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DRAFT SCOPE OF WORK
for the
LOWER CONCOURSE REZONING
and
RELATED ACTIONS
ENVIRONMENTAL IMPACT STATEMENT

CEQR NO.08DCP071X
ULURP NOs. Pending

Lead Agency: NYC Department of City Planning

Prepared by: STV Incorporated

May 14, 2008

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ENVIRONMENTAL REVIEW DIV

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A. INTRODUCTION

This draft scope of work outlines the issues to be analyzed in the preparation of an Environmental Impact Statement (EIS) for the proposed Lower Concourse Rezoning and Related Actions ("the proposed action"). The proposed actions include zoning map and zoning text amendments proposed by the New York City Department of City Planning (DCP). The rezoning area is located in the Mott Haven neighborhood of the Bronx, and is fully contained with Bronx Community District 1 (see Figure 1). The proposed rezoning area is currently zoned R6, C4-4 and M1-2 and M2-1. Zoning Map amendments would be required such that approximately 30 blocks of land currently zoned M1-2 and M2-1 (see Figure 2) would be rezoned to C4-4, C6-2A, MX (M1-4/ R8A), MX (M1-4/ R7X), MX (M1-4/ R7A), MX (M1-4/ R6A), and M1-4. A new C2-4 commercial overlay would be mapped on waterfront lots within the new R7-2 district. The rezoning proposal would include a zoning text amendment to establish a Special Mixed-Use District (MX); to modify food store regulations within the rezoning area; and to establish the Inclusionary Housing program within the rezoning area. Text amendments are proposed to establish a Waterfront Access Plan (WAP) and the Special Lower Concourse Waterfront District in the area located along the Harlem River waterfront between Exterior Street and the Harlem River, north of the Metro North Bridge over the Harlem River and south of East 149th Street. The proposal includes an amendment to the city map to establish a park on an approximately two-acre area of land generally located between the Harlem River and Exterior Street, south of the extension East 146th Street, and north of the extension of East 144th Street would also be required. Although the site of the proposed park is located within the proposed Special Lower Concourse Waterfront District, the special district regulations would not apply. The site would remain zoned M2-1 under the proposed actions.

This document provides a description of the proposed action and includes task categories for all technical areas to be analyzed in the EIS.

The EIS will be prepared in conformity with all applicable laws and regulations, including Executive Order No. 91, New York City Environmental Quality Review (CEQR) regulations, dated August 24, 1977, and will follow the guidelines of the *CEQR Technical Manual*. The EIS will contain:

- A description of the proposed action and its environmental setting.
- A statement of the environmental impacts of the proposed action, including its short-and long-term effects, and typical associated environmental effects.
- An identification of any adverse environmental effects that cannot be avoided if the proposed action is implemented.
- A discussion of alternatives to the proposed action.
- A discussion of any irreversible and irretrievable commitments of resources that would be involved in the proposed action should it be implemented.
- A description of mitigation measures proposed to minimize adverse environmental impacts.

The environmental analyses in the EIS will assume a development period of ten years for the reasonable worst-case development scenario (RWCDS) for the project (build year 2018), and identify the cumulative impacts of other projects in areas affected by the proposed action. The New York City Department of City Planning (DCP), as lead agency, will coordinate the review of the proposed action among the involved and interested agencies and the public.

B. REQUIRED APPROVALS AND REVIEW PROCEDURES

The proposed action requires City Planning Commission (CPC) and City Council approvals through the Uniform Land Use Review Procedure (ULURP), and includes the following actions:

- **Zoning map amendment** to change approximately 30 blocks currently zoned R6, C4-4, M1-2 and M2-1 (see Figure 2) to C4-4, C6-2A, R7-2/C2-4, MX (M1-4/ R8A), MX (M1-4/ R7X), MX (M1-4/ R7A), MX (M1-4/ R6A), and M1-4 (see Figure 3). Under the proposed action, new C2-4 commercial overlays would be mapped across the waterfront blocks, within the R7-2 district.
- **Zoning text amendment** to establish a Special Mixed Use District (MX), extending over all or portions of 25 blocks between Exterior Street and Walton Avenue, south of East 149th Street and north of East 138th Street, and between Park Avenue and Morris Avenue, south of East 146th Street and north of the Major Deegan Expressway. This area is currently zoned M1-2 and M2-1.

- **Zoning text amendments** in the form of a Waterfront Access Plan (WAP) and the Special Lower Concourse Waterfront District for two blocks along the Harlem River waterfront between Exterior Street and the Harlem River, north of the Metro North bridge over the Harlem River and south of East 149th Street, in order to provide for a coordinated network of waterfront open spaces. Within the special district, the zoning would change from M2-1 to R7-2/C2-4 and C4-4, which would facilitate new residential and commercial development. The WAP would identify specific locations for required shore public walkways, upland connections, supplemental public access areas, and visual corridors. In addition, the waterfront Special District would modify applicable use and bulk regulations, to encourage varied building heights, control tower dimensions, and appropriately frame waterfront open spaces. Towers would be allowed to rise to a maximum height of 400 feet on lots larger than 100,000 square feet and 300 feet on lots smaller than 100,000 square feet. The maximum tower height is currently 135 feet. The minimum base height would be 40 feet, and the maximum base height would be 60 feet. Current regulations allow a maximum base height of 60 feet; there is no minimum base height. All towers would have a maximum footprint of 8,100 square feet. Current regulations allow a maximum tower footprint of 8,100 square feet for lots larger than 1.5 acres and 7,000 square feet for lots smaller than 1.5 acres. An authorization would be available to allow narrow or shallow lots to waive out of proposed height, bulk, and waterfront open space requirements. Maximum floor area ratio regulations would not be available to this waiver. The level of the shore public walkway would be required to be raised at least to the height of the Oak Point Rail line for all waterfront properties. Screening requirements would mandate usable floor area facing all waterfront public access areas; usable floor area would be required for the ground floor facing streets; and restrictions on the location of commercial space in mixed-use buildings would be modified to allow flexibility in locating commercial areas (see Figure 3).
- **Zoning text amendment** to modify food store regulations within the rezoning area. The proposed amendment would allow food stores of any size as-of-right within M1-4 districts in Community District 1 in the Bronx in order to encourage the location of new grocery stores in the South Bronx.
- **Zoning text amendment** to establish the Inclusionary Housing program within the proposed rezoning area within Community Board 1, the Bronx.
- **Amendments to the city map** to establish a park on an approximately two-acre area of land located between the Harlem River and Exterior Street, south of the extension East 146th Street, and north of the extension of East 144th Street (see Figure 1). Although the site of the proposed park is located within the proposed

Special Lower Concourse Waterfront District, the special district regulations would not apply. The site would remain zoned M2-1 under the proposed actions. It is anticipated that the Department of Parks and Recreation (DPR) would acquire the site following the park mapping action and develop it for park use.

These actions are subject to the City Environmental Quality Review (CEQR) procedures. An Environmental Assessment Statement (EAS) was submitted on May 14, 2008. DCP, acting as lead agency on behalf of the City Planning Commission, has determined that the proposed action would have the potential for significant adverse impacts. Therefore, a detailed assessment of likely effects in those areas of concern must be prepared and disclosed in an EIS.

This draft scoping document sets forth the analyses and methodologies proposed for the EIS. The public, interested agencies, Bronx Community Board 1 (wherein the proposed rezoning and related actions would be located); adjacent Bronx Community Board 4; and elected officials are invited to comment on the scope, either in writing or orally, at a public scoping hearing to be held on June 19, 2008, at 4:00 PM at Hostos Community College, 450 Grand Concourse, Bronx, NY. Comments received during the draft scope's public hearing, and written comments received up to 30 days after the hearing will be considered and incorporated, as appropriate, into this final scope of work. The final scope of work will be used as a framework for preparing the Draft EIS (DEIS) for the proposed action.

Once the lead agency (DCP) is satisfied that the DEIS is complete, the document will be made available for public review and comment. The DEIS will accompany the ULURP application through the public hearings at the Community Board and City Planning Commission (CPC). A public hearing will be held on the DEIS in conjunction with the CPC hearing on the ULURP applications to afford all interested parties the opportunity to submit oral and written comments. The record will remain open for 10 days after the public hearing to allow additional written comments on the DEIS. At the close of the public review period, a Final EIS (FEIS) will be prepared that will incorporate all substantive comments made on the DEIS, along with any revisions to the technical analysis necessary to respond to those comments. The FEIS will then be used by the decision makers to evaluate CEQR findings, which address project impacts and proposed mitigation measures, before deciding whether to approve the requested discretionary actions.

C. DESCRIPTION OF THE PROPOSED ACTION

The New York City Department of City Planning (DCP) is proposing zoning map and zoning text amendments, and, in association with the NYC Department of Parks and Recreation, changes to the city map establishing a park, (collectively, "the proposed action"), affecting the Lower Concourse area of the South Bronx, Community District 1. The areas affected by the proposed action include all or portions of 30 blocks, generally bound by the Harlem River on the west, East 149th Street and East 144th Street to the north, Morris and Lincoln Avenues on the east, and the Major Deegan Expressway and Park Avenue to the south (see Figure 1). Table 1 below provides a list of the block and lots affected by the proposed action.

The Lower Concourse has a diverse mix of manufacturing, converted manufacturing commercial, institutional and limited retail uses. Buildings within the Lower Concourse have a wide range of heights; many exhibit full lot coverage and are used as manufacturing uses or converted from manufacturing use to other uses.

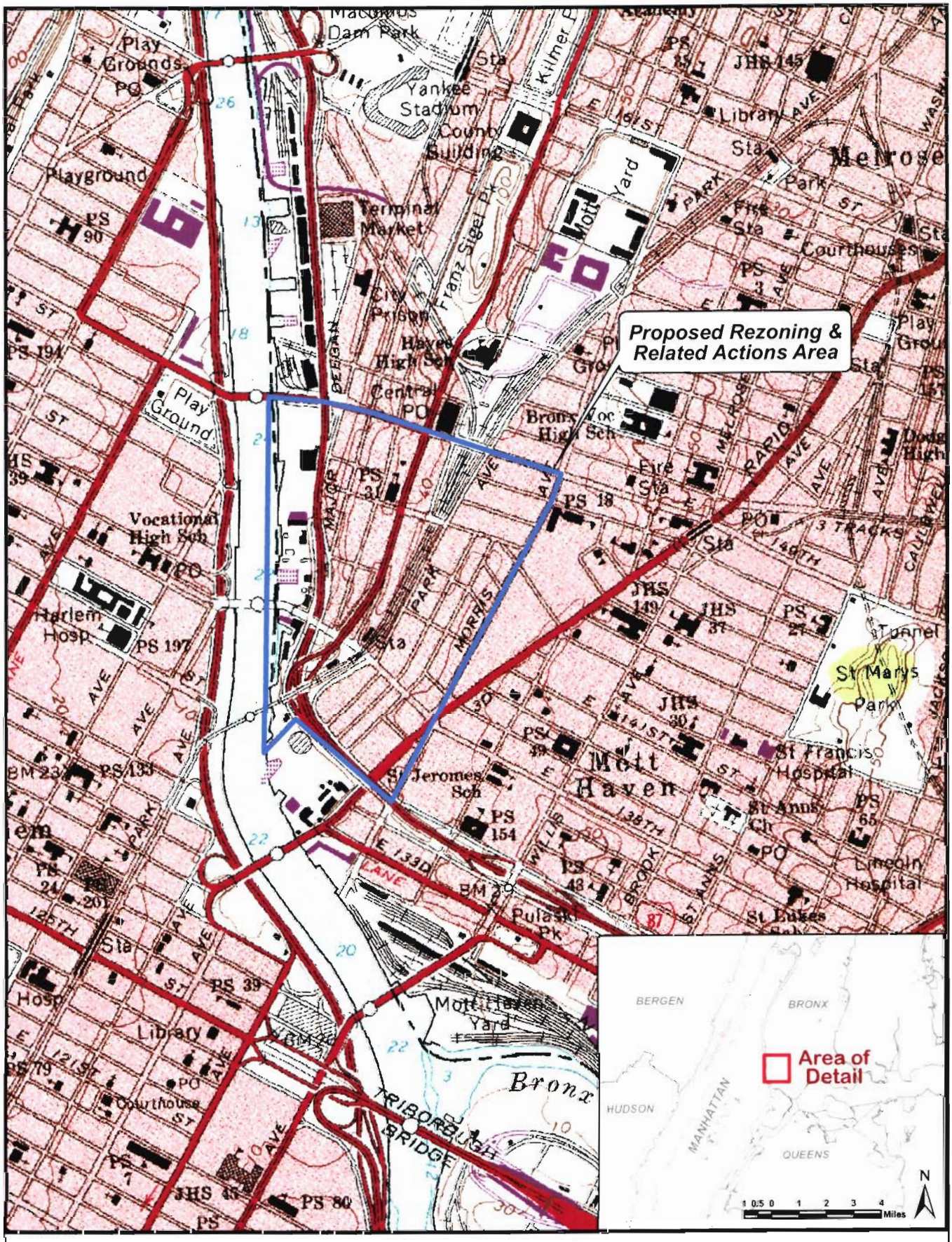


Figure 1: Project Location

Lower Concourse Rezoning and Related Actions EIS

NYC Department of City Planning

Table 1: List of Blocks and Lots Affected by Proposed Lower Concourse Rezoning and Related Actions

Affected Blocks	Affected Lots
2349	15, 100, 112
2323	28
2351	1, 3, 12, 20, 22, 25, 35
2350	1, 5, 11, 16, 34, 63
2349	46, 47, 90
2344	1, 11, 17, 27,52, 60, 75, 83, 110, 112
2345	1, 5, 10, 12, 14, 18, 22, 26, 49
2341	6, 10,23, 28, 31, 34, 37, 40, 42
2340	1, 3, 8, 56, 58, 208, 209
2322	28, 81, 101
2333	1, 6, 10
2320	5, 6, 7, 8, 9 10, 11, 32, 33, 37, 41, 42, 43, 45, 46, 47, 50, 51, 53, 59, 66, 72, 73, 74, 77, 79, 88, 164, 185
2318	5, 7, 9, 18, 19, 22
2335	57, 58
2340	11, 72, 186, 195, 204, 213, 215, 218, 221
2334	38, 39, 40, 41, 43, 45, 59, 61, 62, 63, 66
2333	12, 17, 31, 33, 50, 54
2355	6
2349	3, 38
2323	13, 43

The proposed action is intended to provide opportunities for new residential and commercial development and the enhancement and upgrade of the waterfront areas in the South Bronx. Over the past two decades, the South Bronx has experienced a substantial amount of new housing construction, beginning to rebound from substantial disinvestment and population loss experienced during the 1970's and 1980's. Most vacant and City-owned sites have been developed or are programmed for development, leaving a shortage of available sites for new residential development to continue to recoup earlier population losses. With the population of New York City expected to increase by a million people by the year 2030, new areas are needed to accommodate this growth. At the same time, industrial uses in the Lower Concourse have declined, leaving vacant and underutilized land and buildings.

The Lower Concourse area, generally bounded by East 149th Street and East 144th Street to the north, Morris and Lincoln Avenues on the east, the Major Deegan Expressway

and Park Avenue on the south, and the Harlem River on the west, is bordered by the residential neighborhood of Mott Haven to the north and east and by the mixed-use area of Port Morris to the south. Currently, the area is zoned M1-2 and M2-1, which are manufacturing zones which do not allow residential use.

The proposed action would effectuate the following land use goals:

- Provide new opportunities for redevelopment and economic growth within the South Bronx;
- Direct new housing and commercial development at higher densities to an area with excellent transit and highway access;
- Create a new public park on the Harlem River waterfront;
- Encourage the redevelopment of the waterfront, including continuous public waterfront access along the Harlem River waterfront;
- Encourage new housing production, including new affordable housing, in the Bronx;
- Provide new opportunities for the development of grocery stores in the South Bronx;
- Encourage the creation of a new gateway to the South Bronx through redevelopment of the lower Grand Concourse; and
- Retain viable light industrial businesses and allow for growth.

Purpose and Need

The proposed action is intended to provide opportunities for new residential and commercial development and the enhancement and upgrade of the waterfront areas in the South Bronx. Over the past two decades, the South Bronx has experienced a substantial amount of new housing construction, beginning to rebound from substantial disinvestment and population loss experienced during the 1970's and 1980's. Most vacant and City-owned sites have been developed or are programmed for development, leaving a shortage of available sites for new residential development to continue to recoup earlier population losses. With the population of New York City expected to increase by a million people by the year 2030, new areas are needed to accommodate this growth. At the same time, industrial uses in the Lower Concourse have declined, leaving vacant and underutilized land and buildings.

Transit access is excellent in the Lower Concourse, with stops on New York City Transit's 2, 4, and 5 express subway trains, and the No. 6 local train located within walking distance of the entire proposed rezoning area. The southernmost terminal of the Grand Concourse runs through the center of the project area and is a high-profile gateway to the South Bronx for motorists exiting from the Major Deegan Expressway

and to pedestrians using subway stops at 138th Street and 149th Street. Pedestrian access to Manhattan is available across the 145th Street, Madison Avenue, and Third Avenue bridges.

In the nineteenth century, an active port and numerous rail connections brought a number of industrial businesses including garment and piano factories to this area. The construction of the subway in the early twentieth century brought a number of multi-story industrial loft buildings. While an industrial presence remains, industrial firms and jobs have declined in this area in the last several years. The Oak Point Rail Link was built along the Harlem River in the 1990's, cutting off access to the waterfront and precluding waterfront-dependent uses.

A number of substantial investments have recently been made in the area surrounding the Lower Concourse. The Port Morris/ Bruckner Avenue Mixed-Use district rezoning area is located directly to the south and east. This district, established in 1997 and expanded in 2005, allowed residential uses along with the existing manufacturing uses. This rezoning resulted in the conversion of several buildings into more than 300 new residential units, along with the rehabilitation of several existing row-houses and apartment buildings. The Gateway Center, currently under construction, will bring approximately one million square feet of new retail space north of 149th Street. New waterfront parks are under construction along the Harlem River waterfront directly north of the site.

Despite these investments, few new buildings have been constructed within the Lower Concourse since the current manufacturing zoning went into effect in 1961. New development has consisted primarily of automotive service and personal self-storage facilities. Current zoning in the area is outmoded and unduly limits reasonable expansion of this strategically located area. Current zoning densities and allowed uses are relatively limited for an area with so much transportation infrastructure. Current zoning encourages uses and densities incompatible with surrounding residential neighborhoods and limits opportunities for new investment in the South Bronx. As a consequence, vacant and under-built sites create a blighting influence along major thoroughfares located at high-profile entryways into the borough, creating a negative effect upon the South Bronx as a whole.

The proposed action would create opportunities for new housing development on underutilized and vacant land in this highly-transit accessible location. This will allow for additional investments to continue the revitalization of the South Bronx. In addition, the proposed mixed-use districts would permit the continuation of light industrial uses as well as the development of new light industrial uses. Lifting restrictions on the size of food stores within the rezoning area would provide additional

opportunities for new grocery stores in the South Bronx, which is currently underserved by such stores. Finally, the action would encourage the development of the under-utilized Harlem River waterfront, extending waterfront access from the Gateway Center area south to the Port Morris community.

Existing Zoning

The Lower Concourse is primarily zoned for general manufacturing uses along its waterfront, for commercial use in an area comprising major institutional uses, and medium-density residential (see Figure 2). Table 2 provides a summary of the existing allowed density in the rezoning area.

Table 2: Summary of Existing Allowable Densities in the Lower Concourse Rezoning Area

Zoning District	Maximum Residential FAR	Maximum Residential FAR*	Non-Residential FAR	Community Facility Maximum FAR**
R6	2.43	3.0	-	4.8
C4-4	3.44	4.0	3.4	6.5
M1-2	-	-	2.0	4.8
M2-1	-		2.0	-

*For the R6, the maximum residential FAR applies within 100 feet of a wide street, in accordance with Quality Housing requirements.

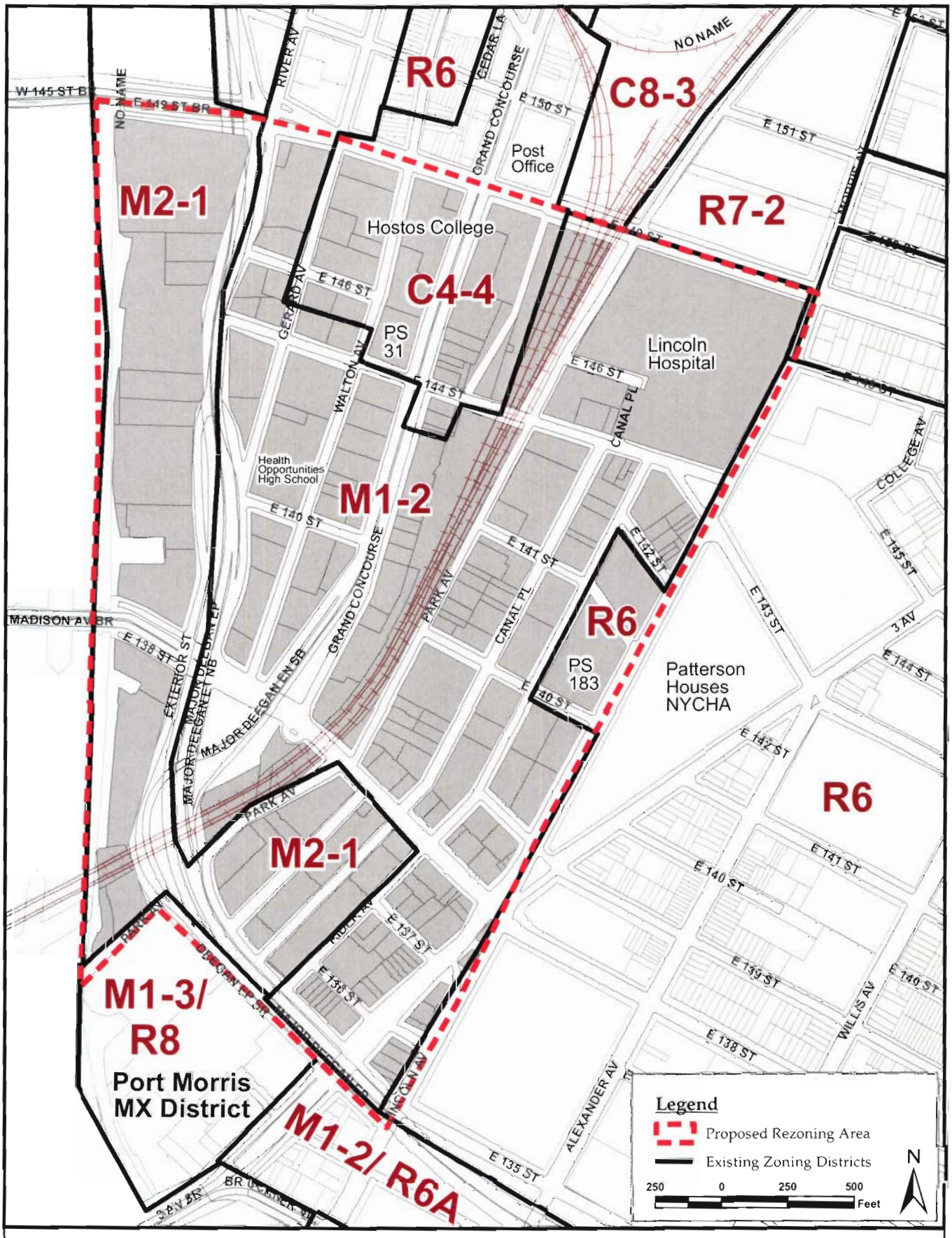
** Industrial use would not be permitted in the proposed C4-4 district. Non-residential use could include community facility use, which would have a separate FAR.

Proposed Zoning

In the proposed action area, existing manufacturing zoning designations would be changed to permit residential and commercial uses on the waterfront and the Grand Concourse, residential and mixed uses in other areas, and to restrict certain areas currently zoned M2-1 to light manufacturing uses. A zoning text amendment would establish the Lower Concourse Special Mixed-Use District (MX). Approximately 30 blocks of land currently zoned M1-2 and M2-1 would be rezoned to C4-4, C6-2A, R7-2, MX (M1-4/ R8A), MX (M1-4/ R7X), MX (M1-4/ R7A), MX (M1-4/ R6A) and M1-4. A new C2-4 commercial overlay would be mapped on waterfront lots zoned R7-2. Figure 3 presents the proposed zoning map.

The proposed zoning changes are listed below.

- Change from **M1-2 to C6-2A** all or portions of 4 blocks generally located along the Grand Concourse south of East 144th Street, north of East 138th Street., between Walton Avenue and the Metro North rail right of way.



Major Zoning Classifications

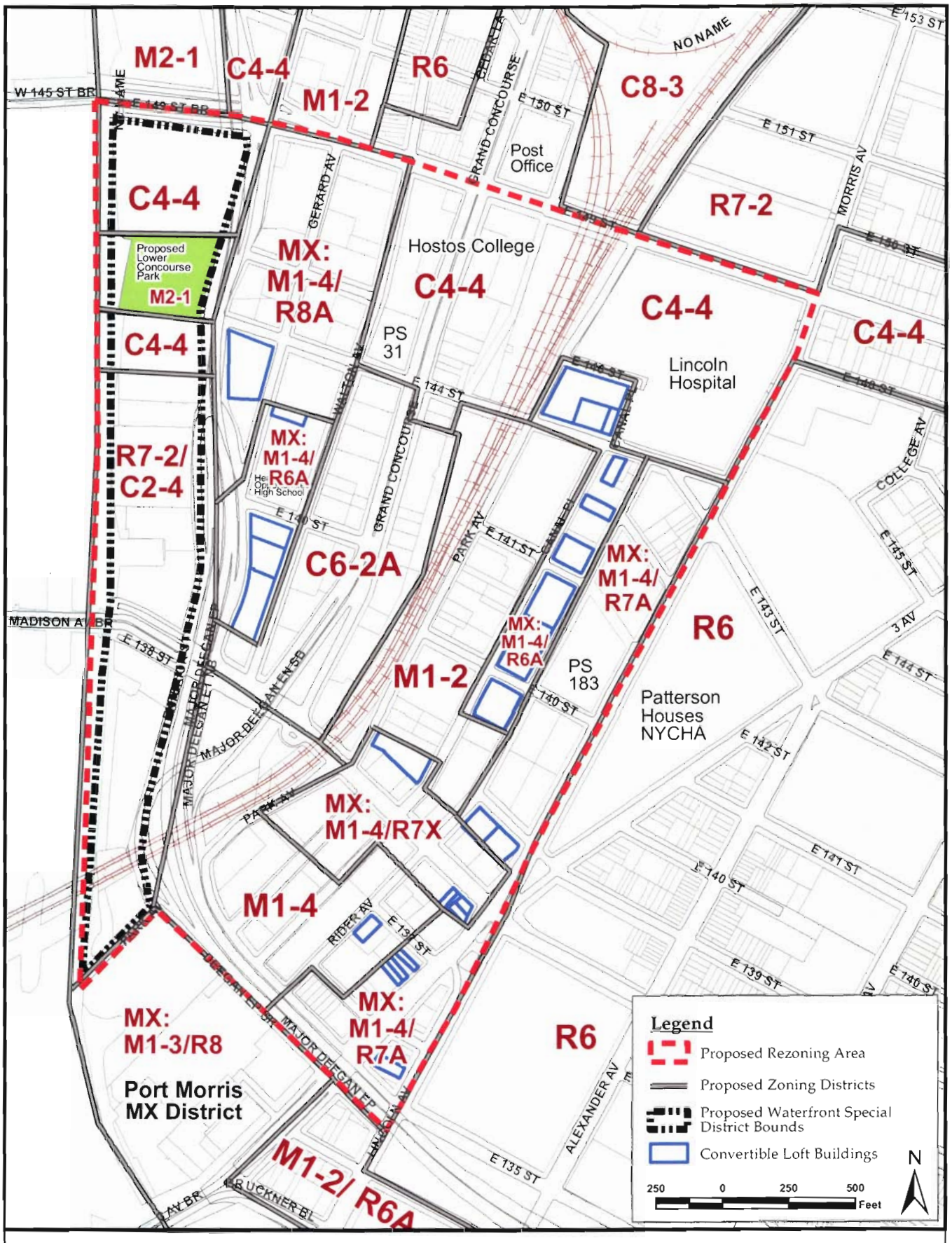
R - Residential District
C - Commercial District
M - Manufacturing District

Source: NYC Department of City Planning, 2008

Figure 2: Existing Zoning

Lower Concourse Rezoning and Related Actions EIS

NYC Department of City Planning



Major Zoning Classifications

R - Residential District
C - Commercial District
M - Manufacturing District

Source: NYC Department of City Planning, 2008

Figure 3: Proposed Zoning

Lower Concourse Rezoning and Related Actions EIS

NYC Department of City Planning

Zoning change would result in a change in uses allowed in this important gateway to the South Bronx along the Grand Concourse, and would facilitate new residential and commercial development at a scale more appropriate to the more historic portions of the Grand Concourse to the north. This area is characterized by single story automotive uses, surface parking, and self storage and moving facility. The proposed C6-2A zoning district would allow taller buildings within a contextual envelope and is proposed here to reflect the width and prominence of the Grand Concourse.

The M1-2 district allows light industrial and some commercial uses with an FAR of 2.0. The proposed C6-2A would allow new residential development with a maximum FAR of 7.2 and new commercial development with a maximum FAR of 6.0. All new development would be required to build along the street-wall within a contextual envelope with a maximum height of 120 feet.

- Change from **M2-1** to **R7-2/ C2-4** and **C4-4** all or portions of 2 blocks along the Harlem River Waterfront south of East 149th Street and north of the Metro North rail bridge.

Zoning changes would result in a change in uses allowed along the Harlem River waterfront, and would facilitate new residential and commercial development. This area is characterized by open air industrial uses such as bus parking and concrete recycling, single-story warehouses, and personal self-storage facilities. New development would be required to provide public access areas shaped by the Waterfront Access Plan (see below). New development on the waterfront would also be subject to the special bulk and use requirements of the Special Lower Concourse Waterfront District.

The M2-1 district allows medium-intensity industrial uses with an FAR of 2.0. The proposed R7-2 and C4-4 zoning districts would allow new residential development with a maximum FAR of 4.0 with bulk regulations controlled by the proposed waterfront Special District. The C2-4 commercial overlay would allow new commercial retail and office development with a maximum FAR of 2.0. The new C4-4 zoning district would allow new regional commercial retail and office development with a maximum FAR of 3.4.

Although the site of the proposed park is located within the proposed Special Lower Concourse Waterfront District, the special district regulations would not apply. The site would remain zoned M2-1 under the proposed actions. It is anticipated that

DPR would acquire the site following the park mapping action and develop it for park use.

- Change from **M1-2** and **C4-4** to **MX (M1-4/ R8A)** all or portions of 6 blocks generally located south of East 149th Street, north of East 140th Street, between Exterior Street and Walton Avenue.

Zoning changes would result in a change in allowed uses for those areas currently zoned M1-2, and would facilitate new residential and commercial development and conversions while continuing to permit existing and new light industrial uses. The area proposed to change from C4-4 to MX (M1-4/ R8A) would be allowed additional FAR for residential uses, increasing from 3.44 to 7.2 FAR. This area is characterized by single-story industrial buildings, multi-story loft buildings, and open-air industrial uses.

The C4-4 district, currently mapped on portions of two blocks, allows for mid-density commercial development at an FAR of 3.44 and residential development at an FAR of 3.44. The existing M1-2 district allows light industrial uses with an FAR of 2.0. The proposed MX (M1-4/ R8A) zoning district would allow new residential development with a maximum FAR of 7.2. New development would be required to build along the street-wall within a contextual envelope with a maximum height of 120 feet. The M1-4 zoning district would allow new commercial retail and office and light industrial development with a maximum FAR of 2.0.

- Change from **M1-2** to **MX (M1-4/ R6A)** all or portions of 6 blocks in two areas generally located south of East 144th Street, north of East 138th Street., between Gerard and Walton Avenues in one area and located south of East 146th Street, north of East 139th Street, between Canal Place and Rider Avenue in another.

Zoning changes would result in a change in allowed uses and would facilitate new residential development and conversions while continuing to permit existing and new light industrial uses. This area is characterized by single-story industrial buildings and multi-story loft buildings. The proposed R6A zoning district is intended to reflect the current built context of four to six-story multi-story loft buildings.

The existing M1-2 district allows light industrial uses with an FAR of 2.0. The proposed MX (M1-4/ R6A) zoning district would allow new residential development with a maximum FAR of 3.6. New development would be required to build along the street-wall within a contextual envelope with a maximum height of

70 feet. The M1-4 zoning district would allow new commercial retail and office and light industrial development with a maximum FAR of 2.0.

- Change from **M1-2** and **M2-1** to **MX (M1-4/ R7X)** all or portions of 7 blocks generally located along East 138th Street between Park and Third Avenues.

Zoning changes would result in a change in allowed uses and would facilitate new residential development and conversions while continuing to permit existing and new light industrial uses. This area is characterized by vacant lots, single-story automotive uses, and open-air automotive uses. The proposed R7X zoning district allows taller buildings within a contextual envelope and is proposed here to reflect the width of 138th Street and the street's mixed-use character to the east.

The existing M1-2 district allows light industrial uses with an FAR of 2.0. The proposed MX (M1-4/ R7X) zoning district would allow new residential development with a maximum FAR of 5.0. New development would be required to build within a contextual envelope with a maximum height of 125 feet. The M1-4 zoning district would allow new commercial retail and office and light industrial development with a maximum FAR of 2.0.

- Change from **M1-2** to **MX (M1-4/ R7A)** all or portions of 10 blocks generally located along Third, Morris, and Lincoln Avenues between East 144th Street and the Major Deegan Expressway.

Zoning changes would result in a change in allowed uses and would facilitate new residential development and conversions while continuing to permit existing and new light industrial uses. This area is characterized by single-story automotive uses, vacant multi-story buildings, and dilapidated residential buildings. The proposed R7A zoning district allows mid-size contextual buildings and is proposed here to reflect the height of buildings within the residential areas to the east.

The existing M1-2 district allows light industrial uses with an FAR of 2.0. The proposed MX (M1-4/ R7A) zoning district would allow new residential development with a maximum FAR of 4.6. New development would be required to build within a contextual envelope with a maximum height of 80 feet. The M1-4 zoning district would allow new commercial retail and office and light industrial development with a maximum FAR of 2.0.

- Change from M1-2 and **M2-1 to M1-4** for portions of five blocks generally located south East 138th Street and north of the Major Deegan Expressway, between Park and Third Avenues.

Zoning changes from M2-1 to M1-4 would result in a change in intensity of industrial uses allowed for portions of three blocks located generally north of the Major Deegan Expressway, west of Park Avenue, south of East 138th Street, and east of Rider Avenue. This area is characterized by single-story and open air industrial uses such as storage and warehouses/ distribution. Several large employers are located in this area. The expressway and elevated rail tracks detract from the ground conditions. For these reasons, allowance of residential use is not proposed here. This rezoning is proposed to ensure that only light industrial uses and retail uses are allowed adjacent to proposed new residential areas.

Zoning changes from M1-2 to M1-4 would result in different requirements for public parking for portions of two blocks located south of East 138th Street and north of East 136th Street between Rider Avenue and Third Avenue. The change from M1-2 to M1-4 would require a special permit for new public parking garages.

The M2-1 district allows medium-intensity industrial uses with an FAR of 2.0. The M1-2 district allows low-intensity uses with an FAR of 2.0. The proposed M1-4 zoning district would allow light industrial uses and some retail uses with a maximum FAR of 2.0.

- Change from **M1-2** to **C4-4** one block located south East 149th Street and north of E 144th Street, between Morris Avenue and the Metro North rail right-of-way.

Zoning change would result in a change in allowed uses, bringing the existing Lincoln Hospital in use conformity.

The proposed action includes the following zoning text amendments:

WATERFRONT ACCESS PLAN and SPECIAL LOWER CONCOURSE WATERFRONT DISTRICT

The proposed zoning text amendment would create the Lower Concourse Waterfront Access Plan (WAP) and Special Lower Concourse Waterfront District. It would consist of all two Harlem River waterfront blocks extending between the Harlem River and Exterior Street, south of East 149th Street and north of the Metro North Railroad Bridge over the Harlem River, and would encompass areas proposed to be rezoned to R7-2/ C2-4 and C4-4 from M2-1. Within the special district, the zoning would change from

M2-1 to R7-2/C2-4 and C4-4, which would facilitate new residential and commercial development. The proposed WAP would specify the location of public access areas and visual corridors. The proposed waterfront Special District would apply special bulk regulations to waterfront lots. Although the site of the proposed park is located within the proposed Special Lower Concourse Waterfront District, the special district regulations would not apply. The site would remain zoned M2-1 under the proposed actions.

The WAP and Special Lower Concourse Waterfront District would be guided by the following goals:

- Provide for a continuous network of open spaces connecting along the Harlem River waterfront;
- Enhance the pedestrian environment along the waterfront public access areas; and
- Provide a varied and pleasing skyline along the Harlem River waterfront.

A summary of the proposed special bulk provisions of the WAP and waterfront Special District follows:

- The maximum base and tower height limits would be modified for R7-2 and C4-4 to allow a maximum tower height of 400 feet on lots larger than 100,000 square feet and 300 feet on lots smaller than 100,000 square feet. Current regulations allow a maximum tower height of 135 feet. The minimum base height would be 40 feet, and the maximum base height would be 60 feet. Current regulations allow a maximum base height of 60 feet, and there is no minimum base height;
- The maximum tower footprint and location of towers would be modified for R7-2 and C4-4. Current regulations allow a maximum tower footprint of 8,100 square feet for lots larger than 1.5 acres and 7,000 square feet for lots smaller than 1.5 acres. Under the proposed regulations, all towers would have a maximum footprint of 8,100 square feet;
- Screening requirements would mandate usable floor area facing all waterfront public access areas; usable floor area would be required for the ground floor facing streets; and
- Restrictions in C2-4 commercial overlays on the location of commercial space in mixed-use buildings would be modified to allow flexibility in locating commercial areas.

MODIFY FOOD STORE REGULATIONS

The proposed zoning text amendment would permit food stores of any size as-of-right within the proposed rezoning area. Currently, food stores over 10,000 square feet are only allowed within M1 districts by special permit of the City Planning Commission. The South Bronx is currently underserved by grocery stores and by stores providing fresh produce. In order to provide additional opportunities for new grocery store development, food stores of any size would be allowed as-of-right within M1-4 zoning districts in the Bronx, Community District 1.

ESTABLISH INCLUSIONARY ZONING in REZONING AREA

The proposed zoning text amendment would apply the Inclusionary Housing program within the rezoning area in the Bronx, Community District 1. New base and bonused FARs would apply to new residential development. Base FARs apply to developments which do not use the Inclusionary Zoning bonus. The full bonused FAR is applied to buildings which take full advantage of the program by providing one-fifth of the total new housing floor area as affordable residential floor area in accordance with the Inclusionary Housing program. Base and bonused FARs are presented in Table 3.

Table 3: Proposed Inclusionary Housing Zoning in the Lower Concourse Rezoning Area

Zoning District	Base FAR	Bonused FAR
C6-2A	5.4	7.2
R6A	2.7	3.6
R7A	3.45	4.6
R7X	3.75	5.0
R8A	5.4	7.2
C4-4	3.0	4.0
R7-2	3.0	4.0

Other changes to be assessed in the EIS and in the ULURP application include changes to the City Map creating a new park. DCP, in conjunction with the Department of Parks and Recreation, is proposing changes to the City Map for the mapping of a new two-acre park located along the Harlem River Waterfront within the rezoning area. The park would be located between the Harlem River and Exterior Street, generally south of the prolongation of East 146th Street and north of the prolongation of East 144th Street (refer to Figure 3). The proposed Harlem River waterfront park would serve the following purposes:

- Provide new recreational green space for the substantial new residential population expected as a result of the proposed actions;
- Provide waterfront access and open space to existing South Bronx residents, employees, and students; and
- Provide a catalyst for redevelopment along the waterfront, thereby extending waterfront access to adjacent waterfront parcels.

Projected Development Scenario

CEQR considers the long term and short term effects of proposed actions. For area-wide rezonings not associated with a specific development, the foreseeable future is generally considered to be a ten-year build out period. This is assumed to be the length of time over which developers would act on the change in zoning and the effects of the proposed action would be experienced.

The future With-Action (or Build) scenario therefore identifies the amount, type, and location of development that is expected to occur by 2018 as a result of the proposed action. The future without the Action (or No-Build) scenario identifies similar development projections for 2018 absent the proposed action. The incremental difference between the build and no-build scenarios serves as the basis for the impact analyses.

To determine the development scenarios, standard methodologies have been used following *CEQR Technical Manual* guidelines and employing reasonable, worst-case assumptions. These methodologies have been used to identify the amount and location of future residential, commercial, and community facility growth. In projecting the amount and location of new development, several factors have been considered, including known development proposals, current market demands, past development trends, and DCP's "soft site" criteria, described below, for identifying likely development sites. Generally, for area-wide rezonings, which create a broad range of development opportunities, new development can be expected to occur on selected, rather than all, sites within a rezoning area. The first step in establishing the development scenarios was to identify those sites where new development could reasonably be expected to occur.

In identifying the RWCDS, a general set of criteria was established and all sites that met the criteria were identified. Area specific criteria were also developed to further identify projected and potential development sites.

General Criteria for Development Sites

- Lots with a total size of 5,000 square feet or larger (may include potential assemblages totaling 5,000 square feet, if assemblage seems probable) occupied by buildings with floor area ratios equal to or less than half the proposed maximum permitted FAR.
- Lots occupied by loft buildings or other buildings which are suitable for residential conversion.

The following criteria were used to further categorize soft sites as "Potential" development sites, which are seen as less-likely to develop in the foreseeable future:

- Lots containing active businesses operating within fully-enclosed structures which occupy most of their lot/ building.
- Active businesses which have undergone extensive investment, which provide unique services, or which are prominent and successful neighborhood businesses or organizations unlikely to move.
- Lots with warehouse buildings which are more than 20% vacant or occupied by marginal uses and which are suitable for conversion.
- Highly irregular lots or otherwise encumbered parcels that would make development difficult or lots situated in a less-attractive location for new development.

The following uses and types of buildings that meet these criteria were **not included** in the development scenario because they are very unlikely to be redeveloped as a result of the proposed rezoning:

- The sites of schools and colleges (public and private). Many schools that meet the development site criteria are built to less than half of the permitted floor area under the current zoning. It is unlikely that the increment of additional FAR permitted under the proposed zoning would induce redevelopment or expansion of these sites.

Additional assumptions made in developing the RWCDS include:

- The average dwelling unit size is assumed to be 1,000 square feet, reflecting that type of units that are currently being constructed in this area.
- Ground floor commercial totals assume that 15 percent of the floor's floor area is circulation and mechanical space.

The Future Without The Proposed Action Conditions (No-Build Scenario)

In the future without the proposed action, given the current zoning and commercial and residential housing trends in the area, it is anticipated that the proposed project area would experience nominal growth in commercial and light manufacturing uses. Most of the projected growth is expected to include further development of self-storage facilities, drive-through restaurants, gasoline station / convenient stores, office uses, and warehouses.

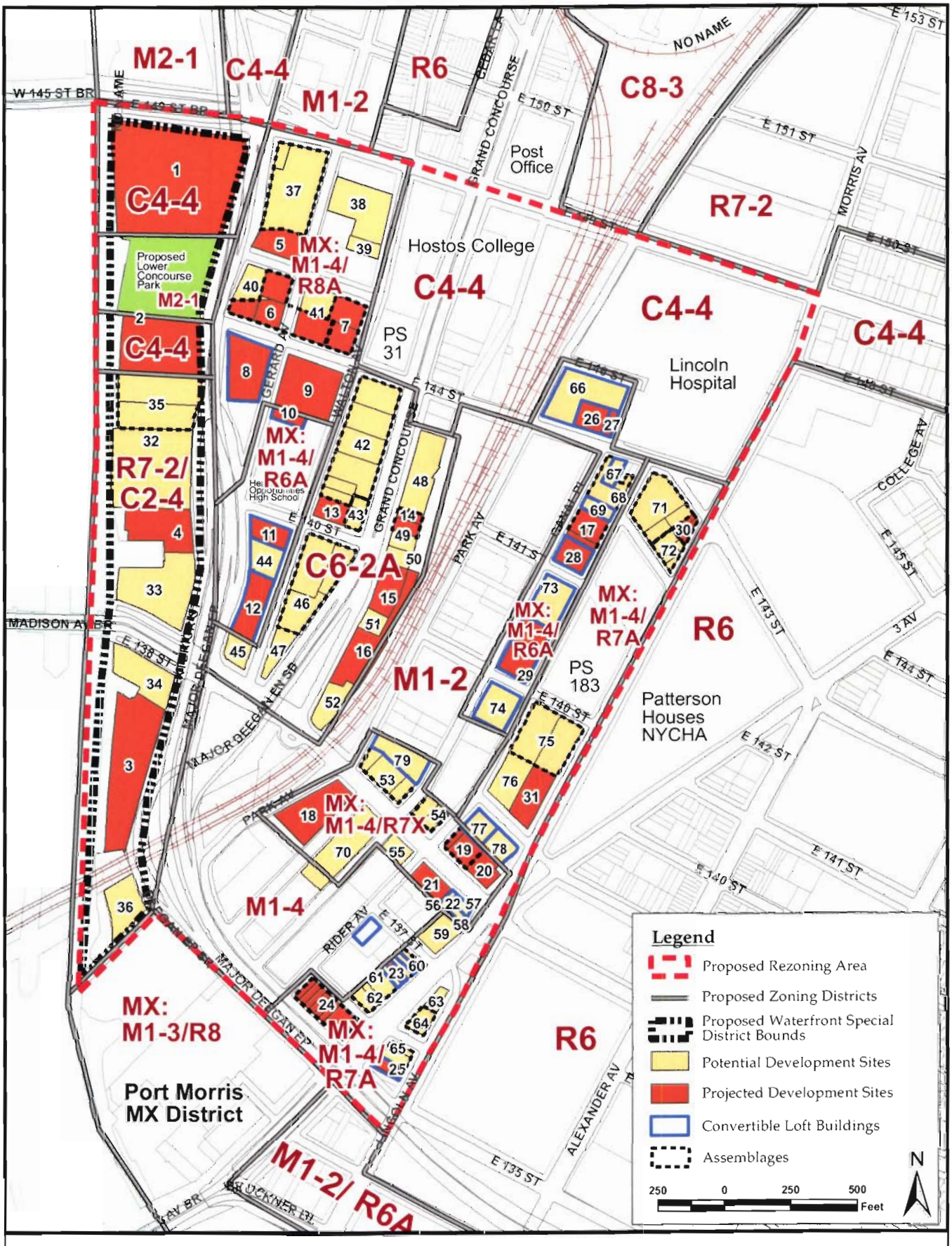
The Future With the Proposed Action Conditions (Build Scenario)

In the future with the proposed action, higher density commercial and residential development is expected to occur throughout the rezoning area. The proposed action is expected to result in new development, including 3,416 dwelling units, 772,750 square feet of commercial space, 95,500 square feet of industrial space, and 154,289 square feet of community facility space. This estimate is based on the above soft-site criteria and the available sites within the rezoning area. In addition, some uses on the projected development sites that are expected in the future without the proposed action would be redeveloped, although in most cases such no-build uses would remain.

DCP identified 31 projected development sites likely to be developed by 2018 (see Table 1 and Figure 4). In addition, there are 48 potential development sites which are considered less likely than the projected sites to be developed over the 10-year analysis period.

The 31 projected development sites currently have 2 dwelling units, 105,163 square feet of commercial uses (including retail and office space), and 532,626 square feet of industrial/manufacturing uses. In the future without the proposed action (No-Build), some of the as-of-right development is expected to occur on these sites. The no-build program is expected to consist of 2 dwelling units, 704,709 square feet of commercial space (office and retail), 404,372 square feet of industrial space, and 90,589 square feet of community facility space.

The total development expected to occur on the projected development sites under the Build conditions would consist of 3,416 dwelling units, 841,535 square feet of commercial space (589,250 local retail, 88,000 square feet of grocery stores, 164,285 square feet hotel), 95,500 square feet of industrial space, and 154,289 square feet of community facility space (educational facilities). The projected incremental (net) change, between the No-Build and the Build scenarios, that would result from the proposed action on the 31 projected development sites is 3,414 dwelling units, 571,162



Major Zoning Classifications

R - Residential District
C - Commercial District
M - Manufacturing District

Source: NYC Department of City Planning, 2008

Figure 4: Projected and Potential Development Sites

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of new retail space, 164,285 of new hotel space (combined for a total of 735,447 square feet), an increase of 63,700 of community facility space, and a net reduction of 598,351 of office space and a net reduction of 308,872 of industrial space.

New residential construction is projected throughout the proposed rezoning area. Hotel and office growth is projected to occur primarily along the Grand Concourse in the proposed C6-2A zoning district. Regional retail is anticipated on large lots along the Grand Concourse and on large lots along the waterfront where proposed zoning districts would allow grocery stores. In addition, the proposed text amendment would allow grocery stores as-of-right within the proposed M1-4 zoning district. Therefore, large and accessible lots within the proposed M1-4 zoning district are also projected as grocery store sites. New local retail is projected at the base of all new residential construction.

Key factors in anticipating a significant increase in new residential development include the introduction of residential uses and relatively high density the proposed zoning would allow. The largest increases in residential growth are expected to occur along the waterfront and along the Grand Concourse.

As part of the proposed actions, a park would be mapped on a site located between the Harlem River and Exterior Street, south of the extension East 146th Street, and north of the extension of East 144th Street. It is expected that under the proposed actions, DPR would develop two acres of park on the site, which is currently occupied by bus parking and warehouse uses. Absent the proposed actions, current uses are expected to continue.

Community facilities are expected near Hostos College, reflecting recent growth patterns.

The projected development sites, with projected no-build and build development, are summarized in Table 3, and also presented in Appendix 1.

Table 3: Summary of No-Build and Build Development on Projected Development Sites

	Existing									No Action										With Action										Increment								
Proj'd Site No.	Retail SF	Off. SF	Hotel SF	Ind SF	CF SF	Res SF	Vacant Bldg Area	Ex. Affordable Dus	Ex. Mkt. Rate Dus	Retail SF	Office SF	Hotel SF	Ind SF	CF SF	Res SF	Vacant Bldg Area SF	Aff. Dus	Mkt Rate Dus	Tot. Dus	Retail SF	Office SF	Hotel SF	Ind SF	CF SF	Res SF	Aff. Dus	Mkt Rate Dus	Total Dus	Retail SF	Office SF	Hotel SF	Ind. SF	CF SF	Res SF	Affordable DUs	Mkt Rate Dus	Total Res Dus
1	0	0	0	14,759	0	0	0	0	0	0	0	0	14,759	0	0	0	0	0	0	143,250	0	0	0	0	620,750	124	497	621	143,250	0	0	-14,759	0	620,750	124	497	621
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60,000	0	0	0	0	260,000	52	208	260	60,000	0	0	0	0	260,000	52	208	260
3	0	0	0	21,700	0	0	0	0	0	0	0	0	21,700	0	0	0	0	0	0	108,668	0	0	0	0	470,893	94	377	471	108,668	0	0	-21,700	0	470,893	94	377	471
4	0	0	0	0	0	0	3,240	0	0	0	0	0	109,086	0	0	0	0	0	0	40,907	0	0	0	0	177,265	35	142	177	40,907	0	0	-109,086	0	177,265	35	142	177
5	0	0	0	0	0	0	2,468	0	0	0	0	0	16,182	0	0	0	0	0	0	13,755	0	0	0	0	102,756	21	82	103	13,755	0	0	-16,182	0	102,756	21	82	103
6	0	0	0	8,993	0	0	0	0	0	0	0	0	45,273	0	0	0	0	0	0	32,568	0	0	0	0	243,300	49	195	243	32,568	0	0	-45,273	0	243,300	49	195	243
	0	0	0	10,000	0	0	0	0	0																													
	0	0	0	6,480	0	0	0	0	0																													
	0	0	0	19,800	0	0	0	0	0																													
7	0	0	0	0	9,975	0	0	0	0	0	29,640	0	0	78,065	0	0	0	0	0	0	0	0	0	0	141,765	0	0	0	0	-29,640	0	0	63,700	0	0	0	0
	0	0	0	0	0	0	29,640	0	0																													
8	0	0	0	237,000	0	0	158,000	0	0	0	395,000	0	0	0	0	0	0	0	0	32,917	0	0	0	0	362,083	0	302	302	32,917	-395,000	0	0	0	362,083	0	302	302
9	82,956	0	0	0	0	0	0	0	0	82,956	0	0	0	0	0	0	0	0	0	37,860	0	0	0	0	282,835	57	226	283	-45,096	0	0	0	0	282,835	57	226	283
10	0	0	0	0	0	0	14,400	0	0	0	0	0	14,400	0	0	0	0	0	0	2,600	0	0	0	0	10,800	0	11	11	2,600	0	0	-14,400	0	10,800	0	11	11
11	1,000	0	0	12,000	0	0	6,000	0	0	0	19,000	0	0	0	0	0	0	0	0	1,000	0	0	11,500	0	35,308	7	28	35	1,000	-19,000	0	11,500	0	35,308	7	28	35
12	0	0	0	43,820	0	0	0	0	0	0	0	0	43,820	0	0	0	0	0	0	7,303	0	0	0	0	91,531	18	73	92	7,303	0	0	-43,820	0	91,531	18	73	92
13	0	0	0	0	0	0	14,940	0	0	0	0	0	20,106	0	0	0	0	0	0	8,545	0	0	0	0	63,837	13	51	64	8,545	0	0	-20,106	0	63,837	13	51	64
14	2,450	0	0	0	0	0	0	0	0	3,600	0	0	0	0	0	0	0	0	0	7,693	0	0	0	0	57,468	11	46	57	4,093	0	0	0	0	57,468	11	46	57
	1,150	0	0	0	0	0	0	0	0																													
15	1,404	0	0	0	0	0	0	0	0	1,404	0	0	0	0	0	0	0	0	0	15,181	0	0	0	0	113,411	23	91	113	13,777	0	0	0	0	113,411	23	91	113
16	8,900	0	0	0	0	0	0	0	0	8,900	0	0	0	0	0	0	0	0	0	27,115	0	164,285	0	0	0	0	0	0	18,215	0	164,285	0	0	0	0	0	0
17	0	0	0	6,250	0	0	0	0	0	0	0	0	18,750	0	0	0	0	0	0	13,281	0	0	0	0	42,969	9	34	43	13,281	0	0	-18,750	0	42,969	9	34	43
	0	0	0	12,500	0	0	0	0	0																													
18	0	0	0	0	14,100	0	0	0	0	0	0	0	33,640	0	0	0	0	0	0	28,594	0	0	0	0	139,606	28	112	140	28,594	0	0	-33,640	0	139,606	28	112	140
19	0	0	0	1,430	0	0	0	0	0	2,440	0	0	1,430	0	0	0	0	0	0	10,625	0	0	0	0	51,875	10	42	52	8,185	0	0	-1,430	0	51,875	10	42	52
	2,440	0	0	0	0	0	0	0	0																													
20	0	0	0	0	0	0	2,200	0	0	2,195	0	0	0	0	0	0	0	0	0	9,328	0	0	0	0	45,542	9	36	46	7,133	0	0	0	0	45,542	9	36	46
21	0	0	0	0	0	0	948	0	0	0	23,000	0	0	0	0	0	0	0	0	9,775	0	0	0	0	47,725	10	38	48	9,775	-23,000	0	0	0	47,725	10	38	48
22	0	0	0	837	0	0	1,673	0	0	0	0	0	837	0	0	1,673	0	0	0	837	0	0	0	0	2,510	0	3	3	837	0	0	-837	0	2,510	0	3	3
23	2,700	0	0	0	0	0	8,100	0	0	2,700	0	0	0	0	0	0	0	0	0	2,700	0	0	0	0	8,100	0	8	8	0	0	0	0	0	8,100	0	8	8
24	0	0	0	0	0	0	0	0	0	0	0	0	23,239	0	0	0	0	0	0	18,000	0	0	0	0	0	0	0	0	18,000	0	0	-23,239	0	0	0	0	0
	0	0	0	0	0	0	448	0	0																													
25	0	0	0	11,907	0	0	6,500	0	0	0	17,907	0	0	0	0	0	0	0	0	5,969	0	0	0	0	11,938	0	12	12	5,969	-17,907	0	0	0	11,938	0	12	12
26	0	0	0	5,000	12,524	0	45,094	0	0	0	0	0	5,000	12,524	0	45,094	0	0	0	0	0	0	0	0	61,959	0	62	62	0	0	0	-5,000	0	61,959	0	62	62
27	0	0	0	0	0	0	9,804	0	0	0	9,804	0	0	0	0	0	0	0	0	2,451	0	0	0	0	7,353	0	7	7	2,451	-9,804	0	0	0	7,353	0	7	7
28	0	0	0	36,150	0	0	6,025	0	0	0	0	0	36,150	0	0	6,025	0	0	0	12,050	0	0	0	0	48,200	0	36	36	12,050	0	0	-36,150	0	48,200	0	36	36
29	0	0	0	84,000	0	0	20,000	0	0	0	104,000	0	0	0	0	20,000	0	0	0	0	0	0	84,000	0	20,000	0	20	20	0	-104,000	0	84,000	0	20,000	0	20	20
30	2,163	0	0	0	0	0	0	0	0	2,163	0	0	0	0	3,522	0	0	2	2	5,721	0	0	0	0	25,241	5	20	25	3,558	0	0	0	0	21,719	5	18	23
	0	0	0	0	0	2,442	0	0	1																													
	0	0	0	0	0	1,080	0	0	1																													
31	0	0	0	0	0	0	20,350	0	0	0	0	0	0	0	0	20,350	0	0	0	18,828	0	0	0	0	83,063	17	66	83	18,828	0	0	0	0	83,063	17	66	83
	105,163	**0**	**0**	**532,626**	**36,599**	**3,522**	**349,831**	**0**	**2**	**106,358**	**598,351**	**0**	**404,372**	**90,589**	**3,522**	**93,142**	**0**	**2**	**2**	**677,520**	**0**	**164,285**	**95,500**	**154,289**	**3,488,316**	**591**	**2,825**	**3,416**	**571,162**	**-598,351**	**164,285**	**-308,872**	**63,700**	**3,484,794**	**591**	**2,823**	**3,414**

The projected and potential development sites are shown on Figure 4 and listed in Appendix 1, where more detail is provided.

Environmental Impact Statement

As the RWCDS associated with the proposed action would affect various areas of environmental concern and was found to have the potential for significant adverse impacts, pursuant to the EAS and Positive Declaration, an Environmental Impact Statement pursuant to CEQR will be prepared for the proposed action. The EIS will analyze the projected developments for all technical areas of concern and also evaluate the effects of the potential developments for site-specific effects such as archaeology, shadows, hazardous materials, air quality, and noise.

D. SCOPE OF WORK FOR THE EIS

TASK 1. PROJECT DESCRIPTION (INCLUDING REASONABLE WORST CASE DEVELOPMENT SCENARIO)

The first chapter of the EIS introduces the reader to the project and sets the context in which to assess impacts. The chapter contains a project identification (brief description and location of the project); the background and/or history of the project; a statement of the public purpose and need for the project; key planning considerations that have shaped the current proposal; a detailed description of the project; and discussion of the approvals required, procedures to be followed, and the role of the EIS in the process. This chapter is the key to understanding the proposed action and gives the public and decision-makers a base from which to evaluate the project against both Build and No Build scenarios. In addition, the description of No-build conditions will discuss other expected actions and developments that could affect technical categories considered under CEQR.

The project description will present the planning background and rationale for the proposed rezoning. In addition, the project description will summarize the reasonable worst-case development scenario for analysis in the EIS and present its rationale (refer to "Projected Development Scenario" in Section C of this document).

The section on approval procedures will explain the Uniform Land Use Review Procedure (ULURP) process, its timing, and hearings before the Community Board, the Borough President's office, the City Planning Commission (CPC), and the New York City Council. The role of the EIS as a full-disclosure document to aid in decision-making will be identified and its relationship to ULURP and the public hearings described.

TASK 2. LAND USE, ZONING, AND PUBLIC POLICY

This chapter will provide a detailed analysis of the potential impacts of the proposed action on land use, zoning, and public policy. The land use study area will consist of the project area, where the potential effects of the proposed action will be directly experienced, and adjacent areas within a quarter-mile radius (the "primary study area") where indirect impacts may be felt (refer to Figure 5). For the purpose of environmental analysis, the primary study area will extend approximately a quarter-mile from the borders of the rezoning area. The study area will be adjusted to include whole City blocks. Subtasks will:

- Provide a description of land use, zoning, and public policy in the study areas discussed above. (A more detailed analysis will be conducted for the project area.). This task will be closely coordinated with Task 3, "Socioeconomic Conditions," which will provide a qualitative analysis of the project's effect on businesses and employment in the rezoning area. Recent trends in the rezoning area will be noted.
- Based on field surveys and prior studies, identify, describe, and graphically portray predominant land use patterns for the balance of the study areas. Describe recent land use trends in the study areas and identify major factors influencing land use trends.
- Describe and map existing zoning and recent zoning actions or BSA variances in the study area.
- Describe relevant public policies affecting the project area or the proposed action generally.



Legend

- Proposed Rezoning Area
- Primary Study Area (Approximate 400-Foot Radius)
- Secondary Study Area (Approximate 1/4-Mile Radius)

Source: STV Incorporated

Figure 5: Land Use Study Area

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Prepare a list of future development projects in the study area that would be expected to influence future land use trends. Also, identify pending zoning actions or other public policy actions that could affect land use patterns and trends in the study area. Based on these changes, assess future conditions in land use and zoning without the proposed action.

- Describe and assess the potential land use changes in the project area based on the reasonable worst-case development scenario.
- Assess effects of the proposed action on land use, zoning, and public policy. Project effects related to issues of compatibility with surrounding land use, the consistency with zoning and other public policy, and the effect of the project on ongoing development trends and conditions in the area will be discussed.

TASK 3. SOCIOECONOMIC CONDITIONS

This chapter will examine the effects of the action on socioeconomic conditions in the study area, including population characteristics, increase in economic activity, and the potential displacement of residents, businesses and employment from the rezoning area.

The socioeconomic conditions study area will consist of the project area, where the potential effects of the proposed action will be directly experienced, and adjacent areas within a quarter-mile radius (the "primary study area") where indirect impacts may be felt. For the purpose of environmental analysis, the primary study area will extend approximately a quarter-mile from the borders of the rezoning area to conform to U.S. Census 2000 tract boundaries.

The analysis will provide an assessment of potential socioeconomic changes associated with the proposed action, including: direct and indirect displacement of residential population, businesses, or employees; a new development that is markedly different from existing uses and activities within the neighborhood; an adverse effect on conditions in the real estate market in the area; or an adverse effect on socioeconomic conditions in a specific industry. Screening analyses will be conducted pursuant to the *CEQR Technical Manual* methodology. The analysis will present sufficient information regarding the effects of the proposed action to make a preliminary assessment either to rule out the possibility of significant impacts or to determine that more detailed analysis is required to make a determination as to impacts.

The preliminary assessment will examine five areas of concern including (1) direct residential displacement; (2) direct business and institutional displacement; (3) indirect residential displacement; (4) indirect business and institutional displacement; (5) and adverse effects on specific industries. For each area of concern, if it has been determined that a socioeconomic impact is likely or cannot be ruled out based on the preliminary screening assessment, then a detailed analysis will be conducted. The study area for socioeconomic conditions will be delineated to reflect boundaries of census tracts that are wholly or partially within one-quarter mile radius of the rezoning area. Subtasks for detailed analysis, if determined to be necessary, include:

Population Characteristics

- Based on the U.S. Census of Population and Housing, describe the 2000 population characteristics of the rezoning area and the study area.
- Discuss population trends in the future without the proposed action.
- Estimate population associated with the proposed rezoning and assess impacts on population, if any.

Housing Characteristics

- Using Census data and other information, such as reports on housing value and median rents, describe the 2000 housing characteristics of the rezoning and the study area.
- Assemble and discuss information on housing market conditions, including identification of presence of any unique or predominant population groups or presence of populations particularly vulnerable to economic changes, using Census data and other sources.
- Discuss housing trends in the future without the proposed action.
- Estimate housing changes associated with the proposed rezoning and assess impacts on housing, if any.

Economic Characteristics

- Describe existing economic activity in the rezoning area (using most recently available data), including the number and types of businesses and employment by key sectors.
- Describe the physical characteristics of the existing residential, commercial and manufacturing buildings in the rezoning and surrounding areas, including the general size of the structures, configurations, and condition. Determine the approximate vacancy rate and rent levels for buildings in the study areas. This

will be based on visual inspections, discussions with the Bronx Office of DCP, and discussions with real estate brokers.

- Describe trends in residential, commercial and manufacturing use in the future without the action.
- Estimate net new employment and other economic activity in the study area under the RWCDS.
- Estimate displacement of commercial and manufacturing businesses and employment based on sites identified for likely development.
- Assess the impact of displacement, if any. Identify likely relocation areas nearby, if necessary.

TASK 4. COMMUNITY FACILITIES AND SERVICES

The demand for community facilities and services is directly related to the type and size of the new population generated by development resulting from the proposed rezoning. New workers tend to create limited demands for community facilities and services, while new residents create more substantial and permanent demands. Community facilities other than open space (see Task 5) will be examined in this section.

The CEQR threshold for detailed analysis of schools is if an action is anticipated to generate 50 or more elementary/middle school students or 150 or more high school students. A screening analysis determined that the proposed action would exceed the screening threshold for both elementary/middle schools and high schools. Therefore detailed analysis is warranted. The high school analysis will be borough-based although public high schools within the study area will be identified and their locations shown on the Public School map in the EIS. In addition, as discussed in the EAS, based on the screening criteria established in the *CEQR Technical Manual*, the proposed action would represent a five percent or greater increase over the average dwelling units per library branch in the borough of the Bronx, the screening threshold for detailed analysis. Accordingly, an analysis of the proposed action's effects on library services will be provided.

The proposed action is projected to generate a net increase of 3,414 dwelling units on the 31 projected development sites; this total includes 591 units of affordable housing, which would be developed on 19 of the projected development sites. As the proposed action would generate fewer than 600 units of low-moderate-income housing in the

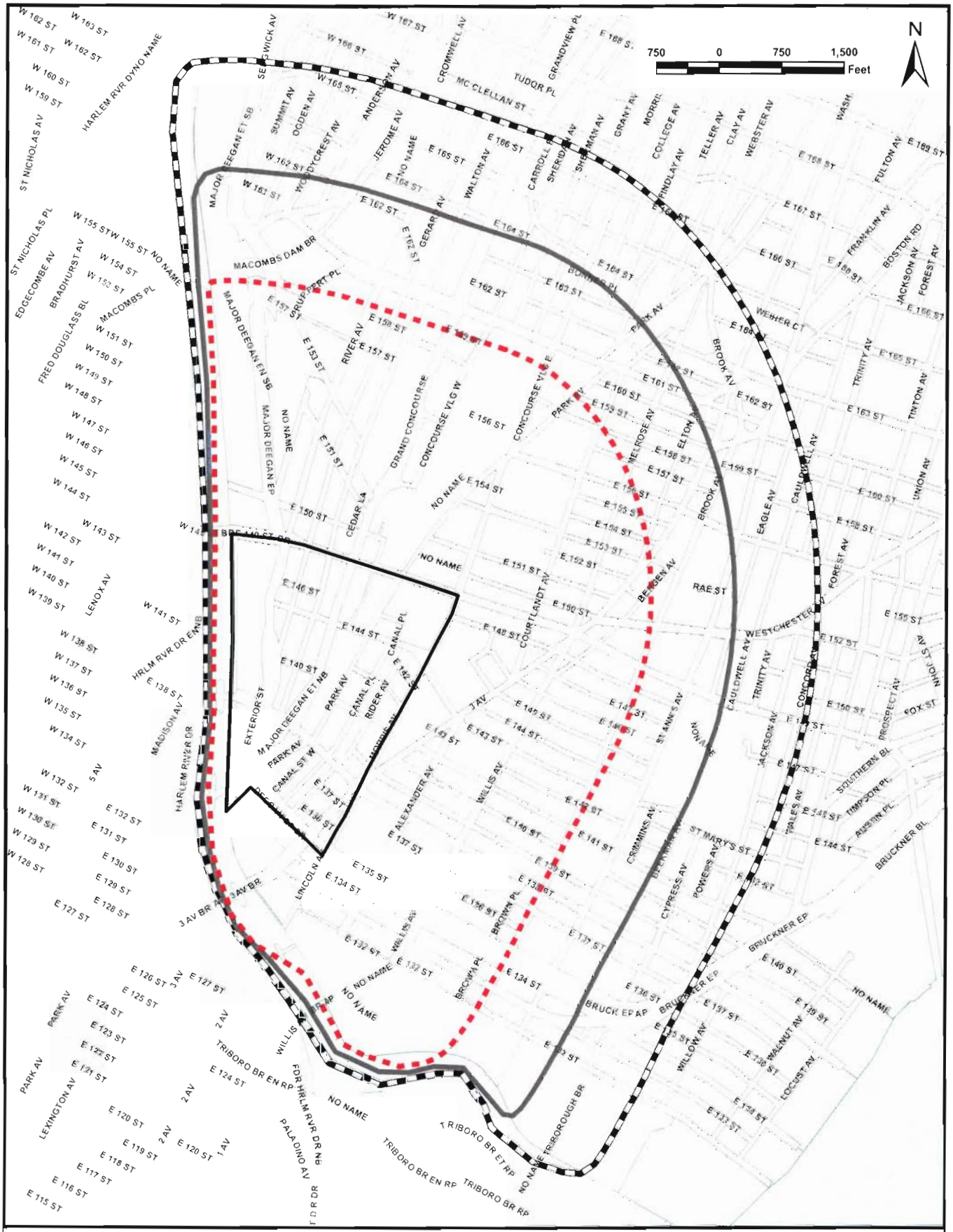
RWCDS, a detailed analysis of health care facilities is not required (*CEQR Technical Manual*, Table 3C-1).

The proposed action would generate more than 50 children eligible for publicly funded daycare. A detailed analysis of day care facilities is required for the proposed action, in accordance with *CEQR Technical Manual*, Table 3C-1 and Table 3C-4.

The Police and Fire Departments routinely evaluate the need for changes in personnel, equipment, or facilities based on population, response times, crime levels, or other local factors. Therefore an assessment of service delivery is usually conducted only if a proposed action would directly affect the physical operations of a station house or precinct house. Since the proposed action would not directly affect existing police and fire facilities, an assessment is not warranted.

The proposed study area for community facilities would be located at or close to a half-mile, ¾ mile or 1-mile radius of the rezoning area depending on the type of community facility, as per CEQR guidelines (refer to Figure 6). Subtasks will include:

- Identify and locate/map all community facilities within the defined study area for general informational purposes, including schools, libraries, health care facilities, police precincts, fire houses, etc. Separate Maps for each kind of facility will be provided.
- Identify and locate public schools within the project study area. Assess conditions in the project study area, and for each affected school district as a whole, in terms of enrollment and utilization during the current school year, noting any specific shortages of school capacity. Identify conditions that will exist in the future without the action, taking into consideration projected increases in future enrollment, including those associated with other developments in the vicinity of the project area and plans to increase school capacity either through administrative actions on the part of the NYC Department of Education (DOE) or as a result of the construction of new school space. Analyze future conditions with the proposed action, adding students likely to be generated by the action to the projections for the future without the action. Project impacts will be assessed based on the difference between the Future With Action projections and the Future No Action projections (at the study area and school district levels) for enrollment, capacity, and utilization in 2018. Planned new capacity projects from DOE's Five Year Capital Plan will not be included in the quantitative analysis unless the projects have commenced site preparation and/or construction. The new projects may, however, be included in a



Legend

- Proposed Rezoning Area
- Approximate 1/2-mile Radius (Public School Analysis)
- Approximate 3/4-mile Radius (Library Analysis)
- Approximate 1-mile Radius (Health Care, Day Care and Police & Fire Services Analyses)

Source: STV Incorporated

Figure 6: Community Facilities Study Area

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qualitative discussion after impacts, if any, have been identified. Sources for the information will be noted in the EIS text or footnotes.

- Identify the local public library branch(es) serving the area. Describe existing population served by the branch(es), using information gathered for socioeconomic conditions assessment and information services provided by branch(es). Circulation, level of utilization, and other relevant existing conditions will be based on publicly available information and/or consultation with the NYPL administration. Sources for the information will be noted in the EIS text or footnotes. For No-build conditions, projections of population change in the area and information on any planned changes in library services of facilities will be described and the effects of these changes on conditions will be assessed qualitatively. The effects of the addition of the population resulting from the projected developments will be qualitatively assessed in terms of special programs, facilities, and collections, with input from library branch management staff.
- Identify hospital emergency room services and outpatient ambulatory care facilities (regulated by the NYS Department of Health and Office of Mental Health) within approximately one mile of the Action Area. Describe each facility in terms of its address, the type of service provided, an indicator of its size, capacity or utilization, and any other relevant existing conditions based on publicly available information and/or consultation with health care officials. For No-Build conditions, the projected change in the area's low-moderate-income population and any planned changes in health care facilities or services will be described, and the effects of these changes on the operating capacity of the facilities will be assessed. The potential effects on health care facilities from the additional population resulting from the proposed project will be assessed in comparison with the effects of changes expected to occur in the future without the proposed project. Sources for the information will be noted in the EIS text or footnotes.
- Identify existing public day care and head start facilities within approximately one mile of the Action Area. Describe each facility in terms of its location, ages served, number of slots (capacity), existing enrollment and length of waiting list. Information will be based on publicly available information and/or consultation with the Administration for Children's Services' Division of Child Care and Headstart (CCHS). Sources for the information will be noted in the EIS text or footnotes. For No-Build conditions, information will be obtained on any changes planned for day care programs or facilities in the area, including closing or expansion of existing facilities and establishment of new facilities. Any expected increases in the population of children under 12 within the eligibility income

limitations, based on *CEQR* methodology (Table 3C-4), will be discussed as potential additional demand; and the potential effect of any population increases on demand for day care services in the study area will be assessed. The potential effects of the additional eligible children resulting from projected developments induced by the RWCDS will be assessed by comparing the estimated net demand over capacity to the net demand over capacity estimated in the Future No-Build analysis.

- A brief discussion of existing police and fire services in or near the project study area will be provided for informational purposes.

TASK 5. OPEN SPACE

New residents and workers generated from new development and conversions in the rezoning areas would place added demands on existing open space and recreational facilities. The proposed action would generate more than 200 residents and has potential to generate up to 500 new employees, thereby requiring an assessment of open space resources. As part of the proposed actions, a park would be mapped on a site located between the Harlem River and Exterior Street, south of the extension East 146th Street, and north of the extension of East 144th Street. The site, which is currently occupied by bus parking and warehouse uses, would be developed with two acres of parkland under the proposed actions. Absent the proposed actions, current uses are expected to continue.

A detailed open space analysis will be conducted according to the following tasks:

- Using 2000 Census data, calculate the total residential population of the open space study area, which as per CEQR guidelines, would be defined as the area within a half-mile radius from the rezoning area with the study area boundary adjusted to include all census tracts with at least 50 percent of their area within the half-mile radius. The population will be identified pursuant to Table 3D-10 of the CEQR Technical Manual. Refer to Figure 7.
- Inventory existing active and passive open spaces within the open space study area. The condition and usage of existing facilities will be described based on the inventory and field visits. Jurisdiction, features, user groups, factors affecting usage, hours of operation, and access will be included in the description of facilities. Also, the potential for facilities to be affected by direct impacts, such as from shadows cast by the action induced development, will also be assessed. Acreage of these facilities will be determined and total study area acreage



Legend

- Proposed Rezoning Area
- Nonresidential Study Area
- Residential Study Area

Source: NYC Department of City Planning MapPLUTO 2006; STV Incorporated

Figure 7: Open Space Study Area

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calculated. The percentage of active and passive open space also will be calculated. A map showing the locations of open spaces keyed to the inventory will be provided.

- Based on the inventory of facilities and study area population, the open space ratios for the residential population will be calculated and compared to City guidelines to assess adequacy. This is expressed as the amount of open space acreage per 1,000 user population. Open space ratio will be calculated for active and passive open space, as well as the ratio for the aggregate open space.
- Assess expected changes in future levels of open space supply and demand in the Build year, based on other planned development projects within the open space study area. Also take account of any new open space and recreational facilities expected in the open space study area. Open space ratios will be developed for future conditions without the action and compared with open space ratios for future conditions with the action to determine changes in future levels of adequacy.
- If the results of the impact analysis identify a potential for a significant adverse impact, discuss potential mitigation measures.
- A preliminary assessment of the potential for open space demand generated by workers will also be prepared. However, if it is determined that the action would generate 500 or more new non-residents, such as employees or a similar number of other users, there will need to be an additional analysis for the non-residential population, based on a quarter-mile radius (adjusted to include census tracts that are 50 percent or more within the quarter-mile study area radius) from the project area following the methodology in the *CEQR Technical Manual*.

TASK 6. SHADOWS

This chapter will examine the proposed action's potential shadows effects pursuant to *CEQR Technical Manual* criteria. Generally, shadow impacts could occur if an action would result in new structures or additions to buildings resulting in structures over 50 feet in height that could cast shadows on natural features, publicly accessible open space, or on historic features that are dependent on sunlight. The proposed action would permit development of buildings of greater than 50 feet in height, and therefore has the potential to result in shadow impacts in the areas to be rezoned. The EIS will assess the RWCDS, on a site-specific basis for potential shadowing effects of new developments or enlargements at both the projected and potential development sites on light-sensitive uses, and disclose the range of shadow impacts, if any, which are likely to result from the action, further identifying:

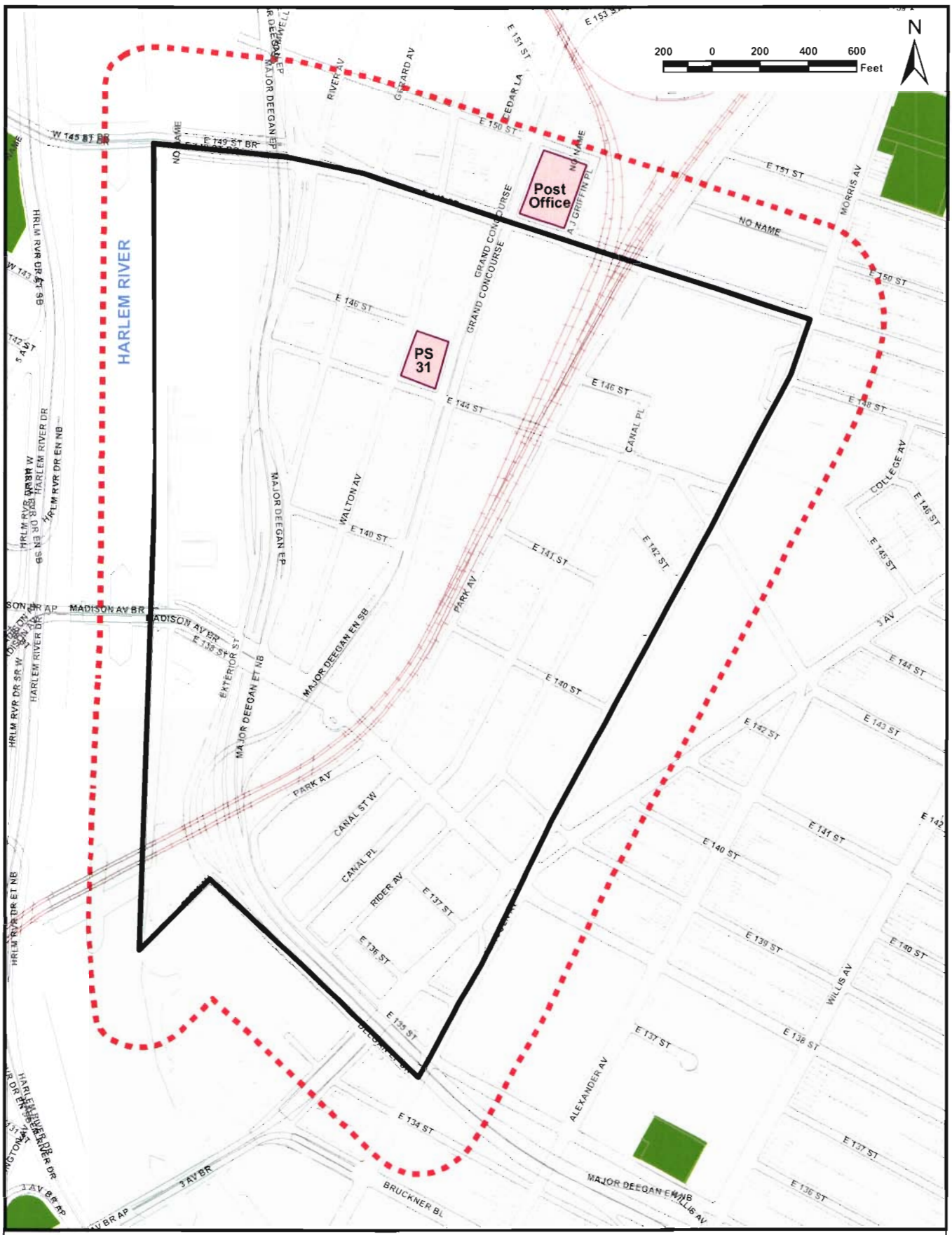
- Projected and potential development sites adjacent to natural resources, historic resources, and/or publicly accessible spaces. This may include former PS 31 (a landmark at 425 Grand Concourse), the Harlem River, and Harlem River Parks, among other resources.
- Projected and potential development sites located in areas which are not susceptible to shadow impacts.
- If warranted, describe in shadow diagrams and text the potential effect of shadows from buildings resulting from the identified development scenario on light-sensitive natural resources, publicly accessible open spaces or sunlight-dependent features of historic resources.

The shadow assessment would be coordinated with Task 5, "Open Space" and Task 7, "Historic Resources," where appropriate.

TASK 7. HISTORIC RESOURCES

The *CEQR Technical Manual* identifies historic resources as districts, buildings, structures, sites, and objects of historical, aesthetic, cultural, and archaeological importance. This includes designated NYC Landmarks; properties calendared for consideration as landmarks by the New York City Landmarks Preservation Commission (LPC); properties listed on the State/National Register of Historic Places (S/NR) or contained within a district listed on or formally determined eligible for S/NR listing; properties recommended by the NY State Board for listing on the S/NR; National Historic Landmarks; and properties not identified by one of the programs listed above, but that meet their eligibility requirements. Because the proposed action would induce development that could result in new in-ground disturbance and construction of a building type not currently permitted in the affected area, the action has the potential to result in impacts to archaeological and architectural resources. Historic Resources of note in the study area include Public School 31, located at 425 Grand Concourse, and the Bronx Post Office, at 560 Grand Course at East 149th Street, immediately north of the rezoning area boundary. No historic resource is known to be located on a projected development site.

Impacts on historic resources are considered on the affected sites and in the area surrounding identified development sites. The historic resources study area is therefore defined as the area to be rezoned plus a 400-foot radius, as per the guidance provided in the *CEQR Technical Manual* (see Figure 8). In addition, potential for significant adverse



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- Proposed Rezoning Area
- Primary Study Area (Approximate 400-Foot Radius)

Source: STV Incorporated

Figure 8: Historic Resources Study Area

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shadowing impact upon historic resources outside the rezoning area and study area will be considered, based upon the maximum shadowing envelope developed under Task 6.

Archaeological resources are considered only in those areas where new in-ground disturbance is likely to occur; these are limited to sites that may be developed in the rezoning areas, and include projected as well as potential development sites. In coordination with the research conducted for the land use and hazardous materials tasks, this section will include an overview of the study area's history and land development. This history will be detailed enough to determine whether any potential archaeological resources may be on the site, requiring further study. Subtasks will:

- Research and describe history of land use, architecturally and archaeologically sensitive locations.
- Identify, map and describe designated historic/architectural resources (New York City Landmarks or pending Landmark designation and properties listed on the State and National Registers of Historic Places) in the project area and immediate vicinity.
- Submit the proposed action to the New York City Landmarks Preservation Commission (LPC) for its review and determination.
- Based on City and State files, identify and map inventoried archaeological resources and/or sensitive locations.
- Identify those areas thought to be archaeologically sensitive within the areas to be rezoned.
- In coordination with the land use task, assess probable impacts of development resulting from the rezoning action on architectural resources in the study area.
- Identify projected and potential development sites where new in-ground disturbance is expected to occur as a result of the proposed action.

If there are projected or potential development sites identified by LPC or other record searches as archaeologically sensitive, prepare Phase IA Archaeological Documentary Reports. The Phase 1A will document the site history, its development and uses, and the potential for the site to host significant archaeological features. The EIS will summarize the results of the Phase IA analyses. The full Phase IA report will be submitted to LPC for review.

TASK 8. URBAN DESIGN AND VISUAL RESOURCES

This chapter will assess urban design patterns and visual resources of the study area as defined in Chapter 3G, Section 310 of the *CEQR Technical Manual* and the effects on these of the proposed action. The proposed action would affect regulations on the building's bulk and height and therefore has the potential to result in impacts related to urban design and visual resources. A detailed preliminary screening analysis will be undertaken to identify whether the proposed action would exceed any of the thresholds identified in the *CEQR Technical Manual*. The urban design/visual resources study area will include the area within a quarter-mile radius of the proposed rezoning area, adjusted to include whole City blocks and natural features (see Figure 9). Subtasks will:

- Describe the urban design and visual resources of each rezoning area and adjacent areas, using photographs and other graphic material as necessary to identify critical features, use, bulk, form, and scale.
- Discuss specific relationships between the proposed rezoning area and adjacent areas regarding light, air, and views.
- Describe the changes expected in the urban design and visual character of the project areas resulting from the various projects proposed for development in the study areas in the future without the action.
- Describe the potential changes that could occur in the urban design character of the rezoning area. For the projected and potential development sites, the analysis will focus on general building types for sites that are assumed for development as well as elements such as street wall height, setback, and building envelope. Photographs and/or other graphic material will be utilized, where applicable, to assess the potential effects on urban design and visual resources for each study area, including views to resources of visual or historic significance.

TASK 9. NEIGHBORHOOD CHARACTER

The character of a neighborhood is established by numerous factors, including land use patterns, the scale of its development, the design of its buildings, the presence of notable landmarks, and a variety of other physical features that include traffic and pedestrian patterns, noise, etc. The proposed action would permit new development that has the potential to alter certain constituent elements of the affected area's neighborhood character, including land use patterns, socioeconomic conditions, traffic and noise levels, and urban design features, and could affect historic resources. An amalgam of impact categories, a neighborhood character analysis considers the



Legend

Proposed Rezoning Area

Urban Design Study Area (Approximate 1/4-Mile Radius)

Source: STV Incorporated

Figure 9: Urban Design Study Area

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combined impacts of land use, urban design, visual resources, historic resources, socioeconomics, traffic and noise issues.

- Drawing on other EIS sections, describe the predominant factors that contribute to defining the character of the neighborhood.
- Based on planned development projects, public policy initiatives, and planned public improvements, summarize changes that can be expected in the character of the neighborhood in the future without the action.
- The analysis of project impacts presented in various EIS sections will serve as the basis for assessing and summarizing the project's impacts on neighborhood character.

TASK 10. HAZARDOUS MATERIALS

A preliminary screening assessment prepared pursuant to the *CEQR Technical Manual* will be conducted for the 79 projected and potential development sites in the rezoning area to determine which sites require further assessment. The preliminary screening assessment will consist of visual or historical documentation of any of the past or current uses (identified in Chapter 24 of Title 15 of the Rules of the City of New York) at a development site and/or tax lot(s) that might have affected or be affecting a development site.

Thirty of the 31 projected development sites are under private ownership. Based on the preliminary screening assessment, if sites are identified as having the potential for hazardous materials contamination, they will be mapped with (E) designations. The (E) designation would require that the fee owner of an (E) designation site conduct a testing and sampling protocol, and remediation, where appropriate, to the satisfaction of the New York City Department of Environmental Protection (DEP) before the issuance of a building permit by the Department of Buildings (pursuant to Section 11-15 Zoning Resolution - Environmental Requirements). The (E) designation also includes mandatory construction-related health and safety plans which must be approved by the NYCDEP.

One of the 31 projected development sites (Site 3 – Block 2323, Lot 28) is publicly owned and cannot be mapped with an (E) designation. Therefore, a Phase I Environmental Site Assessment (ESA) will be conducted for this site pursuant to Title 15, Chapter 24, Section 24-05.

For purposes of the Scope of Work and EIS, it is assumed that the Department of Parks and Recreation (DPR) would acquire Projected Development Site 2 (Block 2349, Lot 100) for parkland. The site, which is located between the Harlem River and Exterior Street, south of the extension East 146th Street, and north of the extension of East 144th Street, would not be subject to an (E) designation. Rather, a Phase I ESA will be prepared to determine previous uses on the site and in adjacent areas with the potential to have resulted in site contamination. If the Phase I assessment is insufficient to define the potential impacts from contamination materials on the site, then Phase II testing will likely be necessary. If Phase II testing is necessary, DPR will enter into a Memorandum of Understanding with DEP ensuring that, prior to the acquisition of the property, all appropriate testing at the proposed park site will be completed. All necessary remediation measures would be undertaken, as necessary, following acquisition and prior to construction.

Subtasks will include:

Review of Information Regarding Topographical and Subsurface Conditions
Appropriate United States Geological Society (USGS) topographical maps will be reviewed to ascertain the topography and drainage patterns for each Site. Available USGS and New York State Geological Survey documents will be reviewed for surface and subsurface geological conditions in addition to the groundwater conditions in the area of the subject properties.

Acquisition and Review of Historical Land Use Data
Sanborn Fire Insurance Maps will be reviewed to develop a profile on the historical usage of the properties. If further historical investigation is required at individual lots, the review may include City Directories, historical maps and atlases, renovation information on the buildings, and tax assessor records.

Site Reconnaissance
It is understood that the majority of the buildings within the rezoning area are owned privately and an on-Site reconnaissance is not always feasible. Therefore, the Site reconnaissance will consist of observing the sites from public access ways (i.e., sidewalks and streets) only and noting the general uses of the buildings (i.e., industrial, manufacturing, residential, commercial, etc.). An interior Site inspection will be recommended if necessary. The site reconnaissance will include the following activities:

- Characterization of the range of industrial uses and activities performed in the rezoning area;
- Description of constituents most commonly associated with the industrial activity;
- Visual inspection of the vegetation and surrounding property to look for stressed vegetation, disturbed topography, soil staining, surface water sheens, noticeable odors, and/or areas that have been excavated and refilled;
- Notation of surrounding properties to assess potential impacts on the subject property;
- Notation of illegal dumping of domestic refuse, hazardous waste, and/or construction debris;
- Evidence of electrical transformers or large capacitors on the subject property; and
- Evidence of underground storage tanks or aboveground storage tanks (USTs and/or ASTs) on the subject property.
- Evaluation and Report of Findings (including draft and final reports)
- The data collected will be evaluated to assess the potential for environmental concerns at the subject sites and potential environmental impacts from surrounding properties. Upon completion of the preliminary screening assessments for each development site, a summary of findings and conclusions will be prepared for inclusion in the EIS. Since the majority of the buildings within the rezoning area are owned privately and an on-Site reconnaissance is not feasible, current and historical uses of the sites will be used to determine where (E) designations may be appropriate where further investigations are necessary.

TASK 11. NATURAL RESOURCES

The proposed rezoning is adjacent to the Harlem River, and the proposed action would induce development within the designated boundaries of the NYC Coastal Zone, and is a largely developed urban area. The projected and potential development sites have largely been paved and developed and are not expected to hold significant potential for natural resources. The assessment of potential impacts to natural resources will be conducted following the guidelines of the *CEQR Technical Manual*. In addition to analysis of potential impacts, the natural resources chapter will include a description of the federal, state, and local laws and associated regulations and regulatory programs that may apply to the Proposed Action with respect to water quality, aquatic and terrestrial biota, and aquatic and terrestrial habitats. A detailed screening analysis will

be presented in the EIS identifying whether the proposed action would result in significant impacts to natural resources, and if warranted, detailed analysis will be provided that would include an analysis of the combined sewage outflow (CSO) generated by the proposed rezoning.

TASK 12. WATERFRONT REVITALIZATION PROGRAM

New York City's Local Waterfront Revitalization Program (LWRP) was adopted pursuant to several local, State and federal regulatory programs relating to the coastal area. The LWRP policies are used as the basis for evaluation of discretionary actions within the coastal zone that require only City permitting/approvals or Uniform Land Use Review Procedure (ULURP) review. The proposed action would induce new development within the designated NYC coastal zone boundary and must therefore be considered for its consistency with the City's Waterfront Revitalization Program (WRP).

Two major components of the proposed Lower Concourse Rezoning and Related Actions are the Waterfront Access Plan (WAP) and Special Lower Concourse Waterfront District. Implementation of the access plan may be affected by existing shoreline conditions, for example, whether there is a stable seawall along the waterfront or if littoral wetland conditions exist. Shoreline conditions will be assessed to determine if they may affect the design of the waterfront esplanade.

(2) The EIS will include an analysis of socioeconomic conditions in the study area. The WRP assessment of consistency with Policy 1: Support and facilitate commercial and residential redevelopment in areas well-suited to such development, will be supported by the EIS assessment of exiting and anticipated socioeconomic conditions.

TASK 13. INFRASTRUCTURE

This chapter will describe the existing infrastructure in the project area. For CEQR, the City's "infrastructure" comprises the physical systems supporting its population, including water supply, wastewater treatment and stormwater management. The proposed action would induce new development which could place additional demands on infrastructure. An analysis will be conducted to determine the potential for the proposed action to affect the City's infrastructure, and, if warranted, will include an analysis of combined sewage outflows (CSO) generated by the proposed action, if warranted. Tasks will include:

Water Supply

- The existing water distribution system serving the proposed action area will be described based on information obtained from the New York City Department of Environmental Protection's (NYCDEP) Bureau of Water Supply and Wastewater Collection.
- The current water usage in the area will be examined.
- The likely demand will be assessed for future conditions without the action, and the effects on the system will be described.
- Water demand for the proposed action will be projected.
- The effects of the incremental demand on the system will be assessed to determine if there is sufficient capacity to maintain adequate supply and pressure.

Sewage and Stormwater

- The existing sewer systems serving the project area will be described from information obtained from NYCDEP. Existing and future flows to the Ward's Island Water Pollution Control Plant (WIWPCP) serving the area will be calculated and estimated. Information on existing sewer infrastructure in the area, including sanitary, storm, and combined sewer mains, sewer connections, catch basins, regulators, interceptor sewers, outfalls, and other components of the local system will also be provided.
- Discuss existing combined sewer overflow during storm events.
- Discuss any expected changes in sewer conditions to occur in the future without the Proposed Action.
- Information on sanitary sewage and stormwater generation will be compiled for the proposed action based on water usage estimates. The adequacy of sewer systems to meet demand generated by the proposed action will be assessed.
- The effects of the incremental demand on the system will be assessed to determine if there will be any impact on the WIWPCP, or on its State Pollution Discharge Elimination System (SPDES) permit conditions.
- Describe the potential effects of the Proposed Action on the local sewerage system, including its operation during major storm events.

TASK 14. SOLID WASTE AND SANITATION SERVICES

The proposed action would induce new development that would require sanitation services. This chapter will provide an estimate of the additional solid waste expected to be generated by the projected developments and assess its effects on the City's solid waste and sanitation services.

- Existing and future New York City solid waste disposal practices will be described.
- Existing and future no-action solid waste generation will be estimated.
- Solid waste generation by the proposed action will be projected based on CEQR guidelines.
- The impacts of the proposed action's solid waste generation on the City's collection needs and disposal capacity will be assessed.

TASK 15. ENERGY

According to the *CEQR Technical Manual,* because all new structures requiring heating and cooling are subject to the New York State Energy Conservation Code, which reflects State and City energy policy, actions resulting in new construction would not create adverse energy impacts, and as such would not require a detailed energy assessment. A qualitative assessment will be provided in the EIS, as appropriate.

TASK 16. TRAFFIC AND PARKING

The traffic and transportation studies will be a critical focus of the EIS, including four significant issues: (1) the size of the traffic study area and the number of intersections to be analyzed both within the project area and along major routes leading to them; (2) the likelihood that the proposed action and the amount of development envisioned will generate significant impacts requiring substantial levels of mitigation; (3) potential increase in the parking demand; and (4) an increased level of subway, bus, and pedestrian use, and possibly mitigation needed to accommodate transit passengers.

Task 16A: Traffic
The proposed action is expected to generate more than 50 additional (net) vehicular trips in project study area. Therefore, the EIS will provide a detailed traffic analysis for the weekday AM, midday, PM and Saturday midday peak hours, focusing on those

intersections handling the highest concentrations of action-generated demand. Based on the preliminary travel demand forecast made for the proposed action, 40 intersections would be analyzed in detail for potential traffic impacts (see Figure 10). A technical memorandum of preliminary transportation planning assumptions and demand analysis is included in Appendix 2. The preliminary trip generation Subtasks of the Traffic analysis will:

- Define a traffic study area consisting of intersections to be analyzed within the area to be rezoned (i.e., the primary traffic study area) and along major routes leading to and from the area, i.e., the secondary traffic study area.
- Compile existing traffic conditions data for the study area. Traffic counts at traffic analysis locations will be conducted via a mix of automatic traffic recorder (ATR) machine counts and manual intersection turning movement counts. ATRs will provide 24-hour traffic volumes for a full week at selected arterial locations. Traffic counts will be conducted during the AM, midday, PM and Saturday midday peak periods.
- Conduct travel speed and delay runs along four (4) routes as support data for air quality and noise analyses. It is anticipated that these speed-and-delay runs will be conducted in conjunction with the traffic volume counts.
- Inventory physical data at each of the analysis intersections needed for capacity analyses, including street widths, number of traffic lanes and lane widths, pavement markings, turn prohibitions, typical parking regulations, and NYCDOT signal phasing and timing data.
- Determine traffic operating characteristics at each analysis intersection including capacities, volume-to-capacity (v/c) ratios, average vehicle delays, and levels of service (LOS) per traffic movement, per intersection approach, and per overall intersection. 2000 Highway Capacity Manual procedures will be used. (Version 4.1f)
- Based on available sources, 2000 US Census data, and standard references, estimate the travel demand characteristics of the existing/No-Build uses on the projected development sites as well as the planned developments at other sites in the study area. This will include daily and hourly person trips, and a modal distribution to estimate trips by auto, taxi, and other modes (refer to discussion of transit and pedestrians for more discussion of other modes). A truck trip generation will also be conducted.
- Using the same transportation planning assumptions as for No Build conditions, estimate the travel demand characteristics of the projected developments associated with the proposed action and for the net change in uses as defined in the project development scenario.



Legend

Primary Study Area

Secondary Study Area

Source: STV Incorporated

Figure 10: Traffic Study Area

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- Compute future No Build traffic volumes based on an approved background traffic growth rate for the study area and the volume of traffic expected to be generated for significant development projects anticipated to be in place by the proposed Build year for the rezoning action. Intersection volume-to-capacity (v/c) ratios, delays, and LOS will also be determined.
- Determine the volume of vehicle traffic expected to be generated by the rezoning action, assign that volume of traffic in each analysis period to the approach and departure routes likely to be used, and prepare traffic volume networks for the future Build condition for each analysis period. It is assumed that this traffic assignment process will be completed for the projected development sites in the study area.
- Determine the resulting v/c ratios, delays, and LOS for the future Build condition, and identify significant traffic impacts in accordance with CEQR Technical Manual criteria.
- Identify and evaluate traffic improvements needed to mitigate significant traffic impacts. The mitigation analysis will frame the full set of measures required in the EIS development scenario built by 2018.
- Construction period traffic impacts will be assessed qualitatively by considering any losses in lanes, walkways, and other above and below grade transportation services, and increases in vehicles from construction workers, and analyze potential temporary impacts to these transportation systems.

Task 16B: Parking

The parking studies will focus on the amount of parking to be provided as part of the projected developments envisioned in the RWCDS (assumed to be maximum permitted as-of-right pursuant to zoning and reflecting site conditions, i.e., new developments are expected to provide accessory parking while conversion and conversion/expansion developments are not) and their ability to accommodate projected parking demand induced by the proposed action. Area-wide parking inventories will also be conducted to determine the general area's capacity to accommodate additional parking. In addition, any changes to parking supply and demand in future without the proposed action will also be considered.

- Conduct an inventory of the public parking lots and garages in the study area, noting their locations, capacities, and peak weekday and overnight utilization levels. Conduct an inventory of the number of legal on-street parking spaces within the project area and their general utilization levels on a typical weekday.

This information will be used as the basis for determining the ability of existing parking resources to accommodate increased demands in the future.

- Project future parking availability based on an annual background growth rate. Any existing parking facilities expected to be removed or relocated or other changes to parking conditions in the future as a result of the rezoning action will be factored into this assessment.
- Develop parking accumulation profiles for each of the projected development sites expected to occur as a result of the proposed action by the Build year of 2018. It will be assumed that each identified new development would provide parking in accordance with applicable zoning requirements. Based on these assumptions, an assessment will be provided to determine whether there would be excess parking demand, and whether there are a sufficient number of other parking spaces available in each area to accommodate that excess demand.

TASK 17: TRANSIT AND PEDESTRIANS

Task 17A: Transit

The proposed action is expected to generate a net increase of more than 200 subway and bus trips, the threshold for detailed transit analysis, in the AM and PM peak hours. Subway and bus modes will be examined to determine existing, future No-Build, and future Build conditions. The subway analyses will focus on nearby existing stations; the bus studies will evaluate local bus service with routings that use one or more streets in the project area.

- Conduct pedestrian counts at critical elements of some or all of the following stations in the study area: East 138th Street and East 149th Street IRT Local and Express 2 (Seventh Avenue), 4, 5, and 6 (Lexington Avenue); These counts will be conducted in the weekday AM and PM peak periods.
- Determine the existing capacities and LOS along or through critical elements of analyzed stations according to CEQR Technical Manual and/or NYC Transit design criteria.
- Determine future No-Build and Build volumes at these analysis locations using background ridership growth rates for the stations and project-generated subway riders. Significant impacts will be identified and mitigation measures identified where necessary in coordination with NYC Transit.
- Identify the bus routes serving the area, detailing existing, future No-Build, and future Build conditions, i.e., bus load levels. Mitigation needs will be identified and improvement or increases in service will be suggested, as appropriate.

Task 17B: Pedestrians
A substantial amount of new pedestrian trips are expected to be generated by the proposed action, particularly related to the retail growth, and pedestrian analyses will be provided in the EIS. Pedestrian studies will focus on up to 7 key intersections in the study area. The pedestrian locations will include all intersections with a subway entrance along the Grand Concourse. The pedestrian analysis will:

- Conduct and analyze pedestrian counts at critical locations in the study area. Corners, crosswalks, and adjoining sidewalks will be evaluated adjacent to major sites in each development scenario and at intersections throughout the study area based upon pedestrian patterns to/from area subway stations.

TASK 18. AIR QUALITY

An assessment of mobile sources will be conducted to estimate the potential air quality impacts of the changes in traffic conditions that will result from the rezoning. Also, the EIS will address the potential for future residential and commercial land uses to be affected by air pollutants emitted from existing nearby sources. A stationary source air quality analysis will therefore be conducted, following the procedures outlined in the *CEQR Technical Manual*, to determine whether these emissions have the potential to cause violations of national ambient air quality standards or health-related guideline values within these residential areas.

Mobile Source Analyses
The specific work program for the mobile source (traffic-related) air quality studies is as follows:

- Update existing air quality data. Collect and summarize existing ambient air quality data for the study area.
- Based on findings from traffic and parking analysis, determine receptor locations for microscale analysis. Critical receptor locations to be analyzed will include high volume and/or heavily congested intersections and highly utilized parking facilities found in the traffic and parking analysis where the maximum total pollutant concentrations with the proposed action or incremental pollution concentrations resulting from the proposed action are likely to occur and where people are likely to have continuous access. Locations may include sidewalks,

parks, schools, or other sensitive uses next to or above roadways, pedestrian paths in or near parking facilities, etc.

- Select dispersion model for microscale carbon monoxide analysis. At the receptor sites, it is anticipated that the USEPA mobile source CAL3QHR dispersion model will be used for the carbon monoxide microscale analysis.
- Emissions from any on-site parking facilities will be modeled using the procedures as described in the *CEQR Technical Manual*. Cumulative impacts from on-street sources and parking emissions will be calculated.
- Select "worst-case" meteorological conditions. Worst-case conditions to be assumed are 1.0 meter/second wind speed, Class D stability, 50°F temperature, and 0.70 persistence factor.
- Select appropriate background levels. For the microscale carbon monoxide analysis, appropriate background levels for the study area will be obtained from NYSDEC and NYCDEP.
- Select emission calculation methodology. Vehicular emissions will be computed using the EPA-developed MOBILE6 model. NYSDEC and DEP-supplied information will be used regarding credits to account for the state vehicle emission inspection and maintenance program, and the state anti-tampering program.
- Determine pollutant levels. At each microscale analysis site calculate, maximum 1- and 8-hour carbon monoxide concentrations for existing conditions, the future without the proposed action, and the future with the proposed action. Contributions from any on-site parking facilities will be included where appropriate.
- Compare with standards and impact evaluation. Existing and future carbon monoxide pollutant levels will be compared with standards and the City's de minimis criteria, and with one another to determine trends and action impacts.
- Assess the consistency of the proposed action with the strategies contained in the State Implementation Plan (SIP) for the area. Consistency with the applicable SIP for the area will be determined. At any receptor sites where violations of standards occur, determine what mitigation measures will be required to attain standards.
- Examine mitigation measures, as necessary. Analyses will be performed to examine and quantify ameliorative measures to minimize any significant adverse impacts of the proposed action.
- An analysis of PM10 and PM2.5 will be conducted, if applicable, following procedures that are currently being developed and updated by NYCDEP.

Stationary Source Analyses

There will be an analysis of the potential for the emissions from the HVAC systems of the projected and potential sites to significantly impact existing land uses or to significantly impact any of the other projected or potential development sites (i.e., project-on-project impacts).

- Three criteria pollutants will be considered; NO2, PM10, and SO2.
- The estimated short-term and annual pollutant concentrations of the criteria pollutants will be added to appropriate background levels, and total pollutant concentrations will be compared with NAAQS standards to determine whether there will be the potential for a violation of these standards at any of the areas that will be rezoned to permit residential uses.
- Consideration of large emission sources located within 1,000 feet of the new residential areas will be undertaken, if field surveys indicate that such sources exist.

Analysis of Air Toxics

The analysis will be conducted as follows:

- In accordance with the CEQR Technical Manual, emissions from industrial/manufacturing or commercial facilities located within 400 feet of the projected or potential residential development sites (i.e., the air quality study area) will be considered. Based on field surveys, it appears that a number of the industrial/manufacturing, including auto body repair shops, graphic art facilities, dry cleaners, are located in or near the area to be rezoned. Although the *CEQR Technical Manual* guidelines also require the consideration of large emission sources located within 1,000 feet of the new residential areas, if field surveys indicate that such sources exist.
- A list of potential emission sources within the air quality study area will be compiled based on USEPA, NYSDEC, and NYCDEP's databases and field observations. If facility types are commonly associated (based on SIC code and USEPA AP-42 emission descriptions) with potentially harmful pollutants, emission information for these facilities will be requested from NYCDEP's Bureau of Environmental Compliance (BEC). Emission and stack parameter data contained in BAR operating permits will then be used to estimate any potential for these sources to result in air quality levels at the new residential sites that exceed applicable air quality standards and guidelines.
- Guidelines values, developed by EPA and NYSDEC (as described in the 2001 CEQR Technical Manual) will be used for determining potential project impacts

of the toxic air pollutants. These are short-term (1-hr) SGC and long-term (annual) AGC guideline values (NYDEC Air Guide-1, Guidelines for the Control of Toxic Air Contaminants), and EPA's unit risks factors for inhalation (USEPA Integrated Risk Information System (IRIS) and EPA Health Effect Assessment Summary Tables).

EPA's "Hazard Index Approach" will be utilized to assess exposure levels associated with non-carcinogenic toxic air pollutants, and EPA's unit risk approach will be used to assess potential long-term impacts of the carcinogenic pollutants. The "Hazard Index Approach" is based on estimating the ratio of pollutant concentrations divided by their respective health-related Guideline Values (GVs). Results of the stationary source air quality analysis for air toxics will be compared to the appropriate measures of environmental impact, as follows:

- Non-carcinogenic air pollutant results will be compared with applicable guideline values. If the total ratio of pollutant concentrations obtained by dividing by their respective GV value is found to be less than 1 for all pollutants combined, no significant air quality impacts will be predicted to occur due to non-carcinogenic toxic pollutant releases.
- Carcinogenic air pollutant results will be compared with EPA cancer risk threshold level of one-in-one million. Potential impacts will be reported if the total incremental cancer risk estimated from the emissions of all of the carcinogenic toxic pollutants combined is greater than one-in-one million.
- Estimates will be made using the USEPA's AERMOD dispersion model. In the event that potential violations of standards are estimated, measures to reduce pollutant levels to within standards will be examined for both stationary sources and air toxics analyses.

Cumulative Boiler Assessment

A cumulative boiler impact analysis will be performed for development sites that would be located in close proximity to one another and will be evaluated as "clusters" to estimate the potential cumulative impacts from the combined heating system emissions on existing land uses. A detailed dispersion analysis will be conducted.

Analysis of Large Scale Emission Sources on Projected and Potential Residential Development

A screening analysis would be performed in order to determine if detailed analyses of large scale sources of boiler emissions (i.e. existing commercial, institutional,

manufacturing or large-scale residential developments) onto projected and potential residential development is necessary. If the proposed action does not pass initial screening analysis, a more detailed analysis using AERMOD will be performed. Refer to Appendix 3 for air quality analysis assumptions.

TASK 19. NOISE

This chapter will examine potential noise impacts due to vehicular noise from project generated traffic (mobile sources) on sensitive receptors in the community and noise impacts from stationary sources on proposed residential uses or other sensitive receptors in the project study area. The noise analysis will evaluate the following:

- Changes in traffic noise levels as a result of the proposed action.
- Stationary source noise impacts at or near new sensitive receptors.
- Achievement of acceptable interior noise levels at projected and potential development sites.
- Short-term construction phase noise and vibration impacts.

Analysis Methodology:

Existing noise levels will be determined by monitoring future residential and other locations. Future noise levels will be estimated based on the proportionate change in traffic volume between existing and future conditions (Future Noise Level (dBA) = Existing Noise Level (dBA) + $10L_{og}$ (Future PCE/Existing PCE)) for both no-build and build conditions.

The *CEQR Technical Manual* recommended L_{10} (1-hour) descriptor will be used to characterize noise in the analysis.

The tasks below will be performed following the guidelines contained in the *CEQR Technical Manual*.

- Site Selection: Potentially affected sites will be selected during a site visit and in consultation with DCP. Selected sites will be representative of the future sensitive sites subject to the rezoning.
- Data Collection: At the identified locations existing noise readings will be determined by performing one-hour equivalent continuous noise levels (Leq) and statistical percentile noise levels. The noise levels will be measured in units

of "A" weighted decibels (dBA). The monitoring periods will coincide with the peak traffic noise periods. Two types of receptor sites will be selected: sites where the proposed rezoning would have the potential for significant impacts due to project-generated traffic and sites that are used to determine the building attenuation to comply with noise regulations.

- Build Year Noise Level Estimates: Following procedures outlined in the CEQR Technical Manual for assessing stationary and mobile source noise impact, future no-action and project noise will be estimated at the proposed sensitive land uses. Existing noise levels and mathematical models based on acoustic fundamentals will be used to determine the future no-action and action noise levels.
- Noise Criteria: CEQR air-borne noise criteria will be followed while determining project impacts at the future sensitive sites in the project area. The criteria will take into consideration the indoor and outdoor areas at the monitored sites, which are representative of future sensitive land uses in the area.
- Build Year Noise Impacts: Noise impacts will be determined by comparing future project noise levels with no-action noise levels following the CEQR methodology. Also, since the proposed action would introduce new sensitive receptors future noise levels will be compared with CEQR noise exposure guidelines. Both methodologies will be used in Impact determination.
- Noise from nearby stationary sources will also be assessed.
- Noise Abatement Analysis: At locations where abatement may be required, appropriate mitigation measures will be considered following the CEQR guidelines and recommendations for their implementation will be made (*CEQR Technical Manual*, Table 3R-4). Future residential buildings, where mitigation may be required as a result of rezoning, may receive (E) designation to ensure that noise attenuation is provided to comply with acceptable interior noise requirements.

  Construction Impacts: Construction phase noise impacts will be qualitatively assessed and recommendations will be made to comply with NYC DEP guidelines contained in DNA Report #CON-79-001 and New York City Noise Code. Noise and ground-borne vibration impacts during construction will be addressed at vulnerable sites and if necessary, appropriate recommendations will be made for their control.

Refer to Appendix 4 for noise analysis assumptions.

TASK 20. CONSTRUCTION IMPACTS

Construction impacts are usually important when construction activity could affect traffic conditions, archaeological resources, the integrity of historic resources, community noise patterns, air quality conditions and mitigation of hazardous materials. Because there are no specific plans for individual buildings, the construction assessment for the rezoning action will be qualitative, focusing on areas where construction activities may pose specific environmental problems. The chapter will address all projected sites for technical areas of concern related to construction. Suggestions on incorporating measures to avoid potential impacts will also be included.

TASK 21. PUBLIC HEALTH

Public health involves the activities that society undertakes to create and maintain conditions in which people can be healthy. Many public health concerns are closely related to air quality, hazardous materials, construction and natural resources. A public health assessment may be warranted if a proposed action results in a) increased vehicular traffic or emissions from stationary sources resulting in significant adverse air quality impacts; b) increased exposure to heavy metals and other contaminants in soil/dust resulting in significant adverse impacts, or the presence of contamination from historic spills or releases of substances that might have affected or might affect ground water to be used as a source of drinking water; c) solid waste management practices that could attract vermin and result in an increase in pest populations; d) potentially significant adverse impacts to sensitive receptors from noise and odors; or e) vapor infiltration from contaminants within a building or underlying soil that may result in significant adverse hazardous materials or air quality impacts. Based on the findings of the tasks discussed above, the EIS will provide an assessment of potential public health impacts, following the guidelines presented in the *CEQR Technical Manual.*

TASK 22. MITIGATION

Where significant adverse project impacts have been identified in Tasks 2 through 20, measures to mitigate those impacts will be described. These measures will be developed and coordinated with the responsible City/State agency. Where impacts cannot be mitigated, they will be described as unavoidable adverse impacts.

TASK 23. ALTERNATIVES

The purpose of an alternatives section in an EIS is to examine development options that would tend to reduce project-related impacts. The alternatives are usually defined when the full extent of project impacts is identified, but at this time it is anticipated that they will include the following:

As-of-Right (Future No Action Scenario) Alternative – An As-of-Right Alternative, which assumes no area-wide rezoning but includes as-of-right development from individual projects proposed by others in the rezoning area.

In addition, the EIS may analyze lesser-density and no-impact alternatives.
The alternatives analysis is primarily qualitative, except where impacts of the proposed action have been identified. For technical areas where impacts have been identified, the alternatives analysis will determine whether these impacts would still occur under each alternative.

TASK 24. SUMMARY EIS CHAPTERS

In accordance with CEQR guidelines, the EIS will include the following three summary chapters, where appropriate to the proposed action:

- Unavoidable Adverse Impacts - which summarizes any significant adverse impacts that are unavoidable if the rezoning is implemented regardless of the mitigation employed (or if mitigation is impossible).
- Growth-Inducing Aspects of the proposed action - which generally refer to "secondary" impacts of a proposed action that trigger further development.
- Irreversible and Irretrievable Commitments of Resources - which summarizes the proposed action and its impacts in terms of the loss of environmental resources (loss of vegetation, use of fossil fuels and materials for construction, etc.), both in the immediate future and in the long term.

TASK 25. EXECUTIVE SUMMARY

The executive summary will utilize relevant material from the body of the EIS to describe the proposed project, its environmental impacts, measures to mitigate those impacts, and alternatives to the proposed action. The executive summary will be written in enough detail to facilitate the drafting of a notice of completion by the lead agency.

Appendix 1

Summary of Build and No-Build Development on Projected Development Sites

Summary of No-Build and Build Development on Projected Development Sites

Site Description	No-Action Conditions							With-Action Conditions								
Projected Development Site	Comm'l SF	Ind.SF	CF SF	Res'l SF	Afford. Dus	Market Rate DUs	Total Res Dus	Proposed Zoning	Proposed FAR	Comm'l SF	Ind. SF	CF SF	Res'l SF	Afford. Dus	Market Rate Dus	Total Res DUs
1	0	14,759	0	0	0	0	0	R7-3/ C2-4	5.00	143,250	0	0	811,750	162	649	812
2	0	0	0	0	0	0	0	R7-3/ C2-4	5.00	60,000	0	0	340,000	68	272	340
3	0	21,700	0	0	0	0	0	R7-3/ C2-4	5.00	108,668	0	0	615,783	123	493	616
4	0	109,086	0	0	0	0	0	R7X/ C2-4	5.00	40,907	0	0	231,808	46	185	232
5	0	16,182	0	0	0	0	0	M1-4/ R8A	7.20	13,755	0	0	102,756	21	82	103
6	0	45,273	0	0	0	0	0	M1-4/ R8A	7.20	32,568	0	0	243,300	49	195	243
7	29,640	0	78,065	0	0	0	0	M1-4/ R8A	6.50 (for CF)	0	0	141,765	0	0	0	0
8	395,000	0	0	0	0	0	0	M1-4/ R8A	7.20	32,917	0	0	362,083	0	302	302
9	82,956	0	0	0	0	0	0	M1-4/ R8A	7.20	37,860	0	0	282,835	57	226	283
10	0	14,400	0	0	0	0	0	M1-4/ R6A	3.60	2,600	0	0	10,800	0	11	11
11	19,000	0	0	0	0	0	0	M1-4/ R6A	3.60	1,000	11,500	0	35,308	7	28	35
12	0	43,820	0	0	0	0	0	M1-4/ R6A	3.60	7,303	0	0	91,531	18	73	92
13	0	20,106	0	0	0	0	0	C6-2A	7.20	8,545	0	0	63,837	13	51	64
14	3,600	0	0	0	0	0	0	C6-2A	7.20	7,693	0	0	57,468	11	46	57
15	1,404	0	0	0	0	0	0	C6-2A	7.20	15,181	0	0	113,411	23	91	113
16	8,900	0	0	0	0	0	0	C6-2A	6.00	162,690	0	0	0	0	0	0

Summary of No-Build and Build Development on Projected Development Sites (Continued)

Site Description	No-Action Conditions							With-Action Conditions								
Projected Development Site	Comm'l SF	Ind.SF	CF SF	Res'l SF	Afford. Dus	Market Rate DUs	Total Res Dus	Proposed Zoning	Proposed FAR	Comm'l SF	Ind. SF	CF SF	Res'l SF	Afford. Dus	Market Rate Dus	Total Res DUs
17	0	18,750	0	0	0	0	0	M1-4/ R6A	3.60	13,281	0	0	42,969	9	34	43
18	37,354	0	0	0	0	0	0	M1-4/ R7X	5.00	32,215	0	0	157,285	31	126	157
19	2,440	1,430	0	0	0	0	0	M1-4/ R7X	5.00	10,625	0	0	51,875	10	42	52
20	10,974	0	0	0	0	0	0	M1-4/ R7X	5.00	9,328	0	0	45,542	9	36	46
21	23,000	0	0	0	0	0	0	M1-4/ R7X	5.00	9,775	0	0	47,725	10	38	48
22	2,510	0	0	0	0	0	0	M1-4/ R7X	5.00	837	0	0	2,510	0	3	3
23	2,700	0	0	0	0	0	0	M1-4/ R7A	4.60	2,700	0	0	8,100	0	8	8
24	0	23,239	0	0	0	0	0	M1-4/ R7A	4.60	18,000	0	0	0	0	0	0
25	17,907	0	0	0	0	0	0	M1-4/ R7A	4.60	0	11,907	0	6,000	0	6	6
26	0	0	12,524	0	0	0	0	M1-4/ R6A	3.60	0	0	12,524	61,959	0	62	62
27	9,804	0	0	0	0	0	0	M1-4/ R6A	3.60	2,451	0	0	7,353	0	7	7
28	0	36,150	0	0	0	0	0	M1-4/ R6A	3.60	0	36,150	0	12,050	0	12	12
29	104,000	0	0	0	0	0	0	M1-4/ R6A	3.60	0	84,000	0	20,000	0	20	20
30	2,163	0	0	3,522	0	2	2	M1-4/ R7A	4.60	5,721	0	0	25,241	5	20	25
31	10,175	0	0	0	0	0	0	M1-4/ R7A	4.60	18,828	0	0	83,063	17	66	83

Appendix 2
Transportation Planning Assumptions Memorandum

Memorandum

FINAL DRAFT

TECHNICAL MEMORANDUM

To: Files

From: Joseph Setteducato, P.E.

Date: April 17, 2008

Subject: Lower Concourse Rezoning EIS
Transportation Planning Factors

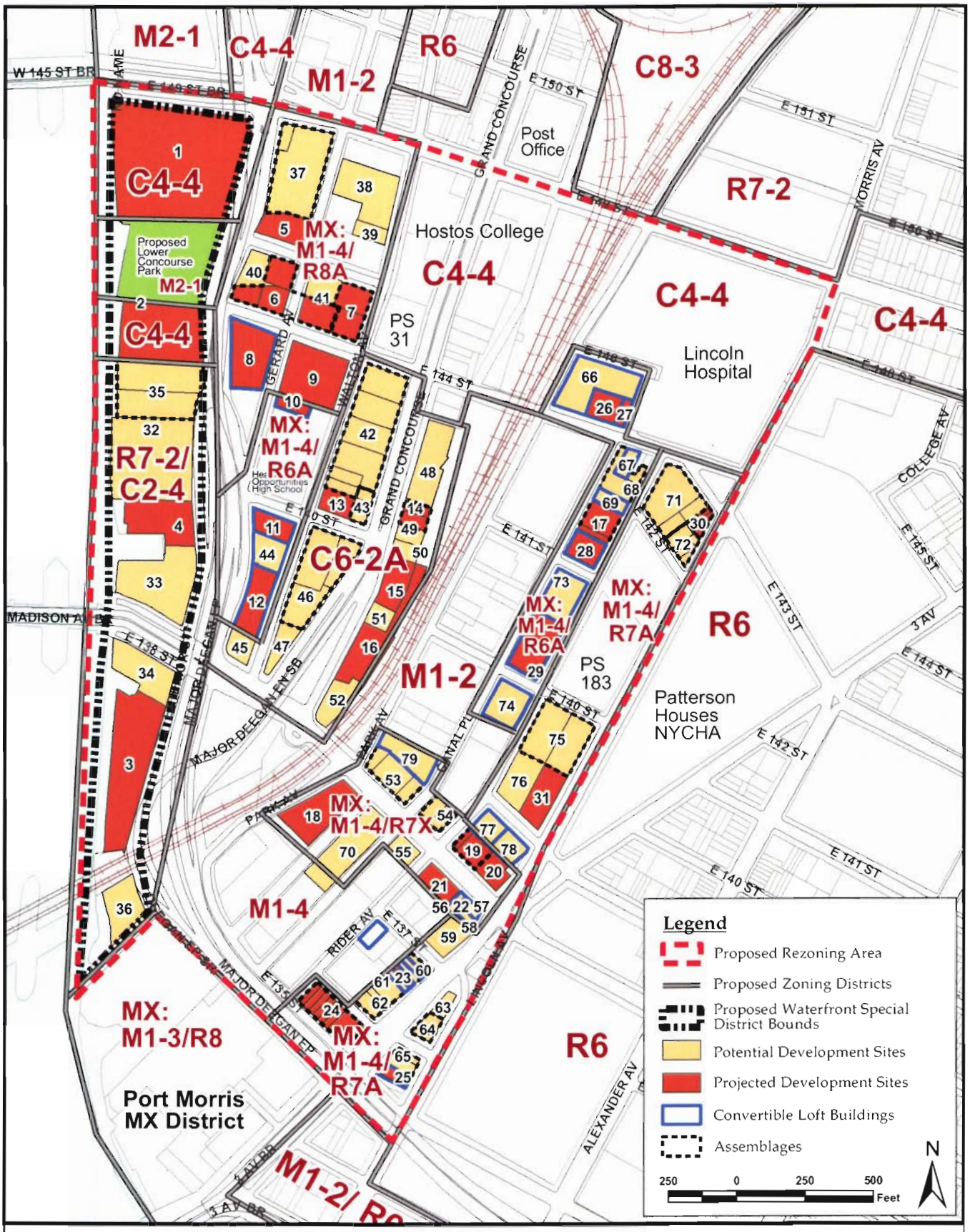
This memorandum summarizes the transportation planning factors to be used for the analyses of traffic, parking, transit and pedestrian conditions for the proposed Lower Concourse Rezoning EIS, including trip generation rates, temporal distributions, modal splits plus estimates of the projected travel demand of the proposed action for the weekday AM, midday,PM and Saturday midday peak analysis hours.

PROJECTED DEVELOPMENT

The New York City Department of City Planning (DCP) is proposing zoning map and zoning text amendments, and, in association with the NYC Department of Parks and Recreation (DPR), changes to the city map establishing a park, (collectively, "the proposed action"), affecting the Lower Concourse area of the South Bronx, Community District 1. The areas affected by the proposed action include all or portions of 30 blocks, generally bound by the Harlem River on the west, East 149th Street and East 144th Street on the north, Morris and Lincoln Avenues on the east, and the Major Deegan Expressway on the south (see Figure 1). The proposed action is intended to provide opportunities for new residential and commercial development and the enhancement and upgrade of the waterfront areas in the South Bronx. In the proposed action area, existing manufacturing zoning designations would be changed to permit residential and commercial uses on the waterfront and the Grand Concourse, residential and mixed uses in other areas, and to restrict certain areas currently zoned M2-1 to light manufacturing uses.

A zoning text amendment would establish the Lower Concourse Special Mixed-Use District (MX-10). The proposed zoning text amendment would create the Lower Concourse Waterfront Access Plan (WAP) consisting of two Harlem River waterfront blocks extending between the Harlem River and Exterior Street, south of East 149th Street and north of the Metro-North Railroad bridge over the Harlem River. The proposed WAP would specify the location of public access areas and visual corridors and apply special bulk regulations to waterfront lots. The proposed zoning text amendment would also permit food stores of any size as-of-right within the proposed rezoning area and

Figure 1:



Major Zoning Classifications

R - Residential District
C - Commercial District
M - Manufacturing District

Source: NYC Department of City Planning, 2008

Proposed Zoning and Projected and Potential Development Sites

Lower Concourse Rezoning and Related Actions EIS

NYC Department of City Planning

apply the Inclusionary Housing Program within the rezoning area in the Bronx, Community District 1. In addition DCP, in conjunction with the DPR, is proposing changes to the city map for the mapping of a new 1.5 acre park located along the Harlem River Waterfront within the rezoning area. The park will be located between the Harlem River and Exterior Street, generally south of the prolongation of East 146th Street and north of the prolongation of East 144th Street.

A reasonable worst case development scenario (RWCDS) for both future "No-Action" and future "With-Action" conditions will be evaluated for the study year of 2018. The future With-Action scenario identifies the size, type and location of development that is expected to occur by the study year with the proposed action. The future without the proposed action (or No-Action) scenario identifies similar development projections for the study year absent the proposed action or rezoning. The analysis of potential transportation impacts is based on the incremental difference in travel demand between the With-Action and No-Action scenarios.

A total of 31 "projected" development sites within the rezoning area have been identified as most likely to be developed by the study year as a result of the proposed action. In addition, 48 "potential" development sites considered less likely to be developed in the foreseeable future were also identified (also see Figure 1). Table 1 shows the total incremental net change in development on the 31 projected development sites that would result from the proposed actions under the RWCDS. As shown in Table 1, compared to the No-Action condition, it is estimated that the proposed rezoning would result in a net increase of 3,414 dwelling units (du), 558,125 gross square feet (gsf) of retail uses, including local retail uses and supermarkets, 164,285 gsf of hotel space, 34,060 gsf of academic facilities, 27,857 gsf of manufacturing facilities, and 1.56 acres of public open space within the rezoning area, along with accessory parking for 1,291 autos, most of which are associated with the residential land use. It is also estimated that a total of 573,711 gsf of office space, a combined total of 318,240 gsf of warehousing and self storage facilities, 15,334 gsf of auto care centers, one gas station, a concrete recycling facility and a school bus parking facility would be displaced by the proposed actions.

Table 1:
Net Change in Land Uses on Projected Development Sites Under the RWCDS

Land Use	Incremental Net Change
Residential[1]	3,484,794 gsf/3,414 du
Local Retail	501,125 gsf
Supermarket	88,000 gsf
Public Open Space	1.56 acres
Hotel[2]	164,285 gsf/329 rooms
Academic	34,060 gsf
Manufacturing	27,857 gsf
Warehousing	(109,128 gsf)
Mini-Warehouse	(209,112 gsf)
Auto Care Centers	(15,334 gsf)
Office	(573,711 gsf)
Gas Station w/store	(12 fueling positions)
Accessory Parking	1,291 spaces
Special uses (see below)	1 Concrete Recycling Facility 1 Bus Parking Facility

Notes:
[1]Assumes 1,000 gsf per dwelling unit
[2]Assumes 500 gsf per room

TRANSPORTATION PLANNING FACTORS

The transportation planning factors proposed for use in forecasting weekday and Saturday travel demand for the No-Action and With-Action Scenarios are summarized in Table 2 and discussed below. The trip generation rates, temporal distributions and mode splits for the uses shown in Table 2A and Table 2B were based on accepted *CEQR Technical Manual* criteria, standard professional references, and studies that have been done for similar uses in the Bronx and other outer New York City boroughs with similar levels of transit access, supplemented 2000 Census journey-to-work and reverse journey-to-work data for census tracts in the study area, as described below. In addition, the operations of two existing facilities in the study area were determined to be atypical special uses and trip generation characteristics will be quantified by field survey during the course of the study.

Residential

The forecast of travel demand from projected residential development will be based on the generation trip rates, temporal distributions and modal splits presented in *Urban Space for Pedestrians* (Pushakrev & Zupan), and that cited in the *CEQR Technical Manual*. The residential modal split reflects journey-to-work data from the 2000 Census

from existing census tracts in the Lower Concourse rezoning area. Although residential-based trips in the midday would likely be more local in nature than in the peak commuter hours (and therefore have a higher walk share, for example), the modal split based on census journey-to-work data is conservatively assumed for all weekday peak periods. Saturday transportation planning factors are based on the *Jamaica Plan FEIS*.

Local Retail
It is anticipated that the retail uses developed under both the No-Action and With-Action scenarios would be local (or "neighborhood") retail, attracting trips primarily from the residential and worker populations in surrounding neighborhoods. It is therefore anticipated that the majority of these trips would be via the walk mode and that many would be "linked" trips (e.g., a trip with multiple purposes, such as stopping at a retail store while commuting to or from work) and would therefore not represent the addition of new discrete trips on the study area transportation network. Weekday and Saturday transportation planning factors for local retail were derived from the *Melrose Commons Urban Renewal Amendments DEIS,* recently completed in support of an amendment to the Melrose Commons Urban Renewal Plan to facilitate future development in the Melrose Commons Urban Renewal Area, located less than a mile northeast of the Lower Concourse area.

Supermarket
Transportation planning factors for a supermarket, except truck trips, were derived from the *Hunts Point Rezoning EAS,* recently completed in support of a rezoning action in the South Bronx, and Dutch Kills Rezoning transportation planning assumptions for a supermarket. Truck trip generation factors were derived from the *Plaza at the Hub EAS*.

Public Open Space
All transportation planning factors for public open space (proposed park) were derived from the *Gateway Center at the Bronx Terminal Market FEIS*.

Hotel
The trip generation rates, temporal distributions, in/out splits, vehicle occupancy and truck trip generation values were derived from a hotel land use cited in the *Jamaica Plan FEIS*. The mode share was derived from a hotel use cited in the *Gateway Center at Bronx Terminal Market FEIS*.

Academic
All transportation planning factors for academic land uses (expansion of Hostos Community College) were derived from the *Melrose Commons Urban Renewal Amendments DEIS*.

Manufacturing
The weekday trip generation rates, temporal distributions and in/out splits for manufacturing land uses were derived from the *Port Morris/Bruckner Boulevard Rezoning Study* while the truck trip generation values were derived from the *No 7 Subway Extension – Hudson Yards Rezoning and Development Program FGEIS* and the modal splits were derived from reverse journey-to-work data from the 2000 Census for census tracts in the Lower Concourse rezoning area. Saturday trip generation rates were

developed using the ratio between weekday and Saturday trips in the *Institute of Transportation Engineers (ITE) Trip Generation Manual*.

Warehousing
The weekday trip generation rates, temporal distributions and in/out splits for warehousing land uses were derived from the *Port Morris/Bruckner Boulevard Rezoning Study EAS* and the modal splits were derived from reverse journey-to-work data from the 2000 Census for census tracts in the Lower Concourse rezoning area. The truck trip generation values for warehousing were derived from the *Greenpoint – Williamsburg Rezoning FEIS*. Saturday trip generation rates were developed using the ratio between weekday and Saturday trips in the *Institute of Transportation Engineers (ITE) Trip Generation Manual*.

Mini-Warehouse
The trip generation rates were derived from the *ITE Trip Generation Manual* for a mini-storage warehouse land use, in/out splits and vehicle occupancy were derived from the *Port Morris/Bruckner Boulevard Rezoning Study EAS* while the temporal distribution and modal splits were derived from the *No 7 Subway Extension – Hudson Yards Rezoning and Development Program FGEIS*. The Manhattan mode share values were judged to be valid in the Bronx due to the common usage characteristics of such facilities.

Auto-Care Center
All transportation planning factors for an auto-care center were derived from the *Greenpoint – Williamsburg Rezoning FEIS*.

Office
The trip generation rates and temporal distributions were derived from *Urban Space for Pedestrians* (Pushakrev & Zupan), as cited in the *CEQR Technical Manual*. In/out splits and vehicle occupancy were derived from the *Hunts Point Rezoning EAS* while the modal splits were derived from reverse journey-to-work data from the 2000 Census for census tracts in the Lower Concourse rezoning area. Truck trip generation was derived from the FHWA study on "Curbside Pickup and Delivery and Arterial Traffic Impacts" and its temporal distribution derived from the *No 7 Subway Extension – Hudson Yards Rezoning and Development Program FGEIS*.

Gas Station with Convenience Store
The trip generation rates and pass-by trip assumption were derived from the *ITE Trip Generation Manual* and *ITE Trip Generation Handbook* while the truck trip generation values were derived from the *No 7 Subway Extension – Hudson Yards Rezoning and Development Program FGEIS*.

Concrete Recycling Facility
This existing facility was judged to be a unique land use. In and out traffic volumes and vehicle types will be quantified for the analysis hours by field survey.

Bus Parking Facility
This existing facility was judged to be a unique land use. In and out traffic volumes and vehicle types will be quantified for the analysis hours by field survey.

Table 2A:
Transportation Planning Assumptions

Land Use:	Residential		Local Retail		Supermarket		Public Open Space		Hotel		Academic	
Trip Generation:	(1)	(11)	(5)	(23)	(4) (25)	(4) (25)	(8)	(8)	(11)	(11)	(11)	(11)
	Weekday	**Saturday**	**Weekday**	**Saturday**	**Weekday**	**Saturday**	**Weekday**	**Saturday**	**Weekday**	**Saturday**	**Weekday**	**Saturday**
Daily Person Trips	8.075	7.678	82.56	82.56	97.5	98.25	139	158	5.82	8.61	26.60	10.87
	per dwelling unit		per 1,000 gsf		per 1,000 gsf		per acre		per room		per 1,000 gsf	
Temporal Distribution:	(1,11)		(5,11)		(4)		(8)		(11)		(11)	
AM	9.1%		3.1%		3.7%		n/a		6.6%		7.2%	
MD	4.7%		19.0%		6.4%		12.0%		8.3%		10.7%	
PM	10.7%		9.6%		6.8%		10.0%		7.7%		12.6%	
SAT MD	8.2%		9.5%		9.8%		20.0%		8.5%		12.6%	
In/Out Splits:	(1,11)		(5,11)		(4)		(8)		(11)		(5,11)	
	In	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**
AM	15%	85%	50%	50%	50%	50%	n/a	n/a	41%	59%	100%	0%
MD	50%	50%	50%	50%	50%	50%	45%	55%	68%	32%	52%	48%
PM	70%	30%	50%	50%	50%	50%	55%	45%	59%	41%	66%	34%
SAT MD	50%	50%	50%	50%	50%	50%	55%	45%	56%	44%	57%	43%
Modal Splits:	(2)		(5)		(4)		(8)		(8)		(5)	
Auto	22%		3%		70%		12%		70%		20%	
Taxi	0%		2%		2%		0%		15%		1%	
Bus	15%		10%		4%		5%		5%		47%	
Subway	51%		5%		1%		5%		5%		24%	
Walk	12%		80%		23%		78%		5%		8%	
	100.0%		100.0%		100.0%		100.0%		100.0%		100.0%	
Vehicle Occupancy:	(2, 4)		(5)		(4)		(8)		(11)		(5)	
Auto	1.50		1.60		1.30		2.80		1.60		1.10	
Taxi	1.40		1.20		1.40		n/a		1.40		1.10	
Truck Trip Generation:	(4)	(24)	(5)	(17)	(6)	(20)			(11)	(24)	(5)	(20)
	Weekday	**Saturday**	**Weekday**	**Saturday**	**Weekday**	**Saturday**	**Weekday**	**Saturday**	**Weekday**	**Saturday**	**Weekday**	**Saturday**
	0.07	0.01	0.45	0.02	0.52	0.03	n/a	n/a	0.10	0.01	0.03	0.00
	per dwelling unit		per 1,000 gsf		per 1,000 gsf				per room		per 1,000 gsf	
	(9,10)		(5,17)		(6,10)				(11,24)		(5,10)	
AM	12.2%		9.7%		14.0%		n/a		14.0%		9.7%	
MD	8.7%		7.8%		8.6%		n/a		8.6%		7.8%	
PM	1.0%		5.1%		1.0%		n/a		1.0%		7.8%	
SAT MD	8.7%		11.0%		8.6%		n/a		9.0%		7.8%	
	In	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**
	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	n/a	n/a	50.0%	50.0%	50.0%	50.0%

Sources

(1) Pushkarev & Zupan, "Urban Space for Pedestrians," 1975.
(2) 2000 US Census Journey-to-Work "Residence of Worker" data for Tracts 47, 49, 53.01, and 57.
(3) No. 7 Subway Extension - Hudson Yards Rezoning and Development Program FGEIS, 2004
(4) Hunts Point Rezoning EAS, 2007.
(5) Melrose Commons Urban Renewal Amendments DEIS, 2007
(6) Plaza at the Hub EAS, 2005.
(7) Greenpoint-Williamsburg Rezoning FEIS, 2005.
(8) Gateway Center at Bronx Terminal Market FEIS, 2005
(9) FHWA, "Curbside Pickup and Delivery and Arterial Traffic Impacts," 1981.
(10) Assumes weekday MD temporal distribution for SAT MD
(11) The Jamaica Plan FEIS, 2007.
(12) Port Morris/Bruckner Boulevard Rezoning Study EAS, 2004.
(13) 2000 US Census Reverse Journey-to-Work "Place of Work" data for Tracts 47, 49, 53.01, and 57.
(14) ITE Trip Generation, 7th Edition, Land Use Code 151: Mini-Warehouse.
(15) ITE Trip Generation, 7th Edition, Land Use Code 945: Gasoline/Service Station with Convenience Market.
(16) Pass-by trips assumed to be 45% based on ITE Trip Generation Handbook (1998).
(17) Coliseum Redevelopment FSEIS, 1997.
(18) ITE Trip Generation, 7th Edition, Land Use Code 840: Automobile Care Center.
(19) ITE Trip Generation, 7th Edition, Land Use Code 140: Manufacturing.
(20) Assumes 5% of weekday trip generation rate.
(21) ITE Trip Generation, 7th Edition, Land Use Code 150: Warehouse.
(22) Saturday rate based on ITE Trip Generation rate variation between weekday and Saturday.
(23) Weekday trip generation rate assumed for Saturday as per Jamaica Plan FEIS, 2007.
(24) Atlantic Yards Arena and Redevelopment Project FEIS, 2006.
(25) Assumes 25% pass by trips as per Dutch Kills Rezoning Transportation Planning Assumptions

Table 2B:
Transportation Planning Assumptions

Land Use:	Manufacturing		Warehousing		Mini-Warehouse		Auto Care Center		Office		Gas Station (With Store)	
Trip Generation:	(12)	(22)	(12)	(22)	(14)	(14)	(7)	(7)	(4)	(4)	(15, 16)	(15, 16)
	Weekday	**Saturday**	**Weekday**	**Saturday**	**Weekday**	**Saturday**	**Weekday**	**Saturday**	**Weekday**	**Saturday**	**Weekday**	**Saturday**
Daily Person Trips	4.5	1.8	5.8	1.4	4.0	3.8	19.42	19.42	18.0	1.6	90.0	90.0
	per 1,000 gsf		per 1,000 gsf		per 1,000 gsf		per 1,000 gsf		per 1,000 gsf		vehicle trips per fueling position	
Temporal Distribution:	(4,12)		(4,12)		(3,4)		(7,10)		(1,4)		(3)	
AM	14.0%		17.0%		10.7%		13.2%		11.8%		6.2%	
MD	19.0%		14.0%		11.0%		11.0%		15.0%		5.5%	
PM	17.0%		13.0%		11.2%		14.2%		13.7%		8.2%	
SAT MD	11.4%		11.4%		11.4%		11.0%		15.0%		5.5%	
In/Out Splits:	(12,19)		(12,21)		(12)		(7,18)				(3)	
	In	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**
AM	77%	23%	83%	17%	59%	41%	65%	35%	96%	4%	50%	50%
MD	50%	50%	50%	50%	50%	50%	50%	50%	39%	61%	50%	50%
PM	36%	64%	25%	75%	51%	49%	50%	50%	5%	95%	50%	50%
SAT MD	50%	50%	50%	50%	50%	50%	50%	50%	60%	40%	50%	50%
Modal Splits:	(13)		(13)		(3)		(7)		(13)		(3)	
Auto	46%		46%		95%		85%		46%		100%	
Taxi	2%		2%		0%		5%		2%		n/a	
Bus	16%		16%		0%		1%		16%		n/a	
Subway	29%		29%		0%		1%		29%		n/a	
Walk	7%		7%		5%		8%		7%		n/a	
	100.0%		100.0%		100.0%		100.0%		100.0%		100.0%	
Vehicle Occupancy:	(12)		(12)		(14)		(7)		(4)		(3)	
Auto	1.04		1.04		1.55		1.30		1.30		1.00	
Taxi	2.00		2.00		n/a		1.30		1.40		n/a	
Truck Trip Generation:	(3)	(20)	(7)	(20)			(7)	(20)	(9)	(24)	(3)	(20)
	Weekday	**Saturday**	**Weekday**	**Saturday**	**Weekday**	**Saturday**	**Weekday**	**Saturday**	**Weekday**	**Saturday**	**Weekday**	**Saturday**
	0.52	0.03	0.67	0.03	n/a	n/a	0.89	0.05	0.15	0.01	0.35	0.02
	per 1,000 gsf		per 1,000 gsf				per 1,000 gsf		per 1,000 gsf		vehicle trips per fueling position	
	(3,10)		(3,10)				(7,10)		(3,24)		(3,10)	
AM	14.0%		14.0%		n/a		14.0%		9.6%		7.7%	
MD	8.6%		9.0%		n/a		9.0%		11.0%		11.0%	
PM	1.0%		1.0%		n/a		1.0%		1.0%		1.0%	
SAT MD	8.6%		9.0%		n/a		9.0%		11.0%		11.0%	
	In	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**
	50.0%	50.0%	50.0%	50.0%	n/a	n/a	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%

Sources:

(1) Pushkarev & Zupan, "Urban Space for Pedestrians," 1975.
(2) 2000 US Census Journey-to-Work "Residence of Worker" data for Tracts 47, 49, 53.01, and 57.
(3) No. 7 Subway Extension - Hudson Yards Rezoning and Development Program FGEIS, 2004
(4) Hunts Point Rezoning EAS, 2007.
(5) Melrose Commons Urban Renewal Amendments DEIS, 2007
(6) Plaza at the Hub EAS, 2005.
(7) Greenpoint-Williamsburg Rezoning FEIS, 2005.
(8) Gateway Center at Bronx Terminal Market FEIS, 2005
(9) FHWA, "Curbside Pickup and Delivery and Arterial Traffic Impacts," 1981.
(10) Assumes weekday MD temporal distribution for SAT MD
(11) The Jamaica Plan FEIS, 2007.
(12) Port Morris/Bruckner Boulevard Rezoning Study EAS, 2004.
(13) 2000 US Census Reverse Journey-to-Work "Place of Work" data for Tracts 47, 49, 53.01, and 57.
(14) ITE Trip Generation, 7th Edition, Land Use Code 151: Mini-Warehouse.
(15) ITE Trip Generation, 7th Edition, Land Use Code 945: Gasoline/Service Station with Convenience Market.
(16) Pass-by trips assumed to be 45% based on ITE Trip Generation Handbook (1998).
(17) Coliseum Redevelopment FSEIS, 1997.
(18) ITE Trip Generation, 7th Edition, Land Use Code 840: Automobile Care Center.
(19) ITE Trip Generation, 7th Edition, Land Use Code 140: Manufacturing.
(20) Assumes 5% of weekday trip generation rate
(21) ITE Trip Generation, 7th Edition, Land Use Code 150: Warehouse.
(22) Saturday rate based on ITE Trip Generation rate variation between weekday and Saturday.
(23) Weekday trip generation rate assumed for Saturday as per Jamaica Plan FEIS, 2007.
(24) Atlantic Yards Arena and Redevelopment Project FEIS, 2006.
(25) Assumes 25% pass by trips as per Dutch Kills Rezoning Transportation Planning Assumptions

TRIP GENERATION

The incremental difference in person and vehicle trips expected to result from the proposed action by the 2018 study year were derived for the proposed rezoning area. Table 3 shows a preliminary estimate of the incremental net change in peak hour person trips (versus the No-Action condition) that would occur in 2018 with implementation of the proposed action (excluding the effects of net loss of vehicle and person trips to and from the existing concrete recycling and school bus parking facilities).

As shown in Table 3, the proposed action would generate an increase of approximately 2,796 total person trips in the weekday AM peak hour, 8,191 in the weekday midday peak hour, 6,088 in the weekday PM peak hour and 7,020 in the Saturday midday peak hour compared to the No-Action condition. Person trips by auto and taxi would increase by a net total of 150 in the weekday AM peak hour, 281 in the weekday midday peak hour, 496 in the weekday PM peak hour and 1,328 in the Saturday midday peak hour. Peak hour subway trips would increase by a net total of 988, 624. 1,316 and 1,283 during these periods, respectively, while peak hour bus trips would increase by 345 in the weekday AM peak hour, 799 in the weekday midday peak hour, 689 in the weekday PM peak hour and 775 in the Saturday midday peak hour. Trips made solely by the walk mode would increase by 1,313 in the weekday AM peak hour, 6,487 in the weekday midday peak hour, 3,587 in the weekday PM peak hour and 3,634 in the Saturday midday peak hour.

Table 4 shows a preliminary estimate of the incremental net change in peak hour vehicle trips (auto, taxi and truck) that would occur in 2018 with implementation of the proposed action, excluding the effects of the loss of vehicle trips (mostly truck/bus trips) associated with the existing concrete recycling and school bus parking facilities, as noted above. Overall, as shown in Table 4, total vehicle trips en route to and from the rezoning area would increase by 97 in the weekday AM peak hour, 228 in the weekday midday peak hour, 310 in the weekday PM peak hour and 988 in the Saturday midday peak hour. In the weekday AM peak hour there would be a net increase of 13 auto trips (inbound and outbound combined) and a net increase of 40 taxi trips. (All taxi trips have been balanced to reflect that a proportion of taxis dropping off inbound passengers would be available to accommodate outbound trips.) In the weekday midday peak hour, auto and taxi trips would increase by 6 and 133, respectively, in the weekday PM peak hour, auto trips and taxi trips would increase by 206 and 67, respectively, while in the Saturday midday peak hour, auto trips and taxi trips would increase by 770 and 162, respectively. Truck trips would increase by 44 in the weekday AM peak hour, 28 in the weekday midday peak hour, 14 in the PM peak hour and 10 in the Saturday midday peak hour.

Table 3:
Net Change in Person Trips

LAND USE		AM						MD						PM						SAT					
		Auto	Taxi	Bus	Subway	Walk	Total	Auto	Taxi	Bus	Subway	Walk	Total	Auto	Taxi	Bus	Subway	Walk	Total	Auto	Taxi	Bus	Subway	Walk	Total
Residential	In	63	0	56	192	45	376	143	0	97	330	78	648	454	0	310	1,053	248	2,065	236	0	161	548	129	1,074
341[illegible] dwelling units	Out	469	0	320	1,088	256	2,133	143	0	97	330	78	648	195	0	133	451	106	885	236	0	161	548	129	1,074
	Total	532	0	376	1,280	301	2,509	286	0	194	660	156	1,296	649	0	443	1,504	354	2,950	472	0	322	1,096	258	2,148
Local Retail	In	19	13	64	32	515	641	118	79	393	197	3,144	3,931	60	40	199	99	1,589	1,987	59	39	197	98	1,572	1,965
401[illegible] gsf	Out	19	13	64	32	513	641	118	79	393	197	3,144	3,931	60	40	199	99	1,589	1,987	59	39	197	98	1,572	1,965
	Total	38	26	128	64	1,028	1,282	236	158	786	394	6,288	7,862	120	80	398	198	3,178	3,974	118	78	394	196	3,144	3,930
Supermarket	In	111	3	6	2	37	159	192	5	11	3	63	274	204	6	12	3	67	292	297	8	17	4	97	423
88000 gsf	Out	111	3	6	2	37	159	192	5	11	3	63	274	204	6	12	3	67	292	297	8	17	4	97	423
	Total	222	6	12	4	74	318	384	10	22	6	126	548	408	12	24	6	134	584	594	16	34	8	194	846
Public Open Space	In	n/a	n/a	n/a	n/a	n/a	n/a	1	0	1	1	9	12	1	0	1	1	9	12	3	0	1	1	21	26
1.56 acres	Out	n/a	n/a	n/a	n/a	n/a	n/a	2	0	1	1	11	15	1	0	0	0	8	9	3	0	1	1	17	22
	Total	n/a	n/a	n/a	n/a	n/a	n/a	3	0	2	2	20	27	2	0	1	1	17	21	6	0	2	2	38	48
Hotel	In	35	8	3	3	3	52	76	16	5	5	5	107	61	13	4	4	4	86	94	94	20	7	7	222
329 rooms	Out	52	11	4	4	4	75	36	8	3	3	3	53	42	9	3	3	3	60	74	16	5	5	5	105
	Total	88	19	7	7	7	128	112	24	8	8	8	160	103	22	7	7	7	146	168	110	25	12	12	327
Academic	In	13	1	31	16	5	66	10	1	24	12	4	51	15	1	35	16	6	73	5	0	12	6	2	25
34060 gsf	Out	0	0	0	0	0	0	9	0	22	11	3	45	8	0	18	9	3	38	4	0	9	5	2	20
	Total	13	1	31	16	5	66	19	1	46	23	8	97	23	1	53	27	9	113	9	0	21	11	4	45
Manufacturing	In	6	0	2	4	1	13	5	0	2	3	1	11	4	0	1	2	1	8	1	0	0	1	0	2
47857 gsf	Out	2	0	1	1	0	4	5	0	2	3	1	11	6	0	2	4	1	13	1	0	0	1	0	2
	Total	8	0	3	5	1	17	10	0	4	6	2	22	10	0	3	6	2	21	2	0	0	2	0	4
Warehousing	In	-41	-2	-14	-25	-6	-88	-20	-1	-7	-13	-3	-44	-9	0	-3	-6	-1	-19	-4	0	-1	-3	-1	-9
-109128 gsf	Out	-8	0	-3	-5	-1	-17	-20	-1	-7	-13	-3	-44	-28	-1	-10	-18	-4	-61	-4	0	-1	-3	-1	-9
	Total	-49	-2	-17	-30	-7	-106	-40	-2	-14	-26	-6	-88	-37	-1	-13	-24	-5	-80	-8	0	-2	-6	-2	-18
Mini-Warehouse	In	-50	0	0	0	-3	-53	-38	0	0	0	-2	-40	-45	0	0	0	-2	-47	-43	0	0	0	-2	-45
-[illegible]12 gsf	Out	-35	0	0	0	-2	-37	-44	0	0	0	-2	-46	-44	0	0	0	-2	-46	-43	0	0	0	-2	-45
	Total	-85	0	0	0	-5	-90	-82	0	0	0	-4	-86	-89	0	0	0	-4	-93	-86	0	0	0	-4	-90
Auto Care Center	In	-22	-1	0	0	-2	-25	-14	-1	0	0	-1	-16	-18	-1	0	0	-2	-21	-14	-1	0	0	-1	-16
-15334 gsf	Out	-12	-1	0	0	-1	-14	-14	-1	0	0	-1	-16	-18	-1	0	0	-2	-21	-14	-1	0	0	-1	-16
	Total	-34	-2	0	0	-3	-39	-28	-2	0	0	-2	-32	-36	-2	0	0	-4	-42	-28	-2	0	0	-2	-32
Office	In	-508	-23	-167	-339	-82	-1,169	-278	-12	-87	-175	-42	-604	-33	-1	-11	-21	-5	-71	-38	-2	-13	-24	-6	-83
-573711 gsf	Out	-22	-1	-9	-14	-3	-48	-435	-19	-151	-274	-66	-945	-618	-27	-215	-390	-94	-1,344	-25	-1	-9	-16	-4	-55
	Total	-530	-24	-185	-353	-85	-1,217	-713	-31	-238	-449	-108	-1,549	-651	-28	-226	-411	-99	-1,415	-63	-3	-22	-40	-10	-134
Gas Station (With Store)	In	-33	n/a	n/a	n/a	n/a	-33	-30	n/a	n/a	n/a	n/a	-30	-44	n/a	n/a	n/a	n/a	-44	-30	n/a	n/a	n/a	n/a	-30
-12[illegible] fueling stations	Out	-33	n/a	n/a	n/a	n/a	-33	-30	n/a	n/a	n/a	n/a	-30	-44	n/a	n/a	n/a	n/a	-44	-30	n/a	n/a	n/a	n/a	-30
	Total	-66	n/a	n/a	n/a	n/a	-66	-60	n/a	n/a	n/a	n/a	-60	-89	n/a	n/a	n/a	n/a	-88	-59	n/a	n/a	n/a	n/a	-60
TOTAL TRIPS	In	416	-2	-39	-118	511	64	160	87	429	363	3,256	4,295	649	57	547	1,154	1,913	4,320	567	140	394	639	1,819	3,559
	Out	543	25	384	1,106	802	2,860	36	72	370	261	3,231	3,866	-236	26	142	162	1,674	1,768	559	62	381	644	1,815	3,461
	Total	127	23	345	988	1,313	2,796	122	159	799	624	6,487	8,161	413	83	689	1,316	3,587	6,088	1,126	202	775	1,283	3,634	7,020

Table 4:
Net Change in Vehicle Trips

LAND USE		AM					MD					PM					SAT				
		Auto	Truck	Taxi	Balanced Taxi (1)	Total	Auto	Truck	Taxi	Balanced Taxi (1)	Total	Auto	Truck	Taxi	Balanced Taxi (1)	Total	Auto	Truck	Taxi	Balanced Taxi (1)	Total
Residential	In	55	15	0	---	70	95	10	0	---	105	303	1	0	---	304	158	1	0	---	159
3414 dwelling units	Out	313	15	0	---	328	95	10	0	---	105	130	1	0	---	131	158	1	0	---	159
	Total	368	30	0	---	398	190	20	0	---	210	433	2	0	---	435	316	2	0	---	318
Local Retail	In	12	11	11	---	34	74	9	66	---	149	37	6	33	---	76	37	1	33	---	71
501125 gsf	Out	12	11	11	---	34	74	9	66	---	149	37	6	33	---	76	37	1	33	---	71
	Total	24	22	22	---	68	148	18	132	---	298	74	12	66	---	152	74	2	66	---	142
Supermarket	In	85	3	2	---	90	148	2	4	---	154	157	0	4	---	161	228	0	6	---	234
88000 gsf	Out	85	3	2	---	90	148	2	4	---	154	157	0	4	---	161	228	0	6	---	234
	Total	170	6	4	---	180	296	4	8	---	308	314	0	8	---	322	456	0	12	---	468
Public Open Space	In	n/a	n/a	n/a	---	n/a	1	n/a	n/a	---	1	1	n/a	n/a	---	1	1	n/a	n/a	---	1
1.56 acres	Out	n/a	n/a	n/a	---	n/a	1	n/a	n/a	---	1	0	n/a	n/a	---	0	1	n/a	n/a	---	1
	Total	n/a	n/a	n/a	---	n/a	2	n/a	n/a	---	2	1	n/a	n/a	---	1	2	n/a	n/a	---	2
Hotel	In	23	2	6	---	31	47	1	12	---	60	38	0	9	---	47	59	0	67	---	126
329 rooms	Out	33	2	8	---	43	22	1	5	---	28	26	0	6	---	32	46	0	11	---	57
	Total	56	4	14	---	74	69	2	17	---	88	64	0	15	---	79	105	0	78	---	183
Academic	In	12	0	1	---	13	9	0	0	---	9	14	0	1	---	15	5	3	0	---	8
34060 gsf	Out	0	0	0	---	0	8	0	0	---	8	1	0	0	---	1	4	3	0	---	7
	Total	12	0	1	---	13	17	0	0	---	17	21	0	1	---	22	9	6	0	---	15
Manufacturing	In	6	1	0	---	7	5	1	0	---	6	3	0	0	---	3	1	0	0	---	1
27857 gsf	Out	2	1	0	---	3	5	1	0	---	6	6	0	0	---	6	1	0	0	---	1
	Total	8	2	0	---	10	10	2	0	---	12	9	0	0	---	9	2	0	0	---	2
Warehousing	In	-49	-5	-1	---	-46	-20	-3	0	---	-23	-9	0	0	---	-9	-4	0	0	---	-4
-109128 gsf	Out	-8	-5	0	---	-13	-20	-3	0	---	-23	-27	0	-1	---	-28	-4	0	0	---	-4
	Total	-49	-10	-1	---	-59	-40	-6	0	---	-46	-36	0	-1	---	-37	-8	0	0	---	-8
Mini-Warehouse	In	-32	n/a	n/a	---	-32	-28	n/a	n/a	---	-28	-29	n/a	n/a	---	-29	-28	n/a	n/a	---	-28
-268412 gsf	Out	-22	n/a	n/a	---	-22	-28	n/a	n/a	---	-28	-28	n/a	n/a	---	-28	-28	n/a	n/a	---	-28
	Total	-54	n/a	n/a	---	-54	-56	n/a	n/a	---	-56	-57	n/a	n/a	---	-57	-56	n/a	n/a	---	-56
Auto Care Center	In	-17	-1	-1	---	-19	-11	-1	-1	---	-13	-14	0	-1	---	-15	-11	0	-1	---	-12
-15334 gsf	Out	-9	-1	-1	---	-11	-11	-1	-1	---	-13	-14	0	-1	---	-15	-11	0	-1	---	-12
	Total	-26	-2	-2	---	-30	-22	-2	-2	---	-26	-28	0	-2	---	-30	-22	0	-2	---	-24
Office	In	-414	-4	-17	---	-435	-214	-5	-6	---	-226	-25	0	-1	---	-26	-29	0	-1	---	-30
-513711 gsf	Out	-57	-4	-1	---	-22	-334	-5	-16	---	-353	-476	0	-19	---	-495	-19	0	-1	---	-20
	Total	-471	-8	-18	---	-457	-548	-10	-22	---	-581	-501	0	-20	---	-521	-48	0	-2	---	-50
Gas Station (With Store)	In	-30	0	n/a	---	-30	-30	0	n/a	---	-30	-44	0	n/a	---	-44	-30	0	n/a	---	-30
-12 fueling station	Out	-33	0	n/a	---	-33	-30	0	n/a	---	-30	-44	0	n/a	---	-44	-30	0	n/a	---	-30
	Total	-66	0	n/a	---	-66	-60	0	n/a	---	-60	-88	0	n/a	---	-88	-60	0	n/a	---	-60
TOTAL TRIPS	In	-343	22	1	20	-301	76	14	72	97	187	432	7	45	45	484	387	5	104	104	496
	Out	356	22	19	20	396	76	14	61	97	41	-226	7	22	45	-174	383	5	48	104	492
	Total	13	44	20	40	97	6	28	133	194	228	206	14	67	90	310	770	10	152	208	988

Note:
(1) Balanced taxi trips assume that 50% of taxis arriving with passengers are available to accommodate outbound riders

VEHICLE TRIP DISTRIBUTION

Specific vehicle trip distributions were derived for residential, office/manufacturing and local retail (including supermarket) land uses in the rezoning area and are illustrated on Figures 2 through 4. The residential distribution was derived from 2000 Census journey to work patterns for residential land uses in the south Bronx and assigned directionally to either highways or local streets based upon the trip destination and length. The office/manufacturing distribution was derived from 2000 Census reverse journey to work patterns for trips into the south Bronx and similarly assigned. Certain minor variations are indicated in the reverse trip assignment of each based upon anomalies in the area roadway network. The retail distribution was based upon the relative proportion of households within one mile of the rezoning area, adjusted downward for retail trips into the rezoning area from Manhattan based upon several factors, including the availability of more retail in Manhattan and possible delays that may be encountered at Harlem River crossings that would discourage such a trip. Since retail trips are expected to be relatively short, minimal highway use was assumed.

Trip distributions were also developed for taxi and truck trips. Taxi trips were assumed to reflect the general short trip distribution of local retail trips and truck trips were distributed based upon New York City Department of Transportation (NYCDOT) designated truck routes in the study area., which include the Harlem River Bridges, the Major Deegan/ Bruckner Expressway, East 149th Street, East 138th Street, 3rd Avenue, River Avenue, Willis Avenue and Bruckner Boulevard.

Figure 2:

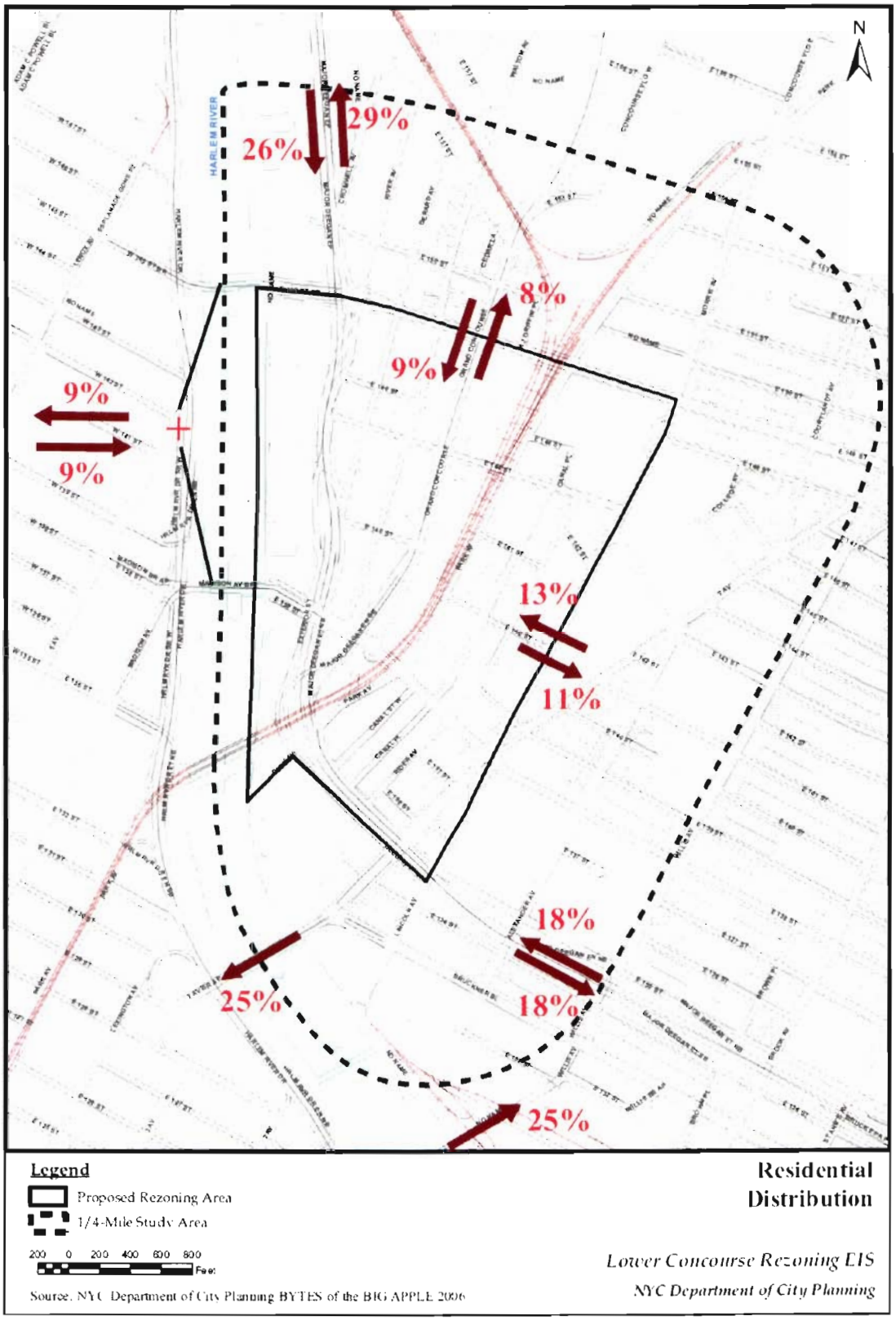

N
HARLEM RIVER
26%
29%
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25%
Legend
Proposed Rezoning Area
1/4-Mile Study Area
200 0 200 400 600 800
Feet
Source: NYC Department of City Planning BYTES of the BIG APPLE 2006
Residential Distribution
Lower Concourse Rezoning EIS
NYC Department of City Planning

Figure 3:

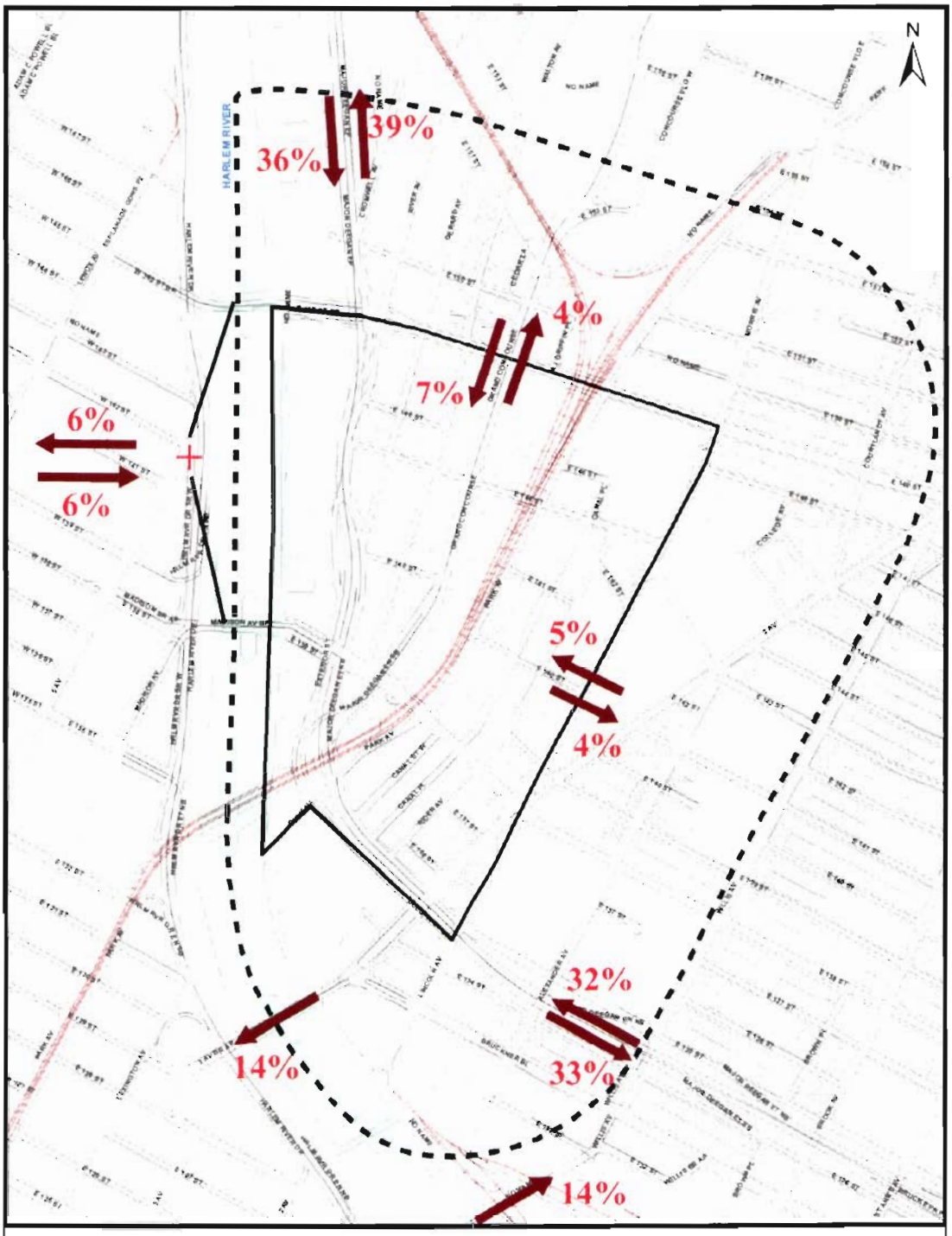
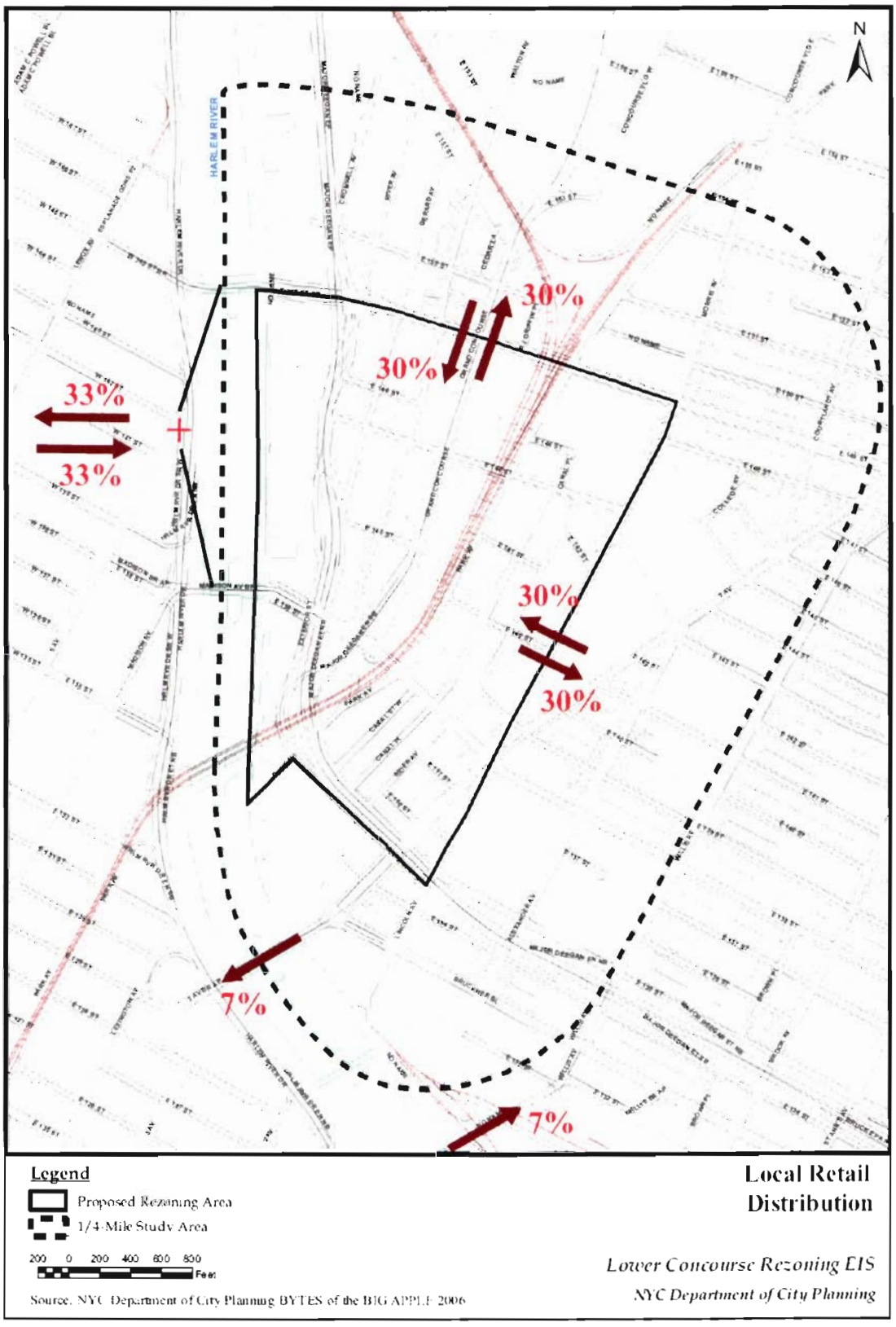

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36%
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Proposed Rezoning Area
1/4-Mile Study Area
200 0 200 400 600 800
Feet
Source: NYC Department of City Planning BYTES of the BIG APPLE 2006
Office / Manufacturing
Distribution
Lower Concourse Rezoning EIS
NYC Department of City Planning

Figure 4:


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Legend
Proposed Rezoning Area
1/4-Mile Study Area
200 0 200 400 600 800
Feet
Source: NYC Department of City Planning BYTES of the BIG APPLE 2006
Local Retail Distribution
Lower Concourse Rezoning EIS
NYC Department of City Planning

TRAFFIC ASSIGNMENT

Preliminary assignments of the net change in vehicle trips entering and leaving the study area to specific roadways were developed for the weekday AM, midday, PM and Saturday midday analysis hours, and are illustrated on Figures 5 through 8. These assignments were developed based upon the projected net change in vehicle trips generated by the development sites relative to the No-Action condition, as indicated in Table 4, the vehicle trip distributions presented above, the characteristics of the roadway network and the location and land use of each development site. Although assignments on these study cordon roadways may change to some extent when specific assignments are prepared for each development sight, such changes are not expected to be significant and the values illustrated herein should be considered reasonably accurate for study scoping purposes.

Overall, the trip vehicle trip assignments at the study area cordons reflect the roadway network characteristics and usage in the study area. Since the land use characteristics of the rezoning area would change under the proposed action from primarily office/manufacturing to residential, inbound trips during the weekday morning and outbound trips in the evening would remain approximately the same as in the No-Action condition or decrease, reflecting the daily trip pattern between home and work. Therefore, a reduction in net vehicle trips is indicated on certain roadways of inbound or outbound vehicle trips during certain time periods. The greatest net changes in vehicle trips are projected to occur on the Major Deegan/Bruckner Expressway, the four Harlem River Bridges, i.e., the two-way 145th Street and Madison Avenue Bridges, the one-way Bronx-bound Willis Avenue Bridge and one-way Manhattan-bound Third Avenue Bridge, on the Grand Concourse and along East 149th Street. As noted above, some of these net changes in vehicle trips are negative.

TRAFFIC ANALYSIS LOCATIONS

Based upon the information presented above, 34 locations were selected for traffic analysis, including three locations in Manhattan, as illustrated on Figure 9. A thorough traffic analysis of the critical corridors that traverse the study area is proposed, including the east-west East 149th Street, East 144th Street and East 138th Street corridors as well as the north-south Grand Concourse, Morris Avenue/3rd Avenue and Exterior Street corridors. Analysis is also proposed of key intersections along Willis Avenue leading from the Willis Avenue Bridge and the touchdown points in Manhattan of the 145th Street and Madison Avenue Bridges at which traffic to and from the Bronx is most concentrated. Most vehicle trips associated with the proposed action that would use the Third Avenue and Willis Avenue Bridges are longer length trips oriented predominately to and from Midtown Manhattan, western Queens, Brooklyn, and Staten Island and would therefore mostly use the FDR Drive rather than Second or First Avenues.

Figure 5:

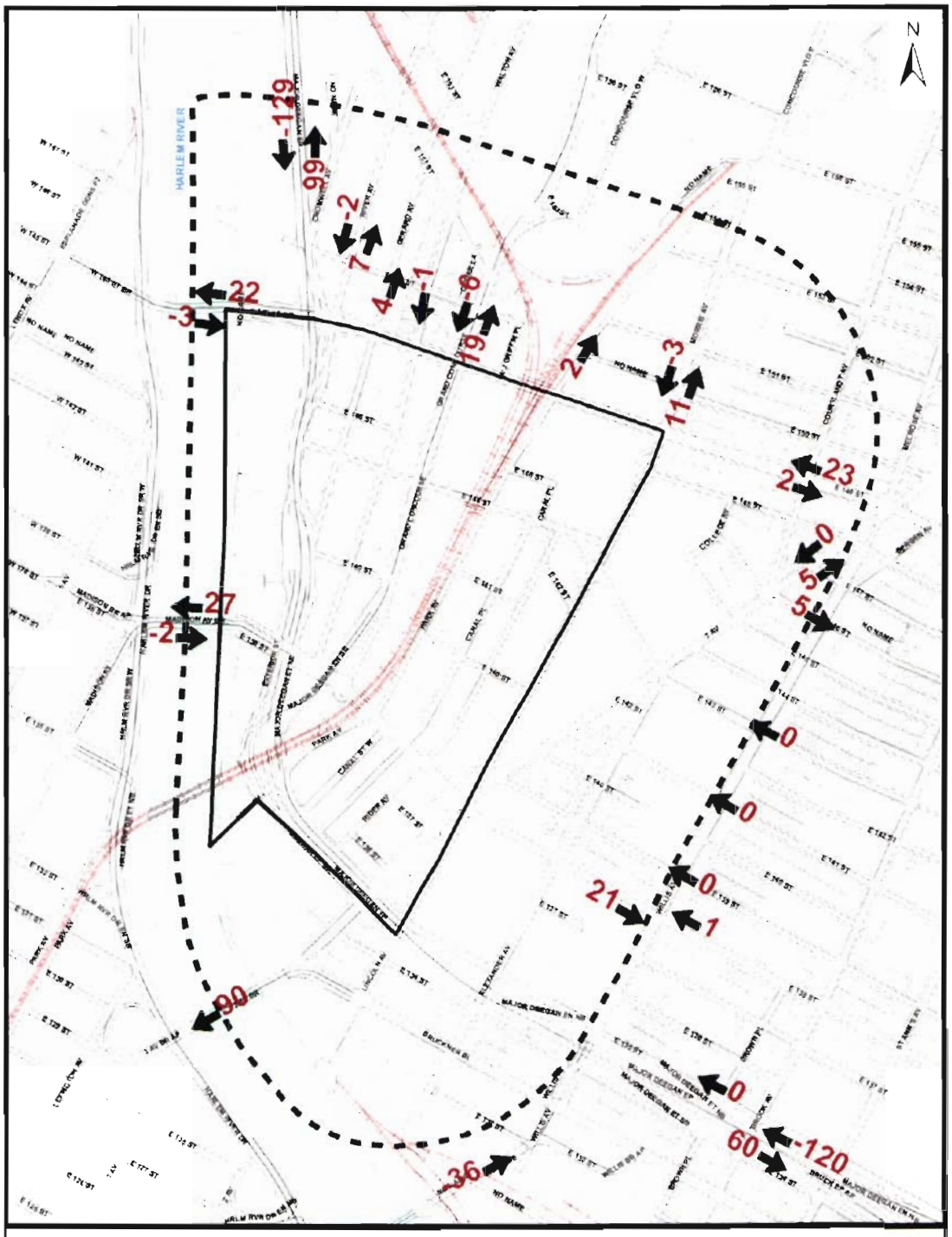

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-120
36
Legend
Proposed Rezoning Area
1/4-Mile Study Area
200 0 200 400 600 800
Feet
Source: NYC Department of City Planning BYTES of the BIG APPLE 2006
Preliminary Traffic Assignments To/From Study Area
AM Peak Hour
Lower Concourse Rezoning EIS
NYC Department of City Planning

Figure 6:

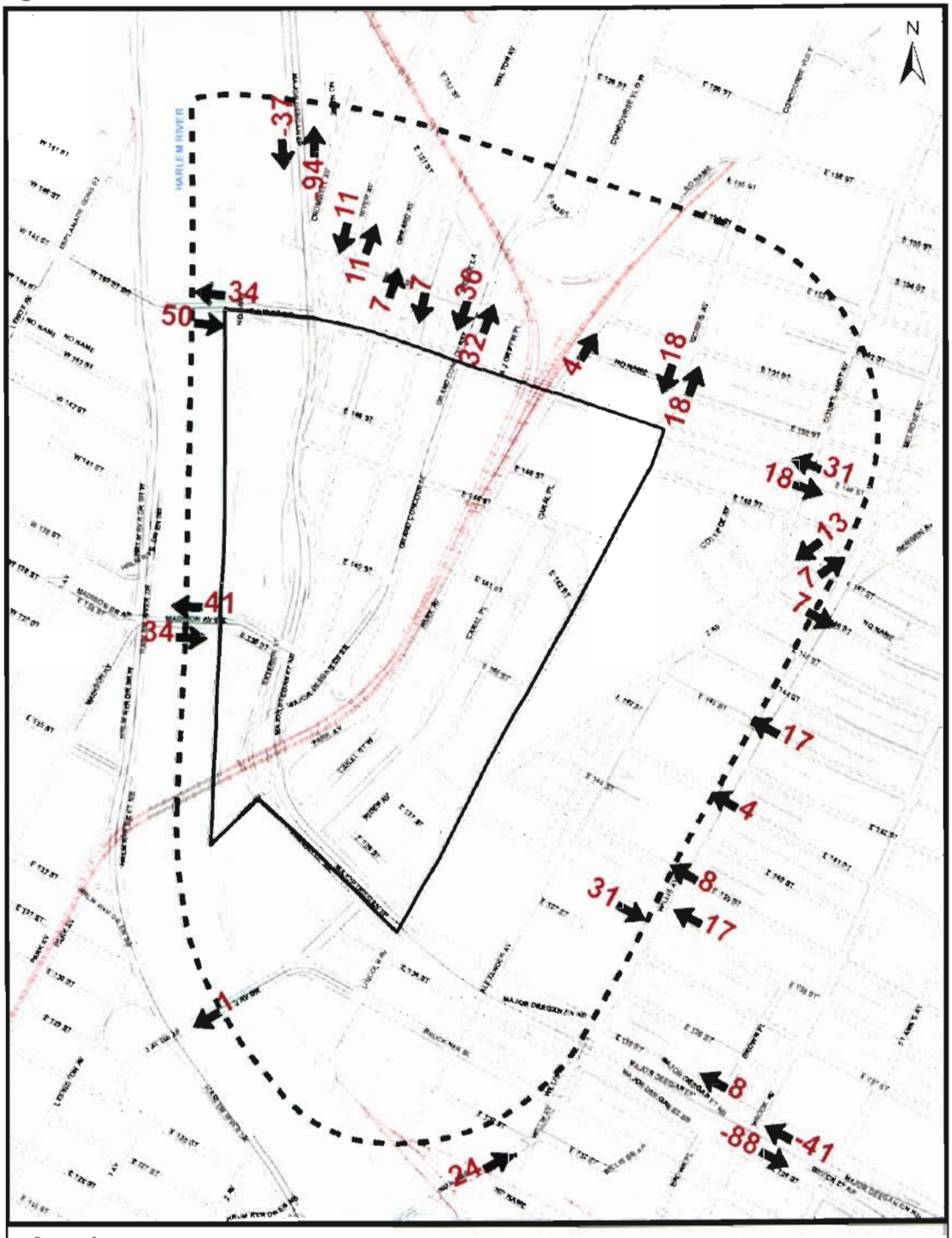

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Legend
Proposed Rezoning Area
1/4-Mile Study Area
200 0 200 400 600 800
Feet
Source: NYC Department of City Planning BYTES of the BIG APPLE 2006
Preliminary Traffic Assignments To/From Study Area
MD Peak Hour
Lower Concourse Rezoning EIS
NYC Department of City Planning

Figure 7:

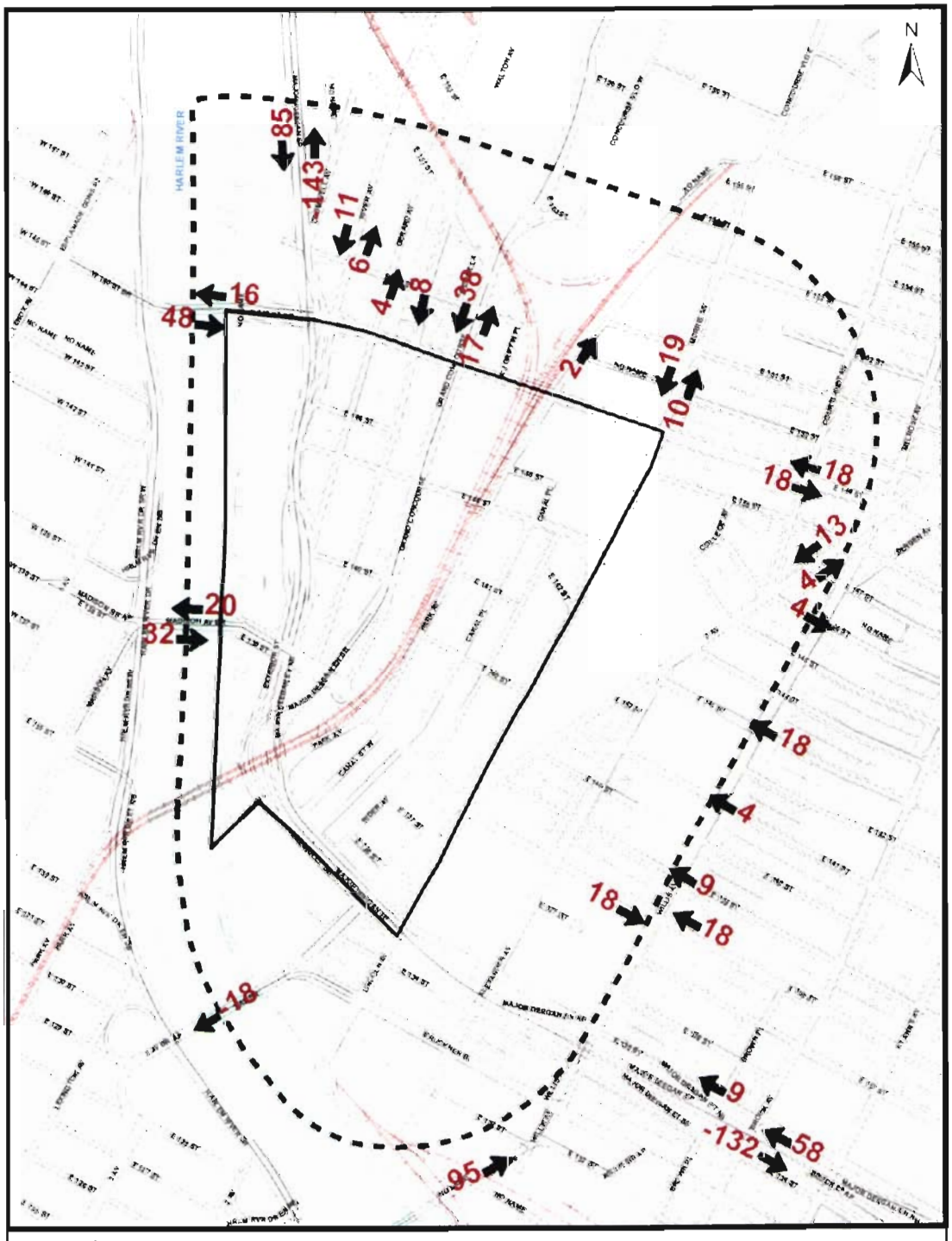

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95
Legend
Proposed Rezoning Area
1/4-Mile Study Area
200 0 200 400 600 800
Feet
Source: NYC Department of City Planning BYTES of the BIG APPLE 2006
Preliminary Traffic Assignments To/From Study Area
PM Peak Hour
Lower Concourse Rezoning EIS
NYC Department of City Planning

Figure 8:

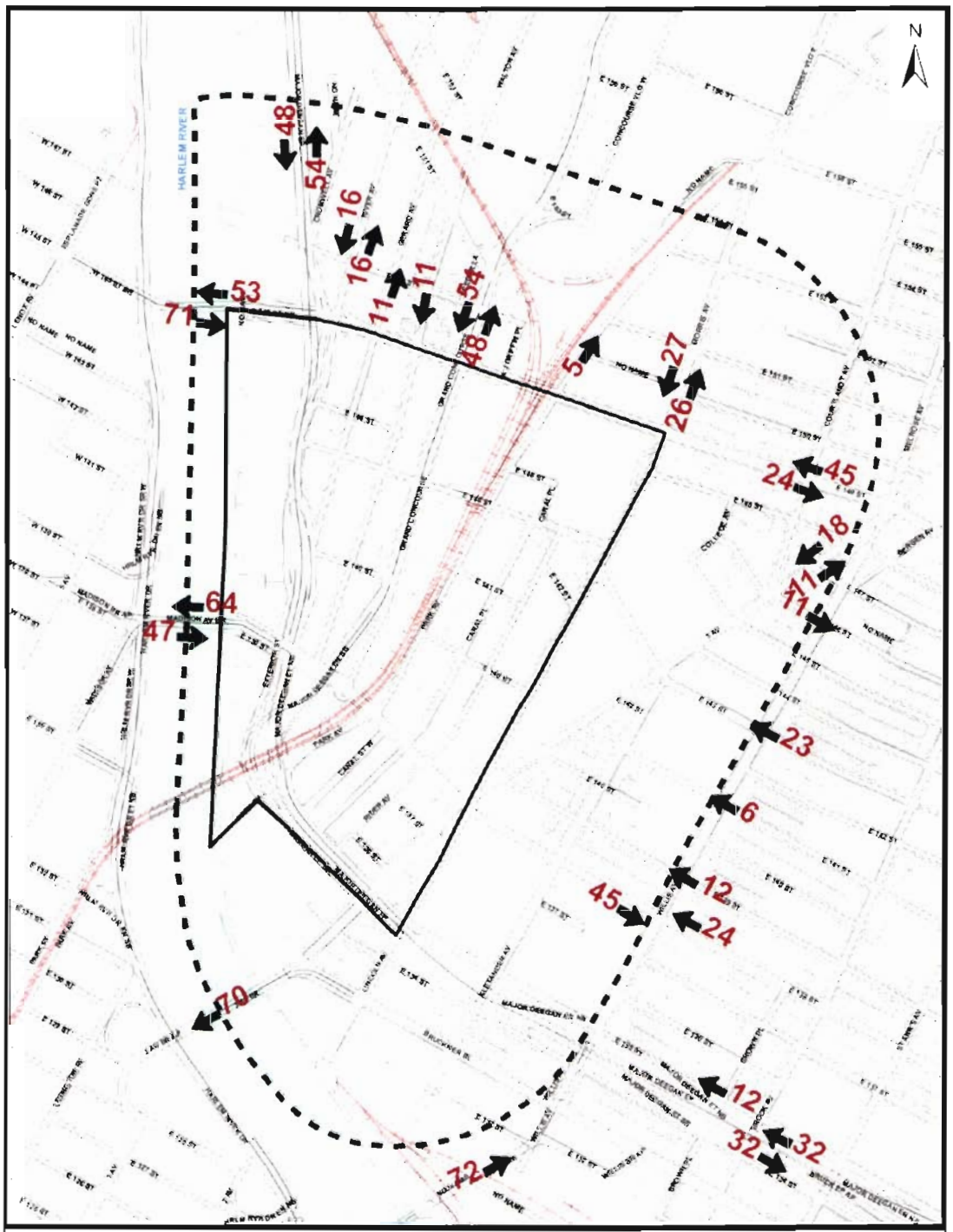
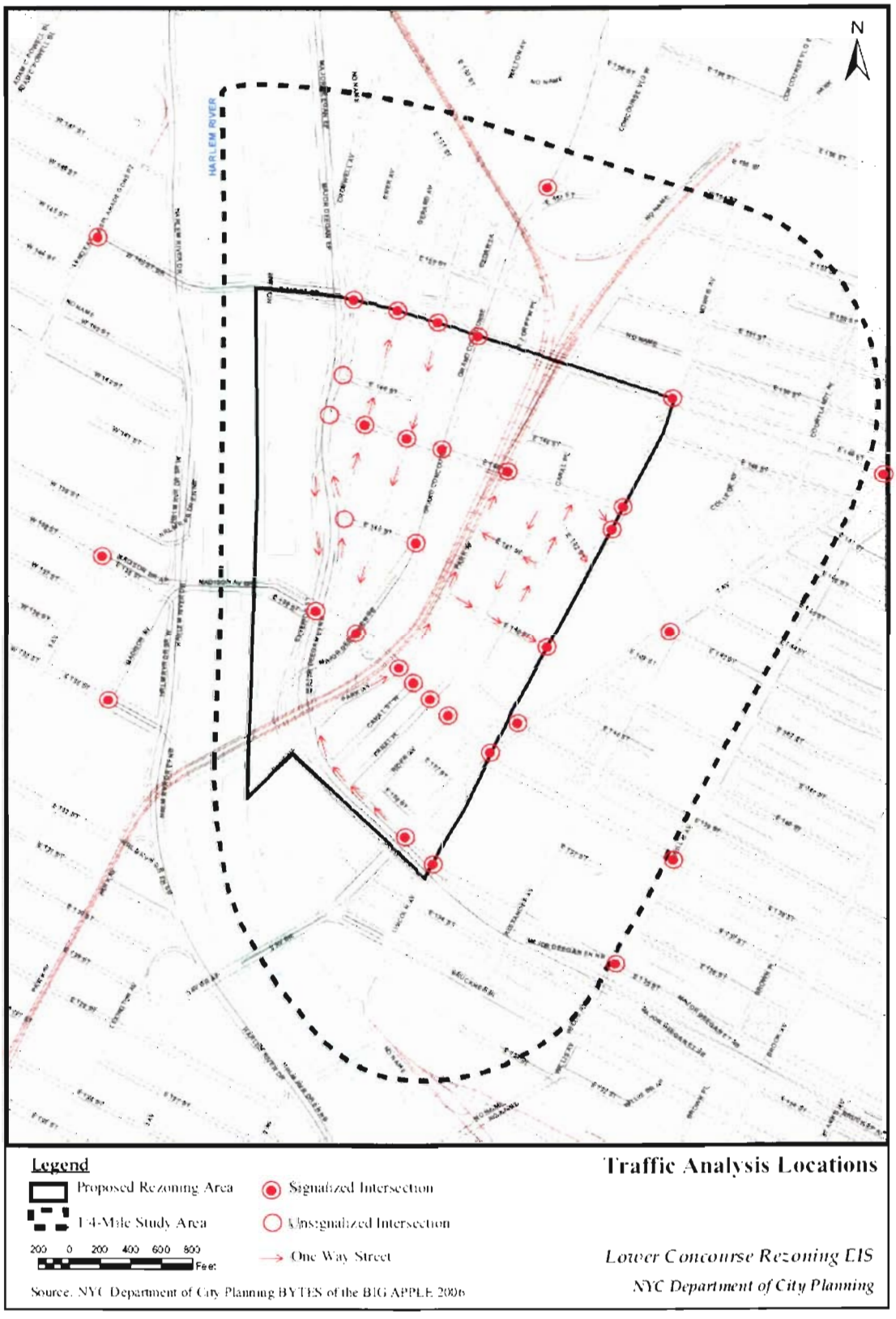

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72
Legend
Proposed Rezoning Area
1/4-Mile Study Area
200 0 200 400 600 800
Feet
Source: NYC Department of City Planning BYTES of the BIG APPLE 2006
Preliminary Traffic Assignments To/From Study Area
Saturday MD Peak Hour
Lower Concourse Rezoning EIS
NYC Department of City Planning

Figure 9:


N
HARLEM RIVER
Legend
Proposed Rezoning Area
1/4-Mile Study Area
200 0 200 400 600 800
Feet
Signalized Intersection
Unsignalized Intersection
One Way Street
Traffic Analysis Locations
Lower Concourse Rezoning EIS
NYC Department of City Planning
Source: NYC Department of City Planning BYTES of the BIG APPLE 2006

PARKING

Parking demand from retail, academic, manufacturing, warehousing and office land uses typically peaks during the weekday midday period whereas parking demand from residential and hotel land uses typically peaks during the overnight period. A parking analysis will be conducted for the No-Action and With-Action conditions during the weekday midday and weekday overnight periods and will assess changes in the capacity and utilization of off-street parking spaces within a ¼-mile radius of the projected development sites.

Overnight parking demand for residential land uses will be forecasted based on auto ownership data from the 2000 Census for comparable areas in the Bronx. Parking demand for other land uses will be derived based on the trip generation forecasts of daily auto trips. A net increase of 1,290 accessory parking spaces will be assumed in the With-Action condition on projected development sites associated with residential and retail land uses, consistent with the RWCDS. Existing on-street parking regulations and off-street parking facilities will be documented within a ¼-mile radius of the projected development sites. On- and off-street parking conditions will be assessed for No-Action and With-Action conditions within a ¼-mile radius of projected development sites where development is expected to generate parking demand exceeding the level of accessory parking supply to be provided.

TRANSIT ANALYSIS

Three subway stations are located within walking distance of the projected development sites: 149th Street/Grand Concourse (2, 4, 5), 138th Street/Grand Concourse (4, 5) and 138th Street/3rd Avenue (6). As shown in Table 3, subway trips to and from the projected development sites would increase by 988 in the weekday AM peak hour, 624 in the weekday midday peak hour, 1,316 in the weekday PM peak hour, and 1,283 in the Saturday midday peak hour. A preliminary assignment of subway trips was made for the weekday PM peak hour (the peak hour with the highest amount of trips) to determine which subway stations would have 200 or more project-generated trips and require a quantitative analysis based on the threshold established in the *CEQR Technical Manual*. The preliminary subway assignment was developed based on the proximity of each projected development site to the subway stations and adjusted for the No. 2 line service at the 149th Street/Grand Concourse station (based on the pattern of 2000 Census journey-to-work subway trips from the study area to destinations on the east and west sides of Manhattan). Because of the ease of transfer between the No. 4, 5 and 6 lines at the 125th Street station, use of one of the three stations for trips to the east side of Manhattan was judged to be most influenced by the proximity of stations to projected development sites rather than subway service. As shown in Table 5, the 200-trip threshold would be exceeded the 149th Street/Grand Concourse (2, 4, 5) and 138th Street/Grand Concourse (4, 5) stations. At these stations, the station elements (street stairs and fare control areas) most likely to be used by project-generated trips will be quantitatively analyzed. A qualitative description of the 138th Street/Third Avenue station will be included in the EIS.

Table 5:
Preliminary Weekday PM Peak Hour Subway Assignment

Subway Station	PM Peak Hour Trips
149th Street/Grand Concourse (2, 4, 5)	922
138th Street/Grand Concourse (4, 5)	362
138th Street/Third Avenue (6)	31
Total	**1,315**

The proposed rezoning area lies near a hub of several local bus routes serving the South Bronx. A total of seven MTA New York City Transit bus lines would be expected to attract demand from the proposed action: the Bx1, Bx2, Bx15, Bx19, Bx21, Bx32 and Bx33. Since all of the projected development sites are located within walking distance of a subway station, no bus-subway linked trips are expected to be generated as a result of the proposed action. As shown in Table 3, bus trips to and from the projected development sites would increase by 345 in the weekday AM peak hour, 799 in the weekday midday peak hour, 689 in the weekday PM peak hour and 775 in the Saturday midday peak hour. As the proposed action exceeds the 200-trip threshold established by the *CEQR Technical Manual* for a detailed analysis of bus transit conditions, each of the seven identified bus routes will be analyzed quantitatively to determine the effects of project-generated trips at their peak load points.

PEDESTRIAN ANALYSIS

The analysis of pedestrian conditions will focus on sidewalks, crosswalks and corners that are expected to have 200 or more project-generated trips during any peak hour. New pedestrian trips resulting from the proposed action would be most heavily concentrated adjacent to projected development sites and become more dispersed farther away from the sites. The pedestrian elements selected for analysis will include key sidewalks, crosswalks and corners in the vicinity of the projected development sites and along corridors leading to the subway stations.

Appendix 3
Air Quality Analysis Assumptions

STV Memorandum

Date: March 4, 2008

To: Mauricio Garcia, NYC DCP

From: Douglas Swann, STV / Tammy Petsios, PB

Subject: Lower Concourse Rezoning EIS - Air Quality Analysis Assumptions

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An air quality analysis will be conducted for the Lower Concourse Rezoning EIS. The project will involve both mobile and stationary source analyses. The following outline of procedures and assumptions was based on guidelines contained in the *2001 NYC CEQR Technical Manual.*

The Proposed Rezoning would alter traffic and land uses in the study area. Air quality, which is a general term used to describe pollutant levels in the atmosphere, would be affected by these changes.

The key issues that would be addressed in the air quality study regarding the potential impacts of the Proposed Rezoning are:

- The potential for significant air quality impacts from increases in the number of project-generated vehicle trips on the already congested local traffic network, and the accompanying reduction in vehicular speeds;
- The potential for emissions from the heating, ventilation and air conditioning (HVAC) systems of the proposed development buildings to significantly impact existing land uses;
- The potential for emissions from the HVAC systems of the proposed development buildings to significantly impact other proposed development buildings (project-on-project impacts);
- The potential combined impacts from HVAC emissions of proposed developments that are located in close enough proximity to one another (clusters) to significantly impact existing land uses and other proposed development sites;
- The potential for significant air quality impacts from the emissions of existing large emission sources (e.g., HVAC systems with 2.8 or more Btu/hr heat input) on the proposed residential/commercial developments located in areas that are being rezoned to allow new residential/commercial uses; and
- The potential for significant air quality impacts on the proposed residential /commercial developments located in areas that are being rezoned to allow new

residential/commercial uses from air toxic emissions generated by nearby existing industrial sources, and

- Potential impacts associated with proposed parking facilities on nearby sensitive uses.
- Potential impacts from elevated roadway emissions on nearby sensitive residential and commercial uses.

The project area is located in the Bronx, New York and is bounded by Harlem River to the west, Major Deegan Expressway to the south, E 149th Street to the north and Morris Avenue to the east. The site is located in a maintenance area for CO and a non-attainment zone for PM2.5.

Mobile Source Microscale Analysis

Pollutants of Concern

The microscale analysis will evaluate the potential that the proposed rezoning will have on localized CO, PM10 and PM2.5 levels in the study area as a result of adding project-generated vehicles at currently congested intersections. Selected sites will be analyzed under the "Reasonable Worst-Case Development Scenario" (RWCDS). The RWCDS is defined as the full build out of the proposed action that includes both projected and potential development sites. However, the study of mobile sources will utilize induced traffic from projected development sites only.

Dispersion and Emissions Modeling for Microscale Analyses

The microscale analysis will be using the EPA's CAL3QHC model for CO intersection analysis and the MOBILE 6.2 model for prediction of vehicular emissions. CAL3QHC and MOBILE are the recommended models for use by the NYCDEP, NYSDEC and the USEPA. For the PM2.5 and PM10 microscale analyses, the MOBILE 6.2 model and EPA's refined CAL3QHCR model will be used with the latest five years (2002-2006) of meteorology from LaGuardia airport.

Analysis Sites

Carbon Monoxide

It is anticipated that the CAL3QHC model will be used to predict CO concentrations at up to 6 intersections. Preliminary locations that have been selected based on other studies and historic observations (which identify high levels of congestion at these locations) include:

- E 149th Street & Exterior Street

- E 149th Street & Grand Concourse
- E 138th Street & Grand Concourse
- E 138th Street & 3rd Ave/Morris Ave

The final selection of the six (6) analysis sites will be completed when trip generation and assignment information is made available from the traffic consultant. The site selection will be based on the CEQR intersection screening analysis and it is assumed that all selected intersections would surpass the CEQR 100 trip screening limit for this area of the city. The site selection will also take into account existing level of service (LOS), overall Build vehicular volumes and vehicle classification (% heavy vehicles) during the project's peak hours. The CO analysis will predict one-hour and eight-hour concentrations and compare them to the NAAQS and CEQR CO *De Minimis* criteria.

PM10 and PM2.5

Traffic within the Lower Concourse community consists of a high number of heavy duty diesel vehicles which contribute to recorded exceendances of the PM2.5 24-hour and annual standard at nearby NYSDEC monitors. In addition there exist many industrial process facilities which also contribute to the PM emissions burden. Project generated heavy duty diesel vehicles (HDDV) and to a lesser degree light-duty gasoline vehicles (LDGV) could impact localized PM emissions. As a result, it is anticipated that a PM10 analysis will be conducted at a one worse case intersection. Site selection will be based on the anticipated number of project-induced HDDV trips, % baseline HDDV and overall Build volumes. The PM10 analysis will predict 24-hour concentrations and compare them to the NAAQS.

One "worse-case" location will be selected to conduct a detailed PM2.5 microscale analysis. The selection will be based on project-generated trip data using the NYCDEP PM2.5 Interim Guidelines screening procedure. Should the screening procedure show that the number of project-generated HDDV's will not surpass the NYCDEP screening thresholds, no further analysis of mobile source PM2.5 will be conducted. However, it is anticipated that at least one location will fail the NYCDEP screening procedure and the selected "worst-case" location will result in the highest number of project-generated HDDVs or combination of HDDVs and passenger cars. The CAL3QHCR model will be used to predict PM2.5 concentrations and an analysis will be conducted to assess whether incremental microscale 24-hour and neighborhood scale annual concentration levels are below NYCDEP Significant Threshold Values (STVs) and the National Ambeint Air Quality Standards (NAAQS).

For the CO, PM2.5 and PM10 analyses,

- Detailed Geometries will be incorporated
- Receptor Placement for both maximum sidewalk locations and average neighborhood locations (15 meters from the curb)

- Each roadway will be modeled within 1000' of an intersection. Traffic data for intersections within 1000' for which no traffic information is available will be conservatively extrapolated from the nearest intersection.
- All modeling will follow USEPA guidelines for intersection modeling.

Model Inputs

EPA's Mobile 6.2 will be used to predict CO, PM2.5 and PM10 emissions rates. Site specific inputs such as *average temperature, registration data, diesel sales fractions* will be supplied by NYSDEC. The latest 2008 NYSDEC inputs for vehicle registration data & diesel fractions will be used. Monitoring Data and background levels will be supplied by the NYCDEP, NYCDCP and the NYSDEC. When using CAL3QHC, worst case meteorological conditions will be assumed. The CAL3QHCR model will be used with the latest available five years (2002-2006) of meteorology from LaGuardia airport.

Analysis Periods

The intersection analyses of mobile sources will predict concentrations for the existing, No Build, & Build scenarios. One build year will be studied. The peak hours will be Weekday AM, Midday & PM and weekend Midday. It is assumed that vehicle speed and classification data for the relevant air quality intersections will be supplied by the traffic consultants for these periods. Project -generated vehicle Ins and Outs for the studied air quality intersections will also be provided by the traffic consultant.

Parking Analysis

Two worst case parking facilities in terms of size, location, and traffic Ins/Outs will be selected for the analysis of CO. Once each facility is selected for analysis, the peak period with the greatest number of vehicular Ins/Outs will be studied. If any of the analyzed intersections are in close proximity to a studied parking facility, the cumulative effect of both sources will be reported. Both ground level and elevated receptors will be considered. The analysis will utilize the appropriate parking analysis methodology as described in the *NYC CEQR Technical Manual* Appendices.

Stationary Source Analyses

HVAC Analyses

The analysis process would be conducted, in accordance with CEQR Technical Manual procedures, as follows:

- Potential impacts of emissions from the HVAC systems of the proposed development buildings to significantly impact existing land uses and other proposed development buildings (project-on-project impacts) would be conducted. Impacts would be initially analyzed using the CEQR Technical Manual nomographic

procedures. The initial screening would assume the use of No. 4/No. 2 fuel oil and natural gas.

- If the analysis results exceed established threshold values, detailed analyses would be conducted using the EPA's AERMOD dispersion model.
- Potential impacts of emissions from large emission sources within 1,000 feet of the Project Site on the proposed developments would be estimated - both individually and combined. A detailed analysis would be conducted, if necessary, using EPA's AERMOD dispersion model. The latest five years of meteorology (2002-2006) will be utilized.
- A cumulative boiler impact analysis will be performed for development sites that would be located in close proximity to one another and will be evaluated as "clusters" to estimate the potential cumulative impacts from the combined heating system emissions on existing land uses. Descriptions of the selected clusters will be sent to the NYC DCP for approval. A detailed dispersion analysis will be conducted.

The analyses would be conducted as follows:

- The pollutants that would be considered for all detailed stationary source analyses are NO_2, SO_2, and PM_{10}.
- Emission factors for the pollutants of concern for HVAC emissions would be obtained from EPA's "Compilation of Air Pollutant Emission Factors" (AP-42) based on building fuel types and fuel consumption rate. Fuel consumption rates would be estimated using factors presented in NYCDEP's Report T.S. #12.
- Stack parameters for the analysis of HVAC system emissions (i.e., temperature, stack diameter, exit velocity, etc.) would be obtained using conservative CEQR Technical Manual default values. Analyses would be conducted with and without building downwash using latest five consecutive years of meteorological data from LaGuardia Airport (2002-2006).
- Estimated short-term and annual pollutant concentrations would be added to appropriate background levels, and total pollutant concentrations would be compared with NAAQS to determine whether there would be the potential for a violation of these standards. Mitigation measures would be identified, where necessary, to ensure compliancy with the NAAQS.

Air Toxics Analysis

The analysis process would be conducted as follows:

- An analysis area with a radius of approximately 400 feet around the areas to be rezoned to allow new residential/commercial uses would be identified;
- Air permits for all facilities within this analysis area on NYSDEC, NYCDEP, and EPA Enviro-facts databases would be acquired and reviewed;

- Dispersion analyses would be conducted to determine the potential of the toxic emissions released from the permitted emission sources to adversely affect the new residential areas, as follows:
  - The dispersion modeling analysis would initially be conducted using NYSDEC's DAR-1 (former Air Guide-1 (AG-1) model to determine whether the existing currently operating permitted facilities within the air toxics study area would have the potential to adversely affect the sensitive analysis sites. (In addition to containing a database, DAR-1 includes software -screen and more refined ISCLT2 subroutine model - and that would be used to determine whether facilities have the potential to exceed short-term or annual health-related guideline values (i.e., SGCs or AGCs)). AG-1 also includes unit risk factors for inhalation (IRIS and EPA Health Assessment summary tables) and health-related guideline values (GVs) for EPA's Hazard Index Approach. Impacts of carcinogenic and non-carcinogenic toxic air pollutants would be estimated using unit risk factors and hazard indexes.
  - A more refined analysis the AERMOD model, would be conducted to estimate potential impacts for facilities, if any, which fail the screening level analysis with DAR-1 software.

Appendix 4
Noise Analysis Assumptions

STV Memorandum

Date: March 3, 2008

To: Mauricio Garcia, NYC DCP

From: Douglas Swann, STV Incorporated

Subject: Lower Concourse Rezoning and Related Actions EIS - Noise Analysis Assumptions

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A noise analysis will be conducted for the Lower Concourse Rezoning EIS. The project will primarily involve the assessment of project-related mobile sources. The following outline of procedures and assumptions was based on guidelines contained in the *2001 NYC CEQR Technical Manual*.

The project area is located in the Bronx, New York and is generally bounded by Harlem River to the west, Major Deegan Expressway to the south, E 149th Street to the north and Morris Avenue to the east.

It is assumed that noise impacts would result primarily from one of two sources:

1. Vehicular noise from project generated traffic on sensitive receptors in the community
2. Ambient noise impacts (from existing local and highway traffic, ventilation equipment, trains, stationary sources etc.) on proposed uses (projected and potential development sites).

Given the high ambient noise levels from existing sources including the Major Deegan Expressway, the Metro-North Railroad and the Oak Point Rail Freight Link, as well as high vehicular volumes on many of the major streets (e.g., East 138th Street, East 149th Street, and the Grand Concourse), the trip generation resulting from the incremental development of the proposed project will likely result in a low level of additional noise. The exceptions to this may occur on other less traveled streets in the project area. While these sites will be examined, it is assumed that the greatest concern for project-generated impacts will be related to the impact of existing and future noise generators on future residents.

Noise Monitoring

Mobile Sources

To determine baseline noise levels within the project study area, noise monitoring is proposed at 21 locations. These locations were selected based on their proximity to projected and potential development sites as well as their potential to experience a doubling in traffic volume (PCE's) from project-induced traffic. In addition, care was taken to select sites that would result in the most representative assessment of the existing noise environment. Elevated receptors will be

examined near the elevated Major Deegan Expressway and Metro North train lines. **This assumes that a secure and accessible location is available**. Monitoring will be conducted during the peak Weekday AM, Midday & PM and Weekend Midday time periods for 20-minute intervals. Up to three sites may be monitored for a 24-hour period assuming access is available. As per the 2001 *CEQR Technical Manual* guidelines, noise monitoring would include the use of A-weighted sound levels, and the L1, L10, L50, L90, Lmin, Lmax and LEQ noise descriptors. The instrument used for the monitoring will be a Type I noise level meter. The proposed noise monitoring sites are listed below;

1 **E 135th Street (between Third & Rider Avenues) ***
2 **Third Avenue (between E 136th & E 137th Streets)**
3 **E 138th Street (between Third Avenue/Morris Avenue & Rider Avenue)**
4 **Morris Avenue (between E 139th & E 140th Streets)**
5 **Park Avenue eastern sidewalk (between E 140th & E 141st Streets)**
6 **Rider Avenue (between E 140th & E 141st Streets)**
7 **Canal Place (between E 140th & E 141st Streets)**
8 **E 144th Street (between Canal Place & Park Avenue)**
9 **Grand Concourse NB(between E 138th & E 140th Streets)**
10 **Grand Concourse NB (between E 140th & E 144th Streets)**
11 **Grand Concourse SB(between E 138th & E 140th Streets)**
12 **Walton Avenue (between E 140th & E 144th Streets)**
13 **NB E 149th Steet (between MDE and the East River)***
14 **Exterior Street NB (between E 146th and E 149th Streets)***
15 **Exterior Street SB(between E 144th and E 146th Streets)***
16 **Exterior Street SB(south of E 138th Street)***
17 **Gerard Avenue (between 140th & 138th Streets)**
18 **E 144th Street (between Gerard & Walton Avenues)**
19 **Any accessible location along the "Oak Point" rail line**
20 **Elevated Metro North Location***
21 **Park Avenue (between E 137th & E 138th Streets)***
22 **TBD**
23 **Gerard Avenue (between E 146th and E 149th Streets)**
24 **E 149th Street (between Walton Avenue and Gerard Avenue)**

* *Sites that may require noise monitoring at an elevated location.*

Rail Sources

Two existing rail sources (Metro North & the Oak Point Rail Line) are within close proximity to proposed sites. Where possible, noise monitoring will be conducted to determine the noise level which potential and projected sites will be exposed to. Noise exposure for specific sites will be determined based on distance-related sound propagation principles. The FTA noise guidance may be used, based on consultation with the DCP & DEP.

Stationary Sources

It is not anticipated that a significant singular source of stationary noise will be identified and therefore no monitoring of stationary sources will be conducted.

Detailed Analysis Procedures

Vehicular Noise

The selected noise monitoring locations will be used to assess the noise impacts of project-induced vehicles. For traffic-induced noise impacts, projected increases in noise would be based on the *CEQR Technical Manual*, depending on the traffic noise levels projected for No Build Conditions. A screening analysis (as per the 2001 *CEQR Technical Manual* guidelines) will be conducted to demonstrate that the proposed project will not result in any exceedences of noise guidelines (a doubling of PCEs). If however, traffic assumptions result in the CEQR noise screening guidelines being exceeded, a detailed analysis at the appropriate receptor locations will be performed at no more than two (2) locations.

Ambient Noise Analysis

Based on predicted build L_{10} noise levels, the noise analysis will result in a determination of the required attenuation values for each of the proposed development sites.

- Initially, the selected noise monitoring locations will be assessed to determine what their future L_{10} noise levels will be.
- Future noise from traffic would be calculated by converting traffic into PCEs for No Build and Build Conditions, using logarithmic calculations and PCE traffic volumes.
- Predicted L_{eq} noise levels will be converted to L_{10} noise levels.
- Each projected and potential development site will then be assigned a future noise level based on their proximity to one of the worst case monitored noise sites.
- Based on this selected future build noise level, the degree to which window/wall attenuation would provide acceptable interior noise levels will be assessed.

Models for Analysis

As per CEQR guidelines, the logarithmic proportional modeling procedure will be used to predict future L_{eq} noise levels. No modeling with the FHWA's TNM model is anticipated.

Analysis Periods

The analyses of mobile sources will predict future noise levels for the existing, No Build, & Build scenarios. One build year will be studied, which has been identified by the Department of City Planning as 2018. The peak hours will be Weekday AM, Midday & PM and Weekend Midday. Average speed and vehicle classification data will be supplied by the traffic consultant for these periods.