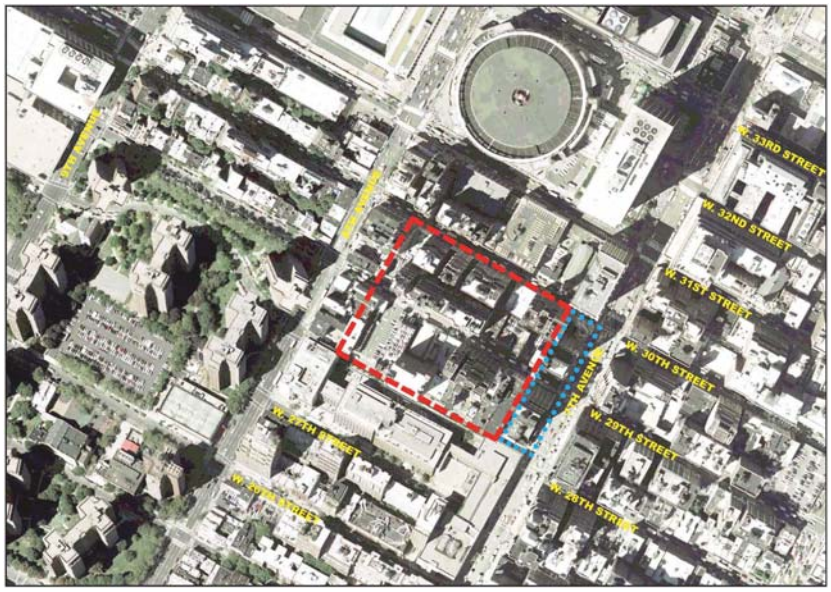
Environmental Assessment Statement

(CEQR # 10DCP004M)

(ULURP # 100063ZMM; 100064ZSM; N110285ZRY)

West 28th Street Rezoning



Lead Agency:
City Planning Commission, City of New York

Prepared For:
249 W 28th Street Properties LLC

Prepared By:
Philip Habib & Associates
Assisted By:
PB Americas, Inc.
Sandstone Environmental

APRIL 21, 2011

West 28th Street Rezoning EAS

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City Environmental Quality Review
ENVIRONMENTAL ASSESSMENT STATEMENT SHORT FORM ● FOR UNLISTED ACTIONS ONLY

Please fill out, print and submit to the appropriate agency (see instructions)

PART I: GENERAL INFORMATION

1. ***Does Action Exceed Any Type I Threshold In 6 NYCRR Part 617.4 or 43 RCNY §6-15(A) (Executive Order 91 of 1977, as amended)?***

☐ Yes ☑ No

If yes, **STOP**, and **complete the FULL EAS**

2. ***Project Name*** **West 28th Street Rezoning**

3. ***Reference Numbers***

CEQR REFERENCE NUMBER (To Be Assigned by Lead Agency)	BSA REFERENCE NUMBER (If Applicable)
10DCP004M	
ULURP REFERENCE NUMBER (If Applicable))	OTHER REFERENCE NUMBER(S) (If Applicable) (e.g. Legislative Intro, CAPA, etc)
100063ZMM; 100064ZSM; N110285ZRY	

4a. ***Lead Agency Information***			4b. ***Applicant Information***		
NAME OF LEAD AGENCY			NAME OF APPLICANT		
New York City Department of City Planning (DCP)			**NYC Department of City Planning, and 249 W 28th Street Properties, LLC**		
NAME OF LEAD AGENCY CONTACT PERSON			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON		
Robert Dobruskin, AICP, Director, EARD			**Gary DeBode, Vice President, Edison Parking Corporation, Manager**		
ADDRESS 22 Reade Street, 4E			ADDRESS **100 Washington Street**		
CITY **New York**	STATE **NY**	ZIP **10007**	CITY **Newark**	STATE **NJ**	ZIP **07102**
TELEPHONE **212.720.3420**	FAX **212.720.3495**		TELEPHONE **973.849.2597**	FAX	
EMAIL ADDRESS **rdobrus@planning.nyc.gov**			EMAIL ADDRESS **GaryD@edprop.com**		

5. ***Project Description:***

This application is for zoning map and text amendments affecting portions of two City blocks in the northern Chelsea area of Manhattan Community District 5, as well as a special permit for a public parking garage pursuant to Sections 13-562 and 74-52 (collectively, the "Proposed Action").The proposed rezoning from M1-5 to M1-6D would facilitate the redevelopment of the "Proposed Development Site", located at 241-251 West 28th Street (244-250 West 29th Street), which is owned by the applicant. An additional 9 projected development sites have also been identified. Refer to Attachment A, "Project Description," for details. The text of the proposed zoning text amendments is included in its entirety as Appendix 3 of this document.

6a. ***Project Location: Single Site*** *(for a project at a single site, complete all the information below)*

ADDRESS	NEIGHBORHOOD NAME	
TAX BLOCK AND LOT	BOROUGH	COMMUNITY DISTRICT
DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS		
EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION IF ANY:		ZONING SECTIONAL MAP NO:

6b. ***Project Location: Multiple Sites*** *(Provide a description of the size of the project area in both City Blocks and Lots. If the project would apply to the entire city or to areas that are so extensive that a site-specific description is not appropriate or practicable, describe the area of the project, including bounding streets, etc.)*

Proposed rezoning area encompasses the midblock portions of two blocks, bounded generally by West 30th Street to the north, Seventh Avenue to the east, West 28th Street to the south, and Eighth Avenue to the west. It encompasses portions of Blocks 778 and 779 in the northern Chelsea neighborhood of Manhattan Community District 5 , and includes approximately 52 lots (refer to Attachment A). The rezoning area is zoned M1-5 (zoning map section no. 8d). Proposed Action also includes a zoning text amendment affecting 10 lots (entire or partial) along the west side of Seventh Avenue between West 28th and West 30th Streets, which are currently zoned M1-6.

7. ***REQUIRED ACTIONS OR APPROVALS*** *(check all that apply)*

City Planning Commission: YES ☑ NO ☐

- ☐ CITY MAP AMENDMENT
- ☑ ZONING MAP AMENDMENT
- ☑ ZONING TEXT AMENDMENT
- ☑ UNIFORM LAND USE REVIEW PROCEDURE (ULURP)
- ☐ CONCESSION
- ☐ UDAAP
- ☐ REVOCABLE CONSENT
- ☐ ZONING CERTIFICATION
- ☐ ZONING AUTHORIZATION
- ☐ HOUSING PLAN & PROJECT
- ☐ SITE SELECTION — PUBLIC FACILITY
- ☐ FRANCHISE
- ☐ DISPOSITION — REAL PROPERTY

ZONING SPECIAL PERMIT, SPECIFY TYPE: **Public Garages or Public Parking Lots pursuant to §13-562 and §74-52**

- ☐ MODIFICATION OF
- ☐ RENEWAL OF
- ☐ OTHER

Board of Standards and Appeals: YES ☐ NO ☑

- ☐ SPECIAL PERMIT

EXPIRATION DATE MONTH DAY YEAR

- ☐ VARIANCE (USE)
- ☐ VARIANCE (BULK)

SPECIFY AFFECTED SECTION(S) OF THE ZONING RESOLUTION

Department of Environmental Protection: YES ☐ NO ☑ IF YES, IDENTIFY:

Other City Approvals: YES ☐ NO ☑

- ☐ LEGISLATION
- ☐ FUNDING OF CONSTRUCTION; SPECIFY:
- ☐ POLICY OR PLAN; SPECIFY:
- ☐ LANDMARKS PRESERVATION COMMISSION APPROVAL *(not subject to CEQR)*
- ☐ 384(b)(4) APPROVAL
- ☐ PERMITS FROM DOT'S OFFICE OF CONSTRUCTION MITIGATION AND COORDINATION (OCMC) *(not subject to CEQR)*
- ☐ RULEMAKING
- ☐ CONSTRUCTION OF PUBLIC FACILITIES
- ☐ FUNDING OF PROGRAMS; SPECIFY:
- ☐ PERMITS; SPECIFY:
- ☐ OTHER; EXPLAIN

State or Federal Actions/Approvals/Funding: YES ☐ NO ☑ IF "YES," IDENTIFY:

8. ***Site Description:*** *Except where otherwise indicated, provide the following information with regard to the directly affected area. The directly affected area consists of the project site and the area subject to any change in regulatory controls.*

GRAPHICS *The following graphics must be attached and each box must be checked off before the EAS is complete.* ***Each map must clearly depict*** *the boundaries of the directly affected area or areas and indicate a 400-foot radius drawn from the outer boundaries of the project site. Maps may not exceed 11×17 inches in size and must be folded to 8.5 ×11 inches for submission*

☑ Site location map **Refer to Figures A-1 in Attachment A** ☑ Zoning map ☑ Photographs of the project site taken within 6 months of EAS submission and keyed to the site location map **Refer to Figure A-3 (a through d) in Attachment A**

☑ Sanborn or other land use map ☑ Tax map ☑ For large areas or multiple sites, a GIS shape file that defines the project sites **Refer to Sanborn Map in Figure 1**

PHYSICAL SETTING *(both developed and undeveloped areas)*

Total directly affected area (sq. ft.):	Type of Waterbody and surface area (sq. ft.):	Roads, building and other paved surfaces (sq. ft.)
Approximately 236,906 sf (lot area being rezoned), plus app. 39,500 sf (area affected by Seventh Avenue bulk control text)	**N.A.**	**Approximately 236,906 sf (rezoning area) + 39,500 sf (affected by Seventh Avenue bulk control text)**

Other, describe (sq. ft.): N.A.

9. ***Physical Dimensions and Scale of Project*** *(if the project affects multiple sites, provide the total development below facilitated by the action)*

Size of project to be developed: **approximately 1,116,649** (gross sq. ft.) **Total development assumed for Proposed Development Site and 9 additional projected development/conversion sites**

Does the proposed project involve changes in zoning on one or more sites? YES ☑ NO ☐

If 'Yes,' identify the total square feet owned or controlled by the applicant: **29,373 sf** Total square feet of non-applicant owned development: **60,980 sf (RWCDS lot area)**

Does the proposed project involve in-ground excavation or subsurface disturbance, including but not limited to foundation work, pilings, utility lines, or grading? YES ☑ NO ☐

If 'Yes,' indicate the estimated area and volume dimensions of subsurface disturbance (if known): **8 of the 10 RWCDS projected development sites are expected to result in in-ground disturbance**

Area: **Unknown at this time** sq. ft. (width × length) Volume: **Unknown at this time** cubic feet (width × length × depth)

DESCRIPTION OF PROPOSED USES *(please complete the following information as appropriate)*

	Residential	***Commercial***	***Community Facility***	***Industrial/Manufacturing***
Size (in gross sq. ft.)	**986,808 sq. ft. total or 949,403 sq. ft. net compared to No-Action**	**124,451 sf total (-29,647 sf net)**	**N.A.**	**N.A.**
Type (e.g. retail, office, school)	**1,153 total (1,134 net)** units	**office, retail, hotel**		

Does the proposed project increase the population of residents and/or on-site workers? YES ☑ NO ☐ Number of additional residents? **1,746 net** Number of additional workers? **43 net**

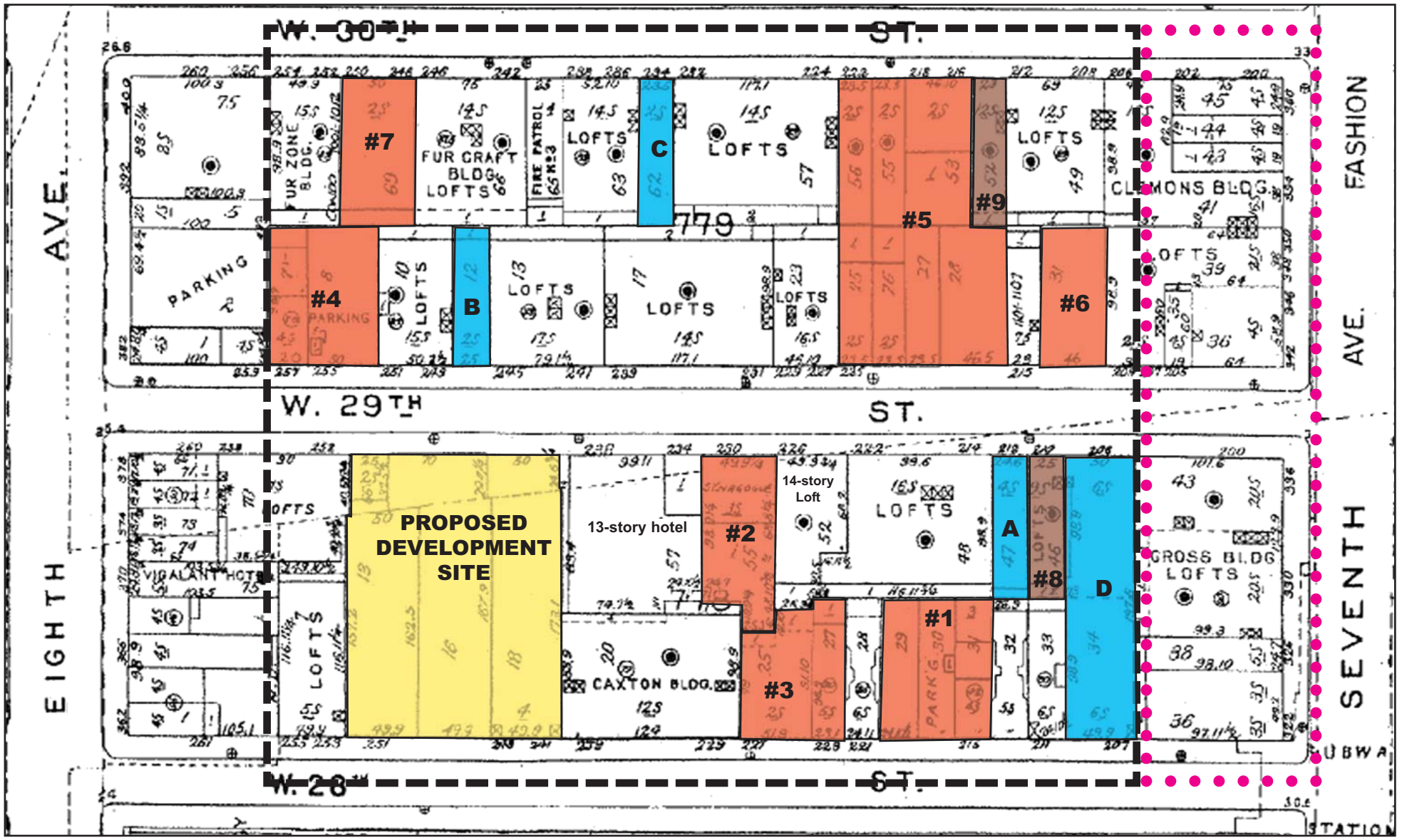
Provide a brief explanation of how these numbers were determined: **Based on net increment assumed for RWCDS, using 1.54 residents per unit and 3 employees per 1,000 sf retail space, 1 employee per 3 hotel rooms, 1 employee per 250 sf office, and 1 employee per 22.5 residential units.**

Does the project create new open space? YES ☐ NO ☑ if Yes (sq. ft)

Using Table 14-1, estimate the project's projected operational solid waste generation, if applicable:	**49,919 (net)**	(pounds per week)
Using energy modeling or Table 15-1, estimate the project's projected energy use:	**152,000,000,000**	(annual BTUs)

Has a No-Action scenario been defined for this project that differs from the existing condition? YES ☑ NO ☐ If 'Yes,' see Chapter 2, "Establishing the Analysis Framework" and describe briefly:

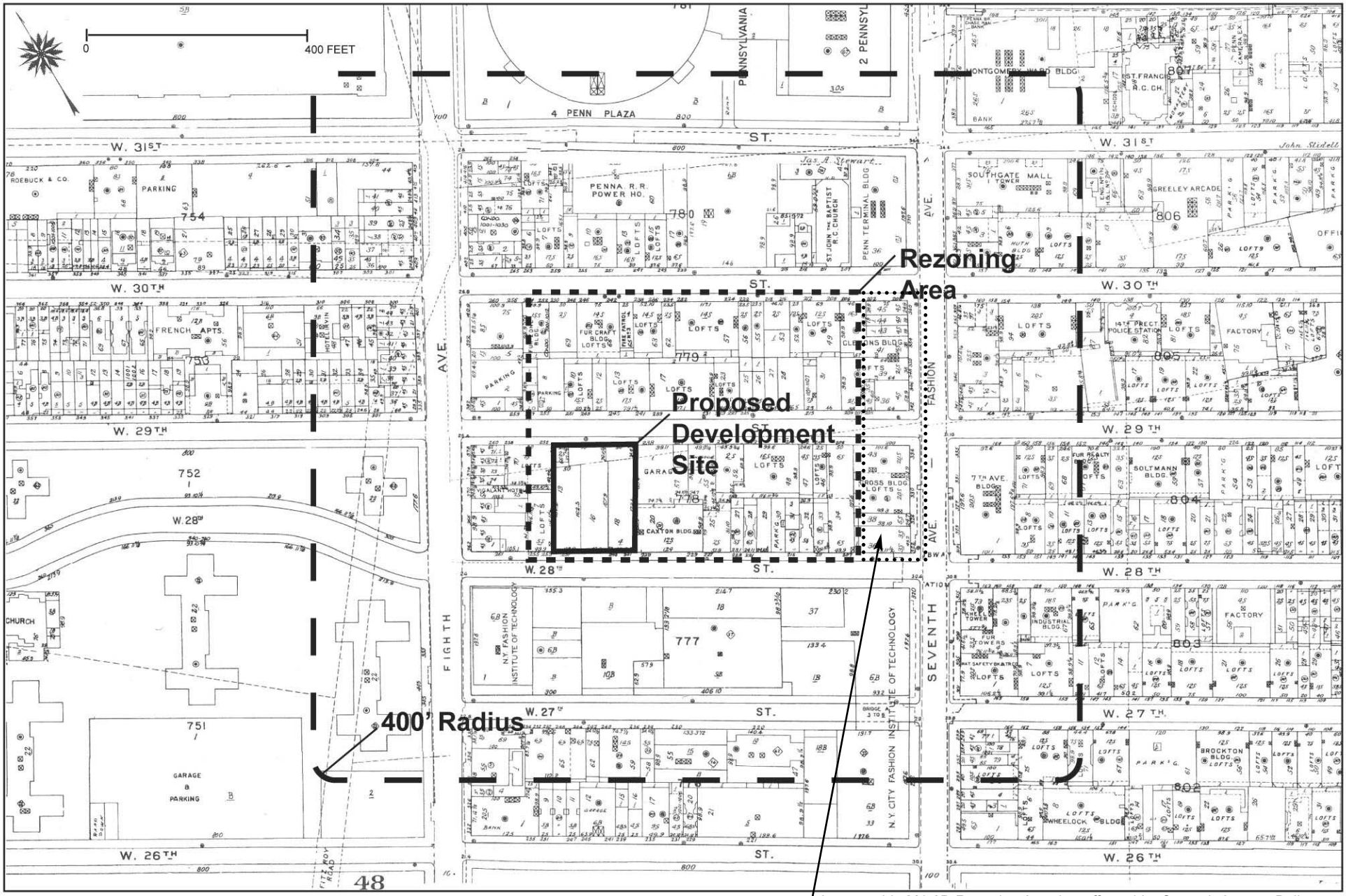
The 10 identified projected development sites (including the Proposed Development Site) would remain mostly unchanged under the No- Action condition, with one exception. The RWCDS assumes that a hotel would be developed within the rezoning area on projected development site 5 in the future without the Proposed Action. Refer to Attachment A, "Project Description" for details.



LEGEND

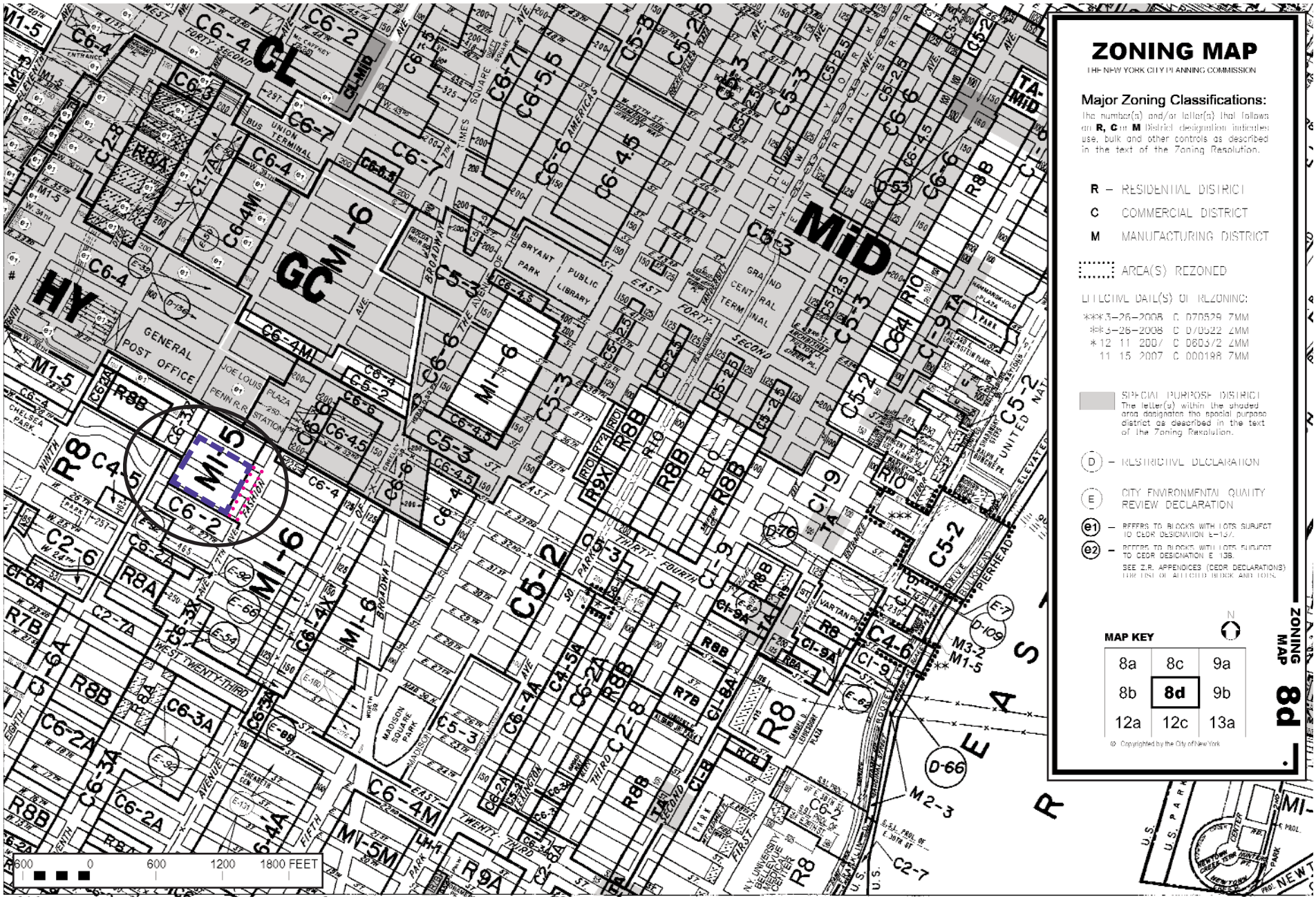
- AREA AFFECTED BY PROPOSED M1-6D ZONING MAP AND TEXT AMENDMENTS
- AREA OUTSIDE M1-6D REZONING AREA BUT AFFECTED BY ZR SECTION 43-43 TEXT AMMENDMENT
- PROPOSED DEVELOPMENT SITE
- PROJECTED DEVELOPMENT SITE
- PROJECTED DEVELOPMENT SITE (CONVERSION)
- POTENTIAL DEVELOPMENT SITE

Figure 1
Projected Development Sites



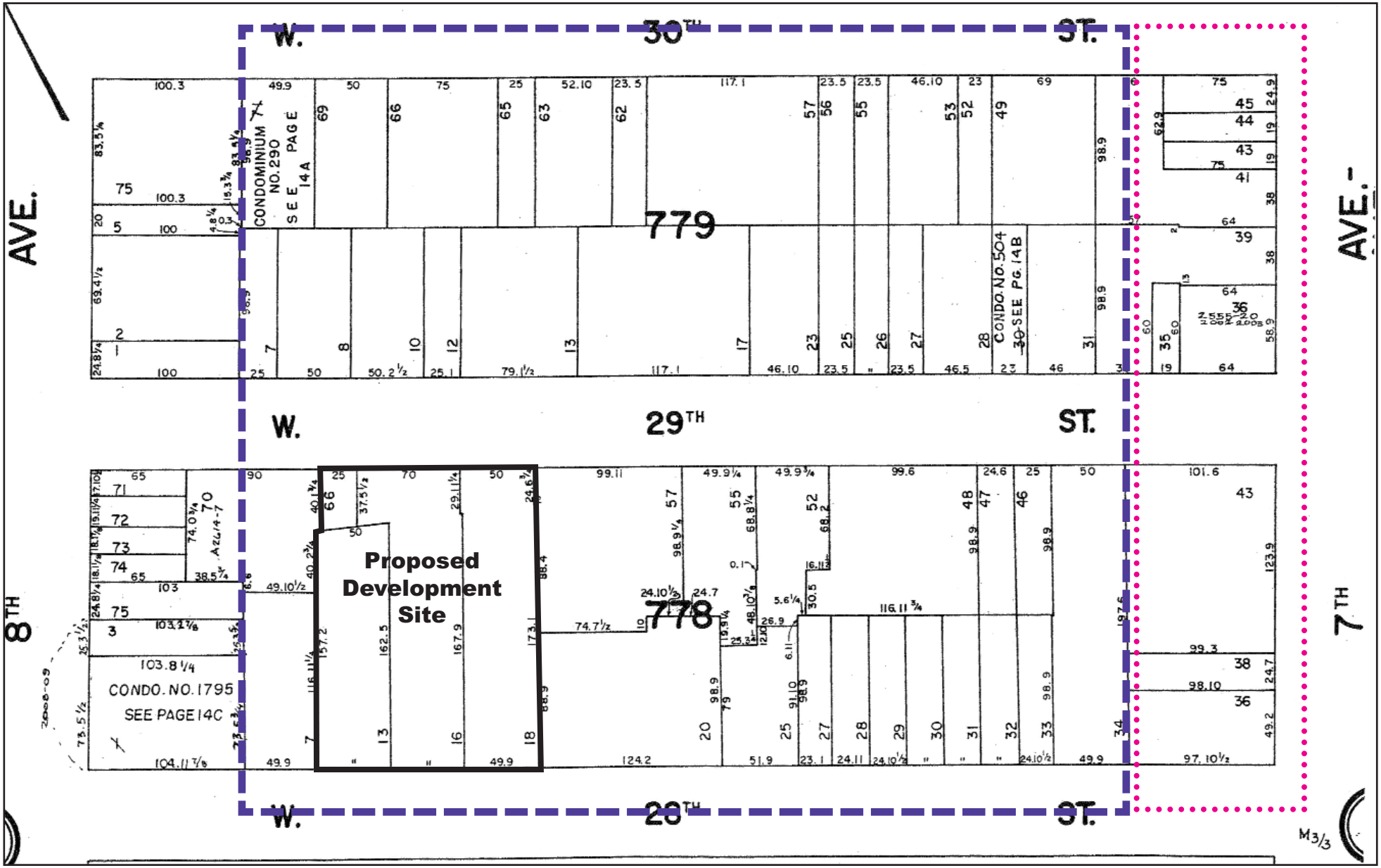
West 28th Street Rezoning EAS

Figure 3
Zoning Map



West 28th Street Rezoning EAS

Figure 3
Zoning Map



Area to be Rezoned

Area outside M1-6D Rezoning Area but affected by Seventh Avenue Bulk Control text ammendment (ZR Section 43-43)

10. *Analysis Year* CEQR Technical Manual Chapter 2

ANTICIPATED BUILD YEAR (DATE THE PROJECT WOULD BE COMPLETED AND OPERATIONAL): **2019**	ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: **Refer to Attachment A," Project Description"**
WOULD THE PROJECT BE IMPLEMENTED IN A SINGLE PHASE? YES ☑ NO ☐	IF MULTIPLE PHASES, HOW MANY PHASES:
BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE: N.A. Proposed Action is a rezoning. **Refer to Attachment A for details.**	

11. *What is the Predominant Land Use in Vicinity of Project?* *(Check all that apply)*

☑ RESIDENTIAL ☑ MANUFACTURING ☑ COMMERCIAL ☐ PARK/FOREST/OPEN SPACE ☑ OTHER, Describe: **Entertainment, Institutional, Transportation-related**

PART II: TECHNICAL ANALYSES

INSTRUCTIONS: The questions in the following table refer to the thresholds for each analysis area in the respective chapter of the CEQR Technical Manual.

- If the proposed project can be demonstrated not to meet or exceed the threshold, check the '**NO**' box.
- If the proposed project will meet or exceed the threshold, or if this cannot be determined, check the '**YES**' box.
- Often, a 'Yes' answer will result in a preliminary analysis to determine whether further analysis is needed. For each 'Yes' response, consult the relevant chapter of the CEQR Technical Manual for guidance on providing additional analyses (and attach supporting information, if needed) to determine whether detailed analysis is needed. Please note that a 'Yes' answer does not mean that an EIS must be prepared—it often only means that more information is required for the lead agency to make a determination of significance.
- The lead agency, upon reviewing Part II, may require an applicant either to provide additional information to support this Short EAS Form or complete a Full EAS Form. For example, if a question is answered 'No,' an agency may request a short explanation for this response. In addition, if a large number of the questions are marked 'Yes,' the lead agency may determine that it is appropriate to require completion of the Full EAS Form.

	YES	NO
1. *LAND USE, ZONING AND PUBLIC POLICY*: CEQR Technical Manual Chapter 4		
(a) Would the proposed project result in a change in land use or zoning that is different from surrounding land uses and/or zoning? Is there the potential to affect an applicable public policy? If "Yes", complete a preliminary assessment and attach.	✔	
(b) Is the project a large, publicly sponsored project? If "Yes", complete a PlaNYC assessment and attach.		✔
(c) Is any part of the directly affected area within the City's Waterfront Revitalization Program boundaries? If "Yes", complete the Consistency Assessment Form.		✔
2. *SOCIOECONOMIC CONDITIONS*: CEQR Technical Manual Chapter 5		
(a) Would the proposed project:		
• Generate a net increase of 200 or more residential units?	✔	
• Generate a net increase of 200,000 or more square feet of commercial space?		✔
• Directly displace more than 500 residents?		✔
• Directly displace more than 100 employees?	✔	
• Affect conditions in a specific industry?		✔
3. *COMMUNITY FACILITIES*: CEQR Technical Manual Chapter 6		
(a) Does the proposed project exceed any of the thresholds outlined in Table 6-1 of Chapter 6?	✔	
4. *OPEN SPACE*: CEQR Technical Manual Chapter 7		
(a) Would the proposed project change or eliminate existing open space?		✔
(b) Is the proposed project within an underserved area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island? If "Yes," would the proposed project generate 50 or more additional residents?		✔
If "Yes," would the proposed project generate 125 or more additional employees?		
(c) Is the proposed project in a well-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island? If "Yes," would the proposed project generate 300 or more additional residents?		✔
If "Yes," would the proposed project generate 750 or more additional employees?		
(d) If the proposed project is not located in an underserved or well-served area, would the proposed project generate: 200 or more additional residents?	✔	
500 additional employees?		✔

	YES	NO
5. *SHADOWS:* *CEQR Technical Manual Chapter 8*		
(a) Would the proposed project result in a net height increase of any structure of 50 feet or more?	✔	
(b) Would the proposed project result in any increase in structure height and be located adjacent to or across the street from a sunlight-sensitive resource?	✔	
6. *HISTORIC AND CULTURAL RESOURCES*: *CEQR Technical Manual Chapter 9*		
(a) Does the proposed project site or an adjacent site contain any architectural and/or archaeological resource that is eligible for, or has been designated (or is calendared for consideration) as a New York City Landmark, Interior Landmark or Scenic Landmark; is listed or eligible for listing on the New York State or National Register of Historic Places; or is within a designated or eligible New York City, New York State, or National Register Historic District? If "Yes," list the resources and attach supporting information on whether the project would affect any of these resources.	✔	
7. *URBAN DESIGN*: *CEQR Technical Manual Chapter 10*		
(a) Would the proposed project introduce a new building, a new building height, or result in any substantial physical alteration to the streetscape or public space in the vicinity of the proposed project that is not currently allowed by existing zoning?	✔	
(b) Would the proposed project result in obstruction of publicly accessible views to visual resources that is not currently allowed by existing zoning?		✔
8. *NATURAL RESOURCES:* *CEQR Technical Manual Chapter 11*		
(a) Is any part of the directly affected area within the Jamaica Bay Watershed? If "Yes," complete the Jamaica Bay Watershed Form.		✔
(b) Does the proposed project site or a site adjacent to the project contain natural resources as defined in section 100 of Chapter 11? If "Yes," list the resources and attach supporting information on whether the project would affect any of these resources.		✔
9. *HAZARDOUS MATERIALS:* *CEQR Technical Manual Chapter 12*		
(a) Would the project allow commercial or residential use in an area that is currently, or was historically, a manufacturing area that involved hazardous materials?	✔	
(b) Does the project site have existing institutional controls (*e.g.* (E) designations or a Restrictive Declaration) relating to hazardous materials that preclude the potential for significant adverse impacts?		✔
(c) Would the project require soil disturbance in a manufacturing zone or any development on or near a manufacturing zone or existing/historic facilities listed in Appendix 1 (including nonconforming uses)?	✔	
(d) Would the project result in the development of a site where there is reason to suspect the presence of hazardous materials, contamination, illegal dumping or fill, or fill material of unknown origin?	✔	
(e) Would the project result in development where underground and/or aboveground storage tanks (*e.g.* gas stations) are or were on or near the site?	✔	
(f) Would the project result in renovation of interior existing space on a site with potential compromised air quality, vapor intrusion from on-site or off-site sources, asbestos, PCBs or lead-based paint?	✔	
(g) Would the project result in development on or near a government-listed voluntary cleanup/brownfield site, current or former power generation/transmission facilities, municipal incinerators, coal gasification or gas storage sites, or railroad tracks and rights-of-way?		✔
(h) Has a Phase I Environmental Site Assessment been performed for the site? If 'Yes," were RECs identified? Briefly identify: **Refer to Attachment I, "Hazardous Materials" for details.**	✔	
10. *INFRASTRUCTURE:* *CEQR Technical Manual Chapter 13*		
(a) Would the proposed project result in water demand of more than one million gallons per day?		✔
(b) Is the proposed project located in a combined sewer area and result in at least 1,000 residential units or 250,000 SF or more of commercial space in Manhattan or at least 400 residential units or 150,000 SF or more of commercial space in the Bronx, Brooklyn, Staten Island or Queens?	✔	
(c) Is the proposed project located in a separately sewered area and result in the same or greater development than that listed in Table 13-1 of Chapter 13?		✔
(d) Would the project involve development on a site five acres or larger where the amount of impervious surface would increase?		✔
(e) Would the project involve development on a site one acre or larger where the amount of impervious surface would increase and is located within the Jamaica Bay Watershed or in certain specific drainage areas including: Bronx River, Coney Island Creek, Flushing Bay and Creek, Gowanus Canal, Hutchinson River, Newtown Creek, or Westchester Creek?		✔
(f) Is the project located in an area that is partially sewered or currently unsewered?		✔
(g) Is the project proposing an industrial facility or activity that would contribute industrial discharges to a WWTP and/or generate contaminated stormwater in a separate storm sewer system?		✔
(h) Would the project involve construction of a new stormwater outfall that requires federal and/or state permits?		✔
11. *SOLID WASTE AND SANITATION SERVICES:* *CEQR Technical Manual Chapter 14*		
(a) Would the proposed project have the potential to generate 100,000 pounds (50 tons) or more of solid waste per week?		✔
(b) Would the proposed project involve a reduction in capacity at a solid waste management facility used for refuse or recyclables generated within the City?		✔

	YES	NO
12. *ENERGY*: CEQR Technical Manual Chapter 15		
(a) Would the proposed project affect the transmission or generation of energy?		✔
13. *TRANSPORTATION*: CEQR Technical Manual Chapter 16		
(a) Would the proposed project exceed any threshold identified in Table 16-1 of Chapter 16?	✔	
(b) If "Yes," conduct the screening analyses, attach appropriate back up data as needed for each stage, and answer the following questions:		
(1) Would the proposed project result in 50 or more Passenger Car Equivalents (PCEs) per project peak hour? If "Yes," would the proposed project result in 50 or more vehicle trips per project peak hour at any given intersection?	✔	
***It should be noted that the lead agency may require further analysis of intersections of concern even when a project generates fewer than 50 vehicles in the peak hour. See Subsection 313 of Chapter 16, "Transporation," for information.*		✔
(2) Would the proposed project result in more than 200 subway/rail or bus trips per project peak hour? If "Yes," would the proposed project result, per project peak hour, in 50 or more bus trips on a single line (in one direction) or 200 subway trips per station or line?	✔	
		✔
(3) Would the proposed project result in more than 200 pedestrian trips per project peak hour? If "Yes," would the proposed project result in more than 200 pedestrian trips per project peak hour to any given pedestrian or transit element, crosswalk, subway stair, or bus stop?	✔	
	✔	
14. *AIR QUALITY*: CEQR Technical Manual Chapter 17		
(a) *Mobile Sources:* Would the proposed project result in the conditions outlined in Section 210 of Chapter 17?		✔
(b) *Stationary Sources:* Would the proposed project result in the conditions outlined in Section 220 of Chapter 17?	✔	
If 'Yes,' would the proposed project exceed the thresholds in the Figure 17-3, Stationary Source Screen Graph? (attach graph as needed)	✔	
(c) Does the proposed project involve multiple buildings on the project site?	✔	
(d) Does the proposed project require Federal approvals, support, licensing, or permits subject to conformity requirements?		✔
(e) Does the proposed project site have existing institutional controls (*e.g.* E-designations or a Restrictive Declaration) relating to air quality that preclude the potential for significant adverse impacts?		✔
15. *GREENHOUSE GAS EMISSIONS*: CEQR Technical Manual Chapter 18		
(a) Is the proposed project a city capital project, a power plant, or would fundamentally change the City's solid waste management system?		✔
(b) If "Yes," would the proposed project require a GHG emissions assessment based on the guidance in Chapter 18?		
16. *NOISE*: CEQR Technical Manual Chapter 19		
(a) Would the proposed project generate or reroute vehicular traffic?	✔	
(b) Would the proposed project introduce new or additional receptors (see Section 124 of Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed rail line with a direct line of site to that rail line?		✔
(c) Would the proposed project cause a stationary noise source to operate within 1,500 feet of a receptor with a direct line of sight to that receptor or introduce receptors into an area with high ambient stationary noise?		✔
(d) Does the proposed project site have existing institutional controls (*e.g.* E-designations or a Restrictive Declaration) relating to noise that preclude the potential for significant adverse impacts?		✔
17. *PUBLIC HEALTH*: CEQR Technical Manual Chapter 20		
(a) Would the proposed project warrant a public health assessment based upon the guidance in Chapter 20?		✔
18. *NEIGHBORHOOD CHARACTER*: CEQR Technical Manual Chapter 21		
(a) Based upon the analyses conducted for the following technical areas, check yes if any of the following technical areas required a detailed analysis: Land Use, Zoning, and Public Policy, Socioeconomic Conditions, Open Space, Historic and Cultural Resources, Urban Design and Visual Resources, Shadows, Transportation, Noise	✔	
If "Yes," explain here why or why not an assessment of neighborhood character is warranted based on the guidance of in Chapter 21, "Neighborhood Character." Attach a preliminary analysis, if necessary.		

The proposed actions would not have the potential to result in any significant adverse impacts in Land Use, Zoning and Public Policy, Socioeconomic Conditions, Open Space, Shadows, Historic and Cultural Resources, Urban Design and Visual Resources, Shadows, Transportation, or Noise; nor would it result in a combination of moderate effects to several elements that cumulatively may affect neighborhood character. Therefore, a preliminary assessment of neighborhood character is not required. Refer to Attachment B, "Supplemental Screening".

		YES	NO
19.	***CONSTRUCTION IMPACTS:*** *CEQR Technical Manual Chapter 22* Would the project's construction activities involve (check all that apply):		
	• Construction activities lasting longer than two years;	✓	
	• Construction activities within a Central Business District or along an arterial or major thoroughfare;	✓	
	• Require closing, narrowing, or otherwise impeding traffic, transit or pedestrian elements (roadways, parking spaces, bicycle routes, sidewalks, crosswalks, corners, etc);	✓	
	• Construction of multiple buildings where there is a potential for on-site receptors on buildings completed before the final build-out;	✓	
	• The operation of several pieces of diesel equipment in a single location at peak construction;		✓
	• Closure of community facilities or disruption in its service;		✓
	• Activities within 400 feet of a historic or cultural resource; or	✓	
	• Disturbance of a site containing natural resources.		✓

If any boxes are checked, explain why or why not a preliminary construction assessment is warranted based on the guidance of in Chapter 22, "Construction." It should be noted that the nature and extent of any commitment to use the Best Available Technology for construction equipment or Best Management Practices for construction activities should be considered when making this determination.

The Proposed Action would result in the development and construction of new multiunit residential buildings with ground floor retail and/or other commercial uses with building heights of up to 210 feet. Ten projected development sites (including the Proposed Development Site) are expected to be developed within eight years following the adoption of the proposed zoning changes. Eight of those sites would entail new construction (the remaining 2 sites have been identified as projected conversion sites). Construction induced by the Proposed Action would be gradual, taking place over an eight-year period, and the Proposed Action is not expected to result in any significant adverse construction impacts. Refer to Attachment N, "Construction Impacts" for details.

20. *APPLICANT'S CERTIFICATION*

I swear or affirm under oath and subject to the penalties for perjury that the information provided in this Environmental Assessment Statement (EAS) is true and accurate to the best of my knowledge and belief, based upon my personal knowledge and familiarity with the information described herein and after examination of pertinent books and records and/or after inquiry of persons who have personal knowledge of such information or who have examined pertinent books and records.

Still under oath, I further swear or affirm that I make this statement in my capacity as the

Edison Parking Corporation, manager of **249 W 28th Street Properties, LLC**

APPLICANT/SPONSOR — NAME THE ENTITY OR OWNER

the entity which seeks the permits, approvals, funding or other governmental action described in this EAS.

Check if prepared by: ☑ APPLICANT/REPRESENTATIVE or ☐ LEAD AGENCY REPRESENTATIVE (FOR CITY-SPONSORED PROJECTS)

Philip Habib, Principal, Philip Habib & Associates
Applicant's Environmental Consultant

APPLICANT/SPONSOR NAME

LEAD AGENCY REPRESENTATIVE NAME

SIGNATURE

April 21, 2011

DATE

PLEASE NOTE THAT APPLICANTS MAY BE REQUIRED TO SUBSTANTIATE RESPONSES IN THIS FORM AT THE DISCRETION OF THE LEAD AGENCY SO THAT IT MAY SUPPORT ITS DETERMINATION OF SIGNIFICANCE.

By: Gary DeBode, Vice President

PART III: DETERMINATION OF SIGNIFICANCE (To Be Completed By Lead Agency)

INSTRUCTIONS:
In completing Part III, the lead agency should consult 6 NYCRR 617.7 and 43 RCNY §6-06 (Executive Order 91 of 1977, as amended) which contain the State and City criteria for determining significance.

1. For each of the impact categories listed below, consider whether the project may have a significant effect on the environment. For each of the impact categories listed below, consider whether the project may have a significant adverse effect on the environment, taking into account its (a) location; (b) probability of occurring; (c) duration; (d) irreversibility; (e) geographic scope; and (f) magnitude.

	Potential Significant Adverse Impact	
IMPACT CATEGORY	**YES**	**NO**
Land Use, Zoning, and Public Policy		✓
Socioeconomic Conditions		✓
Community Facilities and Services		✓
Open Space		✓
Shadows		✓
Historic and Cultural Resources		✓
Urban Design/Visual Resources		✓
Natural Resources		✓
Hazardous Materials		✓
Water and Sewer Infrastructure		✓
Solid Waste and Sanitation Services		✓
Energy		✓
Transportation		✓
Air Quality		✓
Greenhouse Gas Emissions		✓
Noise		✓
Public Health		✓
Neighborhood Character		✓
Construction Impacts		✓

2. Are there any aspects of the project relevant to the determination whether the project may have a significant impact on the environment, such as combined or cumulative impacts, that were not fully covered by other responses and supporting materials? If there are such impacts, explain them and state where, as a result of them, the project may have a significant impact on the environment.

No.

3. ***LEAD AGENCY CERTIFICATION***

Director, Environmental Assessment and Review Division	New York City Department of City Planning
TITLE	LEAD AGENCY
Robert Dobruskin, AICP	Robert Dobruskin 4/21/2011
NAME	SIGNATURE

ATTACHMENT A
PROJECT DESCRIPTION

I. INTRODUCTION

This environmental assessment document is for zoning map and text changes affecting portions of two City Blocks in the northern Chelsea area of Manhattan's Community District 5, and a special permit for a public parking garage. 249 W 28th Street Properties, LLC (a.k.a. "the applicant") is the applicant for the proposed zoning map changes, whereas the New York City Department of City Planning (NYCDCP) is the applicant for the proposed zoning text amendment. In addition to the proposed rezoning and text amendments, the applicant (249 W 28th Street Properties, LLC) is requesting a special permit for a public parking garage to be located at one of the projected development sites pursuant to Sections 13-562 and 74-52 of the Zoning Resolution. The proposed zoning map and text changes and public parking special permit collectively comprise the Proposed Action that is the subject of this environmental assessment document.

The area directly affected by the Proposed Action includes the area proposed to be rezoned as well as an approximately 39,500 sf area that would be affected by the Seventh Avenue bulk control text amendment (described in Section IV below and shown in Figure A-1). The proposed zoning map change would affect an approximately 236,906 square foot (sf) area ("rezoning area") comprising the mid-block portions of two City blocks and extending along the north side of West 28th Street, on either side of West 29th Street, and on the south side of West 30th Street between Seventh and Eighth Avenues (see Figure A-1). The area is currently zoned M1-5, which allows commercial and light industrial uses as well as some community facilities but prohibits new residential development. The Proposed Action would rezone this area to an M1-6D contextual zoning district to permit residential uses as-of-right at a density of 9.0 FAR, which could be increased to 12.0 FAR pursuant to the Inclusionary Housing Program. The proposed text amendment would also include the area proposed to be rezoned within an Inclusionary Housing designated area. It would also increase the FAR for commercial, community facility, and manufacturing uses to 10.0, and limit the conversion of commercial and/or industrial buildings that contain more than 50,000 sf of floor area. The text of the proposed zoning text amendments is included in its entirety in Appendix 3 to this document.

Four of the lots included within the proposed rezoning area boundaries are owned by the applicant, 249 W 28th Street Properties, LLC (Block 778, Lots 13, 16, 18 and 66, together the "Proposed Development Site"), and would be redeveloped as a result of the proposed zoning changes. It is anticipated that the Proposed Development Site would be redeveloped with two new approximately 20-story residential buildings with ground floor retail and office (the "Proposed Development"), which would utilize the 3.0 FAR Inclusionary Housing bonus and therefore would be built to the maximum 12.0 FAR and contain a total of approximately 361,860 gsf of floor area (excluding parking). Approximately 4,685 gsf of retail and 11,390 gsf of office uses are expected to be located at ground level. Assuming a typical residential dwelling unit size of approximately 850 gsf, the proposed buildings on the Proposed Development Site are expected to accommodate approximately 407 residential dwelling units, of which approximately 81 units (20%) would be affordable residences. The Proposed Development would include a 325 car garage (including spaces for 218 monthly parkers) that would replace the 371 public parking spaces currently located on the Proposed Development Site, and the applicant is applying for a special permit to allow such public parking on the Proposed Development Site on two levels below grade.

As discussed in Section V below, several other sites within the proposed rezoning area have been identified as either projected or potential development sites that could be developed as a result of the

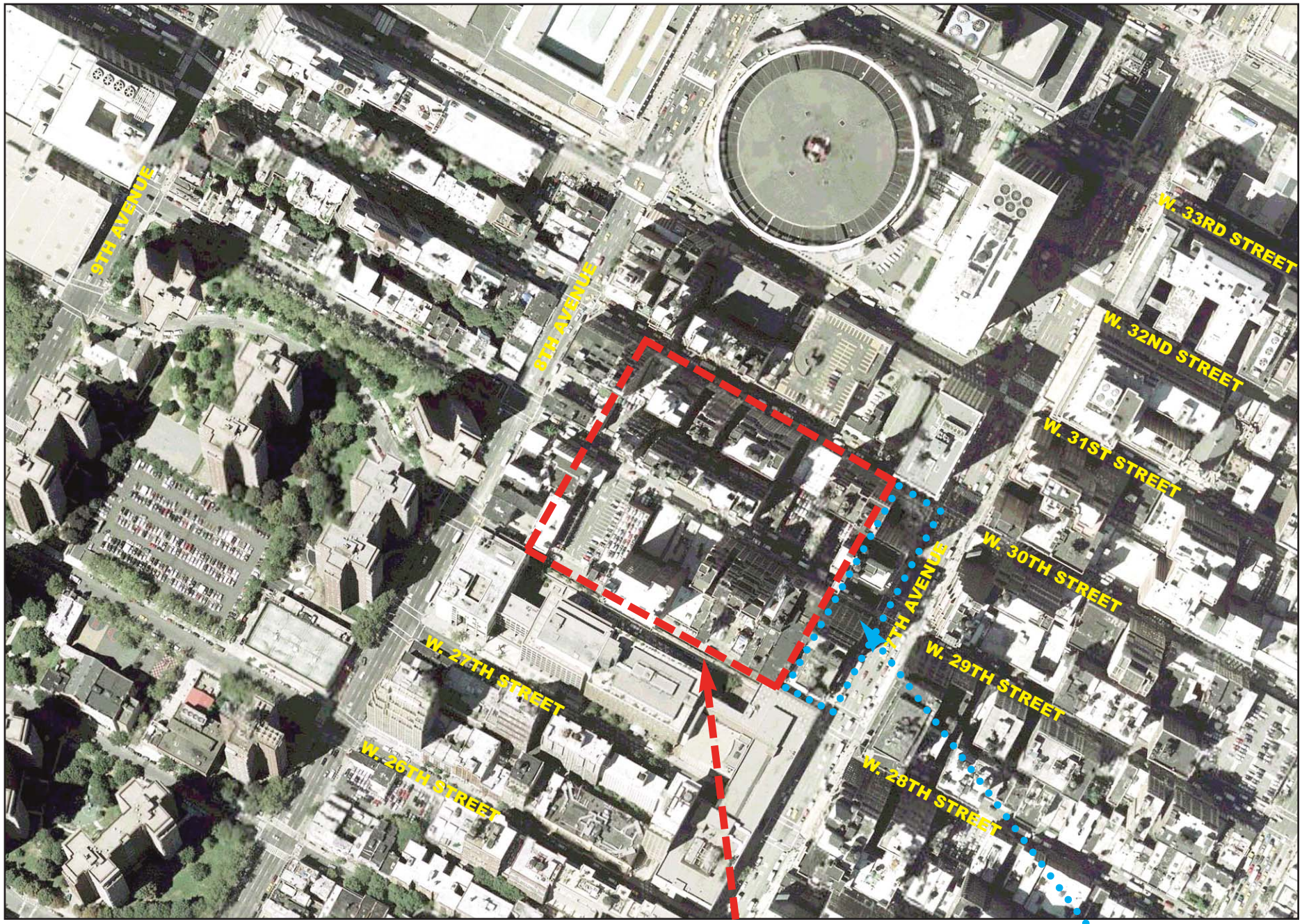


Figure A-1
Project Location

proposed rezoning, and are therefore included for analysis purposes as applicable. As discussed below, the Reasonable Worst Case Development Scenario (RWCDS) for future conditions with the proposed rezoning anticipates that ten (10) projected development sites (including the Proposed Development Site) would accommodate a total of 1,153 residential units, approximately 60,729 gsf of local retail, 5,390 sf of community facility, approximately 11,390 gsf of office, 174 hotel rooms, 325 public parking spaces (including spaces for 218 monthly parkers), and 62 accessory parking spaces. In addition, there are four (4) potential development sites, which are considered less likely to be developed over the 8-year analysis period, but which are considered potential sites for future development. Compared to future conditions without the proposed rezoning, the incremental (net) change that would result from the Proposed Action at the 10 projected development sites (including the Proposed Development Site) is 1,134 residential dwelling units and 42,206 gsf of retail space, 7 accessory parking spaces, and a decrease of approximately –15,153 gsf of office, –8,596 gsf of industrial/warehousing/wholesale space, –189 hotel rooms, and –146 public parking spaces.

As discussed below, the Proposed Action includes a zoning text amendment affecting bulk controls for lots in the area just outside the eastern boundary of the area proposed to be rezoned to M1-6D, along the west side of Seventh Avenue between West 28th and West 30th Streets (the existing M1-6 district within 100 feet of the west side of 7th Avenue). The proposed changes would not alter zoning regulations affecting use or increase maximum allowable FAR. As these bulk control modifications neither induce nor hinder new development, no projected or potential development sites have been identified in that area, and no further assessment is provided in this document. However, the implications of the proposed Seventh Avenue bulk modifications are discussed in Attachment C, "Land Use, Zoning and Public Policy".

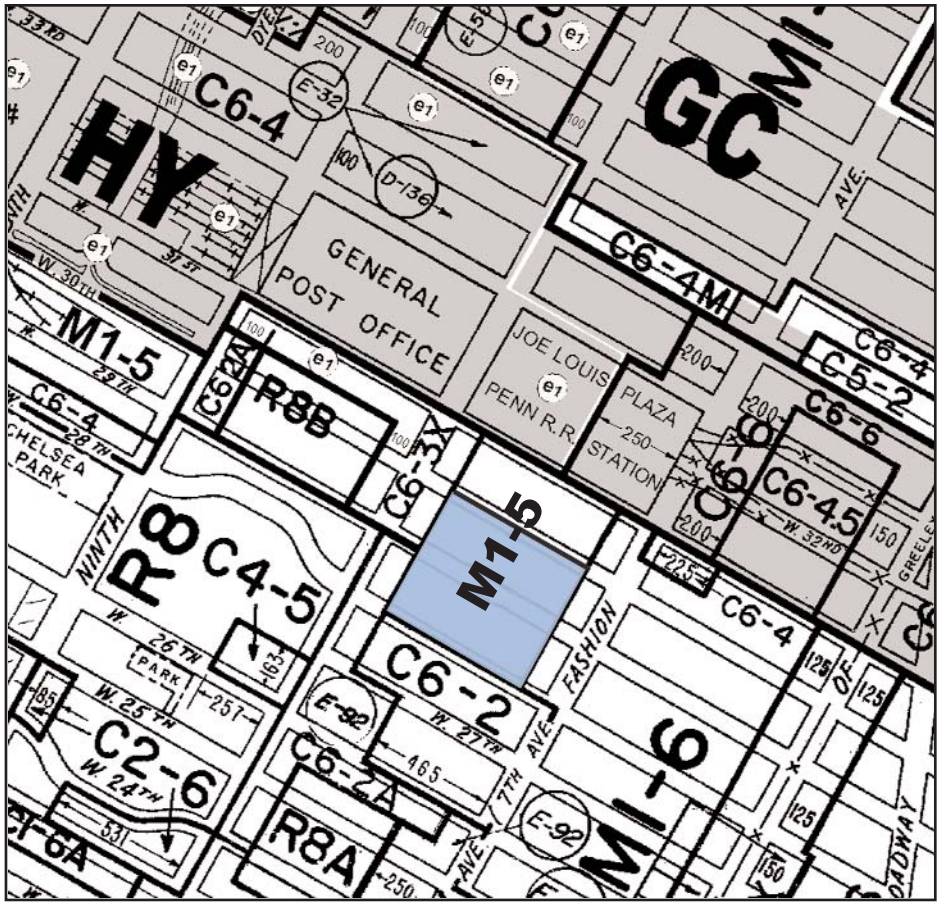
This attachment provides a summary and description of the RWCDS for the Proposed Action, including project area location, existing conditions of the area affected by the proposed zoning and text changes and the Proposed Development Site, purpose of and need for the Proposed Action, description of the Proposed Action and associated development scenario, and the approvals required. The attached supplemental studies examine the potential for the Proposed Action to cause impacts in any CEQR technical areas, including separate attachments with detailed analyses of Land Use, Zoning and Public Policy, Socioeconomic Conditions, Community Facilities, Open Space, Urban Design and Visual Resources, Hazardous Materials, Traffic and Parking, Air Quality, Noise, Shadows, Water and Sewer Infrastructure, and Construction Impacts, in Attachments C through N, respectively. Attachment B, "Supplemental Screening" provides relevant supplemental information to the Technical Analyses in Part II of the EAS form.

II. EXISTING CONDITIONS

The area to be rezoned ("rezoning area") encompasses the mid-block portions of two City blocks, extending along the north side of West 28th Street, on either side of West 29th Street, and on the south side of West 30th Street between Seventh and Eighth Avenues in northern Chelsea (mid-blocks of Blocks 778 and 779, respectively). This area is currently zoned M1-5. An M1-6 district is mapped on the eastern edges of the two City blocks along Seventh Avenue and a C6-2A district is mapped on the western edge of the southern block (Block 778) on Eighth Avenue between West 28th and West 29th Streets and a C6-3X district is mapped on the western edge of the northern block (Block 779) on Eighth Avenue between West 29th and West 30th Streets (see Figure A-2).

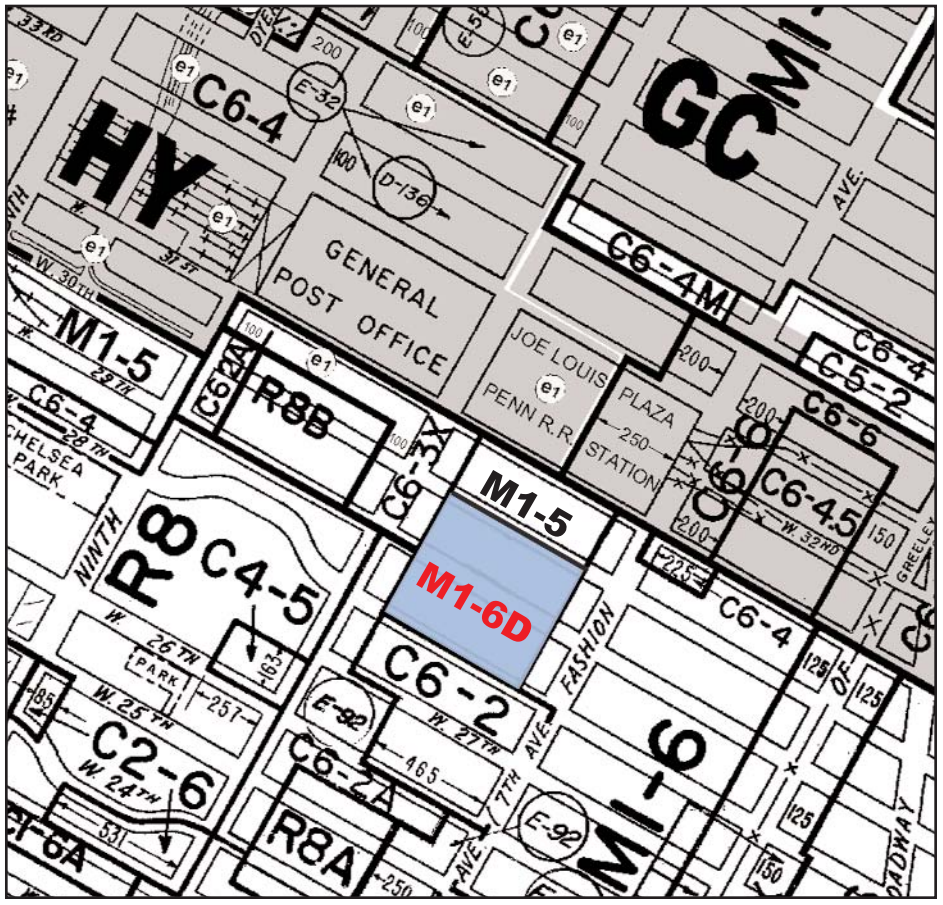
M1-5 districts allow high performance manufacturing and commercial uses up to a maximum floor area ratio (FAR) of 5.0. Certain community facility uses are also allowed in M1-5 districts up to a maximum

EXISTING ZONING



Area to be Rezoned

PROPOSED ZONING



Area to be Rezoned

FAR of 6.5. Residential uses are prohibited in M1-5 districts. C6-2A and C6-3X districts allow commercial, residential and community facility uses and prohibit manufacturing uses. C6-2A districts allow up to a maximum FAR of 6.0 for commercial, 6.02 for residential, and 6.5 for community facility uses, and C6-3X districts allow up to a maximum FAR of 6.0 for commercial and 9.0 for residential and/or community facility uses.

The rezoning area consists of a total of approximately 52 privately owned lots (or parts thereof), which presently support a mix of commercial, wholesale, light industrial, warehousing, residential, public parking, and community facility uses (see Figures A-3a, A-3b, A-3c, and A-3d, photographs of the rezoning area). Eight of these lots are currently undeveloped and contain at-grade public parking facilities (three of which are part of the applicant's site). Existing buildings within the proposed rezoning area consist of a mix of low-to high-rise structures that contain between 2-to 21-stories. Most of the buildings in the rezoning area are lofts and warehouses that were originally built prior to the 1930s. Excluding the recent construction of a new hotel at 232 West 29th Street (Block 778, Lot 57), there has been no new development within the proposed rezoning area since approximately 1928, although several of the buildings have undergone alterations in the past two or three decades. Many of the buildings support ground floor local retail and other commercial service uses. There are a few multiunit residential buildings as well as a couple of buildings that contain Interim Multiple Dwellings (IMD).

The Proposed Development Site consists of four lots included within the proposed rezoning area boundaries that are owned by the applicant (Block 788, Lots 13, 16, 18 and 66), and would be redeveloped as a result of the Proposed Action. These four lots are located near the western edge of the southern block of the rezoning area at 241-251 West 28th Street (244-250 West 29th Street). They comprise a total of approximately 29,373 sf of lot area with linear frontage along both West 29th and West 28th Streets. An at-grade 131-space public parking lot currently occupies Lots 13 and 16, and Lot 18 contains a 4-story building that accommodates a 240-space public parking garage (total of 371 public parking spaces). Lot 66 formerly accommodated a 2-story building fronting on the south side of West 29th Street that has been demolished, and the lot is now occupied by parking (part of the 131-space parking lot).

The Proposed Action includes a zoning text amendment affecting bulk controls for lots in the area just outside the eastern boundary of the area proposed to be rezoned to M1-6D, along the west side of Seventh Avenue between West 28th and West 30th Streets. This area is currently zoned M1-6, and accommodates approximately seven low-rise predominantly commercial buildings ranging from 3 to 5 stories, as well as three high rise commercial buildings that are 18 to 21 stories tall. The Proposed Action would also include the area proposed to be rezoned within an Inclusionary Housing designated area.

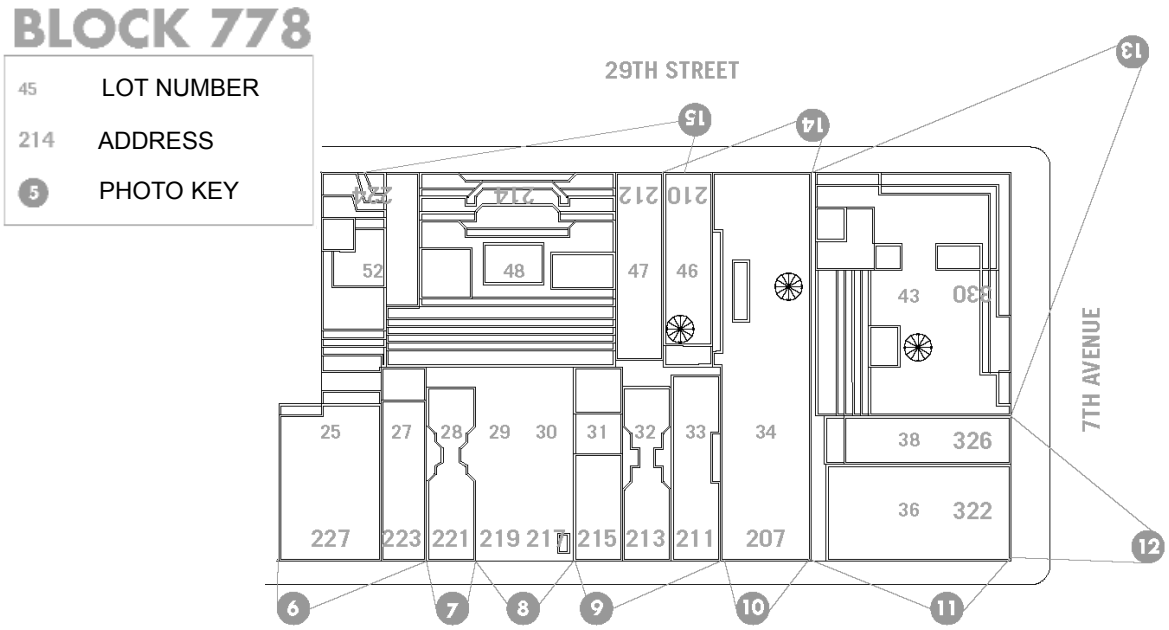
III. PROJECT PURPOSE AND NEED

The decline of the New York City industrial sector during the past several decades has left many properties in this part of Manhattan underutilized. While the industrial sector has declined, residential populations in adjacent communities have substantially increased, leading to greater housing demand. Starting in the 1970s, loft buildings in the area were steadily abandoned by manufacturing firms and converted, often a few floors at a time, either to commercial or residential uses.

The ever-growing commercial uses in the area were allowed as-of-right in areas zoned for manufacturing. Residents who illegally occupied lofts prior to 1981 were protected by the 1982 Loft Law, which designated these illegal residences as Interim Multiple Dwellings until the owners could obtain a residential certificate of occupancy through the Department of Buildings. As a result of a number of Board

Photographs of the Rezoning Area



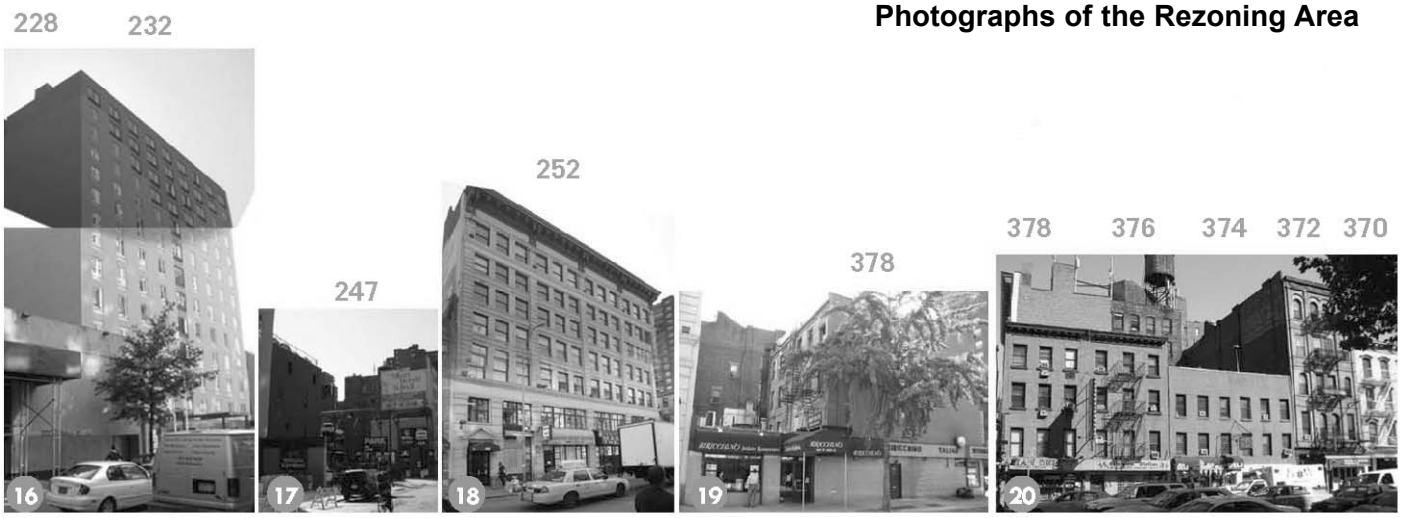


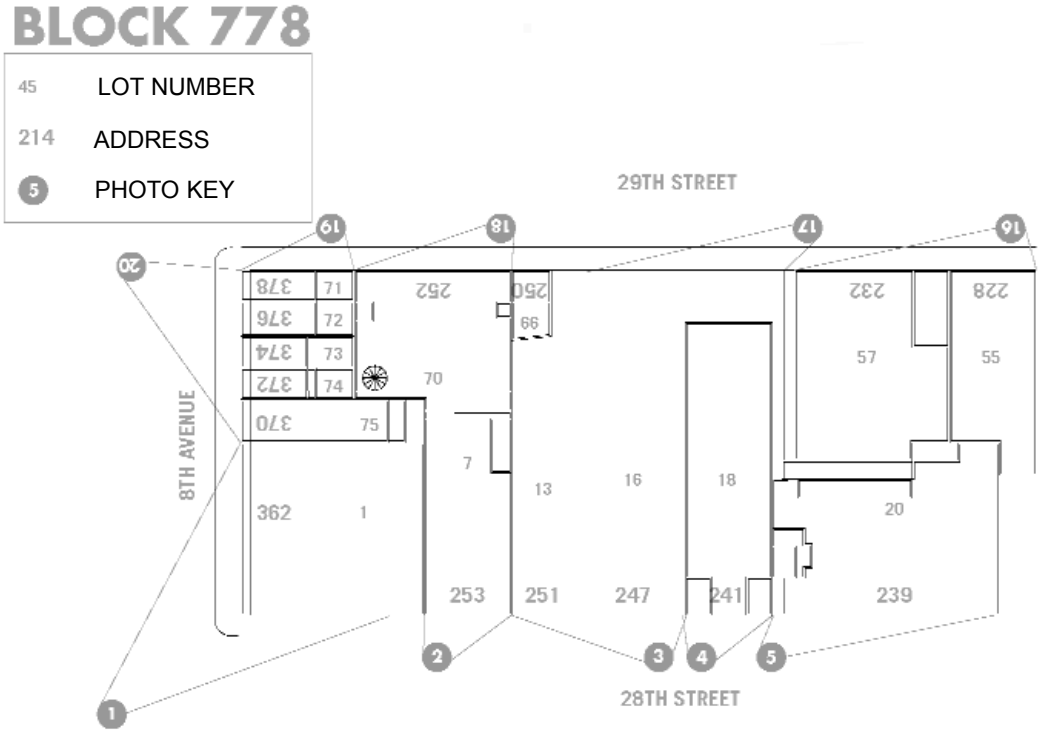


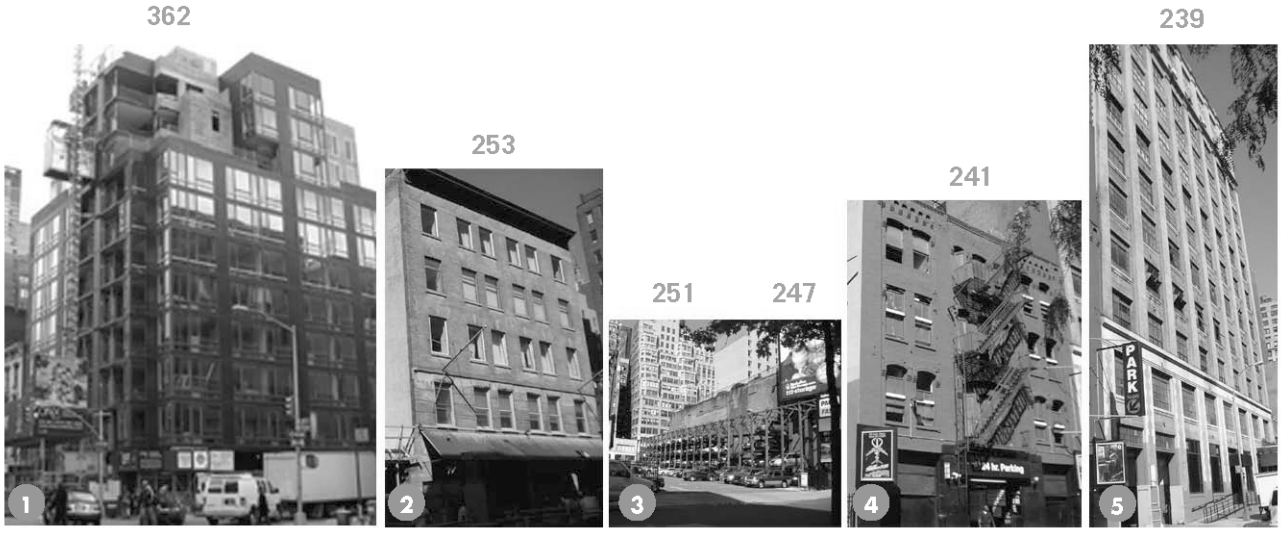
Source: weisz + yoes architecture

NOTE: Sites along the avenues are not part of the proposed rezoning area.

Photographs of the Rezoning Area







Source: weisz + yoes architecture

NOTE: Sites along the avenues are not part of the proposed rezoning area.

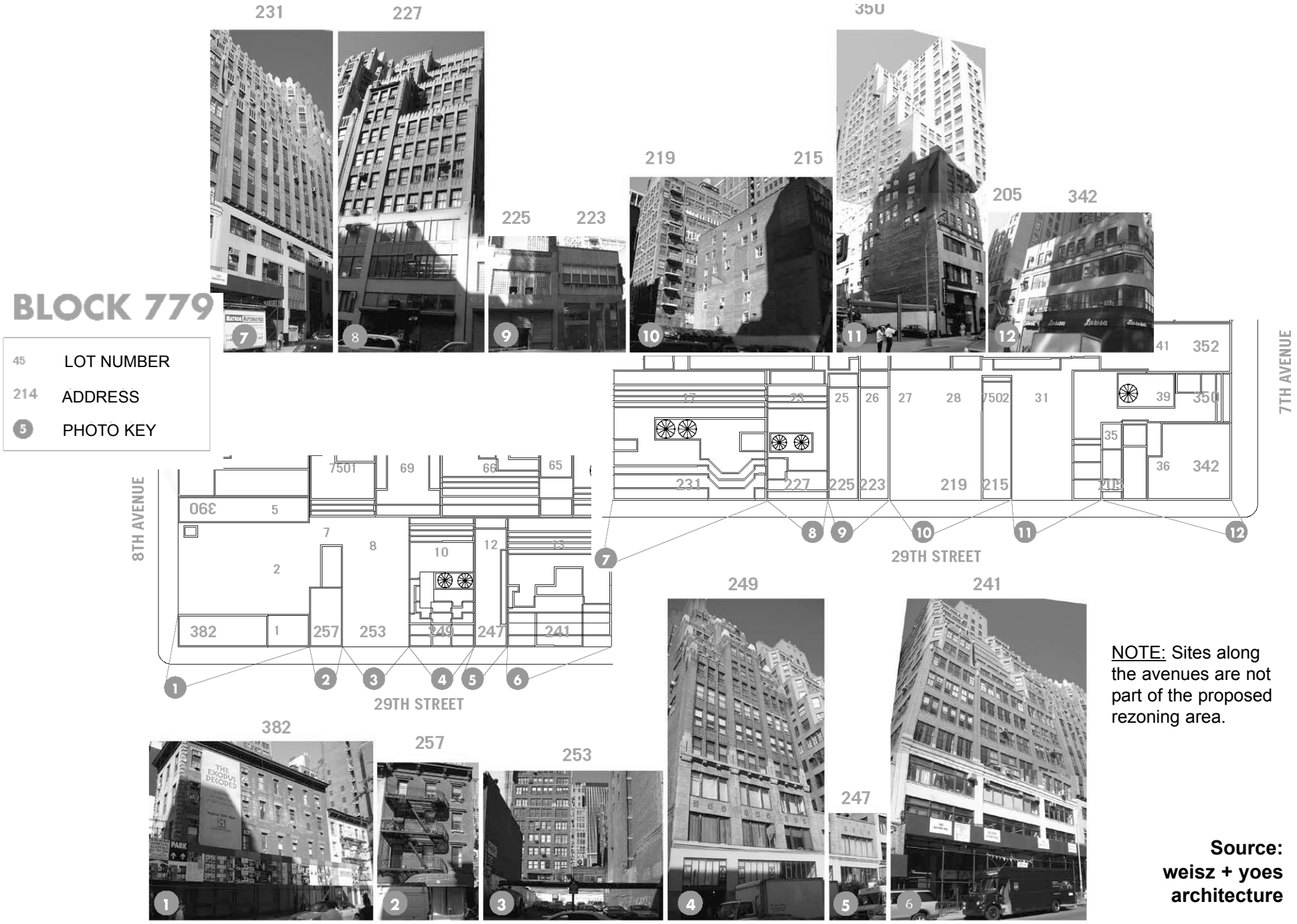
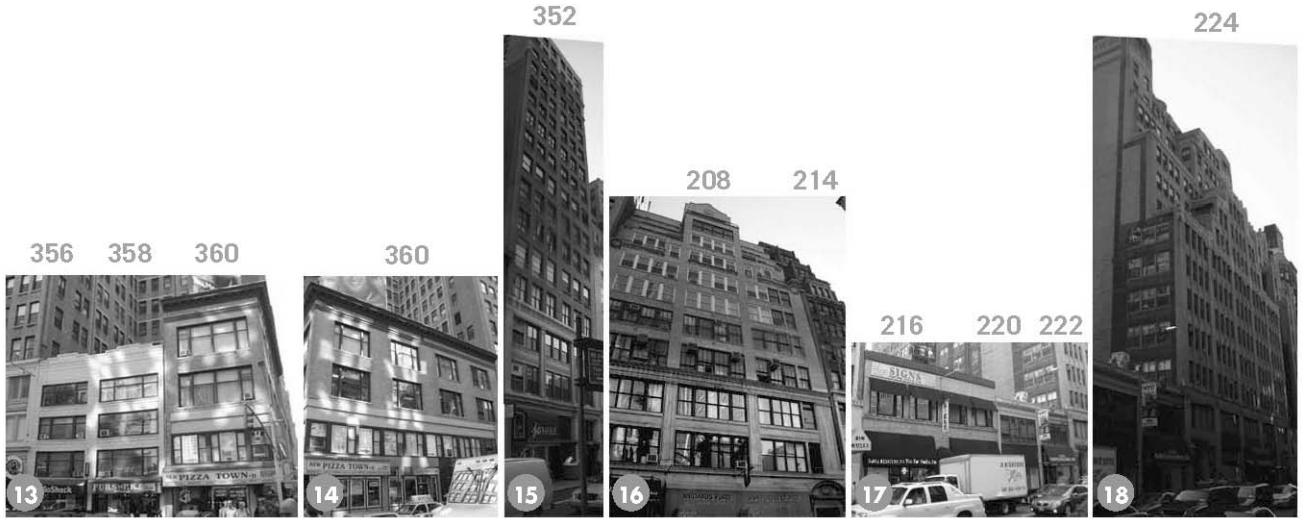
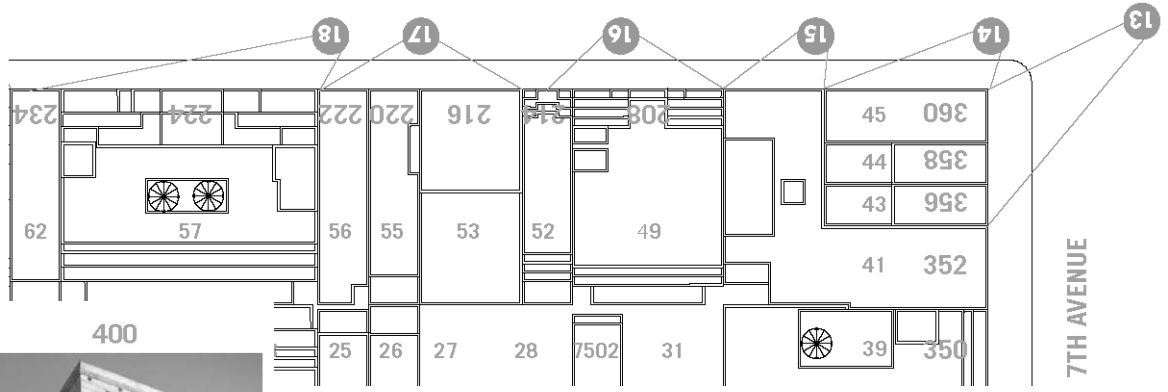


Figure A-3c
Photographs of the Rezoning Area

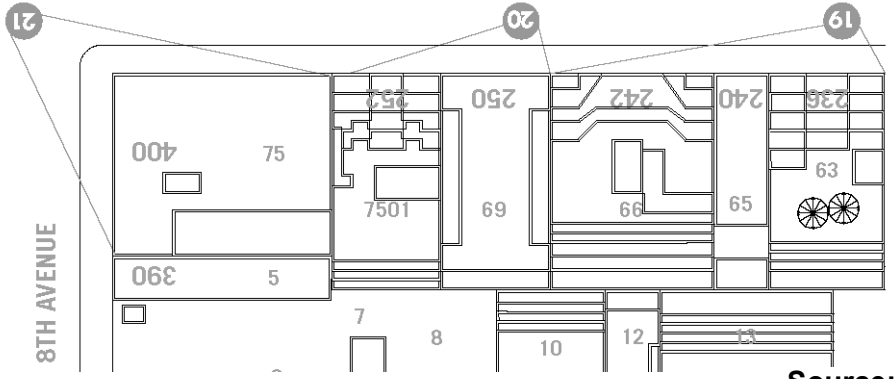


BLOCK 779

45	LOT NUMBER
214	ADDRESS
5	PHOTO KEY







NOTE: Sites along the avenues are not part of the proposed rezoning area.

Source: weisz + yoes architecture

of Standards and Appeals (NYCBSA) variances, the area has seen a slow but steady growth in the number of residences over the last few decades.

Existing high-density manufacturing districts south of Midtown, such as the proposed rezoning area, have largely transitioned from manufacturing districts to important centers of Class B and C commercial office space that house diverse sectors of New York City's economy. Nevertheless, despite the fact that many of these areas have some of the best transit access in New York City and are surrounded by neighborhoods that have continued to experience development and growth, these areas have received little new investment. Moreover, the limited amount of new building stock that has been built under the existing zoning regulations is often out of character with the rich, pre-war loft architecture of these neighborhoods. A number of hotels, for example, have recently been built 15 or 20 feet from the street line and rise without setbacks or articulation to a height far taller than their pre-war neighbors. In short, while the affordable office market that has been created has significant value, the existing manufacturing zoning appears to have stymied new investment and development that could complement existing uses, enhance the business environment by enlivening streets, and create a more robust 24/7 community that ultimately could help stitch these districts back into the evolving fabric of Manhattan.

The rezoning area is currently underutilized – mostly as a result of its designation as a manufacturing district. Despite its manufacturing zoning designation, the area is more accurately characterized as a low-rent office and residential district with a minor light industrial component, where the major employment sector is business and other services. The majority of these firms are professional services such as architecture, engineering, consulting services, advertising, accounting, and clothing designers. There are also a number of photography studios, graphic designers, internet and information service companies, and film/TV production and sound recording studios. A significant number of the units in this mid-block area are occupied as residential apartments. Land uses in the area are very varied, with offices, studios, workshops, and residences (both legal and illegal) all intermixed. Uses change lot by lot, floor by floor and even unit by unit.

Considering the area's context – thriving Chelsea to the south and west, the commercial energy of Midtown South to the north and east, and the potential future redevelopment of Madison Square Garden, Penn Station, the Farley Building, and the Hudson Yards to the north – there is a strong basis for rezoning this district as an M1-6D district. This would preserve maximum flexibility for the area - as the market pushes it either towards residential (Chelsea) or hotels and offices (Midtown and Hudson Yards). Today, less than 6 percent of the jobs in the rezoning area are in the manufacturing sector, and there are an estimated 218 residential units within the rezoning area.[1] The proposed rezoning is intended to update the zoning to reflect the current mixed-use character of the area.

The proposed zoning map and text changes are expected to preserve the neighborhood character while allowing for residential growth and encouraging the creation of affordable housing. The proposed M1-6D district is designed to build upon some of the strengths of this area – the pre-war built fabric, the concentration of affordable office space, and proximity to transit – while addressing some of the problems with the existing zoning – its lack of contextual bulk rules and limited incentive for new development. The proposed M1-6D zoning would allow for high performance manufacturing uses, and a wider range of allowable residential, commercial, and community facility uses. It also would limit the conversion of larger industrial and commercial buildings to residential use or to community facility use with sleeping accommodations, by requiring a 1 to 1 replacement of commercial and/or industrial space in buildings with more than 50,000 sf of zoning floor area.

[1] Number of residential units based on 2008 PLUTO data compiled for lots comprising the rezoning area.

IV. THE PROPOSED ACTION

This environmental assessment document is for zoning map and text changes affecting portions of two City Blocks in the northern Chelsea area of Manhattan's Community District 5, as well as a special permit for a public parking garage pursuant to Sections 13-562 and 74-52 of the Zoning Resolution (collectively, the "Proposed Action"). As shown in Figure A-1, the area affected by the Proposed Action is roughly bounded by West 30th Street to the north, Seventh Avenue to the east, West 28th Street to the south, and Eighth Avenue to the west. The affected tax blocks and lots are identified in Table A-1.

TABLE A-1
List of Blocks and Lots Affected by Proposed Zoning Map and Text Changes

Block	Lot
778	1 (p/o), 7, 13, 16, 18, 20, 25, 27, 28, 29, 30, 31, 32, 33, 34, 46, 47, 48, 52, 55, 57, 66, 70 (p/o), 75 (p/o)
779	7, 8, 10, 12, 13, 17, 23, 25, 26, 27, 28, 31, 39 (p/o), 41 (p/o), 49, 52, 53, 55, 56, 57, 62, 63, 65, 66, 69, 7501 (condominium), 7502 (condominium)
Additional Lots Affected by Seventh Avenue Bulk Text Amendment	
778	36, 38, 43
779	35, 36, 39 (p/o), 41(p/o), 43, 44, 45

p/o = partially included in area affected by zoning map or text amendments

Proposed Zoning Map and Text Changes

The proposal includes mapping an M1-6D district, which is a proposed new mixed-use contextual district that allows for the preservation of existing land uses, building types, and neighborhood character. The Department of City Planning identified five key goals in developing the district:

- Support the development of a vibrant mixed-use district.
- Encourage the introduction of residential uses on underutilized sites.
- Promote the creation of affordable housing.
- Protect concentrations of existing Class B and C office and light manufacturing uses.
- Ensure that new development reflects the existing built character of the area.

Generally, the proposed M1-6D district would be appropriate in areas that have high-density manufacturing and commercial uses, presently have significant concentrations of affordable office space, and could benefit from the introduction of new investment and complementary uses, including residential. Other than the area being rezoned as part of the Proposed Action, there are no known plans to propose the M1-6D district in the foreseeable future.

This district has strict height limits that preclude the possibility of future development that is out-of-scale with the current neighborhood context. As described above, the proposed zoning map change would preserve the mixed-use character that defines this area of northern Chelsea, promote new construction at densities and with design, form, and scale consistent with the built character of the area, and provide incentives for affordable housing development.

As discussed below, the M1-6D zoning district would create a unique set of use regulations that would: (1) allow the full range of commercial uses and light manufacturing uses appropriate in a mixed-use environment; (2) provide protections for existing concentrations of commercial and light industrial uses in

a building; (3) allow infill residential development; (4) allow a broad range of community facility uses; (5) require ground floor retail uses and transparency to enliven the street; and (6) require a special permit for hotels with more than 100 rooms to ensure that the hotel development does not preclude the goal of encouraging residential uses and affordable housing.

The new M1-6D district would limit the conversion of commercial and/or industrial buildings that contain more than 50,000 sf, requiring a 1 to 1 replacement of commercial and/or industrial space in buildings with more than 50,000 sf of zoning floor area. The proposed new district would allow residential use or community facilities with sleeping accommodations on a zoning lot that contains 50,000 sf or more of zoning floor area only upon certification by the Chair of the City Planning Commission. For such sites, the new M1-6D district would require that a restrictive declaration be executed, binding the owners to provide the amount of non-residential floor area that existed on the zoning lot in perpetuity. In addition, the proposed new district would also preclude conversion of large buildings (buildings with 50,000 sf or more) into community facilities with sleeping accommodations.

The new M1-6D district would also include provisions relating to transient hotels and the need for a special permit in certain cases. Transient hotels would be allowed in the new M1-6D district, except that developments or enlargements of transient hotels with greater than 100 sleeping units would only be allowed upon certification by the Chairperson of the City Planning Commission to the Commissioner of Buildings that the residential development goal has been met for the area (the goal is 865 DUs for the area being rezoned as part of the Proposed Action) or, where such residential development goal has not been met, by special permit pursuant to proposed Section 74-802 (in M1-6D Districts).

Finally, the amendment to the Zoning Resolution also includes new street wall requirements for zoning lots in the M1-6 district within 100 feet of the west side of 7th Avenue between West 28th and West 30th Streets. On these lots, there is a minimum required street wall height of 125 feet and a maximum height of 150 feet before setback, with the sky exposure plane commencing at a height of 150 feet above the street line, and the alternate front setback provisions of Section 43-44 do not apply. This is intended to ensure that future development in that area would be contextual with the surrounding structures.

As shown in the proposed zoning map in Figure A-2, the applicant is proposing to rezone a portion of the existing M1-5 district to an M1-6D district which permits a maximum FAR of 10.0 for commercial, light industrial uses, and community facility uses. Residential developments in M1-6D districts may be built up to a maximum base FAR of 9.0, which could be increased to 12.0 FAR within Inclusionary Housing designated areas with the provision of affordable housing. In addition, in order to help encourage the mixing of residential and non-residential uses, the base FAR for residential uses would be set at 9.0 plus 0.25 FAR for each 1.0 FAR of non-residential floor area in the building, up to a maximum base FAR of 10.0. The proposed rezoning would allow new residential development at a scale and density appropriate for the area, while continuing to permit a wide range of high performance industrial/ manufacturing and commercial uses.

The proposed M1-6D district would allow all residential and community facility uses within Use Groups 1-4 and establish envelope controls within the new district. Table A-2 provides a comparison of the zoning use groups allowed in the existing M1-5 and proposed M1-6D districts. As shown in the table, residential Use Groups 1 and 2, and community facilities Use Groups 3 and 4 would be allowed as-of-right under the proposed zoning, as well as most uses permitted in an M1-5 district. There would be some limitations on uses in Use Groups 16 and 17. As such, a majority of the existing uses in the rezoning area are expected to be in conformance with the proposed M1-6D zoning (refer to Attachment C, "Land Use, Zoning, and Public Policy" for detailed assessment).

TABLE A-2
Use Groups Allowed in Existing (M1-5) and Proposed (M1-6D) Zoning Districts

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
M1-5			X*	X**	X	X	X	X	X	X	X	X	X	X		X	X	
M1-6D	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X**	X**	

Source: NYCDCP
* Very limited uses in UG 3 are permitted.
** Only a limited set of uses.

The existing M1-5 zoning permits a maximum front wall height before setback of 85 feet and has no building height limit. Under the proposed M1-6D zoning, buildings in the rezoning area would have a required minimum street wall height of 85 feet and a maximum street wall height of 125 feet, with a maximum building height of 210 feet. A sky exposure plane with a ratio of 4:1 would be required above the maximum base height, although no sky exposure plane is required beyond a 15-foot setback above the maximum base height. The diagram in Figure A-4 illustrates the height and bulk controls of the proposed M1-6D district. On narrow streets, dormers may penetrate a maximum base height and the setback requirements, provided the aggregate width of all dormers at the maximum base height does not exceed 60 percent of the length of the street wall of the highest story entirely below the maximum base height; dormers above that height would have reduced dimensions, and dormers facing the rear yard line would have additional restrictions.

The proposed zoning text amendment would modify Section 23-92 of the Zoning Resolution to make the proposed M1-6D district an "Inclusionary Housing designated area". This will establish an Inclusionary Housing FAR bonus, providing opportunity and incentive for the development of affordable housing. Under the Inclusionary Housing Program, developments providing affordable housing are eligible for a floor area bonus. Affordable units can be provided either on the same site as the development earning the bonus, or off-site. Off-site units can be provided through new construction or through preservation of existing affordable units in perpetuity. Off-site units must be located within Manhattan Community District 5 or within a ½-mile of the site receiving the FAR bonus. Available City, State, and Federal housing programs may be used to finance affordable units. This combination of a zoning bonus with housing programs establishes an incentive for the development and preservation of affordable housing in this area of Manhattan.

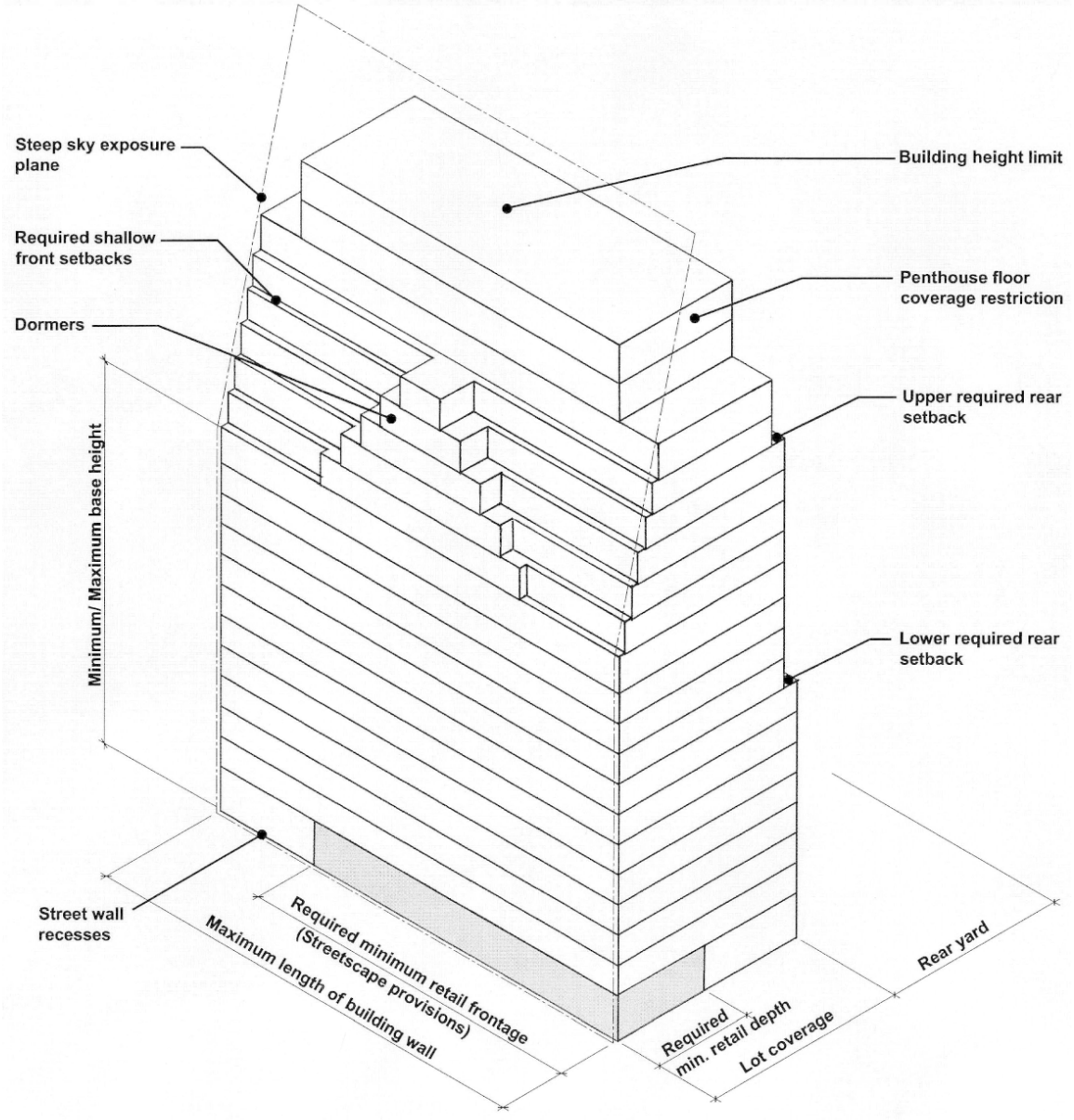
Refer to Attachment C, "Land Use, Zoning, and Public Policy" for a more detailed description of the provisions of the proposed text amendment as well as a detailed description of use and bulk regulations for the new M1-6D district. The text of the proposed zoning text amendments described above is also included in its entirety as Appendix 3 to this document.

Public Parking Garage Special Permit

The applicant is also applying for a special permit under Sections 13-562 and 74-52 of the Zoning Resolution for a Parking Garage or Parking Lot in High Density Central Areas to allow a public parking facility on the Proposed Development Site (Block 778, Lots 13, 16, 18 and 66). The proposed garage would have a total of 325 public parking spaces (approximately 49,100 gsf), including spaces for 218 monthly parkers, occupying portions of the ground floor, cellar and sub-cellar levels. This will decrease the amount of parking that is lost by the removal of an existing parking lot and a garage on the Proposed Development Site.

M1-6D Envelope Controls

1. Lot coverage (§43-623)
2. Rear Yard (§43-625)
3. Penthouse rule (§43-626 (b)(4))
4. Dormers (§43-626 (a)(1))
5. Maximum/Minimum base height (§43-626 (b)(2))
6. Street wall recesses (§43-626 (b)(3)
7. Required front setbacks and sky exposure plane (§43-626 (b)(4)
8. Required rear setbacks (§43-626 (b)(4)(ii))
9. Maximum building height (§43-626 (b)(4)
10. Maximum length of building wall (§43-626 (b)(5))



(E) Designations and Restrictive Declaration

As described in greater detail in the Hazardous Materials, Air Quality, and Noise attachments of this document, the Proposed Action includes the mapping of an (E) designation for hazardous materials on 13 of the 14 projected and potential development sites (sites 1 through 9, and A through D); mapping of an (E) designation for noise on all 14 projected and potential development sites (including the Proposed Development Site); as well as the mapping of an (E) designation on 8 projected and 3 potential development sites for air quality HVAC emissions (the Proposed Development Site, sites 1, 3, 5 through 9, and A, B, and D) that would specify the required set-back distance for fuel oil or the exclusive use of natural gas. The (E) designation is a mechanism which ensures that no significant adverse impacts would result from a proposed action because of steps which would be undertaken prior to the development of a rezoned site. The (E) designation would ensure that these identified sites would not be developed unless necessary remedial measures are implemented. Overall, all of the 10 projected (including the Proposed Development Site) and 4 potential development sites would receive (E) designations under the proposed rezoning.

Due to the potential presence of hazardous materials at the Proposed Development Site, which is owned by the applicant, a restrictive declaration has been recorded on March 14, 2011, which requires the preparation of a hazardous materials sampling protocol including health and safety plan, which would be submitted to the NYCDEP for approval. The declaration establishes an agreement to test and identify any potential hazardous material impacts pursuant to the approved sampling protocol and, if any such impact is found, submit a hazardous material remediation plan including a health and safety plan to NYCDEP for approval. If necessary, remediation measures would be undertaken pursuant to a NYCDEP-approved remediation plan.

V. REASONABLE WORST-CASE DEVELOPMENT SCENARIO

In order to assess the potential effects of the Proposed Action, a Reasonable Worst-Case Development Scenario (RWCDS) for both "future no-action" and "future with-action" conditions will be analyzed for an analysis year, or Build year. Given the compact area being rezoned (mid-blocks of two City blocks) and the limited number of sites expected to be redeveloped as a result of the proposed rezoning and text change, an eight-year analysis period is considered to assess the potential impacts of the proposed rezoning. As such, a RWCDS for both "future no-action" and "future with-action" conditions will be analyzed for an analysis year of 2019.

The future without the action (or No-Action) scenario identifies the amount, type, and location of development that is expected to occur by the 2019 analysis year absent the Proposed Action, while the future with-action (or With-Action) scenario identifies anticipated development in the event the proposed rezoning and associated zoning text amendment is adopted. The incremental difference between the With-Action and No-Action scenarios serves as the basis for the impact analyses of this EAS.

To determine the scenarios, standard methodologies have been used following 2010 *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 residential development, several factors have been considered, including known development proposals, current market demands, past development trends, and the 2010 *CEQR Technical Manual* "soft site" criteria, described below, for identifying likely development sites. In formulating the projections, consideration was given to the fact that there is a large

demand for new housing in the area, but that the demand has been constrained by zoning that does not permit such development as-of-right. Generally, for area-wide rezonings, which create a broad range of development opportunities, new development could 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.

General Criteria for Development Sites

In identifying the RWCDS, the "soft site" criteria outlined in the 2010 *CEQR Technical Manual* were used as the basis for selection. These were modified as appropriate using area-specific criteria in determining development sites in the rezoning area.

The specific development site criteria are discussed below.

Development Site Criteria- New Construction

Under the RWCDS, development sites suitable for new construction were selected based on the following:

- Vacant lots or assemblages of lots comprising 3,000 square feet or larger which are under single ownership or have up to 3 different owners;
- Industrial or commercial buildings built to less than half of the proposed base FAR. Residential development in M1-6D districts may be built to a base FAR of 9.0;
- Commercial and/or industrial buildings containing three stories or less, on lots of 2,000 square feet or larger.

The following uses and types of buildings were excluded from consideration because they are unlikely to be redeveloped as a result of the Proposed Action:

- Buildings that have already been substantially converted to residential use, including residential buildings constructed to half or less of the proposed base residential FAR, that contain more than 6 units (buildings with 6 or more units may fall under New York State rent stabilization laws which offer residents certain protections that would make redevelopment unlikely);
- Buildings with a significant amount of recent investment for industrial or commercial office use;
- Properties currently the subject of a New York City Board of Standards and Appeals (NYCBSA) Variance for conversion to residential use;
- Lots with less than 2,000 square feet of lot area;
- Existing public or community facility use;

Development Site Criteria- Conversions

Sites meeting the following criterion were identified as buildings to be converted to residential uses:

- Industrial loft buildings with four stories or more that contain less than 50,000 sf of floor area.

Projected and Potential Development Sites

Many sites met one or more of the above development site criteria. To produce a reasonable, conservative estimate of future growth, these sites were then divided into two categories – projected development or conversion sites, and potential development or conversion sites. The sites most likely to undergo new development or residential conversion were chosen from among this group, based on size, location and

degree of underutilization. These are called projected development or conversion sites ("projected sites"). The "projected" sites are those sites considered most likely to be developed in the foreseeable future, the 8-year period following approval of the Proposed Action, as they are larger sites built to a very low density, or loft buildings with few impediments to conversion. Many of these sites also have large vacant areas. "Potential" sites are considered less likely to be developed over the approximately 8-year analysis period; such sites generally consist of smaller assemblages or irregularly-shaped parcels, are in active use, would require significant investment to be converted to residential use, or have some combination of these features. However, the analysis recognizes that a number of potential sites could be developed under the Proposed Action in lieu of one or more of the projected sites in accommodating the development anticipated in the RWCDS. The potential sites are therefore also addressed in the EAS for site-specific effects.

All projected development or conversion sites identified for the future With-Action conditions are analyzed for density-related and site-specific impacts in this EAS, whereas potential development or conversion sites are only analyzed for site-specific potential impacts. Density-related impacts are dependent on the amount of development projected on a site; i.e., the number of dwelling units and the resulting population's impact on traffic, mobile-source air quality, community facilities and services, and open space. Site-specific impacts relate to individual site conditions and are not dependent on the density of projected development. Site-specific impacts include analysis for historic resources, shadows, urban design and visual resources, hazardous materials, stationary-source air quality, and noise.

While the Proposed Action includes a zoning text amendment affecting bulk controls for lots along the west side of Seventh Avenue between West 28th and West 30th Streets, the proposed changes would not alter zoning regulations affecting use or maximum allowable FAR on these sites. As these bulk control modifications neither induce nor hinder new development, no projected or potential sites have been identified in that area, and no further assessment is provided in this document. However, the implications of the proposed Seventh Avenue bulk modifications are discussed in Attachment C, "Land Use, Zoning and Public Policy".

Table A-3 lists each of the 52 lots on Blocks 778 and 779 that would be affected by the proposed rezoning action, including the Proposed Development Site. For each lot, the table provides a brief description of the existing building and use on the lot, the approximate lot area, the existing FAR, and the percent of the lot's maximum allowable floor area under the proposed M1-6D zoning. As shown in Table A-3, 26 of the affected lots, including the four lots comprising the Proposed Development Site, would be developed to less than 50 percent of the permitted residential base FAR under the proposed M1-6D zoning.

Five lots (Lots 7501, 3 and 75 on Block 778 and Lots 39 and 41 on Block 779) were eliminated from further consideration as projected or potential development sites, as only a very small area of those lots would be rezoned as part of this action. Lot 7 on Block 778 and Lot 7502 on Block 779 have also been eliminated from consideration, as they are owner-occupied residential buildings with ground floor retail. Lot 57 on Block 778 contains a very recently constructed approximately 71,541 gsf hotel with 13-stories, and therefore, has been eliminated from consideration as well. In addition, Lots 28 and 32 on Block 778 have been eliminated from consideration, as they support a number of rent stabilized residential units (each building has 10 or more rent stabilized units). Lot 65 on Block 779 was eliminated from consideration as it is a city-owned site accommodating a public facility (NYC Fire Department).

Of the remaining lots, as shown in Table A-3, in addition to the aforementioned Proposed Development Site to be developed by the applicant, 21 other lots would be developed to 50 percent or less of the maximum allowable FAR under the proposed zoning. As also indicated in the table, many of these lots have small lot areas, typically less than 5,000 sf; there is some common ownership but most of the lots are in single ownership. For conservative CEQR analysis purposes it is assumed that many of these properties

TABLE A-3
Lots within the Proposed Rezoning Area and their Existing FAR and Percent of Proposed M1-6D Floor Area

Block	Lot	Lot Area (sf)	Owner	Existing Use	# of Stories	Approx. Building FA [1]	Existing Zoning	Existing Built FAR	% of Proposed M1-6D FA [1, 2]
778	p/o 7501	10,395	261 West LLC	Residential (constructed 2006)/Ground Floor Retail	11	75,790	C6-2A/M1-5	7.29	N.A. [3]
	p/o 3	2,635	368 Eighth Avenue LLC	Residential	4	9,400	C6-2A/M1-5	3.57	N.A. [3]
	7	5,818	Pranam LLC-Cooperative	Residential/Ground Floor Retail	5	28,075	M1-5	4.83	54%
	13	***8,080***	***249 W. 28 St. Properties***	***Parking***	***N.A.***	***0***	***M1-5***	***0.00***	***0%***
	16	***10,575***	***249 W. 28 St. Properties***	***Parking***	***N.A.***	***0***	***M1-5***	***0.00***	***0%***
	18	***9,885***	***241 W. 28 St. LLC***	***Parking***	***4***	***33,073***	***M1-5***	***3.35***	***37%***
	20	12,135	SNY INC	Commercial/Industrial	12	139,923	M1-5	11.53	128%
	25	4,442	KB Equities LLC	Mixed Use- Residential/Commercial	2	8,518	M1-5	1.92	21%
	27	2,279	Argusfab Intl. Corpona	Commercial	2	4,554	M1-5	2.00	22%
	28	2,460	V. Downing	Residential/Ground Floor Retail (rent stabilized DUs)	6	11,538	M1-5	4.69	52%
	29	2,452	217-219 W. 28 St.	Parking	N.A.	0	M1-5	0.00	0%
	30	2,452	217-219 W. 28 St.	Parking	N.A.	0	M1-5	0.00	0%
	31	2,456	F. Robert	Mixed Use- Residential/Commercial	4	7,603	M1-5	3.10	34%
	32	2,456	213 W. 28 St. Realty	Residential/Ground Floor Retail (rent stabilized DUs)	5	10,171	M1-5	4.14	46%
	33	2,470	Sun Wansam Realty Corp.	Commercial	6	13,332	M1-5	5.40	60%
	34	9,880	Yung Brothers Real Estate	Commercial/Industrial	6	57,414	M1-5	5.81	64%
	46	2,475	210 W. 29 St. Corp.	Mixed Use- Residential/Commercial	9	23,227	M1-5	9.38	104%
	47	2,419	P. Kopatsis	Commercial/Residential	4	9,212	M1-5	3.81	42%
	48	10,340	Walsam 29 Co.	Commercial	16	125,042	M1-5	12.09	134%
	52	4,562	Walsam 29 Co.	Commercial	14	45,211	M1-5	9.91	110%
	55	4,500	Subud NY	Community Facility	2	5,390	M1-5	1.20	13%
	57	10,825	Brisam Management	Hotel (constructed 2005)	13	52,800	M1-5	4.88	54%
	66	***975***	***249 W. 28 St. Properties***	***Parking***	***0***	***0***	***M1-5***	***0.00***	***0%***
	p/o 70	6,660	Charand Assoc.	Community Facility/Office	7	42,564	C6-2A/M1-5	6.39	82% [4]
	p/o 75	2,541	Yumin Management Corp.	Commercial	5	10,297	M1-5/C6-2A	4.05	N.A. [3]
779	7	2,467	M. Imperioli	Residential/Ground Floor Retail	4	5,358	M1-5	2.17	24%
	8	4,938	384-386 8th Ave.	Parking	N.A.	0	M1-5	0.00	0%
	10	4,937	249 W. 29 Owners Corp	Mixed Use- Residential/Commercial	15	60,610	M1-5	12.28	136%
	12	2,477	249 W. 29 Owners Corp	Residential/Gr. Floor Comm.	2	4,418	M1-5	1.78	20%
	13	7,813	Travel Inc.	Mixed Use- IMD units/Commercial	17	107,040	M1-5	13.7	152%
	17	11,482	JR Building Assoc.	Mixed Use- IMD units/Commercial	15	144,323	M1-5	12.57	140%
	23	4,522	Q. Management Corp.	Commercial	14	55,000	M1-5	12.16	135%
	25	2,312	Gavartins	Industrial	2	4,226	M1-5	1.83	20%
	26	2,312	Rover-NYC LLC	Mixed Use- Residential/Commercial	2	4,721	M1-5	2.04	23%
	27	2,312	29 Park LLC	Parking	N.A.	0	M1-5	0.00	0%
	28	4,584	29 Park LLC	Parking	N.A.	0	M1-5	0.00	0%
	31	4,543	Hardwell Acquisition	Parking	N.A.	0	M1-5	0.00	0%
	p/o 39	6,806	Hardwell Acquisition	Commercial	21	143,845	M1-6/M1-5	21.14	N.A. [3]
	7502	2,271	Condominiums	Residential/Ground Floor Retail	7	14,100	M1-5	6.21	69%

TABLE A-3
Lots within the Proposed Rezoning Area and their Existing FAR and Percent of Proposed M1-6D Floor Area

Block	Lot	Lot Area (sf)	Owner	Existing Use	# of Stories	Approx. Building FA [1]	Existing Zoning	Existing Built FAR	% of Proposed M1-6D FA [1, 2]
	p/o 41	7,484	Acquisition Companies	Commercial	16	127,488	M1-6/M1-5	17.03	N.A. [3]
779	49	6,814	First Hudson Capital	Mixed-Use- Commercial/Residential (rent stabilized DUs)	12	77,556	M1-5	11.38	126%
	52	2,271	214 West 30th Realty	Residential/Ground Floor Retail	12	27,770	M1-5	12.23	136%
	53	4,624	Theodoros Kotopoulos	Commercial	2	7,184	M1-5	1.55	17%
	55	2,312	220 West LLC	Commercial	2	4,419	M1-5	1.91	21%
	56	2,312	Hemat Realty Corp	Commercial	2	4,624	M1-5	2.00	22%
	57	11,561	MB Hamptons, LLC	Commercial/Industrial	14	142,801	M1-5	12.35	125%
	62	2,313	Grokash Realty Assoc	Commercial	2	3,800	M1-5	1.64	18%
	63	5,110	Grokash Realty Assoc	Commercial/Industrial	14	64,414	M1-5	12.61	140%
	65	2,469	NY Board- Fire	Public Facility	4	8,200	M1-5	3.32	37%
	66	7,406	Bradley Acquisition	Mixed-Use- Commercial/Residential/Industrial	14	94,914	M1-5	12.82	142%
	69	4,937	Henegan Construction Co	Commercial	3	14,037	M1-5	2.84	31.5%
	7501	4,913	Condominiums	Mixed-Use- Commercial/ Residential	15	61,903	M1-5	12.60	140%

Notes:

Bold, italicized text indicates the Proposed Development Site under the control of the applicant. Shaded/colored rows indicate lots that would be built to less than 50% of the allowable FAR under the proposed M 6D zoning.

[1] FA: Zoning Floor Area.

[2] The proposed M1-6D district allows for residential development to be built to a maximum FAR of 9.0 (3.0 FAR bonus for inclusionary housing)

[3] Pursuant to ZR Section 77-11, the zoning regulations applicable to the district in which more than 50% of the lot area of the zoning lot may apply to the entire zoning lot if the portion in other district is not more than 25 feet (Block 778, Lots 7501, 3, & 75 are primarily located within C6-2A district and Block 779, Lots 39 and 41 are primarily located within M1-6). Lots eliminated from further consideration as a development site.

[4] Pursuant to ZR Section 77-22, the maximum FAR of the zoning district shall be applied to each portion of the zoning lot within the respective district, and the sum of the product shall be the adjusted maximum FAR applicable to the zoning lot. Approximately 4,070 sf of Lot 70 on Block 778 is located within the rezoning area, and the remaining 2,590 sf is within a C6-2A district.

could be assembled into several larger sites with single ownership (refer to Figure A-5). Lots 29, 30 and 31 on Block 778 would be combined into projected development site #1, Lot 55 on Block 778 would comprise projected development site #2, Lots 25 and 27 on Block 778 would be combined to form projected development site #3, Lots 7 and 8 on Block 779 would be combined to comprise projected development site #4, Lots 25, 26, 27, 28, 53, 55, and 56 on Block 779 would be combined to form projected development site #5,[2] Lot 31 on Block 779 would form projected development site #6, and Lot 69 would comprise projected development site #7. In addition, there are two existing buildings (on Lot 46 on Block 778 and Lot 52 on Block 779) within the rezoning area that have less than 50,000 sf of floor area and contain commercial uses as well as a few residential units and/or Interim Multiple Dwellings, which would likely be converted to primarily residential use on their upper floors with ground floor retail, as a result of the proposed rezoning. These lots would be considered projected development sites #8 and #9.

Due to the small lot size (less than 2,500 sf), existing low-rise buildings, and the inability to assemble the properties into a larger site, Lot 47 on Block 778 and Lots 12 and 62 on Block 779 are considered less likely to be redeveloped within the foreseeable future, and therefore, are assumed to be potential developments (potential development sites A, B, and C). In addition, as Lot 34 on Block 778 contains a six-story building built to only slightly more than 50 percent of the permitted FAR under the proposed M1-6D zoning and is occupied by active commercial uses, it is considered less likely to be redeveloped and is therefore assumed to be potential development site D.

Therefore, ten (10) projected development and conversion sites are considered most likely to be developed in the future with the Proposed Action (including the Proposed Development Site). Eight (8) parcels (including the Proposed Development Site) met the criteria for inclusion as projected development sites, and two (2) additional parcels met the criteria for inclusion as projected conversions to residential uses (see Table A-4).

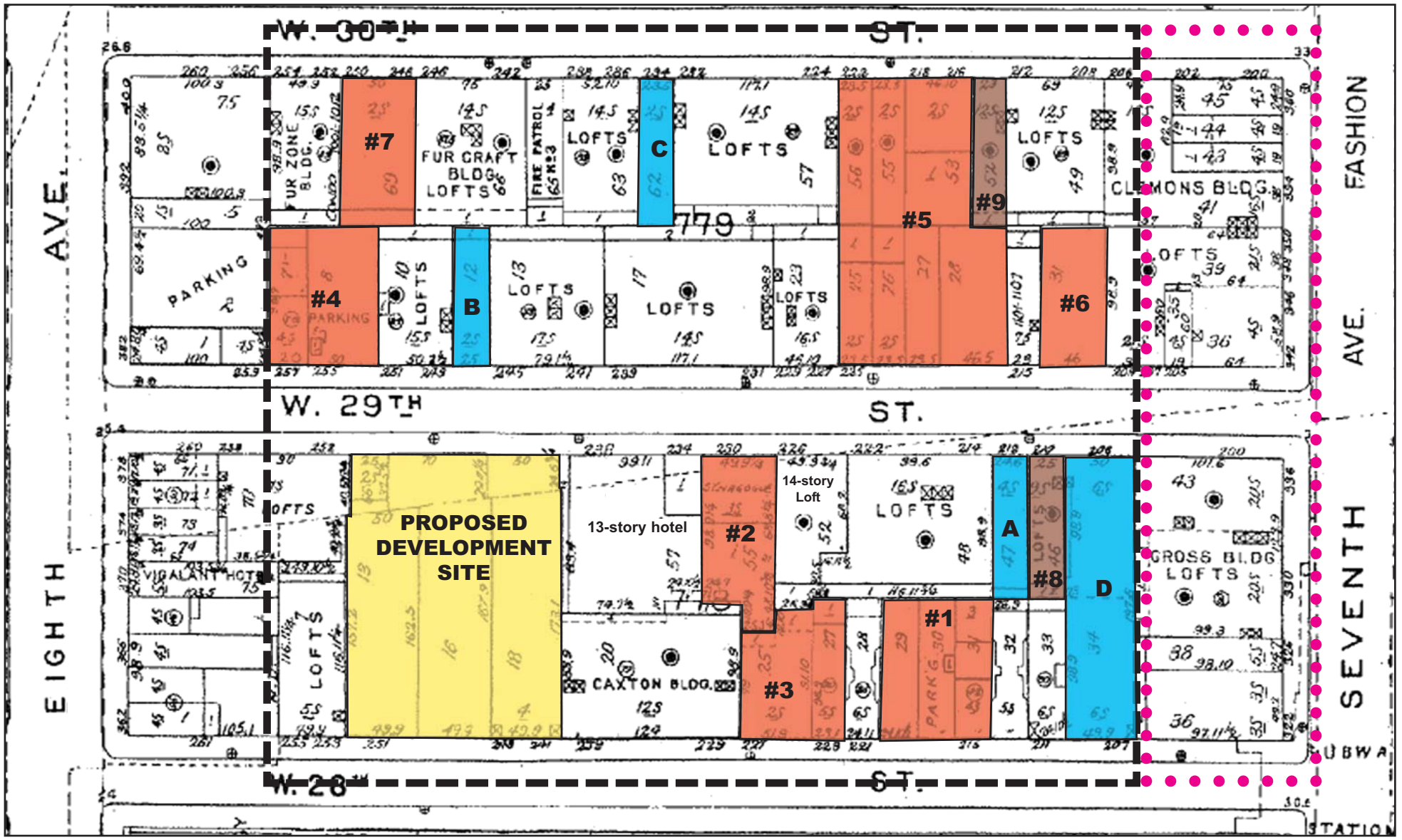
Figure A-5 shows the 10 locations identified as projected development or conversion sites, and Table A-4 provides the development scenario for each projected development/conversion site under both No-Action and With-Action conditions. Figure A-5 also illustrates the 4 locations identified as potential development sites in the proposed rezoning area, and the development scenario for each potential development site under both No-Action and With-Action conditions is also provided in Table A-4.

The Future Without the Proposed Action (No-Action Conditions)

In absence of the Proposed Action, all of the affected lots would retain their current M1-5 zoning and the current land use trends and general development patterns would continue. These trends are characterized by an overall decline in light industrial and manufacturing uses, a continued shift to commercial development, and limited residential growth due to the area's M1-5 zoning.

Under the future No-Action condition in the rezoning area, sites that are expected to be affected by the proposed zoning map and text changes and which constitute the With-Action scenario are assumed to remain unchanged from existing conditions, with one exception. Given the recent increased demand for hotel rooms and development that has occurred in response to that demand in the vicinity of the rezoning area, and its proximity to several major attractions (e.g., Madison Square Garden, Penn Station, etc.), it is assumed that one new as-of-right hotel would be developed within the rezoning area in the future without the Proposed Action. Based on the lot size of the hotel that was recently constructed within the rezoning

[2] While this development site has more than 3 different owners, its low density and its proximity to Midtown and several major attractions (i.e., MSG, Penn Station) make it more likely than other sites to be aggregated for combined development.



LEGEND

- AREA AFFECTED BY PROPOSED M1-6D ZONING MAP AND TEXT AMENDMENTS
- AREA OUTSIDE M1-6D REZONING AREA BUT AFFECTED BY ZR SECTION 43-43 TEXT AMMENDMENT
- PROPOSED DEVELOPMENT SITE
- PROJECTED DEVELOPMENT SITE
- PROJECTED DEVELOPMENT SITE (CONVERSION)
- POTENTIAL DEVELOPMENT SITE

Figure A-5
Projected Development Sites

TABLE A-4
Projected and Potential Development Sites within the Proposed Rezoning Area

Site	Block, Lots	Area	FAR Proposed [1]	Maximum Zoning FA (zsf)	Estimated Gross FA (+6%, excluding parking)[2]	Hotel/Office/Local Retail (~ 50% of gr.fl.) [3]	Community Facility	Residential DU (850 sf/DU) [4]
Proposed Development Site	***Block 778: 13, 16, 18, 66***	***29,373 sf*** [6]	***12.0***	***352,476 zsf***	***361,860 gsf***	***16,075 gsf***	***0 gsf***	***407 DU (345,785 gsf)***
Projected Site 1	Block 778: 29, 30, 31	7,360 sf	12.0	88,320 zsf	93,619 gsf	3,680 gsf	0 gsf	106 DU (89,939 gsf)
Projected Site 2	Block 778: 55	4,500 sf	12.0	54,000 zsf	57,240 gsf	0 gsf	0 gsf (5,390 gsf to remain) [5]	61 DU (51,850 gsf)
Projected Site 3	Block 778: 25, 27	6,721 sf	12.0	80,652 zsf	85,491 gsf	3,361 gsf	0 gsf	97 DU (82,130 gsf)
Projected Site 4	Block 779: 7, 8	7,405 sf	12.0	88,860 zsf	94,192 gsf	3,703 gsf	0 gsf	106 DU (90,489 gsf)
Projected Site 5	Block 779: 25, 26, 27, 28, 53, 55, 56	20,768 sf	12.0	249,216 zsf	263,131 gsf	39,828 gsf	0 gsf	263 DU (223,303 gsf)
Projected Site 6	Block 779: 31	4,543 sf	12.0	54,516 zsf	57,787 gsf	2,272gsf	0 gsf	65 DU (55,515 gsf)
Projected Site 7	Block 779: 69	4,937 sf	10.0	49,370 zsf	52,332 gsf	52,332gsf (174 hotel rooms)	0 gsf	0
Projected Site 8 (Conversion)	Block 778: 46	2,475 sf	9.38	N.A.	23,227 gsf	0 gsf (2,000 gsf to remain)	0 gsf	21 DU (21,227 gsf)
Projected Site 9 (Conversion)	Block 779: 52	2,271 sf	12.23	N.A.	27,770 gsf	0 gsf (1,200 gsf to remain)	0 gsf	27 DU (26,570 gsf)
Total for Projected Development Sites				**1,017,410 zsf**	**1,116,649 gsf**	**121,251 new gsf (3,200 gsf to remain)**	**0 gsf (5,390 gsf to remain- no new additional sf)** [5]	**1,153 DU (986,808 gsf)**
Potential Site A	Block 778: 47	2,419 sf	9.125	22,073zsf	23,397 gsf	1,282 gsf	0 gsf	26 DU (22,115 gsf)
Potential Site B	Block 779: 12	2,477 sf	9.125	22,603 zsf	23,959 gsf	1,313 gsf	0 gsf	27 DU (22,646 gsf)
Potential Site C	Block 779:62	2,313 sf	9.125	21,106 zsf	22,372 gsf	1,226 gsf	0 gsf	25 DU (21,146 gsf)
Potential Site D	Block 778:34	9,880 sf	10.0	98,800 zsf	104,728 gsf	57,414 gsf (191 hotel rooms)	23,657 gsf (dormitory ~95 rooms)	28 DU (23,657 gsf)

Notes:

[1] Excluding the projected conversion sites (Sites 8 and 9), the projected sites (including the Proposed Development Site) would be developed to the maximum FAR of 12.0 utilizing the inclusionary housing bonus, except for Site 7, which would be developed with a hotel and have a maximum commercial FAR of 10.0. Potential sites A to C would be developed to the maximum residential base FAR of 9.0, plus an amount equal to 0.25 times the non-residential floor area (a total of 9.125 FAR is assumed). Site D would be developed with 10.0 FAR, with approximately 5.81 FAR of commercial space (replacing 57,414 sf of existing light industrial/warehousing floor area), and approximately 4.19 FAR equally divided between community facility space, in the form of a dormitory, and residential use (in the form of faculty housing).

[2] Estimated gross floor area represents a 6% increase in zoning floor area, except for the Proposed Development Site (where preliminary plans are available), and site 5 (which is assumed to include accessory parking). Gross floor area shown excludes ground floor areas on the Proposed Development Site and projected development site 5 that are assumed to be occupied by parking areas (ramps, etc.).

[3] Except for the Proposed Development Site (where preliminary plans are available) and Site 5, local retail square footage is assumed to occupy approximately 50% of the ground floor of a development site (0.5 FAR). The remainder of the ground floor space is expected to be occupied by residential lobby, mechanical space, and garage ramp access, where applicable. For Site 5, approximately 85% of the ground floor (or 17,653 sf) is assumed to be occupied by a grocery store, and 95% of the floor plate of the second floor (15,735 sf) and a portion of the third floor (6,440 sf) are assumed to be occupied by other local retail uses.

[4] Excluding projected development sites 8 and 9, which are residential conversions, new residential units are assumed to occupy approximately 850 gsf. The existing buildings at projected development sites 8 and 9 are assumed to accommodate residential units occupying approximately 1,000 gsf.

[5] Existing community facility space (a spiritual/ethical society) is expected to remain at the site in the future with the Proposed Action.

[6] Lot area shown for Proposed Development Site is based on site survey, and is therefore slightly different from the lot areas shown in Tables A-3 and A-5 (total of 29,515 sf), which are based on the City's PLUTO data.

area (Block 778, Lot 57), it is assumed that Lots 25, 26, 27, 28, 53, 55, and 56 on Block 779, would be developed with a new hotel in the No-Action condition. With a lot area of approximately 20,768 sf, this combined site could accommodate a hotel fronting on West 30th Street (the site frontage closest to Penn Station and midtown) with up to approximately 103,840 zoning sf of floor area (estimated 109,032 gsf, excluding parking), with an estimated 363 rooms and approximately 55 accessory parking spaces. This hotel is assumed to be massed on the northern portion of the site, placing it closer to the transit hub at Penn Station, an intermodal facility serving the Long Island Rail Road (LIRR) and New Jersey Transit (NJ Transit) commuter rail services, the Amtrak intercity rail system, as well as two subway stations, the 34th Street-Penn Station stop on the Eighth Avenue IND Line (A, C and E) and the 34th Street-Penn Station stop on the Broadway/Seventh Avenue IRT Line (1, 2 and 3). It is assumed that access to the accessory garage would also be located on West 29th Street. Based on the current M1-5 zoning regulations, this hotel is estimated to be 20-stories in height (approximately 210 feet).

With respect to the remaining lots in the rezoning area, as many of them already exceed their current allowable commercial/industrial FAR of 5.0, no new development is expected to occur and the existing uses would remain on those lots. Whereas some lots within the rezoning area, namely those that have been identified as projected or potential development sites, have less than 5.0 FAR, they are not expected to be redeveloped in absence of the proposed rezoning, primarily due to the existing M1-5 zoning, which permits commercial and high performance manufacturing uses but prohibits residential use. However, it is assumed that any vacant space in existing buildings located on projected or potential development sites would be re-occupied by commercial office uses in the future without the Proposed Action.

The Future With the Proposed Action (With-Action Conditions)

The new land uses that are expected to result from the Proposed Action would represent a continuation of general land use trends in a manner compatible with surrounding land uses. The Proposed Action would allow for the construction of residential development that is consistent with the built character of the area, as well as some limited residential conversion of existing loft buildings. New development that is projected to result from the Proposed Action would occur on underutilized sites.

Sites expected to be developed as a result of the proposed zoning and text amendments were identified and programs for these sites are based on reasonable worst-case assumptions. This includes 10 projected sites (including the Proposed Development Site) and 4 potential development sites, which are listed in Table A-5. The RWCDS developed for the With-Action condition also considers the potential environmental impacts of the proposed zoning text amendments creating the M1-6D zoning district and affecting the Seventh Avenue frontage, which would provide protections for existing concentrations of commercial and light industrial uses, require a special permit for hotels with more than 100 rooms (or, if the residential development goal for the area has been met, no special permit but certification by the Chairperson of the City Planning Commission), allow food stores without size limits, and allow the full range of community facility uses.

Table A-5 shows the projected numbers of new dwelling units and projected new commercial and community facility space for the development sites, based on the proposed M1-6D district, which permits residential uses at a base density of 9.0 FAR, bonusable to 12.0 pursuant to the Inclusionary Housing Program. It would also increase the FAR for commercial, community facility and manufacturing uses to 10.0, and limit the conversion of commercial and/or industrial buildings that contain more than 50,000 sf.

TABLE A-5
RWCDS Projected and Potential Development and Conversion Sites

PROJECTED SITES

EXISTING CONDITION

Site Number	Block	Lot	Address	Lot Area	Bldg Area	FAR	Land Use Description	Zoning	Industrial/ Manufacturing/ Warehouse	Vacant Space in Bldg	Wholesale	Commercial (Office)	Commercial (Retail/ Other)	Public / Community Use	Residential (SF)	DUs	Public Parking Spaces
Proposed	778	13	251 W. 28 ST.	8,080	0	0.00	Parking lot	M1-5									
Development		16	247 W. 28 ST.	10,575	0	0.00	Parking lot	M1-5									131
Site		18	241 W. 28 ST.	9,885	33,073	3.35	Garage	M1-5									240
		66	250 W. 29 ST.	975	0	0.00	Parking lot	M1-5									
1	778	29	219 W. 28 ST.	2,452	0	0.00	Parking lot	M1-5									
		30	217 W. 28 ST.	2,452	0	0.00	Parking lot	M1-5									25
		31	215 W. 28 ST.	2,456	7,603	3.10	Commercial/Residential	M1-5					2,455		5,148	2	
2	778	55	228 W. 29 ST.	4,500	5,390	1.20	Community Facility	M1-5						5,390			
3	778	25	227 W. 28 ST.	4,442	8,518	1.92	Commercial/Residential	M1-5		1,065		1,065	2,130		4,258	1	
		27	223 W. 28 ST.	2,279	4,554	2.00	Commercial	M1-5			2,277	2,277					
4	779	7	257 W. 29 ST.	2,467	5,358	2.17	Commercial/Residential	M1-5					1,300		4,058	3	
		8	253 W. 29 ST.	4,938	0	0.00	Parking lot	M1-5									25
5	779	25	225 W. 29 ST.	2,312	4,226	1.83	Industrial	M1-5	4,226								
		26	223 W. 29 ST.	2,312	4,721	2.04	Commercial/Residential	M1-5			1,100	2,361			1,260	1	
		27	W. 29 ST.	2,312	0	0.00	Parking lot	M1-5									12
		28	219 W. 29 ST.	4,584	0	0.00	Parking lot	M1-5									36
		53	216 W. 30 ST.	4,624	7,184	1.55	Commercial	M1-5			1,500	3,284	2,400				
		55	220 W. 30 ST.	2,312	4,419	1.91	Commercial	M1-5					4,419				
		56	222 W. 30 ST.	2,312	4,624	2.00	Commercial	M1-5			1,508	804	2,312				
6	779	31	W. 29 ST.	4,543	0	0.00	Parking lot	M1-5									50
7	779	69	250 W. 30 ST.	4,937	14,037	2.84	Commercial	M1-5				14,037					
8	778	46	210 W. 29 ST.	2,475	23,227	9.38	Commercial/Residential	M1-5			5,162	5,162	10,324		2,579	3	
9	779	52	214 W. 30 ST.	2,271	27,770	12.23	Commercial/Residential	M1-5		1,780	1,157	1,157	2,314		21,362	10	
Projected Sites Total				**90,495**	**154,704**				**4,226**	**2,845**	**12,704**	**30,147**	**27,654**	**5,390**	**38,665**	**20**	**519**

POTENTIAL SITES

EXISTING CONDITION

Site Number	Block	Lot	Address	Lot Area	Bldg Area	FAR	Land Use Description	Zoning	Industrial/ Manufacturing/ Warehouse	Vacant Space in Bldg	Commercial (Wholesale)	Commercial (Office)	Commercial (Retail/ Other)	Public / Community Use	Residential (SF)	DUs	Public Parking Spaces
A	778	47	212 W.29 ST.	2,419	9,212	3.81	Commercial/Industrial/Residential	M1-5	2,303		1,152	2,304		1,611	1,842	2	
B	779	12	247 W. 29 ST.	2,477	4,418	1.78	Commercial/Residential	M1-5		1,741			736		1,941	1	
C	779	62	234 W. 30 ST.	2,313	3,800	1.64	Commercial	M1-5		1,900	1,900						
D	778	34	207 W. 28 ST	9,880	57,414	5.81	Commercial/Industrial	M1-5	52,414				5,000				

TABLE A-5 (continued)
RWCDS Projected and Potential Development and Conversion Sites

PROJECTED SITES

NO ACTION CONDITION

Site Number	MAX Allowable FAR	Built FAR	Sites with Change from Existing to No-Action	Building Area (SF)	Industrial/ Manufacturing/ Warehouse	Wholesale	Commercial (Hotel)	Hotel Rooms	Commercial (Office)	Commercial (Retail/ Other)	Public/ Community Use	Residential (SF)	DUs	Public Parking Spaces	Accessory Parking Spaces
Proposed	5.0	0.00		0										131	
Development	5.0	0.00		0											
Site	5.0	3.35		33,073										240	
	5.0	0.00		0											
1	5.0	0.00		0										25	
	5.0	0.00		0											
	5.0	3.10		7,603						2,455		5,148	2		
2	5.0	1.20		5,390							5,390				
3	5.0	1.92	***	8,518					2,130	2,130		4,258	1		
	5.0	2.00		4,554		2,277			2,277						
4	5.0	2.17		5,358						1,300		4,058	3		
	5.0	0.00		0										25	
5	5.0		***												
	5.0														
	5.0														
	5.0														
	5.0														
	5.0														
	5.0	5.00		109,032			109,032	363							55
6	5.0	0.00		0										50	
7	5.0	2.84		14,037					14,037						
8	5.0	9.38		23,227		5,162			5,162	10,324		2,579	3		
9	5.0	12.23	***	27,770		1,157			2,937	2,314		21,362	10		
				238,562		**8,596**	**109,032**	**363**	**26,543**	**18,523**	**5,390**	**37,405**	**19**	**471**	**55**

POTENTIAL SITES

NO ACTION CONDITION

Site Number	MAX Allowable FAR	Built FAR	Sites with Change from Existing to No-Action	Building Area (SF)	Industrial/ Manufacturing/ Warehouse	Wholesale	Commercial (Hotel)	Hotel Rooms	Commercial (Office)	Commercial (Retail/ Other)	Public/ Community Use	Residential (SF)	DUs	Public Parking Spaces	Accessory Parking Spaces
A	5	3.81		9,212	2,303	1,152			2,304		1,611	1,842	2		
B	5	1.78	***	4,418					1,741	736		1,941	1		
C	5	1.64	***	3,800		1,900			1,900						
D	5	5.81		57,414	52,414					5,000					

NOTES:

*** A hotel with approximately 363 rooms and 55 accessory parking spaces is assumed to be developed on site 5 in the future without the Proposed Action. Gross floor area shown excludes 5% of ground floor that is assumed to be occupied by accessory parking areas (ramp, etc.). Vacant spaces within existing buildings on projected development sites 3 and 9 and potential development sites B and C are assumed to be reoccupied with office uses in the future without the Proposed Action.

TABLE A-5 (continued)
RWCDS Projected and Potential Development and Conversion Sites

PROJECTED SITES

WITH ACTION CONDITION

Site Number	Development Type	Proposed Zoning	Proposed Base Residential FAR/ Max FAR	Proposed Built FAR	Max Building Height	Projected Building Height	Industrial/ Manufacturing/ Warehouse	Wholesale	Commercial (Hotel)	Hotel Rooms	Commercial (Office)	Commercial (Retail/Foodstore)	Public/ Community Facility	Residential (SF)	New Cnst DUs	Converted DUs	Total DUs	Potential Inclusionary DUs	Public Parking Spaces	Accessory Parking Spaces
Proposed Development Site	New construction	M1-6D	9.0/12.0	12.0	210	210					11,390	4,685		345,785	407		407	81	325	
1	New construction	M1-6D	9.0/12.0	12.0	210	210						3,680		89,939	106		106	21	0	
2	New construction	M1-6D	9.0/12.0	12.0	210	210							5,390	51,850	61		61	12	0	
3	New construction	M1-6D	9.0/12.0	12.0	210	198						3,361		82,130	97		97	19	0	
4	New construction	M1-6D	9.0/12.0	12.0	210	210						3,703		90,489	106		106	21	0	
5	New construction	M1-6D	9.0/12.0	12.0	210	210						39,828		223,303	263		263	53	0	62
6	New construction	M1-6D	9.0/12.0	12.0	210	210						2,272		55,515	65		65	13	0	
7	New construction	M1-6D	9.0/12.0	10.0	210	135			52,332	174									0	
8	Conversion	M1-6D	9.0/12.0	9.38	210	109						2,000		21,227		21	21		0	
9	Conversion	M1-6D	9.0/12.0	12.23	210	151						1,200		26,570		27	27		0	
	Projected Sites Total						**0**	**0**	**52,332**	**174**	**11,390**	**60,729**	**5,390**	**986,808**	**1,105**	**48**	**1,153**	**220**	**325**	**62**

POTENTIAL SITES

WITH ACTION CONDITION

Site Number	Development Type	Proposed Zoning	Proposed Base Residential FAR/ Max FAR	Proposed Built FAR	Max Building Height		Industrial/ Manufacturing/ Warehouse	Wholesale	Commercial (Hotel)	Hotel Rooms	Commercial (Office)	Commercial (Retail/Foodstore)	Public/ Community Facility	Residential (SF)	New Cnst DUs	Converted DUs	Total DUs	Potential Inclusionary DUs	Public Parking Spaces	Accessory Parking Spaces
A	New construction	M1-6D	9.0/12.0	9.125	210	210						1,283		22,114	26		26			
B	New construction	M1-6D	9.0/12.0	9.125	210	210						1,313		22,645	27		27			
C	New construction	M1-6D	9.0/12.0	9.125	210	210						1,226		21,146	25		25			
D	New construction	M1-6D	9.0/12.0	10.0	210	165			57,414	191			23,657	23,657	28		28			

NOTES:

1. Excluding the projected conversion sites (Sites 8 and 9), the projected sites (including the Proposed Development Site) would be developed to the maximum FAR of 12.0 utilizing the inclusionary housing bonus, except for Site 7, which would be developed with a hotel and have a maximum commercial FAR of 10.0. Potential sites A to C would be developed to the maximum residential base FAR of 9.0, plus an amount equal to 0.25 times the non-residential floor area (a total of 9.125 FAR is assumed). Site D would be developed with 10.0 FAR, with approximately 5.81 FAR of commercial space (replacing 57,414 sf of existing light industrial/warehousing floor area), and approximately 4.19 FAR equally divided between community facility space, in the form of a dormitory, and residential use (in the form of faculty housing).

2. Estimated gross floor area represents a 6% increase in zoning floor area, except for the Proposed Development Site (where preliminary plans are available), and site 5 (which is assumed to include accessory parking). Gross floor area shown excludes ground floor areas on the Proposed Development Site and projected development site 5 that are assumed to be occupied by parking areas (ramps, etc.).

3. Except for the Proposed Development Site (where preliminary plans are available) and Site 5, projected development sites that would be developed with residential use are assumed to include 0.5 FAR of local retail, which would occupy approximately 50% of the ground floor of a development site. The remainder of the ground floor space is expected to be occupied by residential lobby, mechanical space, and garage ramp access, where applicable. For Site 5, approximately 85% of the ground floor (or 17,653 sf) is assumed to be occupied by a grocery store, and 95% of the floor plate of the second floor (15,735 sf) and a portion of the third floor (6,440 sf) are assumed to be occupied by other local retail uses.

4. Excluding projected development sites 8 and 9, which are residential conversions, new residential units are assumed to occupy approximately 850 gsf. The existing buildings at projected development sites 8 and 9 are assumed to accommodate residential units occupying approximately 1,000 gsf.

5. For sites containing hotel uses, a ratio of 300 gsf per room is assumed. For dormitory use, a ratio of 250 gsf per student is assumed.

TABLE A-5 (continued)
RWCDS Projected and Potential Development and Conversion Sites

PROJECTED SITES

INCREMENT OVER NO ACTION CONDITION

Site Number	Industrial/ Manufacturing/ Warehouse	Vacant Land	Wholesale	Commercial (Hotel)	Hotel Rooms	Commercial (Office)	Commercial (Retail/ Other)	Community Facility	Residential (SF)	DUs	Public Parking Spaces	Accessory Parking Spaces
Proposed Development Site		-975				11,390	4,685		345,785	407	-46	
1							1,225		84,791	104	-25	
2									51,850	61		
3			-2,277			-4,407	1,231		77,872	96		
4							2,403		86,431	103	-25	
5				-109,032	-363		39,828		223,303	263		7
6							2,272		55,515	65	-50	
7				52,332	174	-14,037						
8			-5,162			-5,162	-8,324		18,648	18		
9			-1,157			-2,937	-1,114		5,208	17		
	0	**-975**	**-8,596**	**-56,700**	**-189**	**-15,153**	**42,206**	**0**	**949,403**	**1,134**	**-146**	**7**

POTENTIAL SITES

INCREMENT OVER NO ACTION CONDITION

Site Number	Industrial/ Manufacturing/ Warehouse	Vacant Land	Commercial (Wholesale)	Commercial (Hotel)	Hotel Rooms	Commercial (Office)	Commercial (Retail/ Other)	Community Facility	Residential (SF)	DUs	Public Parking Spaces	Accessory Parking Spaces
A	-2,303		-1,152			-2,304	1,283	-1,611	20,272	24		
B						-1,741	577		20,704	26		
C			-1,900			-1,900	1,226		21,146	25		
D	-52,414			57,414	191		-5,000	23,657	23,657	28		

All of the projected development sites with new residential construction, including the Proposed Development Site, are conservatively assumed to utilize the 3.0 FAR Inclusionary Housing bonus, and are therefore projected to have a maximum FAR of 12.0 (refer to Table A-4). Potential development sites A through C are assumed to be developed to a maximum base FAR of 9.0, as their small lot sizes (less than 2,500 sf) would make it unfeasible to construct a building taller than 9 stories, given the very small floor plates that would result at the upper floors due to the required setbacks. In accordance with the bulk regulations of the proposed M1-6D district, an amount equal to 0.25 times the non-residential floor area is added to the base FAR, for a total of 9.125 FAR for potential development sites A through C. In addition, in order to assess the full effects of the proposed zoning text amendments, potential development site D is assumed to be developed with 10.0 FAR, with approximately 5.81 FAR of commercial space (replacing 57,414 sf of existing light industrial/warehousing floor area), and approximately 4.19 FAR equally divided between community facility space, in the form of a dormitory, and residential use (in the form of faculty housing), both of which would require certification as the site currently contains a qualifying building, i.e., a building with more than 50,000 sf of commercial or manufacturing floor area. The commercial component on this site is assumed to be a hotel with more than 100 rooms which, depending on when it is developed, would require either a special permit or certification that the residential goal for the area has been met.

Projected development site 7 is assumed to be developed with a hotel with more than 100 rooms with a maximum FAR of 10.0, which, depending on when it is developed, would require either a special permit or certification that the residential goal for the area has been met. For development sites that contain residential uses with ground floor retail, it is generally assumed that at each projected or potential development site, approximately 50 percent of the ground floor would accommodate local retail, and the remaining FAR would be residential. However, for projected development site 5, which is the second largest development site (after the Proposed Development Site), a total of approximately 1.9 FAR of local retail uses (approximately 39,828 gsf) are assumed, which would include a food store in excess of 10,000 sf. Given its large size, site 5 is also assumed to provide approximately 62 accessory parking spaces as permitted by zoning in this area of Manhattan.

The number of new dwelling units is calculated at an average of 850 gsf per unit. The projected conversion sites would continue to accommodate existing ground floor retail uses, while the upper floors of the existing buildings would be renovated to accommodate residential use. The number of new dwelling units for conversions is calculated at an average of 1,000 gsf per unit. For commercial hotel uses, an average of 300 gsf per room is assumed, and an average of 250 gsf per student is assumed for the dormitory use on potential development site D.

In the future with the Proposed Action, residential development would consist of new construction, as well as the conversion of existing underutilized loft buildings. A total of approximately 1,065,652 gsf of new floor area would be constructed on eight of the projected development sites (including the Proposed Development Site) housing approximately 68,919 gsf of local retail/food store and office uses, 174 hotel rooms (52,332 gsf), and 1,105 dwelling units (986,808 gsf), as well as 325 public parking spaces and 62 accessory parking spaces. Buildings anticipated to be converted to residential use contain approximately 50,997 gsf. These buildings could be expected to have 3,200 square feet of commercial use and 48 residential units (47,797 gsf).

Thus, in the future with the Proposed Action, it is anticipated that a total of approximately 1,153 dwelling units, 72,119 sf of local commercial/retail and office space, 174 hotel rooms, 325 public parking spaces and 62 accessory spaces would be developed on the 10 projected development and conversion sites. Approximately 220 of the 1,153 residential units (or approximately 20% of each new construction site) are assumed to be affordable, developed pursuant to the proposed Inclusionary Housing text amendment.

As shown in Table A-6, compared to future conditions without the Proposed Action, the RWCDS associated with the proposed rezoning anticipates that the 10 projected development and conversion sites would result in a net increase of 1,134 dwelling units (approximately 949,403 sf), of which 220 units would be affordable, a net increase of approximately 42,206 sf of retail space, an increase of 7 accessory parking spaces, as well as a decrease of approximately 15,153 sf of commercial office space, 8,596 sf of industrial, manufacturing, warehousing, and wholesale space, 189 hotel rooms, and 146 public parking spaces.

TABLE A-6
Net Change in Land Uses on Projected Development and Conversion Sites Under the RWCDS

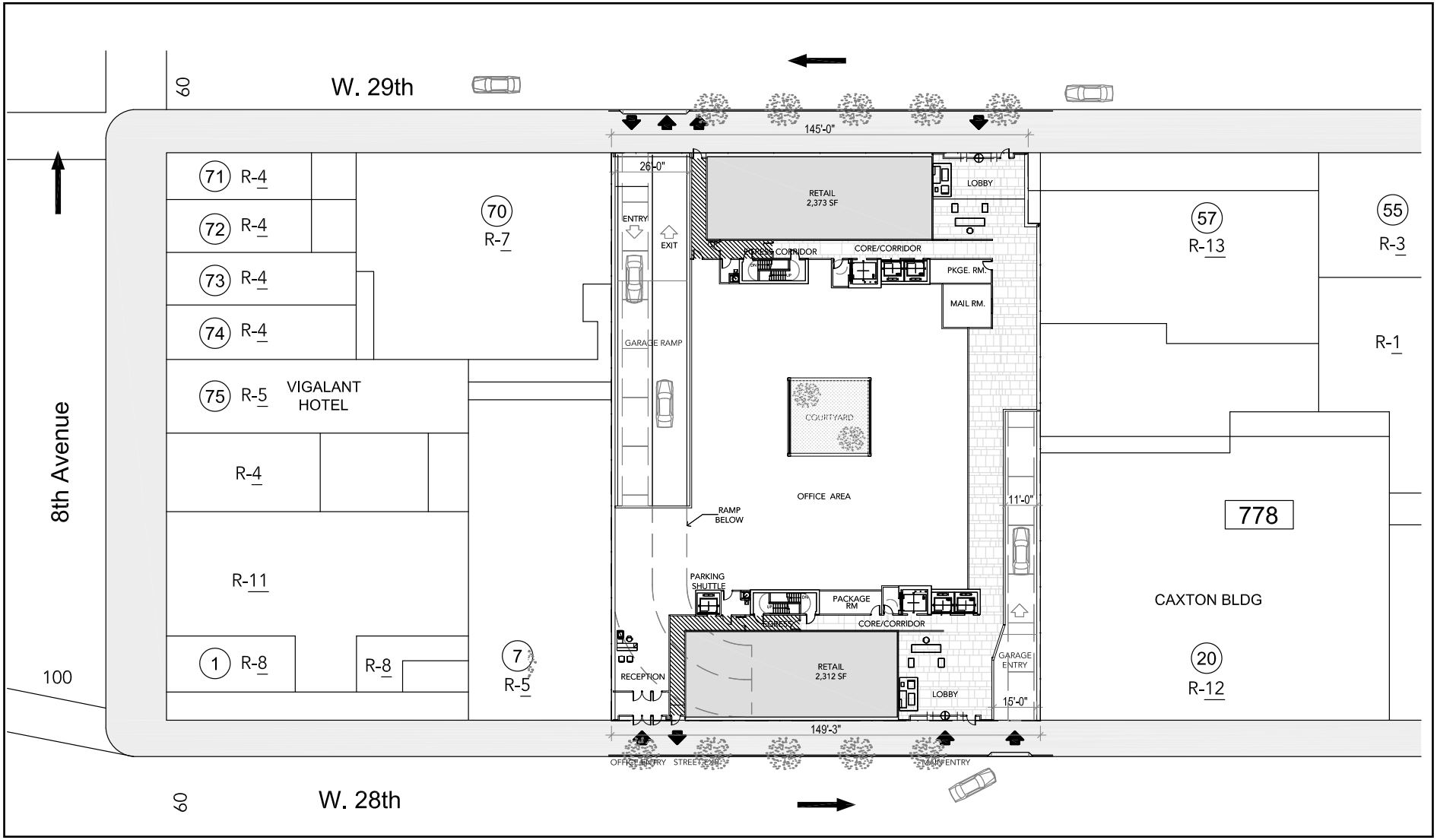
Use	No-Action*	With-Action	Net Increment
Industrial/Manufacturing/Warehousing/Wholesale (gsf)	8,596	0	-8,596
Commercial – Office (gsf)	26,543	11,390	-15,153
Commercial – Retail/Food Store (gsf)	18,523	60,729	42,206
Commercial – Hotel (gsf)	109,032	52,332	-56,700
– Units	363	174	- 189
Community Facility (gsf)	5,390	5,390	0
Residential – GSF	37,405	986,808	949,403
– Units	19	1,153	1,134
– Affordable Units	0	220	220
Public Parking Spaces	471	325	- 146
Accessory Parking Spaces	55	62	7

* Includes existing uses to remain under No-Action conditions.

The RWCDS described above assumes application of the various elements of the text amendments, for example, by assuming hotels with more than 100 rooms on projected development site 7 and potential development site D which, depending on when they are developed, would require either a special permit or certification that the residential goal for the area has been met. The RWCDS also assumes that potential development site D would be developed with 10.0 FAR, including approximately 5.81 FAR of commercial space (replacing 57,414 sf of existing light industrial/warehousing floor area), and approximately 4.19 FAR equally divided between community facility space in the form of a dormitory, and residential use (in the form of faculty housing). As the lot comprising potential development site D currently contains a qualifying building, i.e., a building with more than 50,000 sf of commercial or manufacturing floor area, pursuant to the provisions of the proposed M1-6D district the RWCDS for this site would require both a community facility certification (for the dormitory use) and a residential certification for the faculty housing. Finally, the RWCDS also includes a food store with more than 10,000 sf on projected development site 5. As the RWCDS considers application of all elements of the text amendments on specified projected and potential development sites, no conceptual analysis of the text amendments is necessary.

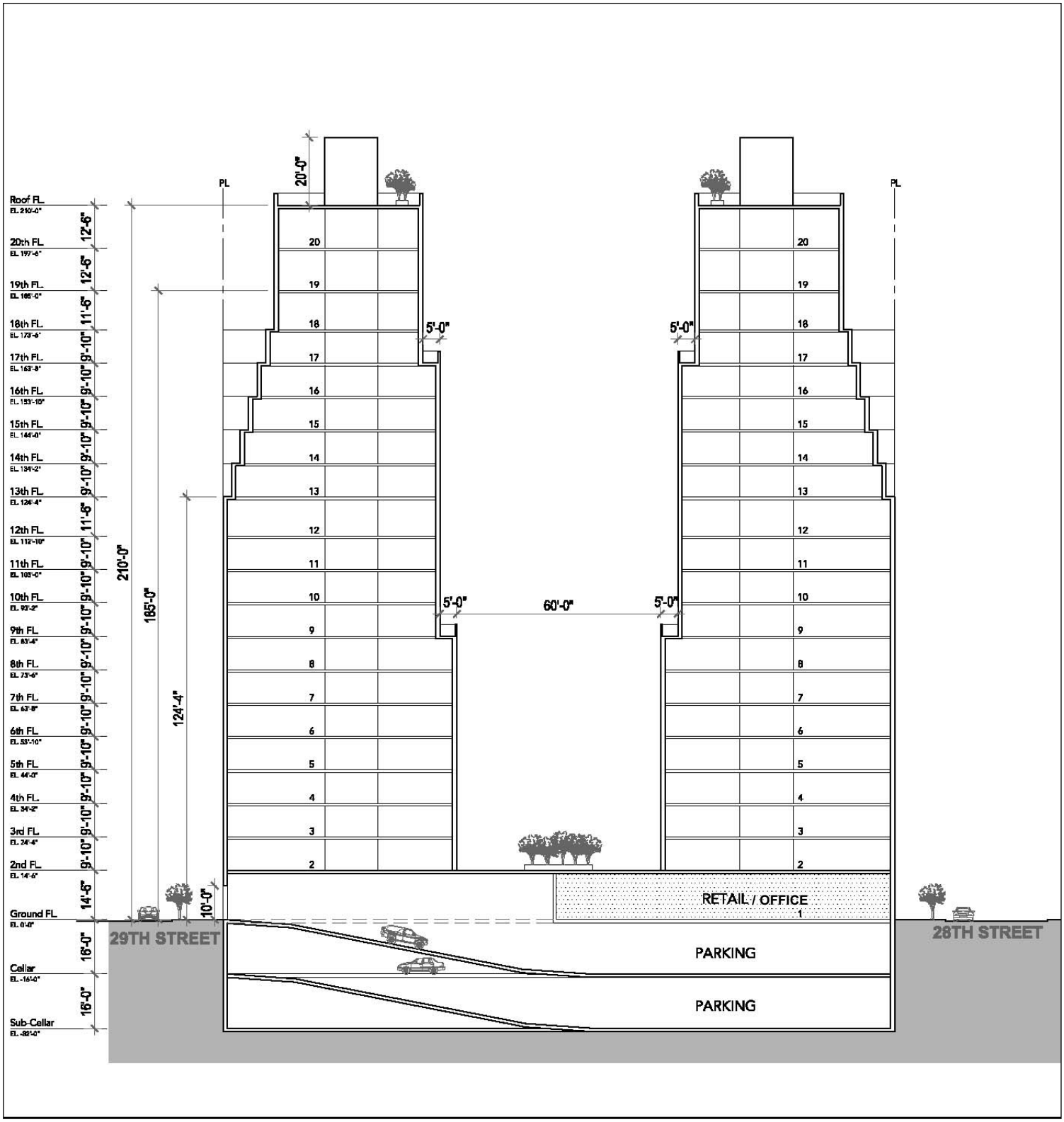
The Proposed Development Site

The Proposed Development Site located at 241-251 West 28th Street (244-250 West 29th Street) is owned by the applicant and would be redeveloped as a result of the Proposed Action. As shown in Figure A-6, the Proposed Development Site would be redeveloped with two approximately 20-story residential buildings that would have ground floor retail and office and front on both West 28th and West 29th Streets. Up to approximately 4,685 gsf of retail and 11,390 gsf of office uses are expected to be located at street level, and approximately 407 residential dwelling units would be located on the building's upper levels. As shown in the illustrative building section in Figure A-7, the proposed buildings are expected to be built to



Prepared By: Handel Architects

Illustrative Section of Proposed Development



Prepared by: Handel Architects

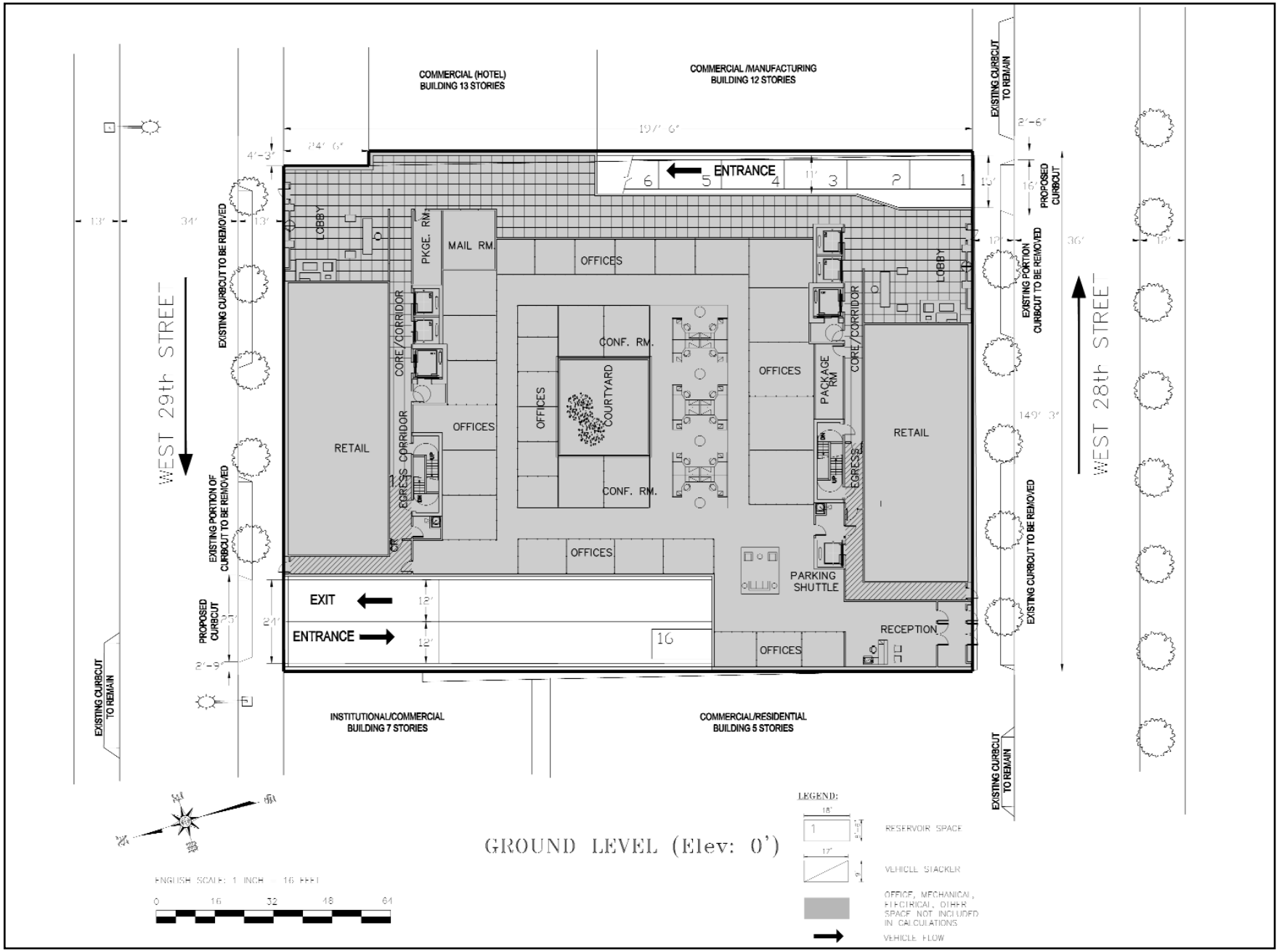
the street line and rise approximately 124 feet to the 12th story, prior to setting back at the 13th story. After the 13th story, the building would step back approximately 2'-6" at each additional floor until the 18th story when the building would rise 36 feet to the roof (total height of 210 feet).

As described above, a special permit is being sought to locate a 325-space public parking garage (including spaces for 218 monthly parkers) on two below-grade levels beneath both buildings. As shown in the proposed garage layout in Figure A-8 (a through c), the public garage would have a single lane entrance ramp via a 16-foot-wide curb cut on the north side of West 28th Street at the southeast corner of the site, and a two lane entrance/exit ramp via a 25-foot-wide curb cut on the south side of West 29th Street. A total of approximately 139 double vehicle stackers would be provided in the proposed public parking garage, with 34 stackers on the cellar level and approximately 105 stackers on the sub-cellar level. As shown in the proposed garage layout in Figure A-8, the proposed garage would provide a total of 16 reservoir spaces to handle queuing vehicles within the garage.

V. APPROVALS REQUIRED

The proposed zoning map amendment and special permit are discretionary public actions that are subject to both the Uniform Land Use Review Procedure (ULURP), and the City Environmental Quality Review (CEQR). ULURP is a process that allows public review of proposed actions at four levels: the community board, the Borough President, the City Planning Commission, and if applicable, the City Council. The procedure has mandated time limits for review at each stage to ensure a maximum review period of seven months. CEQR is a process by which agencies review discretionary actions for the purpose of identifying the effects those actions may have on the environment.

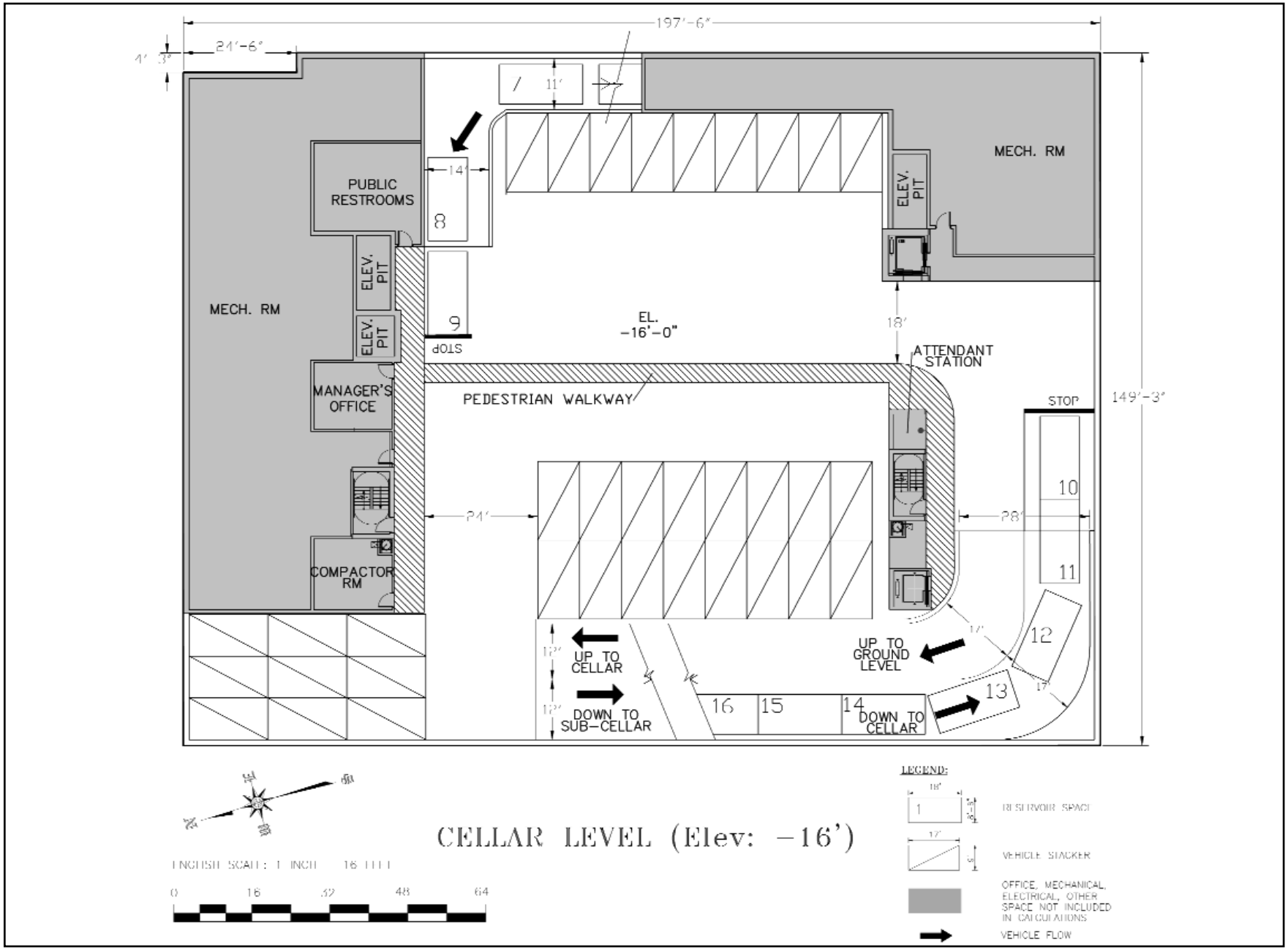
The proposed zoning text amendment is also subject to CEQR. Although not subject to ULURP, proposed zoning text amendments are subject to review by the community board, City Planning Commission, and City Council.

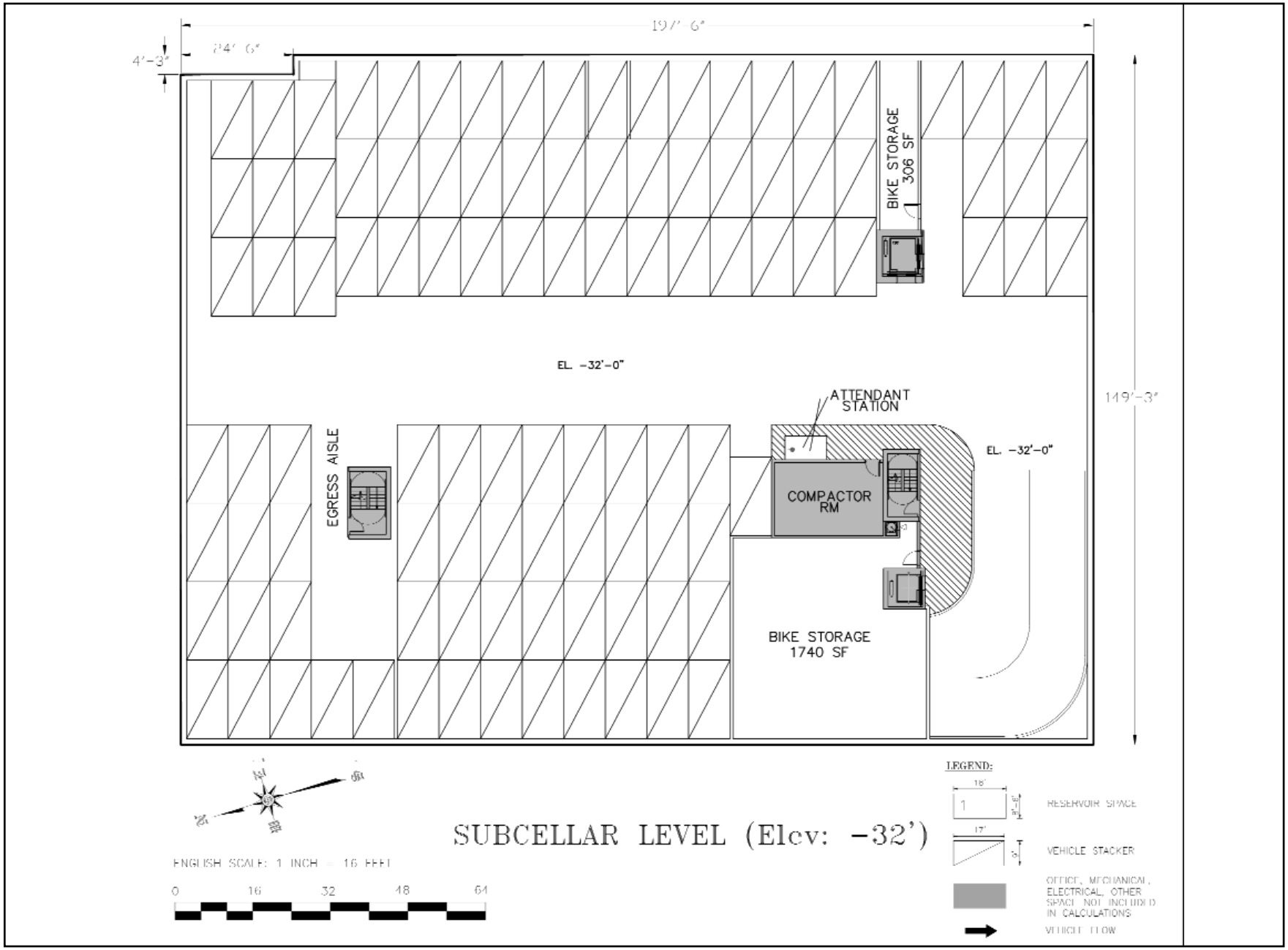


West 28th Street Rezoning EAS

Figure A-8a

Proposed Public Parking Garage Layout - Ground Level


197'-6"
24'-6"
4' 3"
11'
MECH. RM
PUBLIC RESTROOMS
14'
8
ELEV. PIT
ELEV. PIT
MECH. RM
9
STOP
EL. -16'-0"
18'
ATTENDANT STATION
MANAGER'S OFFICE
PEDESTRIAN WALKWAY
STOP
149'-3"
24'
28'
10
11
COMPACTOR RM
12
17'
UP TO GROUND LEVEL
17'
UP TO CELLAR
17'
DOWN TO SUB-CELLAR
16
15
14
DOWN TO CELLAR
13
CELLAR LEVEL (Elev: -16')
ENGLISH SCALE: 1 INCH = 16 FEET
0
16
32
48
64
LEGEND:
RESERVOIR SPACE
VEHICLE STACKER
OFFICE, MECHANICAL, ELECTRICAL, OTHER SPACE NOT INCLUDED IN CALCULATIONS
VEHICLE FLOW



West 28th Street Rezoning EAS

Figure A-8c
Proposed Public Parking Garage Layout - Sub Cellar Level

ATTACHMENT B
SUPPLEMENTAL SCREENING

I. INTRODUCTION

This Environmental Assessment Statement (EAS) has been prepared in accordance with the guidelines and methodologies presented in the 2010 *City Environmental Quality Review (CEQR) Technical Manual*. For each technical area, thresholds are defined which if met or exceeded, require that a detailed technical analysis be undertaken. Using these guidelines, preliminary analyses were conducted for all aspects of the proposed action to determine whether detailed analysis of any technical area would be appropriate. Part II of the EAS Form identifies those technical areas that warrant additional assessment. For those technical areas that warranted a "Yes" answer in Part II of the EAS form, including Land Use, Zoning, and Public Policy, Socioeconomic Conditions, Community Facilities, Open Space, Shadows, Urban Design, Hazardous Materials, Infrastructure, Transportation, Air Quality, Noise, Neighborhood Character, and Construction, supplemental screening is provided in this attachment. In addition, preliminary and/or detailed assessments are required in the areas of Land Use, Zoning, and Public Policy, Socioeconomic Conditions, Community Facilities, Open Space, Urban Design, Transportation, Hazardous Materials, Air Quality, Noise, Shadows, Infrastructure, and Construction Impacts. These analyses are provided in Attachments C through N, respectively, and are summarized in this attachment.

As detailed in Attachment A, "Project Description," this environmental assessment is for zoning map and zoning text amendments affecting portions of two City blocks in the northern Chelsea area of Manhattan Community District 5, and a special permit for a public parking garage. 249 W 28th Street Properties, LLC (a.k.a. "the applicant") is the applicant for the proposed zoning map changes, whereas the New York City Department of City Planning (NYCDCP) is the applicant for the proposed zoning text amendment. In addition to the proposed rezoning and text amendments, the applicant (249 W 28th Street Properties, LLC) is requesting a special permit for a public parking garage to be located at the Proposed Development Site pursuant to Sections 13-562 and 74-52 of the New York City Zoning Resolution. The proposed zoning map and text changes and public parking special permit collectively comprise the Proposed Action. The proposed rezoning is intended to update the zoning to reflect the current mixed-use character of the area. The rezoning area comprises the mid-block areas and is roughly bounded by West 30th Street, Seventh Avenue, West 28th Street, and Eighth Avenue, and is zoned M1-5. The proposed zoning map changes would rezone the area to an M1-6D contextual district, which aims to preserve neighborhood scale and allow residential development, including the provision of incentives and opportunities for affordable housing development.

Four of the lots included within the proposed rezoning area boundaries are owned by the applicant, 249 W 28th Street Properties, LLC (Block 778, Lots 13, 16, 18 and 66, the "Proposed Development Site"), and would be redeveloped as a result of the proposed zoning map and text changes. It is anticipated that the Proposed Development Site would be redeveloped with two new approximately 20-story residential buildings with ground floor retail and office (the "Proposed Development"), which would utilize the 3.0 FAR Inclusionary Housing bonus and therefore would be built to the maximum 12.0 FAR and contain a total of approximately 361,860 gsf of floor area.[1] Up to approximately 4,685 gsf of retail and 11,390 gsf of office uses are expected to be located at ground level and approximately 407 residential dwelling units, of which approximately 81 units (20%) would be affordable residences, would be located above the ground floor. The applicant is also applying for a special permit to allow

[1] Gross square footage of the Proposed Development excludes parking floor area.

public parking on the site within an approximately 325-space below-grade garage (including spaces for 218 monthly parkers) on two levels, to reduce the number of public parking spaces that would be lost when the existing 371 parking spaces on the Proposed Development Site are eliminated by new construction.

Several other sites within the proposed rezoning area have been identified as either projected or potential development sites that could be developed as a result of the proposed rezoning. Fourteen development sites have been identified, of which 10 are projected development sites (including the Proposed Development Site) judged most likely to be developed by 2019, the analysis year for the Proposed Action. In addition, there are 4 potential development sites, which are considered less likely to be developed in the foreseeable future. Compared to future conditions without the Proposed Action, the reasonable worst case development scenario (RWCDS) associated with the proposed rezoning anticipates that the 10 projected development sites would result in a net increase of 1,134 dwelling units (approximately 949,403 sf), of which 220 would be affordable, and a net increase of approximately 42,206 sf of retail/food store, and a decrease of approximately 15,153 sf of commercial office space, 8,596 sf of wholesale space, 189 hotel rooms, and 146 public parking spaces.

Based on 2000 Census data, Manhattan Community District 5 has an average of 1.54 persons per occupied housing unit. Based on this ratio, the approximately 1,134 net new dwelling units projected for development by the Analysis year of 2019 are estimated to generate approximately 1,746 new residents.

As discussed in Attachment A, "Project Description," the Proposed Action includes a zoning text amendment affecting bulk controls for lots in the area just outside the eastern boundary of the area proposed to be rezoned to M1-6D, along the west side of Seventh Avenue between West 28th and West 30th Streets (the existing M1-6 district within 100 feet of the west side of 7th Avenue). The proposed changes would not alter zoning regulations affecting use or increase maximum allowable FAR. As these bulk control modifications neither induce nor hinder new development, no projected or potential development sites have been identified in that area, and no further assessment is provided in this document.

LAND USE, ZONING, AND PUBLIC POLICY

A detailed assessment of land use and zoning is appropriate if a proposed action would result in a significant change in land use or would substantially affect regulations or policies governing land use. An assessment of zoning is typically performed in conjunction with a land use analysis when the action would change the zoning on the site or result in the loss of a particular use.

As the Proposed Action would rezone an area comprising approximately 236,906 sf encompassing the mid-block portions of two City blocks and also includes a zoning text amendment for an approximately 39,500 sf area that would be affected by the Seventh Avenue bulk control text amendment, a detailed assessment of the Proposed Action's effect on land use, zoning and public policy is provided in Attachment C, "Land Use, Zoning, and Public Policy." As presented in the attachment, the Proposed Action would not directly displace any existing land uses so as to adversely affect surrounding land uses, nor would it generate land uses that would be incompatible with existing and anticipated land uses, zoning, or public policy in the study area. The Proposed Action would result in substantial land use changes in the rezoning area that are expected to lead to positive changes for the surrounding area. Land uses in the rezoning area now include a considerable amount of underutilized land. The Proposed Action would allow for residential and community facility development while retaining and allowing viable light industrial and commercial uses. Food stores, including supermarkets, grocery stores, and delicatessen stores, which had been limited to 10,000 sf of

floor area per establishment, would not be limited as to size of establishment. The new residential and commercial uses that are expected to result from the Proposed Action would represent a continuation of the historically mixed-use character of the surrounding area, and would not alter land use patterns.

The zoning map and zoning text changes planned as part of the Proposed Action would largely preserve the existing character of northern Chelsea and prevent development that is out of context with the established mixed-use streetscapes. The proposed M1-6D zoning district would establish maximum street wall and building height limits for new buildings. In addition, incentives encouraging development of affordable housing will help address the rising demand for housing while simultaneously ensuring that the diversity and quality of the neighborhood remains largely unaffected.

The new zoning would limit the residential conversion of commercial and/or industrial buildings containing more than 50,000 zsf of floor area, requiring a one for one replacement of commercial and/or industrial space. It would also preclude conversion of large buildings (buildings with 50,000 zsf of more) for community facilities with sleeping accommodations, without a one-for-one replacement. In addition, existing residential uses within the rezoning area would become conforming uses. The use of a contextual zoning district would ensure that the scale and bulk of new buildings are sensitive to and consistent with existing and anticipated developments. Furthermore, the Proposed Action would also not result in land uses that conflict with public policies applicable to the study area.

Most new development is expected to occur on underutilized properties. The Proposed Action would result in an increase in residential and retail uses, and a decrease in wholesale, office, hotel, and public parking uses within the rezoning area, when compared to conditions in the future without the Proposed Action. The Proposed Action would create a framework that is both responsive to the uses present in the rezoning area and compatible with the existing zoning designations in the surrounding areas. Finally, the Proposed Action provides incentives for much needed affordable housing in the area.

In addition, the Proposed Action would include an amendment to the Zoning Resolution establishing Seventh Avenue Bulk Controls for the area just outside the eastern boundary of the area proposed to be rezoned to M1-6D rezoning. This would provide for minimum streetwalls at the street line in the existing M1-6 district within 100 feet of the west side of Seventh Avenue between West 28th and West 30th Streets, with a minimum required street wall height of 125 feet and a maximum height of 150 feet before setback, with the sky exposure plane commencing at a height of 150 feet above the street line, and the alternate front setback provisions of Section 43-44 do not apply. This will ensure that any future development along the west side of Seventh Avenue would be consistent with the existing context, adjacent to the proposed rezoning area would complement the type of development allowed pursuant to the M1-6D regulations. However, there are no changes contemplated in this zoning amendment to current underlying zoning along these block fronts that would increase FAR or otherwise induce development on these lots.

Therefore, as presented in more detail in Attachment C, the Proposed Action is not expected to adversely affect land use, zoning, or public policies.

SOCIOECONOMIC CONDITIONS

Socioeconomic impacts may occur when an action directly or indirectly changes population, housing stock, or economic activities in an area. In some cases, these changes could be substantial, but not significantly adverse. In other cases, these changes may be beneficial to some groups and adverse to others. The purpose of a socioeconomic assessment is to disclose potentially adverse changes that would be created by an action and identify whether they rise to the level of significance. A socioeconomic assessment should be conducted if a project may be reasonably expected to create

socioeconomic changes within the area affected by the action that would not be expected to occur without the action.

A socioeconomic assessment is required for the Proposed Action, as it would result in the introduction of more than 200 residential units, and the direct displacement of more than 100 employees in the rezoning area based on the *2010 CEQR Technical Manual*'s guidelines. A socioeconomic assessment is provided in Attachment D, "Socioeconomic Conditions" of this EAS. As indicated in Attachment D, the Proposed Action is not expected to result in any significant adverse impacts to socioeconomic conditions.

COMMUNITY FACILITIES

Potential direct or indirect effects of a proposed action can trigger the need for analysis of community facilities. Direct effects occur if an action or project would "physically alter a community facility, whether by displacement or other physical change." Indirect effects occur if an action or project would add population to an area, which may potentially affect service delivery. According to the 2010 *CEQR Technical Manual*, demand for community services such as schools, libraries, hospitals and day care, generally stems from the introduction of new residents to an area.

The Proposed Action would not displace any existing community facilities or services, nor would it affect the physical operations of or access to and from any police or fire stations. Therefore, the Proposed Action would not have any significant adverse direct impacts on existing community facilities or services.

As stated in the 2010 *CEQR Technical Manual*, the demand for community services generally stems from the introduction of new residents to an area. The RWCDS associated with the Proposed Action would result in the introduction of approximately 1,134 net additional dwelling units to the area (compared to No-Action conditions), with an estimated 1,746 residents. A discussion of the Proposed Action's potential effects on community facilities is provided below.

Public Education Facilities

If an action introduces fewer than 50 elementary and middle school age children, or 150 high school students, an assessment of school facilities is not required. The screening threshold is higher for high school students as high school level students can elect to attend schools other than their neighborhood high schools. Guidelines established in the 2010 *CEQR Technical Manual* were used to determine the number of school age children expected to be introduced by the Proposed Action. With 1,746 net additional dwelling units, approximately 135 elementary students and 46 middle students would be generated, for a total of 181 students, as well as 68 high school students. As such, the Proposed Action would trigger the CEQR threshold for elementary and middle school analysis, and a detailed analysis of public education facilities is provided in Attachment E, "Community Facilities." As shown in the attachment, the Proposed Action would not result in any significant adverse impacts on public elementary and intermediate schools per the criteria of the 2010 *CEQR Technical Manual*. In the future with the Proposed Action, despite having collective utilization rates of more than 105 percent in the With-Action condition, utilization rates for elementary and intermediate schools within sub-district 3 of Community School District (CSD) 2 would increase by less than 5 percent. Therefore, the Proposed Action would not result in any significant adverse impacts on public elementary or middle schools in the study area.

Libraries

According to the guidelines established in the 2010 *CEQR Technical Manual*, if a proposed action increases the number of residential units served by the local library branch by more than 5 percent, then an analysis of library services is necessary. In Manhattan, the introduction of 901 residential units would represent a 5 percent increase in dwelling units per branch. The Proposed Action would result in the net increase of approximately 1,134 additional dwelling units to the study area compared to No-Action conditions (representing an increase of approximately 6.3 percent in dwelling units per branch), which exceeds the CEQR threshold for detailed analysis. Therefore, Attachment E contains an analysis of library facilities. As shown in the attachment, the Proposed Action would not result in any significant adverse impacts on libraries in the study area.

Hospitals and Public Health Facilities

According to the *2010 CEQR Technical Manual*, a detailed assessment of service delivery is conducted only if a proposed project would affect the physical operations of, or access to and from, a hospital or public health clinic, or where a proposed project would create a sizeable new neighborhood where none existed before. The Proposed Action would result in the construction of 1,134 net additional dwelling units on ten projected development sites, compared to No-Action conditions, and would not result in any of the above effects, and therefore, further analysis is not warranted.

Public Day Care Centers

The 2010 *CEQR Technical Manual* requires a detailed analysis of day care centers when a proposed action would produce substantial numbers of subsidized, low-to moderate-income family housing units that may therefore generate a sufficient number of eligible children to affect the availability of slots at public day care centers. Typically, proposed actions that generate 20 or more eligible children under age 6 require further analysis. According to Table 6-1a of the 2010*CEQR Technical Manual*, the number of dwelling units to yield 20 or more eligible children under age 6 in Manhattan would be 170 affordable housing units. As the Proposed Action would result in a net increment of 1,134 dwelling units compared to the No-Action condition, of which approximately 220 units are assumed to be affordable, it would trigger the CEQR threshold for public day care analysis, and a detailed analysis of public day care facilities is provided in Attachment E. As presented in Attachment E, the Proposed Action would not result in a significant adverse impact to publicly funded day care centers and Head Start programs in the study area.

Fire Protection

A detailed assessment of fire protection is not necessary because the Proposed Action would not affect the physical operations of, or access to and from, a station house or create a sizeable new neighborhood where none existed before. There are four fire stations that currently serve the area within an approximate ½-mile radius from the rezoning area boundary. These include Engine 1/Ladder 24 at 142 West 31st Street (between Sixth and Seventh Avenues), Engine 26 at 220 West 37th Street (between Seventh and Eighth Avenues), Battalion 7/Engine 3/Ladder 12 at 150 West 19th Street (between Sixth and Seventh Avenues), and Engine 34/Ladder 21 at 440 West 38th Street (between Ninth and Tenth Avenues). In addition, the Fire Patrol House 1 at 240 West 30th Street, which is located within the rezoning area, formerly accommodated a private fire-fighting institution funded by the New York Board of Fire Underwriters. The public facility was one of three fire patrol houses in the City that had operated as insurance company funded fire-fighting forces, which were disbanded in 2006. The Proposed Action would not affect the physical operations of, or access to and from, any existing station house, nor would it create a sizeable new neighborhood. As such, no significant adverse impacts to fire protection services are anticipated as a result of the Proposed Action.

Police Protection

According to the 2010 *CEQR Technical Manual*, impacts on police protection occur when a proposed action physically changes an existing police station, or affects the physical operations of, or access to and from a station house, or creates a sizeable new neighborhood where none existed before. Two police stations are currently located within an approximately ½-mile radius from the rezoning area, including the 14th Precinct (Midtown South Precinct) at 357 West 35th Street between Eighth and Ninth Avenues and the 10th Precinct at 230 West 20th Street between Seventh and Eighth Avenues. In addition, the Traffic Control Division Headquarters for NYPD is located at 138 West 30th Street between Sixth and Seventh Avenues. The Proposed Action would not affect the physical operations of, or access to and from, any existing police station, nor would it create a sizeable new neighborhood. As such, no significant adverse impacts to police protection services are anticipated as a result of the Proposed Action.

OPEN SPACE

An open space assessment may be necessary if a proposed action could potentially have a direct or indirect effect on open space resources in the project area. A direct effect would "physically change, diminish, or eliminate an open space or reduce its utilization or aesthetic value." An indirect effect may occur when the population generated by a proposed action would be sufficient to noticeably diminish the ability of an area's open space to serve the existing or future population. According to the guidelines established in the *CEQR Technical Manual*, a project that would add fewer than 200 residents or 500 employees, or a similar number of other users to an area, is typically not considered to have indirect effects on open space.

Pursuant to the open space thresholds identified in the *CEQR Technical Manual*, an assessment of the Proposed Action's potential to affect open space and recreational facilities is required. The Proposed Action would result in the addition of an estimated 1,746 new residents over No-Action conditions, thereby requiring further assessment based on the *CEQR Technical Manual*'s guidelines. A detailed analysis of open space is therefore provided in Attachment F of the EAS. As the Proposed Action is expected to generate a net increase of approximately 43 daytime users, it would not exceed the 500-employee screening threshold and therefore an assessment of the effects of the new daytime population is not warranted.

The Proposed Action would not reduce the open space ratio by five percent or more in the ½-mile study area. As discussed in Attachment F, "Open Space," the combined passive open space ratio for residents and workers in the future with the Proposed Action would remain unchanged compared to No-Action conditions. The total open space ratio would decrease by approximately 3.5 percent, the active open space ratio would decrease by 4.1 percent, while the passive open space ratio for residents would decrease by approximately 3.6 percent compared to No-Action conditions.

While open space ratios would continue to be below the NYCDCP planning guidelines in the future with the Proposed Action, open space resources within the study area are not scarce, and most of the open space resources in the study area are in good to excellent condition, contain a balanced mix of active and passive uses, and are only lightly or moderately utilized. There are also significant open space resources, both existing and planned, located outside the study area boundary. Existing park areas and open space resources beyond the open space study area boundary include Section 1 of the High Line, the 6.23-acre Madison Square Park immediately across the street from the eastern rezoning area boundary, the 9.6-acre Bryant Park approximately three blocks to the northeast of the study area, portions of the 550-acre Hudson River Park as well as the 2.50-acre Chelsea Waterside Park, which are located approximately 1 to 2 blocks to the west of the study area, as well as several smaller plazas.

In addition, a number of new open space resources are planned outside the study area boundary by the analysis year of 2019, which are expected to add approximately 25.5 acres of new open space by 2019. Although these existing and planned resources are not included in the quantitative analysis, they would add considerable accessible active and passive open space for the residential population as well as some of the area's daytime users. The proximate location of all of the these open spaces just outside the defined study area, some of which are large, regional, and/or unique open spaces that serve a large geographic area, and the fact that some of these future open spaces are expected to be connected, thereby providing a linked network of open spaces, could serve to moderate the shortfall of active and passive open space resources identified in the study area.

Therefore, the Proposed Action and projected development associated with the RWCDS is not anticipated to result in a significant adverse impact on open space resources.

SHADOWS

A shadow assessment considers actions that result in new shadows long enough to reach a publicly accessible open space or historic resource (except within an hour and a half of sunrise or sunset). For actions resulting in structures less than 50 feet high, a shadow assessment is generally not necessary unless the site is adjacent to a park, historic resource, or important natural feature (if the features that make the structure significant depend on sunlight).

The Proposed Action would permit buildings in excess of 50 feet tall (as assumed in the RWCDS a maximum building height of 210 feet tall in the proposed M1-6D district). According to the *CEQR Technical Manual*, the longest shadow a structure will cast in New York City, except for periods close to dawn or dusk, is 4.3 times its height. Following CEQR guidelines, a radius of 4.3 times the maximum proposed heights (903 feet) for all projected and potential development sites was drawn. Given the presence of open spaces and sunlight-sensitive historic resources within the maximum shadow radius, in accordance with CEQR guidelines, a detailed shadows assessment was undertaken to determine whether the Proposed Action would result in any significant adverse shadows impacts. As discussed in Attachment L, "Shadows," there would be no substantial reduction in the usability of any open space or historic resources as a result of incremental shadows created by the Proposed Action. The NYC Landmarks Preservation Commission has concurred with the findings with respect to historic resources, in a letter dated April 1, 2011 (refer to sign-off letter in Appendix 1 at the end of this document). Therefore, no significant adverse shadows impacts are anticipated as a result the Proposed Action.

HISTORIC AND CULTURAL RESOURCES

Historic and cultural resources are defined as districts, buildings, structures, sites, and objects of historical, aesthetic, cultural, and archaeological importance. This includes properties that have been designated or are under consideration as New York City Landmarks or Scenic Landmarks, or are eligible for such designation; properties within New York City Historic Districts; properties listed on the State and/or National Register of Historic Places; and National Historic Landmarks. An assessment of architectural/archaeological resources is usually needed for projects that are located adjacent to historic or landmark structures, or projects that require in-ground disturbance, unless such disturbance occurs in an area that has already been excavated.

According to 2010 *CEQR Technical Manual* guidelines, impacts on historic resources are considered on those sites affected by the Proposed Action and in the area surrounding identified development sites. The historic resources study area is therefore defined as the area to be rezoned plus an

approximate 400-foot radius around the proposed rezoning area. Archaeological resources are considered only in those areas where new excavation or ground disturbance is likely and would result in new in-ground disturbance compared to No-Action conditions; these are limited to sites that may be developed in the proposed rezoning area, and include projected as well as potential development sites.

Architectural Resources

There are no designated architectural resources within or immediately adjacent to any of the identified 10 projected and 4 potential development sites. There are also no designated historic districts within 400 feet of the rezoning area. In addition, none of the RWCDS projected and potential development sites were identified as having architectural significance (refer to New York City Landmarks Preservation Commission Environmental Review letters dated 08/04/2008 and 02/18/2009, in Appendix 1 at the end of this document).

As shown in Table B-1, there are three structures located within the proposed rezoning area that are eligible for New York City Landmarks Preservation Commission (NYCLPC) designation and listing on the State and National Registers of Historic Places (S/NR). In addition, within an approximate 400-foot radius, there is one NYCLPC designated and S/NR listed historic structure, as well as eleven additional structures that are eligible for NYCLPC designation and/or listing on the S/NR. Table B-1 lists all of the designated and eligible resources in the study area, and each of those resources is illustrated in Figure B-1 and described briefly below.[2]

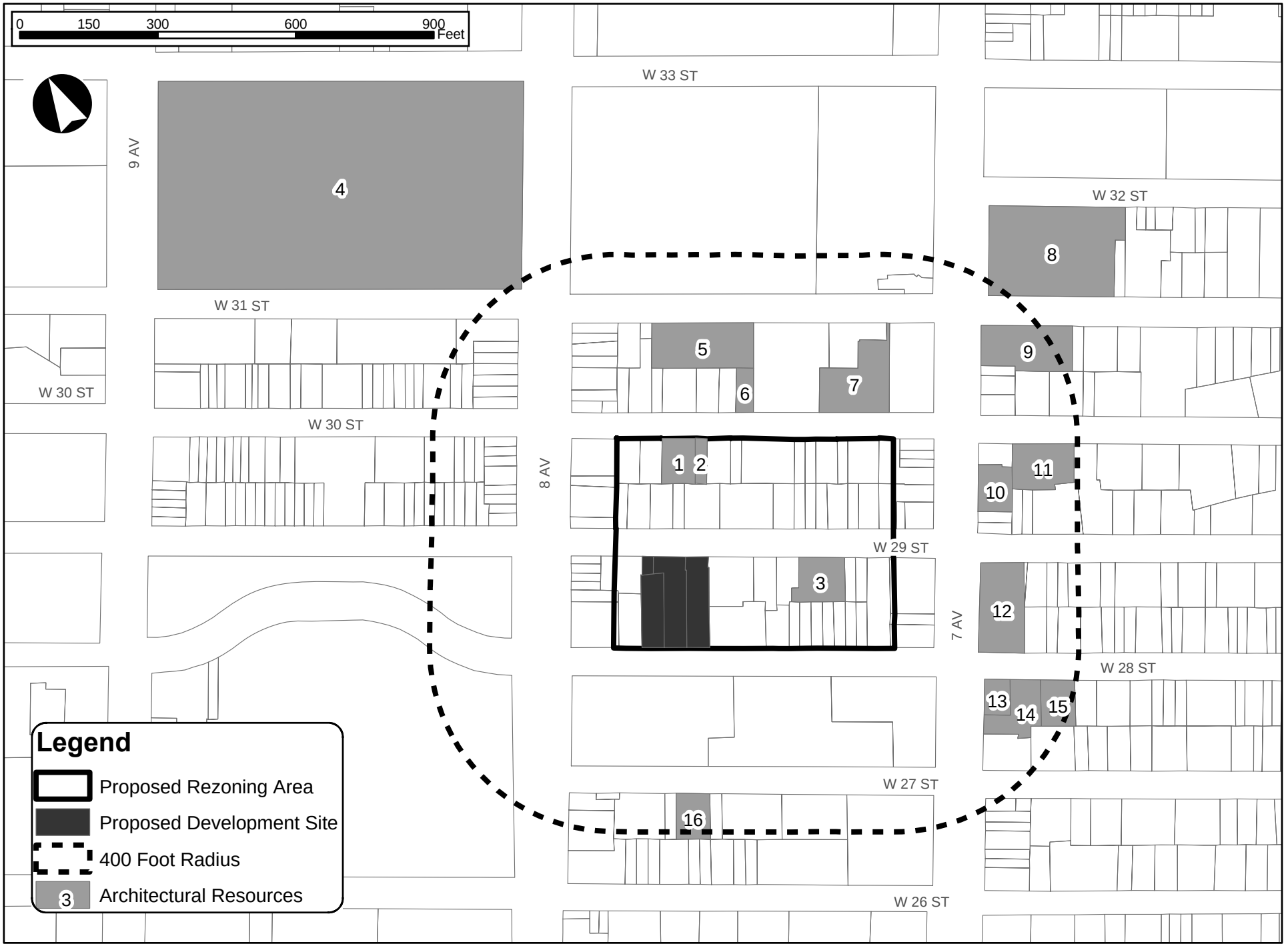
TABLE B-1
Designated and Eligible Architectural Resources Within the Study Area

Map No.	Name or Building Type	Address	NYCL	NYCL-Eligible	S/NR	S/NR-Eligible
Within the Proposed Rezoning Area						
1	Fur Craft Building	242-246 West 30th Street		X		X
2	Fire Patrol House	240 West 30th Street		X		X
3	Loft Building	214-222 West 29th Street		X		X
Within the 400-foot Study Area						
4	US General Post Office (Farley Building)	Block bounded by Eighth and Ninth Avenues, West 31st and West 32nd Streets	X		X	
5	Penn Station Service Building	236-248 West 31st Street		X		X
6	Fairmont Building	239-241 West 30th Street				X
7	St. John the Baptist RC Church and Convent	207-215 West 30th Street		X		X
8	Equitable Life Assurance	383-399 Seventh Avenue		X		X
9	Governor Clinton Hotel	371-377 Seventh Avenue		X		X
10	Loft Building	345-353 Seventh Avenue				X
11	Loft Building	144-154 West 30th Street				X
12	Seventh Avenue Building	323-335 Seventh Avenue				X
13	Kheel Tower	311-315 Seventh Avenue				X
14	Fur Towers	156-160 West 28th Street				X
15	Industrial Building	150-154 West 28th Street				X
16	Fur Art Building	236-240 West 27th Street				X

Notes:
NYCL - New York City Landmark
NYCL-Eligible – Appears eligible for NYCL designation
S/NR - Listed on the State and National Registers of Historic Places
S/NR-Eligible – Appears eligible for S/NR listing

Source: NYCLPC and No. 7 Subway Extension-Hudson Yards Rezoning and Development Program FGEIS

[2] Portions of the text describing the historic structures within the rezoning area and 400-foot study area is taken from the No. 7 Subway Extension-Hudson Yards Rezoning and Development Program FGEIS.


0
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8 AV
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W 29 ST
3
12
7 AV
W 28 ST
13
14
15
W 27 ST
16
W 26 ST
Legend
Proposed Rezoning Area
Proposed Development Site
400 Foot Radius
3
Architectural Resources

Rezoning Area

The three structures within the rezoning area which are eligible for NYCL designation and listing on the S/NR include the Fur Craft Building at 242-246 West 30th Street (Block 779, Lot 66: Map #1), the Fire Patrol House at 240 West 30th Street (Block 779, Lot 65; Map #2), and the loft building at 214-222 West 29th Street (Block 778, Lot 48; Map #3). Built in the mid 1920s for the fur trade industry, the Fur Craft Building and the building at 214-222 West 29th Street are industrial lofts containing 16-and 14-stories, respectively, that feature a series of setbacks with large ground floor showroom and store front space. Henry J. Oser designed both structures. The Fur Craft Building has Classical design elements and the loft at 214-222 West 29th Street has Gothic detailing. Built by the Board of Fire Underwriters in the mid-1890s as Fire Patrol #3, the Fire Patrol House at 240 West 30th Street is a 4-story, 3 bay masonry firehouse designed in the Flemish Revival style by D'Oench and Simon. The structure had been used as a fire patrol station for more than 100 years and is now designated Fire Patrol #1.

Study Area

There is only one structure, the U.S. General Post Office (Map #4), within a 400-foot radius of the rezoning area that is a designated historic resource. As illustrated in Figure B-1, only a very small corner of this resource falls within the 400-foot radius. The U.S. General Post Office, now the James A. Farley Building, is a designated NYCL and is listed on the S/NR. Located two blocks to the northwest of the rezoning area, the building occupies a large block generally bounded by West 33rd Street, Eighth Avenue, West 31st Street and Ninth Avenue.

Constructed between 1910 and 1913, and enlarged in 1934, the building was constructed over the Penn Station Rail Yard. McKim, Mead & White designed this monumental granite building as a companion to the former Penn Station (completed in 1910 and demolished in 1963–1964), which was located directly across Eighth Avenue. The 4-story, Classical Roman building is freestanding and the building's form is that of a monumental Corinthian temple with a peristyle set on a high podium. Each façade is articulated with a central colonnade framed by heavy corner pavilions. An entablature that encircles the building below an attic story further unifies the design. Once corresponding to the main façade of the old Penn Station across Eighth Avenue, the Eighth Avenue façade (the primary façade) is a portico reached by a wide flight of stairs. The portico consists of twenty 53-foot-tall Corinthian columns supporting an entablature with a frieze. An inscription in the frieze reads, "Neither snow nor rain nor heat nor gloom of night stays these couriers from the swift completion of their appointed rounds." The corner pavilions have half-domed niches on the piano nobile level and inscriptions on the attic story. The 1934 expansion extended the building to Ninth Avenue. On the other three façades, the colonnades are formed by alternating Corinthian pilasters and window bays, and the corner pavilions have arched windows that mimic the niches on the Eighth Avenue façade. On Ninth Avenue, three large attached arches mark the center of the façade. These arches have elaborately molded archivolts, and the openings are filled with metal grills. Truck entrances are located in two of the openings. Loading docks are located along the West 31st Street frontage off Ninth Avenue.

Also within the 400-foot study area are a total of 12 additional structures that are eligible for NYCLPC designation and/or listing on the S/NR. Six of these buildings are industrial lofts built for the fur industry and are eligible for listing on the S/NR, including the Fur Art Building at 236-240 West 27th Street (Map #16); Industrial Building at 150-154 West 28th Street (Map #15); Fur Towers at 156-160 West 28th Street (Map #14); the Seventh Avenue Building at 323-335 Seventh Avenue (Map #12); 144-154 West 30th Street (Map #11); and 345-353 Seventh Avenue (Map #10). Built in the 1920s, these lofts contain 14-to 23-stories with a series of setbacks and large showrooms and on the ground floors. The lofts feature a range of styles including Art Deco, Gothic, Romanesque, and Renaissance Revival.

There are four structures which are eligible for NYCL designation and listing on the S/NR, including the Penn Station Service Building at 236-248 West 31st Street (Map #5), St. John the Baptist RC Church and Convent at 207-215 West 30th Street (Map #7), the Equitable Life Assurance Company Building at 383-399 Seventh Avenue (Map #8), and the Governor Clinton Hotel at 371-377 Seventh Avenue (Map #9). Built in the early 1900s, just prior to the completion of the old Penn Station, the Penn Station Service building is a 5-story, Classical structure that supplied electricity to the engines going in and out of the station and compressed air for braking and signaling mechanisms. It also generated heat and light for the station. Napoleon LeBrun designed the St. John the Baptist RC Church and Convent, which was built in the late 1800s. The sandstone church is Gothic in style with a nave that is marked by a central tower with a Gothic-arch porch. The convent is a 4-story brick and bluestone building with Gothic details. Designed in a vaguely Renaissance Revival style, the Equitable Life Assurance Company Building was built in the early 1920s. This solid, massive 26-story structure originally housed the company's headquarters, relocated from their property at 120 Broadway in the Financial District. The former Governor Clinton Hotel is a 25-story, brick-and-stone building with hybrid Italianate and Romanesque details that was designed by Murgatroyd and Ogden in association with George B. Post.

The remaining two structures, the Fairmont Building at 239-241 West 30th Street (Map #6) and Kheel Tower at 311-315 Seventh Avenue (Map #13), are eligible for listing on the S/NR. Erected in the early 1920s by J.M. Heatherton as a memorial to his father, who founded the Plumber's Trade Journal, the Fairmont Building is a 6-story Classical Revival building. The 21-story Kheel Tower is an office and loft building constructed in 1925–1926. William I. Hohauser designed the brick-and-stone building in a stylized Gothic manner.

Assessment

The zoning changes would encourage new development that would be compatible with the existing scale of northern Chelsea. Parking lots, garages, and low-rise buildings are expected to be replaced by larger modern buildings, which would change the contexts of their immediate surroundings. It is expected that the Proposed Action would introduce an additional 1,134 residential units and a net increase of approximately 42,206 sf of retail/food store, and a reduction of approximately 8,596 sf of wholesale, 15,153 sf of commercial office, 189 hotel rooms, and 146 public parking spaces on 10 projected development sites. In addition, it is possible that four potential development sites could be redeveloped.

The potential effect of the Proposed Action on identified architectural resources within the rezoning area is discussed below and summarized in Table B-2. There are no designated historic resources within the rezoning area. The only designated historic resource within the 400-foot study area is the U.S. General Post Office, which is located two blocks to the northwest of the rezoning area. The Proposed Action and subsequent developments are not expected to have any direct physical impacts on any existing architectural resources, as they would not result in any physical destruction, demolition, damage or alteration to any historic property. The 13 structures located outside the rezoning area that are either designated or eligible resources (including the US General Post Office), are also not expected to be directly affected by the Proposed Action, as they are not adjacent to or near any projected or potential development sites.

The projected and potential developments to be constructed subsequent to the Proposed Action are not expected to have significant adverse indirect impacts on existing historic resources in the area. As noted above, the Proposed Action would mandate contextual zoning. The use of contextual zoning districts would ensure that the scale and bulk of new buildings is sensitive to and consistent with existing developments (refer to the Attachment G, "Urban Design and Visual Resources" for details). There is no unifying visual character of the surrounding area. Low-rise, non-descript warehouses,

garages, and taller mid-to high-rise industrial lofts and commercial buildings define much of the area. The southern portion of the study area is characterized by FIT and residential uses dominant the area to the west. The new residential and commercial uses that are expected to result from the Proposed Action would represent a continuation of the historically mixed-use character of the surrounding area, and would not alter land use patterns. Most of the designated and eligible historic architectural structures are located in an area surrounded by mid-to high-rise buildings.

TABLE B-2
Summary of Potential Effect of the Proposed Action on Identified Architectural Resources in the Rezoning Area

Property Name	Direct Effect	Indirect Effect	Construction Impact	Shadows	Comments
LPC Eligible or S/NR Eligible Architectural Resources within the Rezoning Area					
Fur Craft Building	No.	No.	Yes.	No.	Projected development site 7 and potential development site B are adjacent to this structure. Should this building become designated and/or listed, any construction adjacent to it would be subject to the procedures of Building Code section 27-166 and PPN #10/88.
Fire Patrol House	No.	No.	No.	No.	This resource is not immediately adjacent to any projected or potential development sites.
Loft at 214-222 W. 29th St.	No.	No.	Yes.	No.	Projected development sites 1 and 3 and potential development site A are adjacent to this structure. Should this building become designated and/or listed, any construction adjacent to it would be subject to the procedures of Building Code section 27-166 and PPN #10/88.

The developments resulting from the Proposed Action would not alter the setting or visual context of any historic resources in the area, nor would they eliminate or screen publicly accessible views of any resources. Moreover, no incompatible visual, audible or atmospheric elements would be introduced by the Proposed Action to any historic resource's setting. Therefore, the Proposed Action is not expected to result in any significant adverse impacts on historic architectural resources.

Should the Fur Craft Building, and the loft building at 214-222 West 29th Street (which are adjacent to projected development sites 1, 3, and/or 7, and/or potential developments A or B) become designated/listed as historic resources, they would also be subject to the construction protection procedures. Building Code section 27-166 (C26-112.4) serves to protect historic structures by requiring that all lots, buildings, and service facilities adjacent to foundation and earthwork areas be protected and supported in accordance with the requirements of Building Construction Subchapter 7 (Article) and Building Code Subchapters 11 and 19 (Article). In addition, the New York City Department of Buildings' Technical Policy and Procedure Notice (TPPN) #10/88, supplements these procedures by requiring a monitoring program to reduce the likelihood of construction damages to adjacent historic structures and to detect at an early stage the beginnings of damage so that construction procedures can be changed. Adjacent historic resources, as defined in the procedure notice, only include designated NYCLs, properties within NYCL historic districts, and listed S/NR properties that are within 90 feet of a lot under development or alteration. They do not include S/NR-eligible, NYCL-eligible, potential, or unidentified architectural resources, but if some of those resource types were to be designated as NYCLs, calendared for LPC designation, or listed on the S/NR, they would be afforded protection through the implementation of construction protection plans and monitoring procedures, in accordance with the guidelines set forth in TPPN #10/88, which would be required by the NYC Department of Buildings for adjacent construction. Therefore, construction period impacts on any designated historic resources would be minimized, and the historic structures would be protected, by ensuring that adjacent development projected as a result of the Proposed Action adheres to all applicable construction guidelines and follows the requirements laid out in TPPN #10/88.

Archaeological Resources

The New York City Landmarks Preservation Commission (NYCLPC) has reviewed all 13 development sites, and, as indicated in the letters dated 08/04/2008 and 02/18/2009 (see Appendix 1), has determined that none of the lots comprising those sites have any archaeological concerns. Therefore, the Proposed Action is not expected to result in any significant adverse impacts to archaeological resources, and a detailed analysis is not warranted.

URBAN DESIGN AND VISUAL RESOURCES

A preliminary analysis of urban design and visual resources is appropriate when there is the potential for a pedestrian to observe, from the street level, a physical alteration beyond that allowed by existing zoning, including the following: 1) projects that permit the modification of yard, height, and setback requirements; and 2) projects that result in an increase in built floor area beyond what would be allowed 'as-of-right' or in the future without the proposed action. CEQR stipulates a detailed analysis for projects that would result in substantial alterations to the streetscape of the neighborhood by noticeably changing the scale of buildings. As the Proposed Action would increase permitted density within the rezoning area, a detailed analysis has been conducted and can be found in Attachment G, "Urban Design and Visual Resources".

As discussed in that attachment, the Proposed Action would facilitate new developments that would complement the existing buildings in the rezoning area, and would reinforce the urban design character of northern Chelsea. The Proposed Action would not change or adversely affect any of the urban design components defined in the 2010 *CEQR Technical Manual*. The Proposed Action would not result in changes in block form, the demapping of streets or the mapping of new streets, nor would it affect the street hierarchy. The proposed zoning change would limit building heights to 210 feet, and would not produce buildings that would be out of scale with their surroundings or which would affect any significant visual resources in the area.

The proposed contextual M1-6D zone would create the opportunity for new housing development on underutilized land, as well as enable the residential conversion of underutilized loft buildings. It also would ensure that new development would be of an appropriate scale that more closely conforms to the built context. Therefore, the Proposed Action would not result in any significant adverse urban design impacts. Moreover, the urban design characteristics of the neighborhood would be enhanced by reinforcing the neighborhood's uniform street walls and traditional streetscape and establishing a distinctive urban fabric with a higher density contextual district.

New buildings that could be developed under the RWCDS for the Proposed Action would be of heights and bulk consistent with those urban design features of the area and built on existing blocks and lots. This would contribute to a well-defined visual context, with continuous, multi-story streetwalls, with setbacks above a maximum street wall height to allow light and air. These new buildings would not block any significant view corridors and views of visual resources or limit access to any visual resources in the study area, while the proposed height limits would preserve views of the taller visual resources in the area.

In addition, the Proposed Action would contain an amendment to the Zoning Resolution establishing Seventh Avenue bulk controls for the area just outside the eastern boundary of the area proposed to be rezoned to M1-6D, in the existing M1-6 district within 100 feet of the west side of Seventh Avenue between West 28th and West 30th Streets. The proposed Seventh Avenue Bulk Controls text amendment would ensure that any future development along the west side of Seventh Avenue would

be consistent with the existing contexts. As these bulk control modifications neither induce nor hinder new development, no projected or potential development sites have been identified in that area.

Visual Resources

According to the 2010 *CEQR Technical Manual*, conditions that merit consideration for further analysis of visual resources include: (1) when the project partially or totally blocks a view corridor or a natural or built visual resource and that re-source is rare in the area or considered a defining feature of the neighborhood; or (2) when the project changes urban design features so that the context of a natural or built visual resource is altered (for example, if the project alters the street grid so that the approach to the resource changes; if the project changes the scale of surrounding buildings so that the context changes; if the project removes lawns or other open areas that serve as a setting for the resource). The Proposed Action does not meet either of these conditions, and therefore does not warrant an assessment of visual resources.

There are no visual resources located within the proposed rezoning area. Within a 400-foot radius, visual resources include the Farley Complex, which is visible along Eighth Avenue, and St. John the Baptist Roman Catholic Church, which occupies a through block site with frontage on the south side of West 31st Street and the north side of West 30th Street between Seventh and Eighth Avenues. As the Proposed Action would not alter existing block shapes, view corridors within the rezoning area would be preserved.

HAZARDOUS MATERIALS

A hazardous material is any substance that poses a threat to human health or the environment. Substances that can be of concern include, but are not limited to, heavy metals, volatile and semivolatile organic compounds, methane, polychlorinated biphenyls and hazardous wastes (defined as substances that are chemically reactive, ignitable, corrosive or toxic). According to the *CEQR Technical Manual*, the potential for significant impacts from hazardous materials can occur when: a) hazardous materials exist on a site and b) an action would increase pathways to their exposure; or c) an action would introduce new activities or processes using hazardous materials.

The Proposed Action would result in new residential development and conversions within existing structures in areas currently zoned for manufacturing. As such, an assessment of potential hazardous materials impacts was performed for each projected and potential development sites, and is presented in Attachment I, "Hazardous Materials." The assessment was undertaken to determine whether additional investigations are necessary and whether remediation or an (E) designation should be required at privately held projected or potential development sites under the Proposed Action to avoid the potential for hazardous materials impacts. For the Proposed Development Site (Block 778, Lots 13, 16, 18 and 66), which is owned by the applicant, ATC Associated Inc. prepared a Phase I Environmental Site Assessment for the property.

As discussed in Attachment I, the analysis has identified that all of the 10 projected and 4 potential sites, encompassing 27 tax lots, have past or present use, or adjacent uses, suggesting that they may contain hazardous materials contamination. To ensure that the Proposed Action would not result in significant adverse hazardous materials impacts, (E) designations would be mapped on 13 of the 14 development sites as part of the Proposed Action. The (E) designation requirements related to hazardous materials would apply to the development sites listed in Table B-3. An (E) designated site is an area designated on a zoning map within which no change of use or development requiring a New York City Department of Buildings permit may be issued without approval of the Mayor's Office of Environmental Remediation (OER). These sites require the OER's review to ensure protection of

human health and the environment from any known or suspected hazardous materials associated with the site. As described in Attachment A, "Project Description," the (E) designation ensures that the fee owner conduct a testing and sampling protocol and remediation, where appropriate, to the satisfaction of the OER before the issuance of a permit by the Department of Buildings. The environmental requirements for the (E) designation also include mandatory construction-related health and safety plan, which must also be approved by the OER.

TABLE B-3
Development Sites with (E) Designation for Hazardous Materials

Projected Development Sites

Site	Block: Lot	(E) Designation	Site	Block: Lot	(E) Designation
1	778: 29, 30, 31	Yes	6	779: 31	Yes
2	778: 55	Yes	7	779: 69	Yes
3	778: 25, 27	Yes	8	778: 46	Yes
4	779: 7, 8	Yes	9	779: 52	Yes
5	779: 25, 26, 27, 28,53, 55, 56	Yes			

Potential Development Sites

Site	Block: Lot	(E) Designation
A	778: 47	Yes
B	779: 12	Yes
C	779: 62	Yes
D	778: 34	Yes

The applicant is the owner of the Proposed Development Site (Block 778, Lots 13, 16, 18, and 66). Due to the potential presence of hazardous materials at the Proposed Development Site as a result of past and present land uses at the site and on surrounding sites, a restrictive declaration was recommended by DEP. The declaration requires the preparation of a hazardous materials sampling protocol, including health and safety plan, for DEP's review and approval. The restrictive declaration is binding upon the property's successors and assigns. The declaration serves as a mechanism to assure the potential for hazardous material contamination that may exist in the sub-surface soils and groundwater on the Proposed Development Site would be characterized prior to any site disturbance (i.e., site grading, excavation, demolition, or building construction). The restrictive declaration was executed on March 2, 2011, submitted for recording on March 7, 2011, and recorded on March 14, 2011. Pursuant to a letter from DEP dated April 13, 2011 (refer to Appendix 4), DEP is in receipt of a signed copy of a DEP-approved restrictive declaration with proof of recording for the site.

With the measures outlined above, no significant adverse impacts related to hazardous materials would be expected to occur as a result of the Proposed Development or the identified projected development that would be facilitated by the Proposed Action.

WATER AND SEWER INFRASTRUCTURE

For assessment purposes, the City's "infrastructure" comprises the physical systems supporting its population, including water supply, wastewater treatment and storm water management. Other infrastructure components are addressed separately per *CEQR Technical Manual* guidelines. Given the size of New York City's water supply system and the City's commitment to maintaining adequate water supply and pressures, few actions have the potential to cause significant impacts on this system. Therefore only very large developments or actions having exceptionally large water demands (e.g., more than 1 million gallons per day) would warrant a detailed water supply assessment. For wastewater and stormwater conveyance and treatment, the *CEQR Technical Manual* indicates that a preliminary assessment would be needed if a project is located in a combined sewer area and would

exceed the following incremental development of residential units or commercial space above the predicted No-Action scenario: (a) 1,000 residential units or 250,000 sq. ft. of commercial space or more in Manhattan; or, (b) 400 residential units or 150,000 sq. ft. of commercial space or more in the Bronx, Brooklyn, Staten Island or Queens.

In the future with the Proposed Action, it is anticipated that a total of approximately 1,153 dwelling units, 174 hotel rooms, and approximately 72,119 sf of local retail/food store and office space would be developed. Compared to future conditions without the Proposed Action, the RWCDS associated with the proposed rezoning anticipates that the 10 projected development sites would result in a net increase of 1,134 dwelling units (approximately 949,403 sf), of which 220 units would be affordable, and 42,206 sf of retail/food store floor area, as well as a net decrease of 8,596 sf of wholesale, 189 hotel rooms, and 15,153 sf of office space. The proposed rezoning area is located within a combined sewer area of Manhattan. As the Proposed Action would result in a net increase of more than 1,000 residential units compared to No-Action conditions, a preliminary assessment of infrastructure is warranted and is provided in Attachment M.

As discussed in Attachment M, "Water and Sewer Infrastructure," the Proposed Action is not anticipated to result in any significant adverse impacts on the City's water supply or wastewater and stormwater conveyance and treatment systems.

TRANSPORTATION

Traffic and Parking

The objective of the transportation analysis is to determine whether a proposed action may have a potential significant impact on traffic operations and mobility, public transportation facilities and services, pedestrian elements and flow, safety of all roadway users (pedestrians, bicyclists, and vehicles), on-and off-street parking or goods movement.

The *CEQR Technical Manual* identifies minimum development densities that have the potential to result in significant adverse impacts to traffic conditions and therefore require a detailed traffic analysis. As shown in Table 16-1 of the 2010 *CEQR Technical Manual*, actions with a single or multiple land uses which may result in fewer than 50 peak hour vehicle trips are generally unlikely to cause significant adverse impacts. For residential development in zone 1 (which includes Manhattan south of 110th Street) the development threshold requiring trip generation analysis to determine the volume of vehicular trips during the peak hours is 240 dwelling units, which the Proposed Action would exceed.

Attachment H, "Transportation" provides a preliminary trip generation and screening analysis for the Proposed Action. The Proposed Action is expected to result in a net increase of 43 vehicle trips in the weekday AM peak hour, 51 vehicle trips in the weekday midday peak hour, and 53 vehicle trips in the weekday PM peak hour over the No-Action condition. As the net number of vehicle trips generated/diverted by the Proposed Action exceeds the 50 peak hour vehicle trip CEQR threshold for further analysis in the midday and PM peak hours, a Level 2 screening assessment is provided in Attachment H for these two peak periods. As shown in Attachment H, the Proposed Action is not expected to generate a net of 50 or more vehicles through one or more intersections in any peak hour. As no intersection would process a net increment of 50 or more project-generated peak hour vehicle trips, significant adverse traffic impacts would be very unlikely and detailed analysis is not warranted and is not provided. Per the *2010 CEQR Technical Manual*, if a detailed traffic analysis is not warranted, then a detailed parking analysis is also not warranted.

Transit

As also discussed in Attachment H, the Proposed Action would result in a net increase of more than 200 subway transit trips compared to No-Action conditions. Peak hour subway trips would increase by a net total of 416, 294, and 474 during the weekday AM, midday, and PM periods, and would therefore exceed the CEQR threshold. However, as presented in Attachment H, project-generated subway trips would be distributed among a total of four subway stations in the vicinity of the rezoning area. Based on the distribution shown in Attachment H, no subway station serving the rezoning area is expected to experience more than 166 new subway trips in either the AM or PM peak hours with implementation of the Proposed Action, which is below the *CEQR Technical Manual* 200-trip threshold for a detailed transit analysis.

The Proposed Action would also result in an additional 59, 113, and 97 bus trips in the weekday AM, midday, and PM periods, respectively, compared to the No-Action condition, which would not exceed the *CEQR Technical Manual* threshold for analysis. As the Proposed Action would generate fewer than 200 new bus trips in any peak hour, and fewer than 200 new peak hour subway trips at any subway station serving the rezoning area, significant adverse impacts from project-generated transit demand are unlikely to occur based on *CEQR Technical Manual* criteria. Detailed quantitative analyses of subway and bus transit conditions are therefore not warranted.

Pedestrians

Based on the travel demand forecast provided in Attachment H, peak hour walk-only trips would increase by a total of 439 trips in the AM peak hour, 1,312 in the midday, and 930in the PM peak hour, compared to No-Action conditions. Total pedestrian trips, including walk trips to area subway stations and bus stops, would increase by a total of 914 in the AM peak hour, 1,719 trips during the midday, and 1,501 in the PM period (refer to Table H-11 in Attachment H).

As previously discussed, the RWCDS for the Proposed Action consists of 10 projected development sites that would have entrances located on several block fronts including along the north side of West 28th Street, both the north and south sides of West 29th Street and the south side of West 30th Street. The Proposed Development Site, as well as projected development site 5, would also have entrances on more than one block face. As such, pedestrian trips generated by the Proposed Action would not all be concentrated along one particular sidewalk. Rather, pedestrians en route to and from these sites would be dispersed among four different sidewalks.

As per the guidelines of the *2010 CEQR Technical Manual*, as the total pedestrian trips resulting from the RWCDS would exceed 200 in the weekday AM, midday, and PM peak hours, a preliminary assignment of those pedestrian trips was prepared (refer to Figure H-3 in Attachment H), which showed that a number of sidewalks and street corners would process 200 or more project-generated pedestrian trips. Therefore, a detailed analysis for sidewalk and street corner locations that are projected to accommodate more than 200 additional trips in any given peak hour is provided in Attachment H. No crosswalks would process 200 or more project-generated trips and therefore detailed crosswalk analysis is not warranted. As discussed in Attachment H, project-generated demand is not expected to result in significant adverse pedestrian impacts in any peak hour on pedestrian facilities serving the rezoning area.

The proposed garage would provide sufficient reservoir spaces to handle queuing vehicles within the garage, which would further limit obstruction of the adjacent sidewalks. The exit of the proposed garage would be designed to minimize potential conflicts between departing vehicles and pedestrians. Measures to enhance pedestrian safety would include installation of a flashing light and ringing bell to both visually and audibly alert pedestrians to the presence of an exiting vehicle.

AIR QUALITY

Mobile Sources

Localized increases in CO levels may result from increased vehicular traffic volumes and changed traffic patterns in the study area as a consequence of the Proposed Action. According to the 2010 *CEQR Technical Manual* screening threshold criteria for this area of the City, if 170 or more project-generated vehicles pass through a signalized intersection in any given peak period, there is a potential for mobile air quality impacts and a detailed analysis is required.

As described in greater detail in Attachment H, "Transportation," the trip generation analysis conducted for the Proposed Action indicates that the number of project-generated vehicles would be far below 2010 *CEQR* screening threshold values during both the AM and PM peak periods at any affected intersection. Therefore, no detailed air quality analysis is required and no significant mobile source air quality impacts are expected as a result of the Proposed Action.

Parking Garage Analysis

A public parking garage, which would be totally enclosed and mechanically ventilated and would accommodate up to 325 spaces (including 218 spaces for monthly parkers), would be constructed at the Proposed Development Site at 241-251 West 28th Street (244-250 West 29th Street).The potential impacts from a single exhaust vent of the proposed garage have been assessed in Attachment J, "Air Quality" for conservative analysis purposes. The analysis was based on the maximum projected parking demand accumulation, with the maximum number of vehicles in and out. As shown in Attachment J, the maximum total estimated 8-hour CO concentrations are all below the 8-hour CO NAAQS of 9.0 ppm. The result of this analysis is that emissions from the proposed garage would not cause significant air quality impacts.

Stationary Sources

Actions can result in stationary source air quality impacts when they create new stationary sources of pollutants that can affect surrounding uses (such as emission stacks from industrial plants, or exhaust from boiler stack(s) used for heating/hot water, ventilation, or air conditioning systems of a building); or when they locate new sensitive uses (schools, hospitals, residences) near such stationary sources.

A stationary source analysis is required for the Proposed Action, as it would (a) introduce residential uses to an area currently zoned for light industrial uses, and (b) induce new development which has the potential for stationary source air quality impacts related to emissions from heating and hot water systems (boilers). A stationary source air quality assessment is provided in Attachment J, "Air Quality" of this EAS. As indicated in Attachment J, the Proposed Action is not anticipated to result in any significant adverse stationary source air quality impacts.

Analysis of Heating System Emissions

Emissions from the HVAC systems of the projected and potential developments may affect air quality levels at nearby existing land uses as well as the other proposed developments. The impact of these emissions would be a function of fuel type, stack height, building size (gross floor area), and location of each emission source relative to a nearby sensitive land use.

To preclude the potential for significant adverse air quality impacts associated with emissions from HVAC systems of the projected and potential developments, the "E" designations shown in Table B-4 would be required on most of the projected and potential development sites. These "E" designations

TABLE B-4
(E) Designations for Air Quality - Minimum Stack Setback Requirements for Select Projected or Potential Development Sites

Site #	Block	Lot(s)	Restrictions
Proposed Development Site			
Building A	778	13,16,18,66	Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 41 feet for fuel oil No.4/2 from the building line facing W. 29th Street or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant adverse air quality impacts.
Building B	778	13,16,18,66	Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 46 feet for fuel oil No.4/2 from the building line facing W. 28th Street or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant adverse air quality impacts.
Projected Development Sites			
1	778	29, 30, 31	Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 28 feet for fuel oil No.4/2 from the lot lines facing W. 29th Street and 7th Avenue and 30 feet from lot line facing W. 29th Street or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant adverse air quality impacts.
3	778	25, 27	Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 31 feet for fuel oil No.4/2 from the lot line facing W. 29th Street or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant adverse air quality impacts.
5	779	25-28, 53,55,56	Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 20 feet for fuel oil No.4/2 from the lot line facing 7th Avenue or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant adverse air quality impacts.
6	779	31	Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 22 feet for fuel oil No.4/2 from the lot line facing 7th Avenue and 18 feet from the lot line facing W.30th Street or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant adverse air quality impacts.
7	779	69	Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 22 feet for fuel oil No.4/2 from the lot line facing W. 29th Street, and 19 feet from lot line facing 8th Avenue, and 20 feet from lot line facing 7th Avenue or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant adverse air quality impacts.
8	778	46	Any new residential and/or commercial development on the above-referenced properties must use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant adverse air quality impacts.
9	779	52	Any new residential and/or commercial development on the above-referenced properties must use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant adverse air quality impacts.

TABLE B-4 (Continued)
(E) Designations for Air Quality - Minimum Stack Setback Requirements for Select Projected or Potential Development Sites

Potential Development Sites			
A	778	47	Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 13 feet for fuel oil No.4/2 from the lot line facing W. 28th Street and 11 feet from the lot line facing 8th Avenue or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant adverse air quality impacts.
B	779	12	Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 12 feet for fuel oil No.4/2 from the lot line facing 7th Avenue or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant adverse air quality impacts.
D	779	34	Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 30 feet for fuel oil No.4/2 from the lot line facing 7th Avenue or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant adverse air quality impacts.

would specify the required stack setback distance for fuel oil (i.e., the distance that the stack on the building roof must be from the edge of an adjacent development site) or the exclusive use of natural gas. The use of (E) designations would ensure adequate distance between HVAC exhaust stacks and nearby taller or same height development for oil use or the use of natural gas. These measures would in turn ensure that the Proposed Action would not cause violations of the NAAQS and would therefore have no significant adverse air quality impacts.

As the Proposed Action would result in buildings of the same or approximately the same height on some projected and potential development sites that are located in close proximity to one another, in addition to estimating the potential impacts of the HVAC emissions of these sites individually, SO2 and NO2 emissions from these development sites were also considered as "clusters" of emission sources. Two clusters of HVAC emission were identified, as detailed in Attachment J. The results of the analysis was that the maximum 24-hr SO_2 impacts and annual NO_2 impact of combined emissions from these clusters (using fuel oil or natural gas in the HVAC systems of all sites) would not cause an exceedance of a NAAQS, and therefore, no exceedances of the NAAQS for all applicable pollutants are predicted as a result of both clusters' impacts. Similarly, the result of the analysis of potential impacts on existing land uses is that the cumulative air quality impacts of the HVAC emissions of development sites on existing residential land uses are not significant. The HVAC emissions of the Proposed Action, therefore, do not have the potential to significantly impact existing or anticipated land uses.

Health Risk Assessment of Toxic Air Emissions from Existing Industrial Sources

Potential air quality impacts of existing manufacturing and industrial zones on future residential development were considered. A total of 29 active permitted industrial facilities were identified within a 400-foot radius of the rezoning area that could potentially have emissions impacts on the projected and potential development site. The active permits identify emission sources of 20 non-carcinogenic pollutants and three carcinogenic pollutants (tetrachloroetylene, dichloromethane, and cadmium).

The maximum estimated concentrations for each non-carcinogenic toxic contaminant were below the NYSDEC short-term guideline concentrations (SGCs) and annual guideline concentrations (AGCs). In addition, the total (cumulative) hazard index caused by the non-carcinogenic pollutants emitted from

all of the sources combined was below the level (1.0) that is considered by USEPA to be significant. The maximum total estimated incremental cancer risk caused by carcinogenic pollutants emitted from all sources combined is to be 7.36×10^{-2} per million under the RWCDS. This value is below the level one per million that is considered by the USEPA to be significant. Therefore, the results of the analysis indicated that no exceedance of both the NYSDEC SGC or AGC acceptable limits and the USEPA's incremental risk threshold is predicted, and no significant air quality impacts are predicted from emissions of air toxic pollutants associated with existing industrial sources.

NOISE

A noise analysis examines an action for its potential effects on sensitive noise receptors, including the effects on the interior noise levels of residential, commercial and certain community facility uses, such as hospitals, schools, and libraries. The principal types of noise sources affecting the New York City environment are mobile sources (primarily motor vehicles), stationary sources (typically machinery or mechanical equipment associated with manufacturing operations or building heating, ventilating and air conditioning systems) and construction noise.

According to the guidelines established in the 2010 *CEQR Technical Manual*, an initial impact screening would consider whether a proposed action would generate any mobile or stationary source noise, or would be located in an area with high ambient noise levels. As stated in the *CEQR Technical Manual*, there is the potential for significant adverse impacts and a detailed mobile source noise analysis is generally performed if passenger car equivalent (PCE) values are at least doubled between existing and action conditions during the worst-case expected hour at receptors most likely to be affected by the Proposed Action. As discussed above, the Proposed Action would generate a maximum of 53 vehicle trips in any peak hour compared to No-Action conditions, which does not constitute a doubling of PCE values between existing and action conditions in the study area. As the Proposed Action would not double PCE values, an assessment of mobile source noise is not warranted.

However, as the Proposed Action would allow new residential development in an area currently designated for light manufacturing/industrial uses, it may result in the placement of a new sensitive receptor (residences) at sites in the vicinity of potential stationary and mobile noise sources. Such high ambient noise levels may affect the new sensitive uses introduced by the Proposed Action. Therefore, a detailed technical analysis of noise conditions for the identified projected and potential development sites is presented in Attachment K, "Noise." As indicated in Attachment K, the Proposed Action is not anticipated to result in any significant adverse stationary source noise impacts.

As described in Attachment K, throughout much of the rezoning area noise levels would be in the Marginally Unacceptable I or II category under existing, No-Action, and With Action conditions, except for the northeastern boundary of the rezoning area near West 30th Street and Seventh Avenue, which would have noise levels in the Marginally Unacceptable III category under existing, No-Action, and With Action conditions. Therefore, based on the analysis, development on the projected development sites would require indoor-outdoor noise attenuation levels of 28 to 33 dBA to be in compliance with the guidelines of the *CEQR Technical Manual*, as specified in Table B-5 below. To ensure an interior noise environment of 45 dBA or less, an (E) designation for noise will be placed on all projected development sites (including the Proposed Development Site) and all potential development sites, as shown in Table B-5 below. The text of the (E) designation is provided in Attachment K.

TABLE B-5
Projected and Potential Development Sites with (E)-Designations for Noise

Projected Development Site	Tax Block: Lot(s)	(E)-Designation	Attenuation Required	Potential Development Site	Tax Block: Lot(s)	(E)-Designation	Attenuation Required
Proposed Development	778: 13, 16, 18, 66	Yes	28 dB(A); 31 dB(A) on south facade	A	778: 47	Yes	31 dB(A)
1	778: 29, 30, 31	Yes	28 dB(A)	B	779: 12	Yes	28 dB(A)
2	778: 55	Yes	31 dB(A)	C	779: 62	Yes	31 dB(A)
3	778: 25, 27	Yes	28 dB(A)	D	778:34	Yes	28 dBA, 31 dB(A) on north facade
4	779: 7, 8	Yes	28 dB(A)				
5	779: 25, 26, 27, 28, 53, 55, 56	Yes	31 dB(A); 33 dB(A) on north facade				
6	779: 31	Yes	31 dB(A)				
7	779: 69	Yes	31 dB(A)				
8	778: 46	Yes	31 dB(A)				
9	779: 52	Yes	33 dB(A)				

NEIGHBORHOOD CHARACTER

According to the *CEQR Technical Manual*, an assessment of neighborhood character may be appropriate if a proposed action could result in adverse impacts to land use, urban design and visual resources, open space, shadows, historic resources, socioeconomic conditions, traffic or noise within the neighborhood. It is also possible that several moderate changes in the elements that contribute to neighborhood character, while not significant adverse impacts by themselves, could lead to a significant impact on neighborhood character.

The proposed zoning map and text amendments are intended to preserve neighborhood character while allowing for high-density residential growth with affordable housing that conforms to the existing scale and built form of the neighborhood. Specifically, the Proposed Action would preserve neighborhood scale and character through a contextual zoning district with height limits, provide opportunities and incentives for affordable housing development through the establishment of an inclusionary housing bonus, and recognize and preserve existing commercial and light warehouse uses.

Moreover, as discussed in this attachment and in Attachments C, D, F, G, H K, and L, the Proposed Action is not expected to result in any significant adverse impacts on the technical areas relating to neighborhood character, including land use, socioeconomic conditions, open space, urban design, visual resources, historic resources, traffic, noise, or shadows, nor would it result in a combination of moderate effects to several elements that cumulatively may affect neighborhood character. Therefore, the Proposed Action and the resultant development would not result in any significant adverse impacts to neighborhood character.

CONSTRUCTION IMPACTS

Although temporary, construction impacts can include noticeable and disruptive effects from an action that is associated with construction or could induce construction. Determination of the significance of construction impacts and need for mitigation is generally based on the duration and magnitude of the impacts. Construction impacts are usually important when construction activity could affect traffic

conditions, archaeological resources, the integrity of historic resources, community noise patterns, and air quality conditions.

The Proposed Action would result in the development and construction of new residential, commercial, and mixed-use buildings with building heights of up to 210 feet. Ten projected development sites (including the Proposed Development Site) are expected to be developed within eight years following the adoption of the proposed zoning changes. As discussed in Attachment A, Project Description," the ten projected development sites (eight new construction sites and two conversion sites) are expected to accommodate a total of 1,153 residential units, 174 hotel rooms and 72,119 sf of commercial uses (including local retail/food store and office space). The applicant's Proposed Development Site is the largest of the projected developments, with an estimated 407 units and 16,075 sf of commercial uses. The next largest site is projected development site 5, which would accommodate an estimated 263 units and 39,828 sf of local retail/food store uses. Projected development site 7 would be developed as a 174 room hotel. The remaining seven projected development sites would be of a smaller scale, averaging approximately 70 units and 2,700 sf of commercial use per site. In addition, there are four potential development sites considered less likely to be developed over the eight-year analysis period, which are considered potential sites for future development.

Construction induced by the Proposed Action would be gradual, taking place over an eight-year period. The larger projected development sites, such as the Proposed Development Site and projected site 5, would generally take 18-24 months for construction, whereas the construction period for the remaining sites, which are smaller, is expected to last for 12 to 18 months. The two conversion sites are much smaller, and would require a much shorter conversion period.

As construction activity associated with the RCWDS would occur over an eight-year period, and the rezoning area is located within the Manhattan CBD, a preliminary assessment of potential construction impacts is warranted in accordance with the guidelines of the *2010 CEQR Technical Manual*, and is provided in Attachment N, "Construction Impacts". As discussed in Attachment N, construction-related activities resulting from the Proposed Action are not expected to have any significant adverse impacts on traffic, air quality, noise, archaeological/historical resources, or hazardous materials conditions, and a detailed analysis of construction impacts is not warranted. Moreover, the construction process in New York City is highly regulated to ensure that construction period impacts are eliminated or minimized.

ATTACHMENT C
LAND USE, ZONING, & PUBLIC POLICY

I. INTRODUCTION

Under the *2010 CEQR Technical Manual* guidelines, a land use analysis evaluates the uses and development trends in the area that may be affected by a proposed project, and determines whether that proposed project is compatible with those conditions or may affect them. Similarly, the analysis considers the project's compliance with, and effect on, the area's zoning and other applicable public policies.

The goal of the Proposed Action is to address the growing demand for residential space within the Chelsea neighborhood without inhibiting the mixed-use character and flexibility of uses presently found within the study area. The Proposed Action is an application for zoning map and zoning text changes affecting the mid-block portions of two City blocks in the northern Chelsea area of Manhattan's Community District 5. 249 W 28th Street Properties, LLC (a.k.a. "the applicant") is the applicant for the proposed zoning map changes, whereas the New York City Department of City Planning (NYCDCP) is the applicant for the proposed zoning text amendment. In addition to the proposed rezoning and text amendments, the applicant (249 W 28th Street Properties, LLC) is requesting a special permit pursuant to Sections 13-562 and 74-52 of the Zoning Resolution for a public parking garage to be located at the Proposed Development Site.

Under *CEQR* guidelines, a preliminary assessment, which includes a basic description of existing and future land uses and zoning, should be provided for all projects that would affect land use or would change the zoning on a site, regardless of the project's anticipated effects. *CEQR* also requires a detailed assessment of land use conditions if a detailed assessment has been deemed appropriate for other technical areas. Since this EAS has provided detailed assessments for a number of technical areas, a detailed land use and zoning assessment has also been provided. The detailed assessment discusses existing and future conditions with and without the Proposed Action in the 2019 analysis year for a primary study area (coterminous with the rezoning area), and a secondary (¼- mile) study area surrounding the rezoning area.

II. METHODOLOGY

Existing land uses were identified through review of a combination of sources including field surveys and secondary sources such as the No. 7 Subway Extension- Hudson Yards and Development Program FGEIS and Farley Post Office/Moynihan Station Redevelopment Project DEIS. New York City Zoning Maps and the Zoning Resolution of the City of New York were consulted to describe existing zoning districts in the study area, and provided the basis for the zoning evaluation of the Future No-Action and Future With-Action Conditions. Relevant public policy documents, recognized by the New York City Department of City Planning (NYCDCP) and other city agencies, were utilized to describe existing public policies pertaining to the study area, and served as the basis for the Future Without (No-Action condition) and Future With-Action discussions of public policy.

The Proposed Action includes zoning text and zoning map amendments as well as a special permit for a public parking garage, which would affect land use, zoning and potentially public policy. The area directly affected by the Proposed Action includes the approximately 236,906 sf area proposed to be rezoned to M1-6D as well as an approximately 39,500 sf area that would be affected by the Seventh Avenue bulk control text amendment. The text of the proposed zoning text amendments is included in its entirety in Appendix 3 to this document. As described in Attachment A, "Project Description," the changes proposed as part of the Seventh Avenue bulk control text amendment would not alter zoning regulations affecting use or increase maximum allowable FAR. As these bulk control modifications neither induce nor hinder new development, no projected or potential development sites have been identified in that area, and no further assessment is provided in this document. The proposed bulk modifications are described in more detail in this attachment.

Land use, zoning, and public policy are addressed and analyzed for two geographical areas for the proposed rezoning: (1) the rezoning area, also referred to as the primary study area, and (2) a secondary study area. For the purpose of this assessment, the primary study area is coterminous with the rezoning area, and consists of an approximately 236,906 sf area comprising the mid-block portions of the two City Blocks bounded by West 30th Street to the north, Seventh Avenue to the east, West 28th Street to the south, and Eighth Avenue to the west. The secondary study area extends an approximate quarter (¼) mile from the boundary of the rezoning area and encompasses areas that have the potential to experience indirect impacts as a result of the Proposed Action. It is generally bound by West 35th Street to the north, Broadway to the east, West 23rd Street to the south, and terminating mid-block between Ninth and Tenth Avenues to the west. Both the primary and secondary study areas have been established in accordance with *2010 CEQR Technical Manual* guidelines and can be seen in Figure C-1.

III. PRELIMINARY ASSESSMENT

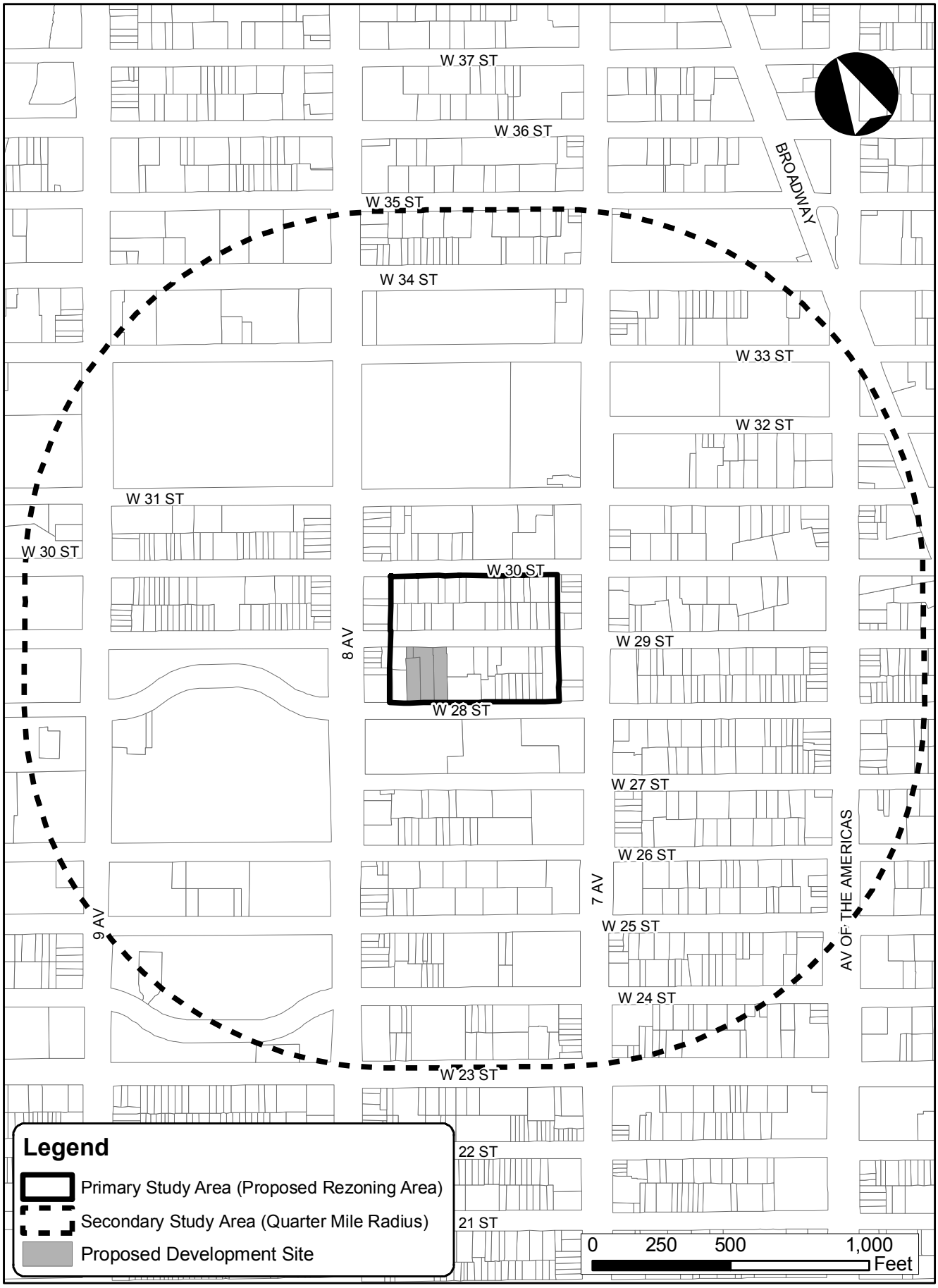
Land Use and Zoning

A preliminary assessment, which includes a basic description of existing and future land uses and zoning, should be provided for all projects that would affect land use or would change the zoning on a site, regardless of the project's anticipated effects. However, under CEQR guidelines, if a detailed assessment is required in the technical analyses of socioeconomic conditions, neighborhood character, traffic and transportation, air quality, noise, infrastructure, or hazardous materials, a detailed land use assessment is appropriate. This EAS provides detailed assessments of socioeconomic conditions, air quality, noise, and hazardous materials; therefore a detailed assessment of land use and zoning is warranted and provided in Section IV below. As a detailed assessment is warranted for the Proposed Action, the information that would typically be included in a preliminary assessment (e.g., physical setting, present land use, zoning information, etc.) has been incorporated into the detailed assessment in Section IV below. As discussed in the detailed assessment, the Proposed Action is not expected to adversely affect land use or zoning.

Public Policy

In addition, some assessment of public policy should accompany an assessment of land use and zoning. According to the *CEQR Technical Manual*, a project that would be located within areas governed by public policies controlling land use, or that has the potential to substantially affect land use regulation or policy controlling land use, requires an analysis of public policy. A preliminary

Land Use Study Area



assessment of public policy should identify and describe any public policies, including formal plans or published reports, which pertain to the study area. If the proposed projects could potentially alter or conflict with identified policies, a detailed assessment should be conducted; otherwise, no further analysis of public policy is necessary. As described below, the Proposed Action does not warrant a detailed assessment of public policies.

There are no adopted City policies applicable to the proposed rezoning area: there are no 197-a plans, urban renewal areas, or designated in-place industrial parks governing the rezoning area, and no areas falling within the coastal boundary. In addition, the Proposed Action does not involve the siting of any public facilities (Fair Share). Within the secondary study area (defined as a ¼-mile radius), there are no applicable public policies except for the 197-a Plan for Chelsea.

Section 197-a of the New York City Charter authorizes Community Boards and Borough Boards, as well as the Mayor, the City Planning Commission (CPC), NYCDCP, and any Borough President to sponsor plans for the development, growth, and improvement of the City, its Boroughs, and communities. The Chelsea 197-a Plan was developed by Community Board 4 and adopted by the City Council in 1999.

The Plan, which covered the 64-block area generally between West 14th and West 34th Streets west of Sixth Avenue, had the following objectives: to provide for orderly growth and change; to provide opportunities for new, economically-integrated housing; to preserve the existing low-income housing stock; to prevent significant displacement of residents and businesses; to preserve ethnic and economic diversity; to protect residential areas from commercial intrusion; to preserve the character and visual unity of Chelsea; to preserve the traditional urban form and scale of the community; and to protect the Chelsea Historic District (roughly bounded by West 23rd and West 19th Streets, Eighth and Tenth Avenues) and other areas of historic character. To accomplish the objectives of the Plan, zoning map and zoning text amendments were proposed. The Plan proposed lowering the allowable density for the area surrounding and including the Chelsea Historic District. Manufacturing districts zoned in the midblock areas between Sixth and Seventh Avenues from West 18th to West 26th Streets, vacant lots throughout the area, and parking facilities in the area were all proposed to be rezoned as residential districts with local commercial overlays. The Plan made no recommendations for the primary study area. However, within the secondary study area, recommendations included rezoning the west side of Eighth Avenue between West 29th and West 31st Streets to C6-2A, and rezoning a midblock C6-2 district between West 24th and West 25th Streets, Seventh and Eighth Avenues, to an R8B contextual district.

The Chelsea Rezoning approved in 1999 for the area bounded by West 14th Street, Sixth Avenue, West 31st Street, and Eleventh Avenue was a significant action taken in response to the Chelsea 197-a Plan. In order to achieve the aims of the 197-a Plan, the Chelsea rezoning mapped contextual districts, reduced permitted density in areas generally west of Eighth Avenue (including the Chelsea Historic District), and maintained existing density in other areas, including the Ladies Mile Historic District. The rezoning increased permitted density in appropriate locations and rezoned certain manufacturing areas to allow new residential development.

The proposed zoning change in the primary study area from M1-5 to M1-6D would be consistent with the policy initiatives and objectives of the Chelsea 197-a Plan. It would accommodate the growing need and demand for housing in the area while preserving commercial and light industrial uses that conform to the proposed M1-6D district's high performance standards. Through contextual zoning and including the area in the Inclusionary Housing program, the Proposed Action would increase opportunities for affordable housing without jeopardizing the existing neighborhood character. The projected development would be compatible with the surrounding residential character, particularly to the south and west of the rezoning area. It also would be compatible with the high-density

development located in Midtown, east of Seventh Avenue. The Proposed Action would further act to complement the Chelsea 197-a Plan through its capacity to promote orderly growth and change. The proposed zoning would allow development to reflect the needs of surrounding neighborhoods, whether residential demands from Chelsea to the south or commercial and industrial opportunities from Midtown.

Therefore, the Proposed Action would not alter or conflict with identified public policies, and no further analysis of public policy is necessary.

IV. DETAILED ASSESSMENT

Background and Development History

The area of Chelsea represented by West 28th, West 29th, and West 30th Streets between Seventh and Eighth Avenues has a long history of development and changing uses. The primary study area is located in Manhattan's Fur District and is characterized by a streetwall of high loft-style buildings interspersed with small 3- to 5-story mixed-use structures. The area also contains a number of parking lot facilities. The diversity of the streetscape is a result of the area's historical piecemeal development. Reflecting the needs of the City as industry expanded northward, the study area has played a variety of roles as it progressed first from agricultural to residential and then to manufacturing loft uses.

The Commissioner's Plan of 1811 mandated the Manhattan grid street layout, which opened up agricultural areas of the city to real estate development to accommodate New York's expanding population. The first development phase of the 1830s brought suburban-style 4- and 5-story row houses to the area. In 1851, West Chelsea was shaped further by the extension of the Hudson River Rail Road to West 30th Street. During this time the Hudson River shoreline, which reached Tenth Avenue, was gradually pushed west through landfilling. The area west of the study area experienced a rapid growth in single-family rowhouses and tenements to accommodate the growing population of immigrants who worked nearby.

Around the turn of the century, the wide north-south avenues of Manhattan, particularly such streets as Fifth Avenue and Broadway, became lined with retail and commercial enterprises; side streets, including those of the proposed rezoning area, redeveloped with loft buildings in which many of the goods sold in nearby stores were manufactured. As similar industries tended to cluster at this time to capitalize on shared resources and more easily serve their prospective markets, many industrial districts took shape within the city. The area around the rezoning area soon came to be known as Manhattan's Fur District. Through the early part of the 20th century, the district catered to manufacturers and retailers in the fur trade, utilizing multi-story loft buildings and large refrigerated storage rooms.

The industrial decline seen throughout the city through the latter part of the 20th century took its toll on the study area. In a trend similar to that of the Garment District and Meat Packing District, production industry space within the Fur District began to see higher rates of vacancy. Because of the cost of removing storage vaults and refrigeration equipment, conversion of loft space was slow to develop in the study area as the 20th century progressed. Today, the district still supports a small number of retail furriers, but the manufacturing side of the business in New York City, though once thriving, is now negligible. The area is also home to printing industries, photography studios, offices, legal and illegal residential loft conversions, and numerous parking facilities.

Existing Conditions

Land Use

Primary Study Area

The proposed rezoning area encompasses the mid-block areas of two City blocks, consisting of 52 lots, generally bounded by West 30th Street to the north, Seventh Avenue to the east, West 28th Street to the south, and Eighth Avenue to the west. It is located within northern Chelsea directly north of the Fashion Institute of Technology (FIT) and two blocks south of Madison Square Garden/Pennsylvania Station.

As described above, land use and market trends within the study area have generally shifted the neighborhood away from an industrial center to a mixed-use neighborhood. Land uses in the primary study area include a mix of light industrial/manufacturing/warehouse uses, commercial, wholesale, parking garages/lots, and residential. There are six public parking facilities including at-grade lots and one garage within the primary study area, as well as 38 additional buildings supporting a range of land uses within approximately 1.5 million gsf. Most of the buildings (approximately 67 percent) within the primary study area contain less than 50,000 sf.

Commercial use primarily includes offices for professional services, including architecture, engineering, accounting, and real estate management corporations, administrative services, social services, telecommunications/information services, photography studios, and designers, as well as film, production and sound recording studios. The area also supports a number of wholesale and retail establishments. Fur stores represent more than a third of the retailers in the area and are concentrated along West 29th and West 30th Streets. Light industrial uses include some clothing and accessories manufacturing, fur wholesale establishments, and printing and publishing establishments. Residential use is generally concentrated towards Eighth Avenue and commonly housed within buildings that accommodate a range of commercial, wholesale, and/or light industrial/ manufacturing/warehouse uses. Approximately 218 residential units are estimated to be located within the primary study area.[1] Additionally, the primary study area features a spiritual center at 230 West 29th Street (Block 778, Lot 55), and formerly accommodated a private fire-fighting institution funded by the New York Board of Fire Underwriters, the Fire Patrol House 1 at 240 West 30th Street (Block 779, Lot 65). A newly constructed hotel, a Holiday Inn Express, is located at 232 West 29th Street (Block 778, Lot 57).

Table C-1 shows percentages of the total lot area within the primary study area devoted to each type of land use. As shown in Table C-1 below, more than 42 percent of the primary study area is composed of tax lots that support a mix of land uses, including various combinations of residential, commercial, industrial, and/or institutional uses. Approximately 24 percent of the lot area in the primary study area is occupied by commercial buildings (such as retail establishments, professional offices and services). About 21 percent of the lot area within the primary study area, including the Proposed Development Site, is comprised of public parking facilities. The remaining area is occupied by industrial buildings, public facilities including a spiritual center, the former firehouse, and a theater, and multi-family residential buildings with ground floor retail, and industrial buildings at 1.0 percent, 2.9 percent, and 8.7 percent respectively. Although present within a ¼ mile of the proposed rezoning area, single and two-family residential uses, transportation and utility uses, open space, and vacant land are not represented within the primary study area.

[1] Number of residential units based on PLUTO data compiled for lots comprising the rezoning area.

TABLE C-1
Primary Study Area Lot Area by Land Use

Land Use	Total Lot Square Footage	Percent of Total
Institutional/ Public Facility	6,969	2.9%
Residential	88	0.0%
Residential with Ground Floor Commercial	20,499	8.7%
Mixed Use (Residential and Commercial)	47,644	20.1%
Mixed Use (Residential, Commercial, Industrial)	9,825	4.1%
Commercial	55,722	23.5%
Industrial	2,312	1.0%
Mixed Use (Commercial and Industrial)	38,686	16.3%
Mixed Use (Commercial and Institutional)	4,366	1.8%
Parking	50,796	21.4%
Total	**236,906**	**100.0%**

Projected Development Sites

The assessment of the primary study area conditions focuses on the 10 projected development sites, including the Proposed Development Site, which have been identified in the reasonable worst-case development scenario (RWCDS) as the sites most likely to be developed as a result of the Proposed Action by 2019 (refer to Attachment A, "Project Description," Table A-5). The following site descriptions reflect the condition of the area at the time the surveys were conducted in January 2009 (and verified in September 2010).

- Proposed Development Site: Four of the lots included within the primary study area, which comprise a lot area of approximately 29,373 sf, are owned by the applicant (Block 778, Lots 13, 16, 18 and 66). The Proposed Development Site is occupied by a 240-space at-grade public parking lot (Lots 13 and 16), a four-story public parking garage containing 131-spaces at 241 West 28th Street with a built FAR of approximately 3.35 (Lot 18).

- Projected Development Site 1: This approximately 7,360 sf site is located at 215-219 West 28th Street (Block 778, Lots 29, 30, and 31). It currently has a 4-story mixed-use residential/commercial building of 7,603 sf, with a built FAR of approximately 3.10 (Lot 31). The site also features a 25-space public parking lot that occupies approximately 4,904 sf (Lots 29 and 30).

- Projected Development Site 2: This approximately 4,500 sf site is located at 230 West 29th Street (Block 778, Lot 55). The site currently features a 3-story community facility/spiritual center of 5,390 sf with a built FAR of 1.20.

- Projected Development Site 3: This approximately 6,721 sf site is located at 223-227 West 28th Street (Block 778, Lots 25 and 27). It currently has an approximately 4,554 sf commercial building with 2-stories and a built FAR of 2.0 (Lot 27), as well as a 2-story mixed-use residential/commercial building of 8,518 sf with a built FAR of 1.92 (Lot 25).

- Projected Development Site 4: This approximately 7,405 sf site is located at 255-257 West 29th Street (Block 779, Lots 7 and 8) near the corner of Eighth Avenue. The site currently has a 4-story, 5,358 sf residential/retail building with a built FAR of 2.17 (Lot 7). The site also features a 4,938 sf at-grade public parking lot with 25 spaces at 253 West 29th Street (Lot 8).

- Projected Development Site 5: This approximately 20,768 sf site is located at 217-225 West 29th Street and at 216-222 West 30th Street (Block 779, Lots 25, 26, 27, 28, 53, 55, and 56). The site contains five 2-story buildings that feature a range of commercial, light industrial and/or residential uses, including: a 4,226 sf industrial building at 225 West 29th Street with a built FAR of 1.83 (Lot 25), a 4,721 sf mixed-use commercial and residential building at 223 West 29th Street with a built FAR of 2.04 (Lot 26), a 7,184 sf commercial building at 216 West 30th Street with a built FAR of 1.55 (Lot 53), a 4,419 sf commercial building at 220 West 30th Street with a built FAR of 1.91 (Lot 55), and a 4,624 sf commercial building at 222 West 30th Street with a built FAR of 2.00 (Lot 56). The site also contains two public parking lots, which combined have a total of 48-spaces (Lots 27 and 28).

- Projected Development Site 6: This approximately 4,543 sf site is located at 211 West 29th Street (Block 779, Lot 31). It is occupied by a 50-space public parking lot.

- Projected Development Site 7: This approximately 4,937 sf site is located at 248-250 West 30th Street (Block 779, Lot 69) near the corner of Eighth Avenue. It contains a 14,037 sf commercial building with 3-stories and a built FAR of 2.84.

- Projected Development Site 8: This approximately 2,475 sf projected conversion site is located at 210 West 29th Street (Block 778, Lot 46). The existing 9-story building of approximately 23,227 sf is currently occupied by commercial and residential uses. It has a built FAR of 9.38.

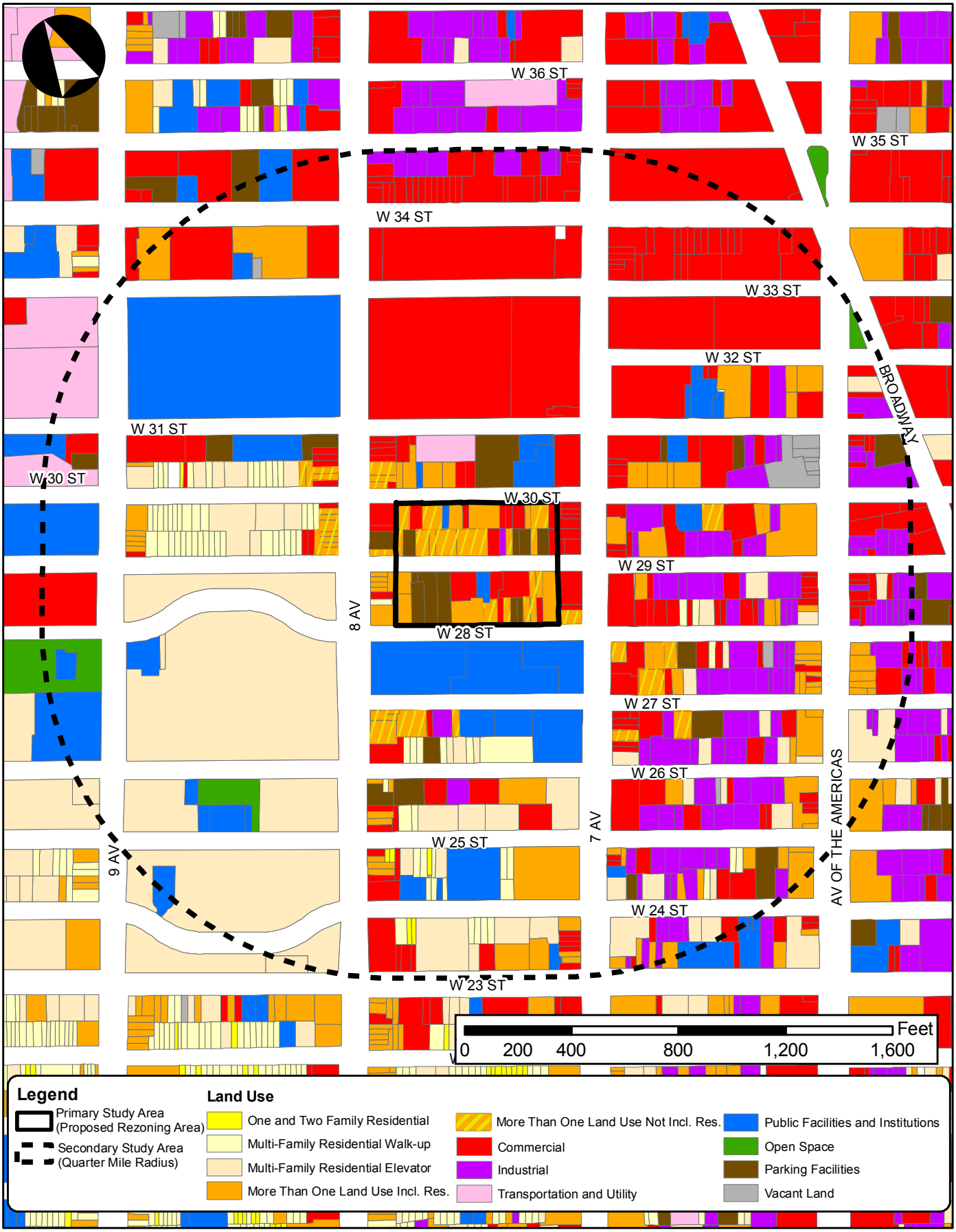
- Projected Development Site 9: This approximately 2,271 sf projected conversion site is located at 214 West 30th Street (Block 779, Lot 52). The existing 12-story building containing approximately 27,770 sf is occupied by commercial and residential uses. It has a built FAR of 12.23.

Secondary Study Area

As described above, the secondary study area includes the area within an approximately ¼-mile radius of the rezoning area. As shown in Figure C-2, the area supports a variety of land uses. The areas north and northwest of the proposed rezoning area are dominated by transportation and utility uses and become primarily commercial uses moving east towards Midtown Manhattan. Land uses to the east and southeast of the primary study area are similar in composition to that of the proposed rezoning area with industrial and commercial uses being most common. Some residential uses are also interspersed. Residential uses are primarily concentrated in the south and southwestern portions of the study area, particularly to the west of Eighth Avenue south of West 30th Street, as well as along the corridors of West 23rd and West 24th Streets. The portion of the secondary study area to the west and southwest is generally characterized by multi-family residential apartments and retail along the avenues. Throughout the study area, a number of former industrial structures have been reused for commercial offices, studios, and art galleries, as well as converted for residential use.

Two blocks north of the primary study area are Madison Square Garden (MSG), Pennsylvania (Penn) Station, and the Farley Complex. MSG, its related theater, and Penn Station occupy a large site between West 33rd and West 31st Streets on the east side of Eighth Avenue. However, the main entrance for these facilities is on Seventh Avenue opposite West 32nd Street, with additional entrances located on Eighth Avenue at West 31st and West 33rd Streets. MSG is an entertainment venue for a variety of sports events, concerts, and conventions, and is comprised of two main entertainment facilities: the Arena, which has a maximum seating capacity of 22,000 seats (fixed and temporary), and the 5,600-seat WaMu Theater. Penn Station lies beneath MSG, and is the busiest passenger

Figure C-2
Land Use



transportation facility in the nation, handling more than 550,000 people daily. It provides regional commuter and long-distance train services, as well as subway access to the A, C, E, 1, 2, and 3 trains. New Jersey Transit (NJT) and Long Island Railroad (LIRR) trains provide regional commuter rail services, while Amtrak provides regional and long-distance services. Sharing the superblock with MSG and Penn Station is Two Penn Plaza, which is a high-rise commercial office building with frontage on Seventh Avenue.

The Farley Complex occupies the block directly west of MSG and Penn Station, which is bounded by West 33rd Street, Eighth Avenue, West 31st Street, and Ninth Avenue. The eastern half of the complex contains space for mail sorting and distribution uses, public lobbies, retail windows, administration spaces, and offices for New York City's Postmaster General. The western portion is used for truck loading and unloading. Truck entrances are located on West 33rd Street and Ninth Avenue. Rail tracks serving Amtrak, NJT, and the LIRR extend beneath the Farley Complex. The eastern half also contains some of Penn Station's passenger platforms for Amtrak, NJT, and the LIRR. Further to the west of the Farley Complex is a large office building at 450 West 33rd Street that is home to the New York Daily News. Much of the area to the west of the study area is characterized by transportation-related uses. The Lincoln Tunnel access roads and ramps cut through and beneath the blocks between Ninth and Tenth Avenues north of West 30th Street.

The northern portion of the study area is solidly commercial, especially to the east of Seventh Avenue and north of West 29th Street. One block north of MSG is One Penn Plaza, a 57-story office tower, flanked by a single-story retail building along Seventh Avenue. One Penn Plaza is in the center of a large paved plaza above street level and has a through block retail arcade and pedestrian thoroughfare at street level and a concourse parallel to the LIRR concourse beneath. The north side of West 34th Street between Seventh and Eighth Avenues also includes continuous retail frontages consisting mainly of discount stores. Further to the north, West 35th Street between Seventh and Eighth Avenues is at the southern end of the Garment Center District, and commercial uses prevail here as well. Unlike the loft buildings in the mid-blocks, which contain a mix of commercial and light manufacturing uses, many of the loft buildings along Seventh and Eighth Avenues have been entirely converted to office uses. Fashion design companies, publishing houses, and design firms unrelated to the apparel industry, such as architects, engineers, and graphic designers, typically occupy this office space. To the northeast, Macy's flagship department store comprises the block between West 35th and West 34th Streets and Sixth and Seventh Avenues at the northeastern edge of the study area.

The south side of West 34th Street supports a number of national and regional retailers, as well as restaurants. The Manhattan Mall is located two blocks south of Macy's on the eastern side of the block between West 32nd and West 33rd Streets. Two large hotels front on Seventh Avenue directly across from One Penn Plaza, the 20-story Hotel Pennsylvania between West 32nd and West 33rd Streets and the 31-story Southgate Hotel at the southeast corner of West 31st Street. There are also several mid-to high-rise office buildings in this area. In addition to commercial office buildings, the mid-blocks of West 26th to West 30th Streets between Sixth and Seventh Avenues support a number of wholesale and retail nurseries, flower stores, and garden centers, which comprise the Flower District.

There is significant residential development in the southern portion of the study area. Apartment buildings and brownstones are the most prevalent type of residential use in the area. The area along Sixth and Seventh Avenues to the south of West 28th Street has recently undergone significant growth in new residential development, primarily resulting from several zoning actions approved in the 1990s. Several new high-rise towers have been constructed on Sixth Avenue between West 24th and West 29th Streets (including the Vanguard, The Capitol at Chelsea, The Caroline, and 777 Sixth Avenue) and a few new residential developments have been constructed on Seventh Avenue. Along both avenues are residential buildings with ground floor retail that support the local area including dry cleaners, delis, and small restaurants.

Spanning from West 28th Street in the north to West 24th Street in the south, between Eighth and Ninth Avenues, are the Penn South Cooperative Houses. The houses consist of a number of high-rise residential buildings that date back to the 1950s when the United Housing Foundation worked with local unions and government officials to provide affordable housing in the industrial area. This cooperative housing complex has retained limited-equity status, providing affordable dwelling units and ample public space. The Penn South Houses accommodate a total of approximately 2,800 units. Further to the west are the Elliot Chelsea Houses, a New York City public housing development, on West 26th Street between Ninth and Tenth Avenues, which provide additional affordable housing. The Elliot Houses consist of four buildings, 11-and 12-stories tall, that contain 589 apartments, which are home to more than 1,400 residents.

Adjacent to the Elliot Houses is Chelsea Park, which partially falls within the secondary study area radius. The park is located on the block between West 27th and West 28th Streets, between Ninth and Tenth Avenues. The park was originally established in the early 20th century as an open area for tenement residents. It remains a popular open space destination, with basketball courts, baseball diamonds, handball courts, benches and a playground. The London Terrace apartments, a market-rate cooperative and rental complex, also fall just beyond the secondary study area boundary. The complex is located between West 24th and West 25th Streets along Ninth Avenue.

Also to the south and partially included in the secondary study area is the Chelsea Gallery District, which ends roughly at West 29th Street to the north and Seventh Avenue in the east, and extends west to Eleventh Avenue and south to West 13th Street.

There are also several community facility and institutional uses located within the secondary study area. The Technical Career Institute/College of Technology is located on the block south of the Farley Complex on the south side of West 31st Street directly west of Eighth Avenue. St. John the Baptist Church is located directly south of MSG, comprising a site that has frontage on both West 30th and West 31st Streets. The Fashion Institute of Technology (FIT), which occupies the entire block between West 28th and West 27th Streets and Seventh and Eighth Avenues, as well as a portion of the block directly south, is located directly south of the rezoning area. The Chelsea School (P.S. 33) is located further to the south of Chelsea Park and east of Elliot Houses, at the corner of West 26th Street and Ninth Avenue.

Zoning

Residential uses are generally not allowed in areas zoned for manufacturing. In New York City there are several conditions allowing dwelling units in zoning districts where they are usually prohibited, including units that existed prior to 1961 zoning, and uses granted through zoning variances granted by the New York City Board of Standards and Appeals (NYCBSA). In 1981, Article 7-C of the Multiple Dwelling Law, also known as the Loft Law, created a new classification of buildings in New York City known as interim multiple dwellings ("IMD"). The IMD classification encompasses formerly commercial and manufacturing loft spaces that were used as residences during the period of April 1, 1980 through December 1, 1981. Generally, the law required landlords to bring lofts up to code, making them suitable for residential uses, before a certificate of occupancy would be granted. The 2010 amendment to the Loft law, which expanded the definition of “interim multiple dwelling” to include certain buildings occupied for residential use from January 1 2008 through December 31, 2009, does not apply to the study area. In addition, a number of rezoning actions in the broader area, such as the Avenue of the Americas Rezoning of 1995, and the Ladies’ Mile Rezoning of 2004, have resulted in a proliferation of new development projects, and encouraged a transition to greater residential and commercial character in the neighborhood. Partly as a result of these changes, as well as a number of NYCBSA variances, the area has seen a slow but steady growth in residential units over the past few decades.

Primary Study Area

The area directly affected by the Proposed Action is zoned M1-5, which is a light manufacturing, high performing district mapped in loft areas, mainly in Manhattan. However, the area is more accurately a mixed-use commercial and residential area. Rising rents, combined with the larger, long-term decline in industrial employment in New York City, have transformed the area into a commercial district with a residential presence.

The rezoning area contains several undeveloped sites that have remained as parking lots for decades because there has not been a demand for new commercial or manufacturing space in the area. The relatively low commercial FAR of 5.0 reduces the economic viability of commercial redevelopment of those sites. The proposed rezoning would allow for residential development which would bring these sites into productive use and would help address the City's housing shortage and particularly increase the supply of affordable housing.

M1 districts are often a buffer between commercial or residential districts and heavier industrial M2 and M3 districts. M1-5 regulations permit manufacturing uses up to a maximum FAR of 5.0 within completely enclosed buildings that conform to strict performance standards for noise, vibration, smoke, and odors, which limits their impact on adjacent residential areas. Retail, office and most other commercial uses are also permitted at a FAR of 5.0. Certain community facilities are allowed up to a maximum FAR of 6.5. Parking is not required in M1-5 districts.

Secondary Study Area

Zoning classifications within the secondary study area contain a mix of commercial, light manufacturing, and residential districts, and include: M1-5, C6-6, C6-4.5, C6-4, C6-4M, C5-2, and M1-6 to the north; M1-6, C6-4, and C6-4X to the east; C6-2, C6-2A, C6-3X, R8A, C2-6, and C2-7A to the south, and C6-3X, C6-2A, C4-5, R8, R8B, M1-5 and C6-4 to the west (see Figure C-3). A brief description of the applicable regulations in each of these districts is provided below.

Directly east of the rezoning area is an M1-6 zoning district that extends from West 31st Street in the north to midway between West 23rd/West 24th Streets in the south. A C6-4X zoning district is mapped along the Sixth Avenue corridor from roughly West 31st Street to midway between West 23rd/West 24th Streets, and a small C6-4 district is mapped at the southeastern corner of Seventh Avenue and West 31st Street. Directly south of the rezoning area a C6-2 zoning district overlays the majority of the blocks bounded by West 28th Street, Seventh Avenue, West 26th Street, and Eighth Avenue encompassing the FIT. Further south are an R8A district mapped on the mid-blocks of West 25th and West 24th Streets between Seventh and Eighth Avenues, a C2-7A district mapped along West 23rd Street west of Seventh Avenue, and a C6-3X district extending along the Seventh Avenue corridor to the south of West 26th Street and mid-way between West 23rd/West 22nd Streets. A small portion of the C2-6 district mapped at the northwest corner of Eighth Avenue and West 23rd Street also falls within the secondary study area.

To the west a C6-3X district extends along Eighth Avenue between West 31st and West 29th Streets and on the south side of West 31st Street between Eighth and Ninth Avenues. The eastern side of Eighth Avenue between West 29th and West 24th Streets is zoned C6-2A. Further to the west are R8 and R8B districts, as well as a C4-5 district at the northwest corner of West 26th Street and Eighth Avenue, and a C6-2A district on the east side of Ninth Avenue between West 29th and just south of West 31st Street. M1-5 and C6-4 districts are located to the west of Ninth Avenue, between West 28th and West 30th Streets. The area to the north of the rezoning area is primarily commercial and mapped with C6 districts, including C6-4, C6-4M, C6-6, C5-2, and C6-4.5 districts, as well as M1-6 further to the north. The northernmost portion of the study area, located to the north of West 31st Street, is



ZONING MAP

THE NEW YORK CITY PLANNING COMMISSION

Major Zoning Classifications:

The number(s) and/or letter(s) that follows an **R, C** or **M** District designation indicates use, bulk and other controls as described in the text of the Zoning Resolution.

- **R** – RESIDENTIAL DISTRICT
- **C** COMMERCIAL DISTRICT
- **M** MANUFACTURING DISTRICT

AREA(S) REZONED

EFFECTIVE DATE(S) OF REZONING:

***3-26-2008 C 070529 ZMM
**3-26-2008 C 070522 ZMM
*12 11 2007 C 060572 ZMM
11 15 2007 C 000198 ZMM

SPECIAL PURPOSE DISTRICT
The letter(s) within the shaded area designates the special purpose district as described in the text of the Zoning Resolution.

(D) – RESTRICTIVE DECLARATION

(E) CITY ENVIRONMENTAL QUALITY REVIEW DECLARATION

(e1) – REFERS TO BLOCKS WITH LOTS SUBJECT TO CEQR DESIGNATION E-157.

(e2) – REFERS TO BLOCKS WITH LOTS SUBJECT TO CEQR DESIGNATION E 138.

SEE Z.R. APPENDICES (CEQR DECLARATIONS) FOR LIST OF AFFECTED BLOCK AND LOTS.

N

MAP KEY

8a	8c	9a
8b	**8d**	9b
12a	12c	13a

ZONING MAP **8d**

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Primary Study Area (Rezoning Area)

Secondary Study Area (Quarter mile radius)

Figure C-3
Existing Zoning

overlaid by three special purpose districts, including Hudson Yards, the Garment Center, and Midtown Special Districts.

The commercial C6 zoning supports medium and high-bulk commercial uses, including large retail stores and related activities, and the districts also permit residential use. C6 districts are widely mapped within special districts and some, such as the C6-4.5 district described below, are only mapped within the Special Midtown District and have unique floor area and bonus rules. Commercial zoning districts with an "A" "D" or "X" suffix are contextual zoning districts that were created to modify the bulk regulations so that new construction would be compatible with the prevailing built environment. C6 districts with a "G" or "M" suffix, such as the C6-4M district described below, are mapped in the Garment Center, Chinatown, and Chelsea, and have special regulations governing conversion of non-residential space to residential use.

C6-4 districts, which are high-density zones allowing a range of uses, have a maximum commercial and community facility Floor Area Ratio (FAR) of 10.0. The commercial FAR can increase to 12.0 FAR with a bonus for a public plaza. High-density residential development is permitted in the C6-4 districts up to a 10.0 FAR (up to 12.0 with bonus), and community facilities within this zone also have a maximum FAR of 10.0. There are no parking requirements in C6-4 districts. However, New York City Zoning Resolution Section 13-42 requires that parking be provided for large publicly assisted housing developments at a rate of 12 to 15 percent of the total number of dwelling units. The mid-blocks between West 31st and West 33rd Streets between Sixth and Seventh Avenues are zoned C6-4.5. This district is only located in the Special Midtown District and allows 12.0 FAR for commercial and community facility development (up to 14.4 with bonuses) and 10.0 FAR for residential development. C6-4X districts allow residential and commercial uses and have a maximum FAR of 10.0, and C6-4M districts allow the same uses and permit the same FAR as C6-4 districts, but additional regulations limit the conversion of nonresidential uses to residential uses. The C6-4 districts mapped within the Special Hudson Yards District have different FARs and uses, depending on the subdistricts, as discussed below.

C6-2, C6-2A, and C6-3X districts permit commercial development with a base 6.0 FAR. C6-2 districts are generally commercial districts zoned outside of the central business district, with the FAR ranging from a base of 6.0 to 7.2 with the plaza bonus. Residential FAR ranges from a base of 0.94 to a maximum of 6.02, and the community facility FAR ranges from 6.5 to 7.8 (including bonus). Residential development is also permitted with a 6.02 FAR in C6-2A districts, and 9.0 FAR in C6-3X districts. C6-2A districts differ from C6-2 districts in that they promote greater lot coverage and apply modified height and setback regulations designed to be compatible with existing older residential neighborhoods. C6-6 districts allow a wide range of high bulk commercial uses requiring a central location. C6-6 districts allow for a commercial FAR of 15.0 (up to 18.0 with bonuses), 10.0 FAR for residential uses (up to 12.0 with bonuses), and 15.0 FAR for community facility uses (up to 18 with bonuses).

C4-5 zoning districts, such as the one located in the west of the study area, are major commercial centers located outside of central business districts. They allow department stores, theaters, and other commercial uses that serve a larger area. Residential FAR ranges from 0.87 to 3.44 (equivalent to R7). C5-2 is a central commercial district intended for offices and high-end retail establishments that serve the entire metropolitan region and for streets where continuous retail frontage is desired. The maximum commercial FAR in C5-2 districts is 10.0 (up to 12.0 with plaza bonus), and the maximum residential FAR is 10.0, exclusive of any applicable bonus (up to 12.0 with bonus).

C2-6 and C2-7A districts are commercial districts that are predominantly residential in character, both of which have a maximum commercial FAR of 2.0. C2-6 districts allow residential uses with an FAR

ranging from 0.87 to 3.44, and C2-7A districts are contextual districts that allow residential uses with an FAR of 7.52.

R8 is a general residence district that allows a maximum residential FAR of 6.02 and a maximum community facility FAR of 6.5. An R8B district is located on the mid-blocks north of West 29th Street between Eighth and Ninth Avenues. R8B and R8A are both contextual residential districts, which differ from R8 districts in that they promote greater lot coverage and apply modified height and setback regulations designed to be compatible with existing low-rise buildings in neighborhoods. The maximum FAR for R8B districts is 4.0. The maximum FAR for an R8A district is 6.0 for residential uses and 6.5 for community facility uses.

In high-density districts that permit residential use at FAR through bonuses, residential development above 10.0 FAR is allowed through the Inclusionary Housing program of the New York City Zoning Resolution. The Inclusionary Housing program allows an increase in floor area in exchange for providing affordable housing either on- or off-site.

Parking is generally not required in the Manhattan Core (the area south of 96th Street), except within the Hudson Yards Special District.

Special Purpose Districts

The Special Hudson Yards District (HY) was established to foster a mix of uses and densities, provide new publicly accessible open space, extend the midtown central business district by providing opportunities for substantial new office development, reinforce existing residential neighborhoods and encourage new housing on Manhattan's far west side. The special district implements a master plan for the area and calls for two new corridors for high-density office and residential development supported by a planned subway line extension, new parks and an urban boulevard. New mid-density residential development would form a transition to existing residential neighborhoods and the Special Garment Center District to the east. To achieve the plan's objectives, the special district creates five subdistricts and mandates a variety of use, bulk and urban design controls in the subdistricts. Two of the five subdistricts (Subdistricts B and C) are mapped in the study area.

The Special Hudson Yards District establishes use and bulk requirements that differ from the requirements of the underlying districts; all of the study area within the Hudson Yards special district has an underlying C6-4 zoning designation. In the portion of Subdistrict B which includes Penn Station, residential use is not permitted, the maximum FAR for community facility is 2.0, and the maximum base FAR for commercial use is 10, with an increase of up to 19.5 with certain bonuses. In the portion of Subdistrict B which includes the Farley Station, the maximum FARs are 6.0 for residential use, 2.0 for community facility use, and 10.0 for commercial use; no floor area bonuses are permitted. In the portion of the study area in Subdistrict C of the Special Hudson Yards District (north of West 33rd Street), the maximum base FAR for residential use is 6.5, and for community facility or commercial use, 10.0. The residential FAR may be increased to 12.0 by a combination of the inclusionary housing bonus and the District Improvement Bonus (DIB), which involves a payment into the District Improvement Fund to support the financing of infrastructure improvements in the Special District, and the commercial FAR may be increased to a maximum 13.0 FAR upon payment of the DIB.

The Special Midtown District generally extends from 31st to 61st Streets and from Third to Eighth Avenues. A portion of the Special Midtown District located west of Sixth Avenue is located in the study area. Adopted in May 1982, the Special District was created to strengthen the Midtown business core by guiding growth toward areas most able to accommodate new development (primarily the West Side); preserving historic areas, landmarks, and the Theater District; protecting the Fifth Avenue

shopping district; and fostering a substantially better pedestrian environment. To that end, special subdistricts were established within the Special Midtown District, including the Penn Center Subdistrict, Grand Central Subdistrict, Theater Subdistrict, Fifth Avenue Subdistrict, and Preservation Subdistrict. Portions of the Penn Center Subdistrict are located within the study area.

A small portion of the secondary study area (approximately half of one block at the study area's northern boundary) falls within the Special Garment Center District, which is mapped between Broadway and 100 feet east of Ninth Avenue, generally between West 35th and West 40th Streets. This special district was instituted in 1987 to provide adequate space for the future needs of the interrelated network of manufacturers, suppliers, wholesalers, and showrooms that serve the fashion industry. The Special Garment Center District's underlying manufacturing zoning is augmented by additional regulations for a "Preservation Area" mapped on the mid-blocks starting from 100 feet in from the avenues, and excluding buildings fronting on the avenues. Conversion to office use in the Special Garment Center District is permitted only if an equal amount of space is preserved for manufacturing, wholesale, or showroom uses elsewhere in the Special District. In this way, the Preservation Area is intended to provide a relocation area for fashion-related firms as buildings are converted to conventional office space.

Future Without the Proposed Action (No-Action)

In the future without the Proposed Action, the existing zoning controls would remain in place. It is expected that the study area blocks within the Chelsea/Fur District area would experience nominal growth in commercial uses and mixed-use conversions.

Land Use

Primary Study Area

In the future without the Proposed Action, it is expected that the current land use trends and general development patterns would continue. These trends are characterized by an overall decline in light industrial and manufacturing uses, a continued shift to commercial development, and limited residential growth due to the area's M1-5 zoning.

The continued underutilization of land in the future without the Proposed Action is primarily due to the existing zoning, which permits commercial and high performance manufacturing uses but prohibits residential use. As-of-right commercial development, in the form of new construction and conversions would likely persist, but opportunities for residential uses would not be provided in the primary study area (except by variance). Many of the lots within the rezoning area already exceed their current allowable maximum commercial/industrial FAR of 5.0, so it is not likely that substantial development would take place under the No-Action condition. Some existing buildings could be expected to be renovated and reoccupied by commercial uses, and one new development is assumed to take place within the proposed rezoning area.

As described in Attachment A, "Project Description," given the recent increased demand for hotel development in the vicinity of the rezoning area, and its proximity to several major attractions and public transportation (e.g., Madison Square Garden, Penn Station, etc.), it is assumed that a new as-of-right hotel would be developed within the rezoning area in the future without the Proposed Action. Based on the lot size of the hotel that was recently constructed within the rezoning area (Block 778, Lot 57), it is assumed that Lots 25, 26, 27, 28, 53, 55, and 56 on Block 779 would be developed with a new hotel in the No-Action condition. With a lot area of approximately 20,768 sf, this combined site

could accommodate a hotel with up to approximately 103,840 zoning sf of floor area (estimated 109,032 gsf), with an estimated 363 rooms and approximately 55 accessory parking spaces. This hotel is assumed to be massed on the northern portion of the site placing it closer to the transit hub at Penn Station, the 34th Street shopping corridor, as well as tourist attractions. Based on the current M1-5 zoning regulations, this hotel is estimated to be 20-stories in height (approximately 210 feet).

Secondary Study Area

Land use development trends within the secondary study area will most likely continue as-of-right. The Chelsea and Midtown neighborhoods are in a state of flux as a result of recent rezonings including the Hudson Yards special district rezoning (2008, 2005), the Ladies' Mile rezoning (2005), and the Chelsea rezoning (1999). In Chelsea, the rezonings have facilitated the development of residential and commercial space in addition to and adjacent to high performance industrial areas. On Manhattan's west side, the Hudson Yards rezoning has established the administrative framework for expanding transportation and utilities and allocating commercial uses as midtown development pushes westward toward the Hudson River.

In the future without the Proposed Action, there are several projects that are likely to be completed by 2019 within an approximate ¼-mile radius of the rezoning area, as listed in Table C-2 and shown in Figure C-4. The intensity of No-Build activity described below underscores the strong trend in the area for new construction that is transforming the surrounding area into a very mixed-use area.

The large development projects planned or currently under construction within the ¼-mile land use study area include the proposed 15 Penn Plaza commercial development as well as the planned components of the Farley Post Office/Moynihan Station Redevelopment Project to the west, the planned FIT expansion directly to the south of the rezoning area, and a number of smaller projects that are primarily located along the Sixth Avenue corridor between West 32nd and West 28th Streets. In total, approximately 4,092,891 sf of office, 927,707 sf of hotel (1,301 rooms, including hotel on projected development site 5 within rezoning area), 1,167,989 sf of retail, and 1,968 dwelling units, and 100,000 sf of community facility space will be added to the study area by 2019. Many of the new developments will be primarily residential with retail on their lower levels including 415 Eighth Avenue, 855 Sixth Avenue,[2] 815 Sixth Avenue, 124 West 23rd Street, and 140-148 West 28th Street. A new 22-story commercial building is planned for 325 West 33rd Street, which will be a 239-room hotel. Tower III at 885 Sixth Avenue and West 32nd Street will include office, retail and residential uses.

15 Penn Plaza is a commercial development planned for the current site of the Hotel Pennsylvania, located on Seventh Avenue between West 32nd and West 33rd Streets. Plans for 15 Penn Plaza call for a new commercial office tower located above a podium base for retail and trading uses with a number of transit improvements. The Farley Post Office/Moynihan Station Redevelopment Project has undergone a number of different variations, but will include rail and transit improvements, as well as office, retail, hotel and residential components both within the Farley Complex and a development transfer site across Eighth Avenue.

[2] Although the development at 855 Sixth Avenue has been delayed, as the site has already been excavated, it assumed to be completed by the analysis year of 2019.

Figure C-4

No-Action Development Sites

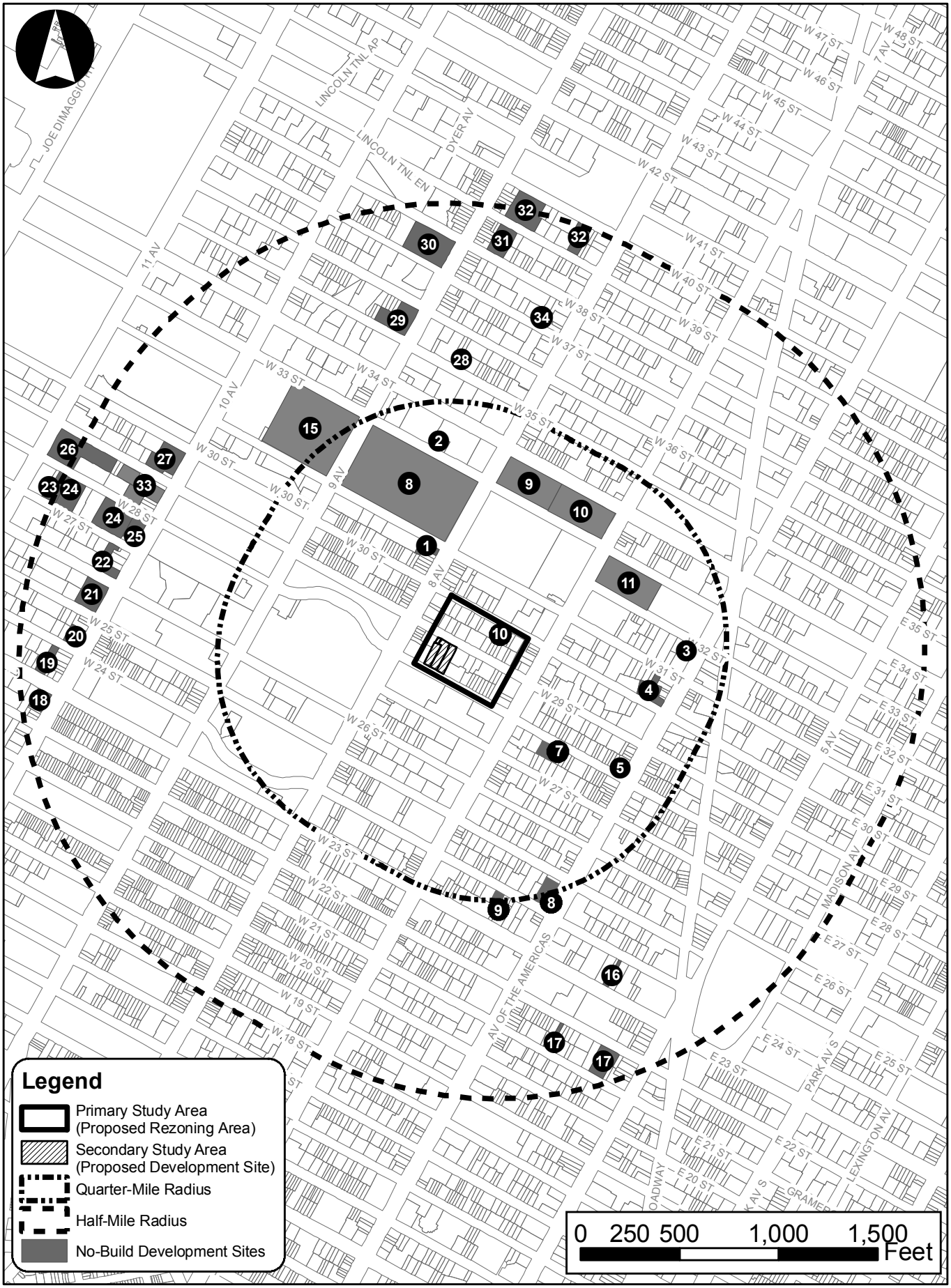


TABLE C-2
No-Build Developments

Map No.	Site Description	Office FA	Hotel FA	Hotel Rooms	Retail FA	Housing Units	Community Facility FA	Comments	CD #	No-Action Residents	No-Action Workers
Within a Quarter Mile Radius of the Rezoning Area (Secondary Study Area)											
1	415 8th Ave. @ SW corner of W. 31 St. (Block 754: Lot 44)				10,000	106		All residential units will be market-rate.	4	174	34
2	Cambria Suites MSG Hotel- 325 W. 33 St. (Block 757: Lot 17)		119,500	239				Commercial building (assume 500 sf/room).	4	0	80
3	The Continental -885 6th Ave @ W. 32 St (Block 807: Lot 43)	21,500			25,600	338		Mixed Use building.	5	521	176
4	855 6th Ave. (btw W. 30/W. 31 Sts.) (Block 806: Lot 34)				38,468	433		Residential condominium building with retail.	5	667	133
5	Former REMY site - 815 6th Ave. (@ W. 28 St.) (Block 804:Lot 34)				59,000	269		Residential condominium building with retail.	5	414	188
6	140-8 W. 28th St. (btw 6th/7th Aves.) (Block 803, Lots 62 and 65)				9,000	252		Residential building with retail.	5	388	37
7*	216-222 W. 30 St. (btw 7th/8th Aves.) (Block 779: Lots 25, 26, 27, 28, 53, 55, 56)		109,032	363				Hotel development	5	0	121
8	Expanded Moynihan Project: Farley Building (Entire block bounded by W. 31 and W. 33 Sts. and 8th/9th Aves.)	235,000	125,000	125	553,100			Conversion of existing building with mixed-uses (train station, hotel and destination retail)	4	0	2641
9	Expanded Moynihan Project: Penn West (Eighth Ave. btw W. 33/W. 34 Sts.)		574,175	574	36,602	492		Mixed-use building.	5	758	321
10	Expanded Moynihan Project: Penn East (Seventh Ave. btw W. 33/W. 34 Sts.)	1,942,577			70,508			Commercial building.	5	0	7982
11	15 Penn Plaza (btw W. 32/W. 33 Sts.)	1,893,814			361,711			Commercial building.	5	0	8660
12	1182 Broadway					44		new residential units in formerly commercial building	5	68	2
13	FIT Expansion (South of W. 28th Street b/w 7th and 8th Avenues)						100,000	new community facility space on the south side of West 28th St. between 7th and 8th Avenues	5	0	100
14	124 W. 23rd Street				4,000	34		Mixed Use building.	4	56	13
	TOTALS for Quarter Mile Radius	***4,092,891***	***927,707***	***1,301***	***1,167,989***	***1,968***	***100,000***			***3,046***	***20,488***
Within a Quarter to a Half Mile Radius of the Rezoning Area (Outside Secondary Study Area)											
15	Hudson Yards Sites 32/33 (West side of Ninth Ave. btw W. 31/W. 33 Sts.)	4,615,700			82,300			Commercial building.	4	0	18710
16	35-41 W. 23 St. (Block 825: Lots 20, 1001-1005)					63		Residential condominium may include ground floor retail	5	97	3
17	Ladies' Mile Rezoning- Development Sites #1 & #2 (Block 823: Lot 31 & Block 823: Lot 16, 17 & 64)				36,081	439		Development Site 1 will include affordable housing units	5	676	126
18	10 Chelsea- 500 W. 23 St.(Block 694: Lot 39)					68		Market-rate residential building.	4	112	3
19	HL 23- 515-517 W. 23 St. (Block 695: Lot 27)					11		Residential condominium building	4	18	1
20	245 10th Ave. (Block 696; Lot 33)					18		Residential condominium building	4	30	1
21	Avenue School - 507 W. 25 St. (Block 697: Lots 27 & 31)				0	0	1600 Seat Pre K -12th Grade School	Community Facility (pre-K to 12 school), assume 1 staff per 20 seats	4	0	80
22	W. 26 St. & 10th Ave. (Block 698: Lot 28 & 32)		26,250	53		31		Approx. 500 sf/hotel room and approx. 850 sf/residential unit	4	51	19
23	West Chelsea Site 4- 547-59 W. 27 St.(Block 699: Lot 5)				15,548	118		Conversion of an existing building	4	194	52
24	West Chelsea Site 5- 507-517 W. 27 St.(Block 699: Lot 9, 22-27, & 44)				39,976	283		Residential development with retail.	4	464	131
25	West Chelsea Site 6- 299-311 10th Ave. (Block 699: Lots 29, 31-33, & 37)				28,637	159		Residential development with retail.	4	261	92
26	NE corner of 11th Ave at W. 28 St. (Block 700: Lots 1, & 49-61)					600		Residential development	4	984	24
27	SW corner of 10th Ave & W. 30 St. (Block 701: Lots 30, 33, 36, 37, & 42-44)				30,000	382		Residential development with retail and parking.	4	626	105
28	345 W. 35 St. (btw 8th/9th Aves.) (Block 759: Lot 14)		100,500	173				Commercial building.	4	0	58
29	Hudson Yards Site 28 (Hudson Mews II (South))- Dyer Ave btw W. 35 St/W. 36 Sts.				16,100	361		80/20 residential development with approx. 3,660 sf of open	4	592	63
30	Hudson Yards Site 24 (Hudson Mews I (North))- Dyer Ave btw W. 37/W. 38 Sts.					448	7,460	Mixed-use development with affordable residential units and 170 parking spaces	4	735	25
31	Hudson Yards Site 37- mid-block on W. 38/W. 39 Sts. btw 8th/9th Aves.(Block 762: Lot 6)	381,990						Garment Center Special District	4	0	1528
32	Hudson Yards Sites 68 & 70- mid-block bounded by W. 39/W. 40 Sts., 8th/9th Aves.		891,240	1,061				Boutique budget hotels	4	0	354
33	Taxi Garage Site: Tenth Avenue (West side btw 28/29 Sts.) (Block 700: Lots 27, 42, 44, 45, 32, 34, & 38)		38,850	78		46		Approx. 500 sf/hotel room and approx. 850 sf/residential unit	4	75	28
34	307-311 W. 37 St. (North side btw 8th/9th Aves.) (Block 761: Lot 28)		93,319	187				Commercial building.	4	0	62
35	CUNY School of Professional Studies						76,000	new community facility space at 132 W. 31st	5	0	76
36	Chelsea Elliott (401-405 W. 25th Street / 429-59 9th Ave.)				7,000	168		22-story apartment bldg w. ground floor commercial	4	276	28
	TOTALS	***4,997,690***	***1,150,159***	***1,552***	***255,642***	***3,195***	***83,460***			***4,915***	***21,541***
	OVERALL TOTALS FOR 1/2-MILE	***9,090,581***	***2,077,866***	***2,853***	***1,423,631***	***5,163***	***183,460***			***7,961***	***42,029***

Sources: New York City Department of City Planning, Western Rail Yard Project, Ladies Mile Rezoning EAS
Notes: FA: Floor Area; CD: Community District

Other Developments Outside of the Secondary Study Area

For the purposes of other analyses that have a larger study area than a ¼-mile radius, such as community facilities and open space, Table C-2 and Figure C-4 also provide a list of developments anticipated to occur within a ¼-mile to a ½-mile of the rezoning area. Many of these projects include projected developments for the West Chelsea, Hudson Yards, and Ladies' Mile Rezoning plans. In total, 22 No-Build developments have been identified within a ¼-mile to a ½-mile of the rezoning area. These developments are anticipated to add approximately 4,997,690 sf of new office space, 1,150,159 sf of hotel use (1,552 rooms), 255,642 sf of retail space, 3,195 dwelling units, and 83,460 sf of community facility use.

Zoning

In the future without the Proposed Action, the primary study area would maintain its existing M1-5 manufacturing zoning. Existing trends in land use are expected to continue within the framework of the current M districts; with continued as-of-right conversion of industrial space to commercial uses, and additional applications for zoning variances for residential development are considered likely to occur. With these trends, the actual land use would become increasingly inconsistent with the underlying zoning designations.

It is assumed that without the Proposed Action, zoning in the secondary study area would reflect existing zoning, special district designations, and any zoning proposals approved by 2019. Thus, the secondary study area will continue to experience an increase in as-of-right residential and commercial development due to rezonings of the Hudson Yards area, Chelsea, and the Sixth Avenue corridor, and areas beyond the ¼-mile secondary study area would continue to experience a similar increase in as-of-right residential and commercial development due to the Ladies' Mile and West Chelsea rezonings.

Future With the Proposed Action (With-Action)

Land Use

Primary Study Area

It is anticipated that the Proposed Action would change land uses in the primary study area, but would not result in significant adverse land use impacts. An M1-6D district would be mapped over the entire rezoning area, replacing the existing M1-5 district. Implementation of the proposed zoning change would allow for new residential development, as well as community facility uses, while commercial and light industrial uses that meet high performance standards would continue to be permitted. The proposed M1-6D would limit the residential conversion of existing commercial and/or light industrial buildings containing 50,000 sf of floor area or more, requiring a one for one replacement of commercial and/or light industrial space. The proposed zoning would also require that, on narrow streets, for zoning lots with street frontage of 50 feet or more, ground floor uses limited to Use Groups 6A, 6C, 7B, 8A, 8B, 9A, 10A, 12A and 12B shall have a depth of at least 30 feet from the street wall and shall extend along a minimum of 50 percent of the width of the street frontage of the zoning lot. The remainder of the street frontage of the zoning lot may be occupied by any permitted uses, lobbies, or entrances to parking spaces, except that lobbies shall be limited to a total width of 40 feet. No minimum 30 foot depth requirement shall apply where a reduction in such depth is necessary in order to accommodate a residential lobby or vertical circulation core. For zoning lots on narrow streets that have street frontage of less than 50 feet, no special ground floor use limitations or 30 foot depth of use requirement shall apply.

The proposed M1-6D district, which would increase the permitted base FAR from 5.0 under current zoning to 9.0 for residential uses and 10.0 for commercial uses, would result in an increase in density relative to existing zoning, and is therefore expected to promote new construction at densities consistent with the built character of the area, as many of the existing buildings are currently overbuilt. The strict height limits imposed by the M1-6D district on the blocks in the rezoning area (maximum height of 210 feet) would preclude the possibility of future development that is out-of-scale with the current neighborhood context.

Under the Proposed Action, light manufacturing uses generally would continue to be permitted, however, given market trends, it is expected that no new industrial development would occur as a result of the Proposed Action.

Reasonable Worst Case Development Scenario

In the future with the Proposed Action, the primary study area is expected to be redeveloped with predominantly residential buildings with ground floor retail, with some hotel and community facilities. As detailed in Attachment A, Project Description, 14 projected and potential development sites, including the Proposed Development site, which is owned by the applicant, have been identified. These include 10 projected development sites, considered most likely to be developed by 2019 and 4 potential development sites, which are considered possible sites for future development but less likely to be developed over the eight-year analysis period. As per CEQR guidelines, the assessment of density-specific impacts, including land use, zoning, and public policy analyses, focuses on the effects of projected developments only and does not assess the effects of potential developments.

It is expected that the 10 projected development sites would accommodate an approximate total of 1,153 dwelling units, 60,729 sf of local retail, 11,390 sf of office, 174 hotel rooms, and 5,390 sf of community facility, as well as 325 public parking spaces (including spaces for 218 monthly parkers) and 62 accessory parking spaces. Accordingly, compared to No-Action conditions the incremental net change that would result from the Proposed Action at these 10 sites is 1,134 dwelling units (including 220 affordable units built pursuant to the Inclusionary Housing program), a net increase of approximately 42,206 sf of retail space, an increase of 7 accessory parking spaces, as well as a decrease of approximately 15,153 sf of commercial office space, 8,596 sf of industrial//warehousing/ wholesale use, 189 hotel rooms, and a loss of 146 public parking spaces. Residential development would consist of new construction and the conversion of existing underutilized buildings. All new developments would have height restrictions, with building heights limited to 210 feet tall.

Assessment

The Proposed Action would result in substantial land use changes in the primary study area, and is expected to lead to positive changes for the area. Land uses in the primary study area currently include underutilized land used for parking and partially vacant buildings reflecting a long-term decline in manufacturing and prohibitions on as-of-right residential development. The Proposed Action would allow for residential and community facility development while retaining and allowing viable light industrial and commercial uses. The proposed zoning change would represent an opportunity to strengthen existing residential uses by allowing new residential development at a scale and density appropriate for the area. The new residential and commercial uses that are expected to result from the Proposed Action would replace underutilized uses.

Furthermore, inclusionary zoning would be made available to give developers incentives to build affordable units. The proposed residential and commercial uses would be compatible with and complement land uses in the surrounding area.

The Proposed Action would also preserve the area's existing built character. The proposed M1-6D district would require street walls and limit heights of new buildings and provide a framework for contextual development that would be consistent with the existing built form.

The Proposed Action would not generate land uses that would be incompatible with surrounding uses, and would not displace land uses in such a way as to adversely affect surrounding land uses. The Proposed Action and the associated Reasonable Worst Case Development Scenario (RWCDS) are not expected to result in any significant adverse impacts to or conflicts with land use in the primary study area.

Secondary Study Area

The Proposed Action is also not expected to result in any adverse land use impacts on the secondary study area. The proposed rezoning is intended to update the zoning to reflect the current mixed-use character of the area. Considering the rezoning area's context – thriving Chelsea to the south and west, the commercial energy of Midtown South to the north and east, and the potential future redevelopment of Penn Station, the Farley Building, and the Hudson Yards to the north – there is a strong argument for rezoning this district as an M1-6D district. Given the existing proximity to residential and mixed-use development in the secondary study area, the changes resulting from the Proposed Action should not cause any difference in secondary study area land use. As such, the Proposed Action is not expected to result in significant adverse land use impacts.

Zoning

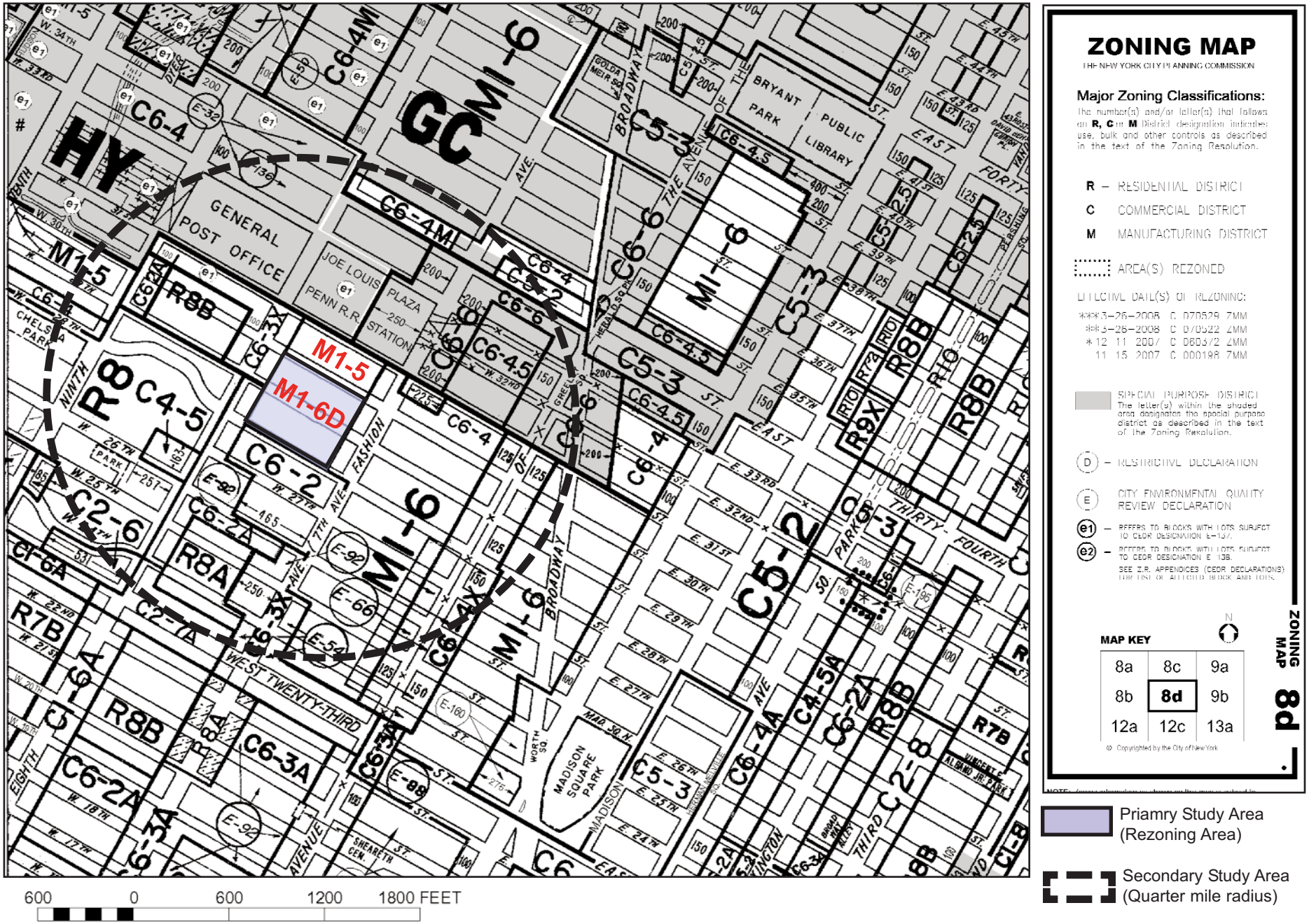
Primary Study Area

Under the future condition with the Proposed Action, the existing zoning in the primary study area (rezoning area) would change. As described in Attachment A, "Project Description," the Proposed Action involves zoning map and text amendments intended to preserve the mixed-use character of the area, promote new construction at densities consistent with the built character of the area, and provide incentives for affordable housing development.

The Proposed Action includes an amendment to the New York City Zoning Resolution text to create the new M1-6D zoning district. In addition, the Proposed Action includes the mapping of an M1-6D district over the mid-block portions of two City blocks replacing the existing M1-5 district (see Figure C-5). The proposed zoning text amendment would also modify Appendix F, Inclusionary Housing Designated Areas, to make the proposed M1-6D district an "Inclusionary Housing designated area." The M1-6D zoning text would allow the use of inclusionary FAR bonus in the rezoning area, providing incentive for the development of affordable housing.

The M1-6D zoning district contains regulations that:

1. allow a full range of commercial and light manufacturing uses appropriate in a mixed-use environment
2. provide for the preservation of existing commercial and light industrial uses
3. allow high density residential development
4. encourage the provision of affordable housing through a 20% floor area bonus
5. allow a broad range of community facility uses
6. require ground floor retail uses and transparency to create a vibrant streetscape
7. mandate height and bulk controls that will produce buildings that preserve and complement the existing neighborhood context


M1-5
M1-6D
M1-6
C6-4M
C6-4
C6-2
C6-6
C5-3
C5-2
C6-4.5
C6-2A
C6-3A
C6-3X
C6-4X
C6-1A
C6-2
C6-3
C6-4A
C6-5A
C2-6
C2-7A
C1-6A
R8B
R8A
R8
R7B
R9X
R10
C4-5
C4-5A
C5
HY
GC
GENERAL POST OFFICE
JOE LOUIS PLAZA
PENN R.R. STATION
BRYANT PARK
PUBLIC LIBRARY
MADISON SQUARE PARK
CHELSEA PARK
BROADWAY
FIFTH AVE
SIXTH AVE
SEVENTH AVE
EIGHTH AVENUE
PARK AVE SOUTH
FASHION
THE AVENUE OF THE
EAST
FORTY-
THIRTY-FOURTH
NINTH
WEST TWENTY-THIRD
THIRD
MADISON
WORTH SQ.
GOLDA MEIR SQ.
HERALD SQ.
GREELEY SQ.
W. 34TH
W. 33RD
W. 32ND
W. 30TH
W. 29TH
W. 28TH
W. 27TH
W. 26TH
W. 25TH
W. 22ND
W. 21ST
W. 20TH
W. 18TH
W. 17TH
E. 45TH
E. 43RD
E. 42ND
E. 40TH
E. 39TH
E. 38TH
E. 37TH
E. 36TH
E. 35TH
E. 33RD
E. 32ND
E. 31ST
E. 30TH
E. 29TH
E. 28TH
E. 27TH
E. 26TH
E. 25TH
E. 24TH
E-32
E-92
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E-54
E-98
E-160
E-195
E-136
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E-92

8. require a special permit for hotels with more than 100 rooms to ensure that the hotel development does not preclude the goal of encouraging residential uses and affordable housing

The text of the proposed zoning text amendments is included in its entirety as Appendix 3 to this document, and its provisions are described below.

The Proposed Action would update the current zoning to reflect the current mixed-use character of the area. The area's current zoning does not allow residential use, whereas the proposed zoning would provide opportunities for new residential development. In addition, existing residential uses within the rezoning area would become conforming uses. The proposed M1-6D zoning would ensure that the zoning designation for the area more accurately represents the actual activities occurring there, and would facilitate the change of the area into a thriving mixed-use neighborhood, while providing for the continued presence of viable commercial and light industrial uses.

The proposed M1-6D district would allow residential and community facility uses within Use Groups 1-4 and establish envelope controls (see Table C-3). It also would continue to permit commercial and high performance, light industrial/manufacturing uses. Food stores, including supermarkets, grocery stores, and delicatessen stores, which had been limited to 10,000 sf of floor area per establishment pursuant to the existing M1-5 zoning district, would not be limited as to size of establishment under the proposed M1-6D district. Zoning for the proposed M1-6D district permits a maximum commercial, manufacturing, and/or community facility FAR of 10.0, and residential development would have a maximum base FAR of 9.0, which could be increased to 12.0 FAR with the provision of affordable housing pursuant to the Inclusionary Housing program. This would considerably increase the existing maximum FAR of 5.0 for commercial and industrial uses and maximum FAR of 6.5 for community facility uses permitted under the existing M1-5 zoning. The new zoning would also limit the residential conversion of commercial and/or industrial buildings containing more than 50,000 sf of zoning floor area, requiring a one for one replacement of commercial and/or industrial space in such buildings. It would also preclude conversion of such large buildings for community facilities with sleeping accommodations without a similar floor area replacement. These regulations are laid out in detail below.

Provisions of the M1-6D District

Preservation of Existing Class B and C Office Space and Manufacturing Uses

For zoning lots containing buildings with at least 50,000 square feet of floor area at the time this text is referred by the City Planning Commission for public comment, no residential use is permitted as-of-right. New buildings constructed on such a zoning lot would be required to provide one-for-one replacement of non-residential floor area. Non-residential floor area being replaced can be either commercial or manufacturing use regardless of the original type of non-residential floor area that occupied the zoning lot.

Provision of Residential Uses

Under the proposed text amendment, residential use will be permitted as-of-right under certain circumstances and otherwise by certification if located on the same zoning lot as a qualifying building. A qualifying building is defined as any building that existed on the date of referral of the text which contained at least 50,000 square feet of floor area on such date and contained at least some non-residential use. Prior to the issuance of a building permit for residential use, an affidavit from a professional engineer or registered architect licensed by the State of New York must be filed with the

Department of Buildings stating that no building on the zoning lot contained at least 50,000 square feet of floor area on the date of referral of the zoning text.

TABLE C-3
Comparison of Existing and Proposed Zoning

	M1-5 (Existing)	M1-6D (Proposed)
Floor Area Ratio (FAR)	5.0 commercial and light industrial 6.5 certain community facilities	9.0 for residential, up to 12 with bonus for Inclusionary Housing 10.0 for commercial, community facility and high performance industrial uses
Use Groups	5 – 14, 16 – 17 (see Note 1 below)	1 – 14, 16 – 17 (see Note 2 below)
Street Wall	• Not required • Maximum 85 feet or 6 stories of front wall before setback	• On Wide Streets, minimum base height of 125 feet, maximum of 150 • On Narrow Streets, minimum base height of 85 feet, maximum base height of 125 feet
Height and Setback (*Refer to definitions of building envelope terms below)	• No height limit • Regular or alternate height and setback and sky exposure plane • Tower regulations (40 percent max.) apply/permitted	• Maximum height of 210 feet • Setback required for buildings greater than 150 feet (wide streets) or 125 feet (narrow streets) • Contextual Envelope

NOTES:
1. Very limited uses in UG 3 and only a limited set of uses in UG 4 are permitted in M1-5 districts.
2. Food stores, including supermarkets, grocery stores, and delicatessen stores, would not be limited as to size of establishment under the proposed M1-6D district.

*** Definition of Terms:**
sky exposure plane- an imaginary inclined plan beginning above the street line at a height set forth in the district regulations and which rises over a zoning lot at a ratio of vertical distance to horizontal distance set forth in the district regulations, which a building may not penetrate.
contextual envelope- term used to describe mandatory street wall, setback, and maximum building height requirements in certain zoning districts as an alternative to sky exposure plan or tower regulations to maintain the continuity of existing street wall and a harmonious relationship with existing buildings in the area.

Residential use by certification is permitted on a zoning lot that on the date of such referral is occupied by one or more qualifying buildings only upon certification by the Chairperson of City Planning that the zoning lot will thereafter contain at least the amount of non-residential floor area that existed within a qualifying building on the zoning lot as of the date of referral, with the following specified conditions:

1. Preservation of non-residential floor area within existing buildings smaller than 50,000 sf of floor area are not counted towards the requirements of the certification
2. Floor area from community facility uses with sleeping accommodations are not counted towards the requirement of the certification
3. Non-residential floor area converted to residential vertical circulation and lobby space need not be replaced as non-residential floor area.

In addition, a restrictive declaration must be recorded with the Office of the City Register, and provided to the Department of Buildings upon application to bind the owner to provide the amount of non-residential floor area that existed on the site as of the date of referral.

Community Facility Uses

The community facility uses currently permitted in M1 districts is very limited, including houses of worship, cemeteries, and certain health facilities. The proposed zoning district would allow the full range of community facility uses, such as universities, schools, museums, and non-commercial art galleries. Community facility uses with sleeping accommodations would only be permitted on the same terms as residential uses.

Retail Continuity and Transparency Requirements

For zoning lots with 50 feet of frontage or more, retail uses are required along 50% of such frontage and are required to have a minimum depth of 30 feet. For all ground floor uses, except residential and community facility uses where allowed, 50% of the streetwall is required to be glazed with transparent material. No portion of a streetwall that Is not transparent may exceed 10 feet in width.

FAR and Affordable Housing

The proposed M1-6D district allows a maximum base FAR for community facility, commercial and light manufacturing uses of 10.0, For M1-6D districts mapped within an Inclusionary Housing designated area, the maximum base FAR for a zoning lot containing residences would be 9.0, bonusable to 12.0 through the Inclusionary Housing program. No other bonuses are allowed.

Under the Inclusionary Housing program, developments within the M1-6D are eligible for a maximum floor area bonus of 33% in exchange for setting aside 20% of the building's floor area for affordable housing. The proposed M1-6D district would modify the Inclusionary Housing bonus formula in order to encourage a range of non-residential uses in addition to affordable housing.

In R10 and equivalent districts within Inclusionary Housing designated areas, the base FAR allowed for a zoning lot containing any residences, such as in a mixed-use building, is 9.0. If this formula were to be applied in M1-6D, it would reduce the as-of-right 10.0 FAR allowed for commercial and community facility uses. The standard Inclusionary Housing formula also requires that 20% of the floor area of a building (excluding the ground floor) be reserved for affordable housing, regardless of whether the building contains non-residential uses above the ground floor. If these features of the Inclusionary Housing formula were not modified, the goal of the M1-6D district to maximize mixed-use development could not be fully implemented.

Therefore, in order to help encourage the mixing of residential and non-residential uses, the base FAR for residential uses would be set at 9.0 plus 0.25 FAR for each 1.0 FAR of non-residential floor area in the building, up to a maximum base FAR of 10.0. This formula is laid out in the chart below.

FAR of Non-residential uses	Adjusted Base FAR
0	9
1	9.25
2	9.5
3	9.75
4	10.0

Eligibility for the Inclusionary Housing bonus would still be based on the provision of 20% of the residential floor area within the building.

Special Permit for Transient Hotel Use

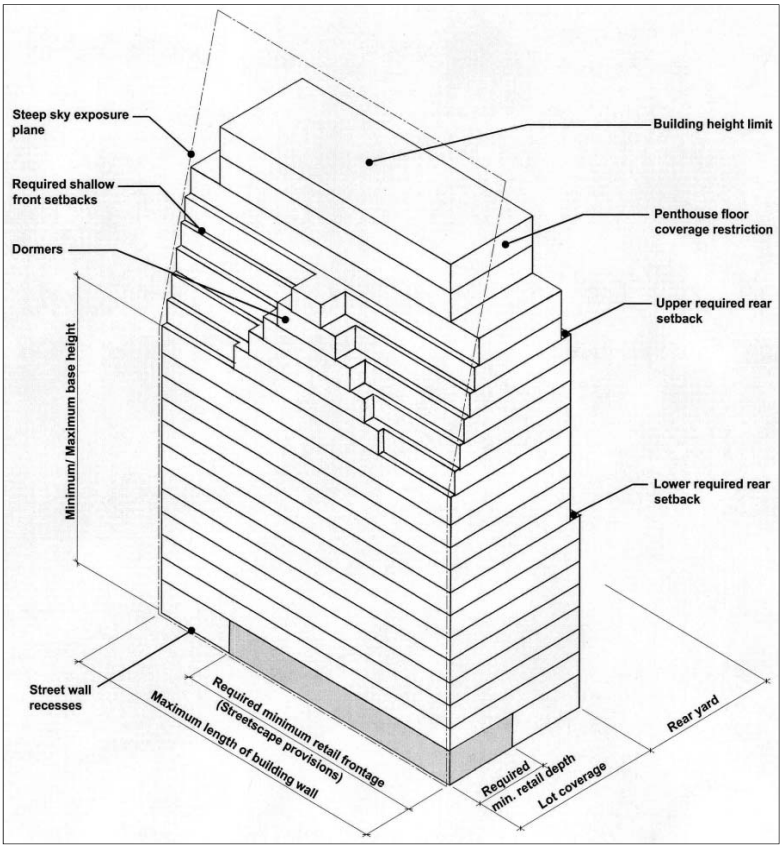
The new M1-6D district would also include provisions relating to transient hotels and the need for a special permit in certain cases. Transient hotels would be allowed in the new M1-6D district, except that developments or enlargements of transient hotels with more than 100 sleeping units on zoning lots where residential use is permitted as-of-right would only be allowed upon certification by the Chairperson of the City Planning Commission to the Commissioner of Buildings that the residential development goal for the area has been met (the residential development goal is 865 units for the area being rezoned as part of the Proposed Action) or, where such residential development goal has not

been met, by special permit pursuant to Section 74-802 (Transient Hotels in M1-6D Districts). This requirement is intended to ensure that hotel development does not conflict with the goal of a vibrant mixed-use district with a significant residential presence.

Bulk Controls in M1-6D District

The contextual height limits established by the M1-6D district would apply to all new development and enlargements and would ensure that new development would be compatible with existing buildings in terms of bulk and height. The table and diagram below illustrate the proposed height and bulk controls.

Bulk Control	**Regulation**
Maximum Building Height	Narrow Street: 210 feet Wide Street: 290 feet
Streetwalls	Street walls are required to be located at the street line.
Maximum Base Height	Minimum: 85 feet Maximum: 125 feet
Setbacks	Above the maximum base height, buildings could not penetrate a sky exposure plane with a ratio of 4 vertical feet to 1 horizontal foot (4:1). However, no sky exposure plane would be required beyond 15 feet of the streetline.
Penthouse	The floor plates of the top two floors of a building would be limited to 80% of the gross area of the story below.
Dormers	As in other high density districts, dormers may penetrate the sky exposure plane and maximum base height. Dormers would also be allowed to penetrate the rear yard setback.
Rear Yard Setback	As with other contextual zoning districts, for buildings with residential uses, a rear yard setback of 10 feet would be required above the maximum base height (125 feet for M1-6D). In M1-6D however, the ten foot setback could be split between two five foot setbacks to be located at the same distance from the base height.



The proposed M1-6 district would require street walls with a base height between 85 and 125 feet on narrow streets and between 125 and 150 feet on wide streets and a maximum building height of 210 feet, compared to the current M1-5 zoning which permits a maximum front wall height of 85 feet and has no building height limit. In the proposed M1-6D district, a sky exposure plane with a ratio of 4:1 would be required above the maximum base height on narrow streets, although no sky exposure plane would be required beyond a 15-foot setback. On narrow streets, dormers may penetrate a maximum base height, provided the aggregate width of all dormers at the maximum base height does not exceed 60 percent of the length of the street wall of the highest story entirely below the maximum base height, with the size of dormers decreasing as the height of the building increases. There are additional restrictions for dormers facing the rear yard line.

This proposed zoning map amendment would also be accompanied by (E) designations on projected development sites 1 through 9 and all of the potential development sites to protect against potential impacts to future residents from hazardous materials in the rezoning area, and (E) designations on all 14 projected and potential development sites (including the Proposed Development Site) to protect against potential impacts to future residents from noise (refer to Attachment A, "Project Description" for details). In addition, (E) designations would be mapped on 8 projected (the Proposed Development Site and projected development sites 1, 3, and 5 to 9) and on three potential development sites (potential development sites A, B and D) to protect against potential impacts to future residents from stacks associated with air emissions from HVAC systems. As described in Attachment A, "Project Description," due to the potential presence of hazardous materials at the Proposed Development Site, which is owned by the applicant, a restrictive declaration has been recorded on March 14, which requires the preparation of a hazardous materials sampling protocol including health and safety plan, which would be submitted to the NYCDEP for approval.

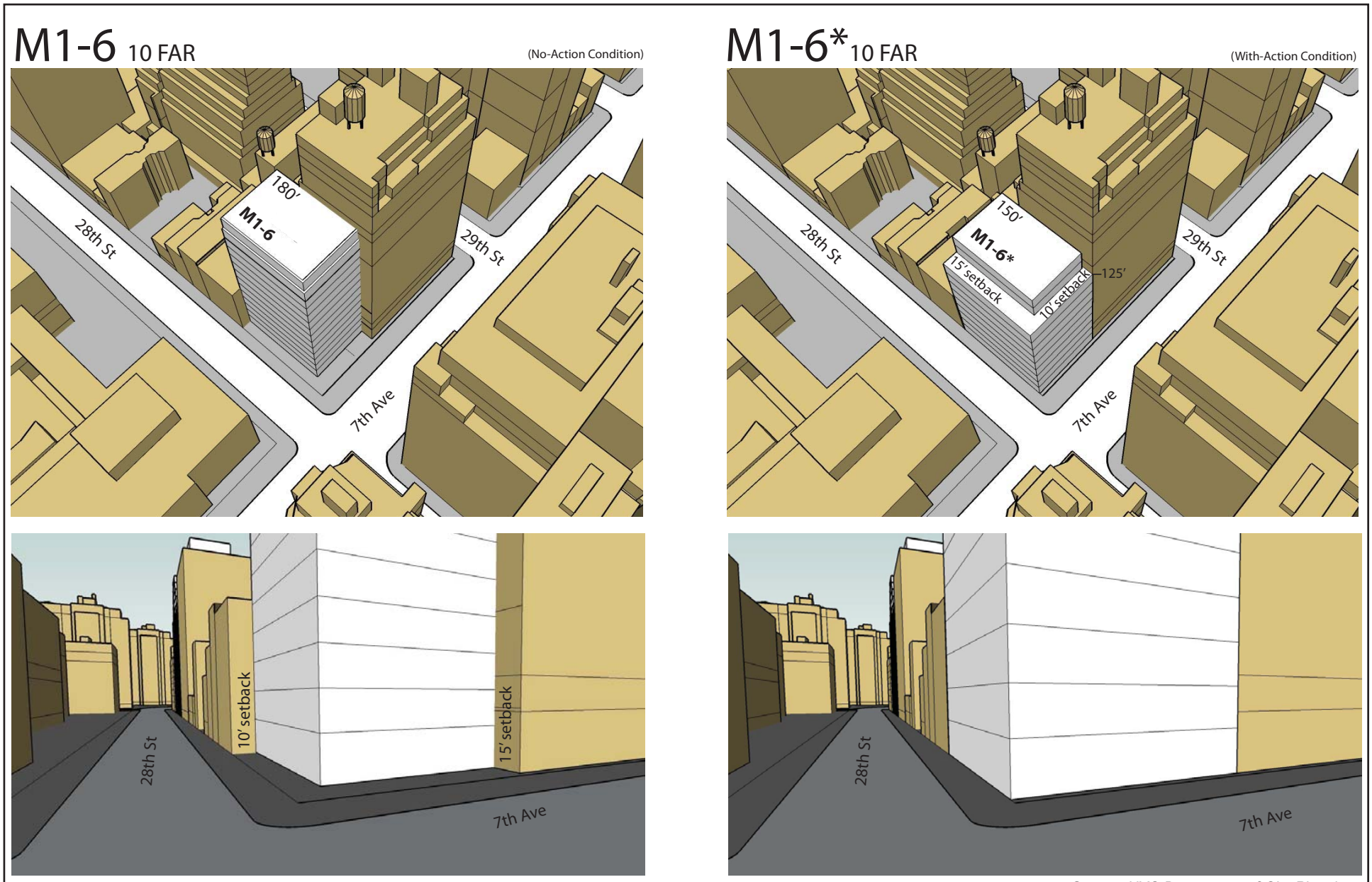
The Proposed Action would change the area in a manner that would both correspond with existing land use and be responsive to documented land use trends over recent years, and would not result in significant adverse impacts related to zoning.

Secondary Study Area

The Proposed Action would also contain an amendment to the Zoning Resolution establishing Seventh Avenue Bulk Controls for the area just outside the eastern boundary of the area proposed to be rezoned to M1-6D, within the existing M1-6 district within 100 feet of the west side of 7th Avenue between West 28th and West 30th Streets. This would provide for minimum streetwalls at the street line between 125 to 150 feet in height before setback. The sky exposure plane would begin at 150 feet and the alternate front setback provisions of Section 43-44 would not apply. This will ensure that any future development along Seventh Avenue would be consistent with the existing context. In addition, no bonuses would be allowed for public plazas or arcades. The diagram in Figure C-6 illustrates the built form of potential development along the blockfront under existing M1-6 regulations and under the proposed Seventh Avenue Bulk Controls.

However, there are no changes contemplated in this zoning amendment to current underlying zoning along these block fronts that would increase FAR or otherwise induce development on these lots.

No other changes to zoning in the secondary study area would result from the Proposed Action. The proposed zoning map and text changes are expected to complement and be compatible with surrounding zoning districts, including commercial and residential districts to the west, north and/or south, and the high performance manufacturing districts that would be retained on the blocks directly north and to the west of the rezoning area. As described previously, there have been a number of rezonings within the surrounding and adjacent areas that have increased the mixed-use character, including the Hudson Yards, West Chelsea and Ladies' Mile Rezonings. Therefore, the proposed



Source: NYC Department of City Planning

West 28th Street Rezoning EAS **Figure C-6**

Potential Development Under Existing M1-6 Regulations and Under the Proposed Seventh Avenue Bulk Controls

zoning map and text changes would complement and be compatible with the zoning districts mapped throughout the secondary study area.

IV. CONCLUSION

The Proposed Action would not directly displace any existing land uses so as to adversely affect surrounding land uses, nor would it generate land uses that would be incompatible with existing and anticipated land uses, zoning, or public policy in the study area. The Proposed Action would result in substantial land use changes in the rezoning area that are expected to lead to positive changes for the surrounding area. The Proposed Action would allow for residential and community facility development while retaining and allowing viable light industrial and commercial uses. The new residential and commercial uses that are expected to result from the Proposed Action would represent a continuation of the historically mixed-use character of the surrounding area, and would not alter land use patterns.

The zoning map and zoning text changes planned as part of the Proposed Action would largely preserve the existing character of northern Chelsea and prevent development that is out of context with the established mixed-use streetscapes. The proposed M1-6D zoning district would establish maximum street wall and building height limits for new buildings. In addition, incentives encouraging development of affordable housing will help address the rising demand for housing while simultaneously ensuring that the diversity and quality of the neighborhood is preserved and enhanced.

The proposed zoning map and text changes are therefore expected to preserve the neighborhood character while allowing for residential growth with opportunities for the creation of affordable housing. Therefore, as presented above, the Proposed Action is not expected to adversely affect land use, zoning, or public policies.

ATTACHMENT D
SOCIOECONOMIC CONDITIONS

I. INTRODUCTION

This attachment examines the potential effects of the Proposed Action on the socioeconomic conditions in the study area, including its potential to result in significant adverse impacts by directly or indirectly changing population, housing stock, or economic activities in the surrounding area. A socioeconomic assessment may be necessary if an action is expected to create substantial socioeconomic changes within the area, which would not be expected to occur in the absence of the action. Such socioeconomic changes include direct 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.

The Proposed Action involves a rezoning of the mid-block portions of two City blocks in the northern portion of Chelsea, in Manhattan Community District 5. An M1-6D contextual zoning district would be mapped to replace the existing M1-5 district. The Proposed Action also includes a zoning text amendment to apply the Inclusionary Housing Program to the M1-6D district to be mapped as part of this action, which will establish an inclusionary floor area ratio (FAR) bonus, providing opportunity and incentive for the development of affordable housing. In addition, the applicant, 249 W 28th Street Properties, LLC, is requesting a special permit for a public parking garage to be located at the Proposed Development Site, pursuant to Sections 13-562 and 74-52 of the New York City Zoning Resolution.

As described in Attachment A, "Project Description," there are 10 projected development sites (including the Proposed Development Site) that are anticipated to be developed by the 2019 analysis year. As compared to the No-Action condition, the Reasonable Worst Case Development Scenario (RWCDS) associated with the Proposed Action (projected development sites only) would result in a net increase of 1,134 residential units, of which approximately 220 would be affordable, approximately 42,206 sf of retail space and 7 accessory parking spaces, and a net reduction of approximately 15,153 sf of office space, 189 hotel rooms, approximately 8,596 sf of wholesale uses, and 194 public parking spaces. As the Proposed Action would result in a net increase of more than 200 residential units, a socioeconomic assessment is warranted. As discussed below, the Proposed Action could also directly displace a total of 26 businesses and seven residential units on 8 of the 10 projected development sites. One of the projected development sites contains an institutional use (spiritual center), which employs approximately 6 workers. The RWCDS assumes that this use would not be displaced as a result of the Proposed Action, and it is therefore expected to remain on the site in the future with or without the Proposed Action. In addition, projected development site 5 is anticipated to be redeveloped with a 363-room hotel in the No-Action condition. As development on the 4 potential development sites identified in the RWCDS is considered less likely to occur by the 2019 analysis year, it is not included in this assessment.

In considering the likely socioeconomic effects of the Proposed Action, it is important to note that Action-induced development is expected to occur over an approximately eight year period on a site-by-site basis, rather than all at once. With the exception of the Proposed Development Site, it is unclear exactly when each of the 10 projected development sites would be developed, or what businesses or tenants would occupy the sites at the time of redevelopment. It is likely that those sites

with known development proposals would be developed first, with the remaining parcels being built later in response to market conditions. During that time, the Proposed Action's overall effect on socioeconomic conditions would gradually increase, with the full effects being reached in 2019.

II. METHODOLOGY

Determining Whether a Socioeconomic Assessment is Appropriate

Based on 2010 *CEQR Technical Manual* guidelines, the following circumstances (*in italics below*) help to determine whether a preliminary socioeconomic assessment is appropriate:

- *Would the project directly displace residential population to the extent that the socioeconomic character of the neighborhood would be substantially altered? The displacement of less than 500 residents would not typically be expected to alter the socioeconomic character of a neighborhood. For projects exceeding this threshold, assessments of the direct residential, indirect residential displacement and indirect business displacement are appropriate.*

As described in Attachment A, "Project Description," the reasonable worst-case development scenario (RWCDS) associated with the Proposed Action identifies 10 projected development sites. Six of the projected development sites (sites 1, 3, 4, 5, 8, and 9) currently have a total of 20 residential units. As both sites 8 and 9 have been identified as projected conversion sites, none of the 13 residential units on those two conversion sites would be directly displaced as a result of the Proposed Action. Thus, direct displacement would occur on four sites (projected development sites 1, 3, 4, and 5), which accommodate a total of seven dwelling units in four low-rise 2-and 4-story buildings. Assuming that the households currently occupying these seven residential units are of average size for the community district (1.54 persons per household), they house approximately 11 residents. Therefore, the Proposed Action would result in the direct displacement of an estimated 11 residents on four of the projected developments sites, which falls far below the CEQR threshold of 500 displaced units that would typically be expected to alter the socioeconomic character of a neighborhood. As such, direct residential displacement due to the Proposed Action would not result in significant adverse impacts, and no further analysis is warranted.

- *Would the project directly displace more than 100 employees? If so, assessments of direct business displacement and indirect business displacement are appropriate.*

Excluding those businesses on projected development site 5 that would be displaced in both the With-Action and No-Action scenarios, the Proposed Action could directly displace 26 businesses with displacement are warranted, and are provided in this attachment.[1]

- *Would the project directly displace a business that is unusually important because its products or services are uniquely dependent on its location, based on its type or location, it is the subject of other regulations or publicly adopted plans aimed at its preservation; or it serves a population uniquely dependent on its services in its present location? If any of these conditions is likely, assessments of direct business displacement and indirect business displacement are appropriate.*

[1] Although an additional business, a parking garage with an estimated 14 employees, is located on the Proposed Development Site, it is operated by the applicant, and would therefore not be involuntarily directly displaced.

The 26 businesses that could be involuntarily directly displaced on the 10 projected development sites conduct a variety of business activities. The firms that are expected to be directly displaced include a total of 4 public parking facilities, 3 retail stores, 6 wholesale merchants, 6 business/legal/professional/ other services, 4 photography studios/film production companies, 2 graphic arts/publishing firms, and 1 construction/contractor firm. The products and services that each establishment provides are widely available in the area and the City and would still be available to consumers as many other existing businesses would remain and firms providing similar products and services would still be available in the surrounding area. Businesses that are expected to be displaced in the study area would likely be able to find alternative properties that are appropriately zoned within New York City. It is considered reasonable that these displaced businesses could relocate to other commercial areas in the immediate area, or within Manhattan or other parts of New York City.

- *Would the project result in substantial new development that is markedly different from existing uses, development, and activities within the neighborhood? Residential development of 200 units or less or commercial development of 200,000 sf of less would not typically result in significant socioeconomic impacts and assessments of indirect residential displacement and indirect business displacement are appropriate.*

The Proposed Action would result in a net increase of 1,134 new housing units by 2019 over the No-Action condition. Therefore, preliminary assessments of indirect residential displacement and indirect business displacement are warranted, and are provided in this attachment.

- *Would the project add to, or create, a retail concentration that may draw a substantial amount of sales from existing businesses within the study area to the extent that certain categories of businesses close and vacancies in the area increase, thus resulting in a potential for disinvestment on local retail streets? Projects resulting in less than 200,000 sf of local-serving or regional-serving retail in the study area or commercial development of 200,000 sf or less would typically not result in significant socioeconomic impacts. For projects exceeding these thresholds, an assessment of the indirect business displacement due to market saturation is appropriate.*

The Proposed Action would result in a net increase of approximately 42,206 sf of retail/food store use, and a net decrease of approximately 15,153 sf of commercial office space, 189 hotel rooms, and 8,596 sf of wholesale space, as well as 146 public parking spaces. It would result in less than 200,000 sf of local-serving or regional-serving retail in the study area and therefore, an assessment of the indirect business displacement due to market saturation is not warranted.

- *Would the project affect conditions within a specific industry? If so, an assessment is appropriate.*

A preliminary assessment of the Proposed Action's effect on specific industries is provided in this attachment.

Based on *2010 CEQR Technical Manual criteria, t*he Proposed Action does not warrant preliminary screening for direct residential displacement, and therefore no further assessment is provided. However, the Proposed Action warrants preliminary screening assessments for indirect displacement of residential population, direct and indirect displacement of businesses, and potential adverse effects on specific industries. In accordance with the guidelines presented in the *CEQR Technical Manual*, the following is a preliminary assessment of four specific factors that could create substantial socioeconomic impacts in an area, including: (1) indirect displacement of residential population; (2) direct displacement of existing businesses; (3) indirect displacement of businesses; or (4) adverse effects on specific industries not necessarily tied to a project site or area.

Study Area Definition

In order to assess these issues, information was gathered regarding the surrounding area's demographic characteristics, housing inventory, housing market, and industrial, commercial, and retail activity. Typically, the socioeconomic study area boundaries are similar to those of the land use study area. The study area encompasses the area affected by the Proposed Action, and an adjacent area within 400 feet, ¼-mile, or ½-mile, depending on project size and area characteristics. The socioeconomic assessment seeks to assess the potential to change socioeconomic character relative to the study area population. For projects that result in an increase in residential population, the scale of the relative change is typically represented as a percent increase in population.

As described above, the Proposed Action would result in a net increase of approximately 1,134 residential units, which would add an estimated 1,705 net new residents to the rezoning area.[2] This population increase represents an approximately 6 percent increase in population compared to the expected No-Action population in a ¼-mile radius from the proposed rezoning area. Therefore, pursuant to *2010 CEQR Technical Manual* guidelines, an approximate ½-mile radius from the proposed rezoning area is the appropriate study area for the socioeconomic assessment (see Figure D-1).

Similar to the land use and zoning analysis in Attachment C, this assessment includes two study areas: the primary study area (i.e., the area to be rezoned) and the secondary study area (i.e., the approximate ½-mile area around the primary study area). The exact boundary of the socioeconomic secondary study area was modified to match the census tracts that most closely define a ½-mile perimeter surrounding the rezoning area (see Figure D-1).[3] By conforming to census tract boundaries, the socioeconomic analysis more accurately applies Census data to depict the demographic characteristics of the surrounding area.

Data Sources

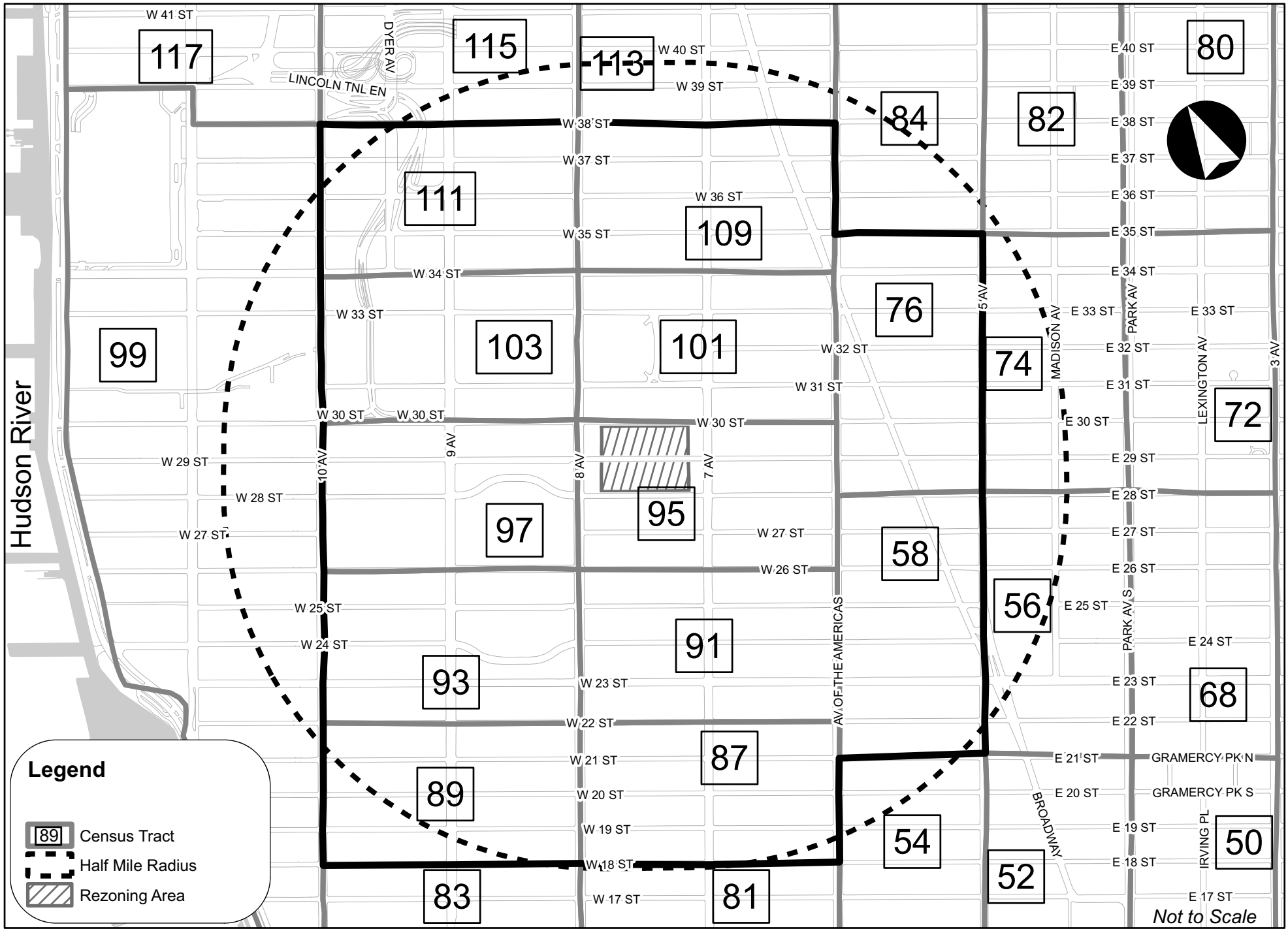
Residential Displacement

The residential displacement analyses are based primarily on data from the 2000 U.S. Census. However, because the census is performed every decade, baseline, or 2010 conditions were determined based on trends and current data. Therefore, while the census data serve as a foundation for the baseline conditions, the information has been updated wherever possible to reflect 2010 conditions in the study area. Updated 2010 information for the study area is based on population and housing estimates for the borough of Manhattan from the Census Bureau Current Estimates Program (American Community Survey). A per year growth rate was determined from the borough's recent growth over the 10 year period between 2000 and 2010.

The Census data have been supplemented, where appropriate, with information from local real estate agencies and real estate listings from local newspapers. Census data on median contract rent provide a statistical basis for identifying trends; these data are affected by the presence of rent-regulated housing units in the study area. Due to the prevalence of rent-regulated housing in the study area, the median contract rent data does not reflect pricing trends experienced by the majority of residents in the area.

[2] Utilizing the average household size for Manhattan Community District 5 of 1.54 persons per household.

[3] For analysis purposes, only those census tracts with an area of approximately 50 percent or greater located within a ½-mile radius of the proposed rezoning area were included within the socioeconomic conditions study area, including Tracts 58, 76, 87, 89, 91, 93, 95, 97, 101, 103, 109, and 111. Those census tracts with less than approximately 50 percent of their area within a ½-mile radius of the rezoning area were excluded.



West 28th Street Rezoning EAS

Figure D-1
Socioeconomic Study Area

However, in order to provide a more accurate picture of current market rate rents in the study area, information was gathered from New York Times real estate sections, real estate agency web sites, and the New York City Department of Finance.

Business Displacement

The assessment of business displacement begins with an analysis of employment trends in the study area, Manhattan, and New York City as a whole. The analysis is based on Reverse Journey-to-Work data from the 2000 Census.[4] Employment data were gathered for each census tract in the study area. Employment data were also obtained from the New York State Department of Labor (NYSDOL). However as NYSDOL emp0loyment data are available at the zip code level, rather than smaller geographic areas such as census tracts or block groups, employment estimates for the study area are based on a slightly different geographic area than the actual boundary of the study area, but nevertheless is still representative of conditions in the study area given the proximity of the zip code boundaries to the study boundary.

A field survey was conducted to ascertain the types of businesses that were in the area, condition of the area, trends, recent developments, and other study area conditions necessary to determine both potential and direct business displacement. In addition, secondary sources were consulted including the *Business and Employment Assessment for Manhattan Blocks 778/779* prepared by HR&A in February 2009. Edison Properties (the applicant for the rezoning and special permit) commissioned HR&A to conduct a site survey and employment density analysis of Manhattan Blocks 778 and 779, which comprise the area to be rezoned. HR&A conducted site visits in January 2009 to 39 buildings located on Blocks 778 and 779.

The employment data gathered identifies the industry sectors that dominate or characterize the study area. Employment data on specific businesses was estimated based on field surveys and secondary research. These data were used to estimate the total number of jobs that would be directly displaced by the Proposed Action through private redevelopment initiatives on the projected development sites. When information on a business was not available through various secondary sources (such as Manta.com), employment was estimated using information on comparable businesses of the same size and with similar hours of operation. In some cases, the number of current employees for the projected development sites was estimated based on the approximate square footage and the standard ratio of 3 employees per 1,000 sf of retail space. However, the jobs identified on the projected development sites in this assessment might not be located on the affected sites at the time the Proposed Action is under way. The analysis represents a "snapshot in time" that describes the existing socioeconomic conditions in the vicinity of the rezoning area. The employment data also were supplemented by field investigations conducted as of January 2009.

In addition, sources for commercial trends and rents include real estate brokers' internet sites (e.g., Cushman & Wakefield and CB Richard Ellis), as well as the CoStar Real Estate Group internet site.

Adverse Effects on Specific Industries

The assessment of potential adverse effects on specific industries is based on the data compiled for assessment of business displacement (described above).

[4] Reverse Journey-to-Work data tabulates and reports the characteristics of workers by the location of their workplace.

III. PRELIMINARY ASSESSMENT

Effects on socioeconomic conditions can occur due to the direct or indirect displacement of residents or businesses from the site(s) of a proposed action. Direct displacement is the involuntary displacement of residents or businesses from the site(s) of a proposed action. Indirect displacement is the involuntary displacement of residents, businesses or employees that results from a change in socioeconomic conditions created by the Proposed Action. According to the *CEQR Technical Manual*, the socioeconomic character of an area is defined in terms of its population, housing stock, and economic activities. Socioeconomic impacts may occur when an action would directly or indirectly change population, housing stock, or economic activities in an area. In some cases, these changes can be substantial, but not adverse. In other cases, these changes may be beneficial to some groups and adverse to others. The purpose of a socioeconomic assessment is to disclose changes that would be created by an action and identify whether they rise to a level of significance.

Indirect Residential Displacement

Indirect residential displacement is the involuntary displacement of residents due to a change in socioeconomic conditions created by a proposed action. According to the *CEQR Technical Manual*, the potential for indirect displacement depends not only on characteristics of the proposed action, but also on the characteristics of the study area. In most cases, the issue for indirect displacement of residential population is that an action would increase property values and thus rents throughout the study area, making it difficult for some existing residents to afford their homes.

The objective of this assessment is to determine whether the Proposed Action would introduce or accelerate a trend of changing socioeconomic conditions that may potentially displace a vulnerable population to the extent that the socioeconomic character of the neighborhood would change.

Existing Conditions

This section describes the population and housing characteristics of the secondary study area as it relates to potential indirect residential displacement. It outlines trend data since 1989, and compares the secondary study area characteristics with the characteristics of Manhattan and New York City as a whole. The secondary study area is located on the west side of southern Midtown Manhattan and is bounded by West 38th Street to the north, Fifth Avenue) to the east, West 18th Street to the south, and Tenth Avenue to the west (see Figure D-1). The study area encompasses most of Chelsea.

Population

According to the Census, the residential population of the study area was approximately 38,869 in 2000. As shown in Table D-1, between 1990 and 2000, the study area's population decreased by 0.6 percent. In contrast, the populations of Manhattan and New York City as a whole increased by 3.3 and 9.4 percent, respectively, during this timeframe. Within the study area, most of the population loss occurred in census Tract 101, which encompasses the northeastern portion of the study area and is the area generally bounded by West 34th Street to the north, Sixth Avenue to the east, West 30th Street to the south and Eighth Avenue to the west.

TABLE D-1
Population and Income Characteristics of Secondary Study Area

	Total Population					Median Household Income [1]			Poverty Status		
	1990	2000	Est. 2010 [2]	Percent Change 1990- 2000	Percent Change 2001-2010	1989 [2]	1999 [2]	Percent Change	1990	2000	Percent Change
Study Area	39,124	38,869	41,804	-0.6%	7.5%	$56,339	$67,140	19.2%	16.0%	15.4%	-3.7%
Manhattan	1,487,536	1,537,195	1,639,870	3.3%	6.7%	$56,733	$61,556	8.5%	20.5%	20.0%	-2.5%
New York City	7,322,564	8,008,278	8,436,545	9.4%	5.3%	$52,444	$50,120	-4.4%	19.3%	21.2%	9.8%

Notes:
[1] Median household income for the study area was estimated based on a weighted average of the median household incomes for the Census tracts in the study area.
[2] 1989 and 1999 median household income are presented in constant 2010 dollars.
Most recent 2010 population estimates for Manhattan and New York City were estimated from the 2009 Census Bureau Current Estimates Program (American Community Survey) by applying an annual growth rate that was derived from each respective area's growth rate over the 9 year period between 2000 and 2009. The 2010 population for the study area was estimated by applying the borough's per year growth rate to the study area.
Sources: U.S. Department of Commerce, Bureau of the Census, 1990 and 2000 Census, Summary File 1 and 3; New York City Department of Finance; and New York City Department of City Planning.

The residential population in the study area is generally concentrated in the southern half of the study area. More than 80 percent of the population in 2000 lived to the south of West 30th Street. Census Tracts 93 and 97, bounded by Eighth and Tenth Avenues and West 30th and West 22nd Streets, which capture major residential developments such as the Elliot Houses and Penn South Houses, contained approximately 32 percent of the study area's population in 2000. The Penn South Houses (also known as the Mutual Redevelopment Houses, Inc.) is a residential limited-equity moderate-income cooperative community containing approximately 3,000 housing units that are roughly bounded by Eighth and Ninth Avenues between West 28th and West 24th Streets. The New York City Housing Authority's Elliot Houses is a public housing complex bordered by West 25th Street, Chelsea Park, Ninth and Tenth Avenues with approximately 589 apartments.

During the period of 2001 through 2010, the study area is estimated to have experienced an increase of approximately 7 percent in its residential population, similar to Manhattan as a whole, but higher than the increase in New York City overall (5.3%). Most of the study area's residential growth occurred in the eastern portion of the study area along Sixth Avenue and on the mid-blocks between Sixth and Eighth Avenues to the south of West 26th Street due to several recent rezonings in the area. In addition, population growth occurred in the northwestern portion of the study between Eighth and Ten Avenues from East 34th to East 38th Streets. Some recent residential developments within the vicinity of the rezoning area include mixed-use developments at 735 Avenue of the Americas, which houses more than 400 residential apartments, Chelsea Centro at 200 West 26th Street, which contains 231 residential units, and the recently constructed residential buildings at 133, 135, 137, and 143 West 22nd Street.

The 1999 median household income within the study area was an estimated $67,140 (in 2010 dollars), about 9 percent higher than the median household income for Manhattan ($61,556), and considerably higher than New York City ($50,120). There was a 19 percent increase in median household income within the study area between 1989 and 1999, as compared to the single-digit percentage increase in Manhattan (8.5 percent). In contrast, the median household income for New York City declined by approximately 4.4 percent between 1989 and 1999.

There was variation in the median household incomes among census tracts in the study area. The lowest by a considerable margin was $42,342 (in 2010 dollars) in census Tract 97 (bounded by West 26th and West 30th Streets between Eighth and Tenth Avenues, which includes portions of the study

area population in Elliot Houses and Penn South). The highest median household income was $93,768 in census Tract 109 (bounded by West 34th and West 38th Streets between Sixth and Eighth Avenues).

In 2000, slightly more than 15 percent of residents in the study area were living below the poverty level, compared to 20 percent in Manhattan, and 21.2 percent in New York City as a whole. For the study area, this was a decrease of almost 4 percent. Nearly 72 percent of the residents in the study area that were living in poverty resided in census Tracts 93 and 97, which encompass the Elliot Houses and Penn South developments. The Elliot Houses accommodate an estimated 1,420 residents and the Penn South Houses approximately 6,200 residents.

Housing

The type, quality and age of housing structures vary across the study area. Generally, most dwelling units are located within the southern portion of the study area to the south of West 26th Street, as well as to the west of Eighth Avenue between West 26th Street and West 30th Street. The housing stock consists of a mix of low-rise townhouses, pre-war co-ops, and luxury doorman buildings, as well as some loft conversions, one limited-equity moderate-income cooperative community (Penn South Houses), and one New York City Housing Authority public housing complex (Elliot Houses). Some of the largest residential developments within the study area include: the 11-and 12-story buildings of the Elliot Houses, a New York City public housing project; the 20-story Penn South Houses, a Mitchell Lama moderate-income housing complex, and the 16-story London Terrace Gardens and London Terrace Towers, which consist of both cooperative and rental apartments on the block generally bounded by West 24th Street, Ninth Avenue, West 23rd Street, and Tenth Avenue. Recently, the area has experienced a significant amount of new residential development that has introduced high-rise rental apartment and condominium buildings concentrated along the Sixth Avenue corridor.

Between 1990 and 2000, the housing stock in the study area expanded by 1,277 units, or about 5.5 percent, outpacing the approximately 1.6 percent growth in the housing stock for Manhattan (see Table D-2). The housing stock of the City as a whole grew by 7.0 percent. The 2000 Census counted a total of 24,388 housing units in the study area, with an additional approximately 2,342 units added as of 2010 (a 9.6 percent gain). The study area had a 7.9 percent residential vacancy rate in 2000, which was comparable to that of the borough (7.5 percent) and slightly higher than the City as a whole (5.6 percent).

TABLE D-2
Housing Unit Characteristics of Secondary Study Area

	Total Housing Units					2000 Vacancy Rate		2000 Tenure, All Occupied Units	
	1990	2000	2010	Percent Change 1990-2000	Percent Change 2000-2010	Percent Occupied	Percent Vacant	Percent Owner Occupied	Percent Renter Occupied
Study Area	23,111	24,388	26,730	5.5%	9.6%	92.1%	7.9%	25.4%	74.6%
Manhattan	785,127	798,144	865,470	1.6%	8.4%	92.5%	7.5%	20.1%	79.9%
New York City	2,992,169	3,200,912	3,396,102	7.0%	6.1%	94.4%	5.6%	30.2%	69.8%

Notes: The 2010 total housing units in New York City and in Manhattan were calculated from the 2009 American Community Survey estimate and applying an annual growth rate determined from the respective area's growth over the 9 year period between 2000 and 2009. The study area's 2010 total housing units was determined by applying the borough's per year growth rate to the study area.
Sources: U.S. Department of Commerce, Bureau of the Census, 1990 and 2000 Census, Summary File 1; New York City Department of Finance; New York City Department of City Planning; and the American Community Survey.

In 2000, approximately 16,748study area housing units (74.6 percent of all occupied units) were renter-occupied, and 5,709 units (25.4 percent) were owner-occupied. A slightly higher percentage (80 percent) of residents in Manhattan rented, as compared to the study area.

According to the 2000 Census, the study area was composed of approximately 22,475 households (see Table D-3). Similar to the borough (3.1 percent), the number of households in the study area grew by only a small percentage (4.4 percent) between 1990 and 2000, whereas households in New York City grew by approximately 7.3 percent. In 2000, the median contract rent (excluding such expenses as electricity, gas, and telephone service) in the study area was about $1,156 per month (in 2010 dollars), higher than the median contract rent for Manhattan and New York City as a whole (see Table D-3). Rents in the study area increased by about 32 percent between 1990 and 2000, a much higher growth rate compared to Manhattan and New York City.

TABLE D-3
Households and Median Contract Rents in Secondary Study Area

	Total Households			Median Contract Rent		
	1990	2000	Percent Change	1990	2000	Percent Change
Study Area	21,526	22,475	4.4%	$877	$1,156	31.8%
Manhattan	716,811	739,167	3.1%	$840	$969	15.2%
New York City	2,816,274	3,022,477	7.3%	$787	$845	7.4%

Notes: 1990 and 2000 median gross rents are presented in constant 2010 dollars.
Sources: U.S. Department of Commerce, Bureau of the Census, 1990 and 2000 Census, Summary File 1 and 3.

It should be noted that the study area exhibited a wide range of median rents. Median rents ranged from a high of $1,981 in Tract 101, which encompasses the area bounded by West 34th and West 30th Streets between Sixth and Eighth Avenues, to a low of $522 in Tract 97, which contains a portion of the Penn South Houses and the Elliot Chelsea Houses public housing project.

Recent Residential Trends

In order to develop a more accurate picture of the current residential real estate market in the primary and secondary study areas, the Census data are supplemented with information from local brokerage firms and Internet sites, including information on recent residential rentals and condominium and cooperative apartment sales. Data gathered through these sources indicate that current market-rate home values and rental rates in the study area are substantially higher than those reported by the 2000 Census.

The housing stock of Chelsea consists of a vast mix of loft warehouse conversions, low-rise townhouses, pre-war co-ops, and newly constructed luxury high-rises, as well as public housing and middle income/Mitchell Lama housing. Recently, the area has experienced a significant amount of new residential development that has introduced a number of high-rise rental apartment and condominium buildings concentrated along the Sixth Avenue corridor. Since 2006, more than 30 new condominium developments have been added to Chelsea. Some of the more prominent new condominium buildings include 650 Sixth Avenue (67 units), 101 West 24th Street (204 units), 101 West 28th Street (45 units), and 261 West 28th Street (52 units). Table D-4 provides a list of major rental and condominium residential developments in the study area completed since 2000.

TABLE D-4
Major Residential Development in the Study Area Completed Since 2000

Development Name/ Address	Residential Program (New Units)
Penmark: 315 West 33rd Street	333
Chelsea Place: 363 West 30th Street	77
Chelsea Atlier: 777 Sixth Avenue	293
Chelsea Centro: 200-220 West 26th Street	356
Chelsea Tower: 100 West 26th Street	227
Chelsea Stratus: 101 West 24th Street	204
202 West 24th Street	180
133 West 22nd Street	89
TOTAL	**1,759**

Throughout the last couple of years, Chelsea has experienced a steady increase in median condominium sales prices, from $780,000 in the 4th quarter of 2006 to approximately $1.53 million in the third quarter of 2010. Despite the recent economic downturn, the area continues to remain attractive with its art galleries, vibrant nightlife, including nightclubs and off-Broadway theaters, the High Line, shopping and restaurants, and Chelsea Piers, which have added value and cachet to the neighborhood.

Table D-5 provides a comparison of the median sale prices for Chelsea as well as the Manhattan market overall. As shown in the table, the median home sale price for all apartments in the Chelsea/Flatiron district in the 3rd Quarter of 2010 was $999,000, approximately 24 percent higher than Manhattan as a whole (median home sale $803,000). The median price per square foot in the Chelsea/Flatiron district also ranked as one of the higher values at $1,100, approximately $109 more per square foot than for the entire borough.

TABLE D-5
Median Sale Price for All Apartments (includes all Condominiums and Cooperatives)

	Median Home Sale Price			Median Price Per Square Foot		
	4th Quarter '07	3rd Quarter '10	% Change	4th Quarter '07	3rd Quarter '10	% Change
Manhattan	$835,000	$803,000	-3.8%	$1,084	$991	-8.6%
Chelsea/Flatiron	$895,000	$999,000	11.6%	$1,167	$1,100	-11%

Source: REBNY's New York City Residential Sales Reports for the 4th Quarter 2009 and the 3rd Quarter of 2010.

Table D-6 provides a comparison of average rent summaries for studio, one-, two-, and three-bedroom apartments in Chelsea and the borough as a whole for January 2011. Average rental rates in Chelsea are some of the highest in Manhattan, and are comparable to rates in the SoHo/TriBeCA, West Village, and Gramercy/Flatiron areas. As shown in the table, rental rates in Chelsea are generally approximately 20 to 30 percent higher than in the borough as a whole. The average rent for a studio in Chelsea is $2,293, over $430 more than the average for Manhattan. A one-bedroom in Chelsea has an average rent of approximately $3,281, over $760 more than the average for Manhattan. Older walk-up tenement buildings, generally located between Ninth and Tenth Avenues, represent the lower end of the housing market.

TABLE D-6
Average Rent Summary for Apartments in January 2011

	Average Rent Summary			
	Studio	1-bedroom	2-bedroom	3-bedroom
Manhattan	$1,857	$2,517	$3,542	$4,817
Chelsea	$2,293	$3,281	$4,549	$5,788

Source: CitiHabitats Rental Market Analysis: January 2011.

Preliminary Assessment for Indirect Residential Displacement

Step 1

Determine if the proposed project would add new population with higher average incomes compared to the average incomes of the existing populations and any new population expected to reside in the study area without the project. If the project would introduce a more costly type of housing compared to existing housing and the housing expected to be built in the No-Action condition, then the new population may be expected to have higher incomes. In some cases, the study area would already be experiencing socioeconomic change and the housing to be developed under a proposed project represents a continuation of an existing trend, and not a new trend. If the expected average incomes of the new population would be similar to the average incomes of the study area populations, no further analysis is necessary. If the expected average incomes of the new population would exceed the average incomes of the study area populations, then Step 2 of the analysis should be conducted.

It is the intent of the Proposed Action to provide zoning changes that would enable the rezoning area to transform from an underutilized industrial area to a more vibrant mixed-use community that provides needed housing. As described in Attachment C, "Land Use, Zoning, and Public Policy," underutilized buildings and parking lots are common in the rezoning area.

The Proposed Action would result in a net increase of 1,134 new housing units by 2019. Of those, 914 units are expected to be market-rate and 220 would be affordable units built pursuant to the Inclusionary Housing program. As 2000 census data indicate that the study area had a median household income of $67,140 (in constant 2010 dollars), the new market rate units are expected to house a population whose median household income would be above the median for Manhattan ($61,556 in 2010 dollars). In addition, through the provision of affordable housing, the Proposed Action would also introduce a population with lower household incomes. This combination of affordable and market-rate housing makes it likely that the population introduced by the Proposed Action would be relatively diverse in its socioeconomic characteristics and that the new population would not be markedly different in socioeconomic profile from the study area population as a whole. The new residential population would likely mirror the economic diversity of the existing population in the study areas and would likely be more diverse than the population that will be introduced to the study area in the future without the Proposed Action.

Under the RWCDS the Proposed Action would result in a net increase of 1,134 residential units. The 13 existing residential units on projected development sites 8 and 9 will remain as part of a conversion. As intended by the Proposed Action, the Inclusionary Housing Program would apply; and would result in up to approximately 220 (20 percent of new construction) affordable units. Although most housing units introduced by the Proposed Action would be new, market-rate housing and would thus likely be more costly than existing older housing stock in the study area, the new market-rate units would be comparable in price to recent and new developments that are planned to be in place by 2019. The affordable units (20 percent of new construction), which would result from developers using the proposed inclusionary housing zoning text amendment to increase floor area, would likely rent at prices comparable to or below most existing rents in the study area.

The greater area of Chelsea has experienced a considerable amount of new residential development that has introduced a number of new housing units, particularly along Sixth Avenue. Immediately adjacent to the southwest corner of the rezoning area an 11-story market-rate residential condominium building with approximately 50 units was recently constructed at the northeast corner of West 28th Street and Eighth Avenue. As shown in Table D-2, the vacancy rate for the study area at 7.9 percent is similar to Manhattan, which had a vacancy rate of 7.5 percent. New York City as a whole had a slightly lower rate at 5.6 percent. From 1990 to 2000, the median contract rent of the study area

($1,156 in 2010 dollars) saw an approximately 32.0 percent increase- more than double the rate of increase for the entire borough (15.2 percent) and more than quadruple the rate for the City as a whole (7.4 percent). Furthermore, the 2000 median contract rent for the study area was more than 19 percent higher than the median contract rent for Manhattan. The relatively high median contract rent indicates the desirability of the study area as a residential neighborhood. Furthermore, as discussed above, real estate data as of the third quarter of 2010 indicate sales prices and rents have increased significantly since 2000.

According the New York City Residential Sales Report for the 3rd quarter of 2010, the median sales price for condominiums and cooperative units in the Chelsea/Flatiron area was $999,000 selling for an average of $1,100 per square foot, as compared to Manhattan as a whole, which had a median sales price of $803,000 for condominiums and cooperative units selling at an average of $991 per square foot.

This upward trend in the study area's residential real estate market is expected to continue in the future without the Proposed Action. Approximately 5,163 residential units are expected to be added to the ½-mile study area in the future without the Proposed Action, increasing the study area housing unit count (26,730 units in 2010) by 19.3 percent. Some of the largest development plans are for mixed-use commercial and residential projects anticipated to be constructed along the Sixth Avenue corridor including 885 Sixth Avenue (at West 32nd Street), 855 Sixth Avenue (between West 30th and West 31st Streets), and 815 Sixth Avenue (at West 28th Street), as well as the planned Moynihan Station Redevelopment Project and several projected developments within the Hudson Yards and West Chelsea rezoning areas to the west. These nine projects combined will add 2,907 units to the study area (accounting for roughly 56 percent of new construction).

As the expected average incomes of the new population generated by the Proposed Action would be similar to the average incomes of the study area populations, no further analysis is warranted, and therefore, no significant adverse impact from the Proposed Action relating to indirect residential displacement would occur.

Direct Business Displacement

The *CEQR Technical Manual* defines direct business displacement as the involuntary displacement of businesses from the site(s) of (or a site(s) directly affected by) a proposed action. A preliminary assessment of direct business displacement looks at the employment and business characteristics of the affected business to determine the significance of the potential impact. A significant direct displacement impact may exist if the businesses in question are either: (1) businesses that provide products or services essential to the local economy that would no longer be in its "trade area" to local residents or businesses due to the difficulty of either relocating the businesses or establishing new, comparable businesses; or (2) a category of businesses that are the subject of regulations or publicly adopted plans to preserve, enhance or otherwise protect them.

Directly Displaced Business Establishments

Most of the projected development in the rezoning area is expected to take place on underutilized parcels. Several of the projected development sites include low-density uses such as public parking lots. As shown in Table D-7, there are currently approximately 50 business establishments located on 9 of the 10 projected development sites that occupy approximately 4,226 sf of industrial/ manufacturing/ warehousing space, 12,704 sf of wholesale space, 30,148 sf of office, 27,653 sf of retail/other commercial uses, and 33,073 sf of public garage. The existing 3-story building on projected development site 2 serves as an institutional use (i.e., spiritual center), which employs

approximately 6 workers, and does not support any business establishments. Based on field surveys conducted by HR&A and subsequent field surveys by Philip Habib and Associates, the various types of businesses on the projected development sites include retail, wholesale merchants, professional offices, messenger/courier services, construction contractors, photography studios, graphic designers and publishers, a nightclub and public parking uses (see Table D-8). It is estimated that these firms provide jobs for roughly 348 people.

TABLE D-7
Classification of Business Establishments
Currently Located on the Projected Development Sites

	Sites										
Types of Business Establishments on the Projected Development Sites	**Proposed Dev't Site**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**Total**
Public Parking	2	1			1	1	1				6
Retail/ Restaurant		1		2		5			2	1	11
Wholesale				1		6			2	3	12
Bus./Legal/Prof.						4			3		7
Other Services				2		1				1	4
Photography Studio/ Music/Production/Film					1				3		4
Graphic Arts/Publishing				1		2			1		4
Construction/Contractor						1		1			2
Number of Employees	**20**	**38**		**50**	**7**	**99**	**4**	**50**	**53**	**27**	**Total Employees 348**
Redeveloped in the No-Action?	**No**	**No**	**No**	**No**	**No**	**Yes***	**No**	**No**	**No**	**No**	

Notes: Bus./Legal/Prof.: Business/Legal/Professional Services; Other Services includes social, human, and personal services.
Projected development site 2 contains an institutional use (spiritual center), which employs approximately 6 workers, and does not support any business establishments. The RWCDS assumes that this use would not be displaced as a result of the Proposed Action, and it is therefore expected to remain on the site in the future with or without the Proposed Action.
*Projected development site 5 would be redeveloped in the No-Action condition with a new 363-room hotel, and all of the existing business would be eliminated in the future without the Proposed Action.
Source: HR&A and PHA field surveys

The Proposed Action is expected to result in the direct displacement of most of the firms identified on the projected development sites. On a few of the sites, including projected development sites 8 and 9, the development anticipated under the Proposed Action would not affect some of the existing businesses. In addition, as described in Attachment A, "Project Description," projected development site 5 is anticipated to be redeveloped with a new 363-room hotel in the No-Action condition and therefore, the existing business establishments and employees would be displaced with or without the Proposed Action. The remaining projected development sites are anticipated to only be redeveloped under the Proposed Action (see Table A-5 in Attachment A, "Project Description" and Table D-7 below). If these sites are redeveloped as assumed under the RWCDS, it is possible that these existing firms could be displaced to facilitate the construction of new development, subject to lease terms and agreements between private firms and property owners existing at the time of redevelopment. While the businesses and jobs currently located on the projected development sites may not be located on the affected sites when redevelopment under the Proposed Action occurs, the current businesses and employment are representative of the economic activities that could potentially be displaced in the future with the Proposed Action.

TABLE D-8
Description of Businesses on Projected Development Sites

General Type of Business	Specific Type of Business	Number of Businesses	Sum of Business Sq. Ft.	# of Employees (est. based on field surveys)
Public Parking	Public Parking Lot Public Parking Garage	5 1	N.A. 33,073 sf	38
Retail	Nightclub Clothing/Apparel [1] Other Misc. Retail	1 8 2	2,455 sf 8,977 sf 3,275 sf	67
Wholesale	Clothing/Apparel/Accessories [2] Cosmetic/Medical/Drug Other Misc. Wholesale	6 3 3	3,276 sf 4,067 sf 5,361 sf	52
Bus./Legal/Prof. Services & Other Services	Courier/Messenger Social/Personal/Human Advertising Architecture/Engineering/Design Real Estate Management	2 3 2 3 1	2,203 sf 4,227 sf 2,201 sf 5,108 sf 910 sf	77
Photography Studios/ Movie/TV production	Photography Studios	3 1	6,018 sf 1,300 sf	9
Graphic Design/ Publishing	Graphic Design Publishing	3 1	5,709 sf 1,381 sf	25
Construction/ Contractor	Construction/ Contractor	2	18,263 sf	80
	TOTALS	***50***	***107,804***	***348***

Notes:
[1] Seven of the 8 Clothing/Apparel retail stores are fur retailers.
[2] Four of the 6 Clothing/Apparel wholesale merchants work in the fur industry.
Source: HR&A 2009 Field Surveys

Excluding those businesses on projected development site 5 that would be displaced in both the With-Action and No-Action scenarios, the Proposed Action would directly displace approximately 26 firms and 225 employees (see Table D-9). Three retail establishments on projected development sites 8 and 9 are expected to remain. In addition, the parking garage that is located on the Proposed Development Site (with an estimated 14 employees) is operated by the applicant, 249 W 28th Street Properties, LLC, and would therefore not be involuntarily directly displaced. As shown in Table D-9, the firms that are expected to be directly displaced include a total of 4 public parking facilities[5], 3 retail stores, 6 wholesale merchants, 6 business/legal/professional/other services, 4 photography studios/film production companies, 2 graphic arts/publishing firms, and 1 construction/contractor firms.

TABLE D-9
Employment Subject to Direct Displacement Under the Proposed Action

	Estimated Employees	Percent of Total	Number of Firms	Percent of Total
Public Parking	20	8.9%	4	15.4%
Retail	34	15.1%	3	11.5%
Wholesale	32	14.2%	6	23.1%
Bus./Legal/Professional and Other Services	70	31.1%	6	23.1%
Photography Studio/ Movie/TV production	9	4.0%	4	15.4%
Graphic Arts/Publishing	10	4.4%	2	7.7%
Construction	50	22.2%	1	3.8%
Total	**225**	**100%**	**26**	**100%**

(1) Although an additional business, a parking garage with an estimated 14 employees, is located on the Proposed Development Site, it is operated by the applicant, and would therefore not be involuntarily directly displaced.

[5] Although an additional parking garage with an estimated 14 employees is located on the Proposed Development Site, it is operated by the applicant, and would therefore not be involuntarily directly displaced.

Preliminary Assessment for Direct Business Displacement

In most cases, direct displacement would not constitute a significant adverse socioeconomic impact under CEQR. The *2010 CEQR Technical Manual* provides a framework to analyze the effects of displacement by asking whether the businesses in question provide products or services essential to the local economy that would no longer be available in its "trade area" to local residents or business due to the difficulty of either relocating it or establishing a new comparable business. In addition, the *CEQR Technical Manual* asks whether a category of businesses is the subject of other regulations or publicly adopted plans to preserve, enhance, or otherwise protect it.

As shown in Table D-7, 9 projected development sites contain 50 businesses with an estimated 348 employees. If these sites are redeveloped as assumed under the RWCDS, it is possible that a portion of these existing firms could be displaced, subject to lease terms and agreements between private firms and property owners existing at the time of redevelopment in the future with the Proposed Action. While the businesses and jobs currently located on the projected development sites may not be located on the affected sites when redevelopment under the Proposed Action occurs, the current businesses and employment are representative of the economic activities that could potentially be displaced in the future with the Proposed Action.

As shown in Table D-9, there are an estimated 225 workers that could be directly displaced as a result of the Proposed Action. Slightly less than a quarter (6) of the potentially displaced businesses are wholesale merchants, and public parking facilities account for approximately 15.4 percent. Approximately 23 percent (6) of the businesses are in the industry sectors of business, legal, professional, or other services. Retail firms comprise approximately 11.5 percent of the firms potentially displaced, and graphic arts or publishing represent 8 percent. Photography studios and film production represent approximately 15.4 percent, and construction firms represent approximately 4 percent.

The businesses that could be displaced conduct a variety of business activities. The products and services that each establishment provides are widely available in the area and the City and would still be available to consumers as many other existing businesses would remain and firms providing similar products and services would still be available in the surrounding area.

Businesses that are expected to be displaced in the study area would likely be able to find alternative properties that are appropriately zoned within New York City. It is considered reasonable that these displaced businesses could relocate to other commercial areas in the immediate area, or within Manhattan or other parts of New York City. Furthermore, it is the intent of the Proposed Action to protect office space in the rezoning area. As described in Attachment A, "Project Description," the intent of the proposed zoning change (to an M1-6D zoning district) is to update the zoning to reflect the current mixed-use character of the area, preserving maximum flexibility for the area and allowing a wider range of residential, community facility, commercial, and high-performance industrial uses. The proposed M1-6D district is designed to retain the concentration of affordable office space. It would limit the conversion of larger industrial and commercial buildings to residential use or to community facility use with sleeping accommodations, by requiring a one to one replacement of commercial and/or industrial space in buildings with more than 50,000 sf of zoning floor area.[6] This is expected to protect existing Class B and C office and light manufacturing uses in the rezoning area.

[6] For zoning lots containing buildings with at least 50,000 square feet of floor area at the time this text is referred by the City Planning Commission for public comment, no residential use is permitted as-of-right. New buildings constructed on such a zoning lot would be required to provide one-for-one replacement of non-residential floor area. Non-residential floor area being replaced can be either commercial or manufacturing use regardless of the original type of non-residential floor area that occupied the zoning lot.

Approximately 8,596 sf of wholesale and 71,853 sf of commercial space (including office and hotel space) as well as 146 public parking spaces are expected to be displaced as a result of the Proposed Action. Although the Proposed Action would directly displace a moderate amount of commercial space, it is reasonable to assume that existing office, wholesale, retail and other commercial space inventory in the study area and surrounding study area would readily accommodate the displaced office and retail. According to listings from the CoStar Real Estate Group and CB Richard Ellis in March 2009, office space is available from $40 to $60 per square foot, while general retail space is available at approximately $80 to $200 per square foot. Office vacancy rates in the Chelsea and Penn Station areas of Manhattan were 8.6 and 6.3 percent, respectively, in the fourth quarter of 2009, lower than Midtown's office vacancy rate of 12 percent.

In addition, the potentially displaced businesses are not the subject of regulations or publicly adopted plans that preserve and protect their business category. There are no policies or regulations that directly protect the 26 businesses that are expected to be displaced as a result of the Proposed Action (the affected businesses do not fall within any in-place industrial parks or business improvement districts, for example).

As described in Attachment C, "Land Use, Zoning, and Public Policy," the Proposed Action would be consistent with the City's public policy initiatives aimed at encouraging investment and a mix of uses in Chelsea, including new residential uses, and bringing increased vitality to an underutilized area. The Proposed Action would complement the Chelsea 197-a Plan through its capacity to promote orderly growth and change. The proposed zoning would allow development to reflect the needs of surrounding neighborhoods, be it residential demands from Chelsea to the south or commercial and industrial opportunities from Midtown. The Proposed Action would permit the existing high performance industrial uses to remain, while facilitating new residential or commercial development in the area. In addition, the Proposed Action would also support the City's goal of developing new housing throughout the City, including affordable housing pursuant to Inclusionary Housing.

As discussed above, the Proposed Action would not result in the direct displacement of any businesses that provide products or services essential to the local economy that would no longer be available in its trade area, nor would it result in the displacement of any business that is the subject of regulations in the publicly adopted plans to preserve, enhance or otherwise protect it. Therefore, the Proposed Action would not have a significant adverse direct business displacement impact, and no further assessment is warranted.

Indirect (or Secondary) Business Displacement

In most cases, the issue for indirect displacement of businesses is that an action would markedly increase property values and rents throughout the study area, making it difficult for some categories of businesses to remain in the area.

The purpose of the preliminary assessment for indirect business displacement is to determine whether a proposed action has potential to introduce a trend that makes it difficult for certain businesses to remain in the area. Per the 2010 *CEQR Technical Manual* Section 321.2, these businesses include: (1) businesses that provide products or services essential to the local economy that would no longer be in its "trade area" to local residents or businesses due to the difficulty of either relocating the businesses or establishing new, comparable businesses, or (2) a category of businesses that are the subject of regulations or publicly adopted plans to preserve, enhance or otherwise protect them.

Additionally, indirect displacement of businesses may occur if an action directly displaces any type of use that either directly supports businesses in the area or brings a customer base to the area for local

businesses, or if it directly or indirectly displaces residents or workers who form the customer base of existing businesses in the area.

Business Profile and Employment Patterns

To better understand economic patterns in the study area, it is useful to examine employment trends in Manhattan and the City as a whole. In general, the manufacturing sector, the leading employer in the City in the first half of the 20th century, gave way to more service-oriented industries, such as financial and business services, tourism, and entertainment in the city throughout the latter part of the 20th century.

Table D-10 provides recent fourth quarter 2000 and 2009 private sector employment data for the secondary (½-Mile) study area, as well as for Manhattan and New York City as whole, compiled by NYSDOL. The geographic distribution of employment in the secondary study area varies widely, but the largest concentration of jobs is primary located east of Ninth Avenue. Additional concentrations of employment are located to the west at the Eastern Rail Yard and at the Jacob K. Javits Convention Center. The secondary study area contained a total of 215,390 private sector jobs in 2009, an approximate 6 percent increase from 2000. In contrast, private sector employment in Manhattan and the city as a whole decreased slightly from 2000 to 2009 by 7.6 and 3.1 percent, respectively.

TABLE D-10
2000 and 2008 Private Sector Employment in the Study Area[1]

Industry Sector	Q4 2000		Q4 2009		Percent Change
	Jobs	Percent of Total	Jobs	Percent of Total	2000 to 2009
Agriculture, Forestry, Fishing & Hunting	N.A.	N.A.	0	0.00%	N.A.
Utilities	N.A.	N.A.	N.A.	N.A.	N.A.
Construction	5,593	2.8%	6,910	3.2%	23.5%
Manufacturing	25,596	12.6%	11,488	5.3%	-55.1%
Transportation & Warehousing	5,639	2.8%	3,156	1.5%	-44.0%
Wholesale Trade	29,486	14.5%	26,863	12.5%	-8.9%
Retail Trade	24,357	12.0%	23,456	10.9%	-3.7%
FIRE	13,574	6.7%	16,593	7.7%	22.2%
Professional, Scientific, Tech., & Info. Services	37,107	18.3%	41,635	19.3%	12.2%
Business Management and Admin.	23,999	11.8%	33,136	15.4%	38.1%
Educational Services	2,820	1.4%	4,085	1.9%	44.9%
Health & Social Services	19,306	9.5%	23,712	11.0%	22.8%
Food, Hotel, & Entertainment Services	9,156	4.5%	15,185	7.1%	65.8%
Other Services	4,775	2.4%	8,214	3.8%	72.0%
Unclassified	965	0.5%	617	0.3%	-36.1%
Secondary Study Area Total	**202,752**	**100.0%**	**215,390**	**100.0%**	**6.2%**
Manhattan Total	**1,980,954**	**100.0%**	**1,830,482**	**100.0%**	**-7.6%**
New York City Total	**3,134,626**	**100.0%**	**3,036,051**	**100.0%**	**-3.1%**

Notes: FIRE- Finance, Insurance, and Real Estate
[1]The study area for employment includes zip codes 10001 and 10018, due to the limited availability of similar data at the census tract or smaller level. The study area for employment includes the areas known as Midtown South and the Fashion Center and is generally bounded by West 40th Street on the north, West 24th Street on the south, Fifth Avenue on the east, and the Hudson River to the west.
Source: Quarterly Census of Earning and Wages (QCEW) from the NYSDOL

Consistent with the overall trend of declining industrial activity, Table D-10 shows that the secondary study area experienced significant losses in jobs in the manufacturing and transportation and warehousing industries within the last several years. Employment within the manufacturing and

transportation and warehousing industries declined by approximately 55 and 44 percent, respectively, between 2000 and 2009. Wholesale trade and retail trade also experienced declines of approximately 9 and 4 percent, respectively, from 2000 to 2009 in the secondary study area, Industry sectors of other services, food, hotel, and entertainment services, and educational services experienced the largest increases in employment during this time frame with growths of approximately 72, 66 and 45 percent, respectively. Overall the secondary study area is characterized by a diverse mix of retail, office, warehousing, and manufacturing activity; no one industry sector characterizes employment within the secondary study area

Table D-11 provides the current business profile and distribution of employment in the primary study area. As shown in Table D-11, the rezoning area is estimated to include approximately 480 business establishments that employ approximately 3,100 workers. The majority of workers (approximately 54 percent) within the primary study area are employed in office-based industries, which include professional, technical and scientific services, publishing, social assistance, Internet startups, and other technological services. The median office business staff is four employees. The next largest employment group within the primary study area is the "Other" classification, which includes film and TV production, artist and photography studios, printing, food and beverage services, and educational uses, employing roughly 18 percent.

TABLE D-11
Distribution of Employment by Use in the Primary Study Area

Use	Number of Businesses	Percent of Total	Number of Employees	Percent of Total
Office	215	45%	1,660	54%
Retail	70	15%	350	11%
Manufacturing	25	5%	180	6%
Wholesale	55	11%	310	10%
Other	110	23%	550	18%
Parking	5	1%	25	< 1%
Hotel	1	< 1%	40	1%
Total	480	100%	3,100	100%

Source: HR&A 2009 Field Surveys

Wholesale and retail establishments account for a combined 21 percent of the primary study area's employment. Almost 5 percent of the total retail and wholesale workers are in the fur industry. The median staff size for retail and wholesale businesses is four employees. Although the rezoning area encompasses much of the Fur District of Manhattan, which formerly thrived as a manufacturing area that supported manufacturers, wholesalers, and retailers in the fur trade industry. Manufacturing establishments account for about 6 percent of the employment within the primary study area. In addition to fur, types of manufacturing in the primary study area include apparel, jewelry, and leather goods. Most manufacturing businesses are small and have a median staff size of three employees.

As described in Attachment C, "Land Use, Zoning, and Public Policy," the industrial decline experienced throughout the city during the latter part of the 20th century also occurred within the rezoning area. During the early part of the 20th century, the area encompassing the rezoning area became recognized as part of the Fur District in Manhattan, which is roughly bounded by West 30th Street, Fifth Avenue, West 27th Street and Eighth Avenue. Manhattan's Fur District catered to manufacturers, wholesalers, and retailers in the fur trade industry, which utilized multi-story loft buildings and large refrigerated storage rooms.

Similar to most manufacturing industries, the fur manufacturing sector has experienced substantial declines due to competition from abroad, resulting in most manufacturing processes in the industry

leaving the country. Within the entire Fur District area, only about 100 fur manufacturing businesses remain. The rezoning area contains 31 fur businesses employing approximately 127 workers. These fur businesses consist of fur pelt wholesalers, fur manufacturers, fur apparel wholesalers, and fur apparel retailers. The majority of these businesses are in the retail and wholesale sectors. Most retail/wholesale product is imported from China. More than three quarters of the firms and an equal proportion of workers are in the retail and wholesale sectors. The rezoning area includes approximately seven fur manufacturers employing an estimated 34 workers, which are generally concentrated within two buildings: 224 West 30th Street and 208 West 29th Street.

Preliminary Assessment for Indirect Business Displacement

According to CEQR, businesses most vulnerable to indirect displacement due to increased rents are typically those businesses whose uses are less compatible with the economic trend which is creating upward rent pressures in the study area; i.e., those businesses that tend not to directly benefit (in terms of increased business activity) from the market forces generating the increases in rent. For example, if a neighborhood is becoming a more desirable place to live, uses that are less compatible with residential conditions (such as manufacturing) would be less able to afford increases in rent due to increases in property values compared to a neighborhood service use, such as a bank, which could see increased business activity from the increased residential presence.

The Proposed Action would introduce a zoning change that would allow for medium-to high-density residential uses within a well-established mixed-use area that supports a dense and diverse amount of economic activity as well as residential uses. As described in Attachment A, "Project Description," similar to other existing high-density manufacturing districts in southern Midtown, the proposed rezoning area has largely transitioned from a manufacturing district to an important center of Class B and C commercial office space that accommodates a range land uses, including office, retail, wholesale, light industrial/manufacturing, warehousing, community facility, and residential uses, Although historically the area contained a number of manufacturing/industrial business, it is more accurately characterized as a low-rent office and residential district with a minor light industrial component, where the major employment sector is business and other services (refer to Table D-11). In addition, there is an existing trend within the secondary study area toward increased residential and mixed-use development. As described in Attachment C, more than 5,163 residential dwelling units are anticipated to be constructed within an approximate ½-mile radius of the rezoning area, of which 1,968 dwelling units would be constructed within a ¼-mile of the rezoning area, in the future without the Proposed Action. The Proposed Action is not expected to alter or accelerate or create new economic patterns in the study area.

As industrial use is minor within the study area, the possibility of this type of indirect displacement within the study area—and its potential effect on the character of the neighborhood—is limited. In sum, there is currently a variety of uses within the study area, and the study area would continue to be largely defined by its mix of commercial, residential, community facility, warehousing, and light industrial land uses in the future with or without the Proposed Action. The Proposed Action would also not result in the indirect displacement of any business that are the subject of regulations or publicly adopted plans to preserve, enhance or otherwise protection. For example, the study area does not contain any in-place industrial parks, or significant maritime industrial areas.

As described above, it is the intent of the Proposed Action to protect office space in the rezoning area. The proposed M1-6D zoning district would allow for a wider range of residential, community facility, commercial uses (including food stores without size limits), as well as high-performance industrial uses. It would limit the conversion of larger industrial and commercial buildings to residential use or to community facility use with sleeping accommodations, by requiring a one to one replacement of commercial and/or industrial space in buildings with more than 50,000 sf of zoning floor area.

As detailed above, the Proposed Action would also not directly displace uses of any type of use that directly support businesses in the area or bring a customer base to the area for local businesses. As shown in Table D-9, approximately 26 businesses with an estimated 225 employees are located on projected development sites that are not anticipated to be developed in the future without the Proposed Action. If these sites are redeveloped as assumed under the RWCDS, it is possible that these existing firms could be directly displaced, subject to lease terms and agreements between private firms and property owners existing at the time of redevelopment. The uses located on these sites—primarily business, legal, professional and other services, wholesale, retail and public parking facilities —do not directly support businesses in the area or bring people to the area that form a customer base for local businesses. As discussed in the preliminary assessment of direct business displacement, local businesses do not rely on the potentially displaced businesses' products and services for day-to-day needs. And these uses characteristically do not draw large volumes of customers to their locations so as to create a customer base to surrounding establishments.

The Proposed Action would also not directly or indirectly displace enough residents, workers, or visitors to adversely affect the customer base of existing businesses in the study areas. As described in the *Methodology* section above, there are only 11 residents that could potentially be directly displaced; this is not of an amount that would alter the customer base of existing businesses in the study areas. As shown in Table D-9, approximately 26 businesses with an estimated 225 employees are located on projected development sites that are not anticipated to be developed in the future without the Proposed Action. If these sites are redeveloped as assumed under the RWCDS, it is possible that these existing firms could be displaced, subject to lease terms and agreements between private firms and property owners existing at the time of redevelopment. It is unlikely that the low number of directly displaced workers would have a significant impact on surrounding businesses.

With respect to indirectly displaced residents and workers, as described in the assessment of indirect residential displacement and this assessment of indirect business displacement, the Proposed Action is not expected to result in significant adverse impacts due to indirect displacement of residents or workers. While potentially displaced employees and residents may form a portion of the customer base of neighborhood service establishments (food and drink establishments, retail, etc) they would be replaced by a new residential population, as intended by the goals of the Proposed Action. In addition, new commercial uses that are being attracted to the area due to a growing residential base would also bring added employment to the area. Overall, the Proposed Action would result in a net increase in residents that would add to the customer base of existing study area businesses.

As none of the preliminary assessment screening thresholds would occur, further detailed analysis is not necessary, and no significant adverse impacts from the Proposed Action relating to indirect business displacement are expected.

Adverse Effects on Specific Industries

According to the *CEQR Technical Manual,* a significant adverse impact may occur if an action would affect the operation or the viability of a specific industry. As an example, the *CEQR Technical Manual* cites new regulations that prohibit or restrict the use of certain processes critical to certain industries. The following preliminary analysis is based on screening criteria presented in Section 323, Chapter 5 of the *CEQR Technical Manual.*

Preliminary Assessment for Adverse Effects on Specific Industries

- ***Would the action significantly affect business conditions in any industry or any category of business within or outside the study area?***

The Proposed Action would not significantly affect business conditions in any industry or any category of business within or outside the study area. As shown in the preliminary assessments of direct and indirect business displacement, the Proposed Action is expected to help revitalize and strengthen economic conditions in the rezoning area. The Proposed Action would introduce zoning changes that would allow for medium-to high-density residential uses within a mixed-use area. This zoning change is expected, under the RWCDS, to result in a net increase of approximately 42,206 sf of retail use and a net reduction of approximately 8,596 sf of wholesale, 71,853 sf of commercial uses (including hotel and office spaces), and 146 public parking spaces on projected development sites within the rezoning area.

Because the proposed zoning actions would allow for mixed-uses to continue, there would not be any specific new economic activities introduced to the study area. For instance, the RWCDS would result in a net increase in housing units, which are already prevalent in the study area. The Proposed Action would also continue to permit commercial, office, and light industrial uses, all of which are already present and well established in the study area. Although the new housing units would increase the retail expenditure potential of the study area, this consumer spending would not constitute a new economic activity, given that the study area already contains a large residential population and street level retail is common and located along avenue corridors and major cross streets in the study area. Increased consumer spending would also not constitute a new economic activity in the study area.

Although the new M1-6D district would limit the development of transient hotels in the rezoning area, the Proposed Action is not expected to adversely affect the hotel industry. As described in Attachment C, transient hotels would be allowed in the new M1-6D district, except that developments or enlargements of transient hotels with greater than 100 sleeping units would only be allowed upon certification by the Chairperson of the City Planning Commission to the Commissioner of Buildings that the residential development goal has been met for the area (the goal is 865 DUs for the area being rezoned as part of the Proposed Action) or, where such residential development goal has not been met, by special permit pursuant to proposed Section 74-802 (in M1-6D Districts). Transient hotels are permitted in C1, C2, C4, C5, C6, C8, and M1 districts. As described in Attachment C, zoning classifications within an approximate ¼-mile of the rezoning area include a mix of commercial and light industrial manufacturing districts that would allow transient hotels as-of-right, including: M1-5, C6-6, C6-4.5, C6-4, C6-4M, C5-2, and M1-6 to the north; M1-6, C6-4, and C6-4X to the east; C6-2, C6-2A, C6-3X, C2-6, and C2-7A to the south, and C6-3X, C6-2A, C4-5, M1-5 and C6-4 to the west (refer to Figure C-3).

- ***Would the action indirectly substantially reduce employment or impair the economic viability in the industry or category of business?***

The Proposed Action would not indirectly reduce employment or have an impact on the economic viability in any industry or category of business. Development under the Proposed Action is not expected to introduce new, competing businesses that would drive out or otherwise diminish the performance of any identifiable business sector. The proposed rezoning area does not contain a concentration of any particular industry. Furthermore, while the Proposed Action is not expected to cause indirect displacement, any indirect displacement that may occur would not be concentrated in a particular industry. Therefore, there would not be an adverse impact on a particular industry or category of businesses as a result of the Proposed Action.

As stated above, the Proposed Action would affect no particular industry. There are 26 existing businesses located on 8 projected development sites that could be displaced if those sites are redeveloped as assumed under the RWCDS (refer to Table D-9 above). Such potential displacement, however, would be subject to lease terms and agreements between private firms and property owners existing at the time of redevelopment. These firms employ an estimated 225 workers, which account for approximately 7.3 percent of the employment in the rezoning area and less than one percent of the employment in the secondary study area. Furthermore, while the Proposed Action is not expected to cause indirect displacement, any indirect displacement that may occur would not be concentrated in a particular industry.

As noted above, the area encompassing the rezoning area has historically been known as part of the Fur District in Manhattan, which is roughly bounded by West 30th Street, Fifth Avenue, West 27th Street and Eighth Avenue. Similar to most manufacturing industries, the fur manufacturing sector has experienced substantial decline due to competition from aboard, resulting in most manufacturing processes in the industry leaving the country. Within the entire Fur District area, only about 100 fur manufacturing businesses remain. The rezoning area contains 31 fur businesses employing approximately 127 workers. These fur businesses consist of fur pelt wholesalers, fur manufacturers, fur apparel wholesalers, and fur apparel retailers. Most retail/wholesale product is imported from China. More than three quarters of the firms and an equal proportion of workers are in the retail and wholesale sectors. The rezoning area includes approximately seven fur manufacturers employing an estimated 34 workers, which are generally concentrated within two buildings at 224 West 30th Street and 208 West 29th Street. Neither of those buildings has been identified as a projected development site.

Therefore, there would not be an adverse impact on a particular industry or category of businesses.

IV. CONCLUSION

In sum, it is concluded that the Proposed Action would not result in significant adverse socioeconomic impacts. Conclusions related to each of the four areas considered in the socioeconomic preliminary screening analysis, including: indirect residential displacement; direct business displacement; indirect business displacement; and adverse effects on specific industries, as outlined in the *CEQR Technical Manual*, are summarized below.

Indirect Residential Displacement

According to the *CEQR Technical Manual*, indirect displacement of a residential population can occur when an action increases property values and thus rents throughout a study area, making it difficult for some current residents (or residents in the No-Action) to continue to afford to live in the community.

The population added by the Proposed Action is expected to have similar socioeconomic characteristics to the existing population and future population expected to reside in the study area without the Proposed Action. Housing costs are expected to reflect rather than alter the existing market trends within the surrounding neighborhood. There is an existing trend toward increased rents that is expected to accelerate in the future without the Proposed Action. Furthermore, the Proposed Action would encourage a mix of market-rate and affordable housing. The new residential population would likely mirror the economic diversity of the existing population in the study areas and would likely be

more diverse than the population that will be introduced to the study area in the future without the Proposed Action. Therefore, the Proposed Action would not result in a significant adverse impact.

Direct Business Displacement

The analysis was done for the Proposed Action in accordance with the *CEQR Technical Manual.* However, since it is not possible to determine with certainty the future actions of any private property owner, sites are analyzed to illustrate a potential and conservative assessment of the effects of the Proposed Action on sites considered likely to be redeveloped based on known information, as described in the description of the RWCDS in Attachment A, "Project Description". The *CEQR Technical Manual* provides a framework to analyze the effects of displacement by asking whether the businesses in question provide products or services essential to the local economy that would no longer be available in its "trade area" to local residents or business due to the difficulty of either relocating it or establishing a new comparable business. In addition, the *CEQR Technical Manual* asks whether a category of businesses is the subject of other regulations or publicly adopted plans to preserve, enhance, or otherwise protect it.

As shown in Table D-7, the 10 projected development sites contain 50 businesses with an estimated 348 employees. If these sites are redeveloped as assumed under the RWCDS, it is possible that 26 of these 50 existing firms, employing 225 workers, could be directly displaced, subject to lease terms and agreements between private firms and property owners existing at the time of redevelopment in the With-Action condition. The businesses that could be displaced conduct a variety of business activities. The products and services that each establishment provides are widely available in the area and the City and would still be available to consumers as many other existing businesses would remain and firms providing similar products and services would still be available in the surrounding area. In addition, none of the potentially displaced businesses are the subject of regulations or publicly adopted plans that preserve and protect their business category. Furthermore, it is the intent of the Proposed Action to protect office space in the rezoning area. The proposed M1-6D district is designed to retain the concentration of affordable office space, and would limit the conversion of larger industrial and commercial buildings to residential use or to community facility use with sleeping accommodations, by requiring a one to one replacement of commercial and/or industrial space in buildings with more than 50,000 sf of zoning floor area.

Based on the guidelines in the *CEQR Technical Manual*, the direct displacement of these businesses would not result in a significant adverse impact.

Indirect Business Displacement

The Proposed Action would not likely displace substantial numbers of businesses or employees. Over the last 20 years, the proposed rezoning area and study areas have been experiencing declines in industrial uses and an increase in commercial, office, and residential uses. The rezoning area has increasingly become a desirable mixed-use area, as evidenced by the increase in numbers of commercial businesses and residents. It is unlikely that the Proposed Action would substantially accelerate these trends. The trend in the area toward higher-cost renovated commercial space and conversion of under-performing commercial space to residential use is likely to continue with or without the Proposed Action.

It is possible that the Proposed Action could lead to some increase in commercial rents and property values, as underutilized properties are redeveloped with residential and commercial uses. Various effects of the Proposed Action could increase pressures to raise rents and lead to a rise in property

values. Redevelopment of the area's underutilized parcels would improve the appearance of the neighborhood, resulting in the perception of a better commercial business climate. In addition, the influx of new residents would make the area more attractive to neighborhood retail/service businesses. As noted above, these characteristics affect rents, which if increased substantially, may result in indirect business displacement.

It is not anticipated, however, that the resulting increases in rents or property values would have a substantial effect on light industrial uses, which represent that category of business that could be most affected by the action. Based on the results of this preliminary assessment, the Proposed Action is unlikely to result in any indirect business displacement effects. Thus, more detailed analyses are not warranted. Development induced by the Proposed Action would not create any of the conditions that would be likely to lead to significant indirect displaced effects on businesses.

Adverse Effects on Specific Industries

The Proposed Action would affect no particular industry. The potentially displaced businesses vary and are not concentrated within a significant business sector. Nor are the businesses subject to displacement essential to the survival of other industries outside of the study area, as they do not serve as the sole provider of goods and services to an entire industry or category of business in the City. In addition, it should be noted that the potential displacement of these businesses would be subject to lease terms and agreements between private firms and property owners existing at the time of redevelopment. Furthermore, while the Proposed Action is not expected to cause indirect displacement, any indirect displacement that may occur would not be concentrated in a particular industry. Therefore, there would not be an adverse impact on a particular industry or category of businesses as a result of the Proposed Action.

ATTACHMENT E
COMMUNITY FACILITIES

I. INTRODUCTION

The *CEQR Technical Manual* defines community facilities as public or publicly funded facilities including schools, libraries, day care centers, hospitals, and fire and police protection services. This attachment examines the potential effects of the development of the projected development sites by 2019 under the Proposed Action, as described in Attachment A, "Project Description," on the capacity and provision of services by those community facilities. A project can affect community facility services when it physically displaces or alters a community facility (direct effect) or causes a change in population that may affect the services delivered by a community facility (indirect effect), as might happen if a facility is already over-utilized, or if a project is large enough to create a demand that could not be met by the existing facility. The CEQR analysis examines potential impacts on existing facilities and generally focuses in detail on those services that the City is obligated to provide to any member of the community. The CEQR analysis is not a needs assessment for new or additional services. Service providers like schools or libraries conduct their own needs assessments on a continuing basis.

Neither the Proposed Development Site nor the other projected development sites contain community facilities. Accordingly, as there would be no direct effects to existing community facilities resulting from the Proposed Action, this analysis concentrates on the potential for indirect effects. The analysis of community facilities has been conducted in accordance with the guidelines established in the 2010 *CEQR Technical Manual*. The demand for community services generally stems from the introduction of new residents to an area. In general, size, income characteristics, and the age distribution of a new population are factors that could affect the delivery of services. The *CEQR Technical Manual* provides guidelines or thresholds that can be used to make an initial determination of whether a detailed study is necessary to determine potential impacts.

As discussed in Attachment B, "Supplemental Screening," in the areas of public schools, publicly funded day care centers, and libraries, development of the projected development sites by 2019 under the Proposed Action exceeds the *CEQR Technical Manual* thresholds, and detailed analyses of these services follow. The population anticipated to be introduced as a result of development of the projected development sites would not exceed the CEQR thresholds requiring detailed analysis of other community facilities, including publicly funded health care facilities, and fire and police protection services.

This attachment uses the reasonable worst-case development scenario (RWCDS), as discussed in Attachment A, "Project Description," as the basis for assessing the impacts of the Proposed Action on community facilities. In the future with the Proposed Action, the RWCDS associated with the proposed rezoning anticipates that the 10 projected development/conversion sites would result in a net increase of 1,134 dwelling units, compared to future conditions without the Proposed Action, of which 220 units (20 percent of new construction) could be affordable. With an average household size of 1.54 persons in Manhattan Community District 5 based on 2000 Census data, the 1,134 net additional dwelling units would add an estimated 1,746 residents to the rezoning area. The analyses of the Proposed Action were performed for an analysis year of 2019.

II. PUBLIC SCHOOLS

Methodology

According to the guidelines presented in the *CEQR Technical Manual*, CEQR analyzes potential impacts only on public schools operated by the New York City Department of Education (NYCDOE). Therefore, private and parochial schools within the study area are not included in the analysis of schools presented in this attachment.

Based on the multipliers presented in Table 6-1a of the 2010 *CEQR Technical Manual*, the RWCDS associated with the Proposed Action would result in a net increase of approximately 181 new elementary and middle school students in the rezoning area, as compared to the No-Action condition, which exceeds the CEQR threshold for detailed analysis (refer to Table E-5). The Proposed Action would also add an estimated 68 new high school students compared to No-Action conditions, which would not trigger the CEQR threshold for detailed analysis of high schools. Moreover, because high school students travel throughout the City and high schools have a borough- or city-wide base, demand for high school seats does not have to be accommodated locally. Therefore, the following schools analysis focuses on the elementary and middle school levels only.

This analysis assesses the potential effects of the RWCDS on schools located within a primary study area, defined as sub-district 3 of Community School District 2 (CSD 2). In addition, in accordance with the guidelines of the 2010 *CEQR Technical Manual*, this analysis also considers a secondary study area for elementary and intermediate schools; defined as a ½-mile radius from the rezoning area for elementary schools and an approximate 1-mile radius for intermediate schools (see Figure E-1). Children residing within the proposed rezoning area would most likely attend the elementary and intermediate schools in these defined study areas. Impacts are identified if the Proposed Action would result in: (1) a collective utilization rate of the elementary and/or intermediate schools in the sub-district study area that is equal to or greater than 105 percent in the With-Action Condition; and (2) an increase of five percent or more in the collective utilization rate between the No-Action and With-Action conditions.

Existing Conditions

Elementary and intermediate schools in New York City (NYC) are located in geographically defined school districts. As shown in Figure E-1, the rezoning area is located within the boundaries of sub-district 3 of Community School District 2 (CSD 2). Analyzed schools located in CSD 2 can be generally defined by one of four categories: elementary, intermediate, secondary and K-8 schools. Elementary schools are defined as pre-kindergarten or kindergarten through 5th grades, intermediate schools are 6th through 8th grades, secondary schools are 6th through 12th grades, and K-8 schools are pre-kindergarten or kindergarten through 8th grades. For utilization analysis purposes, elementary and K-8 schools have been combined. It should be noted that some of the school buildings in this area of CSD 2 house more than one organization, and in such case those organizations are listed separately in Table E-1. For example, the P.S. 11 building (320 West 21st Street) also housed M.S. 260 in the 2009-2010 school year, which is listed separately in Table E-1. Similarly, P.S. 347 and J.H.S. 47 are located in the same building but are also listed separately in Table E-1. Capacity and enrollment information for elementary and intermediate schools in sub-district 3 and the defined ½-mile and 1-mile secondary study areas is provided in Table E-1 for the 2009-2010 school year.

Figure E-1

Public Schools in Planning Zone 3 of CSD 2, 1/2-Mile & 1-Mile Study Area

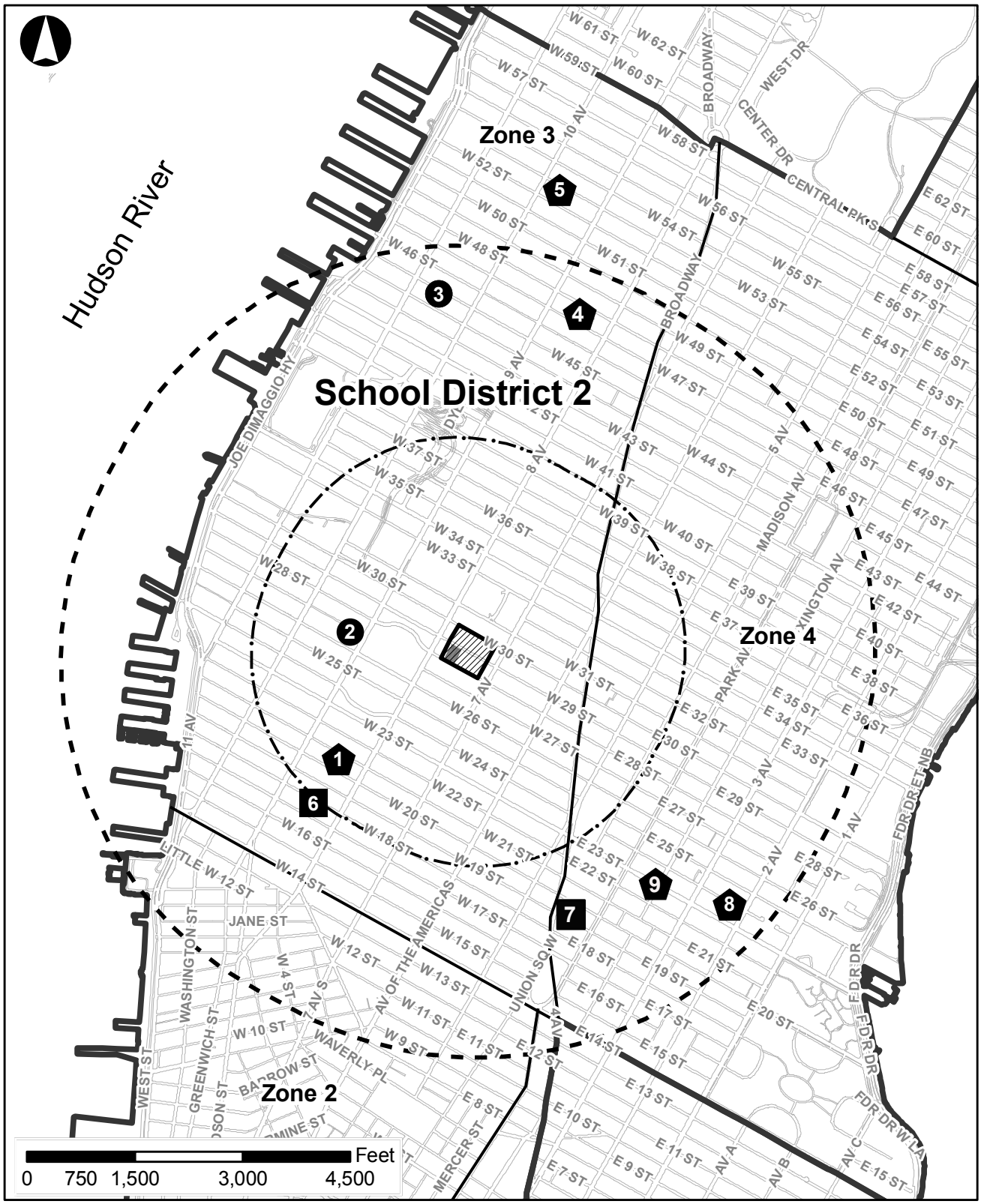


TABLE E-1
Existing Study Area Public School Enrollment, Capacity, and Utilization Figures
2009-2010 School Year

Map No.	School Name & Address	Grades Served	Enrollment	Target Capacity*	Seats Available	Percent Utilization
ELEMENTARY AND PS/IS SCHOOLS						
Primary Study Area (Sub-district 3 of CSD 2)						
1	P.S. 11 - William T. Harris (320 W. 21st St.)	PK-5	571	557	-14	102.5%
2	P.S. 33 - Chelsea Prep School (281 9th Ave.)	PK-5	355	520	165	68.3%
3	P.S. 51 – Elias Howe School (520 W. 45th St.)	PK-5	324	276	-48	117.4%
4	P.S. 212 Midtown West (328 W. 48th St.)	PK-5	345	342	-3	100.9%
5	P.S. 111 Adolph S. Ochs- PS Component (440 W. 53rd St.)***	PK-8	382	472	90	80.9%
7	Ballet Tech– NYC Public School for Dance (890 Broadway)	4- 12	78	134	56	58.2%
Total Elementary Schools in Sub-district 3 of CSD 2			**2,055**	**2,301**	**246**	**89.3%**
Total for ½-Mile Secondary Study Area*			***926***	***1,077***	***151***	***86.0%***
INTERMEDIATE/SECONDARY SCHOOLS						
Primary Study Area (Sub-district 3 of CSD 2)						
1	M.S. 260 Clinton School of Writers and Artists (located in same bldg as P.S. 11) - (320 W. 21st St.)	6-8	269	273	4	98.5%
4	Professional Performing Arts School (328 West 48th Street) – IS Component	6-12	85	98	13	86.7%
5	P.S. 111 Adolph S. Ochs- IS Component (440 W. 53rd St.)***	PK-8	206	253	47	81.4%
6	NYC Lab M.S. for Collaborative Studies - (333 W. 17th St.)	6-8	562	642	80	87.5%
7	Ballet Tech – NYC Public School for Dance (890 Broadway) – IS Component	4-12	64	110	46	58.2%
Total Intermediate Schools in Sub-district 3 of CSD 2			***1,186***	***1,376***	***190***	***86.2%***
Additional Intermediate Schools Outside Sub-District 3 But Within 1-Mile Secondary Study Area						
8	J.H.S. 47 (school for the Deaf) - (223 East 23rd Street)- IS Component	IS/HS	32	47	15	68.1%
8	P.S. 347 (223 East 23rd Street) – IS Component	K-8	44	277	233	15.9%
9	School for the Future High School (127 East 22nd Street) – IS Component	6-12	295	342	47	86.3%
Total for 1-Mile Secondary Study Area*			***1,557***	***2,042***	***485***	***76.2%***

Source: New York City Department of Education, *Enrollment – Capacity – Utilization Report, 2009-2010 School Year.*
Notes: (Map No. corresponds to Figure E-1.)
* Program capacity estimates are based on NYCDOE's Target Method, which sets a goal of a reduced class-size of 20 for grades K-3 and is used by the NYCDOE for capital planning purposes.
** Only two elementary schools are located within the ½-mile study area, namely P.S. 11 and P.S. 33. Intermediate schools 1-mile study area is comprised of M.S. 260, the I.S. component of the Professional Performing Arts School, the I.S. component of P.S. 111, NYC Lab Middle School for Collaborative Studies, and Ballet Tech, as well as 3 schools outside sub-district 3.
*** Based on information provided by NYCDCP, the breakdown for P.S. 111 enrollment and capacity is assumed to be 65% elementary and 35% intermediate; the breakdown for School for the Future is assumed to be 43% intermediate and 57% high; the breakdown for Ballet Tech is assumed to be 54% elementary,44% intermediate, and 1% high school; the breakdown J.H.S. 47 is assumed to be 20% intermediate and 80% high; the breakdown for P.S. 347 is assumed to be 79% elementary and 21% intermediate; and the breakdown for Professional Performing Arts School is assumed to be 18% intermediate and 82% high.

Elementary Schools

As shown in Figure E-1, there are currently six elementary schools within sub-district 3 of CSD 2. The nearest elementary school to the proposed rezoning area is P.S. 33, located at 281 Ninth Avenue. Table E-1 shows the existing capacity, enrollment, and utilization figures for elementary and middle schools within sub-district 3 and within the ½-mile secondary study area. As shown in Table E-1, the six elementary schools within sub-district 3 had a capacity of 2,301 seats in the 2009-2010 academic year, and enrollment of 2,055 students, for a utilization of approximately 89 percent, with 246

available seats. For the ½-mile study area, the utilization rate for elementary schools is approximately 86 percent, with 151 available seats.

Intermediate Schools

Table E-1 shows the existing capacity, enrollment, and utilization figures for middle schools within sub-district 3 and the 1-mile secondary study area. As shown in Figure E-1, five intermediate schools fall within sub-district 3: M.S. 260, which shares the same building as P.S. 11, Professional Performing Arts School, P.S. 111, NYC Lab Middle School for Collaborative Studies, and Ballet Tech. As shown in Table E-1, CSD 2's sub-district 3 had a capacity of 1,376 intermediate school seats in the 2009-2010 academic year and enrollment of 1,186 students, for a utilization of approximately 86 percent, with 190 available seats. For the 1-mile study area intermediate/secondary schools, enrollment was at approximately 76 percent of target capacity, with 485 seats available (Table E-1).

The Future Without The Proposed Action (No-Action)

Without the Proposed Action, future utilization of public elementary and intermediate schools serving the proposed rezoning area and surrounding study area would be affected by changes in enrollment mainly due to aging of the existing student body and new arrivals born in the area or moving to it; and changes in capacity, or number of available seats, in the schools as a result of planned construction of new schools or building additions.

Capacity Changes

Several school projects are expected to be built within CSD 2 in the future without the Proposed Action. According to the NYCDOE/SCA 2010-2014 Five-Year Capital Plan - (Proposed Amendment, February 2011), several school projects are expected to be developed within CSD 2 by 2019, of which two would be located within sub-district 3, namely, P.S. 51 and P.S. 340. P.S. 51 is located on the Studio City Site (525 West 44th Street), occupying the majority of the block bounded by West 45th Street, Tenth Avenue, West 44th Street and Eleventh Avenue, which is to be redeveloped by New York City Department of Housing Preservation and Development (NYCHPD) and a private developer. The School Construction Authority (SCA) is working on a plan with NYCHPD to build a new 630-seat school building for P.S. 51 on this site. It is assumed that the expanded P.S. 51 will have 353 elementary and 277 intermediate seats.[1] This represents an increase to capacity of 77 elementary seats and 277 intermediate seats. The estimated date of completion is 2013. P.S. 340 would also be located in sub-district 3 of CSD 2 within a retrofitted Foundling Hospital building at 590 Sixth Avenue (located near West 17th Street). It is expected that P.S. 340 would be completed by 2017, and accommodate a total of 518 seats, including 363 elementary seats and 155 intermediate seats.

These two projects are anticipated to add approximately 440 elementary seats and 432 intermediate seats to sub-district 3 of CSD 2. Neither of these projects is located within the ½-mile secondary study area for elementary schools, but both projects fall within the 1-mile study area for intermediate schools.

All of these seats are either currently under construction, or are fully or partially funded in the 2010-2014 Plan with completion expected in the 2015-2019 Capital Plan. The analysis does not include school seats that have not been sited, are not under construction or do not have finalized construction contracts, or will be provided for in a future capital plan. While several other school projects are

[1] Source: *West 44th Street and Eleventh Avenue Rezoning FEIS, January 2010.*

anticipated within CSD 2 overall, which would increase both elementary and intermediate school capacity, they do not fall within sub-district 3, and are therefore not included in this analysis.

In addition to the above capital projects specified in the Capital Plan, NYCDOE is actively engaged in repurposing underutilized school space. Information on proposed and adopted "Significant Changes in School Utilization" from the Panel for Education Policy's public notice website was also used to adjust the study areas' projected capacity under No-Action conditions (only proposed or approved plans have been incorporated into the analysis). This includes approved plans for the temporary relocation of the Clinton School for Writers and Artists to Saint Michael's Academy (at 425 West 33rd Street), starting in the 2010-2011 school year. The re-siting of the Clinton school would provide additional capacity at the elementary school level at P.S. 11. According to the *Revised Education Impact Statement*, after the relocation of the Clinton school, P.S. 11 will be able to accommodate approximately 250-300 additional seats. Therefore, for conservative analysis purposes, it is estimated that P.S. 11's capacity would increase by approximately 250 seats in the No-Action condition. This would add approximately 250 elementary seats to the ½-mile study area.[2]

Table E-2 shows the anticipated capacity changes for elementary and intermediate school seats in both the primary and secondary study areas in the 2019 No-Action Condition. As shown in Table E-2, 440 elementary school seats and 432 intermediate school seats would be added to the primary study area by 2019 in the No-Action condition. In addition, approximately 250 elementary school seats and 432 intermediate school seats would be added to the secondary study areas.

TABLE E-2
Changes in Elementary and Intermediate School Capacity in the No-Action Condition

Study Area	Elementary School Seats	Intermediate School Seats
Primary Study Area (Sub-district 3 of CSD 2)	440	432
Secondary Study Area*	250	432

Notes: * ½-mile radius represents the secondary study area for elementary schools, and 1-mile radius represents the secondary study area for intermediate schools.

Enrollment Changes

Estimates of future enrollments are derived from the latest available NYCDOE enrollment projection data for CSD 2 for 2009–2018 (Actual 2008, Projected 2009-2018), including pre-K and special education enrollment. In the future without the Proposed Action, NYCDOE projections show that demand for both public elementary and intermediate schools in CSD 2 is expected to increase by 2019, with elementary school enrollment forecasted to increase by approximately 25.2 percent (to 20,418) and intermediate school enrollment forecasted to increase by approximately 12.8 percent (to 7,570) by 2019. As a whole, CSD 2 is projected to experience an approximate 21.6 percent enrollment increase, to 27,988 elementary and intermediate students by 2019.[3] According to recent sub-district information from the NYCSCA, 18.69 percent of CSD 2's projected 2019 elementary school enrollment is estimated to be within sub-district 3, while 17.3 percent of CSD 2's projected 2019 intermediate enrollment is estimated to be within sub-district 3.

Additionally, a significant amount of new residential development is planned in the respective secondary study areas by the analysis year of 2019. As described in Table C-2 of Attachment C, "Land Use, Zoning and Public Policy," approximately 5,163 residential dwelling units are anticipated to be constructed within an approximate ½-mile radius of the proposed rezoning area. In addition, there are

[2] According to the NYCSCA, the additional elementary capacity that would become available in the PS 11 building with the relocation of M.S. 260, is to be attributed to CSD 2's sub-district 2, per their capital planning strategy.

[3] Grier enrollment projections were used for analysis purposes (Actual 2008, Projected 2009-2018). Projections include Special Education students who are integrated into regular classrooms.

a couple of large-scale projects planned for the area within a ½-mile to 1-mile radius of the proposed rezoning that are anticipated to introduce residential development, including: the West 44th Street and Eleventh Avenue Rezoning project and the Western Rail Yard project. Combined, these two large-scale projects are anticipated to add an estimated 3,298 dwelling units (refer to Appendix 2).[4] Overall, approximately 8,461 dwelling units are anticipated to be developed within an approximate 1-mile radius of the proposed rezoning. Using CEQR student generation rates presented in Table 6-1a of the 2010 *CEQR Technical Manual*, the number of students estimated to be generated in the respective secondary study areas in the future without the Proposed Action were calculated. Based on these ratios, new housing units developed within the secondary study areas in the future without the Proposed Action would generate approximately 620 elementary level students and 338 intermediate level students.[5]

The NYCSCA recently conducted a Capital Planning Analysis for the West Clinton Rezoning EAS (CEQR No. 11DCP068M), which estimated the number of elementary and intermediate school students that would be added to sub-district 3 of CSD 2 (i.e., the primary study area). According to the NYCSCA's Capital Planning Analysis, approximately 1,841 new elementary and 589 new intermediate level students would be added to the primary study area by 2019. As the Build Year for the West Clinton Rezoning project is by 2019 and it would also be located within the primary study area, the number of elementary and intermediate level students generated by this project has been added to NYCSCA's Capital Planning Analysis projections. The West Clinton Rezoning project is anticipated to add approximately 1,623 residential units, which would introduce approximately 195 elementary level students and 65 intermediate level students.

Table E-3 shows the number of elementary and intermediate level students estimated to be generated in both the primary and secondary study areas. As shown in Table E-3, approximately 2,036 elementary and 654 intermediate level students would be added to the primary study area, and approximately 620 elementary level students and 338 intermediate level students would be added to the respective secondary study area.

TABLE E-3
Estimated Number of Public School Students Generated by New Development in the 2019 Future Without the Proposed Action

Study Area	Elementary School Students	Intermediate School Students
Primary Study	2,036	654
Secondary Study Area*	620	338

Source: NYCSCA and NYCDCP; Student generation rates are based on the ratios shown in Table 6-1a of the *2010 CEQR Technical Manual*: for Manhattan, 0.12- elementary and 0.04- intermediate.
Notes: * Based on No-Build development anticipated to be development within an approximately ½-mile radius of the rezoning area as shown in Table C-2 in Attachment C, "Land Use, Zoning, and Public Policy, and planned large-scale projects anticipated to be constructed within an approximate ½-mile to 1-mile radius of the proposed rezoning area, which are listed in Appendix 2.

Elementary Schools

The utilization rate for public school facilities in the future without the Proposed Action is calculated by adding the estimated enrollment from known future proposed residential developments within sub-district 3 to the projected enrollment from NYCDOE, and then comparing that number to projected

[4] The 1-mile secondary study area only includes development anticipated to be constructed on the Western Rail Yards site (located on the block bounded by West 33rd Street, 11th Avenue, West 30th Street, and Route 9A). It does not include any development planned on the Ninth Avenue Site located on the east side of Ninth Avenue between West 53rd and West 54th Streets, which is located beyond a 1-mile radius of the proposed rezoning area.

[5] Student generation rates are based on ratios shown in Table 6-1a of the 2010 *CEQR Technical Manual*: 0.12 for elementary; and 0.04 for intermediate. The secondary study area for elementary schools is defined as a ½-mile radius from the proposed rezoning area, and the secondary study area for intermediate schools is defined as a 1-mile radius.

capacity. As shown in Table E-4, with the addition of a substantial number of elementary school students generated by No-Action residential developments, when added to the projected enrollment, utilization rates for elementary schools in both sub-district 3 as well as the ½-mile secondary study area are expected to be above 100 percent, with a shortage of seats. As shown in Table E-4, the elementary schools in sub-district 3 would be operating over capacity (approximately 213.5 percent) with a shortage of 3,111 seats, whereas elementary schools within the ½-mile secondary study area would be operating at 135.6 percent capacity, with a shortage of 472 seats in the 2019 future without the Proposed Action.

Intermediate Schools

The utilization rate for public school facilities in the future without the Proposed Action is calculated by adding the estimated enrollment from known future proposed residential developments within the study area to the projected enrollment from NYCDOE, and then comparing that number to projected capacity. As shown in Table E-4, with the addition of a substantial number of intermediate school students generated by No-Action residential developments, when added to the projected enrollment, the utilization rate for intermediate schools in sub-district 3 is expected to be above 100 percent, with a shortage of seats. As shown in Table E-4, the intermediate schools in sub-district 3 would be operating over capacity (approximately 108.6 percent) with a shortage of 156 seats, whereas, intermediate schools within the 1-mile secondary study area would be operating at approximately 83.0 percent capacity, with 411 available seats in the 2019 future without the Proposed Action.

TABLE E-4
2019 No-Action Condition: Estimated Public Elementary and Middle School Enrollment, Capacity, and Utilization

	2019 Projected Enrollment *	Students Generated from New Residential Development in No-Action	Total Projected Enrollment in No-Action	Projected Capacity**	Seats Available	Percent Utilization
ELEMENTARY AND PS/IS SCHOOLS						
CSD 2	20,418	3,921	24,339	16,775	-7,564	145.1%
Primary Study Area Sub-district 3 of CSD 2	3,816	2,036	5,852	2,741	-3,111	213.5%
Secondary Study Area	1,179	620	1,799	1,327	-472	135.6%
INTERMEDIATE/SECONDARY SCHOOLS						
CSD 2	7,570	1,307	8,877	8,927	50	99.4%
Primary Study Area Sub-district 3 of CSD 2	1,310	654	1,964	1,808	-156	108.6%
Secondary Study Area	1,725	338	2,063	2,474	411	83.4%

Notes:

* Sub-district 3 enrollment projections were calculated by multiplying CSD 2 projections (elementary and intermediate were handled separately) by SCA approved percentages for CSD 2's sub-district 3 (18.69 percent for elementary 17.30 percent for intermediate). Enrollment projections for the local study areas (1/2-mile for elementary; 1-mile for intermediate) were calculated using the *2010 CEQR Technical Manual* methodology. In 2009-2010, approximately 5.77 percent of CSD 2's elementary enrollment was in the ½-mile study area and approximately 22.79 percent of CSD 2's intermediate enrollment was in the 1-mile study area. These percentages were applied to the 2019 enrollment projections (elementary and intermediate were handled separately) to calculate ½-mile and 1-mile study area enrollment projections.

** Projected Elementary Capacity in CSD 2's sub-district 3 includes P.S. 51 (77 additional seats) and P.S. 340 (363 seats). Only the additional seats at P.S. 11 (250 seats) are included in the ½-mile secondary study area. Projected Intermediate Capacity in CSD 2's sub-district 3 as well as the 1-mile secondary study area includes P.S. 51 (277 additional seats) and P.S. 340 (155 seats).

The Future With The Proposed Action (With-Action)

As described in Attachment A, "Project Description," the RWCDS associated with the Proposed Action is expected to result in a net increase of approximately 1,134 residential dwelling units on the 10 projected development and conversion sites as compared to the No-Action condition by 2019. This new development is expected to introduce an estimated 1,746 residents over the No-Action condition. Approximately 220 of these units (20 percent of new construction) would be affordable residences provided through the Inclusionary Housing Program.

The same methodology used to estimate public school enrollment for No-Action development projects was applied to the residential component of the RWCDS. As shown in Table E-5, the estimated school age population generated by the RWCDS would include: 135 elementary school students, 46 middle school students, and 68 high school students by 2019. The threshold for significance, as outlined in the *CEQR Technical Manual*, is if the Proposed Action would result in: (1) a collective utilization rate of the elementary and/or intermediate schools in the sub-district study area that is equal to or greater than 105 percent in the With-Action Condition; and (2) an increase of five percent or more in the collective utilization rate between the No-Action and With-Action conditions.

TABLE E-5
Projected Number of Public School Pupils Generated by New Development on Projected Development Sites in the Future With the Proposed Action

Projected Development Sites	Net Increment of DUs	Pupil Generation Ratios Per Unit*			Number of Students Generated by RWCDS			
		Elementary	Middle	High	Elementary	Middle	Elementary +Middle	High
Proposed Development Site	407	0.12	0.04	0.06	49	16	65	24
1	104	0.12	0.04	0.06	12	4	16	6
2	61	0.12	0.04	0.06	7	2	9	4
3	96	0.12	0.04	0.06	11	4	15	6
4	103	0.12	0.04	0.06	12	4	16	6
5	263	0.12	0.04	0.06	32	11	43	16
6	65	0.12	0.04	0.06	8	3	11	4
8	18	0.12	0.04	0.06	2	1	3	1
9	17	0.12	0.04	0.06	2	1	3	1
				Totals	**135**	**46**	**181**	**68**

Source: 2010 *CEQR Technical Manual*, Table 6-11.
Notes: * Ratios are for borough of Manhattan.

Elementary Schools

In the future with the Proposed Action, there would continue to be a shortage of elementary school seats in sub-district 3 of CSD 2 as well as in the ½-mile secondary study area. As shown in Table E-6, the addition of 135 elementary school students generated by the Proposed Action by 2019 would increase the utilization from 213.5 percent to 218.4 percent from No-Action to With-Action conditions in sub-district 3, leaving 3,246 elementary school students that would not be accommodated by the elementary schools within sub-district 3. The 4.9 percent increase in utilization in sub-district 3 generated by the Proposed Action is less than a five percent increase compared to the No-Action condition and falls below the CEQR threshold for significance. Therefore, the Proposed Action would not be expected to cause a significant adverse impact on elementary schools. For the ½-mile secondary study area, utilization of elementary school seats would increase by 10.2% from No-Action to With-Action conditions, from 135.5 to 145.7 percent, with a shortfall of 607 seats.

TABLE E-6
2019 With-Action Condition: Estimated Public Elementary and Middle School Enrollment, Capacity, and Utilization

Schools	2019 No-Action Projected Enrollment	New Students Generated by Proposed Action	Total Future With-Action Projected Enrollment	Projected Capacity	Seats Available	Percent Utilization	Percent Change from No-Action to With-Action
ELEMENTARY AND PS/IS SCHOOLS							
Primary Study Area - Sub-district 3	5,852	135	5,987	2,741	3,246	218.4%	4.9%
Secondary Study Area	1,799	135	1,934	1,327	-607	145.7%	10.2%
INTERMEDIATE/SECONDARY SCHOOLS							
Primary Study Area - Sub-district 3	1,964	46	2,010	1,808	-202	111.2%	2.6%
Secondary Study Area	2,063	46	2,109	2,474	365	85.2%	1.9%

Sources: Totals for CSD 2 projected enrollment: DOE's Enrollment Projections (Actual 2008, Projected 2009-2018); Capacity numbers for CSD: DOE *Utilization Profiles: Enrollment/Capacity/Utilization, 2009-2010*
Notes: School enrollment is based on "target capacity" figures, which assume a class size of 20 children per class for grade K-3.

Intermediate Schools

Similar to elementary schools, there is expected to continue to be a shortage of intermediate school seats in sub-district 3 of CSD 2 in the future with the Proposed Action. As shown in Table E-6, the addition of 46 intermediate school students to sub-district 3 would increase the utilization from 108.6 percent to 111.2 percent from No-Action to With-Action conditions, leaving 202 intermediate school students that would not be accommodated by the intermediate schools within sub-district 3. This 2.6 percent increase in utilization generated by the Proposed Action is less than a five percent increase compared to the No-Action condition and falls below the CEQR threshold for significance. Therefore, the Proposed Action would not be expected to cause a significant adverse impact on intermediate schools. For the 1-mile secondary study area, the utilization rate would increase by approximately 2.0 percent from No-Action to With-Action conditions, to 85 percent, with 365 available seats.

Assessment

The *CEQR Technical Manual* states that if the impact assessment finds that the proposed action would result in: (1) a collective utilization rate of the elementary and/or intermediate schools in the sub-district study area that is equal to or greater than 105 percent in the With-Action Condition; and (2) an increase of five percent or more in the collective utilization rate between the No-Action and With-Action conditions, a significant impact may result warranting consideration of mitigation.

This analysis, which is based on an assumption that all of the currently planned developments in the area would be completed between 2010 and 2019, shows that elementary and intermediate schools in the sub-district encompassing the rezoning area, as well as in the defined ½-mile secondary study area for elementary schools, would be overcrowded in the Future Without the Proposed Action. The Proposed Action would somewhat exacerbate the projected overcrowded conditions. The *CEQR Technical Manual* states that if the impact assessment finds that the proposed action would cause an increase of five percent or more in utilization in the sub-district, a significant impact may result warranting consideration of mitigation. While the Proposed Action would generate 181 elementary and intermediate school students, it would not cause a significant adverse impact for elementary and

intermediate schools per the criteria of the 2010 *CEQR Technical Manual*, as it would result in an increase of 4.93 percent and 2.56 percent, respectively, over the No-Action condition.

It is expected that the Department of Education will continue to monitor enrollment trends within CSD 2 and its component sub-districts, as new housing units identified in the No-Action and With-Action conditions are developed, and will plan for new capacity or administrative actions to accommodate new students accordingly.

III. PUBLIC DAY CARE

The *CEQR Technical Manual* requires a detailed analysis of day care centers when a proposed action would produce substantial numbers of subsidized, low-to moderate-income family housing units, which may therefore generate a sufficient number of eligible children to affect the availability of slots at public day care centers. Typically, proposed actions that generate 20 or more eligible children under age six require further analysis. Table 6-1b of the 2010 *CEQR Technical Manual* calculates by borough the estimated number of affordable (low or low- to moderate-income) housing units that could yield at least 20 children under age six eligible for publicly financed child care. According to the table, 170 affordable housing units in Manhattan would yield more than 20 children under age six eligible for public day care. Impacts are identified if an action would result in demand for slots in publicly funded day care centers greater than remaining capacity, and the increase in demand would be five percent or more over the collective capacity of the day care centers in the future without the proposed action.

The following is a conservative analysis of day care facilities, which assumes that all of the projected development sites (excluding the projected conversion sites and site 7) would be redeveloped pursuant to the Inclusionary Housing Program with approximately 20 percent of the housing units affordable to low-to moderate income households. As described above, with a net increment of 1,134 units, of which 220 units are assumed to be affordable and built pursuant to the Inclusionary Housing program, the Proposed Action would generate up to approximately 23 children under the age of six, i.e., potentially eligible for publicly subsidized day care As this value exceeds the *CEQR* threshold, a detailed assessment is provided below.

Publicly financed child care services are available for income-eligible children up through the age of 12. The CEQR analysis focuses on services for children under age 6 because eligible children aged 6-12 are expected to be in school for most of the day.

Existing Conditions

Publicly funded day care for the children of income-eligible households in New York City is sponsored and financially supported by the Division of Child Care and Head Start, within the New York City Administration for Children's Services (NYCACS), and federally funded early childhood education and family support programs. NYCACS contracts with hundreds of private, non-profit organizations to provide Child Care and Head Start programs in communities across the City that are licensed by the New York City Department of Health (NYCDOH). ACS also issues vouchers to eligible families to provide financial assistance in accessing care from formal and informal providers in the City.

To receive subsidized childcare services, a family must meet specific financial and social eligibility criteria established by NYCACS. In general, children in families that have incomes at or below 200 percent of the Federal Poverty Level (FPL), depending on family size, are financially eligible, although in some cases eligibility can go up to 275 percent FPL. The family must also have an approved "reason for care," such as involvement in a child welfare case or participation in a "welfare-to-work" program. The City's affordable housing market is pegged to the Area Median Income (AMI) rather than the Federal Poverty Level (FPL). Lower-income units must be affordable to households at or below 80 percent AMI. Since family incomes at or below 200 percent FPL fall under 80 percent AMI, for the purposes of CEQR analysis, the number of housing units expected to be subsidized and targeted for incomes of 80 percent AMI or below is used as a proxy for eligibility. This provides a conservative assessment of demand, since eligibility for subsidized child care is not defined strictly by income (generally below 200 percent of poverty level), but also takes into account family size and other reasons for care (i.e. low-income parent(s) in school; low-income parent(s) training for work; or low-income parents who are ill or disabled).

NYCACS supports subsidized childcare in several types of facilities including center-based group day care, Head Start, family and group family childcare, and informal childcare. Key characteristics of these services include:

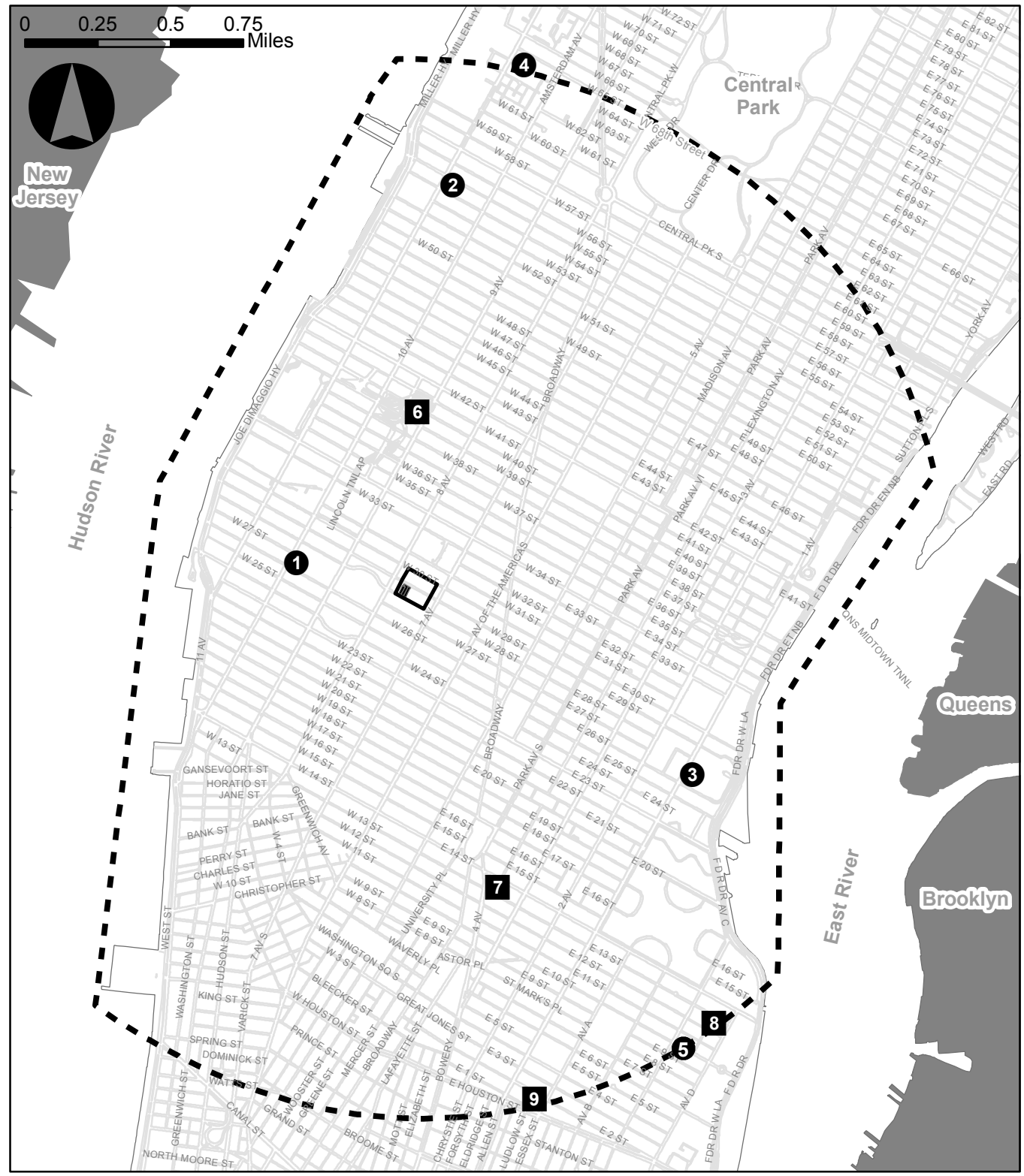
- Group Day Care: delivered for children in child care centers contracted by NYCACS, licensed by the NYCDOH, and staffed by certified teachers.
- Head Start: a federally funded childcare program that has, since its inception, provided parents with part-day child care services. In New York City, Head Start programs administrated by NYCACS serve more than 17,000 preschool-age children (ages 3 to 5) from low-income families.
- Group Family Child Care: in which up to 7 to 12 children are placed under the care of a registered or licensed provider and an assistant in a home setting, and are licensed by NYCDOH.
- Family Child Care: in which family childcare providers, who are professionals, provide care for three to seven children in their residences, and are licensed by NYCDOH.
- Informal Child Care: is usually provided by a relative or neighbor for a maximum of two children.

For CEQR analysis purposes, only Group Day Care and Head Start facilities are included, as data on the exact location of Family Child Care Network and Voucher slots are not available, and they are therefore not suitable for a study area analysis.

Since there are no location requirements for enrollment in day care centers, and some parents/guardians choose a day care center close to their employment rather than their residence, the service areas of these facilities can be quite large and not subject to strict delineation to identify a study area. According to the 2010 *CEQR Technical Manual* guidelines, the locations of publicly funded group day care centers within 1.5 miles or so of the project site should be shown since, as discussed in the *CEQR Technical Manual*, the center(s) closest to the project site are more likely to be subject to increased demand. In transit-rich areas, such as midtown Manhattan, the study area may be expanded up to 2 miles or so, in consultation with the lead agency and ACS.

Figure E-2 shows publicly funded day care and Head Start facilities within an approximate 1.75 mile radius of the proposed rezoning area, and Table E-7 indicates the capacity and enrollment for each facility, as well as the available slots where applicable. As shown in Table E-7 and Figure E-2, there are presently 5 publicly funded or partially publicly funded group day care facilities as well as 5 Head Start facilities within an approximate 1.75 mile radius of the proposed rezoning area.

Public Day Care Centers and Head Start Programs



The ten day care and Head Start facilities within the study area have a combined total capacity of approximately 651 slots, with a current enrollment of 550, and a utilization rate of approximately 84 percent, resulting in approximately 101 available slots (see Table E-7).

As noted above, in addition to attending group day care centers, eligible children may also be cared for in the homes of family childcare providers, also registered with the NYCDOH. A family childcare provider is a professional who provides care for three to seven children in his or her residence. A group family childcare provider is a professional who cares for 7 to 12 children with the help of an assistant, in his or her home. The majority of family and group family childcare providers in New York City are registered with a childcare network, which provides access in training and support services. According to NYCACS, these home-based facilities tend to absorb unmet demand at day care centers, and host households are added to the system as demand increases.

TABLE E-7
Public Day Care Centers and Head Start Facilities within a 1-¾ Mile Study Area

Map No.	Program Name	Program Address	Budget Capacity	Enrollment	Available Slots	Percent Utilized
Day Care Centers						
1	Hudson Guild	459 West 26th Street	90	52	38	57.8%
2	Polly Dodge Center	538 West 55th Street	83	65	18	78.3%
3	Bellevue Educare CCC	462 First Avenue	33	21	12	63.6%
4	Mabel Barrett Fitzgerald	243 West 64th Street	68	51	17	75.0%
5	Virginia Day Nursery	464 East 10th Street	45	35	10	77.8%
		TOTALS	319	224	95	70.2%
Head Start Programs						
1	Hudson Guild	459 West 26th Street	60	60	0	100%
6	Bank Street	410 West 40th Street	30	30	0	100%
7	Bank Street	113 East 13th Street	60	60	0	100%
8	Escuela	185 Avenue D	91	91	0	100%
9	Little Angels	137 East 2nd Street	91	85	6	93.4%
		TOTALS	332	326	6	98.2%
		OVERALL TOTALS	**651**	**550**	**101**	**84.5%**

Sources: New York City Administration for Children's Services (NYCACS), September and October 2010.
Notes: (Map No. corresponds to Figure E-2.)

The Future Without The Proposed Action (No-Action)

As described in Attachment C, "Land Use, Zoning, and Public Policy," there are a number of projects that would be constructed within a ½-mile radius of the proposed rezoning area, which are anticipated to add approximately 5,163 dwelling units by 2019 in the future without the Proposed Action (refer to Table C-2 in Attachment C). As shown in Appendix 2 at the end of this document, these new residential development projects are anticipated to include some low-to moderate income housing units. Approximately 859 units within the ½-mile radius of the proposed rezoning area are anticipated to be affordable to low-to moderate-income units. In addition, there are several large-scale projects planned for the area within a ½-mile to 1.75-mile radius of the proposed rezoning that are anticipated to introduce residential development with affordable housing, including: the West 44th Street and Eleventh Avenue Rezoning, 770 Eleventh Avenue, the West Clinton Rezoning, Riverside Center, the Western Rail Yard project, and the East Village/Lower East Side Rezoning.[6] Combined, these projects are anticipated to add an estimated 10,312 dwelling units, of which approximately 2,338 units would be affordable to low-to moderate-income households (refer to Appendix 2). Overall, approximately

[6] The 1.75-mile study area includes development anticipated to be constructed on the Western Rail Yards site (located on the block bounded by West 33rd Street, 11th Avenue, West 30th Street, and Route 9A), and development planned for the Ninth Avenue Site located on the east side of Ninth Avenue between West 53rd and West 54th Streets.

3,197 units within a 1.75-mile radius of the proposed rezoning are assumed to be affordable to low-to moderate-income households.

Based on *CEQR Technical Manual* Table 6-1b, these affordable units would generate 368 children under the age of 6 eligible for publicly funded day care services (see Table E-8). As such, demand for publicly financed day care and Head Start slots in the study area would increase as a result of these new developments in the future without the Proposed Action, causing a deficit of approximately 267 available slots, and increasing the collective utilization rate of the day care centers and the Head Start programs to 141 percent (refer to Table E-10).

TABLE E-8
Projected Number of Public Day Care Pupils Generated by New Development in the 2019 Future Without the Proposed Action

	Affordable Units*	Generation Ratio Per Unit** (Children ≤ Age 6)	Number of Children ≤ Age 6 Generated
Study Area Total	3,197	0.115	368

Source: 2010 *CEQR Technical Manual*, Table 6-1b.
Notes: * Based on No-Build developments as shown in Appendix 2 to this document.
** Ratio for borough of Manhattan.

The Future With The Proposed Action (With-Action)

As discussed above, the *CEQR Technical Manual* requires a detailed analysis of day care centers when a proposed action would produce substantial numbers of subsidized, low-to moderate-income family housing units that may therefore generate a sufficient number of eligible children to affect the availability of slots at public day care centers. By 2019, as a result of the Proposed Action, up to 220 affordable housing units are assumed to be added to the study area, many of which would be potentially eligible for subsidized day care. Residents with household incomes no greater than approximately 80 percent of the Area Median Income (AMI), as determined by HUD, could occupy these affordable units.

Based on *CEQR Technical Manual* Table 6-1b, these 220 affordable units would generate 25 children under the age of 6 eligible for publicly funded day care services (see Table E-9). The additional 25 children potentially eligible for public day care would exacerbate the shortfall of available slots described above in the future without the Proposed Action. With the Proposed Action, there would be a shortage of 292 slots in public funded child care programs in the study area. The collective utilization rate of the day care centers and Head Start programs would increase to 144.8 percent (see Table E-10), an increase of 3.8% over the utilization rate in the future without the Proposed Action.

TABLE E-9
Projected Number of Public Day Care Pupils Generated by New Development on Projected Development Sites in the Future With the Proposed Action

	Affordable Units*	Generation Ratio Per Unit** (Children ≤ Age 6)	Number of Children ≤ Age 6 Generated
Study Area Total	220	0.115	25

Source: 2010 *CEQR Technical Manual*, Table 6-1b.
Notes: * Ratio for borough of Manhattan.

TABLE E-10
Comparison of Budget Capacity, Enrollment, Available Slots and Percent Utilized for the 2019 Future Without and Future With the Proposed Action

	Budget Capacity	Enrollment	Available Slots	Percent Utilized
2019 Future Without the Proposed Action	651	918	-267	141.0%
Project Increment	0	25		
2019 Future With the Proposed Action	651	943	-292	144.8%

According to the *CEQR Technical Manual*, a significant adverse impact could result if a proposed action results in: 1) a demand for slots greater than remaining capacity of day care centers, and 2) that demand constitutes an increase of 5 percent or more of the collective capacity of the day care centers serving the study area over the No-Action condition. The Proposed Action would add approximately 25 children potentially eligible for subsidized day care to the study area, and would cause a 3.8 percent increase in demand over the existing capacity of day care facilities in the study area, less than the CEQR threshold of five percent. Therefore, the Proposed Action would not result in a significant adverse impact to publicly funded day care centers and Head Start programs in the study area.

IV. LIBRARIES

Methodology

Potential impacts on libraries may result from an increased user population. A noticeable change in service delivery is likely to occur if an action introduces a large residential population (i.e., greater than a 5 percent increase in housing units served). The number of housing units the Proposed Action is expected to introduce into the area would exceed the *CEQR Technical Manual* threshold (Table 3C-3) of 901 units, and therefore an analysis of potential impacts on libraries is necessary.

The Proposed Action would result in new residential development as well as allow for the residential conversion of existing buildings within the rezoning area. The RWCDS associated with the Proposed Action is expected to add a net increase of 1,134 dwelling units, of which 220 would be affordable units provided through the Inclusionary Housing Program, to the rezoning area over No-Action conditions. It is estimated that these housing units would introduce an additional 1,746 new residents to the rezoning area by 2019.

The *CEQR Technical Manual* defines neighborhood library branches service areas based on the distance that residents would travel to use library services, which is typically not more than three-quarters of a mile. This libraries analysis is prepared using an existing conditions analysis year of 2010 and employs a Build analysis year of 2019. The analysis identifies the study area population under existing, No-Action, and With Action conditions. The number of library holdings (including books, CDs, DVDs, videotapes, etc.) available in study area libraries is also identified and used to calculate a holdings per resident ratio. This ratio is compared with the system-wide ratio for the New York Public Library (NYPL) system. The analysis also considers the percentage increase in the study area population and compares it to impact threshold identified in the *CEQR Technical Manual*.

Existing Conditions

The New York Public Library serves the Bronx, Manhattan and Staten Island (Queens and Brooklyn have separate library systems) and is comprised of a set of scholarly research collections, as well as a network of community libraries. In its entirety, the Library houses a collection of approximately 53 million holdings, and is visited and used annually by more than 15 million people. The vast collections, impressive to begin with, continue to expand at the rate of approximately 10,000 items per week in dozens of languages.

The research collections of the New York Public Library, which are for reference only (none of the materials may be borrowed) and organized as the Research Libraries, resemble the holdings of the great national and university libraries. Four special Research Libraries have been established: the Humanities and Social Sciences Library, on Fifth Avenue and 42nd Street; The New York Public Library for the Performing Arts, at Lincoln Center; the Schomburg Center for Research in Black Culture, in Harlem; and the Science, Industry and Business Library, on Madison Avenue and 34th Street. The community circulating libraries, which are organized as the Branch Libraries, resemble classic municipal libraries throughout the US. The branch system has grown to include 86 libraries, with circulating collections totaling 7 million items, whereas the four research libraries have collections totaling approximately 43.6 million items (circulating and non-circulating).

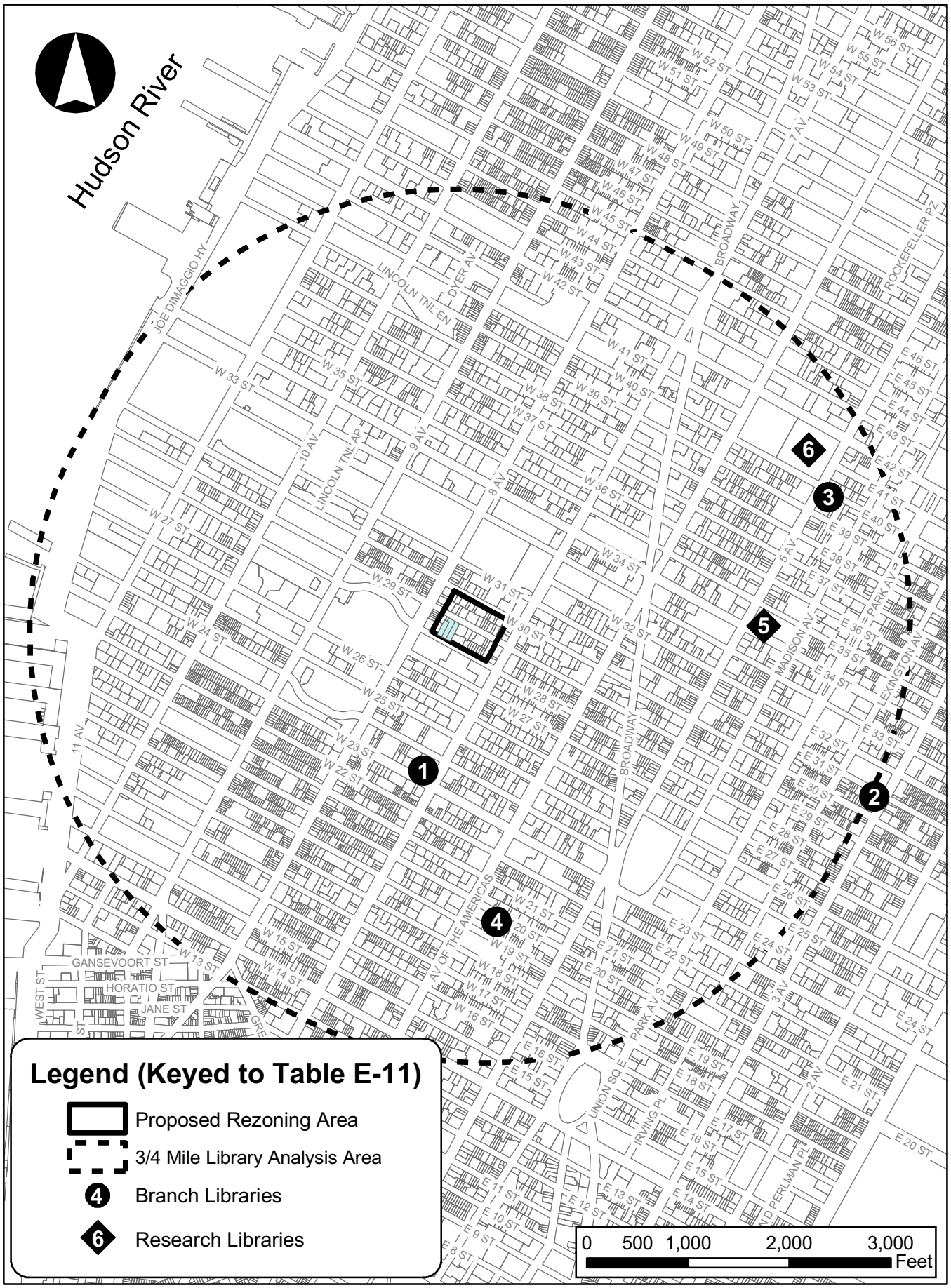
Library Facilities

Libraries provide books, information services, written documents, audio/visual references, and educational services to their surrounding communities. There are no libraries within the proposed rezoning area. As shown in Figure E-3, there are six public libraries within the library analysis study area, an approximate three-quarter mile radius from the rezoning area. These six public libraries include two of the Research Libraries, the Humanities and Social Sciences Library and the Science, Industry, and Business Library, as well as the Andrew Heiskell Braille and Talking Book Library, a system-wide resource for the NYPL service area, and three Branch Libraries, including, the Mid-Manhattan Library, the Kip Bay Branch Library, and the Muhlenberg Branch Library. The closest library to the rezoning area is the Muhlenberg Branch Library (see Figure E-3 and Table E-11). In addition, it should be noted that residents could go to any NYPL branch and order books from any of the other branches in the NYPL system. For analysis purposes, only the three branch libraries are included, as they serve the local neighborhoods (whereas the two research libraries serve a research function and most of their collections may not be borrowed, and the Andrew Heiskell Braille and Talking Book Library serves the entire NYPL system and is therefore not considered a branch library).

TABLE E-11
Library Services in the ¾-Mile Study Area – Branch Libraries

Map No.	Library	Location	Holdings	Circulation
1	Muhlenberg Branch	209 West 23rd Street	42,973	265,852
2	Kips Bay Branch	446 Third Avenue	57,607	212,267
3	Mid-Manhattan	455 Fifth Avenue	670,268	2,219,094
4*	Andrew Heiskell Braille and Talking Book Library	40 West 20th Street	N.A.	N.A.
5*	Science, Industrial, and Business Library	188 Madison Avenue	N.A.	N.A.
6*	Humanities and Social Sciences Library	Fifth Avenue at 42nd Street	N.A.	N.A.
Total Holdings - Study Area Branch Libraries			**770,848**	**2,697,213**
Total Holdings- New York Library System Branch Libraries			**7,601,853**	

Source: New York Public Library, March 2009
Notes: (Map No. corresponds to Figure E-3.)
* The Science, Industrial, and Business Library and the Humanities and Social Sciences Library are research libraries that contain both circulating and non-circulating collections. The Andrew Heiskell Braille and Talking Book Library is a resource for the entire NYPL service area, and is therefore not included in the quantitative analysis for branch libraries.


Hudson River
Legend (Keyed to Table E-11)
Proposed Rezoning Area
3/4 Mile Library Analysis Area
4 Branch Libraries
6 Research Libraries
0 500 1,000 2,000 3,000
Feet

The three branch libraries within the ¾-mile study area have a combined total of 770,848 holdings with a circulation of approximately 2,697,213 (see Table E-11).

Muhlenberg Branch Library

As noted above, the Muhlenberg Branch Library is the closest public library to the rezoning area, and has a branch collection of 42,973 holdings, with an annual circulation of 265,852. The Muhlenberg Branch is located at 209 West 23rd Street (between Seventh and Eighth Avenues) approximately five blocks south of the rezoning area within a 3-story brick and limestone building. It is open six days per week, Monday through Saturday.

The Muhlenberg Library has served the Chelsea area for nearly a century and is one of the 65 branch libraries built from funds given to New York City by Andrew Carnegie. The refurbished branch has an adult and young adult area on the main floor; a children's room with a story hour space on the second floor; and, on the third floor, a community room for public programs and meetings.

Given its location, it is expected that the Muhlenberg Branch would be the primary library serving residents generated by the Proposed Action.

Kips Bay Branch Library

The Kips Bay Branch Library is located in Manhattan Community District 6, at 446 Third Avenue near East 31st Street, to the east of the rezoning area. This library branch has approximately 57,607 holdings, with a total annual circulation of 212,267. Like the Muhlenberg Branch, the Kips Bay Branch is open six days a week (currently Monday through Saturday).

This facility is expected to serve as a secondary facility for most residents generated by the Proposed Action, as residents introduced by the proposed rezoning would live closer to the Muhlenberg Branch than the Kips Bay Branch. However, the assessment of the Proposed Action's demand for library services would still include the Kips Bay Branch as it is within the library ¾-mile study area.

Mid-Manhattan Library

The Mid-Manhattan Library is located at 455 Fifth Avenue at 40th Street to the northeast of the rezoning area. This library serves a bridge between the neighborhood branch libraries and the in-depth, non-circulating collections of the New York Public Library's Research Library. It is open seven days per week and its collections house the largest circulating and reference collections in the New York Public Library branches. The facility contains five floors of open stacks that shelve its subject collections, which encompass a range of disciplines including: art, education, consumer health, history, job information, language, law, literature, philosophy, political science, psychology, religion, sociology, and more. These collections are geared to meet the needs of college undergraduates, graduate students, and serious adult users. They include books, magazines, newspapers, and non-print materials such as CDs, DVDs and software. In addition, the library also has an extensive selection of popular reading, new books, movies, music, and a major collection of older and classic fiction.

The Mid-Manhattan Library has approximately 670,268 holdings, with a total annual circulation of 2,219,094. This facility also is expected to serve as a secondary facility for most residents generated by the Proposed Action, as residents introduced by the proposed rezoning would live closer to the Muhlenberg Branch than the Mid-Manhattan Library. However, the assessment of the Proposed Action's demand for library services would still include the Mid-Manhattan Library as it is within the library study area.

Andrew Heiskell Braille and Talking Book Library

The Andrew Heiskell Braille and Talking Book Library is located at 40 West 20 Street between Fifth and Sixth Avenues to the southeast of the rezoning area. This library, which is a resource for the entire NYPL service area, has two public floors, with a children's room and a young adult section, large circulating collections of talking book and braille materials that mirror collections in traditional neighborhood public libraries, specialized audio playback equipment for listening to recorded books and magazines, and adaptive technology. Fiction and nonfiction selections range from classics to bestsellers in many subject areas. There is also a meeting room for concerts, lectures, and other special events. In order to receive braille and/or talking book service, patrons must meet eligibility requirements and be certified by an appropriate authority.

The Andrew Heiskell Braille and Talking Book Library has approximately 423,147 holdings, with a total annual circulation of 320,715. It is open six day per week from Monday to Saturday. This facility is not expected to serve as a primary facility for most residents generated by the Proposed Action. The Andrew Heiskell Braille and Talking Book Library is a specialized library, circulating collections of talking book and braille materials. Therefore, the assessment of the proposed action's demand for neighborhood library services does not include the Andrew Heiskell Braille and Talking Book Library.

Research Libraries Within Study Area

As noted above, the study area also includes two of the NYPL's four research libraries, The Science, Industry and Business Library (SIBL), and The Humanities and Social Sciences Library. Although those two research libraries are not included in the analysis presented herein, they are described briefly below.

The Science, Industry and Business Library (SIBL) is located at 188 Madison Avenue near East 34th Street. It is the nation's largest public information center devoted solely to science and business, and has both circulating and non-circulating collections, as well as services and electronic resources that are geared to the needs of science and business users for quick, efficient access to accurate, up-to-date information. An Electronic Information Center (EIC), with 73 workstations, connects users to the hundreds of internal and external electronic information resources. The SIBL circulating library contains approximately 40,000 titles, and its non-circulating research collection consists of 1.2 million holdings. The SIBL offers 970,474 holdings, with at total annual circulation of 127,315. It is open six days per week.

The Humanities and Social Sciences Library (i.e., Stephen A. Schwarzman Building) is located at the southwest corner of Fifth Avenue and 42nd Street. This library features extensive and diverse collections in the humanities and social sciences, which were consolidated in 1895 from the collections of the Astor and Lenox Libraries, and have evolved into one of the world's preeminent public resources for the study of human thought, action, and experience -- from anthropology and archaeology, to religion, sports, world history, and literature. All of the library's collections must be consulted on-site. The library primarily serves scholars or those looking for older or specialized materials that are no longer in print.

The Humanities and Social Sciences Library is open seven days per week. It houses some 15 million items, among them priceless medieval manuscripts, ancient Japanese scrolls, contemporary novels and poetry, as well as baseball cards, dime novels, comic books, and political ephemera and tracts. In total, the Humanities and Social Sciences Library offers 4,803,288 holdings, which are predominantly non-circulating.

Population Served

The proposed rezoning area is located within northern Chelsea on the western edge of Manhattan Community District 5. To determine the population of the library service area, 2000 U.S. Census data were assembled for all census tracts that fall primarily within the ¾-mile library study area. Based on census data for those census tracts falling entirely or mostly within the ¾-mile study area, the study area had a residential population of 95,336 in 2000. Assuming an approximate 0.79 percent increase in the residential population per year from 2001 until 2010[7], it is estimated that the study area has a 2010 residential population of approximately 103,141.

Holdings per Resident

The Muhlenberg, Kips Bay, and Mid-Manhattan branches have combined holdings of 770,848 items. With an existing 2010 population of 103,141 residents, the study area has approximately 7.47 holdings per resident. By comparison, the NYPL branch library system has a total holdings collection of approximately 7,601,853 and the total population of the three boroughs it serves is approximately 3,518,071. As a result, the system has a holdings-to-resident ratio of 2.2 to 1.

Future Without The Proposed Action

In the future without the Proposed Action through 2019, no major renovations are expected to occur at any of the libraries within the project site study area. The Muhlenberg and Kips Bay branch libraries are expected to undergo some building upgrades including roof replacement work, exterior masonry restoration, and/or fire alarm improvements, and the Humanities and Social Science Library is expected to undergo some façade restoration, domestic water upgrade, emergency light improvements, and room renovations.

As previously noted in this chapter, there is a significant amount of new residential development expected to occur by 2019 that would change the population within the library study area. This would include all of the No-Action developments summarized in Table C-2 of Attachment C, and the Western Rail Yard project, which would occupy the large block bounded by West 33rd Street, Eleventh Avenue, West 30th Street, and Westside Highway (Twelfth Avenue) (refer to Appendix 2).[8] Developments completed from 2010 to 2019 would result in 7,111 new dwelling units within a ¾-mile radius of the proposed rezoning. As a result of these No-Action developments, the residential population in the study area is expected to increase by approximately 11,156 new residents. All of these new residents would be located within the library ¾-mile study area. The 11,156 new residents would represent an increase in population of approximately 10.8 percent over the existing population of 103,141 in the library study area, raising the study area population to 114,297 under 2019 No-Action conditions.

Holdings per Resident

For analysis purposes, the number of holdings in the study area branch libraries is assumed to remain the same in 2019, with 770,848 holdings. With a 2019 No-Action population of 114,297 residents, the

[7] Updated 2010 information for the study area is based on population and housing estimates for the borough of Manhattan from the Census Bureau Current Estimates Program (American Community Survey). A per year growth rate was determined from the borough's recent growth over the 10 year period between 2000 and 2010.

[8] The ¾-mile libraries study area only includes development anticipated to be constructed on the Western Rail Yards site (located on the block bounded by West 33rd Street, 11th Avenue, West 30th Street, and Route 9A). It does not include any development planned on the Ninth Avenue Site located on the east side of Ninth Avenue between West 53rd and West 54th Streets, which is located beyond a ¾-mile radius of the proposed rezoning area.

study area holdings per resident ratio is expected to decrease from 7.47 holdings per resident to 6.74 holdings per resident.

Future With The Proposed Action

As previously noted, the Proposed Action would result in a net increase of 1,134 residential units to the study area, 914 market rate and 220 low/moderate/middle income units built pursuant to the Inclusionary Housing Program. These 1,134 units are expected to generate an estimated 1,746 new residents to the study area by 2019 as a result of the Proposed Action. This estimate of new residents is calculated by multiplying the number of residential units by 1.54 persons, which is the average household size for Manhattan Community District 5.

The approximately 1,746 new residents expected to be generated by the Proposed Action would comprise an increase of approximately 1.5 percent to the study area population by 2019 over the No-Action condition, less than the CEQR threshold for impact significance.

Holdings per Resident

The approximately 1,746 new residents expected to be generated by the Proposed Action would increase the study area population to 116,043 residents. With 770,848 holdings at study area libraries, the holdings per resident ratio would decrease from 6.74 under No-Action conditions to 6.64 under future With Action conditions.

Assessment

The holdings per resident ratio for the study area branch libraries with the Proposed Action would be 6.64 to 1, and would remain above the system-wide ratio of 2.2 to 1 for the NYPL branch libraries. Accordingly, the Proposed Action is therefore not expected to have any adverse impacts on library services within the study area.

V. CONCLUSION

The Proposed Action was assessed for the effects of its projected development on community facilities and services. A screening analysis found that the Proposed Action exceeds thresholds for detailed analysis of elementary and intermediate schools, public day care centers, and public libraries. The Proposed Action did not exceed the threshold for a detailed analysis for hospitals and health facilities, fire protection services or police protection services.

Based on a detailed analysis of public elementary and intermediate schools, publicly funded day care facilities, and public libraries within the study areas for the respective facilities, no significant adverse impacts for elementary and intermediate schools in sub-district 3 of CSD 2, publicly funded day care, or public libraries were found as a result of the Proposed Action by 2019.

ATTACHMENT F
OPEN SPACE

I. INTRODUCTION

An open space assessment may be necessary if a proposed action could potentially have a direct or indirect effect on open space resources in the area. According to the *New York City Environmental Quality Review Technical Manual* (*CEQR Technical Manual*), a direct open space impact would "physically change, diminish, or eliminate an open space or reduce its utilization or aesthetic value." An indirect effect may occur when the population generated by a proposed project would be sufficient to noticeably diminish the ability of an area's open space to serve the existing or future population. According to the guidelines established in the *CEQR Technical Manual*, a project that would add more than 200 residents or 500 employees, or a similar substantial number of other users to an area, is typically assessed for any potential indirect effects on open space.[1] The Proposed Action would add new residents to the area over the 8-year period following the adoption of the Proposed Action, and therefore has the potential to affect the way residents of the surrounding community use parks, playgrounds, and other open spaces in the area.

As discussed in Attachment A, "Project Description," compared to future conditions without the Proposed Action, the RWCDS associated with the proposed rezoning anticipates that the 10 projected development and conversion sites would result in a net increase of 1,134 dwelling units, 42,206 sf of retail space, and 7 accessory parking spaces, as well as a decrease of approximately 15,153 sf of office space, 8,596 sf of industrial/warehousing/ wholesale space, 189 hotel rooms, and 146 public parking spaces. This anticipated development would add an estimated 1,746 net new residents to the study area,[2] and would also result in a net increase of approximately 43 workers over the next eight years following the adoption of the Proposed Action. As the RWCDS associated with the Proposed Action would add 1,746 new residents, it exceeds the *2010 CEQR Technical Manual* threshold for an open space assessment, and therefore an open space assessment is warranted to examine the change in total population relative to total public open space in the area, in order to determine whether this increase in user population would significantly reduce the amount of open space available for the area's population. This entails the calculation of the existing open space ratio, as well as the open space ratios in the future without and with the Proposed Action in place. The open space ratio is expressed as the amount of public open space acreage per 1,000-user population. The analysis year for the Proposed Action is 2019. The Proposed Action would not exceed the 500-employee CEQR screening threshold, and therefore an assessment of the open space effects of the new worker population associated with the Proposed Action is not warranted. As such, this attachment focuses exclusively on the Proposed Action's residential demands on open space resources. Although the number of workers/daytime population added by the Proposed Action does not trigger the CEQR threshold for analysis, the open space needs of the worker/daytime population within the defined residential study area are accounted for in the analysis, as discussed below.

[1] As the rezoning area is not located within an underserved or well-served area of the City and it would add more than 200 residents, an open space assessment was conducted in accordance with the 2010 *CEQR Technical Manual*.
[2] Utilizing the average household size for Manhattan Community District 5 of 1.54 persons per household.

II. METHODOLOGY AND OPEN SPACE STUDY AREA

With an inventory of available resources and potential users, the adequacy of open space in the study area can be assessed both quantitatively and qualitatively. The quantitative approach computes the ratio of open space acreage to the population in the study area and compares this ratio with certain guidelines. The qualitative assessment examines other factors that can affect conclusions about adequacy, including proximity to additional resources beyond the study area, the availability of private recreational facilities, and the demographic characteristics of the area's population. Specifically, the analysis in this attachment includes:

- Characteristics of the two open space user groups: residents and workers. To determine the number of residents in the study area, census data have been compiled for census tracts comprising the open space study area. This information was updated based on population and housing estimates for the borough of Manhattan from the Census Bureau Current Estimates Program (American Community Survey). A per year growth rate was determined from the borough's recent growth over the 8 year period between 2000 and 2008. Because the study area is characterized by a workforce that may also use open spaces, the number of employees in the study area has also been calculated, based on reverse journey-to-work census data. This information was updated based on an annual growth rate derived from a comparison of New York State Department of Labor (NYSDOL) private sector employment data for zip code 10001 (approximately ¼-mile radius) for the 4th quarter of 2000 and the 4th quarter of 2009. In addition, the daytime population estimate was adjusted to include an additional 10,413 daytime users to account for the population of the Fashion Institute of Technology.
- An inventory of all publicly accessible passive and active recreational facilities in the study area.
- An assessment of the quantitative ratio of open space in the study area by computing the ratio of open space acreage to the population in the study area and comparing this open space ratio with certain guidelines. For the residential population, there are generally two guidelines that are used to evaluate residential open space ratios. The NYCDCP generally recommends a comparison to the median ratio for community districts in New York City, which is 1.5 acres of open space per 1,000 residents. Alternately, NYCDCP has established an optimal level, or planning goal, of 2.5 acres of open space per 1,000 residents. To determine the adequacy of open space resources for the working, or daytime, population, NYCDCP has established a ratio of 0.15 acres of passive open space per 1,000 workers as representing a reasonable amount of open space. The needs of workers and residential populations are also considered together in the study area because it is assumed that both will use the same passive open spaces. Therefore, a weighted average of the amount of passive open space necessary to meet the NYCDCP guideline of 0.5 acres of passive open space per 1,000 residents and 0.15 acres of passive open space per 1,000 workers is considered in this analysis.
- An evaluation of qualitative factors affecting open space use, including barriers to access, description of active and passive uses, and characteristics of user groups.
- A final determination of the adequacy of open space in the study area.

Open Space Study Area

In accordance with the guidelines established in the *2010 CEQR Technical Manual*, a reasonable walking distance generally defines the open space study area that users would travel to reach local open space and recreational resources. That distance is typically a half-mile radius for residential projects and a quarter-mile radius for commercial projects with a worker population. Because the

Proposed Action would not result in an increase of 500 or more workers in the study area, an assessment of the non-residential study area was not necessary. Therefore, a half-mile radius from the proposed rezoning area is the appropriate study area boundary for the Proposed Action.

For analysis purposes, the study area was determined by identifying a half-mile radius around the boundaries of the proposed rezoning area. Per *2010 CEQR Technical Manual* guidelines, census tracts with 50 percent or greater of their area located within the half-mile radius were included in the calculation of population and open space; those with less than 50 percent of their area in the half-mile radius were excluded, and the study area boundary was adjusted accordingly. Figure F-1 shows the resultant open space study area boundary. As shown in the figure, the open space study area includes the following census tracts in their entirety: 58, 76, 87, 89, 91, 93, 95, 97, 101, 103, 109, and 111. As per the guidelines of the *2010 CEQR Technical Manual*, only those open spaces and populations that fall within the census tracts comprising the study area were included in the quantitative analysis.

III. PRELIMINARY ASSESSMENT

Pursuant to the guidelines of the *2010 CEQR Technical Manual*, a preliminary open space assessment was conducted which provided a comparison of the total open space ratios for existing conditions and in the future with the Proposed Action. As the study area exhibits a low open space ratio (i.e., below the citywide average of 1.5 acres per 1,000 residents) under existing conditions and in the future with the Proposed Action, a detailed open space assessment is warranted and is provided below.[3]

IV. DETAILED ANALYSIS

Existing Conditions

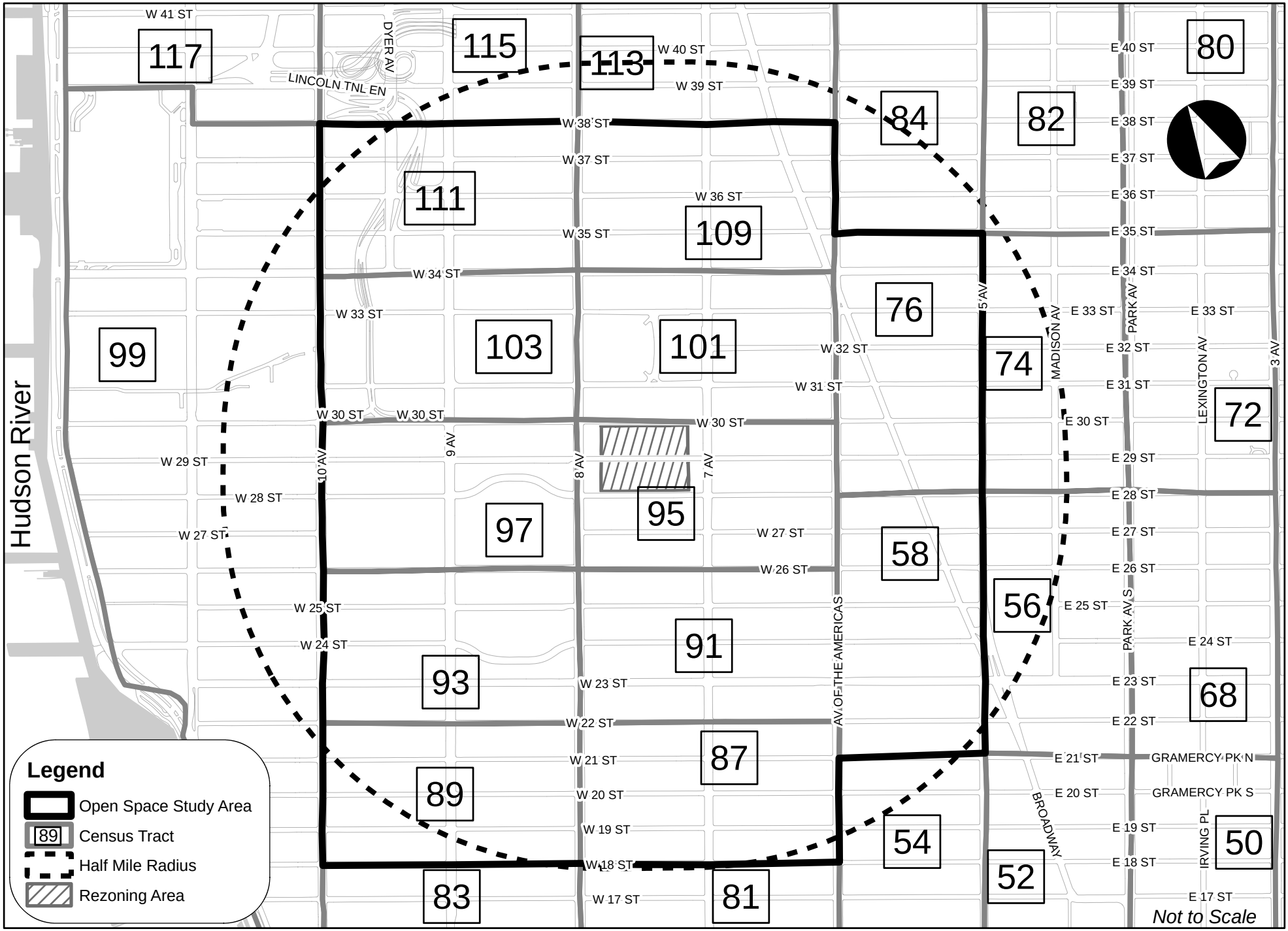
Study Area Population

Residential Population

To determine the residential population served by existing open space resources, 2000 Census data were compiled for the census tracts comprising the study area. In addition, in order to more accurately reflect the study area's current estimated population, an annual percentage growth rate was applied based on population and housing estimates for the borough of Manhattan from the Census Bureau Current Estimates Program (American Community Survey). A per year growth rate was determined from the borough's recent growth over the 8 year period between 2000 and 2008.

As shown in Table F-1 below, Census data indicate that the study area had a residential population of approximately 38,869 people in 2000. Based on the annual growth rate described above, it is estimated that the study area's 2010 adjusted population is approximately 42,041 residents. It should be noted that although the census data presented in Table F-1 do not include the new population added since

[3] The preliminary open space assessment showed that in the future with the Proposed Action the open space ratio would be 0.32 acres per 1,000 residents, which is less than the citywide average of 1.5 acres per 1,000 residents.



West 28th Street EAS

Figure F-1
Open Space Study Area

2000, for analysis purposes, it is assumed that these new residents have an age breakdown similar to the rest of the study area.

The median population age for individual census tracts within the study area ranges from a high of 47.5 years (census tract 97) to a low of 24.7 years (census tract 95) as shown in Table F-1. The study area's average median age of 37.2 is older than the median age for Manhattan as a whole, which is 35.7 years. Approximately 76.8 percent of the study area's population falls between the ages of 20 and 64, whereas approximately 12.8 percent of the area's residents are 65 years of age and older, compared to 68.7 percent and 12.2 percent, respectively, for Manhattan as a whole. As such, the open space study area has a larger percentage of adults and seniors compared to Manhattan overall. When compared to Manhattan as a whole, the study area has a higher median age (37.2 years in contrast to 35.7 years in Manhattan), and a lower percentage of persons under the age of 20 (10.5 percent in contrast to 19.1 percent in Manhattan).

TABLE F-1
Residential Population, Age Group Distribution, and Worker Population in Open Space Study Area

Census Tract	Residential Population	Under 5		5 to 9		10 to 14		15 to 19		20 to 64		65+ Years		Median Age	Worker Population
		#	%	#	%	#	%	#	%	#	%	#	%		
58	659	23	3.5	23	3.5	29	4.4	12	1.8	533	80.9	39	5.9	37.8	20,350
76	2,493	61	2.4	38	1.5	38	1.5	64	2.6	2,178	87.4	114	4.6	34.3	29,525
87	4,626	108	2.3	64	1.4	63	1.4	58	1.3	3,896	84.2	437	9.4	37.4	8,175
89	5,320	131	2.5	132	2.5	151	2.8	159	3.0	4,259	80.1	488	9.2	37.9	1,555
91	4,553	85	1.9	68	1.5	59	1.3	53	1.2	3,945	86.6	343	7.5	37.3	10,405
93	8,714	289	3.3	260	3.0	259	3.0	243	2.8	5,918	67.9	1,745	20.0	42.5	2,225
95	2,694	54	2.0	26	1.0	35	1.3	468	17.4	2,043	75.8	68	2.5	24.7	18,035
97	4,852	134	2.8	137	2.8	175	3.6	179	3.7	2,866	59.1	1,361	28.1	47.5	3,535
101	239	2	0.8	1	0.4	3	1.3	0	0.0	193	80.8	40	16.7	44.5	38,890
103	1,463	20	1.4	10	0.7	14	1.0	20	1.4	1,287	88.0	112	7.7	34.5	14,465
109	208	2	1.0	3	1.4	8	3.8	5	2.4	179	86.1	11	5.3	34.0	37,930
111	3,048	79	2.6	74	2.4	65	2.1	82	2.7	2,549	83.6	199	6.5	33.9	13,010
Total Population	**38,869**	**988**	**2.5**	**836**	**2.2**	**899**	**2.3**	**1,343**	**3.5**	**29,846**	**76.8**	**4,957**	**12.8**	**37.2**	**198,100**
Adjusted 2010 Total (1)	**42,041**														**230,760**

Notes:
(1) Residential population based on an annual growth rate of 0.7875% calculated from Manhattan's growth rate over the eight year period between 2000 and 2010 Census Bureau Current Estimates Program (American Community Survey). For the worker daytime population, 2010 population is estimated by increasing 2000 population by an annual growth rate of 1.07%, based on a comparison of NYSDOL private sector employment data for zip code 10001 (approximately ¼-mile radius) for the 4th quarter of 2000 and the 4th quarter of 2009. In addition, the adjusted 2010 daytime population estimate includes an additional 10,413 daytime users to account for Fashion Institute of Technology.

Source: 2000 US Census Data; Summary File 1, Table P-1; and CTPP Part 2, Table P-1.

As also shown in Table F-1, approximately 2.5 percent of the study area's residents are under the age of 5, 2.2 percent are between the ages of five and nine, 2.3 percent are between 10 and 14 years old, and 3.5 percent are between the ages of 15 and 19. These percentages are considerably lower than the percentages for the borough of Manhattan in the same age groups. This is indicative of the more mature nature of the study area's population. With these demographic characteristics, the study area has a need for a range of active and passive recreation facilities, particularly those geared toward adults.

Non-Residential/Worker Population

Although there is no quantitative analysis dedicated exclusively to the non-residential population within the defined study area, the *CEQR Technical Manual* calls for a quantitative analysis of the

passive open space needs of the non-residential population within the residential study area. Therefore, a combined passive open space ratio for the entire study area population (including both residents and non-residents) is calculated to assess the adequacy of the passive open space resources during the day when both of these user groups could be utilizing the spaces.

As shown in Table F-1, based on 2000 Census Journey to Work data compiled by NYCDCP, the 2000 worker population for the open space study area is estimated at approximately 198,100 workers. Using an annual growth rate of 1.07%[4], the current 2010 worker population is estimated at approximately 220,347 for the study area. In addition, approximately 10,413 daytime users were added to the adjusted 2010 worker/daytime population to account for the Fashion Institute of Technology (based on Fall 2009 total full- and part-time undergraduate and graduate enrollment). Therefore, the total 2010 adjusted worker/daytime population in the study area is estimated at 230,760.

Total User Population

As shown in Table F-2 below, within the defined study area, the total current residential and non-residential population is estimated to be 272,801. This count conservatively assumes that the residential and non-residential populations are entirely distinct from each other. It is possible that some area residents may also work in the study area, and as such there is likely to be some double-counting of the daily user population in the study area, resulting in a more conservative analysis.

TABLE F-2
Summary of Open Space User Groups Within Defined Study Area

User Group	2000	2010 (1)
Residents	38,869	42,041
Workers/Daytime Users	198,100	230,760
Combined Residents and Non-Residents	236,969	272,801

(1) Residential population based on an annual growth rate of 0.7875% calculated from Manhattan's growth rate over the eight year period between 2000 and 2008 Census Bureau Current Estimates Program (American Community Survey). For the worker daytime population, 2010 population is estimated by increasing 2000 population by an annual growth rate of 1.07%, based on a comparison of NYSDOL private sector employment data for zip code 10001 (approximately ¼-mile radius) for the 4th quarter of 2000 and the 4th quarter of 2009. In addition, the adjusted 2010 daytime population estimate includes an additional 10,413 daytime users to account for Fashion Institute of Technology.

Source: 2000 US Census Data; Summary File 1, Table P-1; and CTPP Part 2, Table P-1.

Inventory of Publicly-Accessible Open Space

According to the *CEQR Technical Manual*, open space may be public or private and may be used for active or passive recreational purposes. Public open space is defined as facilities open to the public at designated hours on a regular basis and is assessed for impacts under CEQR rules. Private open space is not accessible to the general public on a regular basis and should only be considered qualitatively.

An open space is determined to be active or passive by the uses that the design of the space allows. Active open space is the part of a facility used for active play such as sports or exercise and may include playground equipment, athletic fields and courts, swimming pools, skating rinks, golf courses, lawns, greenways and esplanades for running and paved areas for active recreation. Passive open space is used for seating, strolling, and relaxation with benches, walkways, and picnicking areas.

[4] Based on a comparison of NYSDOL private sector employment data for zip code 10001, which is equivalent to an approximate ¼-mile radius, for the 4th quarter of 2000 and the 4th quarter of 2009.

All publicly accessible open space facilities within the study area were inventoried in July 2009 and identified by their location, size, owner, hours of operation, condition and equipment. Open spaces that are not accessible to the general public or that do not offer usable recreational areas, such as spaces where seating is unavailable, were generally excluded from the survey. The condition of each open space facility was categorized as "Excellent," "Good", "Fair", or "Poor." A facility was considered in excellent condition if the area was clean, attractive, and all equipment was present and in good repair. A good facility had minor problems such as litter, or older but operative equipment. A fair facility was one which was poorly maintained, had broken or missing equipment, or other factors which would diminish the facility's attractiveness. A poor facility exhibited serious deficiencies in cleanliness, security, and landscaping. Determinations were made subjectively, based on a visual assessment of the facilities. Table F-3, "Inventory of Existing Open Space and Recreational Facilities", identifies the name, address, ownership, hours, condition and utilization of the 20 open spaces within the study area. Figure F-2 maps their location within the study area. As shown in the table, the study area includes approximately 5.73 acres for active recreation and approximately 5.21acres for passive use, for a total of approximately 10.94 acres of open space.

Judgments as to the intensity of use and conditions of the facilities were qualitative, based on an observed degree of activity or utilization. If a facility seemed to be at or near capacity, i.e., the majority of benches or equipment was in use, then utilization was considered heavy. If the facility or equipment was in use, but could accommodate additional uses, utilization was considered moderate. If a playground or seating area had few people, usage was considered low.

The publicly accessible open spaces in the study area range from large to small neighborhood parks and playgrounds. Of the 20 open space resources in the study area, seven include playground equipment, five include other active use recreational facilities for young children, teens, and adults, and ten are dedicated exclusively to passive recreation, providing benches for sitting, flowers, plantings and tables. One of the passive use facilities is Herald Square (#3), which consists of seating areas and a pedestrian plaza. As shown in Table F-3, Greeley Square (#4) is also entirely dedicated to passive-use, and consists of a pedestrian plaza area with planting and seating areas.

Chelsea Park (#8), the second largest open space in the study area with 3.90 acres, contains multiple playing courts, as well as landscaped areas and seating areas. It receives moderate levels of use and is in good condition. The Penn South Houses Open Space (#11), 1.42 acres in size, contains landscaping, seating areas, walking paths, play equipment, and playing courts. It is generally in acceptable condition and receives low levels of usage. One Penn Plaza (#1), 1.15 acres large, contains landscaping and seating areas. It is currently in good condition and receives moderate levels of usage.

With an area of 0.60 acres, Elliot Houses Open Space (#9) features athletic fields, playground equipment, seating areas, landscaping, and a water feature. The facilities there, which generally receive a low level of use, are in good condition. The amenities in 0.49-acre Clement Clarke Moore Park (#16) include seating areas, a water feature, play equipment, and landscaping. These facilities are in good condition and generally receive moderate levels of use. The 0.39-acre P.S. 11 – William J Harris School Playground (#19) contains athletic courts, playground equipment, and seating areas. This facility is run by the New York City Department of Education (NYCDOE) and is open for public use before and after school hours when it is not dark out. It is in good condition and generally experiences low levels of use.

In 2008, the New York City Department of Transportation (NYCDOT) implemented street design changes to Broadway, which created new pedestrian areas on Broadway in Herald Square (35th to 33rd Streets) and Times Square (47th to 42nd Streets), which were subsequently made permanent in February 2010. Extensive safety improvements were also made along the Broadway corridor between

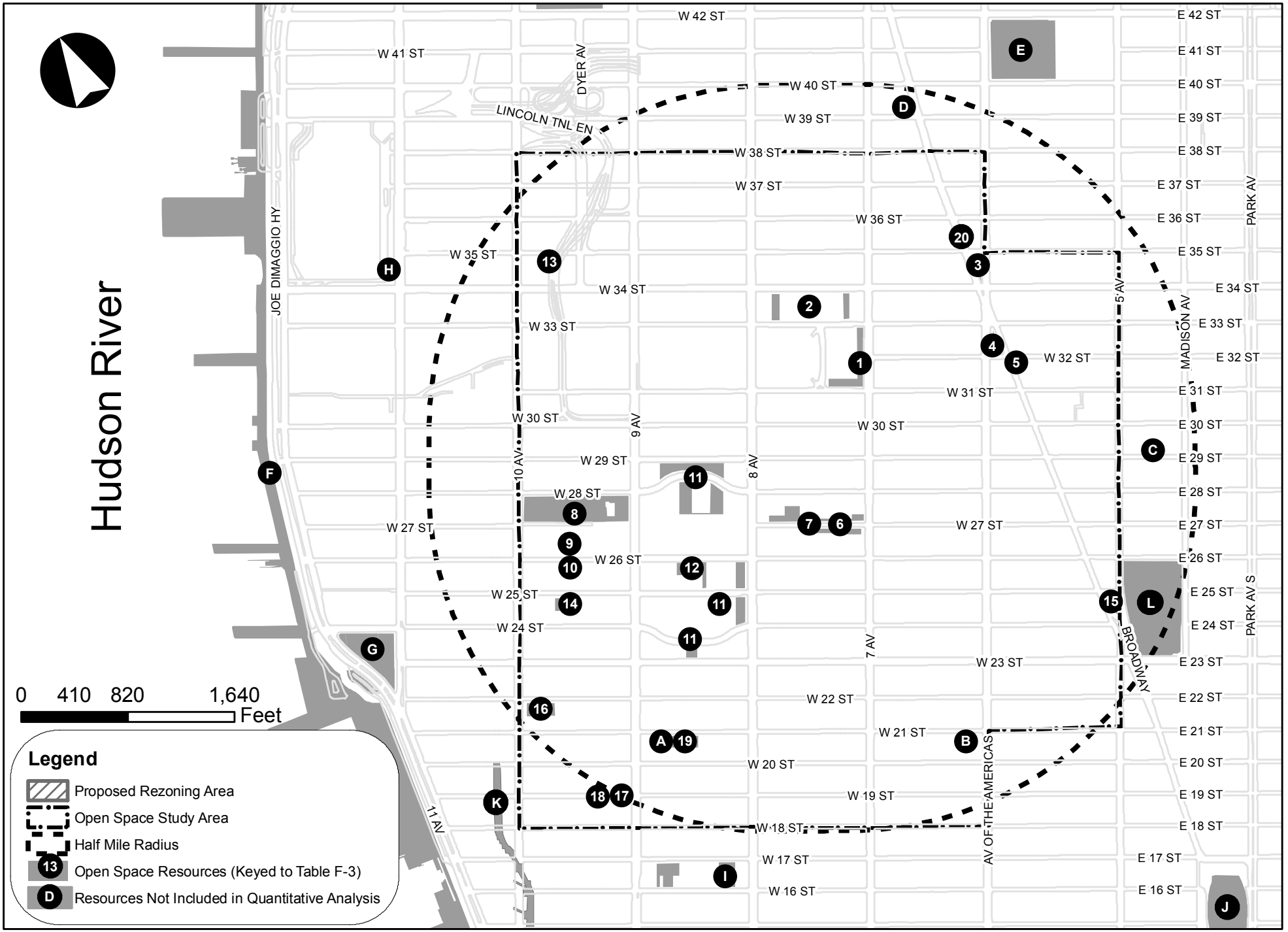


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Figure F-2
Open Space Resources

TABLE F-3
Inventory of Existing Open Space and Recreational Facilities

MAP #	NAME	LOCATION	OWNER/ AGENCY[1]	AMENITIES	CONDITION	UTILIZATION	HOURS OF ACCESS	AREA (acres)			PERCENTAGE OF TOTAL AREA	
								TOTAL	ACTIVE	PASSIVE	ACTIVE	PASSIVE
1	1 Penn Plaza	W 33rd St. to 34th St. between 7th and 8th Avenues	One Penn Plaza LLC	Landscaping, Seating Areas	Excellent	Moderate	Dawn to Dusk	1.15	0.00	1.15	0%	100%
2	2 Penn Plaza	W. 31st St. to 33rd St. between 7th to 8th Avenues	Vorando Two Penn Plaza LLC, Madison Square Garden LP	Paved Areas, Statuary , Seating Areas	Excellent	Low	Dawn to Dusk	0.42	0.00	0.42	0%	100%
3	Herald Square	W 34th St to 36th St between Broadway and 6th Avenue	NYCDPR	Landscaping, Seating Areas	Excellent	High	Dawn to Dusk	0.04	0.00	0.04	0%	100%
4	Greeley Square	W 32nd St. to W 33rd St. between 6th Avenue and Broadway	34th Street Partnership	Landscaping, Seating Areas	Excellent	High	Dawn to Dusk	0.18	0.00	0.18	0%	100%
5	1250 Broadway Plaza	1250 Broadway	Carlyle / SL Green 1250 Broadway LLC	Landscaping, Seating Areas, Statuary	Excellent	Low	Dawn to Dusk	0.22	0.00	0.22	0%	100%
6	230 W 27th St. Plaza	230 W 27th St.	SUNY FIT	Trees, Planters, Fences, Benches	Excellent	Moderate	Dawn to Dusk	0.07	0.00	0.07	0%	100%
7	FIT Plaza	W 27th St and 7th Avenue	SUNY FIT	Statuary, Seating Areas, Outdoor Art	Excellent	Moderate	Dawn to Dusk	0.05	0.00	0.05	0%	100%
8	Chelsea Park	W 28th St between 9th and 10th Avenues	NYCDPR	Seating Areas, Landscaping, Athletic Fields,	Excellent	Moderate	Dawn to Dusk	3.90	2.93	0.97	75%	25%
9	Elliott Houses Open Space	W 26th St between 9th a nd 10th Avenues	NYCHA	Seating Areas, Landscaping, Athletic Fields and Equipment, Water Feature	Excellent	Low	Dawn to Dusk	0.60	0.30	0.30	50%	50%
10	Chelsea Houses Open Space	W 25th St between 9th a nd 10th Avenues	NYCHA	Seating Areas, Landscaping, Athletic Fields and Equipment, Water Feature	Excellent	High	Dawn to Dusk	0.34	0.31	0.03	90%	10%
11	Penn South Houses Open Space	W 26th St between 8th and 9th Avenues	Mutual Redevelopment Houses LLC	Seating Areas, Landscaping, Play Equipment	Excellent	Low	Dawn to Dusk	1.42	0.36	1.07	25%	75%
12	Penn South Houses Playground	W. 26th St between 8th and 9th Avenues	NYCDPR	Play Equipment, Seating Areas, Plaing Courts	Excellent	Low	Dawn to Dusk	0.60	0.54	0.06	90%	10%
13	Bob's Park	456 W. 35th St.	Clinton Housing West 40th Partners LP	Play Equipment, Seating Areas, Landscaping	Excellent	Low	Dawn to Dusk	0.05	0.01	0.04	20%	80%
14	Chelsea Recreational Center	West 24th St to West 25th St between 9th and 10th Avenues	NYCDPR	Pool, Gymnasium (basketball/volleyball courts), fitness rooms	Excellent	High	Dawn to Dusk	0.39	0.39	0.00	100%	0%
15	General Worth Square	Broadway and 5th Avenue, W. 24th to W. 25th Streets	NYCDPR	Landscaping, Statuary	Excellent	Low	Dawn to Dusk	0.08	0.00	0.08	0%	100%
16	Clement Clarke Moore Park	W 22nd St between 9th and 10th Avenues	NYCDPR	Water Feature, Seating Areas, Play Equipment, Landscaping	Excellent	Moderate	Dawn to Dusk	0.49	0.34	0.15	70%	30%
17	Robert S. Fulton Houses Playground	W 19th St between 9th and 10th Avenues	NYCHA	Landscaping, Seating Areas, Play Equipment	Excellent	Low	Dawn to Dusk	0.28	0.14	0.14	50%	50%
18	Robert S. Fulton Houses Open Space	W 19th St between 9th and 10th Avenues	NYCHA	Landscaping, Seating Areas, Play Equipment, Water Feature	Excellent	Low	Dawn to Dusk	0.13	0.07	0.07	50%	50%
19	P.S. 11 - William J. Harris School Playground	W 21st St between 8th and 9th Avenues	NYCDOE	Athletic Fields, Play Equipment, Seating Areas	Excellent	Low	Dawn to Dusk except when school is session	0.39	0.35	0.04	90%	10%
20	Green Light for Midtown – Herald Square Plaza	Broadway between West 35th and 37th Streets	NYCDOT	Landscaping, Seating Areas	Excellent	High	24 hrs	0.14	0.00	0.14	0%	100%
							STUDY AREA TOTAL	**10.94**	**5.73**	**5.21**	**52%**	**48%**
RESOURCES NOT INCLUDED IN QUANTITATIVE ANALYSIS												
A	P.S. 11 Garden	320 West 21st	NYCDOE	Community Garden			Not Posted					
B	Congregation Shearith Isreal Cemetary	W 21st St between 6th and 7th Avenues	Congregation Shearith Isreal	Statuary, Landscaping	Excellent	Low	Dawn to Dusk	0.20	0.00	0.20	0%	100%
ADDITIONAL OPEN SPACE RESOURCES OUTSIDE STUDY AREA												
C	10 East 29th Street Plaza	East 29th Street Between Madison and 5th Avenues	Rose 29 LLC	Benches, trees, Planters, Lighting	Good	Moderate	Dawn to Dusk	0.29	0.00	0.29	0%	100%
D	Golda Meir Square	Broadway, between W. 39th and W. 40th Streets	1412 Trizec Hahn-Swig LLC	Seating, Trees, Planters	Good	High	Dawn to Dusk	0.38	0.00	0.38	0%	100%
E	Bryant Park	W. 40th to W. 42nd Street, between 5th and 6th Avenues	NYCDPR	Trees, Benches, Monuments, Lawn, Food Kiosks, Restaurant, Tables, Planters, Fountain	Excellent	High	Dawn to Dusk	9.60	0.00	9.60	0%	100%
F	Hudson River Park (2)	W. of Route 9A from 18th to 38th Streets	NYS and NYC	Walking, Jogging, Biking Path, Various Kiosks, Piers, Sport Fields, Seating Lawns	Excellent	High	Dawn to Dusk	4.00	2.00	2.00	50%	50%
G	Chelsea Waterside Park	W. 23rd to W. 24th Streets, between 11th and 12th Avenues	Hudson River Park Trust	Basketball Courts, Paved Walkways, Benches, Sprinkler Area, Picnic Tables, Soccer Fields, Trees, Planters, Dog Run	Excellent	High	Dawn to Dusk	2.50	1.25	1.25	50%	50%
H	Jacob Javits Convention Center Plaza	418 11th Avenue	National Railroad ETA	Benches, Platforms, Sculptural Seating	Good	Low	Dawn to Dusk	0.76	0.00	0.38	0%	50%
I	Dr. Gertrude B Kelly Playground	W. 17th and W. 18th Street to the west of 8th Avenue	NYCDPR	Sitting area, Spray Shower, Play Equipment, Basketball Courts and Trees	Good	Moderate	Dawn to Dusk	0.53	0.42	0.11	80%	20%
J	Union Square Park	Broadway to 4th Avenue from E. 17th to E. 14th Streets	NYCDPR	Walking Paths, Trees, Seating, Dog Run, Landscaping, Plazas, Playgrounds	Excellent	High	6AM to Midnight	3.59	0.9	2.65	25%	75%
K	The High Line - Section 1	Gansevoort to West 30th streets between Washington and 11th avenues	NYCDPR	Concrete pathways with naturalistic plantings, fixed and movable seating, lighting, special features	Excellent	Low	7:00 AM to 10:00 PM	0.58	0	0.58	0%	100%
L	Madison Square Park (1)	Broadway to Madison Avenues, E. 23rd to E. 26th Streets	NYCDPR	Trees, Benches, Fountain, Artwork, Playground, Dog Run	Excellent	Moderate	6:00 AM to midnight	4.6725	0.46725	4.20525	10%	90%

[1] NYCDPR - New York City Department of Parks and Recreation; FIT - State University of New York Fashion Institute of Technology; NYCHA - New York City Housing Authority; NYCDOE - New York City Department of Education.
(1) Madison Square Park is a 6.23-acre facility; however, as only an estimated 75% of its area falls within an approximate half-mile radius, only 75% of its total acreage (or 4.67 acres) is included in the quantitative analysis).
(2) Hudson River Park is an approximately 550-acre facility. Approximately 4.0 acres are estimated to fall in the area between 18th and 38th street, to the west of the open space study area.

Sources: NYCDPR website, PHA field inventory, Hudson Yards FGEIS.

Columbus Circle and Madison Square. These improvements, known as Green Light for Midtown, are aimed at improving traffic flow and creating open space, a pedestrian boulevard, and a protected bicycle path. The Broadway streetbed has been modified from four travel lanes to two travel lanes; the remainder of the streetbed has become a pedestrian mall, delineated by painted areas, planters and other elements to provide passive open space. Amenities of these pedestrian outdoor living rooms include street furniture, such as benches, chairs, tables, planters, and umbrellas. The portion of the plaza located within the study area, along the east side of Broadway between approximately West 35th and 37th Streets, is included in the quantitative analysis, and is estimated at approximately 0.14 acres of passive open space.

In addition to the above resources, there is one community garden and a cemetery located within the open space study area, as well as several other open space resources located outside the study area boundaries that are not included in the quantitative analysis (identified by letters A through L in Figure F-2 and Table F-3). These facilities are discussed in the qualitative assessment below.

Quantitative Analysis of Open Space Adequacy

The NYCDCP has established quantitative measures for determining the adequacy of open and recreational space within a neighborhood. The citywide median ratio of 1.5 acres per 1,000 persons provides a measure of open space adequacy, while the planning goal for large-scale developments is 2.5 acres per 1,000 persons, consisting of 2.0 acres of active space and 0.5 acres of passive space. Provided below are assessments of existing open space conditions according to these two guidelines.

As shown in Table F-2, the open space study area contains 10.94 acres of public open space, of which an estimated 5.73 acres are for active use and 5.21 acres are for passive use. Based on the current residential population of 42,041, the overall residential open space ratio is 0.260 acres of total open space per 1,000 residents. There are 0.136 acres of active open space per 1,000 residents and 0.124 acres of passive open space per 1,000 residents. With a combined residential and worker population of 272,801, the combined passive open space ratio in the study area is 0.019, which is significantly lower than the recommended weighted average ratio of 0.204 acres per 1,000 residents and workers (refer to Table F-4). The study area therefore currently falls far short of NYCDCP's measures of adequacy. In addition, the active versus passive open space ratios within the study area (approximately 52% active and 48% passive) does not match the NYCDCP optimal goal of 80 percent active and 20 percent passive.

TABLE F-4
Adequacy of Open Space Resources in the Study Area – Existing Conditions

	Total Population	Open Space Acreage			Open Space Ratios Per 1,000-People			DCP Open Space Guidelines		
		Total	Active	Passive	Total	Active	Passive	Total	Active	Passive
Residents	42,041	10.94	5.73	5.21	0.260	0.136	0.124	2.50	2.00	0.50
Combined Non-Residents & Residents	272,801				N.A.	N.A.	0.019	N.A.	N.A.	0.204*

Notes:
* Weighted average combining 0.15 acres per 1,000-non-residents and 0.50 acres per 1,000-residents.

Qualitative Assessment of Open Space Adequacy

The open space resources that exist within the open space study area are deficient in meeting the community's open space needs according to NYCDCP's guidelines for the provision of open space.

Although the study area contains a good mixture of recreational facilities, with approximately 40 percent dedicated to active uses and 60 percent dedicated to passive use, open space ratios per 1,000 residents still fall well below NYCDCP's planning goal of 2.5 acres per 1,000 residents and the Citywide median of 1.5 acres per 1,000 residents.

The quantitative deficiency of open space resources within the defined study area may be ameliorated by several factors. First, all 20 open spaces are considered to be in good or excellent condition. The study area contains a good mix of recreational facilities, with 52 percent dedicated to active uses and 48 percent to passive recreation. A wide variety of options to the open space user are available, from sitting areas and walking paths to playgrounds, basketball and handball courts, ball fields, dog runs, grassy areas and trees.

Second, the study area contains one cemetery (Congregation Shearith Israel cemetery), as well as one community garden (P.S. 11 Garden), which are open to the public and provide additional passive recreational opportunities. Although those two facilities were not taken into account as part of the quantitative analysis because they had no posted hours of operation, their presence should be noted, as they can occasionally be used by the area's residents and daytime users.

In addition, other park areas and open space resources that are located beyond the open space study area boundary add considerable accessible active and passive open space for the residential population as well as some of the area's daytime users. These include Section 1 of the High Line, the 6.23-acre Madison Square Park immediately across the street from the eastern rezoning area boundary, the 9.6-acre Bryant Park approximately three blocks to the northeast of the study area, portions of the 550-acre Hudson River Park as well as the 2.50-acre Chelsea Waterside Park, which are located approximately 1 to 2 blocks to the west of the study area, as well as several smaller plazas. Section 1 of the High Line, which opened to the public on June 9, 2009, runs from Gansevoort Street to 20th Street (just outside the study area boundary), and is approximately 2.9 acres. When all sections are complete, the High Line will be a mile-and-a-half-long approximately 5.9-acre elevated park, running through the West Side neighborhoods of the Meatpacking District, West Chelsea and Clinton/Hell's Kitchen. It features an integrated landscape combining meandering concrete pathways with naturalistic plantings. Fixed and movable seating, lighting, and special features are also included in the park. Access points to Section 1 are currently located at Gansevoort Street, 14th Street, 16th Street, 18th Street, and 20th Street. Section 2 of the High Line is projected to open in 2011, and is discussed in the No-Action section below. Similarly, Madison Square Park, which falls just outside the study area boundary, has not been included in the quantitative analysis, although most of the park falls within a half-mile radius from the proposed rezoning area. Madison Square Park is located between Fifth and Madison Avenues, extending from East 23rd to East 26th Streets, and contains several statues, as well as lush lawns and flowering plants, a playground, a dog run, a restored 19th century ornamental fountain, and benches.

Although these open spaces are located beyond the open space study area boundary, it is likely that both residents and workers at least occasionally take advantage of the recreational resources that these parks have to offer.

Future Without The Proposed Action (No-Action)

Open Space Study Area Population

As described in Attachment C, "Land Use, Zoning, and Public Policy," a number of No-Build developments are anticipated to be completed within a half-mile radius of the rezoning area in the 2019 future without the Proposed Action. Table F-5 provides a list of the known projects that are

anticipated to occur within the boundaries of the defined open space study area, as well as the 363-room hotel assumed to be developed on projected development site 5 within the rezoning area in the No-Action condition. As shown in Table F-5, it is estimated that a total of approximately 3,447 new dwelling units would fall within the defined open space study area. Based on 2000 Census data, the average household size for Manhattan Community District 5 is 1.54, and the average for Manhattan Community District 4 is 1.64. Based on these ratios, the approximately 3,447 new dwelling units expected in the study area in the future without the Proposed Action are estimated to add approximately 5,422 new residents to the study area over the next eight years. This would bring the study area's residential population to 47,463 in the future without the Proposed Action.

As also shown in Table F-5, the identified developments expected within the open space study area in the future without the Proposed Action are also estimated to add approximately 8,708,591 sf of office space, 1,309,470 sf of retail space, and approximately 183,460 sf of community facility space, as well as an estimated 1,661 hotel rooms (including one hotel within the rezoning area). These developments would introduce an estimated 39,639 workers to the study area, increasing the daytime population to approximately 270,399 in the No-Action condition.

Therefore, within the defined study area, the total residential and non-residential population in 2019 is estimated at approximately 317,862 persons.

Open Space Resources

No new open space resources are expected within the open space study area by 2019. As such, for quantitative analysis purposes, the study area would continue to have a total of 10.94 acres of open space in the 2019 future without the Proposed Action, with approximately 5.73 acres for active recreation and approximately 5.21 acres for passive use.

There are several open space resources that are expected to be added beyond the defined study area by 2019, which are conservatively not included in the quantitative analysis (see Figure F-3). Section 2 of the High Line, which would stretch from West 20th Street to West 30th Street (see Figure F-3) is expected to be developed by 2019, and would comprise an estimated 2.9 acres. As shown in Figure F-3, most of Section 2 would fall within a ½-mile radius of the rezoning area, just outside the study area boundary. Similar to Section 1 of the High Line, Section 2 is assumed to be comprised entirely of passive open space. Segments 5, 6, and 7 of Hudson River Park, beginning at West 14th Street and stretching north to West 59th Street, are expected to be completed by 2011. Altogether, these sections of Hudson River Park would provide 9.83 acres of publicly accessible open space along the Hudson River.[5] In addition, development of the Hudson Park and Boulevard open space, stretching in the mid-blocks from West 33rd to West 36th Streets between Tenth and Eleventh Avenues (just half a block to the west of the study area) would add approximately 2.12 acres of open space by the analysis year of 2019. The Eastern Rail Yards development between West 30th and West 33rd Streets, Tenth and Eleventh Avenues, is also expected to add 5.2 acres of open space, while the Western Rail Yard development (between Eleventh Avenue and Route 9A) would add approximately 5.45 acres of open space. It is also anticipated that, in the future, the High Line would connect to the planned open space within the Western Rail Yard development and, ultimately, to Hudson River Park, which would result in a linked network of open spaces. As discussed above, because these resources all fall outside the boundaries of the study area, they were not included in the quantitative analysis of open space. However, it should be noted that although all of these facilities are conservatively not included in the quantitative analysis, they would add considerable accessible active and passive open space by 2019, a total of approximately 25.5 acres, which may be occasionally utilized by the study area's residents and/or daytime users.

[5] Source: No. 7 Subway Extension - Hudson Yards Rezoning and Development Program FGEIS; June 2004.

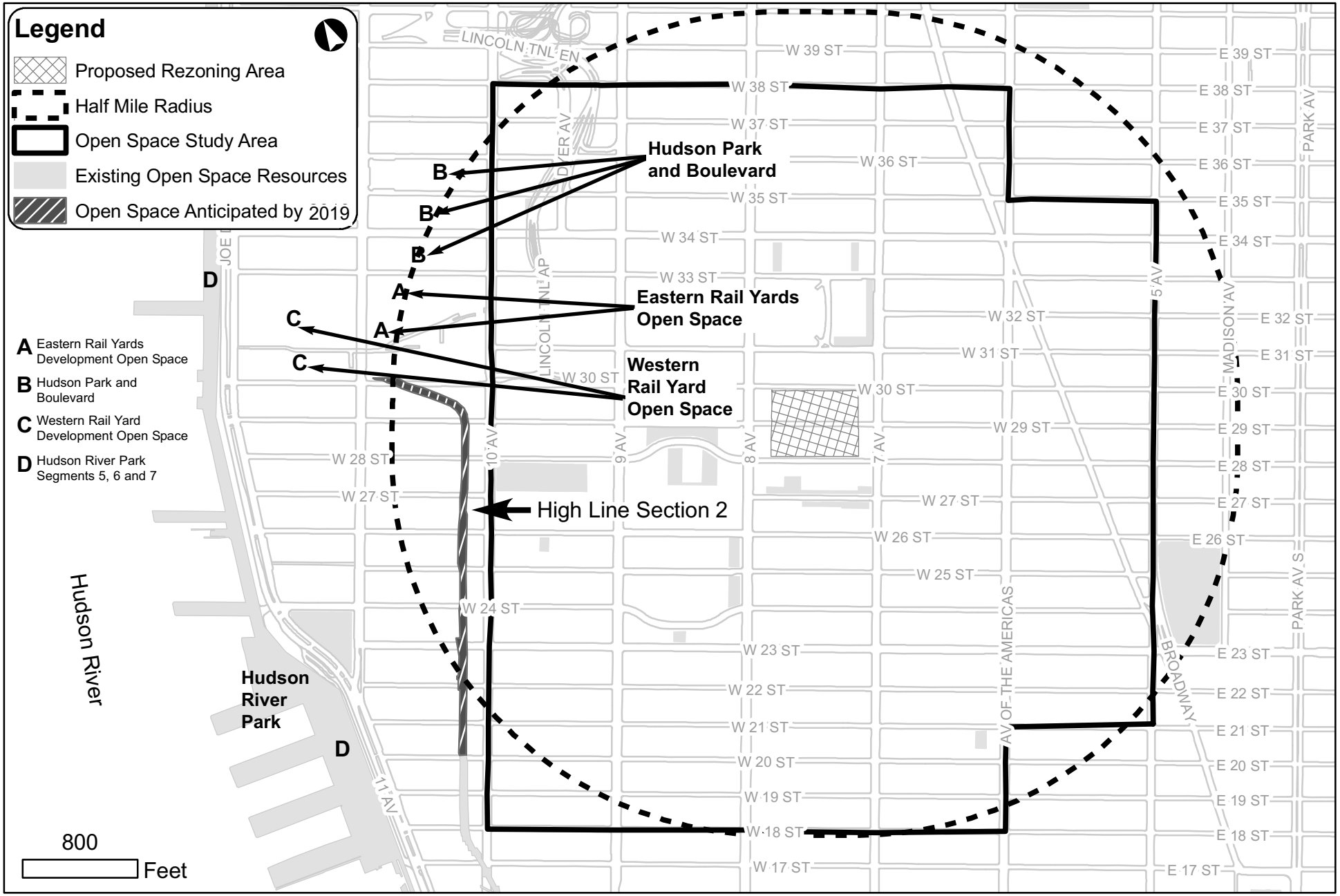

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Figure F-3

Open Space Resources Anticipated by 2019 Under No-Action Conditions

TABLE F-5
No-Build Developments Within the Open Space Study Area

Map No.	Site Description	Land Use Category in SF or Units					No-Action Residents	No-Action Workers
		Office FA	Hotel Rooms	Retail FA	Housing Units	Community Facility FA		
1	415 8th Ave. @ SW corner of W. 31 St.			10,000	106		174	34
2	Cambria Suites MSG Hotel- 325 W. 33 St.		239				0	80
3	The Continental -885 6th Ave @ W. 32 St	21,500		25,600	338		521	176
4	855 6th Ave. (btw W. 30/W. 31 Sts.)			38,468	433		667	133
5	Former REMY site - 815 6th Ave. (@ W. 28 St.)			59,000	269		414	188
6	140-8 W. 28th St. (btw 6th/7th Aves.)			9,000	252		388	37
7*	216-222 W. 30 St. (btw 7th/8th Aves.)		363				0	121
8	Expanded Moynihan Project: Farley Building (Entire block bounded by W. 31 and W. 33 Sts. and 8th/9th Aves.)	235,000	125	553,100			0	2641
9	Expanded Moynihan Project: Penn West (Eighth Ave. btw W. 33/W. 34 Sts.)		574	36,602	492		758	321
10	Expanded Moynihan Project: Penn East (Seventh Ave. btw W. 33/W. 34 Sts.)	1,942,577		70,508			0	7982
11	15 Penn Plaza (btw W. 32/W. 33 Sts.)	1,893,814		361,711			0	8660
12	1182 Broadway				44		68	2
13	FIT Expansion (South of W. 28th Street b/w 7th and 8th Avenues)					100,000	0	100
14	124 W. 23rd Street			4,000	34		56	13
15	Hudson Yards Sites 32/33 (West side of Ninth Ave. btw W. 31/W. 33 Sts.)	4,615,700		82,300			0	18710
16	35-41 W. 23 St.				63		97	3
17	Ladies' Mile Rezoning- Development Sites #1 & #2			36,081	439		676	126
28	345 W. 35 St. (btw 8th/9th Aves.)		173				0	58
29	Hudson Yards Site 28 (Hudson Mews II (South))- Dyer Ave btw W. 35 St/W. 36 Sts.			16,100	361		592	63
30	Hudson Yards Site 24 (Hudson Mews I (North))- Dyer Ave btw W. 37/W. 38 Sts.				448	7,460	735	25
34	307-311 W. 37 St. (North side btw 8th/9th Aves.)		187				0	62
35	CUNY School of Professional Studies					76,000	0	76
36	Chelsea Elliott (401-405 W. 25th Street / 429-59 9th Ave.)			7,000	168		276	28
TOTALS FOR OPEN SPACE STUDY AREA		***8,708,591***	***1,661***	***1,309,470***	***3,447***	***183,460***	***5,422***	***39,639***

Notes: FA- Floor Area
Map number corresponds to Figure C-4 in Attachment C, "Land Use, Zoning, and Public Policy.
* Hotel assumed to be developed within the rezoning area (on projected development site 5) in the future without the Proposed Action
Source: NYCDCP

Quantitative Analysis of Open Space Adequacy

As discussed above, it is anticipated that new development in the study area will result in an increase in the population in the future without the Proposed Action. At the same time, the supply of open space in the study area, both total and passive, is expected to remain unchanged from existing conditions. Therefore, as shown in Table F-6, the total open space ratio in the study area would decrease from 0.260 acres/1,000 residents under existing conditions to 0.230 acres per 1,000 residents (a decrease of 11.5 percent). The active open space ratio would also decrease, from 0.136 acres per

1,000 residents under existing conditions to 0.121 acres per 1,000 residents (a decrease of 11.0 percent).

TABLE F-6
Adequacy of Open Space Resources in the Study Area – No-Action Conditions

	Total Population	Open Space Acreage			Open Space Ratios Per 1,000-People			DCP Open Space Guidelines		
		Total	Active	Passive	Total	Active	Passive	Total	Active	Passive
Residents	47,463	10.94	5.73	5.21	0.230	0.121	0.110	2.50	2.00	0.50
Combined Non-Residents & Residents	317,862				N.A.	N.A.	0.016	N.A.	N.A.	0.202*

Notes:
* Weighted average combining 0.15 acres per 1,000-non-residents and 0.50 acres per 1,000-residents.

With a combined residential and non-residential population of 317,862, the combined passive open space ratio in the study area would decrease from 0.019 under existing conditions, to 0.016 acres per 1,000 persons (a decrease of 15.8 percent), which would continue to be much less than the recommended weighted average ratio of 0.202 acres per 1,000 residents and non-residents (refer to Table F-6). As such, in the future without the Proposed Action, the study area is anticipated to continue to fall far short of the guidelines for adequacy (1.5 acres per 1,000 residents) and the citywide planning goals established by NYCDCP (2.5 acres per 1,000 residents).

Qualitative Assessment of Open Space Adequacy

Although the study area's open space resources would continue to be deficient in meeting the community's open space needs under No-Action conditions, this deficiency of open space resources within the defined study area may be ameliorated by some of the new open space facilities that are expected to be developed outside the study area. As discussed above, these include Section 2 of the High Line, the three segments of Hudson River Park, as well as the Hudson Park and Boulevard open space and the open spaces planned as part of the Eastern Rail Yards and Western Rail Yard developments. Although these facilities are conservatively not included in the quantitative analysis, they would add considerable accessible active and passive open space (25.5 acres total, more than the amount located within the defined study area) which may be occasionally utilized by the study area's residents and/or daytime users in the future without the Proposed Action. In addition to the new facilities planned by 2019, as discussed above, there are also other existing park areas and open space resources that are located beyond the open space study area boundary, which would continue to add considerable accessible active and passive open space for the residential population as well as some of the area's daytime users. These include Section 1 of the High Line, the 6.23-acre Madison Square Park immediately across the street from the eastern rezoning area boundary, which serves local residents and workers and attracts visitors to the area, the 9.6-acre Bryant Park approximately three blocks to the northeast of the study area, portions of the 550-acre Hudson River Park as well as the 2.50-acre Chelsea Waterside Park, which are located approximately 1 to 2 blocks to the west of the study area, as well as several smaller plazas.

Future With The Proposed Action (With-Action)

Open Space Study Area Population

Attachment A, "Project Description" shows that in the future with the Proposed Action, it is estimated that a total of approximately 1,153 dwelling units (DUs) on the 10 identified projected development and conversion sites would be added within the rezoning area by 2019, an increase of 1,134 DUs from No-Action conditions. Based on 2000 Census data, the average household size for Manhattan Community District 5, which encompasses the rezoning area, is 1.54. Based on these assumptions, the approximately 1,134 new dwelling units expected in the study area in the future with the Proposed Action are estimated to add approximately 1,746 new residents to the study area.

The Proposed Action would also result in a net increase of approximately 43 employees in the study area compared to No-Action conditions.

Open Space Resources

No new open space resources are anticipated to be developed as part of the RWCDS. Therefore, the open space resources within the study area would remain unchanged from No-Action conditions.

Quantitative Analysis of Open Space Adequacy

As shown in Table F-7, the total residential open space ratio in the study area would decrease compared with No-Action conditions, from 0.230 to 0.222 acres per 1,000 residents (a decrease of 3.5 percent). The active open space ratio would decrease compared to No-Action conditions, from 0.121 to 0.116 acres per 1,000 residents (a 4.1 percent decrease), while the passive open space ratio for residents would decrease compared to No-Action conditions, from 0.110 to 0.106 acres per 1,000 residents (a decrease of 3.6 percent).

TABLE F-7
Adequacy of Open Space Resources in the Study Area –
2019 No-Action and With-Action Conditions

	Total Population	Open Space Acreage			Open Space Ratios Per 1,000-People			DCP Open Space Guidelines		
		Total	Active	Passive	Total	Active	Passive	Total	Active	Passive
NO-ACTION CONDITIONS										
Residents	47,463	10.94	5.73	5.21	0.230	0.121	0.110	2.50	2.00	0.50
Combined Non-Residents & Residents	317,862				N.A.	N.A.	0.016	N.A.	N.A.	0.202*
WITH-ACTION CONDITIONS										
Residents	49,209	10.94	5.73	5.21	0.222	0.116	0.106	2.50	2.00	0.50
Combined Non-Residents & Residents	319,651				N.A.	N.A.	0.016	N.A.	N.A.	0.204*

Notes:
* Weighted average combining 0.15 acres per 1,000-non-residents and 0.50 acres per 1,000-residents.

As also shown in Table F-7, the recommended weighted average passive open space ratio for the study area would be higher compared to No-Action conditions, at 0.204 acres per 1,000 users in the future with the Proposed Action. The combined passive open space ratio for residents and nonresidents would remain unchanged from No-Action conditions, at 0.016 acres per 1,000 users.

Qualitative Discussion of Open Space Adequacy

The Proposed Action would neither result in any direct displacement of existing open space resources in the study area, nor would the Proposed Action significantly exacerbate the deficiency in open space. As described in the Attachment L, "Shadows," the Proposed Action would also not result in any significant adverse shadow impact on any open space resources.

The study area contains numerous open spaces, most of which are in good to excellent condition. These open spaces include Chelsea Park; the open spaces at The Penn South Houses and the Elliot Houses; the plaza at One and Two Penn Plaza; Clement Clarke Moore Park; the High Line Open space; and the William J. Harris School Playground. These open spaces provide a range of active and passive amenities within the study area. There are a number of existing and planned open spaces outside of the study area that feature active and passive amenities, which would help to offset the increased residential population's demand. As discussed above, there are a number of existing park areas and open space resources that are located beyond the open space study area boundary which, although not included in the quantitative analysis, would add considerable accessible active and passive open space for the residential population as well as some of the area's daytime users. These include Section 1 of the High Line which is a unique award-winning open space resource that attracts users from throughout the City, the 6.23-acre Madison Square Park immediately across the street from the eastern rezoning area boundary, the 9.6-acre Bryant Park approximately three blocks to the northeast of the study area, as well as the 2.50-acre Chelsea Waterside Park, which are located approximately 1 to 2 blocks to the west of the study area, as well as several smaller plazas.

Further, Hudson River Park, a large regional open space resource, is located approximately two blocks to the west of the study area and has both active and passive open space amenities that are accessible to residents within the study area. This large regional open space is unique in terms of its size, location, and amenities, and therefore attracts users from a wide geographic area. In addition, as noted above, there are a number of new open spaces that are expected to be completed beyond the study area by the analysis year of 2019. These include Section 2 of the High Line (2.9 acres), Segments 5, 6, and 7 of Hudson River Park (9.83 acres), Hudson Park and Boulevard (2.12 acres), Eastern Rail Yards development open space (5.2 acres), and Western Rail Yard development open space (5.45 acres). Although these facilities are conservatively not included in the quantitative analysis as they fall beyond the study area boundary, they would add considerable accessible active and passive open space (25.5 acres total, which is more than the total amount located within the study area). The proximate location of all of the above open spaces, some of which are large, regional, and/or unique open space resources that serve a large geographic area, could serve to moderate the shortfall of active and passive open space resources identified in the study area. Moreover, it is also anticipated that, in the future, the High Line would connect to the planned open space within the Western Rail Yard development and, ultimately, to Hudson River Park, which would result in a linked network of open spaces that would be easily accessible to residents and workers within the study area.

In the future with the Proposed Action, ratios of open spaces to residents would continue to be lower than the measure of open space adequacy and the optimal planning goals furnished by the Department of City Planning. The population generated by the Proposed Action is not expected to have any special characteristics, such as a disproportionately older or younger population, that would place heavy demands on facilities that cater to specific user groups. The residents in the future with the Proposed Action are expected to exhibit similar characteristics to the current residents of the study area and the breakdown of the population is expected to remain the same.

V. CONCLUSION

According to *CEQR Technical Manual* guidelines, a Proposed Action or project may result in a significant adverse impact on open space resources if (a) there would be a direct displacement/alteration of existing open space within the study area that has a significant adverse effect on existing and anticipated users; or (b) it would reduce the open space ratio and consequently result in overburdening existing facilities or further exacerbates a deficiency in open space. According to the *CEQR Technical Manual*, a 5% decrease in the open space ratio is generally considered to be a significant adverse impact in areas that are currently below the City's median community district open space ratio of 1.5 acres per 1,000 residents. However, if the study area exhibits a low open space ratio, even a small decrease in that ratio as a result of the action may have an adverse effect, whereas a change of less than 1 percent should be considered significant only if open space resources are very scarce in the study area.

No new publicly accessible open space resources are being introduced as part of the Proposed Action. The Proposed Action would not result in the direct displacement or alteration of existing open space resources in the study area. The Proposed Action would also not reduce the open space ratio by five percent or more in the open space study area.

As noted above, the total, active, and passive open space ratios for residents would experience a slight decrease compared to No-Action conditions, while the combined passive open space ratio for residents and workers would remain unchanged compared to No-Action conditions. The total open space ratio would decrease by approximately 3.5 percent (approximately 0.008 acres/1,000 residents), the active open space ratio would decrease by 4.1 percent, while the passive open space ratio for residents would decrease by approximately 3.6 percent compared to No-Action conditions.

Open space ratios present under Existing and No-Action conditions are below the citywide median of 1.5 acres of open space per 1,000 residents and also below the NYCDCP planning guidelines of 2.0 acres of active open space per 1,000 residents and 0.5 acres of passive open space per 1,000 residents, and would continue to be below those guidelines in the future with the Proposed Action. However, open space resources within the study area are not scarce, and most of the open space resources in the study area are in good to excellent condition, contain a balanced mix of active and passive uses, and are only lightly or moderately utilized. There are also significant open space resources, both existing and planned, located outside the study area boundary. Existing park areas and open space resources beyond the open space study area boundary include Section 1 of the High Line, the 6.23-acre Madison Square Park immediately across the street from the eastern rezoning area boundary, the 9.6-acre Bryant Park approximately three blocks to the northeast of the study area, portions of the 550-acre Hudson River Park as well as the 2.50-acre Chelsea Waterside Park, which are located approximately 1 to 2 blocks to the west of the study area, as well as several smaller plazas. In addition, a number of new open space resources are planned outside the study area boundary by the analysis year of 2019, which are expected to add approximately 25.5 acres of new open space by 2019. Although these existing and planned resources are not included in the quantitative analysis, they would add considerable accessible active and passive open space for the residential population as well as some of the area's daytime users. The proximate location of all of the these open spaces beyond the defined study area, some of which are large, regional, and/or unique open spaces that serve a large geographic area, and the fact that some of these future open spaces are expected to be connected, thereby providing a linked network of open spaces, could serve to moderate the shortfall of active and passive open space resources identified in the study area.

Moreover, the population to be generated by the Proposed Action is not expected to have any special characteristics, such as a disproportionately younger or older population, that would place heavy

demand on facilities that cater to specific user groups. As in the future without the Proposed Action, the usability of the open spaces in the study area is not expected to be impaired by factors such as noise, air quality, shadows, design, or accessibility in the future with the Proposed Action. As detailed in Attachment L, "Shadows," although the Proposed Action would result in new shadows being cast on two of the existing open space resources in the study area, there would be no noticeable reduction in the usability of any open space as a result of incremental shadows created by projected development sites identified in the RWCDS for the proposed rezoning.

Therefore, the Proposed Action and projected development associated with the RWCDS are not anticipated to result in a significant adverse impact on open space resources.

ATTACHMENT G
URBAN DESIGN

I. INTRODUCTION

This attachment assesses the potential effects on urban design and visual resources that could result from the Proposed Action. As described in Attachment A, "Project Description," the Proposed Action involves zoning map and text amendments for portions of two City blocks in the northern Chelsea area of Manhattan for the purpose of preserving the existing mixed-use neighborhood character while allowing for residential growth with incentives for the creation of affordable housing. The rezoning will utilize a contextual zoning district to encourage investment and mixed-use development in the area, as well as promote the opportunity for workers to live in the area they work, and to recognize and enhance the vitality and character of existing mixed use neighborhoods. Furthermore, the Proposed Action includes a zoning text amendment that will establish an inclusionary floor area bonus, providing opportunity and incentive for the development of affordable housing within the rezoning area.

The Proposed Action will affect the area generally bounded by West 30th Street to the north, Seventh Avenue to the east, West 28th Street to the south, and Eighth Avenue to the west. As the Proposed Action would result in alterations to the streetscape of the neighborhood by noticeably changing the scale of buildings, a detailed analysis has been prepared in accordance with the *2010 CEQR Technical Manual*. As discussed in Attachment A, "Project Description," the Proposed Action includes a zoning text amendment affecting bulk controls for lots in the area just outside the eastern boundary of the area proposed to be rezoned to M1-6D, along the west side of Seventh Avenue between West 28th and West 30th Streets (the existing M1-6 district within 100 feet of the west side of 7th Avenue). The proposed changes would not alter zoning regulations affecting use or increase maximum allowable FAR. As these bulk control modifications neither induce nor hinder new development, no projected or potential development sites have been identified in that area, and no further assessment is provided in this document. As discussed in Attachment B, "Supplemental Screening," the Proposed Action does not warrant a further assessment of visual resources. There are no visual resources located within the proposed rezoning area. The Proposed Action and resultant development would not partially or totally block any view corridors or natural or built visual resources, nor would the Proposed Action change the urban design features of the area so that the context of a natural or built visual resource is altered, As discussed in this attachment, no significant adverse impacts on urban design are expected as a result of the Proposed Action.

Four of the lots included within the proposed rezoning area boundaries are owned by the applicant, 249 W 28th Street Properties, LLC (Block 778, Lots 13, 16, 18 and 66, the "Proposed Development Site"), and would be redeveloped as a result of the proposed zoning changes. It is anticipated that the Proposed Development Site would be redeveloped with two new approximately 20-story residential buildings with ground floor retail (the "Proposed Development"), which would utilize the 3.0 FAR Inclusionary Housing bonus and therefore would be built to the maximum 12.0 FAR and contain a total of approximately 361,860 gsf of floor area (excluding parking). Approximately 4,685 gsf of retail and 11,390 gsf of office uses are expected to be located at ground level. Assuming a typical residential dwelling unit size of approximately 850 gsf, the proposed buildings on the Proposed Development Site are expected to accommodate approximately 407 residential dwelling units, of which approximately 81 units (20%) would be affordable residences. The Proposed Development would include a 325 car public parking garage (including spaces for 218 monthly parkers) that would replace the existing 371 public parking spaces on the site, and the applicant (249 W 28th Street Properties, LLC) is applying

for a special permit to allow such public parking on the Proposed Development Site below-grade on two levels. As detailed in Attachment A, "Project Description," nine additional sites have been identified as projected development sites in the Reasonable Worst-Case Development Scenario (RWCDS), and four sites have been identified as potential development sites.

Together, the urban design components and visual resources of an area define the distinctive identity of a neighborhood. In an urban design assessment under CEQR, one considers whether and how a project may change the experience of a pedestrian in the project area. The assessment focuses on the components of a proposed project that may have the potential to alter the arrangement, appearance, and functionality of the built environment, as experienced by pedestrians in the study area. These components include building bulk, use, and type; building arrangement; block form and street pattern; streetscape elements; street hierarchy; and natural features. The concept of bulk is created by the size of a building and the way it is massed on a site. Height, length and width define a building's size; volume, shape, setbacks, lot coverage, and density define its mass. The analysis of visual resources will assess the effects of the Proposed Action on the study area's visual resources, which are its unique or important public view corridors, vistas, or natural or built features. Waterfront views, public parks, landmarked structures, landmarked districts, and natural resources are examples of visual resources. As per the guidelines of CEQR, only views of visual resources from public and publicly accessible locations will be assessed.

The following analysis addresses each of these characteristics for existing conditions and the future without and with the Proposed Action for the year 2019.

II. METHODOLOGY

Determining Whether an Urban Design Analysis is Necessary

Urban design is the totality of components that may affect a pedestrian's experience of public space. These components include streets, buildings, visual resources, open space, natural features, and wind and sunlight conditions. These elements, as defined in the *2010 CEQR Technical Manual*, are described below:

- *Streets.* The arrangement and orientation of streets define the location and flow of activity in an area, set street views, and create the blocks on which buildings and open spaces are organized. The apportionment of street space between cars, bicycles, transit, and sidewalk is critical to making a successful streetscape, as is the careful design of street furniture, grade, materials used, and permanent fixtures, including plantings, street lights, fire hydrants, curb cuts, or newsstands.
- *Buildings.* Buildings support streets. A building's streetwalls form the most common backdrop in the city for public space. A building's size, shape, setbacks, lot coverage, placement on the zoning lot and block, the orientation of active uses, and pedestrian and vehicular entrances all play major roles in the vitality of the streetscape. The public realm also extends to building façades and rooftops, offering more opportunity to enrich the visual character of an area.
- *Visual Resources.* A visual resource is the connection from the public realm to significant natural or built features, including views of the waterfront, public parks, landmark structures or districts, otherwise distinct buildings or groups of buildings, or natural resources.

- *Open Space.* For the purpose of urban design, open space includes public and private areas such as parks, yards, cemeteries, parking lots and privately owned public spaces.
- *Natural Features.* Natural features include vegetation and geologic, topographic, and aquatic features. Rock outcroppings, steep slopes or varied ground elevation, beaches, or wetlands may help define the overall visual character of an area.
- *Wind.* Channelized wind pressure from between tall buildings and downwashed wind pressure from parallel tall buildings may cause winds that jeopardize pedestrian safety.
- *Sunlight.* Sunlight is essential to the maintenance of a vital streetscape. A successful urban design accounts for the optimization of direct and reflected sunlight.

In general, an assessment of urban design is needed when the project may have effects on one or more of the elements that contribute to the pedestrian experience, which are described above. As the Proposed Action would increase permitted density within the rezoning area, it the potential to result in development that could alter the arrangement, appearance, and functionality of the built environment, and therefore, change the experience of a pedestrian in the project area. The following urban design analysis follows the guidelines of the *2010 CEQR Technical Manual.*

Per criteria of Section 230 of the 2010 *CEQR Technical Manual*, a wind condition analysis is not warranted for the Proposed Action. The proposed rezoning area is not located in a high wind location, such as along the waterfront, nor is it in a location where wind conditions from the waterfront are not attenuated by buildings or natural features. Although the Proposed Action would increase permitted density within the rezoning area, allowing for the construction of buildings up to 210 feet tall, it is located in southern Midtown Manhattan, a dense urban area that contains a range of buildings from low-rise two-and three-story buildings to taller buildings rising up to 16-and 17-stories (approximately 210 feet tall). It is the intent of the proposed M1-6D zoning district to promote development at an appropriate scale that conforms to the existing built context.

Study Area

The urban design study area consists of both a primary study area, which is coterminous with the boundaries of the rezoning area, where the urban design effects of the Proposed Action are direct, and a secondary study area. The analysis focuses on nearby locations from which the rezoning area would be visible. With the exception of north-south avenues, views to the rezoning area are limited primarily to the immediately surrounding streets. Because views of the area are generally not available beyond 400 feet from the boundaries of the rezoning area, the urban design study area has been defined as the rezoning area plus an approximately 400-foot radius around the rezoning area. As shown in Figure G-1, the secondary study area is generally bounded by midway between West 32nd and West 31st Street to the north, approximately 200 feet east of Seventh Avenue to the east, midway between West 27th and West 26th Street to the south, and approximately 200 feet west of Eighth Avenue to the west. The analysis of urban design is based on field visits, photography, and computer imaging of the projected developments and buildings on surrounding sites.

III. PRELIMINARY ASSESSMENT

Under CEQR, a preliminary assessment of urban design is appropriate when there is the potential for a pedestrian to observe from the street level a physical alteration beyond that allowed by existing zoning. CEQR stipulates a detailed analysis for projects that would result in substantial alterations to

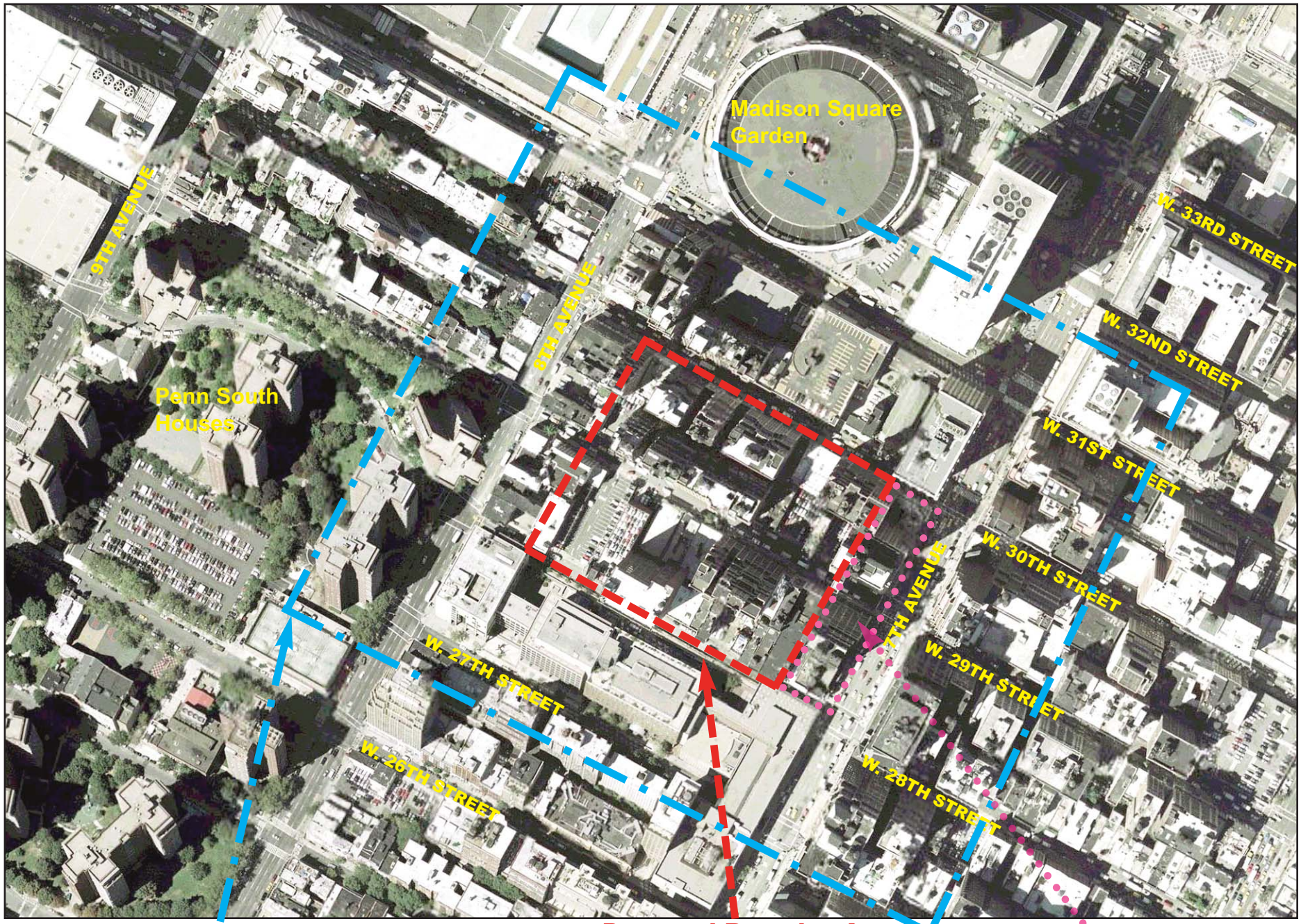


Figure G-1
Urban Design and Visual Resources Study Area

the streetscape of the neighborhood by noticeably changing the scale of buildings. According to the 2010 *CEQR Technical Manual*, detailed analyses are generally appropriate for area-wide rezonings that include an increase in permitted floor area or changes in height and setback requirements. As the Proposed Action falls into that category, a detailed analysis of urban design has been conducted and is provided below.

As discussed in this attachment, although the Proposed Action would noticeably change the scale of buildings in the study area, it is expected that the change would be consistent with the scale of the surrounding area and would not result in significant adverse effects on urban design.

IV. DETAILED ANALYSIS

Existing Conditions

Primary Study Area / Rezoning Area

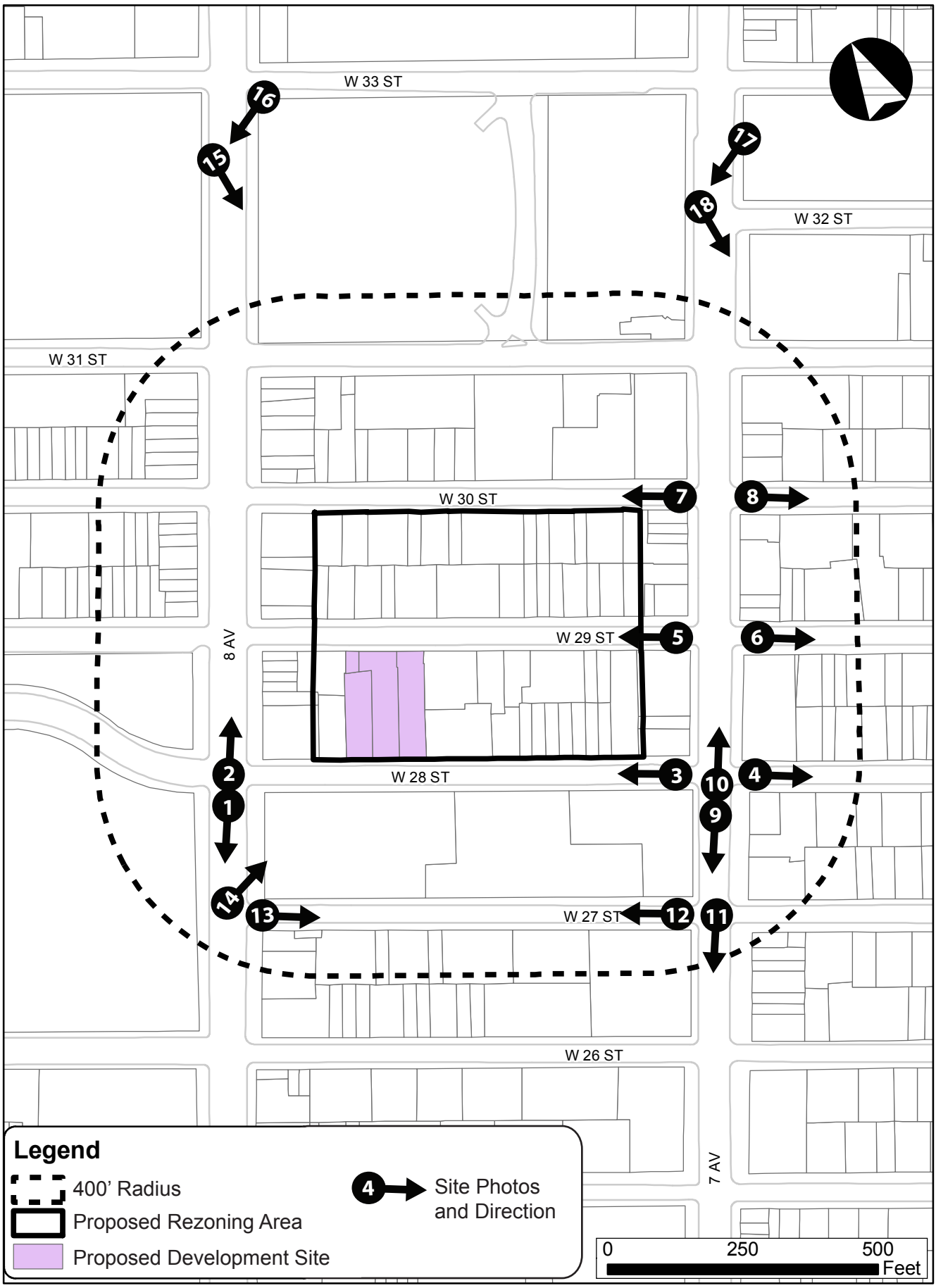
The rezoning area, which is currently zoned M1-5, contains a mix of low-to medium-density development, and a variety of commercial, light industrial, and residential uses. It is located within the northern Chelsea area of Midtown Manhattan directly north of the Fashion Institute of Technology (FIT), and is bounded by West 30th Street to the north, West 28th Street to the south, 100 feet west from Seventh Avenue, and 100 feet east of Eighth Avenue. As described in Attachment C, "Land Use, Zoning, and Public Policy," industrial activity in this area is limited with few remaining manufacturing and printing firms, while several buildings in the area contain a mix of commercial and/or residential uses.

The rezoning area comprises the mid-block areas of two regularly shaped rectangular blocks that contain a mixture of large and small lot sizes. Approximately 46 tax lots are located entirely within the rezoning area and portions of 5 other tax lots are partially located within the rezoning area. The rezoning area consists of approximately 39 existing buildings that contain a total of approximately 1.5 million square feet. Most of these buildings (67 percent) contain less than 50,000 sf. However, more than 1.2 million square feet of floor area within the rezoning area is located within 13 buildings that contain more than 50,000 zsf each.

Although the greater Chelsea area has experienced a considerable amount of new development within the last decade, there has been little new development within the rezoning area. Excluding the recent construction of a 13-story hotel, a Holiday Inn Express, on the south side of West 29th Street at 232 West 29th Street, the majority of buildings in the rezoning area were erected in the early half of the 20th century. All of the existing structures within the rezoning area are built to the lot line, with few if any setbacks, and as a result a boxy shape and larger floor plates characterize many of the existing larger loft buildings. In addition, most of the buildings occupy the entire tax lot. The maximum floor area ratio (FAR) permitted in the existing M1-5 district is 5.0. Figures G-2a through G-2c provide photographs that illustrate the views within the primary study area along West 28th, West 29th, West 30th Streets, Seventh and Eighth Avenues, and a photo key map is provided in Figure G-2.

A number of very bulky, manufacturing loft buildings built in the 1920s and 1930s for the fur industry characterize the rezoning area. Many of these structures are overbuilt and exceed the maximum permitted floor area (see Figure G-3). Building heights in the rezoning area range from low-rise two- and three-story buildings to taller buildings rising up to 16-and 17-stories, which have heights up to

Figure G-2
Urban Design Photo Key





1. View looking south on Eighth Avenue from West 28th Street.



2. View looking north on Eighth Avenue from between W. 27th/W. 28th Streets.



3. View looking west on West 28th Street from Seventh Avenue.



4. View looking east on West 28th Street from Eighth Avenue.



5. View looking west on West 29th Street from Seventh Avenue.



6. View looking east on West 29th Street from Eighth Avenue..



7. View looking west on West 30th Street from Seventh Avenue.



8. View looking east on West 30th Street from Eighth Avenue.



9. View looking south on Seventh Avenue from between West 27th/West 28th Streets.



10. View looking north on Seventh Avenue from between West 27th/West 28th Streets.



11. View looking south on Seventh Avenue from between West 27th/ West 26th Streets.



12. View looking west on West 27th Street between Seventh and Eighth Avenues.



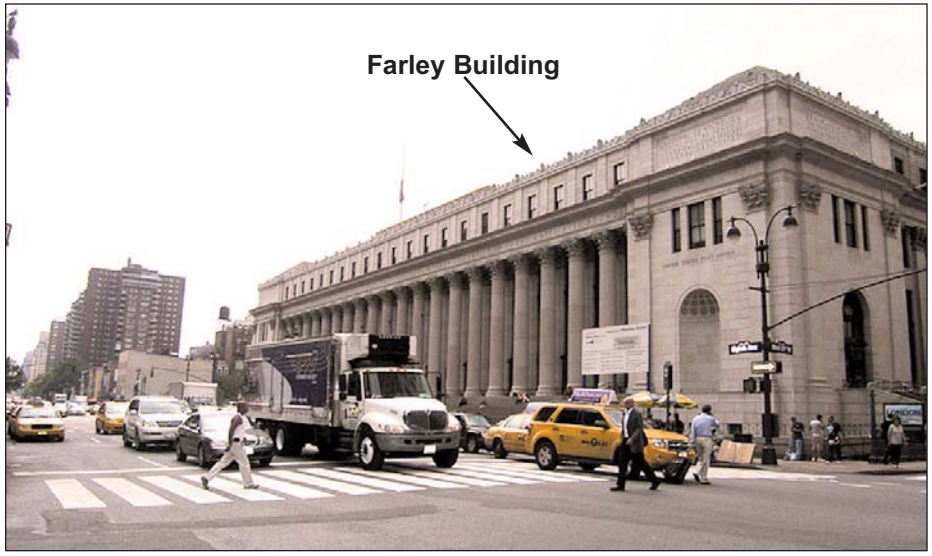
13. View looking east on West 27th Street between Seventh and Eighth Avenues.



14. View looking northeast on Eighth Avenue between West 27th and West 28th Streets.



15. View looking south east on Eighth Avenue between West 33rd and West 31st Streets.



16. View looking south west on Eighth Avenue between West 33rd and West 31st Streets.

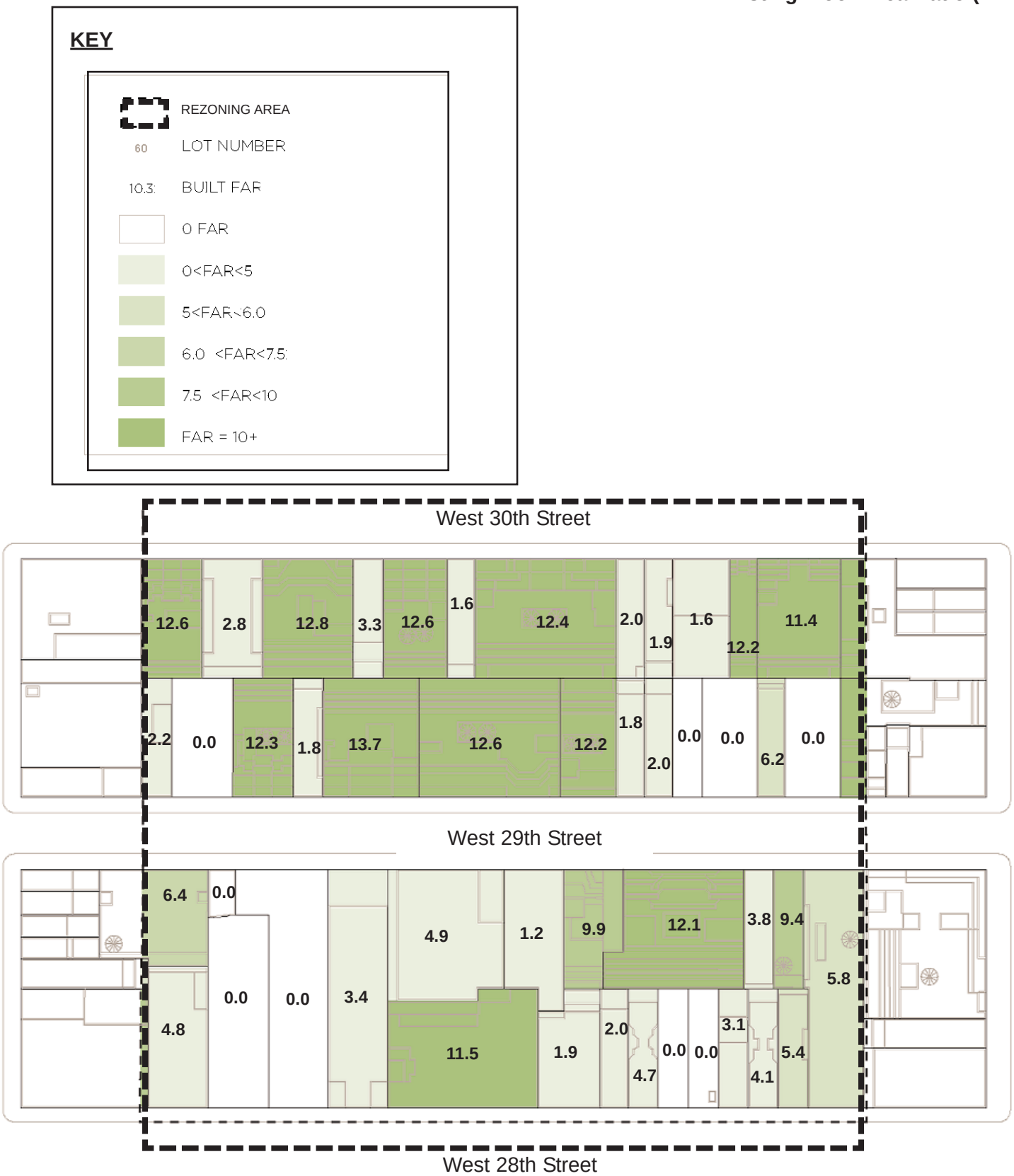


17. View looking south east on Seventh Avenue between West 33rd and West 32nd Streets.



18. View looking south east on Seventh Avenue between West 33rd and West 32nd Streets

Figure G-3
Existing Floor Area Ratio (FAR)



Source: weisz + yoes architecture

approximately 210 feet tall. Most of these larger loft structures are older nondescript buildings with strong street walls built at the property line. There are several 4-to 6-story walkup residential apartment buildings, and several low-rise garages, warehouses and other commercial structures with minimal fenestration. The rezoning area also contains a number of underutilized sites including 8 lots that contain unenclosed parking uses that create visual gaps in the streetscape along the north side of West 28th Street and either side of West 29th Street. The curb cuts of these parking facilities also break up the streetscape.

Given that the primary study area is located in southern Midtown Manhattan, in a dense urban environment, a limited amount of sunlight reaches the streetscape. As describe above, buildings in the study area range in height from one to 18 stories tall, and a number of the structures are bulky lofts built to the lot line with few setbacks. Furthermore, West 28th, West 29th and West 30th Streets are narrow 60-foot wide east-west streets.

As described in Attachment C, "Land Use, Zoning and Public Policy," this area of northern Chelsea has shifted from its largely industrial roots to become a more mixed-use neighborhood supporting a variety of commercial, residential, as well as high performance industrial uses. Informal conversions have led to approximately 218 residential units in the study area, artists' living and workspaces, as well as a range of commercial uses, including offices, wholesale merchants, photography studios, film or sound production studios, and retail shops. While both residential conversions and new residential construction are on the rise in Chelsea, in particular to the south and west and along the Sixth Avenue corridor, this area continues to support some viable light industrial uses. Additionally, there is a significant amount of underutilized space in the rezoning area, both within existing buildings and in properties that are vacant or used for parking.

As illustrated in Figure A-4 in Attachment A, "Project Description," the rezoning area includes 10 projected development sites (including the Proposed Development Site, which is owned by the co-applicant) and 4 potential development sites. The projected development sites are discussed in further detail in Table G-1.

The proposed rezoning area has relatively flat topography and there are no natural features, or open spaces within the rezoning area.

Proposed Development Site

Four of the lots included within the primary study area are owned by the applicant (Block 778, Lots 13, 16, 18 and 66). The Proposed Development Site is approximately 29,373 sf and occupied by a 240-space at-grade public parking lot (Lots 13, 16 and 66), a four-story public parking garage containing 131-spaces at 241 West 28th Street with a built FAR of approximately 3.35 (Lot 18).

Secondary Study Area

Figures G-2d and G-2e provide photographs that illustrate the views within the 400-foot secondary study area, and a photo key map is provided in Figure G-2.

Natural Features, Open Space, Street Patterns, and Block Shapes

The study area is developed in the typical Manhattan grid street pattern, with expansive avenues mapped 100-feet wide running north-south and narrow streets mapped 60-feet wide running east-west, creating short, wide, approximately 200-foot by 800-foot rectangular blocks, some of which have been assembled into superblocks. The superblocks, which are the exception to the grid pattern, are Madison

Square Garden (MSG)/Penn Station and the Farley Complex located to the north of the rezoning area (see Figure G-2d), and the Penn South Houses located to the west. As shown in Figure G-1, the Penn South Houses occupy a large irregularly-shaped curvilinear block.

TABLE G-1
List of Projected Development Sites

Projected Development Sites				**Existing Conditions**	
	Lot Area	**Address**	**Block; Lot**	**Buildings**	**Site Use**
Proposed Dev't Site	29,373 sf	241-251 W. 28 St. 250 W. 29 St.	Blk 778; Lots 13, 16, 18, 66	An approx. 33,073 sf garage with 4-stories.	At-grade and enclosed public parking
1	7,360 sf	215-219 W. 28 St.	Blk 778; Lots 29, 30, 31	An approx. 7,603 sf mixed-use building with 4-stories	At-grade public parking and a low-rise residential building with 2 dwelling units and retail
2	4,500 sf	228 W. 29 St.	Blk 778, Lot 55	An approx. 5,390 sf building with 3-stories	Institutional/public facility use
3	6,721 sf	223-227 W. 28 St.	Blk 778, Lots 25, 27	A approx. 8,518 sf mixed-use building with 5-stories and an approx. 4,554 sf building with 2-stories	Office, wholesale, retail, and 1 dwelling unit.
4	7,405 sf	253-257 W. 29 St.	Blk 779; Lots 7, 8	An approx. 5,358 sf building with 4-stories	At-grade public parking and residential building with 3 dwelling units and retail
5	20,768 sf	219-225 W. 29 St. 216-222 W. 30 St	Blk 779; Lots 25, 26, 27, 28, 53, 55, 56	A collection of 2-story buildings containing a total of approx. 25,174 sf	At-grade public parking, office, wholesale, retail, light industrial, and 1 dwelling unit
6	4,543 sf	W. 29 St.	Blk 779; Lot 31	N.A. No buildings on this site.	At-grade public parking
7	4,937 sf	250 W. 30 St.	Blk 779: Lot 69	An approx. 4,937 sf commercial building with 2-stories	Office building
8	2,475 sf	210 W. 29 St.	Blk 778; Lot 46	An approx. 23,227 sf mixed-use commercial/residential building with 9-stories	Mixed-use building with office, wholesale, and retail uses, and 3 dwelling units
9	2,271 sf	214 W. 30 St.	Blk 779: Lot 52	An approx. 27,770 sf mixed-use commercial/residential building with 12-stories	Mixed-use building with office, wholesale, and retail uses, and 10 dwelling units
Total	90,353 sf				

The vicinity of the rezoning area is fully urbanized with little public open space and contains no notable natural features. Building heights and street widths in the secondary study area vary; these conditions generally allow sunlight to reach the much of the secondary study area throughout the day.

Streetscape

Physical features that make up a streetscape include front yards, street trees, curb cuts, street walls (i.e., the "wall" created by the continuous front facade of buildings along the street), street furniture (i.e., items permanently installed on the street, such as street lights, fire hydrants, or newsstands), building entrances, curb cuts, parking lots, fences, stoops, etc. The study area is urban in character, with streets flanked by concrete sidewalks that are typically wider on the north-south avenues and narrower along the cross streets.

The study area is characterized by the general absence of attractive streetscape elements, such as furniture or street trees, except on West 27th Street between Seventh and Eighth Avenues. This street

segment is lined with buildings affiliated with the Fashion Institute of Technology, which are generally setback from the lot line and have planted landscaped areas in shallow front yards as well as seating areas (see Figure G-2c above). There are also numerous street trees along this street. In the remainder of the study area, most buildings are built to the lot lines and in general the streets are not well planted with trees. Except near the Penn South Houses, Eighth Avenue has almost no trees within the study area. At the northern edge of the study area, instead of street trees, boxy concrete bollard planters encircle MSG along Eighth Avenue and West 31st Street (see Figure G-2d).

On the sidewalks, modern "cobra-head" lampposts are used in the area and there is typical street furniture (e.g., public telephones, newspaper boxes, bus stops). The area is heavily used by pedestrians in particular along Seventh Avenue, which accommodates pedestrians traveling to and from MSG and Penn Station. There are subway entrances/exits on each corner of West 28th Street at Seventh Avenue, as well as egress stairs from the subway on the north side of West 27th Street on either side of Seventh Avenue, which are marked by the typical green and red globe lamps and green metal stair enclosures.

Buildings Uses, Shapes, and Forms

In general, the study area does not have a uniform urban design character, architectural style or building type. Buildings mainly occupy their full lots and range considerably in height and type, including high-rise residential and mixed-use commercial and/or residential elevator buildings, lower-rise walkup residential buildings, and single use large institutional and commercial buildings. Some buildings also contain a mixture of high performance industrial, commercial, residential, and/or institutional uses. With the exception of the General Post Office ("Farley Building"), Madison Square Garden (MSG), the Fashion Institute of Technology (FIT) and the Penn South Houses block fronts, ground floor retail and restaurant uses are common along both Seventh and Eighth Avenues.

The most recent development within the study area has been on Seventh and Eighth Avenues. These are generally contextual buildings (i.e., consistent with existing neighborhood character) of no more than 18 stories. By contrast, just beyond the study area's boundaries, the new residential development on Sixth Avenue north of West 23rd Street has produced large buildings and taller towers, reflecting their location closer to Midtown.

Zoning lots are typically rectangular in shape and most buildings are oriented perpendicular to the street line and create strong street walls at the property line. A number of large, bulky structures that occupy entire City blocks or superblocks, including the Farley Building, MSG, and Two Penn Plaza to the north, and FIT to the south, are located within the study area (see Figures G-2d and G-2e).

FIT occupies a full block from Seventh to Eighth Avenues, between West 28th and West 27th Streets, located directly south of the rezoning area, as well as part of the adjacent southern block. The large institutional complex consists of five academic and administrative buildings and three dormitories that form a relatively secluded enclave. The buildings vary in architectural design and are constructed to different heights, ranging from 6-to 18-stories. Generally, the buildings have a modernist style with limited fenestration and feature blank walls, particularly along Seventh Avenue, West 26th Street, and Eighth Avenue (see Figures G-2c and G-2d). An elevated passageway along Seventh Avenue connects the two block-sized buildings on Seventh Avenue, which cast shadows on the street below (see Figure G-2d).

At the southwestern edge of the study area, extending between Eighth and Ninth Avenues, from West 29th to West 26th Streets and from West 25th to West 23rd Streets, City blocks have been combined to accommodate the Penn South Houses, a cooperative residential complex. As noted above, these irregular blocks are characterized by curved block faces and corresponding modified street alignments along West 28th and West 24th Streets. In addition, as a result of its superblock configuration, West 27th

Street is removed from the grid, from Eighth to Tenth Avenues. Built in the early 1960s, the complex consists of several tall, approximately 22-story, unornamented brick apartment buildings set on broad plazas that are encircled by landscaped open space areas and at-grade accessory parking. Excluding the surface parking lots, the buildings along the avenue are mainly built to the street line and create strong street walls. However, in contrast to most of the study area, building arrangement within the Penn South Houses varies from attached structures, constructed in a rectilinear fashion to the street line, to high-rise buildings placed in a park-like setting. Further to the west, beyond the study area boundaries, is another super block housing development, Chelsea Park and the Chelsea and Elliot Houses, from Ninth to Tenth Avenues, between West 28th and West 26th Streets. Directly north of the Penn South Houses to the west of Eighth Avenue the study area continues to be primarily residential. The north side of West 29th Street and West 30th Street are generally lined with 4-to 6-story attached brick residential walkups built to the lot line.

At the northwest corner of the study area, and in large part located outside the study area, is the Farley Building. The 120-foot tall Farley Building is a grand building in the form of a Corinthian temple set upon a pedestal that creates its monumental steps (see Figure G-2d). It is a ceremonial Classical Revival-style structure clad in granite with a row of twenty 53-foot-tall Corinthian columns and a wide flight of stairs leading up to its Eighth Avenue façade, which is set back approximately 35 feet from the streetline. Besides space for mail distribution, the Farley Building contains public lobbies, retail windows, administration spaces, and an office for New York City's District Manager/Postmaster. An unenclosed large at-grade parking lot with stackers occupies the southwest corner directly south of the Farley Building.

The intersection of Eighth Avenue and West 31st Street is unusually open as MSG is set back from the street, and its circular form allows for large pedestrian circulation areas on the east side of the avenue (see Figure G-2d). MSG is a drum-shaped building, 150 feet tall, set back from the side streets and Eighth Avenue, creating a pedestrian plaza. It is connected by a skyway to the adjacent Two Penn Plaza with an entry to MSG beneath this overpass. Two Penn Plaza is located on Seventh Avenue between West 31st and West 33rd Streets (see Figure G-2e). It is a 1.56-million-square foot, 30-story commercial office building. The building is set back from the street on a large approximately 0.42-acre plaza that wraps around this superblock, with steps up to MSG entrances, and provides a connection to Penn Station. The broad east and west façades of this building are constructed of metal and glass, interrupted by regular light-colored masonry piers.

The block to the south of Penn Station/MSG is characterized by large loft structures of 12-to 16-stories interspersed with low-rise buildings. Many of these buildings have been converted to commercial uses. In addition, St. John the Baptist Roman Catholic Church occupies a through block site just west of Seventh Avenue.

The eastern portion of the study area, consisting of the blocks to the east of Seventh Avenue between West 31st and West 26th Streets, is primarily commercial and supports the cores of the Fur and Flower Districts in Manhattan. Plants and trees spill onto the street from the wholesale florists on West 28th Street. A number of storefronts are in the import/export/wholesale fur trade. The study area also contains variety of light industrial uses, as well as some residential uses intermixed. Parcels are generally subdivided into mid-size lots occupied by older loft buildings. These bulky structures are generally built to the lot line, and range from 5-to 12-stories high. The taller buildings generally have staggered setbacks. Several loft buildings in this area have been converted to residential use, with ground-floor retail, which creates pedestrian activity throughout the day. The buildings are constructed in a rectilinear fashion to the street line, and are generally attached, creating a continuous streetwall. The streetscape in this area does not include street furniture or a significant number of street trees, as the streets are devoted to intensive commercial-pedestrian use.

As noted earlier, the Proposed Action includes a zoning text amendment affecting bulk controls for lots in the area just outside the eastern boundary of the area proposed to be rezoned to M1-6D, along the west side of Seventh Avenue between West 28th and West 30th Streets. This area currently accommodates approximately seven low-rise predominantly commercial buildings ranging from 3 to 5 stories, as well as three high rise commercial buildings that are 18 to 21 stories tall.

Future Without The Proposed Action (No-Action Condition)

As discussed in Attachment C, "Land Use, Zoning, and Public Policy", it is expected that in the absence of the Proposed Action, the current land use trends and general development patterns would continue. These trends and patterns are characterized by a continued demand for housing, and general decline in industrial uses.

Primary Study Area/Rezoning Area

In the future without the Proposed Action, no major changes are anticipated in the rezoning area. No changes to block form and street pattern, or street hierarchy are anticipated. Given the existing zoning and recent trends in the area, only one new as-of-right development is assumed to occur within the rezoning area. Many of the lots within the rezoning area already exceed their current allowable maximum commercial/industrial FAR of 5.0, so it is not likely that substantial development would take place under the No-Action condition. Some existing buildings could be expected to be renovated and reoccupied by commercial uses.

As described in Attachment A, "Project Description," given the recent increased demand for hotel rooms in the vicinity of the rezoning area, and its proximity to several major attractions (e.g., Madison Square Garden, Penn Station, etc.), it is assumed that one new as-of-right hotel would be developed within the rezoning area in the future without the Proposed Action. Based on the lot size of the hotel that was recently constructed within the rezoning area (Block 778, Lot 57), it is assumed that Lots 25, 26, 27, 28, 53, 55, and 56 on Block 779 would be developed with a new hotel in the No-Action condition. With a lot area of approximately 20,768 sf, this combined site could accommodate a hotel with up to approximately 103,840 zoning sf of floor area (estimated 109,032 gsf), with an estimated 363 rooms and approximately 55 accessory parking spaces. This hotel is assumed to be massed on the northern portion of the site (closer to midtown), and based on the current M1-5 zoning regulations, it is estimated to be 20-stories in height (approximately 210 feet).

It is anticipated that the existing low-rise structures and at-grade parking lots at the projected development sites would remain. The proposed rezoning area would continue to contain a number of underutilized sites, and the bulk and density of buildings in the rezoning area would not change from existing conditions, except for the addition of the new as-of-right hotel. No open space resources would be created in the rezoning area. Therefore, the overall urban design of the rezoning area is anticipated to remain similar to existing conditions. However, it is assumed that any vacant space in existing buildings located on projected or potential development sites would be re-occupied by commercial office uses in the future without the Proposed Action.

Proposed Development Site

In the future without the Proposed Action, the Proposed Development Site would continue to be occupied by a 131-space at-grade public parking lot, a four-story public parking garage containing 240-spaces.

Secondary Study Area

The greater Chelsea area is anticipated to experience a significant amount of new development, including new residential development, as well as commercial uses to the north and west.

In the future without the Proposed Action the natural features, street patterns, block shapes, sunlight, and streetscape of the study area are expected to remain unchanged by the analysis year of 2019. Moreover, no new open space resources would be created.

In the future without the Proposed Action, a limited amount of new development is anticipated to occur by 2019 within the 400-foot study area, including one new predominantly residential development and an expansion of an institutional use. At the southwest corner of West 31st Street and Eighth Avenue directly south of the Farley Complex, a new 106-unit residential building with approximately 10,000 sf of retail will be constructed at 415 Eighth Avenue replacing an at-grade parking lot. The building will be located on a highly visible corner site and is planned to rise approximately 15-stories with two levels of retail use and market-rate apartments on the upper floors. This new development at 415 Eighth Avenue will become part of the variety of buildings of various heights and design in the study area. By replacing a parking lot facility, it is anticipated to fill a significant visual gap and will reinforce the street walls on its block.

The Fashion Institute of Technology is also planning to construct a new horizontal expansion to its academic building on West 28th Street between Seventh and Eighth Avenues, which is expected to be completed by the analysis year of 2019. The proposed expansion will be a 10-story all-glass structure that would make visible an FIT textile lab, working classrooms, and students' work. The proposed expansion would give FIT an architectural identity and draw pedestrians to the little-used street, thereby improving the study area's visual character.

Beyond the 400-foot study area boundaries, as further described in Attachment C, there is a significant amount of development expected to occur within a half-mile radius of the rezoning area, in particular to the north of West 35th Street, and west of Eighth Avenue (as part of the Hudson Yards redevelopment project, Moynihan Station redevelopment, and West Chelsea rezonings), and along the Sixth Avenue corridor, as well as the new development at 15 Penn Plaza on Seventh Avenue.

Future With The Proposed Action (With-Action Condition)

Primary Study Area/Rezoning Area

The Proposed Action would change the zoning of the mid-block areas of two City blocks generally bounded by West 28th Street, Seventh Avenue, West 30th Street and Eighth Avenue to allow new development at higher densities, as well as permit a wider range of community facility and residential uses that currently are prohibited. The proposed M1-6D zoning is expected to increase zoning compliance/conformance within the rezoning area while enabling appropriate new development of comparable bulk and scale that would be contextual with the surrounding area. It would mandate a contextual building envelope, which is a term used to describe mandatory street wall, setback, and maximum building height requirements in certain zoning districts as an alternative to sky exposure plane or tower regulations, in order to maintain the continuity of existing street walls and harmonious relationship with existing buildings in the area. The text of the proposed zoning text amendments is included in its entirely as Appendix 3 to this document.

The existing M1-5 zoning district does not reflect either the current land uses or built character, which are characterized by mixed-use and medium-to high-density development. The Proposed Action would replace a non-contextual zoning district with a contextual zoning district that requires street walls and limits heights for new buildings, thereby keeping the scale and bulk of new development induced by the Proposed Action compatible with the former industrial loft buildings prevalent in the rezoning area and adjoining areas of southern Midtown.

The proposed M1-6D zoning would permit residential uses at a base density of 9.0 FAR, bonusable to 12.0 pursuant to the Inclusionary Housing Program. It would also increase the FAR for commercial, community facility and manufacturing uses to 10.0, and limit the conversion of commercial and/or industrial buildings that contain more than 50,000 zoning sf. In addition, the proposed new M1-6D district would require that, on narrow streets, for zoning lots with street frontage of 50 feet or more, ground floor uses limited to Use Groups 6A, 6C, 7B, 8A, 8B, 9A, 10A, 12A and 12B shall have a depth of at least 30 feet from the street wall and shall extend along a minimum of 50 percent of the width of the street frontage of the zoning lot. The remainder of the street frontage of the zoning lot may be occupied by any permitted uses, lobbies, or entrances to parking spaces, except that lobbies shall be limited to a total width of 40 feet. No minimum 30 foot depth requirement shall apply where a reduction in such depth is necessary in order to accommodate a residential lobby or vertical circulation core. For zoning lots on narrow streets that have street frontage of less than 50 feet, no special ground floor use limitations or 30 foot depth of use requirement shall apply.

The Proposed Action is expected to result in new development that would have mandatory streetwalls, specified setbacks, and maximum heights of 210 feet. This would contribute to a well-defined visual context, with continuous, multi-story streetwalls, with setbacks above a maximum street wall height of 85-125 feet (narrow streets) to allow sunlight and air. In addition, the Proposed Action would provide a framework for other potential development in the future that would further strengthen the urban design context for the neighborhood. New development under the proposed zoning would be consistent and compatible with the neighborhood's urban design context and is expected to replace several at-grade parking lots and low-rise two-to four-story buildings. Additionally, the increased density and the proposed Inclusionary Housing bonus would provide added incentives for housing, particularly affordable housing, as compared to the No-Action conditions. The Proposed Action would not add any open space. Figure G-4 provides an illustrative example of a 12 FAR residential building with the inclusionary housing bonus, as viewed from street level. As illustrated in the figure, the resulting building form would be compatible with existing buildings in the area.

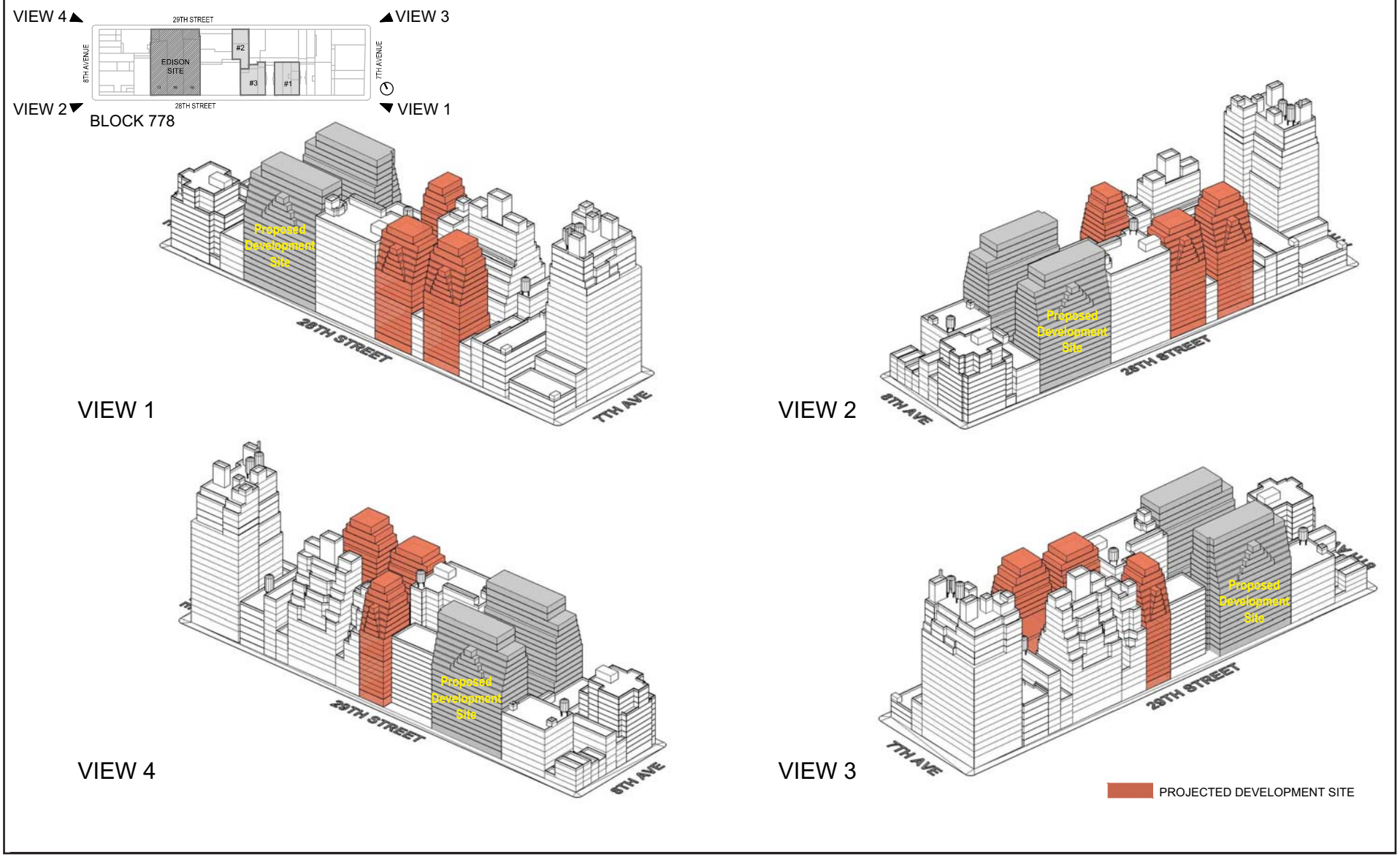
Figures G-5a through G-5d provide illustrative graphical depictions of contextual residential building types that could result on the projected (including the Proposed Development Site) and potential development sites. As illustrated in these graphical depictions, the scale and bulk of buildings developed pursuant to the proposed zoning would be compatible with the surrounding area, although some action-generated buildings would be slightly taller than surrounding buildings. As such, the projected and potential developments would not adversely affect the prevailing urban design features of the area. In addition, the mandatory streetwalls and maximum base height requirements of the proposed contextual zoning would result in building forms that share form characteristics with existing buildings. Furthermore, by filling in the gaps created by existing vacant and underutilized lots, the projected and potential developments would enhance the streetscape by restoring street walls in the rezoning area.

Sunlight conditions would be somewhat altered with the redevelopment of the projected and potential development sites, which would replace a number of at-grade parking lots and low-rise one-to four-story buildings. However, these changes would not be expected to adversely affect the pedestrian experience of the primary study area.

Figure G-4
M1-6D Building Form - Street-Level View



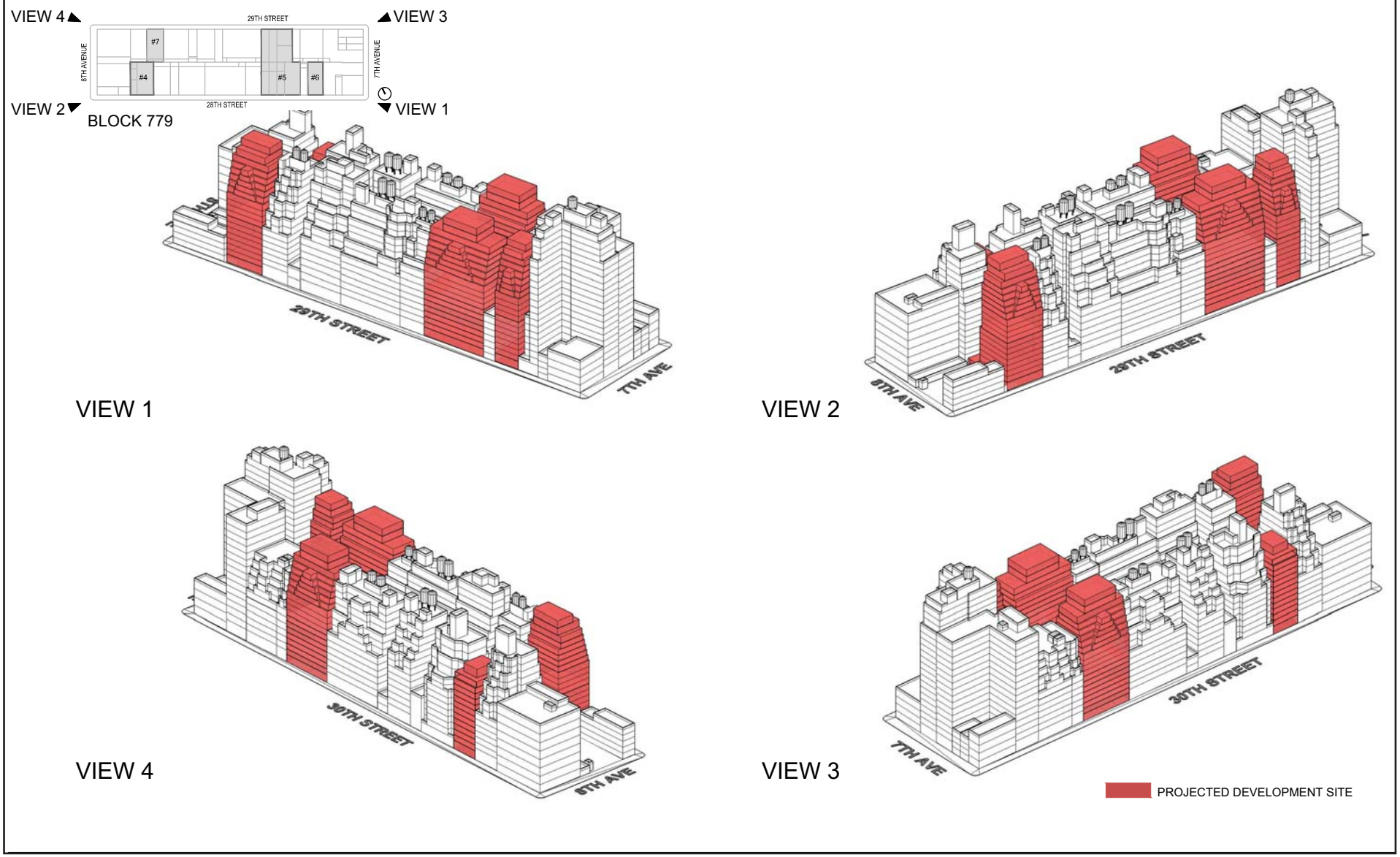
Source: NYC Department of City Planning



Source: Handel Architects LLP

FOR ILLUSTRATIVE PURPOSES ONLY

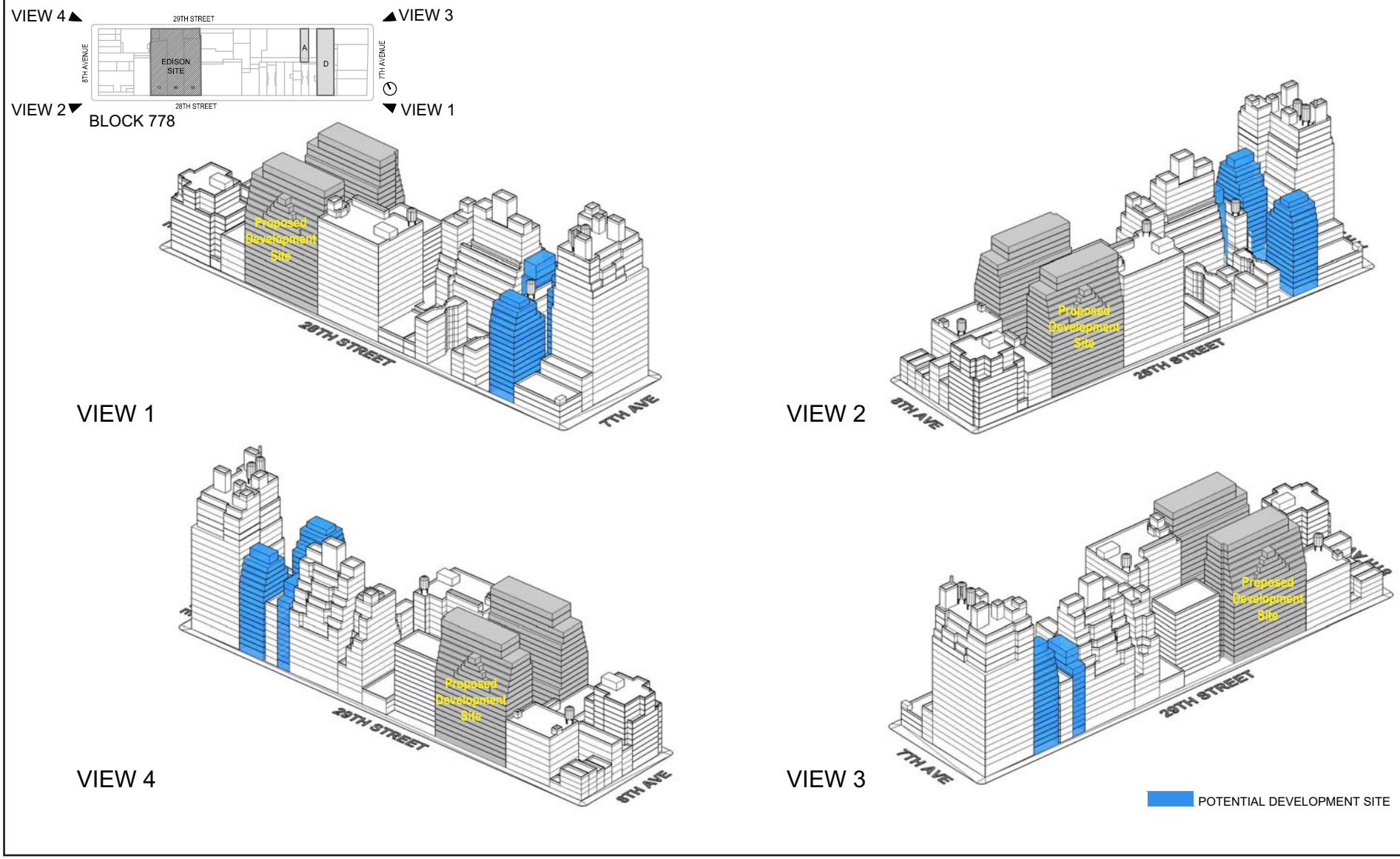
Figure G-5a
Block 778 Soft Site Bulk Analysis for Projected Development Sites



Source: Handel Architects LLP

FOR ILLUSTRATIVE PURPOSES ONLY

Figure G-5b
Block 779 Soft Site Bulk Analysis for Projected Development Sites



Source: Handel Architects LLP

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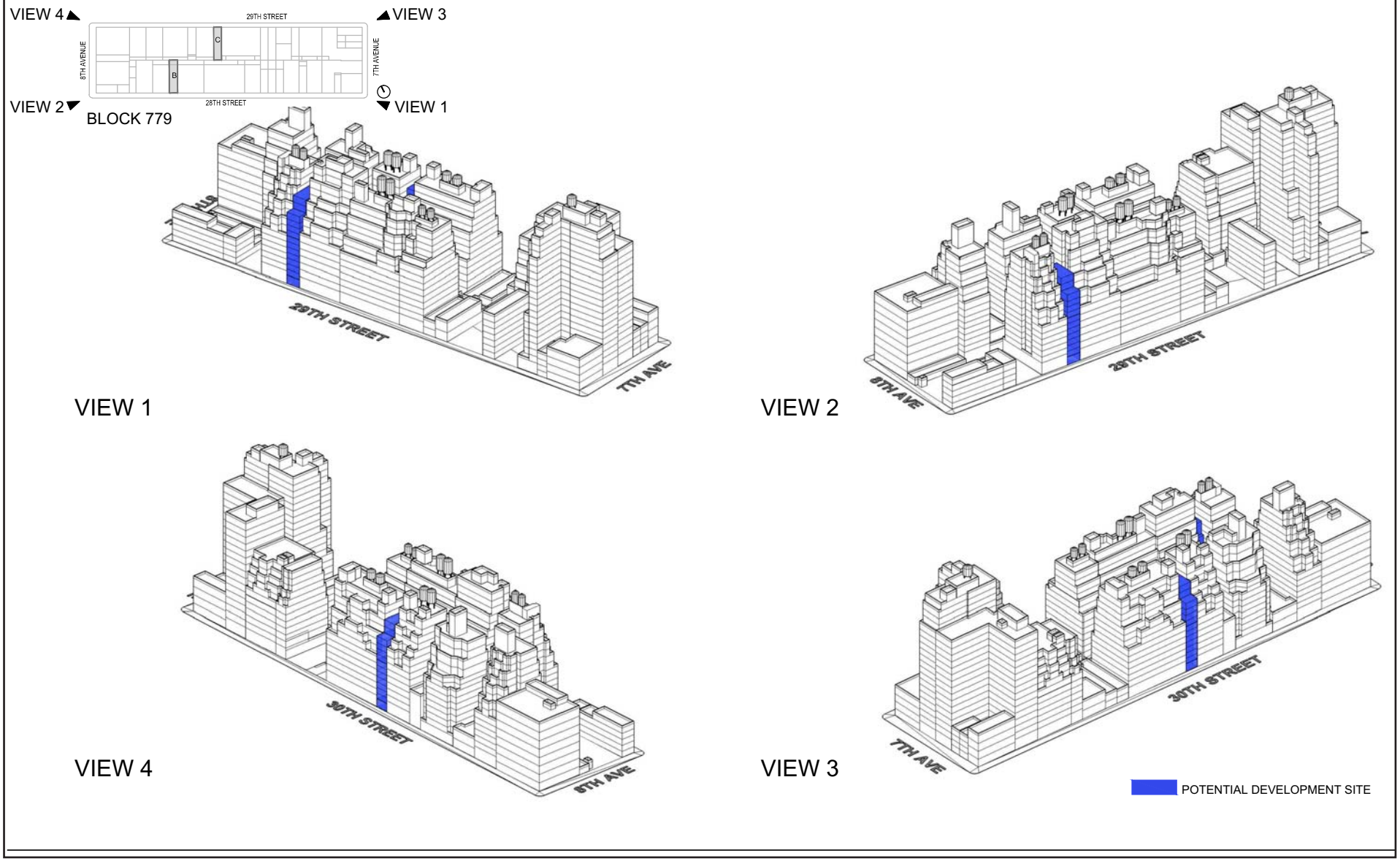
West 28th Street Rezoning EAS

Figure G-5c
Block 778 Soft Site Bulk Analysis for Potential Development Sites



Source: Handel Architects LLP

FOR ILLUSTRATIVE PURPOSES ONLY

Figure G-5d
Block 779 Soft Site Bulk Analysis for Potential Development Sites

The Proposed Action would also contain an amendment to the Zoning Resolution establishing Seventh Avenue Bulk Controls for the area just outside the eastern boundary of the area proposed to be rezoned to M1-6D, in the existing M1-6 district within 100 feet of the west side of Seventh Avenue between West 28th and West 30th Streets. The proposed Seventh Avenue Bulk Controls text amendment will ensure that any future development along the west side of Seventh Avenue would be consistent with the existing contexts. As these bulk control modifications neither induce nor hinder new development, no projected or potential development sites have been identified in that area. However, for illustrative purposes, the diagrams below (Figure G-6) illustrate the built form of potential development along the affected area of the Seventh Avenue blockfront under existing M1-6 regulations and under the proposed Seventh Avenue Bulk Controls.

Proposed Development Site

The Proposed Development Site located at 241-251 West 28th Street (244-250 West 29th Street) is owned by the applicant and would be redeveloped as a result of the Proposed Action. The existing at-grade public parking lot and 4-story public parking garage would be removed and replaced by a predominantly residential development with some commercial retail and office space. As shown in Figures A-5 and A-6 in Attachment A, "Project Description", the Proposed Development Site would be redeveloped with two approximately 20-story residential buildings that would have ground floor retail and office uses and front on both West 28th and West 29th Streets. Up to approximately 4,685 gsf of retail and 11,390 gsf of office uses are expected to be located at ground level and approximately 407 residential dwelling units would be located on the buildings' upper levels. A 325-space public parking garage would be located on two levels below-grade beneath both buildings. The public garage would have a single ramp access point from the north side of West 28th Street at the southeast corner of the site and a ramp for ingress and egress from the south side of West 29th Street.

As shown in Figure A-6 in Attachment A, "Project Description", the proposed buildings are expected to be built to the street line and rise approximately 124 feet to the 12th story, prior to setting back at the 13th story. After the 13th story, the building would step back approximately 2'-6" at each additional floor until the 18th story when the building would rise 36 feet to the roof. The proposed development would be limited to a maximum height of 210 feet and would comply with the proposed M1-6D district's bulk regulations. Therefore, the proposed the proposed buildings would be approximately 170 feet taller than the existing 4-story garage currently occupying a portion of the Proposed Development Site.

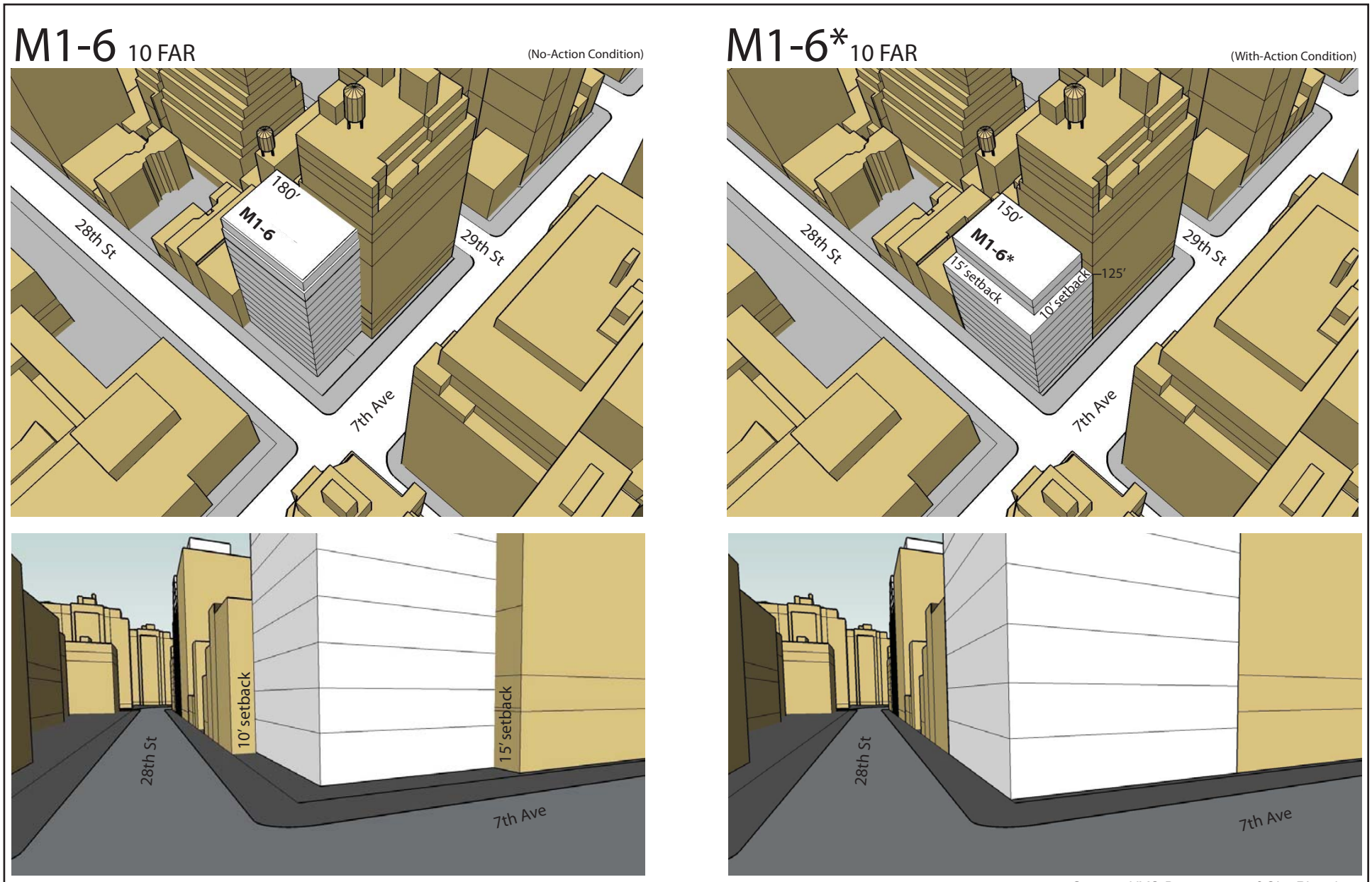
Secondary Study Area

Natural Features, Open Space, Street Patterns, and Block Shapes

The Proposed Action and subsequent development would not affect topography, natural features, sunlight, or the limited open space in the secondary study area. Therefore, there would be no significant adverse impacts to these urban design features as a result of the proposed action.

Streetscape

The Proposed Action would not alter any street patterns, street hierarchies, or block forms in the study area. The projected and potential buildings would be constructed on existing blocks and would therefore maintain these existing urban design features.



Source: NYC Department of City Planning

West 28th Street Rezoning EAS **Figure G-6**

Potential Development Under Existing M1-6 Regulations and Under the Proposed Seventh Avenue Bulk Controls

Building Uses, Shapes and Forms

The Proposed Action would not have significant adverse impacts on building uses, bulks, or arrangements within the study area. The proposed residential, local retail and public parking uses would be in keeping with the mixed-use character of the study area. The Proposed Action is expected to result in new development that would have continuous streetwalls, setbacks, and maximum heights of 210 feet and would be similar in arrangement and bulk to many of the large residential and mixed-use buildings found in the study area.

V. CONCLUSION

The Proposed Action would change the zoning of the mid-block areas of two City blocks generally bounded by West 28th Street, Seventh Avenue, West 30th Street and Eighth Avenue to allow new development at higher densities, as well as permit a range of community facility and residential uses that currently are prohibited. This would contribute to a well-defined visual context, with continuous, multi-story streetwalls, with setbacks above a maximum street wall height to allow light and air. In addition, the Proposed Action would provide a framework for other potential development in the future that would further strengthen the urban design context for the neighborhood. New development under the proposed zoning would be consistent and compatible with the neighborhood's urban design context.

Therefore, (1) the Proposed Action would not result in significant adverse impacts on urban design in the study area, and (2) no significant adverse impacts on visual resources are anticipated as a result of the Proposed Action.

ATTACHMENT H
TRANSPORTATION

I. INTRODUCTION

The objective of the transportation analysis is to determine whether a proposed action may have a potentially significant impact on traffic operations and mobility, public transportation facilities and services, pedestrian elements and flow, safety of all roadway users (pedestrians, bicyclists, and vehicles), on-and off-street parking or goods movement.

The *2010 CEQR Technical Manual* identifies minimum development densities that potentially require transportation analysis. Development at less than the development densities shown in Table 16-1 of the *2010 CEQR Technical Manual* generally result in fewer than 50 peak hour vehicle trips, 200 peak hour subway/rail or bus transit riders, and 200 peak hour pedestrian trips, where significant adverse impacts are considered unlikely. For residential developments in Zone 1 (which includes Manhattan south of 110th Street) the development threshold is 240 new dwelling units, which the Proposed Action would exceed. For off-street parking facilities, the threshold in Zone 1 is 85 new spaces, which the Proposed Action would also exceed. For commercial retail and office developments in Zone 1, the development threshold is 30,000 sf and 115,000 sf, respectively, which the Proposed Action would not exceed.

According to the *2010 CEQR Technical Manual*, if an action would result in development greater than these minimum development density thresholds, a Level 1 (Project Trip Generation) Screening Assessment should be prepared. In most areas of the City, including the project area, if the proposed actions are projected to result in fewer than 50 peak hour vehicle trips, 200 peak hour subway/rail or bus transit riders, or 200 peak hour pedestrian trips, it is unlikely that further analysis would be necessary. If these trip generation screening thresholds are exceeded, a Level 2 (Project-generated Trip Assignment) Screening Assessment should be prepared to determine if the proposed action would generate fewer than 50 peak hour vehicle trips through any intersection, 200 peak hour subway trips through a single station, 50 peak hour bus trips on a single bus route in the peak direction, or 200 peak hour pedestrian trips through a single pedestrian element. If any of these Level 2 screening thresholds are met or exceeded, detailed analysis for the respective mode is required. As discussed in this attachment, Level 2 screening assessments were warranted for traffic, subway, and pedestrians and the assessments found that detailed analyses of traffic, parking, and subway are not warranted and are therefore not provided. However, as the Proposed Action would exceed the Level 2 screening thresholds for pedestrians, a detailed quantitative analysis of pedestrians is provided.

II. TRAFFIC AND PARKING SCREENING ASSESSMENT

Existing Conditions Within Rezoning Area

As shown in Table A-5 of Attachment A, "Project Description," the 10 projected development sites (including the applicant's Proposed Development Site) identified in the Reasonable Worst Case Development Scenario (RWCDS) currently accommodate a total of approximately 20 residential units, 30,147 sf of office space, 27,654 sf of retail space, 16,930 sf of warehousing/wholesale space, as well

as 519 public parking spaces.[1] These public parking spaces are located in six existing public parking facilities (1 garage and 5 lots) on five of the projected development sites. (There are two separate public parking facilities on the Proposed Development Site). As shown in Table H-1, the total vehicle trips (in and out combined) associated with these six existing public parking facilities are approximately 124, 90, and 134 vehicle trips in the weekday AM, midday, and PM peak hours, respectively.

The Future Without the Proposed Action (No-Action Conditions)

Under the future No-Action condition in the rezoning area, projected development sites that are expected to be affected by the proposed zoning map and text changes and which constitute the With-Action scenario, are assumed to experience some changes as compared to existing conditions due to as-of-right redevelopment that would occur, reflecting development trends in the area. Specifically, the existing mix of uses on site 5 would be redeveloped as a hotel and on sites 3 and 9 a small amount of vacant space would be occupied as office space. As a result, as shown in Table A-5 of Attachment A, under No-Action conditions on the 10 projected development sites, there would be a total of approximately 19 residential units, 26,543 sf of office space, 18,523 sf of retail space, 8,596 sf of wholesale space, and 109,032 sf of hotel space containing 363 guest rooms with 55 accessory parking spaces, and 471 public parking spaces. This represents the baseline condition for these sites to which the effects of the projected RWCDS will be compared.

The transportation planning factors used to estimate the travel demand associated with No-Action uses on the 10 projected development sites are summarized in Table H-2, and Table H-3 shows an estimate of the peak hour person trips and vehicle trips (auto, taxi and truck) associated with these uses. As shown in Table H-3, excluding the public parking facilities, under No-Action conditions the 10 projected development sites would generate approximately 75 vehicle trips in the weekday AM peak hour, 122 vehicle trips in the weekday midday, and 117 in the weekday PM peak hour.

With the redevelopment of Site 5, one of the existing public parking facilities (Lot 5) within the rezoning area would be eliminated under No-Action conditions. While the other five existing public parking facilities, which are expected to remain on the projected development sites, may experience an increase in parking demand as a result of ongoing development in the surrounding area, for conservative analysis purposes this increase in demand has not been included in the traffic screening analysis. Therefore, for analysis purposes, the No-Action condition is assumed to be identical to existing conditions for the five public parking facilities to remain.

As shown in Table H-4, the total auto trips (in and out combined) associated with these five public parking facilities are approximately 106, 68, and 101 vehicle trips in the weekday AM, midday, and PM peak hours, respectively. Therefore, as shown in Table H-3, the combined No-Action uses on the 10 projected development sites, including the five parking facilities expected to remain in the No-Action, would generate a total of 181 vehicle trips in the weekday AM peak hour, 190 in the midday peak hour, and 218 in the PM peak hour.

[1] One projected development site also includes a 5,390 sf community facility; however, as this facility is assumed to remain unchanged in the future with the Proposed Action, it is not included in the travel demand forecasts.

TABLE H-1
Parking Demand at Existing Public Parking Facilities On Projected Development Sites Within Rezoning Area

	Garage 1* Proposed Development Site			Lot 2* Proposed Development Site			Lot 3 Projected Development Site 1			Lot 4 Projected Development Site 4			Lot 5 Projected Development Site 5			Lot 6 Projected Development Site 6			Total For All Facilities		
	IN	OUT	ACC	IN	OUT	ACC	IN	OUT	ACC	IN	OUT	ACC	IN	OUT	ACC	IN	OUT	ACC	IN	OUT	ACC
6-7 AM			77			42			0			14			6			9	0	0	148
7-8	10	1	86	11	7	46	3	0	3	8	1	21	14	3	17	10	2	17	56	14	190
8-9	34	8	112	26	9	63	10	0	13	9	1	29	15	3	29	9	0	26	103	21	272
9-10	27	5	134	15	3	75	13	1	25	5	2	32	14	3	40	7	4	29	81	18	335
10-11	15	16	133	19	6	88	2	4	23	4	3	33	11	0	51	10	3	36	61	32	364
11-12	24	12	145	9	6	91	3	1	25	6	7	32	15	5	61	6	2	40	63	33	394
12-1 PM	20	11	154	16	4	103	2	2	25	2	3	31	14	8	67	3	5	38	57	33	418
1-2	16	18	152	13	3	113	4	1	28	3	5	29	7	5	69	1	10	29	44	42	420
2-3	9	20	141	8	11	110	3	3	28	1	4	26	10	13	66	8	12	25	39	63	396
3-4	10	16	135	7	4	113	1	9	20	2	4	24	19	18	67	15	17	23	54	68	382
4-5	11	30	116	7	11	109	2	4	18	3	9	18	7	10	64	2	6	19	32	70	344
5-6	16	19	113	10	15	104	1	5	14	7	11	14	9	24	49	8	9	18	51	83	312
6-7	11	34	90	15	18	101	0	8	6	1	15	0	19	17	51	9	13	14	55	105	262
Capacity	*240*			*131*			*25*			*25*			*48*			*50*			*519*		
Midday Utilization	**64%**			**79%**			**100%**			**124%**			**140%**			**76%**			**81%**		

Source: PHA counts conducted October 2008

*** Garage 1 and Lot 2 are currently located on the proposed development site.**

TABLE H-2
Transportation Planning Assumptions - No Action Condition for Projected Development Sites

Land Use:	Local Retail	Office		Residential	Industrial/ Wholesale		Hotel	
Size/Units:	18,523 sf	26,543 sf		19 DU	8,596 sf		363 rooms 103,840 sf	
Trip Generation:	(1)	(1)		(1)	(7)		(3)	
Weekday	205 per 1,000 sf	18 per 1,000 sf		8.075 per DU	9.55 per 1,000 sf		9.4 per room	
Temporal Distribution:	(1)	(1)		(1)	(3)		(3)	
AM (8-9 AM)	3.0%	12.0%		10.0%	13.0%		7.5%	
MD (12-1 PM)	19.0%	15.0%		5.0%	10.0%		14.4%	
PM (5-6 PM)	10.0%	14.0%		11.0%	14.0%		12.8%	
	(2)	(5)		(6)	(5)		(3)	
Modal Splits:	AM/PM	AM/PM	MD	AM/MD/PM	AM/PM	MD	AM/PM	MD
Auto	2.0%	14.7%	2.0%	7.0%	14.7%	2.0%	9.1%	8.1%
Taxi	3.0%	1.0%	1.0%	5.1%	1.0%	1.0%	17.5%	14.9%
Subway	6.0%	67.3%	7.0%	50.8%	67.3%	7.0%	24.2%	12.8%
Bus	6.0%	12.4%	7.0%	5.8%	12.4%	7.0%	3.1%	3.2%
Walk/Ferry/Other	83.0%	4.6%	83.0%	31.3%	4.6%	83.0%	46.1%	61.0%
	100.0%	100.0%	100%	100.0%	100.0%	100%	100.0%	100%
	(2)	(4)		(6)	(3)		(3)	
In/Out Splits:	In Out	In	Out	In Out	In	Out	In	Out
AM	50% 50%	96.0%	4.0%	16.0% 84.0%	88.0%	12.0%	39.0%	61.0%
MD	50% 50%	39.0%	61.0%	50.0% 50.0%	50.0%	50.0%	54.0%	46.0%
PM	50% 50%	5.0%	95.0%	67.0% 33.0%	12.0%	88.0%	65.0%	35.0%
Vehicle Occupancy:	(2)	(5)		(6)	(3)		(3)	
Auto	1.65	1.20		1.11	1.30		1.40	
Taxi	1.40	1.20		1.40	1.40		1.80	
Truck Trip Generation:	(1)	(1)		(1)	(3)		(3)	
	0.35 per 1,000 sf	0.32 per 1,000 sf		0.06 per DU	0.52 per 1,000 sf		0.06 per 1,000 sf	
Truck Temporal Distribution:	(1)	(1)		(1)	(3)		(3)	
AM (8-9 AM)	8.0%	10.0%		12.0%	14.0%		12.2%	
MD (12-1 PM)	11.0%	11.0%		9.0%	8.6%		8.7%	
PM (5-6 PM)	2.0%	2.0%		2.0%	1.0%		0.0%	
Truck In/Out Splits:	In Out	In	Out	In Out	In	Out	In	Out
AM/MD/PM	50.0% 50.0%	50.0%	50.0%	50.0% 50.0%	50.0%	50.0%	50.0%	50.0%

Notes :

(1) 2010 City Environmental Quality Review (CEQR) Technical Manual.
(2) Western Rail Yard FEIS, October 2009.
(3) Special West Chelsea District Rezoning and High Line Open Space FEIS, December 2004.
(4) Pushkarev & Zupan, "Urban Space for Pedestrian," 1975.
(5) Based on 2000 census Reverse Journey to Work data for tracts 91, 93, 95, 97, 101, 103.
(6) Modal split and vehicle occupancy data are based on 2000 census Journey to Work data for tracts 91, 93, 95, 97, 101, 103. Pushkarev & Zupan, "Urban Space for Pedestrians" for temporal distribution and in/out directional splits.
(7) ITE Trip Generation, 8th Edition, Land Use Code 110 (Light Industry), converted into person's trip.

TABLE H-3
Transportation Demand Forecast Summary- No Action Condition for Projected Development Sites

Land Use:	Local Retail	Office	Residential	Industrial/ Wholesale	Hotel	Subtotal
Size/Units:	18,523 sf	26,543 sf	19 DU	8,596 sf	363 rooms 103,840 sf	
Peak Hour Person Trips:						
AM	114	57	15	11	256	453
MD	720	72	6	8	491	1,297
PM	378	66	18	11	437	910

Person Trips:

		Local Retail		Office		Residential		Industrial/ Wholesale		Hotel		Subtotal		
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
AM	**Auto**	1	1	8	0	0	1	1	0	9	14	19	16	35
	Taxi	2	2	1	0	0	1	0	0	17	27	20	30	50
	Subway	3	3	36	2	1	6	8	2	25	39	73	52	125
	Bus	3	3	7	0	0	1	1	0	3	5	14	9	23
	Walk	48	48	3	0	1	4	0	0	46	72	98	124	222
	Total	57	57	55	2	2	13	9	2	99	157	222	231	453
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
MD	**Auto**	7	7	1	1	0	0	0	0	21	18	29	26	55
	Taxi	11	11	0	0	0	0	0	0	40	34	51	45	96
	Subway	22	22	2	3	2	2	0	0	34	29	60	56	116
	Bus	22	22	2	3	0	0	0	0	8	7	32	32	64
	Walk	298	298	23	37	1	1	4	4	162	138	488	478	966
	Total	360	360	28	44	3	3	4	4	265	226	660	637	1,297
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
PM	**Auto**	4	4	0	9	1	0	0	1	26	14	31	28	59
	Taxi	6	6	0	1	1	0	0	0	50	27	57	34	91
	Subway	11	11	2	43	6	3	2	7	69	37	90	101	191
	Bus	11	11	0	8	1	0	0	1	9	5	21	25	46
	Walk	157	157	0	3	4	2	0	0	130	70	291	232	523
	Total	189	189	2	64	13	5	2	9	284	153	490	420	910

Vehicle Trips :

		Local Retail		Office		Residential		Industrial/ Wholesale		Hotel		Subtotal			Public Parking (471 Spaces) *Note 1*		Total Vehicle Trips		
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total	In	Out	In	Out	**Total**
AM	**Auto (Total)**	1	1	7	0	0	1	1	0	6	10	15	12	27	88	18	103	30	133
	Taxi Balanced	2	2	1	1	1	1	0	0	20	20	24	24	48	0	0	24	24	48
	Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	3	3	8	1	1	2	1	0	26	30	39	36	75	88	18	**127**	**54**	**181**
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total	In	Out	In	Out	**Total**
MD	**Auto (Total)**	4	4	1	1	0	0	0	0	15	13	20	18	38	43	25	63	43	106
	Taxi Balanced	12	12	0	0	0	0	0	0	30	30	42	42	84	0	0	42	42	84
	Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	16	16	1	1	0	0	0	0	45	43	62	60	122	43	25	**105**	**85**	**190**
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total	In	Out	In	Out	**Total**
PM	**Auto (Total)**	2	2	0	8	1	0	0	1	19	10	22	21	43	42	59	64	80	144
	Taxi Balanced	6	6	1	1	1	1	0	0	29	29	37	37	74	0	0	37	37	74
	Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	8	8	1	9	2	1	0	1	48	39	59	58	117	42	59	**101**	**117**	**218**

NOTE 1: See Table H-8 for net incremental traffic volumes.

The Future With the Proposed Action (With-Action Conditions)

As discussed in Attachment A, "Project Description," the RWCDS associated with the proposed rezoning anticipates that ten (10) projected development sites (including the Proposed Development Site) would be developed and as a result under With-Action conditions they would have a total of approximately 1,153 residential units, approximately 11,390 sf of office, 60,729 sf of local retail/food store, 52,332 sf of hotel space containing 174 guest rooms, 62 accessory parking spaces, and 325 public parking spaces (including spaces for 218 monthly parkers). (As noted above, 5,390 sf of existing community facility space would remain with or without the Proposed Action.) The 325 public parking spaces would be located on the applicant's Proposed Development Site and would have ramps on both the West 28th and West 29th Streets and the 62 accessory parking spaces would be located on projected development site 5 and are assumed to be accessed from a driveway on West 29th Street.

Although site 5 is projected to accommodate a food store of up to approximately 18,000 sf, it should be noted that this use would be located at a midblock location within the Manhattan CBD, would be of relatively small size compared to typical 40-50,000 sf supermarkets, and would be located in a dense urban area. For example, it is estimated that there are approximately 24,215 residents within a ¼-mile radius of the rezoning area. Therefore, this food store is likely to be a neighborhood establishment primarily serving the surrounding community, with a high share of walk trips. As such, the food store is treated more as a local retail use for transportation planning purposes.

The residential and commercial uses that would be present under With-Action conditions are expected to generate their highest demand during the traditional weekday AM and PM commuter periods as well as the weekday midday (lunch time) period. The transportation planning factors used to forecast travel demand under the With-Action during these periods are summarized in Table H-5. The trip generation rates, temporal distributions and mode choice factors for residential and commercial uses shown in Table H-5 were based on accepted *CEQR Technical Manual* criteria, standard professional references, and studies that have been done for similar uses in the area.

Table H-6 shows an estimate of the number of peak hour person trips that would be generated in 2019 on the Proposed Development Site and all the other projected development sites under the RWCDS. As shown in Table H-6, the With-Action condition would generate approximately 1,453 person trips in the weekday AM peak hour, 3,093 person trips in the weekday midday, and 2,507 in the weekday PM peak hour.

Table H-6 also shows an estimate of the peak hour vehicle trips (auto, taxi and truck) that would occur in 2019 with implementation of the Proposed Action. This also includes an estimate of the demand generated by public parking spaces created as part of the Proposed Action.

In addition to accommodating the parking demand generated by the various uses in the Proposed Action, it is expected that the proposed 325-space public parking garage would also accommodate some demand from other off-site parkers. This would include diverted trips associated with some of the displaced parkers utilizing the 471 spaces in public parking facilities on the projected development sites under No-Action conditions. These are expected to include local residents parking overnight, as well as some transient demand from those parking during the day would. It should be noted that other displaced parkers that would use the present 471 spaces in the public parking facilities on the projected development sites under No-Action conditions would relocate to other public parking facilities outside the rezoning area under With-Action conditions. Table H-7 provides an overview of the parking utilization of the proposed 325-space public parking garage (including spaces for 218 monthly parkers) under With-Action conditions.

TABLE H-4
No-Action Parking Demand at Public Parking Facilities Within Rezoning Area that would be Displaced in RWCDS

	Garage 1* Proposed Development Site			Lot 2* Proposed Development Site			Lot 3 Projected Development Site 1			Lot 4 Projected Development Site 4			Lot 6 Projected Development Site 6			Total For All Facilities		
	IN	OUT	ACCUM.	IN	OUT	ACCUM.	IN	OUT	ACCUM.	IN	OUT	ACCUM.	IN	OUT	ACCUM.	IN	OUT	ACCUM.
6-7 AM			77			42			0			14			9			142
7-8	10	1	86	11	7	46	3	0	3	8	1	21	10	2	17	42	11	173
8-9	34	8	112	26	9	63	10	0	13	9	1	29	9	0	26	88	18	243
9-10	27	5	134	15	3	75	13	1	25	5	2	32	7	4	29	67	15	295
10-11	15	16	133	19	6	88	2	4	23	4	3	33	10	3	36	50	32	313
11-12	24	12	145	9	6	91	3	1	25	6	7	32	6	2	40	48	28	333
12-1 PM	20	11	154	16	4	103	2	2	25	2	3	31	3	5	38	43	25	351
1-2	16	18	152	13	3	113	4	1	28	3	5	29	1	10	29	37	37	351
2-3	9	20	141	8	11	110	3	3	28	1	4	26	8	12	25	29	50	330
3-4	10	16	135	7	4	113	1	9	20	2	4	24	15	17	23	35	50	315
4-5	11	30	116	7	11	109	2	4	18	3	9	18	2	6	19	25	60	280
5-6	16	19	113	10	15	104	1	5	14	7	11	14	8	9	18	42	59	263
6-7	11	34	90	15	18	101	0	8	6	1	15	0	9	13	14	36	88	211
Capacity	*240*			*131*			*25*			*25*			*50*			*471*		
Midday Utilization	**64%**			**79%**			**100%**			**124%**			**76%**			**75%**		

Source: PHA counts conducted October 2008

*** Garage 1 and Lot 2 are currently located on the proposed development site.**

TABLE H-5
Transportation Planning Assumptions - With-Action Condition for Projected Development Sites

Land Use:	Local Retail/ Foodstore	Office		Residential		Hotel	
Size/Units:	60,729 sf	11,390 sf		1,153 DU		174 rooms 52,332 sf	
Trip Generation:	(1)	(1)		(1)		(6)	
Weekday	205 per 1,000 sf	18 per 1,000 sf		8.075 per DU		9.4 per room	
Temporal Distribution:	(1)	(1)		(1)		(6)	
AM (8-9 AM)	3.0%	12.0%		10.0%		7.5%	
MD (12-1 PM)	19.0%	15.0%		5.0%		14.4%	
PM (5-6 PM)	10.0%	14.0%		11.0%		12.8%	
	(2)	(4)		(5)		(6)	
Modal Splits:	AM/PM	AM/PM	MD	AM/MD/PM		AM/PM	MD
Auto	2.0%	14.7%	2.0%	7.0%		9.1%	8.1%
Taxi	3.0%	1.0%	1.0%	5.1%		17.5%	14.9%
Subway	6.0%	67.3%	7.0%	50.8%		24.2%	12.8%
Bus	6.0%	12.4%	7.0%	5.8%		3.1%	3.2%
Walk/Ferry/Other	83.0%	4.6%	83.0%	31.3%		46.1%	61.0%
	100.0%	100.0%	100%	100.0%		100.0%	100%
	(2)	(3)		(5)		(6)	
In/Out Splits:	In Out	In	Out	In	Out	In	Out
AM	50% 50%	96.0%	4.0%	16.0%	84.0%	39.0%	61.0%
MD	50% 50%	39.0%	61.0%	50.0%	50.0%	54.0%	46.0%
PM	50% 50%	5.0%	95.0%	67.0%	33.0%	65.0%	35.0%
Vehicle Occupancy:	(2)	(4)		(5)		(6)	
Auto	1.65	1.20		1.11		1.40	
Taxi	1.40	1.20		1.4		1.80	
Truck Trip Generation:	(1)	(1)		(1)		(6)	
	0.35 per 1,000 sf	0.32 per 1,000 sf		0.06 per DU		0.06 per 1,000 sf	
Truck Temporal Distribution:	(1)	(1)		(1)		(6)	
AM (8-9 AM)	8.0%	10.0%		12.0%		12.2%	
MD (12-1 PM)	11.0%	11.0%		9.0%		8.7%	
PM (5-6 PM)	2.0%	2.0%		2.0%		0.0%	
Truck In/Out Splits:	In Out	In	Out	In	Out	In	Out
AM/MD/PM	50.0% 50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%

Notes :

(1) 2010 City Environmental Quality Review (CEQR) Technical Manual.

(2) Western Rail Yard FEIS, October 2009.

(3) Pushkarev & Zupan, "Urban Space for Pedestrian," 1975.

(4) Based on 2000 census Reverse Journey to Work data for tracts 91, 93, 95, 97, 101, 103.

(5) Modal split and vehicle occupancy data are based on 2000 census Journey to Work data for tracts 91, 93, 95, 97, 101, 103. Pushkarev & Zupen, "Urban Space for Pedestrians" for temporal distribution and in/out directional splits.

(6) Special West Chelsea District Rezoning and High Line Open Space FEIS, December 2004.

TABLE H-6
Transportation Demand Forecast Summary - With-Action Condition for Projected Development Sites

Land Use:	Local Retail/	Office	Residential	Hotel	Subtotal
Size/Units:	60,729 sf	11,390 sf	1,153 DU	174 rooms 52,332 sf	
Peak Hour Person Trips:					
AM	374	25	931	123	1,453
MD	2,364	31	464	234	3,093
PM	1,244	28	1,025	210	2,507

Person Trips:

		Local Retail/ In	Local Retail/ Out	Office In	Office Out	Residential In	Residential Out	Hotel In	Hotel Out	Subtotal In	Subtotal Out	Total
AM	Auto	4	4	4	0	10	55	4	7	22	66	88
	Taxi	6	6	0	0	8	40	8	13	22	59	81
	Subway	11	11	16	1	76	396	12	18	115	426	541
	Bus	11	11	3	0	9	45	1	2	24	58	82
	Walk	155	155	1	0	47	245	22	36	225	436	661
	Total	187	187	24	1	150	781	47	76	408	1,045	1,453
MD	Auto	24	24	0	0	16	16	10	9	50	49	99
	Taxi	35	35	0	0	12	12	19	16	66	63	129
	Subway	71	71	1	1	118	118	16	14	206	204	410
	Bus	71	71	1	1	13	13	4	3	89	88	177
	Walk	981	981	10	17	73	73	77	66	1,141	1,137	2,278
	Total	1182	1182	12	19	232	232	126	108	1,552	1,541	3,093
PM	Auto	12	12	0	4	48	24	12	7	72	47	119
	Taxi	19	19	0	0	35	17	24	13	78	49	127
	Subway	37	37	1	19	348	172	33	18	419	246	665
	Bus	37	37	0	3	40	20	4	2	81	62	143
	Walk	517	517	0	1	215	106	63	34	795	658	1,453
	Total	622	622	1	27	686	339	136	74	1,445	1,062	2,507

Vehicle Trips :

		Local Retail/ In	Local Retail/ Out	Office In	Office Out	Residential In	Residential Out	Hotel In	Hotel Out	Subtotal In	Subtotal Out	Subtotal Total	Displaced Public Parking Garage Trips (Note 1) In	Displaced Public Parking Garage Trips (Note 1) Out	Total Vehicle Trips In	Total Vehicle Trips Out	Total Vehicle Trips Total
AM	Auto (Total)	2	2	3	0	9	50	3	5	17	57	74	20	4	37	61	98
	Taxi Balanced	6	6	0	0	32	32	9	9	47	47	94	0	0	47	47	94
	Truck	1	1	0	0	4	4	0	0	5	5	10	0	0	5	5	10
	Total	9	9	3	0	45	86	12	14	69	109	178	20	4	**89**	**113**	**202**
MD	Auto (Total)	15	15	0	0	14	14	7	6	36	35	71	10	6	46	41	87
	Taxi Balanced	38	38	0	0	14	14	15	15	67	67	134	0	0	67	67	134
	Truck	1	1	0	0	3	3	0	0	4	4	8	0	0	4	4	8
	Total	54	54	0	0	31	31	22	21	107	106	213	10	6	**117**	**112**	**229**
PM	Auto (Total)	7	7	0	3	43	22	9	5	59	37	96	8	17	67	54	121
	Taxi Balanced	21	21	0	0	25	25	14	14	60	60	120	0	0	60	60	120
	Truck	0	0	0	0	1	1	0	0	1	1	2	0	0	1	1	2
	Total	28	28	0	3	69	48	23	19	120	98	218	8	17	**128**	**115**	**243**

NOTE 1: Vehicle trips generated by displaced public parkers that can be accommodated within the proposed public parking garage (based on Table H-7).

TABLE H-7
Public Parking Demand Forecast for RWCDS and Utilization of Proposed Garage

	Proposed RWCDS (Excluding Site 5)												Demand from Site 5 not Accommodated in On-Site Accessory Parking Garage			Demand from Transient Displaced Parkers that can be Accommodated Within Proposed Garage *			Demand from Residential Displced Parkers that Can be Accommodated Within Proposed Garage *			Total Garage Accumulation		
	Residential Demand (890 units)*			Retail Demand (20,901 gsf)			Office Demand (11,390 gsf)			Hotel Demand (174 Rooms/ 52,332 gsf)														
Time	#IN	#OUT	ACC.	#IN	#OUT	ACC.	#IN	#OUT	ACC.	#IN	#OUT	ACC.	#IN	#OUT	ACC.	#IN	#OUT	ACC.	#IN	#OUT	ACC.	#IN	#OUT	ACC.
12-1 AM	0	0	267	0	0	0	0	0	0	0	0	35	0	0	17	0	0	0	0	0	6	0	0	325
1-2	0	0	267	0	0	0	0	0	0	0	0	35	0	0	17	0	0	0	0	0	6	0	0	325
2-3	0	0	267	0	0	0	0	0	0	0	0	35	0	0	17	0	0	0	0	0	6	0	0	325
3-4	0	0	267	0	0	0	0	0	0	0	0	35	0	0	17	0	0	0	0	0	6	0	0	325
4-5	0	0	267	0	0	0	0	0	0	0	0	35	0	0	17	0	0	0	0	0	6	0	0	325
5-6	2	5	264	0	0	0	0	0	0	0	0	35	0	0	17	0	0	0	0	0	6	2	5	322
6-7	2	15	251	0	0	0	0	0	0	0	2	33	0	1	16	5	0	5	0	1	5	7	19	310
7-8	2	23	230	0	0	0	0	0	0	1	4	30	1	2	15	12	2	15	0	1	4	16	32	294
8-9	7	38	199	0	0	0	3	0	3	3	5	28	2	4	13	20	3	32	0	1	3	35	51	278
9-10	5	15	189	1	1	0	3	0	6	3	4	27	3	3	13	16	1	47	0	1	2	31	25	284
10-11	10	12	187	2	1	1	0	0	6	2	3	26	4	2	15	13	3	57	0	1	1	31	22	293
11-12	10	10	187	2	2	1	0	1	5	2	3	25	4	4	15	12	5	64	0	0	1	30	25	298
12-1 PM	11	11	187	5	5	1	0	0	5	7	6	26	10	10	15	10	6	68	0	0	1	43	38	303
1-2	10	10	187	2	2	1	0	0	5	2	3	25	5	5	15	8	8	68	0	0	1	27	28	302
2-3	12	7	192	2	2	1	1	0	6	3	3	25	5	4	16	7	12	63	0	0	1	30	28	304
3-4	15	5	202	2	2	1	0	0	6	3	2	26	5	4	17	8	16	55	0	0	1	33	29	308
4-5	25	10	217	3	2	2	0	2	4	5	4	27	5	6	16	5	14	46	1	0	2	44	38	314
5-6	33	17	233	2	2	2	0	3	1	9	5	31	7	6	17	6	19	33	1	0	3	58	52	320
6-7	23	9	247	3	2	3	0	1	0	5	3	33	5	4	18	6	20	19	1	0	4	43	39	324
7-8	17	9	255	1	2	2	0	0	0	6	4	35	3	4	17	4	14	9	1	0	5	32	33	323
8-9	17	9	263	1	1	2	0	0	0	2	2	35	2	2	17	2	9	2	1	0	6	25	23	325
9-10	10	7	266	0	1	1	0	0	0	1	1	35	1	1	17	3	5	0	0	0	6	15	15	325
10-11	8	9	265	0	1	0	0	0	0	0	0	35	1	1	17	3	3	0	0	0	6	12	14	323
11-12	8	6	267	0	0	0	0	0	0	0	0	35	1	1	17	1	1	0	0	0	6	10	8	325
Total	227	227		26	26		7	7		54	54		64	64		141	141		5	5		524	524	

Note:
* Public demand pattern based on counts at existing public parking facilities within rezoning area

As shown in Tables H-6 and H-7, the portion of No-Action public parking users that would be accommodated by the proposed public garage would include approximately 24 auto trips in the weekday AM peak hour (20 in and 4 out), 16 in the midday peak hour (10 in and 6 out), and 26 in the PM peak hour (7 in and 19 out). Thus, overall, as shown in Table H-6, the Proposed Action would generate a total of approximately 202 vehicle trips in the weekday AM peak hour, 229 vehicle trips in the weekday midday, and 244 in the weekday PM peak hour. All taxi trips have been balanced to reflect that a proportion of taxis dropping off inbound passengers would be available to accommodate outbound trips.

Net Increment

The RWCDS for With-Action conditions would represent a net incremental change from No-Action conditions of -8,596 sf of warehousing/wholesale, -56,700 sf of hotel space (-189 guest rooms), -15,153 sf of office, -146 public parking spaces, +1,134 residential units, and +7 accessory parking spaces.

Table H-8 shows the net change in traffic volumes generated by the With-Action conditions compared to No-Action conditions. As indicated in the table, no credit is taken for No-Action residential overnight parkers, which would presumably continue to park in the area in the future with the Proposed Action. As shown in the table, compared to future No-Action conditions, the Proposed Action would result in a net increment of 45 vehicle trips in the weekday AM peak hour, 51 vehicle trips in the midday peak hour, and 53 vehicle trips in the PM peak hour.

TABLE H-8
Change in Peak Hour Traffic Volumes Due to the Proposed Action

	Weekday Midday			Weekday PM		
	In	**Out**	**Total**	**In**	**Out**	**Total**
No-Action Conditions						
Vehicles Generated by No-Action Uses on Projected Development Sites	62	60	122	59	58	117
Vehicle Trips Associated with No-Action Public Parking	43	25	68	42	59	101
Total Vehicle Trips	***105***	***85***	***190***	***101***	***117***	***218***
No-Action Overnight Parkers to Remain in the Area (No Credit)	6	6	12	18	9	27
Net No-Action Credit	***99***	***79***	***178***	***83***	***108***	***191***
With-Action Conditions						
Vehicles Generated by RWCDS on Projected Development Sites	107	106	213	120	98	218
Vehicle Trips Generated by Public Parkers	10	6	16	7	19	26
Total Vehicle Trips	***117***	***112***	***229***	***127***	***117***	***244***
Net Vehicle Trips Resulting from Proposed Action*	**18**	**33**	**51**	**44**	**9**	**53**

* Rezoning plus 325-space public parking garage

Level 1 (Project Trip Generation) Screening Assessment

Under *2010 CEQR Technical Manual* Level 1 screening assessment criteria, if a proposed action in any area of the City would generate fewer than 50 peak hour vehicle trip ends, it is unlikely to result in significant adverse impacts, and further analysis is not warranted. As the net number of vehicle trips generated/diverted by the Proposed Action exceeds 50 peak hour vehicle trips in the weekday midday and weekday PM peak hours, a Level 2 screening assessment should be provided.

As shown in Table H-6, the projected development sites would generate 178 vehicle trips in the AM peak hour under Build conditions and a further 24 vehicle trips associated with No-Action public parking users would remain in the traffic study area, for a total of 202 vehicle trips. As 157 of the 181 total vehicle trips generated by the projected development sites under No-Action conditions (see Table H-3 for total No-Action vehicle trips) would be removed under With Action conditions, there would be a net increase of 45 project-generated vehicle trips in the AM peak hour. As the weekday AM peak hour, with 45 net incremental peak hour vehicle trips, would not exceed the Level 1 50 vehicle threshold, per the guidelines of the *2010 CEQR Technical Manual*, further analysis for that peak hour is not warranted.

Level 2 (Project-generated Trip Assignment) Screening Assessment

Per the 2010 *CEQR Technical Manual*, as the Proposed Action would generate a net increment of 51 and 53 vehicle trips in the weekday midday and weekday PM peak hours, respectively, a Level 2 screening assessment is necessary for those two peak hours to determine if there would be 50 or more project-generated trips processed by any single intersection.

The peak hour traffic assignment patterns for project increment trips to and from the rezoning area in the midday and PM peak hours are shown in Figure H-1. The patterns are based on the characteristics of the dense Chelsea/Midtown South roadway network, the one-way street pattern in the rezoning area, and the entry/exit configuration of the proposed 325-space public parking garage.

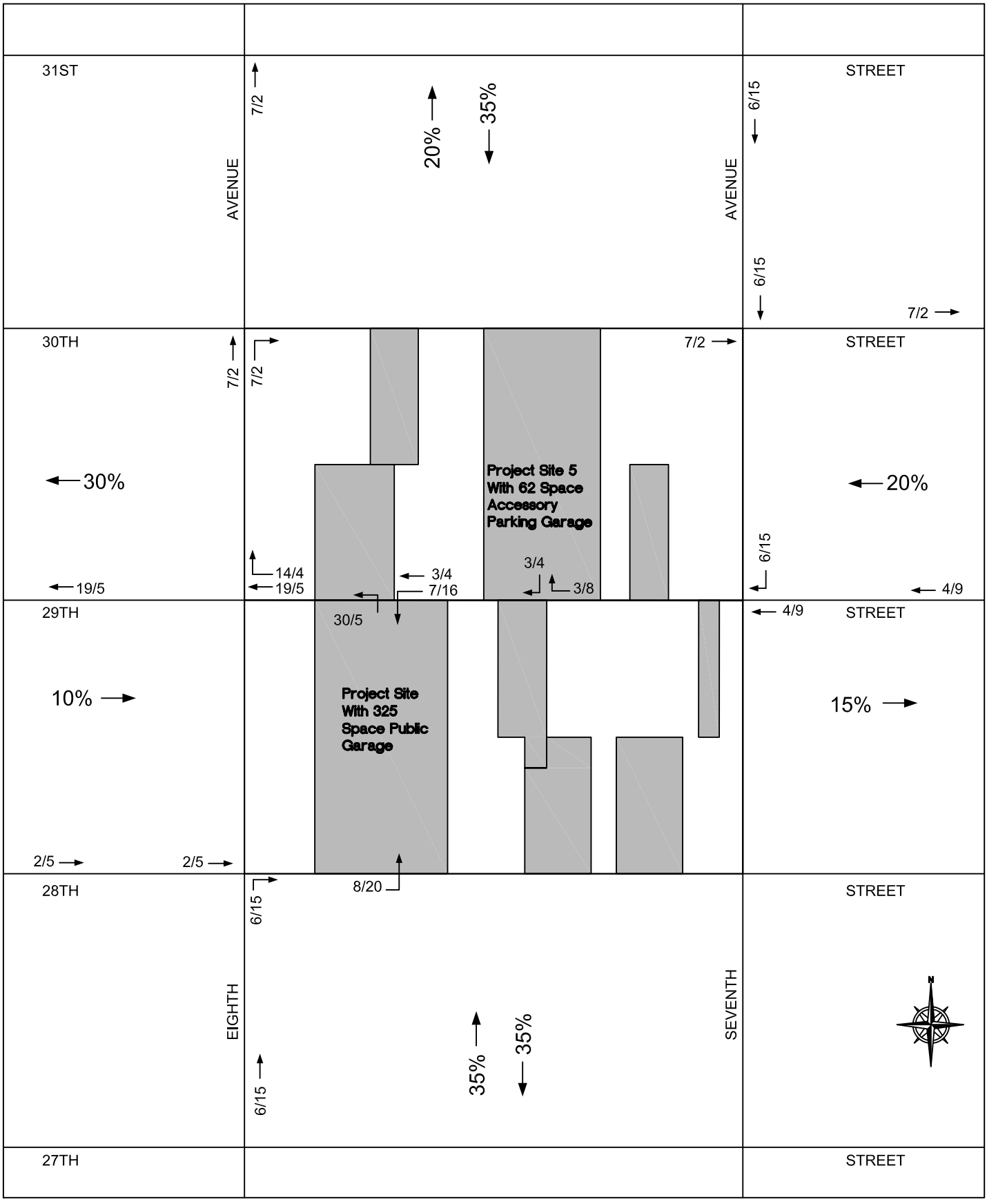
The proposed rezoning area would be accessible from both the one-way southbound 7th and the one-way northbound 8th Avenues via one-way eastbound West 28th, one-way westbound West 29th, and one-way eastbound West 30th Streets. As shown in Figure A-5 of Attachment A, the proposed 325-space public parking garage on the applicant's Proposed Development Site (including spaces for 218 monthly parkers) would have a single lane entrance-only ramp on the north side of West 28th Street, and a two lane entrance/exit ramp on the south side of West 29th Street. Thus the proposed garage would be accessible from areas to the south and west via West 28th Street, and from areas north and east of the rezoning area via West 29th Street. All vehicles would exit the garage on West 29th Street. It should be noted that the proposed garage would provide sufficient reservoir spaces to handle queuing vehicles within the garage, thereby reducing the potential for queued vehicles to obstruct the adjacent sidewalks. The exit of the proposed garage would be designed to minimize potential conflicts between departing vehicles and pedestrians. Measures to enhance pedestrian safety would likely include installation of a flashing light and ringing bell to both visually and audibly alert pedestrians to the presence of an exiting vehicle.

For worst case analysis purposes, the 62-space accessory parking garage on Projected Development Site 5 is projected to have a two-way entrance/exit ramp on West 29th Street.

The vehicle trips generated by the Proposed Action identified in Table H-8 were assigned to the area roadways per the assignment patterns in Figure H-1 in order to identify if any intersection would process 50 or more peak hour project-generated trips. Figure H-1 also shows the resulting incremental traffic volumes at the study area intersections. As shown in the figure, the greatest concentration of project-generated trips would occur at the 8th Avenue and West 29th Street intersection in the AM peak hour, with a net increment of 33 project-generated vehicles traversing the intersection.

As no intersection would process a net increment of 50 or more project-generated peak hour vehicle trips in the midday or PM peak hours, significant adverse traffic impacts would be very unlikely and detailed analysis is not warranted and is not provided.

Net Project Generated Traffic Increment



Projected Development Site

8/20 = Midday/PM

35% = Project Increment Distribution Pattern

Parking Screening

Per the 2010 *CEQR Technical Manual*, as detailed traffic analysis is screened out for the Proposed Action, detailed parking analysis is not warranted and is not provided.

III. TRANSIT SCREENING ASSESSMENT

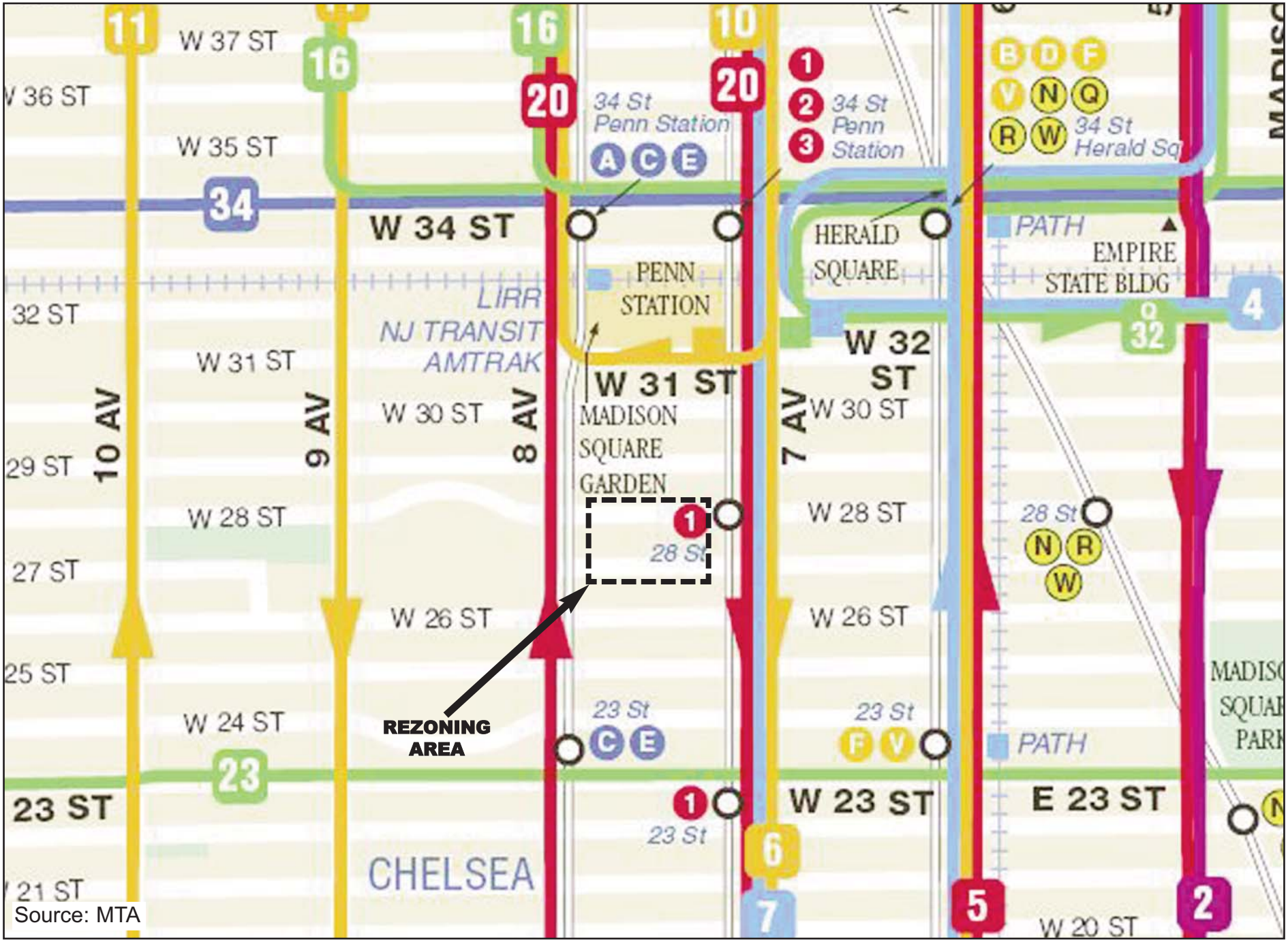
The study area is very well served by public transit. Six subway routes serve the proposed rezoning area, including the No. 1 local trains, which travel beneath Seventh Avenue in the vicinity of the rezoning area serving stations at West 28th and West 34th Streets; the Nos. 2 and 3 express trains which also travel beneath Seventh Avenue serving the station at West 34th Street; the C and E local trains, which travel beneath Eighth Avenue and serve stations at West 23rd and West 34th Streets; and the A express train, which also travels below Eighth Avenue serving the station at West 34th Street (see Figure H-2). No. 1 trains run from Van Cortlandt Park-242nd Street in the Bronx, making all local stops to South Ferry in Lower Manhattan via Seventh Avenue, whereas the Nos. 2 and 3 trains provide express service through Manhattan along Seventh Avenue. No. 2 trains travel from Wakefield-241st Street/White Plains Road in the Bronx to Brooklyn College-Flatbush Avenue/Nostrand Avenue in Brooklyn, and No. 3 trains travel from Harlem-148th Street/Seventh Avenue in northern Manhattan to New Lots Avenue/Livonia Avenue in Brooklyn. The C subway line runs from Washington Heights-168th Street in Manhattan making all local stops to Euclid Avenue-Pitkin Avenue in Brooklyn via Eighth Avenue in Manhattan. E trains run from Jamaica Center-Parsons/Archer in Queens making express stops in Queens and all local stops in Manhattan to World Trade Center/Church Street in Lower Manhattan via Eighth Avenue in Manhattan. The A subway line runs from Inwood-207th Street/Broadway in northern Manhattan making express stops to Far Rockaway-Mott Street and Ozone Park-Lefferts Boulevard in Queens.

The proposed rezoning area is also served by a number of NYC Transit local bus routes that connect the proposed rezoning area in northern Chelsea with other parts of Manhattan. These include the M20, M34, M10, M11, M23, M4, M5, M6, and M7 routes.

According to the general thresholds used by the Metropolitan Transportation Authority and specified in the *CEQR Technical Manual*, detailed transit analyses are not required if the Proposed Action is projected to result in fewer than 200 peak hour rail or bus transit riders during peak hours, because a proposed development that generates such a low number of transit riders is unlikely to create a significant impact on an existing public transit facility. Based on the travel demand forecast provided in Tables H-3 and H-6 above, peak hour subway trips would increase by a net total of 416, 294, and 474 during the weekday AM, midday, and PM periods, respectively, as summarized in Table H-9 below. There would also be an additional 59, 113, and 97 bus trips in the weekday AM, midday, and PM periods, respectively, compared to the No-Action condition.

Level 1 (Project Trip Generation) Screening Assessment: Bus and Subway

Transit impact analyses typically focus on the weekday AM and PM peak commuter hours, as it is during these periods that overall demand on transit (subway and bus) facilities is generally greatest. Per the *CEQR Technical Manual*, a Level 1 screening assessment identifies whether an action would generate 200 or more peak hour subway trips and 200 or more bus trips. For each mode, if a project generates less than 200 peak hour trips further analysis is not warranted. If a project generates 200 or more peak hour trips, then a Level 2 screening assessment is necessary.



Source: MTA

Figure H-2
Subway & Bus Routes in the Vicinity of the Rezoning Area

TABLE H-9
Change in Peak Hour Transit Trips Due to the Proposed Action

	Weekday AM	Weekday Midday	Weekday PM
SUBWAY TRANSIT			
No-Action Conditions *	125	116	191
With-Action Conditions **	541	410	665
Net Subway Transit Trips Resulting From Proposed Action	**416**	**294**	**474**
BUS TRANSIT			
No-Action Conditions *	23	64	46
With-Action Conditions **	82	177	143
Net Bus Transit Trips Resulting From Proposed Action	**59**	**113**	**97**

* *Refer to Table H-3 above.*
** *Refer to Table H-6 above.*

As shown in Table H-9, the Proposed Action would not exceed the *CEQR Technical Manual* threshold of 200 or more peak hour bus trips during the AM and PM peak hours, therefore significant adverse bus impacts are very unlikely and no further analysis is warranted.

However, the number of subway trips generated by the Proposed Action would exceed the Level 1 screening assessment 200-trip threshold in both the AM and PM peak periods.

Level 2 (Project-generated Trip Assignment) Screening Assessment: Subway

A Level 2 (Project-generated Trip Assignment) screening assessment determines if the proposed project would generate more than 200 subway trips through a single subway station. If this threshold is exceeded, then a detailed assessment is warranted. If the threshold is not exceeded, then no further analysis is necessary.

A subway trip assignment was prepared to identify the distribution of project-generated trips among the four nearby subway stations in the vicinity of the rezoning area. Subway stations serving the rezoning area include:

* the 28th Street IRT station (1), with uptown/downtown platform entry/exit at West 28th Street and 7th Avenue;
* the 34th Street-Penn Station IRT station (1, 2, 3), with uptown/downtown platform entry/exit at West 32nd Street and 7th Avenue;
* the 23rd Street IND station (C, E), with uptown/downtown platform entry/exit at West 25th Street and Eighth Avenue; and
* the 34th Street-Penn Station IND station (A, C, E), with uptown/downtown entry/exit at West 32nd Street and Eighth Avenue.

Based on 2009 ridership data and the proximity of each subway station to the rezoning area, it is estimated that the 28th Street IRT station would experience 35 percent of the new subway demand generated by the Proposed Action, followed by the 34th Street-Penn Station IRT and IND stations with 30 percent and 25 percent, respectively, and the 23rd Street IND station with 10 percent, as shown in Table H-10. Based on this distribution, no subway station serving the rezoning area is expected to experience more than 166 new subway trips in either the AM or PM peak hours with implementation of the Proposed Action, which is below the *CEQR Technical Manual* 200-trip threshold for a detailed transit analysis. In addition, the Proposed Action is not a generic action and would not generate any

travel demand at other locations outside the rezoning area neighborhood that would add additional project-generated trips at any subway station.

As the Proposed Action would generate fewer than 200 new peak hour subway trips at any single subway station serving the rezoning area, significant adverse impacts from project-generated transit demand are very unlikely to occur based on *CEQR Technical Manual* criteria. Detailed quantitative analyses of subway conditions are therefore not warranted.

TABLE H-10
Estimated Subway Trip Distribution by Station

Subway Station	Percent Split	AM	PM
28th Street IRT (1)	35%	146	166
34th Street-Penn Station IRT (1, 2, 3)[1]	30%	125	142
23rd Street IND (C, E)[2]	10%	41	47
34th Street-Penn Station IND (A, C, E)	25%	104	119
TOTAL	**100%**	**416**	**474**

[1] Enter/exit on W. 32nd Street

[2] Enter/Exit on W. 25th Street

IV. PEDESTRIANS ASSESSMENT

An analysis of pedestrian flow conditions typically focuses on those pedestrian elements, i.e., sidewalks, corner areas, and crosswalks, which would be utilized by concentrations of pedestrians generated as a result of a proposed action. According to the *CEQR Technical Manual*, detailed pedestrian analyses are generally not required when projected increases in pedestrian volumes would total less than 200 persons per hour at any pedestrian element. Increases of less than 200 persons per hour are generally not noticeable and would be unlikely to result in significant adverse impacts based on *CEQR Technical Manual* criteria.

Per the *CEQR Technical Manual*, a Level 1 (Trip Generation) screening assessment is necessary to identify whether the Proposed Action would generate 200 or more pedestrian trips in any peak hour. Based on the travel demand forecast provided above, peak hour walk-only trips would increase by a total of 439 trips in the AM peak hour, 1,312 in the midday, and 930 in the PM peak hour, as summarized in Table H-11 below. Total pedestrian trips, including walk trips to area subway stations and bus stops, would increase by a total of 914 in the AM peak hour, 1,719 trips during the midday, and 1,501 in the PM period (refer to Table H-11).

TABLE H-11
Change in Peak Hour Pedestrian Trips Due to the Proposed Action

	Weekday AM	Weekday Midday	Weekday PM
No-Action Conditions *	222	966	523
With-Action Conditions **	661	2,278	1,453
Net Walk-Only Trips Resulting From Proposed Action	***439***	***1,312***	***930***
Net Walk Trips to Area Subway Stations and Bus Stops ***	475	407	571
Total Pedestrian Trips Resulting From Proposed Action	**914**	**1,719**	**1,501**

* *Refer to Table H-3 above.*
** *Refer to Table H-6 above.*
*** *Refer to Table H-9 above.*

According to the *CEQR Technical Manual*, if a proposed project would result in more than 200 peak hour pedestrian trips, a Level 2 Screening Assessment should be conducted before undertaking a detailed pedestrian analysis. This entails assignment of project-generated pedestrian trips (including walk-only trips as well as walk trips en route to and from area transit facilities) for all peak hours in which the project exceeds 200 pedestrian trips. As the total pedestrian trips resulting from the RWCDS would exceed 200 in the weekday AM, midday, and PM peak hours, a preliminary assignment of these pedestrian trips was prepared, and is shown in Figure H-3.

As previously discussed, the RWCDS for the Proposed Action consists of 10 projected development sites that would have entrances located along several block fronts including the north side of West 28th Street, both the north and south sides of West 29th Street and the south side of West 30th Street. The Proposed Development Site and projected development site 5 would also have entrances on more than one block face. As such, pedestrian trips generated by the Proposed Action would not all be concentrated along one particular sidewalk, street corner, or crosswalk. Rather, pedestrians en route to and from these sites would be dispersed among pedestrian elements throughout the rezoning area. As shown in the pedestrian assignment diagram in Figure H-3, it is estimated that selected sidewalks and street corners would process 200 or more project-generated pedestrian trips. Therefore, detailed analyses are provided for several sidewalk and street corner locations that are projected to accommodate more than 200 additional trips in any given peak hour. As shown in Figure H-3, no crosswalks would process 200 or more project-generated trips and therefore detailed crosswalk analysis is not warranted.

Methodology for Pedestrian Capacity Analysis

As pedestrian volumes generated by the Proposed Action are expected to be highest in the weekday midday and PM peak hours (see Table H-11 above), those two peak periods were selected for analysis. Peak 15-minute pedestrian flow conditions are analyzed using the *2000 Highway Capacity Manual* methodology. Using this methodology, the congestion level of pedestrian facilities is determined by considering pedestrian volume, measuring the sidewalk or crosswalk width, determining the available pedestrian capacity and developing a ratio of volume flows to capacity conditions. The resulting ratio is then compared with level of service (LOS) standards for pedestrian flow, which define a qualitative relationship at a certain pedestrian traffic concentration level. The evaluation of street crosswalks and corners is more complicated as these spaces cannot be treated as corridors due to the time incurred waiting for traffic lights. To effectively evaluate these facilities a "time-space" analysis methodology is employed which takes into consideration the traffic light cycle at intersections. (As noted above, crosswalk analysis was screened out for the Proposed Action; however, crosswalk information is provided for informational purposes.)

LOS standards are based on the average area available per pedestrian during the analysis period, typically expressed as a 15-minute peak period. LOS grades from A to F are assigned, with LOS A representative of free flow conditions without pedestrian conflicts and LOS F depicting significant capacity limitations and inconvenience. Table H-12 defines the LOS criteria for pedestrian crosswalk/corner area and sidewalk conditions, as based on the *2000 Highway Capacity Manual* methodology.

The analysis of sidewalk conditions includes a "platoon" factor in the calculation of pedestrian flow to more accurately estimate the dynamics of walking. "Platooning" is the tendency of pedestrians to move in bunched groups or "platoons" once they cross a street where cross traffic required them to wait. Platooning generally results in a level of service one level poorer than that determined for average flow rates.

Assignment of Pedestrian Trips Generated by RWCDS

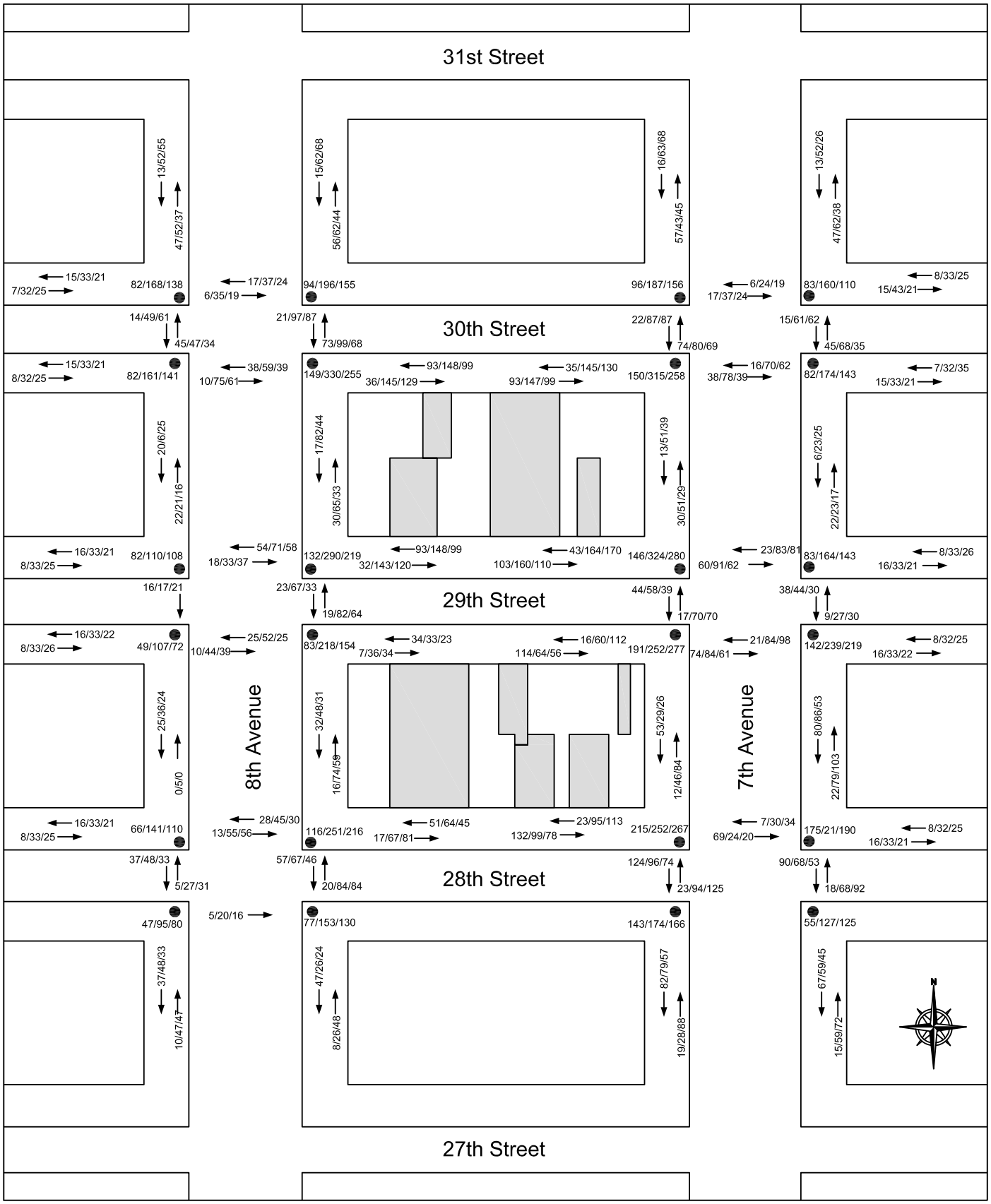


Table H-12
Pedestrian Corner Area and Sidewalk Levels of Service Descriptions*

Levels of Service		Corner Area Criteria (sq. ft./ped.)	Sidewalk Criteria (ped./min./ft.)
A	(Unrestricted)	≥ 60	≤ 5
B	(Slightly Restricted)	≥ 40	≤ 7
C	(Restricted but fluid)	≥ 24	≤ 10
D	(Restricted, necessary to continuously alter walking stride and direction)	≥ 15	≤ 15
E	(Severely restricted)	≥ 8	≤ 23
F	(Forward progress only by shuffling; no reverse movement possible)	< 8	> 23

Note: *Based on average conditions for 15 minutes.
Source: *2000 Highway Capacity Manual.*

Existing Conditions

Pedestrian volumes were counted in the study area during March 2011 and field surveys were conducted to identify sidewalk and street corner physical characteristics, including effective width available to process pedestrian flow and traffic signal timing information needed for the street corner time-space analysis. Following the pedestrian level of service methodology specified in the *CEQR Technical Manual*, peak 15-minute pedestrian volumes at analyzed locations were calculated and pedestrian operating conditions calculated.

Sidewalks

Based on the pedestrian trip assignment prepared for the Level 2 screening, detailed pedestrian analyses in the rezoning area were prepared for the north and south midblock sidewalks of West 29th Street and the south sidewalk of West 30th Street. Detailed analysis is only provided for the weekday midday and weekday PM peak hours. Detailed analysis of the weekday AM peak hour was screened out as there would be less than 200 project-generated pedestrian trips at all sidewalks in that time period.

The results of the sidewalk analyses are presented in Tables H-13. All three of the analyzed sidewalks have a total width of 13 feet; the two on the south sides of West 29th and West 30th Streets each have an effective width of 10 feet while the sidewalk on the north side of West 29th Street has an effective width of 8 feet. As shown in the table, all three analyzed sidewalks operate at acceptable level of service (LOS) A or B.

Street Corners

Detailed pedestrian analyses of street corners includes those locations that have 200 project-generated pedestrian trips in any peak hour, including the northwest corner of the 7th Avenue and West 28th Street intersection (AM peak hour only), northwest corner of the 7th Avenue and West 29th Street intersection, the southeast corner of the 7th Avenue and West 29th Street intersection, the southwest corner of 7th Avenue and West 29th Street, the northeast corner of the 8th Avenue and West 28th Street intersection, the northeast corner of the 8th Avenue and West 29th Street intersection, the southeast corner of the 8th Avenue and West 29th Street intersection, the southwest corner of the 7th Avenue and

Table H-13
Existing Sidewalk Conditions

Sidewalk No.	Location		Total Width	Effective Width (1) (ft)	Peak 15-Minute Volumes			Flow Rate (persons/foot/min)			Average Flow Level of Service			Platoon-Adjusted Level of Service		
					AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM
S1	W. 29th St between 7th Ave and 8th Ave	North	13	8	-	205	188	-	1.7	1.6	-	A	A	-	B	B
S2	W. 29th St between 7th Ave and 8th Ave	South	13	10	-	330	276	-	2.2	1.8	-	A	A	-	B	B
S3	W. 30th St between 7th Ave and 8th Ave	South	13	10	-	165	124	-	1.1	0.8	-	A	A	-	B	B

West 30th Street intersection, and the southeast corner of 8th Avenue and West 30th Street. These corners are representative of conditions in the area, particularly as they process people walking to and from Penn Station/Madison Square Garden located on the same side of the street a few blocks to the north. If the analysis determines that the Proposed Action would not result in significant adverse impacts at these locations, then impacts would also be very unlikely at other locations processing fewer project-generated trips.

The results of the street corner analyses are presented in Table H-14. These street corners provide substantial area for queuing and walking pedestrians as the cross streets, with 13-foot wide sidewalks, intersect the wider avenue sidewalks (18-foot on 8th Avenue and 20-foot on 7th Avenue). As shown in the table, all three analyzed street corners operate at acceptable LOS C or better.

Table H-14
Existing Corner Conditions

No.	Intersection	Corner	Curb Radii (feet)	Peak 15-Minute Volume			Avg Pedestrian Space (sq-ft/ped)			Level of Service		
				AM	MD	PM	AM	MD	PM	AM	MD	PM
C1	7th Av @ W. 28 St	NW	12	65	31	44	108.2	84.9	63.8	A	A	A
C2	7th Av @ W. 29 St	NW	12	-	114	80	-	70.3	77.4	-	A	A
C3	7th Av @ W. 29 St	SE	12	-	85	62	-	64.2	62.6	-	A	A
C4	7th Av @ W. 29 St	SW	12	-	41	55	-	75.6	351.6	-	A	A
C5	7th Av @ W. 30 St	SW	12	-	31	40	-	52.5	35.1	-	B	C
C6	8th Av @ W. 28 St	NE	12	-	24	22	-	183.5	137.1	-	A	A
C7	8th Av @ W. 29 St	NE	12	-	55	39	-	152.1	170.5	-	A	A
C8	8th Av @ W. 29 St	SE	12	-	61	15	-	157.7	188.4	-	A	A
C9	8th Av @ W. 30 St	SE	12	-	52	28	-	92.9	83.7	-	A	A

No-Action Conditions

Under No-Action conditions, it is expected that the pedestrian volumes in the vicinity of the rezoning area would change somewhat because of general long term trends and small incremental increases from specific developments. None of the No-Action projects identified in Table C-2 in Attachment C, "Land Use, Zoning, and Public Policy," will generate substantial increases in peak hour pedestrian activity at the analyzed locations. However, the hotel assumed to be developed on projected development site 5 under No-Action conditions would generate some new pedestrian trips in the area. Per *CEQR Technical Manual* guidance, to account for general trends and small increments associated

with new developments, a compounded 0.25% annual background growth rate was applied to the existing pedestrian volumes for the eight years from 2011 to 2019 to identify the No-Action volumes.

Tables H-15 and H-16 present the 2019 No-Action conditions for analyzed sidewalks and street corners, respectively. As shown in the tables, in both analyzed peak hours the sidewalks would continue to operate at LOS B or better ad the street corners would continue to operate at LOS C or better.

Table H-15
Future Condition Without the Proposed Action - Sidewalks

Sidewalk No.	Location		Total Width	Effective Width (1) (ft)	Peak 15-Minute Volumes			Flow Rate (persons/foot/min)			Average Flow Level of Service			Platoon-Adjusted Level of Service		
					AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM
S1	W. 29th St between 7th Ave and 8th Ave	North	13	8	-	210	192	-	1.8	1.6	-	A	A	-	B	B
S2	W. 29th St between 7th Ave and 8th Ave	South	13	10	-	337	282	-	2.2	1.9	-	A	A	-	B	B
S3	W. 30th St between 7th Ave and 8th Ave	South	13	10	-	169	127	-	1.1	0.8	-	A	A	-	B	B

Table H-16
Future Condition Without the Proposed Action - Corners

No.	Intersection	Corner	Curb Radii (feet)	Peak 15-Minute Volume			Avg Pedestrian Space (sq-ft/ped)			Level of Service		
				AM	MD	PM	AM	MD	PM	AM	MD	PM
C1	7th Av @ W. 28 St	NW	12	66	31	45	105.7	83.0	62.3	A	A	A
C2	7th Av @ W. 29 St	NW	12	-	116	82	-	68.8	75.5	-	A	A
C3	7th Av @ W. 29 St	SE	12	-	87	64	-	62.7	61.0	-	A	A
C4	7th Av @ W. 29 St	SW	12	-	42	56	-	73.8	343.8	-	A	A
C5	7th Av @ W. 30 St	SW	12	-	31	40	-	51.3	34.1	-	B	C
C6	8th Av @ W. 28 St	NE	12	-	24	22	-	180.2	133.6	-	A	A
C7	8th Av @ W. 29 St	NE	12	-	57	40	-	148.3	167.0	-	A	A
C8	8th Av @ W. 29 St	SE	12	-	63	15	-	154.3	184.8	-	A	A
C9	8th Av @ W. 30 St	SE	12	-	54	28	-	90.4	81.8	-	A	A

With-Action Conditions

In the future with the Proposed Action in 2019, the rezoning area would generate new pedestrian trips by residents, shoppers, employees, and other visitors. Project-generated pedestrians would include walk only trips as well as trips by public transportation modes that include a walk component. As shown in Table H-11, the Proposed Action would generate a net increment of 914, 1,719, and 1,501

pedestrian trips (including pedestrian portions of transit trips). All of these trip would have either an origin or destination at one of the ten projected development sites' building entrances located on the midblock street frontages of West 28th Street (north side), West 29th Street (north and south sides), West 30th Street (south side). The locations selected for detailed analysis, where the greatest concentrations of project-generated trips would occur, were selected based on the trip assignment shown in Figure H-3. It should be noted that these forecasted volumes conservatively do not include any credits for pass-by or linked trips although such patterns are common in this area of Manhattan.

The assigned pedestrian incremental volumes were added to the No-Build volumes in order to identify Build 2019 pedestrian volumes and determine pedestrian level of service at analyzed sidewalks and corners. The pedestrian level of service analysis is presented in Tables H-17 and H-18, for sidewalks and corners, respectively.

Table H-17
Future Condition With the Proposed Action - Sidewalks

Sidewalk No.	Location		Total Width	Effective Width (1) (ft)	Project Increment Peak 15-Minute Volumes			Total Peak 15-Minute Volumes			Flow Rate (persons/foot/min)			Average Flow Level of Service			Platoon-Adjusted Level of Service		
					AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM
S1	W. 29th St between 7th Ave and 8th Ave	North	13	8	-	101	88	-	311	280	-	2.6	2.3	-	A	A	-	B	B
S2	W. 29th St between 7th Ave and 8th Ave	South	13	10	-	39	53	-	376	335	-	2.5	2.2	-	A	A	-	B	B
S3	W. 30th St between 7th Ave and 8th Ave	South	13	10	-	91	68	-	260	195	-	1.7	1.3	-	A	A	-	B	B

Table H-18
Future Condition With the Proposed Action - Corners

No.	Intersection	Corner	Curb Radii (feet)	Peak 15-Minute Volume			Avg Pedestrian Space (sq-ft/ped)			Level of Service		
				AM	MD	PM	AM	MD	PM	AM	MD	PM
C1	7th Av @ W. 28 St	NW	12	81	41	62	87.5	71.5	55.0	A	A	B
C2	7th Av @ W. 29 St	NW	12	-	135	97	-	58.4	65.4	-	B	A
C3	7th Av @ W. 29 St	SE	12	-	91	68	-	56.2	55.0	-	B	B
C4	7th Av @ W. 29 St	SW	12	-	60	80	-	62.1	296.4	-	A	A
C5	7th Av @ W. 30 St	SW	12	-	47	52	-	44.8	31.4	-	B	C
C6	8th Av @ W. 28 St	NE	12	-	28	24	-	137.8	112.0	-	A	A
C7	8th Av @ W. 29 St	NE	12	-	92	59	-	109.4	131.1	-	A	A
C8	8th Av @ W. 29 St	SE	12	-	76	26	-	119.3	149.5	-	A	A
C9	8th Av @ W. 30 St	SE	12	-	82	39	-	69.8	68.8	-	A	A

As shown in the tables, all analyzed elements would operate acceptably with LOS C or better in all peak hours. Accordingly, the Proposed Action would not result in any significant adverse pedestrian impacts.

V. CONCLUSION

The RWCDS associated with the proposed rezoning anticipates that 10 projected development sites (including the Proposed Development Site) would be developed with a total of 1,153 residential units, approximately 11,390 sf of office, 60,729 sf of local retail/foodstore, and 325 public parking spaces. The Proposed Development would provide a 325-space public parking garage on the Proposed Development Site, while eliminating a 131-space public parking lot and a 240-space public parking garage currently on the Proposed Development Site. Three other public parking facilities within the rezoning area (on projected development sites 1, 4, and 6), with a combined capacity of 100 spaces, would also be displaced under the RWCDS. Thus, the RWCDS associated with the Proposed Action would result in a net reduction of 146 public parking spaces in the area, while creating substantial parking demand from the new dwelling units and other uses.

As detailed in this attachment, the Proposed Action would generate a maximum of 53 total incremental trips in any peak hour. As no intersection would process a net increment of 50 or more project-generated peak hour vehicle trips in the midday or PM peak hours (which triggered a Level 2 Screening Assessment), the CEQR threshold for detailed analysis, significant adverse traffic impacts would be very unlikely and detailed analysis is not warranted and is not provided. Per the 2010 *CEQR Technical Manual*, as detailed traffic analysis is screened out for the Proposed Action, detailed parking analysis is not warranted.

Although the Proposed Action would result in a net increase of more than 200 subway transit trips compared to No-Action conditions, those project-generated subway trips would be distributed among a total of four subway stations in the vicinity of the rezoning area, and no subway station serving the rezoning area is expected to experience more than 166 new subway trips in either the AM or PM peak hours with implementation of the Proposed Action, which is below the *CEQR Technical Manual* 200-trip threshold for a detailed transit analysis. As the Proposed Action would generate fewer than 200 new bus trips in any peak hour, which would be distributed among 9 different bus routes in the vicinity of the rezoning area, it also does not warrant a detailed bus analysis.

As discussed above, analyzed sidewalks and corners on the vicinity of the rezoning area would operate at acceptable levels of service in the future with the Proposed Action. Accordingly, the Proposed Action would not result in any significant adverse pedestrian impacts.

Therefore, the RWCDS identified for the Proposed Action is not expected to result in any significant adverse impacts on traffic operations and mobility, public transportation facilities and services, pedestrian elements and flow, or off-street parking.

ATTACHMENT I
HAZARDOUS MATERIALS

I. INTRODUCTION

This attachment assesses the potential for the presence of hazardous materials in soil and/or groundwater at both the projected and potential development sites identified in the Reasonable Worst-Case Development Scenario (RWCDS) under the Proposed Action. The Proposed Action involves a rezoning that encompasses the mid-block portions of two City blocks in northern Chelsea on the western edge of Manhattan Community District 5, which would map an M1-6D district over a potion of an existing M1-5 zone. A total of 10 projected development sites (including the Proposed Development Site) and four (4) potential development sites have been identified in the proposed rezoning area, on which new buildings could be constructed or existing buildings converted to primarily residential use (refer to Figure A-4 in Attachment A, "Project Description"). Four of the lots included within the rezoning area boundaries are owned by the applicant, 249 W 28th Street Properties, LLC (Block 778, Lots 13, 16, 18 and 66, the "Proposed Development Site"), and would be redeveloped as a result of the Proposed Action with two new approximately 20-story residential buildings with ground floor commercial uses and a public parking garage.

An assessment of potential hazardous materials impacts was performed for each projected and potential development site to assess the potential for exposure to residual contamination. This study was completed in accordance with the requirements of the *CEQR Technical Manual*. The outcome of this assessment was a determination as to whether the Proposed Action could lead to an increase in human or environmental exposure to hazardous materials; and if there was such an increase, to determine whether it would result in significant public health impacts or environmental damage.

A qualitative evaluation of environmental conditions, performed in the form of a preliminary screening assessment, was completed for all projected and potential development sites within the proposed rezoning area. The preliminary screening consists of a visual and/or historical identification of any past or current uses at the projected development sites, potential development sites, and surrounding properties. In the case of the Proposed Development Site, a Phase I Environmental Site Assessment (ESA) was prepared for the property to further quantify potential on-site environmental conditions. The Phase I included all analyses as specified in the *American Society for Testing and Materials (ASTM) Method E 1527-05*. For all other development sites (projected development sites 1 to 9 and potential development sites A to D), the assessment was undertaken to determine whether additional investigations are necessary and whether remediation or an (E) designation should be required at privately held projected or potential development sites under the Proposed Action to avoid the potential for impact. An (E) designated site is an area designated on a zoning map within which no change of use or development requiring a New York City Department of Buildings permit may be issued without approval of the Mayor's Office of Environmental Remediation (OER). These sites require the OER's review to ensure protection of human health and the environment from any known or suspected hazardous materials associated with the site.

II. METHODOLOGY

As described in the *CEQR Technical Manual*, the goal of a hazardous materials assessment is to determine whether a proposed action would lead to a potential increased exposure of hazardous materials to people or the environment or whether the increased exposure would lead to significant public health impacts or environmental impacts. Under the proposed M1-6D district, residential uses would be allowed as-of-right in an area that has historically been used for manufacturing. This may create the potential for exposure of new residents to potentially toxic chemicals that may exist in the soils and underlying groundwater.

The objective of this analysis is to determine which, if any, of the development sites identified as part of the RWCDS may have been adversely affected by current or historical uses on-site, adjacent to, or within 400 feet of the sites, such that the property may be adversely impacted by hazardous materials and thus require an (E) designation.

The term hazardous material, as defined by the *CEQR Technical Manual*, refers to a substance that is able to pose a threat to human health or the environment. These substances would include, but are not limited to, heavy metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), methane, polychlorinated biphenyls (PCBs), pesticides, dioxins, and hazardous wastes. Hazardous wastes are defined under the regulations promulgated by the Resource Conservation and Recovery ACT (RCRA) as solid waste that meets at least one of the four characteristics: ignitability, corrosivity, reactivity, and/or toxicity, or as identified in NYCRR Part 371.4.

As per Chapter 24 of Title 15 of the Rules of the City of New York, reviews of the regulatory database, Sanborn maps, and exterior assessment of the properties were used to determine past uses of the property and enable an assessment of whether the lot should receive an (E) designation.

Chapter 24 of Title 15 of the Rules of the City of New York specifies the process for determining if an (E) designation should be placed on a specific site. Section 24-04 describes the preliminary screening process, which includes reviewing historical documentation for past or current uses that may have affected or be affecting a projected or potential development site or an adjacent site. Appendix A of the Hazardous Materials Appendix 5 (Chapter 24 of Title 15 of the Rules of the City of New York) provides a list of types of facilities, activities or conditions, which would lead to a site receiving an (E) designation. Section 24-05 stipulates that sites, which did not receive an (E) designation as a result of the preliminary screening described in Section 24-04, should undergo further investigation, specifically, a Phase I Environmental Site Assessment.

Specific information sources used in the assessment are described below.

Historic Sanborn Fire Insurance Maps

For most of the rezoning area, the Sanborn map review included an examination of maps for each available decade from the late 1800's to the 1990's, including the years 1887, 1904, 1915, 1938, 1950, 1969, 1977, 1986 and 1996. Historic Sanborn maps were obtained from Environmental Data Resources, Inc. (EDR) of Milford, Connecticut.

City Directories

City directories for the project area for the years 1928 through 2005 were obtained from EDR and reviewed to determine potential site tenants/uses, which may have resulted in environmental impacts to the projected and potential development sites.

Limitations

While the Sanborn map and city directory reviews were conducted in accordance with the protocols outlined in the ASTM-E-1527-05 standard, it should be emphasized that all of the projected and potential development sites are privately-owned and, except for the site owned by the applicant, not controlled by the applicant. Accordingly, the scope of this project was limited to collecting and analyzing limited information sufficient to make a determination relevant to a hazardous materials (E) designation. Sanborn and city directory review was limited to the properties within the boundaries of the rezoning area. Other elements of a Phase I Environmental Site Assessment (ESA) and the protocols outlined in the *CEQR Technical Manual* (e.g. regulatory database review, reviews of building department and fire department records, a title deed search, and interviews with current and former employees and owners), were not included.

III. EXISTING CONDITIONS

The Proposed Action involves the rezoning of the mid-block portions of two City blocks generally bounded by Seventh Avenue to the east, Eighth Avenue to the west, West 30th Street to the north, and West 28th Street to the south in northern Chelsea of Manhattan Community District 5. The area to be rezoned is currently zoned M1-5. The Proposed Action would map an M1-6D zoning district, which would allow for high performance industrial/manufacturing uses, and a wider range of allowable residential, commercial, and community facility uses

As described in Attachment A, "Project Description," the RWCDS consists of 10 projected development sites (including the Proposed Development Site) where new development is considered likely following the adoption of the Proposed Action, and 4 potential development sites that are considered less likely to be developed, but which potentially could be developed by 2019. These development sites contain a wide range of uses including commercial, light industrial/manufacturing, public parking, warehousing/storage, and residential uses.

Excluding the Proposed Development Site, Table I-1 shows information for the 9 other projected and 4 potential development sites. As shown in the table, common historical uses for development sites that may have contributed to potential on-site soil or groundwater contamination include, but are not limited to: parking facilities; manufacturing facilities; auto repair shops; underground storage tanks; fuel tanks; and drycleaners.

TABLE I-1
Hazardous Materials Assessment of Projected and Potential Development Sites

Site	Block	Lot	Address	Zoning		Sanborn Map & Regulatory Data Base Review	Current Use, Exterior and Surrounding Area Assessment	E-Designation Evaluation	(E) Designation
				Existing	Proposed				
PROJECTED SITES									
1	778	29	219 W. 28th St.	M1-5	M1-6D	Manufacturing of paper hangings four lots to the east (1890-1899); wire works located four lots to the west in 1890 and wire & cable co. works adjacent to the west of in 1899.	Open parking facility with lifts.	Based on the presence of parking lot lifts and their potential to impact the subsurface, and the former manufacturing adjacent to the west, this Lot may be subject to E-designation.	YES
		30	217 W. 28th St.			Manufacturing of paper hangings three lots to the east (1890-1899); wire works five lots to the west in 1890 and wire & cable co. works two lots to the west in 1899.	Open parking facility with lifts.	Based on the presence of parking lot lifts and their potential to impact the subsurface, this Lot may be subject to E-designation.	
		31	215 W. 28th St.			Manufacturing of paper hangings two lots to the east (1890-1899); wire works located six lots to the west in 1890 and wire & cable co. works three lots to the west in 1899. This lot is diagonally contiguous to a former manufacturing site (Block 778, Lot 47).	4-story building. 1st floor identified as "nest"; possibly a nightclub. Floors 2 to 4 appear to be residential but this could not be confirmed.	Based on historical research, this site is diagonally contiguous to a former manufacturing site and therefore, may be subject to E-designation.	
2	778	55	228 W. 29th St.	M1-5	M1-6D	Auto body repair adjacent to west (1976-1996), garages with fuel tanks beginning one lot to the west (1930-1996); insulated wire works adjacent to the west in 1890 and adjacent to southwest in 1899	There is no 228 identified on the buildings but 230 W. 29th St. is identified as the "Subud Chelsea Center," which is relatively large and appears to include 228.	Based on auto body repair located adjacent to the west from at least 1976-1996, this Lot may be subject to an E-designation.	YES
3	778	25	227 W. 28th St.	M1-5	M1-6D	Wire Works adjacent to the west in 1890 and on the property in 1899; auto body repair one lot to the north (1976-1996); garages with fuel tanks two lots to the northwest (1930-1996)	2-story, commercial use building identified as "Botanica" and "SB Trading".	Based on the former presence of a manufacturing facility (Wire Works), this lot may be subject to E-designation.	YES
		27	223 W. 28th St.			Wire Works was identified two lots to the west in 1890 and on the property in 1899; auto body repair two lots to the north (1976-1996); garages with fuel tanks three lots to the northwest (1930-1996)	4-story, commercial use building identified as "Greenwich Village Plumbers Supply."	Based on the former presence of a manufacturing facility (Wire Works), this lot may be subject to E-designation.	
4	779	7	257 W. 29th St.	M1-5	M1-6D	Gasoline tank adjacent to the east in 1950; garage with fuel tanks across W. 29th St. to the south (1930-1996); according to EDR Database, dry cleaner with poor housekeeping practices adjacent to the south across W. 29th St.	4-story building. 1st floor identified as "Studio Dante", which was closed at the time of the field assessment. Floors 2 to 4 appear to be residential but this could not be confirmed.	Based on the gasoline tank depicted adjacent to the west on the 1950 Sanborn map and a drycleaner with poor housekeeping practices to the south across W. 29th St. identified in the EDR database report, this Lot may be subject to an E-designation.	YES
		8	255 W. 29th St.			Gasoline tank on Lot 8 in 1950; garage with fuel tanks across W. 29th St. to the south (1930-1996); according to EDR Database, drycleaner with poor housekeeping practices to the south across W. 29th St.	Open parking with lifts.	Based on the gasoline tank depicted on-site on the 1950 Sanborn map and a dry cleaner with poor housekeeping practices to the south across W. 29th St. identified in the EDR database report, this Lot may be subject to an E-designation.	
5	779	25	225 W. 29th St.	M1-5	M1-6D	Multi-story building with a basement with street level retail and residences above in 1911; multi-story building with a basement with street level retail and an office with storage above in 1930; 2-story building with a basement with street level retail and an office above in 1950; and a 2-story store with a basement from 1976-1996. Former manufacturing facility across W. 29th St., slightly to the east, and gasoline tank noted to the west on the same block on the 1950 map.	2-story commercial building identified as "Granite, Tile, Marble."	Based on the former presence of manufacturing facilities located across W. 29th St. (to the east), and the former presence of USTs to the northwest (on the same block), this Lot may be subject to E-designation.	Yes
		26	223 W. 29th St.			Five-story building with a basement with street level retail with a flat above from at least 1911-1930 and a 2-story building with a basement with street level retail and a flat above from 1950-1996. Former manufacturing facility across West 29th Street, slightly to the east, and gasoline tank noted to the west on the same block on the 1950 map.	2-story commercial office building identified as "a-alternatives," which appears to be the office for a marketing company	Based on the former presence of manufacturing facilities located across W. 29th St. (to the east), and the former presence of USTs to the northwest (on the same block), this Lot may be subject to E-designation.	
		27	221 W. 29th St.			Manufacturing directly to the south across West 29th Street (1979-1996)	Open parking lot with lifts.	Based on manufacturing identified directly to the south across W. 29th St. in Sanborn maps from 1979-1996, and parking lifts, this Lot may be subject to an E-designation.	
		28	219 W. 29th St.			Manufacturing directly to the south across West 29th Street (1979-1996)	Open parking lot with lifts.	Based on manufacturing identified directly to the south across W. 29th St. in Sanborn maps from 1979-1996, and parking lifts, this Lot may be subject to an E-designation.	

5	779	53	216 W. 30th St.	M1-5	M1-6D	Large parking garage with gasoline tanks to north across West 30th Street (1976-1996)	2-story, commercial and office use building. 1st floor identified as SoMa Resources and "The Fur Studio Inc." 2nd floor is identified as "SIGNS," which appears to be the office for the company that sells corporate signs.	Based on the presence of a parking garage with gasoline tanks identified on Sanborn maps from 1979-1996 across W. 30th St. to the north, this Lot may be subject to an E-designation.	Yes
		55	220 W. 30th St.			Large parking garage with gasoline tanks to north across West 30th Street (1976-1996)	2-story commercial and office use building. "Rogue," a music store, is identified on the 1st floor and 2nd floor appears to be office space.	Based on the presence of a parking garage with gasoline tanks identified on Sanborn maps from 1979-1996 across W. 30th St. to the north, this Lot may be subject to an E-designation.	
		56	222 W. 30th St.			Large parking garage with gasoline tanks to north across West 30th Street (1976-1996); according to UST database, 1 closed-in-place UST at western adjoining Lot	2-story commercial and office use building - same building as 220 W. 30th St. "Furs by Karayiannis Brothers Inc." is identified on the 1st floor. 2nd floor appears to be office space.	Based on the presence of a parking garage with gasoline tanks to the north across W. 30th St. identified on Sanborn maps from 1976-1996 and 1 closed-in-place UST at the western adjoining Lot identified in the EDR database report, this Lot may be subject to an E-designation.	
6	779	31	W. 29th St.	M1-5	M1-6D	Manufacturing to southwest across W. 29th St. (1979-1996)	Open parking with lifts.	Based on manufacturing identified directly to the southwest across W. 29th St. in Sanborn maps from 1979-1996, this Lot may be subject to an E-designation.	YES
7	779	69	250 W. 30th St.	M1-5	M1-6D	Printing on first floor (1976-1996); gasoline tank adjacent to southwest in 1950; Chinese laundry located one lot to the northwest in 1911; according to UST database, one UST installed in 1996 and removed 2005 at northeastern adjacent property across W. 30th St., one in-service 5,000-gallon UST installed 1928 at northern adjacent property across W. 30th St., and one in-service 5,000-gallon UST at eastern adjoining property installed in 1925	3-story office building with no specific name associated with it. Appears to be relatively new construction.'	Based on the USTs identified in the Sanborn maps and the EDR database report at several adjacent properties, this Lot may be subject to an E-designation.	YES
8	778	46	210 W. 29th St.	M1-5	M1-6D	Manufacturing adjacent to west (1979-1996); manufacturing of paper hangings/wallpaper adjacent to east (1890-1911)	9-story commercial and residential building. 1st floor is identified as "NY Fur Wholesalers."	Based on manufacturing identified at both eastern and western adjoining properties, this Lot may be subject to an E-designation.	YES
9	779	52	214 W. 30th St.	M1-5	M1-6D	Large parking garage with gasoline tanks to north across W. 30th St. (1976-1996)	11-story commercial and residential building. 1st floor is identified as "Furs by Paul."	Based on the presence of a parking garage with gasoline tanks identified on Sanborn maps from 1979-1996 across W. 30th St. to the north, this Lot may be subject to an E-designation.	YES
POTENTIAL SITES									
A	778	47	212 W. 29th St.	M1-5	M1-6D	Manufacturing on-site (1979-1996); manufacturing of paper hangings/wallpaper one lot to the east (1890-1911)	4-story commercial and residential building. 1st floor is identified as "ABCapital" that appears to be an office for security and private investigation services. Floors 2 to 4 appear to be residential in nature but this could not be confirmed.	Based on on-site manufacturing identified from 1979-1996, this Lot may be subject to an E-designation.	YES
B	779	12	247 W. 29th St.	M1-5	M1-6D	Garage with fuel tanks adjacent to the south across W. 29th St (1930-1996)	2-story building identified as "Morris Katz Art Studios" an art gallery that appeared closed during the time of the field assessment.	Based on the presence of a garage with fuel tanks located directly to the south across W. 29th St. (1930-1996), this Lot may be subject to an E-designation.	YES
C	779	62	234 W. 30th St.	M1-5	M1-6D	Parking garage with gasoline tanks adjacent to the northeast across W. 30th St. (1976-1996)	2-story commercial building. 1st floor occupied by a showroom for the Jesco Lighting Group. 2nd floor appeared to be commercial in nature and appeared unoccupied during the of the assessment.	Based on the presence of a parking garage with gasoline tanks located directly to the northeast across W. 30th St. (1976-1996), this Lot may be subject to an E-designation.	YES
D	778	34	207 W. 28th St.	M1-5	M1-6D	Manufacturing of paper hangings/wallpaper (1890-1911)	6-story commercial building. Two store fronts comprise the 1st floor. One is identified as "207 and 209 Yung Kee" and the second is 209, which appears to be commercial space for unidentified use(s).	Based on historical manufacturing operations on-site from 1890-1911, this Lot may be subject to an E-designation.	YES

Notes:

* According to the New York City Department of City Planning, a City Environmental Quality Review (CEQR) Environmental Designation (E-designation) can be placed on a property if the property:

1. Was used as or is in close proximity to a gas station or some other underground fuel oil tank;
2. Is located in or contiguous to a manufacturing district or has a history of manufacturing uses;
3. Is located next to a building with a history of manufacturing uses;
4. Is located on a heavily trafficked street or highway, or is located next to a railroad;
5. Has some other environmental condition on the property or nearby that is a cause for concern.

Source: ATC

Proposed Development Site

ATC Associates Inc. (ATC) prepared a Phase I Environmental Site Assessment (ESA) in conformance with the scope and limitations of ASTM Standard Practice E 1527-05 for the Proposed Development Site, comprising the property at 241-251 West 28th Street and 240-250 West 29th Street (Lots 13, 16, 18, and 66 on Block 778). The following summarizes the conclusions of the Phase I:

- According to the Federal Resource Conservation and Recovery Act (RCRA) databases, the northwestern adjacent property at 252 West 29th Street (Block 778, Lot 70; Neighborhood Cleaners Assoc /New York School of Dry Cleaning) has been reported as both a Small Quantity Generator (SQG) and Non-Generator (NonGen) of hazardous waste. The facility received a violation of an unreported nature related to the SQG listing on October 18, 2001, but achieved compliance on December 11, 2001. The RCRA listings regarding this facility appear to conflict, but it nonetheless appears that this adjacent property has handled or currently does handle dry cleaning fluids. Combined with the facility's listing in several of the state regulatory databases and reportedly poor housekeeping practices with dry cleaning fluids, this adjacent dry cleaning facility is a recognized environmental condition.

- According to the UST database, six USTs were closed in-place on Lot 18 of the Proposed Development Site on April 1, 1999. All six USTs reportedly have 550-gallon capacities, contained unleaded gasoline, and are constructed of steel/carbon steel. According to the NY Spills database, gasoline-contaminated soil was found during the investigation for the closure of these six USTs on April 28, 1999. Contamination was reportedly found at 5 feet below ground surface (bgs) and a sample collected at 7-9 feet bgs was clean. According to a NYSDEC Memo dated June 19, 2003, the NYSDEC received and reviewed a Subsurface Investigation Report dated June 1999 and a Tank Closure Report dated July 1999 by Cosmos Environmental Services. According to the reports, on-site soil and groundwater was clean, and the spill was subsequently closed on June 19, 2003. While it appears that there are a total of six USTs that are closed in-place on the Proposed Development Site and there is a spill associated with these USTs, this spill was closed by the NYSDEC on June 19, 2003. Because this spill was granted closure by the NYSDEC, it is considered to be a historic recognized environmental condition.

- The western adjoining property at 252 West 29th Street (Block 778, Lot 70) is listed on the NY Manifest database for several shipments of halogenated solvents from 1993 through 2007. The property is also listed on the NY Spills database for the spill of an unknown quantity of dry cleaning fluids on April 1, 2001. This spill was closed on February 13, 2003. The property is also listed on the Drycleaners database. The property supposedly houses a dry cleaning school in the basement of the building, according to the NY Spills listing. According to the spill notifier, spills reportedly occur there on a regular basis and are not properly cleaned up. The United States Environmental Protection Agency (USEPA) has reportedly been notified. Based on adjacent location to the Proposed Development Site, and reportedly ongoing poor housekeeping practices regarding dry cleaning fluids in the basement of the building, this adjacent property is a recognized environmental condition for the Proposed Development Site.

- Westside Operation Ctr., located at 381 West 28th Street approximately 327 feet to the west-northwest of the Proposed Development Site, is a Consolidated Edison (Con Ed) facility that is listed on the NY Spills database for the release of an unspecified amount of petroleum product in 1995 due to a leaking tank. As of December 16, 2003, on-site monitoring wells remained contaminated with methyl tertiary butyl ether (MTBE) and benzene, and the spill remains open with the NYSDEC. Based on distance to the Site and known groundwater

contamination, this open NY Spills listing is considered a recognized environmental condition for the Site.

- According to historical Sanborn fire insurance maps, the Proposed Development Site appears to have been developed by 1890. By 1911, the Proposed Development Site appears to have been developed with N.Y. Transfer Company on Lot 18. By 1930, the Proposed Development Site appears to have been developed with a garage with one 550-gallon buried gasoline tank on Lot 13 and a garage with two 550-gallon buried gasoline tanks on Lot 18. By 1976, the Proposed Development Site appears to have been developed with a parking lot on Lots 13 and 16, a garage with two 550-gallon buried gasoline tanks on Lot 18, and a commercial building on Lot 66. From this point on, the Proposed Development Site appears to have changed little. According to historical city directories, historical tenants of the Site include an auto repair facility in 1934 and 1938, a printing ink compound company from 1938 to 1947, a fur processing and cleaning company from 1950 to 1958, and several garages/parking facilities, fur companies, and trucking companies.

  Surrounding properties were historically depicted with various industrial, commercial and residential properties. Some properties of concern identified on the Sanborn maps include a wire works and later an iron works facility at the eastern adjoining property from at least 1890 through 1911, which was then converted to a garage with two 550-gallon buried gasoline tanks from at least 1930 through 1996. According to the historical city directories, surrounding properties are listed mainly with similar commercial and manufacturing/industrial listings, including cold storage facilities, fur cleaning and dyeing facilities, and printing facilities.

  Based on the potential presence of historical USTs and the historical use of both the Proposed Development Site and surrounding area, Phase I concludes that the current and former development of the site and surrounding area represents a recognized environmental condition.

- The motor for one of the two hydraulic automobile elevators in the parking garage on Lot 18, located in the eastern Elevator Motor Room on the roof, was observed to be leaking during the site reconnaissance, as hydraulic fluid was observed at the base of the motor. Due to the age of this motor, it is possible that the motor oil contains PCBs. Since this motor is located on the roof of the building, it is not likely to pose a concern to the subsurface of the Proposed Development Site. However, it is considered a *de minimis* condition.

- The parking garage on Lot 18 has two hydraulic automobile elevators. Staining was observed in both pits. The pits are constructed of concrete; however, there are two points in each pit at the sides that have exposed soil. Based on the age of the building (constructed by 1911), it is possible that these hydraulic elevators use or formerly utilized PCB-containing hydraulic fluid for their operation. Because it is possible that PCB-containing material has come into contact with soil beneath the Proposed Development Site, these hydraulic elevators are recognized environmental conditions for the site.

- A limited visual assessment was conducted within the accessible areas of the parking garage on Lot 18 for suspect asbestos-containing material (ACM). All suspect materials were observed to be in fair condition. Based on the age of the garage (constructed by 1911), it likely that ACMs are present within the garage.

The Phase I recommended that a Phase II Environmental Site Investigation (ESI) be conducted to assess whether the recognized environmental conditions identified above have impacted the subsurface

of the Proposed Development Site. As such, a Phase II ESI Work Plan will be prepared and submitted, together with the Phase I, to the New York City Department of Environmental Protection (NYCDEP) for review and approval.

IV. FUTURE WITHOUT THE PROPOSED ACTION (NO-ACTION CONDITION)

In the future without the Proposed Action (No-Action), given the existing zoning and recent trends in the area, it is anticipated that there will be little new development under the No-Action condition. The current manufacturing zoning designation would remain and the identified projected and potential development sites are mostly expected to continue in their current uses, except for projected development site 5, which is projected to be developed with a new hotel in the future without the Proposed Action. Existing vacant space within buildings on projected developments sites 3 and 9 are also expected to be re-occupied with commercial office uses in the future without the Proposed Action. Except for site 5, which is expected to be redeveloped in the No-Action, there is not anticipated to be any in-ground disturbance or excavation of the projected or potential development sites in absence of the Proposed Action.

Any construction involving soil disturbance in the future without the Proposed Action could potentially create or increase pathways for human exposure to any subsurface hazardous materials present. Since no (E) designations (which require the owner of a property to assess potential hazardous material impacts prior to construction) currently exist on any portion of the rezoning area, such soil disturbance would not necessarily be conducted in accordance with the procedures (e.g., for conducting testing before commencing excavation and implementation of health and safety plans during construction) described in the following section. However, the New York State Department of Environmental Conservation (NYSDEC) regulatory requirements pertaining to any identified petroleum tanks and/or spills, requirements for disturbance and handling of suspect lead-based paint and asbestos-containing materials, and requirements for off-site disposal of soil/fill, would need to be followed. As such, without the Proposed Action, the amount of soil disturbance would be less, but potentially the controls on its performance would not be as stringent as under the Proposed Action, as described below.

V. FUTURE WITH THE PROPOSED ACTION (WITH ACTION CONDITION)

In the future with the Proposed Action, there are 10 projected development sites, including the Proposed Development Site, and 4 potential development sites that are assumed to be developed by 2019. The analysis below examines projected and potential sites where it could be expected that development in the future with the Proposed Action would have the potential for environmental impacts due to potential presence of hazardous materials. These impacts could include the potential for impacts to the health and safety of workers during construction, the potential for the transport of contaminated soil, or the potential for impact on future residents or employees of individual buildings on these sites.

Projected and Potential Development Sites

The hazardous materials assessment presented herein has indicated that each of the projected and potential development sites that are not under the control of the applicant has some associated concern regarding environmental conditions. As a result, and in order to avoid any potential significant adverse hazardous materials impacts, the proposed actions incorporate (E) designations for all projected and potential development sites, excluding the Proposed Development Site, as discussed below.

Appendix A of the Hazardous Materials Appendix 5 (Chapter 24 of Title 15 of the Rules of the City of New York) provides a list of facilities, activities or conditions requiring an (E) designation. If the projected or potential development sites or adjacent properties had indications of uses listed in Appendix A, placement of an (E) designation was recommended. Additionally, if properties within the 400-foot buffer zone surrounding each site or cluster of sites had indications in the regulatory database of uses listed in Appendix A, placement of an (E) designation was recommended. A matrix summarizing the findings of the assessment is shown in Table I-1.

The preliminary screening was conducted for each projected or potential development site reviewing historical documentation for past or current uses that may have affected or be affecting a development site or an adjacent site. The past uses were compared to the list of types of facilities, activities or conditions which would lead to a site receiving an (E) designation given in Appendix A of the Hazardous Materials Appendix 5. Based on this preliminary screening, 9 projected development sites, as well as the 4 potential development sites met the criteria for receiving an (E) designation.

The (E) designation requirements related to hazardous materials would apply to the following development sites:

Projected Development Sites:
Block 778, Lots 29, 30, 31 (Projected Development Site 1)
Block 778, Lot 55 (Projected Development Site 2)
Block 778, Lots 25, 27 (Projected Development Site 3)
Block 779, Lots 7, 8 (Projected Development Site 4)
Block 779, Lots 25, 26, 27, 28, 53, 55, 56 (Projected Development Site 5)
Block 779, Lot 31 (Projected Development Site 6)
Block 779, Lot 69 (Projected Development Site 7)
Block 778, Lot 46 (Projected Development Site 8)
Block 779, Lot 52 (Projected Development Site 9)

Potential Development Sites:
Block 778, Lot 47 (Potential Development Site A)
Block 779, Lot 12 (Potential Development Site B)
Block 779, Lot 62 (Potential Development Site A)
Block 778, Lot 34 (Potential Development Site B)

The (E) designation text related to hazardous materials is as follows:

Task 1

The applicant submits to OER, for review and approval, a Phase 1 of the site along with a soil and groundwater testing protocol, including a description of methods and a site map with all sampling locations clearly and precisely represented.

If site sampling is necessary, no sampling should begin until written approval of a protocol is received from OER. The number and location of sample sites should be selected to adequately characterize the site, the specific source of suspected contamination (i.e., petroleum based contamination and non-petroleum based contamination), and the remainder of the site's condition. The characterization should be complete enough to determine what remediation strategy (if any) is necessary after review of sampling data. Guidelines and criteria for selecting sampling locations and collecting samples are provided by OER upon request.

Task 2

A written report with findings and a summary of the data must be submitted to OER after completion of the testing phase and laboratory analysis for review and approval. After receiving such results, a determination is made by OER if the results indicate that remediation is necessary. If OER determines that no remediation is necessary, written notice shall be given by OER.

If remediation is indicated from the test results, a proposed remediation plan must be submitted to OER for review and approval. The applicant must complete such remediation as determined necessary by OER. The applicant should then provide proper documentation that the work has been satisfactorily completed.

An OER-approved construction-related health and safety plan would be implemented during evacuation and construction and activities to protect workers and the community from potentially significant adverse impacts associated with contaminated soil and/or groundwater. This plan would be submitted to OER for review and approval prior to implementation.

All demolition or rehabilitation would be conducted in accordance with applicable requirements for disturbance, handling and disposal of suspect lead-paint and asbestos-containing materials. For all projected and potential development sites where no E-designation is recommended, in addition to the requirements for lead-based paint and asbestos, requirements (including those of NYSDEC) should petroleum tanks and/or spills be identified and for off-site disposal of soil/fill would need to be followed.

Proposed Development Site

A Phase I Environmental Site Assessment (ESA) was prepared in January 2009 for the Proposed Development Site. The Phase I ESA was reviewed by DEP's Office of Environmental Planning and Assessment, and a restrictive declaration was recommended by DEP for the Proposed Development Site, due to the potential presence of hazardous materials on the site as a result of past and present on-site land uses. The declaration requires the preparation of a hazardous materials sampling protocol, including health and safety plan, for DEP's review and approval. The restrictive declaration is binding upon the property's successors and assigns. The declaration serves as a mechanism to assure the potential for hazardous material contamination that may exist in the sub-surface soils and groundwater on the Proposed Development Site would be characterized prior to any site disturbance (i.e., site grading, excavation, demolition, or building construction).

The restrictive declaration was executed on March 2, 2011, submitted for recording on March 7, 2011, and recorded on March 14, 2011. Pursuant to a letter from DEP dated April 13, 2011 (refer to

Appendix 4), DEP is in receipt of a signed copy of a DEP-approved restrictive declaration with proof of recording for the site.

VI. CONCLUSION

With the measures outlined above, no significant adverse impacts related to hazardous materials would be expected to occur as a result of the Proposed Development or the identified projected development that would be facilitated by the Proposed Action.

ATTACHMENT J
AIR QUALITY

I. INTRODUCTION

The Proposed Action, under the Reasonable Worst-Case Development Scenario (RWCDS), would affect ten (10) projected development sites (including the Proposed Development Site) and three (3) potential development sites. The "Proposed Development Site" includes four lots (Block 788, Lots 13, 16, 18, and 66) that are owned by the applicant, 249 W 28th Street Properties, LLC, which would be developed as a result of the Proposed Action with two approximately 20-story residential building towers - one facing West 28th Street (Building A) and the other facing West 29th Street (Building B). Figure A-4 in Attachment A, "Project Description" shows the Proposed Development Site, as well as the remaining projected and potential development sites, and identifies the blocks and lots within and adjacent to the rezoning area.

The Proposed Action would increase development and alter land uses in the study area and allow residential units where the existing zoning permits only commercial and light industrial activity, as well as certain community facilities. Air quality, which is a general term used to describe pollutant levels in the atmosphere, would be affected by these changes. The potential air quality impacts that are addressed in this analysis are:

1. Potential for changes in vehicular travel associated with proposed development activities to result in significant mobile source (vehicular related) air quality impacts;

2. Potential impacts from the exhaust of a proposed parking garage on the Proposed Development Site;

3. The potential for emissions from the heating, ventilation and air conditioning (HVAC) systems of the buildings to be located on the affected development sites to significantly impact existing land uses;

4. The potential for emissions from the HVAC systems of the buildings to be located on the affected development sites to significantly impact other proposed developments (i.e., project-on-project impacts);

5. 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 developments;

6. The potential for significant air quality impacts from the emissions of "major" existing emission sources (i.e., HVAC systems with 20 or more million Btu/hr heat input) on the proposed residential developments located in areas that are being rezoned to allow new residential uses; and

7. The potential for significant air quality impacts on the proposed developments located in areas that are being rezoned to allow new residential uses from air toxic emissions generated by nearby existing industrial sources.

Air quality analyses were conducted, following the procedures outlined in the 2010 *New York City Environmental Quality Review* (*CEQR) Technical Manual,* to determine whether the Proposed Action would result in violations of ambient air quality standards or exceedances of health-related guideline values. The methodologies and procedures utilized in these analyses are described below.

II. POLLUTANTS OF CONCERN

Criteria Pollutants

The following air pollutants have been identified by the United States Environmental Protection Agency (USEPA) as being of concern nationwide: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone, particulate matter (PM_{10} and $PM_{2.5}$), sulfur dioxide (SO_2), and lead. National Ambient Air Quality Standards (NAAQS) are concentrations set for each of the criteria pollutants specified by the USEPA that have been developed to protect human health and welfare. New York has adopted the NAAQS as state ambient air quality standards. These standards, together with their health-related averaging periods, are presented in Table J-1 for the pollutants of concern for this project.

TABLE J-1
Applicable National and State Ambient Air Quality Standards

Pollutant	Averaging Period	National and NY State Standards	
		Primary	Secondary
Carbon Monoxide	8 Hour	9 ppm (10 mg/m^3)	Same as Primary Standard
	1 Hour	35 ppm (40 mg/m^3)	Same as Primary Standard
Nitrogen Dioxide	Annual Average	0.053 ppm (100 µg/m^3)	Same as Primary Standard
Sulfur Dioxide	Annual Average	80 µg/m^3 (0.03 ppm)	-
	24 Hour	365 µg/m^3 (0.14 ppm)	-
	3 Hour	-	1300 µg/m^3 (0.5 ppm)

Notes: ppm: parts per million
µg/m^3: micrograms per cubic meter
Source: US Environmental Protection Agency, "National Primary and Secondary Ambient Air Quality Standards." (49 CFR 50). New York State Department of Environmental Conservation (NYSDEC).

The following air pollutants were considered for this analysis:

- SO_2 and NO_2 for impacts of project-related HVAC emissions; and
- CO for the mobile source and garage analysis.

Air Toxic Pollutants

In addition to criteria pollutants, small quantities of a wide range of the non-criteria air pollutants, known as toxic air pollutants, which are emitted from nearby industrial and commercial facilities, are also of concern. These pollutants can be grouped into two categories: carcinogenic air pollutants, and

non-carcinogenic air pollutants. These include hundreds of pollutants, ranging from high to low toxicity. No federal standards have been promulgated for toxic air pollutants. However, the USEPA and the New York State Department of Environmental Conservation (NYSDEC) have issued guidelines that establish acceptable ambient levels for these pollutants based on human exposure criteria.

In order to evaluate short-term and annual impacts of carcinogenic and non-carcinogenic toxic air pollutants, the NYSDEC has established short-term guideline concentrations (SGCs) and annual guideline concentrations (AGCs) for exposure limits. These are maximum allowable 1-hour and annual guideline concentrations, respectively, that are considered acceptable concentrations below which there should be no adverse effects on the health of the general public. Based on SGCs and AGCs, USEPA also developed methodologies that can be used to estimate the potential impacts of air toxic pollutants from multiple emission sources. The "Hazard Index Approach" can be used to estimate the potential impacts of non-carcinogenic pollutants. If the combined ratio of estimated pollutant concentrations divided by the respective SGCs or AGCs value for each of the toxic pollutants is found to be less than 1, no significant air quality impacts are predicted to occur. Estimated overall incremental cancer risk should be conservatively compared with one-to-one million threshold established by USEPA to determine if significant air quality impacts are predicted.

III. MOBILE SOURCE ANALYSIS

Intersection Analysis

Localized increases in CO levels may result from increased vehicular traffic volumes and changed traffic patterns in the study area as a consequence of the Proposed Action. According to the 2010 *CEQR Technical Manual* screening threshold criteria for this area of the City, if 170 or more project-generated vehicles pass through a signalized intersection in any given peak period, there is a potential for mobile air quality impacts and a detailed analysis is required.

As described in greater detail in Attachment H, "Traffic and Parking," the trip generation analysis conducted for the Proposed Action indicates that the number of project-generated vehicles would be below the 2010 *CEQR* screening threshold during both the AM and PM peak periods at any affected intersection. Therefore, no detailed air quality analysis is required and no significant mobile source air quality impacts are expected as a result of the Proposed Action.

Garage Analysis

An air quality analysis was conducted, following guidelines provided in the 2010 *CEQR Technical Manual* for a mechanically ventilated, enclosed garage, to estimate the potential impacts of a proposed 325-space below-grade public parking garage at the Proposed Development Site. Emissions from the garage were assumed to be exhausted through one garage vent. As almost exclusively gasoline-powered automobiles and not diesel-fueled trucks would use the garage, CO was the only pollutant considered for this analysis. Potential PM_{10} and $PM_{2.5}$ impacts were not considered because the operation of this facility would not materially affect the ambient concentrations of these pollutants.

CO emission factors for the various vehicles operating modes (cold/hot start/idle) under the future 2019 With Action scenario were estimated using the latest version of the USEPA emission factor algorithm (MOBILE 6.2.03). Maximum hourly CO emission rates were calculated for the time period

with the maximum number of departing autos in an hour, since departing autos are assumed to be "cold" and arriving cars are assumed to be "hot" ("cold" autos emit CO at considerably higher rates than "hot" autos). Maximum hourly CO emission rates over a consecutive 8-hour period were computed for the 8-hour time period that averages the largest number of departing autos per hour. The maximum emission rate was determined based on the ins/outs for the 8-hour time period and the mean traveling distance within the garage. The analysis assumed that all departing autos would idle for one minute before traveling to the exits of the garage, and all arriving and departing autos would travel at 5 miles per hour within the garage.

Estimates of off-site CO impacts are based on EPA's equation for dispersion of pollutants from a stack. The garage vents are converted into "virtual point sources" and the concentrations within the garage are used to estimate the initial dispersion at the garage vents. The initial horizontal and vertical distributions are assumed to be equal and calculated by setting CO concentration at the exit of the vent equal to the CO level within the facility. One exhaust vent was conservatively assumed for this analysis. Eight-hour CO impacts are estimated at a receptor near the vent (i.e., 5 feet from the vent) and at a receptor across a street on the far sidewalk from the vent (50 feet away). Cumulative CO impacts on the near and far sidewalks adjacent to the garage vent were calculated by adding the impact from the garage exhaust to on-street sources, and CO 8-hour background levels of 2.9 ppm.

A maximum total 8-hour CO concentration of 3.8 ppm was estimated at a receptor located 5 feet from the vent by adding the estimated garage impact (0.9 ppm) and the background concentration (2.9 ppm); a maximum total 8-hour CO concentration of 3.4 ppm was estimated at the receptor located 50 feet from the vent by adding the estimated garage (0.4 ppm), street traffic impacts (0.1 ppm), and the background concentration (2.9 ppm). The maximum total estimated 8-hour CO concentrations are therefore below the 8-hour CO NAAQS of 9.0 ppm.

An analysis was also conducted (using EPA's AERMOD model) to estimate the potential garage exhaust impacts on nearby receptors located at window level of the Proposed Development Site. Receptors were placed at different distances from the vent at an exhaust vent height of 12 feet to estimate maximum impacts. The highest 8-hour CO impact (of approximately 0.5 ppm) was found at 10 feet from the vent; at 50 feet from the vent, the estimated impact was 0.03 ppm. The maximum total estimated 8-hour CO concentrations at these locations are therefore below the 8-hour CO NAAQS of 9.0 ppm.

The result of this analysis is that emissions from the proposed public garage would not cause significant adverse air quality impacts.

IV. ANALYSIS OF HEATING SYSTEM EMISSIONS

Emission Sources Considered

Emissions from the HVAC systems of the proposed, projected, and potential developments may affect air quality levels at nearby existing land uses as well as the other developments. The impacts of these emissions would be a function of fuel type, stack height, building size (gross floor area), and location of each emission source relative to a nearby sensitive receptor site.

Data to conduct this analysis were obtained as follows:

- The size (gross floor area and height) and location (block and lot number) for the proposed development was provided by the project architect, and similar information for each projected

and potential development under the Proposed Action was determined by employing reasonable, worst-case assumptions; and

- The size and location of existing buildings were determined using the New York City Open Accessible Space Information System Cooperative (OASIS) data base.

The 2010 *CEQR Technical Manual* includes a screening methodology to estimate the potential impacts of HVAC system emissions from a single building that is at least 30 feet from the nearest building of similar or greater height. A detailed dispersion analysis is required for buildings that are less than 30 feet from a taller building. However, when a building-on-building analysis involves multiple buildings, situations may occur where one (or more) of the buildings is located less than 30 feet from a nearby building but more than 30 feet from another nearby building. In these cases, each building's impact on each nearby building was estimated individually—using either screening level or detailed analysis, as appropriate. As such, each proposed building was placed in one or both of the following groups:

- Group 1 Development Sites – proposed, projected, and potential sites that are more than 30 feet apart from a taller building. The 2010 *CEQR* screening methodology was used to estimate the potential impacts of these buildings.

- Group 2 Development Sites – projected and potential sites that are closer than 30 feet from a taller building. A detailed dispersion analysis was used to estimate the potential impacts of these buildings.

Existing Land Uses

A survey of existing land uses within approximately 400 feet of the rezoning area was conducted using the New York City OASIS mapping network system to identify residential land uses and other sensitive receptor sites. The survey showed that there are several multi-story residential and/or mixed-use buildings containing residential uses that are adjacent to development sites 1. 6, 7, A, B, and D. All these buildings are taller than the proposed buildings on sites 1, 6 7, A, B and D and therefore, detailed assessment is required for these sites.. A residential 22-story building on Block 752, Lot 1 located 280 feet from the Proposed Development Site across Eighth Avenue, that is part of the Penn South Houses, was considered in the screening analysis and passed the screening analysis.

Based on the results of the survey, the following existing buildings were considered in the detailed analysis:

16-story building on Block 778, Lot 48 adjacent to Site 1;
16-story building on Block 779, Lot 41 adjacent to Site 6;
21-story building on Block 779, Lot 39 adjacent to Site 6;
14-story building on Block 779, Lot 66 adjacent to Site 7;
15-story building on Block 779, Lot 7501 adjacent to Site 7;
16-story building on Block 778, Lot 48 adjacent to Site A;
17-story building on Block 779, Lot 13 adjacent to Site B; and
21-story building on Block 778, Lot 43 adjacent to Site D.

Results of the detailed analysis and the required stack setback distances for sites 1, 6, 7, A, B, and D are provided in Tables J-8 thru J-10.

Building-on-Building Impact Analysis

A screening analysis was conducted for Group 1 development sites, using 2010 *CEQR Technical Manual* nomographic procedures, to determine whether the HVAC emissions of any of the proposed, projected, and/or potential developments would have the potential to significantly affect air quality levels at any of the other nearby projected and potential development sites (i.e., project-on-project impacts).

The proposed and each projected and potential development site was evaluated and all nearby projected or potential developments of similar or greater height were considered as potential sensitive receptor sites. Figures 17-4 and 17-7 of the Air Quality Appendix were used to determine potential for significant SO_2 (i.e., the critical pollutant for fuel oil) and NO_2 (i.e., the critical pollutant for natural gas) impacts. If more than one taller building is located near a shorter building, the potential impacts from the HVAC emissions of the shorter building on the closest taller building were considered.

If the distance from a proposed, projected, and/or potential development to the nearest development of similar or greater height is less than the threshold distance provided in the 2010 *CEQR* nomographs, the potential exists for significant air quality impacts, and a detailed dispersion modeling analysis was conducted. Otherwise, the development site passes the screening analysis, and no further detailed analysis is required.

The maximum floor area of the proposed development and each of the projected and/or potential developments under the Proposed Action was used as input for the screening analysis (refer to Table A-4 in Attachment A, "Project Description"). It was conservatively assumed that Proposed Development Site buildings - Building A and Building B - would be adjacent to each other (even if they are designed to setback from each other) and the total floor area of 361,860 sq. feet would be evenly split between them. As such, analyses were conducted assuming both buildings would have the same height (210 feet) and gross floor area (180,930 square feet). It was also assumed that the HVAC system of each development site, including the Proposed Site buildings, would utilize a single 3-foot tall stack (as per 2010 *CEQR Technical Manual* guidance).

Proposed, projected, and potential development sites that were evaluated using either screening-level or detailed analyses are presented in Table J-2.

Pollutants Considered

Screening level and detailed analyses were conducted using both fuel oil (No. 2 and No. 4) and natural gas, with the critical pollutant for fuel oil being SO_2 and the critical pollutant for natural gas being NO_2. For the screening analysis, the threshold distances presented in Table J-4 are given for fuel oil #4 (based on 2010 *CEQR* nomograph Figure 17-4) as these are more conservative values.

Results

If the HVAC emissions of a building can affect several nearby buildings, only the highest impacts on the nearest building were considered. These highest values, using the screening-level analysis, are presented in Table J-3. If a building passed this screening analysis, the other surrounding buildings (located further from the building being considered) are also assumed to pass the screening analysis. The results of the screening-level analyses for building-on-building impacts for Group 1 development sites (as well as the critical distance parameters used in these analyses), which are presented in Table J-3, are as follows:

TABLE J-2
Proposed, Projected, and Potential Development Sites and Level of Analysis Required

Site	Block	Lot	Total Square Feet	Bldg Height (feet)	Distance to Nearest Building of Similar or Greater Height (feet)	Level of Analysis Required
Proposed Development Site						
Building A	778	13,16,18,66	180,930	210	> 30 ft (from 4and B)	Screening
					<30 ft (from Building B)	Detailed
Building B	778	13,16,18,66	180,930	210	> 30 ft (from 2)	Screening
					<30 ft (from Building A)	Detailed
Projected Development Sites						
01	778	29, 30, 31	93,619	210	< 30 ft (from A)	Detailed
02	778	55	57,240	210	> 30 ft (from 5)	Screening
03	778	25, 27	85,491	198	< 30 ft (from 1 and 2)	Detailed
04	779	7,8	94,192	210	> 30 ft (from B)	Screening
05	779	25-28, 53,55,56	263,131	210	< 30 ft (from 6)	Detailed
					>30 ft (from 2)	Screening
06	779	31	57,787	210	< 30 ft (from 5)	Detailed
07	779	69	52,332	135	< 30 ft (from 4 and B)	Detailed
08	778	46	23,227	116	< 30 ft (from A and D)	Detailed
09	779	52	27,770	160	< 30 ft (from 5 and 6)	Detailed
Potential Development Sites						
A	778	47	23,397	210	< 30 ft (from 1)	Detailed
					>30 ft (from 5 and 6)	Screening
B	779	12	23,959	210	>30 ft (from 4 and C)	Screening
C	779	62	22,372	210	>30 ft (from B)	Screening
D	778	34	104,728	165	>30 ft (from 1 and 6)	Screening

- The Proposed Development Site Buildings (A and B), and Projected Development Sites 2, 4, 5, B (B on 4) and D did not pass the screening-level analysis for building-on-building impacts using fuel oil and/or natural gas.

- Potential Development Sites A, B (B on C), and C passed the screening-level analysis for building-on-building impacts using either fuel oil or natural gas.

Detailed Analysis

Detailed dispersion analyses, using the USEPA AERMOD model, were conducted for development sites that did not pass the screening-level analysis either for building-on-building impacts or impacts on existing buildings or for which a screening-level analysis was not applicable.

Methodology

Dispersion Model

AERMOD is a steady-state plume model that is applicable in rural and urban areas, flat and complex terrain, surface and elevated releases, and multiple sources (including point, area, and volume sources). It can be used to calculate pollutant concentrations from one or more points (e.g., exhaust

TABLE J-3
Screening Level Group 1 Analysis Results

Development Site	Size (sq. feet)	Development Site Height (feet)	CEQR Threshold Distance for Fuel Oil (feet)	CEQR Threshold Distance for Natural Gas (feet)	Measured Distance to Nearest Development Site (feet)	Source and Receptor Development Sites	CEQR Screening Results for Fuel Oil	CEQR Screening Results for Natural Gas
Proposed Development Site (P)								
Building A or B	180,930	210	170	90	95	A on 2	Fail	Pass
					60	A on 4	Fail	Fail
					60	A on B	Fail	Fail
Projected and Potential Development Sites								
Site 2	57,240	210	96	54	73	2 on 5	Fail	Pass
Site 4	94,192	210	125	69	49	4 on B	Fail	Fail
Site 5	263,131	210	213	110	73	5 on 2	Fail	Fail
Site A	23,397	210	60	38	64	A on 5	Pass	Pass
Site B	23,959	210	60	38	48	B on 4	Fail	Pass
					100	B on C	Pass	Pass
Site C	22,372	210	60	38	100	C on B	Pass	Pass
Site D	104,728	165	126	74	47	D on 1	Fail	Fail
					64	D on 6	Fail	Fail

stacks) based on hourly meteorological data, and has the capability of calculating pollutant concentrations in a cavity region and at locations when the plume from the exhaust stack is affected by the aerodynamic wakes and eddies (downwash) produced by nearby structures.

Regulatory default options of the AERMOD model were used. Following 2010 *CEQR Technical Manual* guidelines, analyses were conducted assuming stack tip downwash, urban dispersion and surface roughness length, with and without building downwash, and the elimination of calms. The AERMOD downwash algorithm was utilized to estimate the potential effects of the multiple building structures on the plume dispersion. While analyses were conducted with and without the consideration of downwash effects on plume dispersion (i.e., affects caused by wind flow obstructions around buildings), these maximum values were all estimated and reported as results of direct plume impacts (i.e., without plume downwash).

Pollutants Considered

Detailed analyses were conducted using both fuel oil (No. 2 and No.4) and natural gas, with the critical pollutant for fuel oil being SO_2 and the critical pollutant for natural gas being NO_2. For the detailed analysis, because the emission rates for either fuel #2 and #4 are the same, the results obtained for the fuel #2 also apply to the fuel #4.

Emission Rates

Emission rates were estimated as follows:

- A fuel consumption rate for each site was estimated using fuel factors presented in the 2010 *CEQR Air Quality Appendix*.

- These fuel factors, which are 0.38 for Number 2 fuel oil and 52.8 cubic feet per square feet for natural gas in New York City, were multiplied by the square footage of each site to estimate the total number of gallons (or cubic feet) of fuel consumed by that building annually.

- It was assumed that all fuel is consumed in a 100 day (2,400 hour) heating season.

- Average annual peak period pollutant emission rates were estimated, as recommended in the 2010 *CEQR Technical Manual*, by dividing the total amount of pollution estimated to be emitted in a year by 8,760 hours.

Emission factors for pollutants of concern were obtained from USEPA's "Compilation of Air Pollutant Emission Factors" (AP-42, Tables 1.3-1 and 1.4-1) for fuel oil with sulfur content of 0.2 percent and natural gas.

Stack Parameters

Stack heights, building sizes (square footages and heights), and estimated pollutant emission rates used in these analyses are provided in Table J-4. The stack parameters were developed using the New York City Department of Environmental Protection (NYCDEP) "CA Permit" database and boiler rated heat inputs (in million Btus [MMBtus] per hour). It was assumed that emissions from each building would be released through a single stack located at the edge of the roof closest to the nearest taller building.

Meteorological Data

Analyses were conducted using the latest five consecutive years of meteorological data (2004-2008). Surface data were obtained from La Guardia Airport and upper air data were obtained from Brookhaven station, New York. These meteorological data provide hour-by-hour wind speeds and directions, stability states, and temperature inversion elevations over the 5-year period. Data were developed using the USEPA AERMET processor. The land use around the site was classified using defined categories to determine surface parameters used by the AERMET program.

Receptor Locations

Source-receptor configurations (stack diameters, plume rise and dispersion, and stack proximity to the receptors) were considered in selecting receptor sites. For the building-on-building analysis, receptors were placed on the façade of impacted development site directly under the plume centerline from the stack of the shorter building (i.e., where the highest impacts are likely to occur).

For the analysis of existing land uses, receptors were placed on the nearby existing buildings at the levels of the stacks of the proposed, projected, and potential development sites. For the analysis of the "major" emission source impacts on development sites, receptors were placed on the façade of the each of the thirteen (13) buildings at the top floor level.

Background Concentrations

In estimating the total impact of the Proposed Action, it is necessary to include consideration of the background pollutant levels for the study area. Applicable background concentrations were added to the modeling results to obtain total pollutant concentrations. Background concentrations, obtained from NYCDEP, incorporated the recently available 2009 monitoring data from NYSDEC PS59

TABLE J-4
Development Sites, Stack Parameters, and Pollutant Emission Rates

Site No.	Pollutant	Development Size ft^2	Estimated Emission Rates g/sec	Estimated Heat Input MMBtu/hr	Stack Parameters		
					Height feet	Diameter feet	Velocity ft/sec
Proposed Development Site							
Building A or B	**Annual NOx**	180,930	0.014	4.1	213	0.5	12.8
	24-hr SO_2		0.103				
Projected Development Sites							
1	**Annual NOx**	93,619	0.007	2.1	213	0.5	12.8
	24-hr SO_2		0.053				
2	**Annual NOx**	57,240	0.004	1.3	213	0.5	12.8
	24-hr SO_2		0.032				
3	**Annual NOx**	85,491	0.006	1.9	201	0.5	12.8
	24-hr SO_2		0.048				
4	**Annual NOx**	94,192	0.007	2.1	213	0.5	12.8
	24-hr SO_2		0.053				
5	**Annual NOx**	263,131	0.020	5.8	213	1.0	19.0
	24-hr SO_2		0.149				
6	**Annual NOx**	57,787	0.004	1.3	213	0.5	12.8
	24-hr SO_2		0.033				
7	**Annual NOx**	52,332	0.004	1.4	138	0.5	12.8
	24-hr SO_2		0.030				
8	**Annual NOx**	23,227	0.002	0.5	119	0.5	12.8
	24-hr SO_2		0.013				
9	**Annual NOx**	27,770	0.002	0.6	163	0.5	12.8
	24-hr SO_2		0.016				
Potential Development Sites							
A	**Annual NOx**	23,397	0.002	0.5	213	0.5	12.8
	24-hr SO_2		0.013				
B	**Annual NOx**	23,959	0.002	0.5	213	0.5	12.8
	24-hr SO_2		0.014				
C	**Annual NOx**	22,372	0.002	0.5	213	0.5	12.8
	24-hr SO_2		0.013				
D	**Annual NOx**	104,728	0.008	2.3	168	0.5	12.8
	24-hr SO2		0.059				

Note:
The following AP-42 emission factors were used: SO_2 = 28.4 pounds per 1000 gallons; nitrogen oxides (NOx) = 100 pounds per $10^{\wedge 6}$ cubic feet.

monitoring station in Manhattan. The first highest 24-hr SO_2 background concentration of 110 µg/m^3 was added to the 1st highest AERMOD-predicted SO_2 impact and resulting total 24-hr SO_2 concentrations were compared with appropriate 24-hr SO_2 NAAQS of 365 µg/m^3. An annual background NO_2 concentration of 68 µg/m^3 from the same monitoring station was used as well.

Results

Group 1 Development Sites That Did Not Pass the Screening-Level Analysis for Building-on-Building Impacts

The sites that did not pass the screening-level analysis for building-on-building impacts are both Proposed Development Site Buildings (A and B), Projected Development Sites 2, 4, and 5, and Potential Development Sites B (B on 4) and D (see Table J-3). As shown in Tables J-5 and J-6, the result of detailed dispersion analyses for the Proposed Development Site buildings and Projected Sites 2, 4, and 5 is that no exceedances of either the 24-hour SO_2 or annual NO_2 NAAQS are predicted.

TABLE J-5
Group 1 Development Sites That Passed the Detailed Analysis for Building-on-Building Impacts with Fuel Oil

Site No.	Total Floor Area (sq. feet)	Stack Height (feet)	Source and Receptor Sites	24-hr SO_2 Emission Rates (gm/sec)	Maximum Estimated 24-hr SO_2 Conc.* ($\mu g/m^3$)	24-hr SO_2 NAAQS ($\mu g/m^3$)
Proposed Development Site						
Building A	180,930	213	A on 4 or B	0.103	234	365
Projected Sites						
Site 2	57,240	213	2 on 5	0.032	133	
Site 5	263,131	213	5 on 2	0.149	243	
Site 4	94,192	213	4 on B	0.053	191	
Site B	23,959	213	B on 4	0.014	128	
Site D	104,728	168	D on 1	0.059	193	
			D on 6		169	

* Total estimated 24-hr SO_2 concentrations include a background of 110 $\mu g/m^3$

TABLE J-6
Group 1 Development Sites That Passed the Detailed Analysis for Building-on-Building Impacts with Natural Gas

Site No.	Total Floor Area (sq. feet)	Stack Height (feet)	Source and Receptor Sites	Annual NO_2 Emission Rates (gm/sec)	Maximum Estimated Annual NO_2 Conc.* ($\mu g/m^3$)	Annual NO_2 NAAQS ($\mu g/m^3$)
Proposed Development Site						
Building A	180,930	213	A on 4 or B	0.014	69	100
Site 4	94,192	213	4 on B	0.007	69	
Site 5	263,131	213	5 on 2	0.020	70	
Site D	104,728	168	D on 1	0.008	68	
			D on 6		69	

* Total estimated annual NO_2 concentrations include a background of 68 $\mu g/m^3$.

Building-on-Building Impacts of Group 2 Development Sites

Group 2 development sites, which require detailed analyses, are Proposed Development Site Buildings (A on B and B on A), Projected Development Sites 1 (1 on A), 3 (3 on 1 and 3 on 2), 5 (5 on 6), 7 (7 on 4 and 7 on B), 8 (8 on A and 8 on D), 9 (9 on 5 and 9 on 6), and Potential Site A (A on 1).

The New York City Building Code (Building Code) requires that a rooftop stack should be at least 10 feet away from a taller building. As such, the HVAC stack on each projected and potential development site located adjacent to another projected or potential development site were initially placed 10 feet from the lot line to account for conditions that may occur should an adjacent taller building be built, and potential impacts were estimated. If exceedances of the NAAQS were predicted,

setback distances were increased in one-foot increments until the threshold distance at which the development site would pass analysis was found.

All Group 2 development sites passed the detailed analysis with a 10-foot distance between the HVAC exhaust stack and the nearest taller development site if *natural gas* was used for the analysis. Conservative analysis to determine the annual NO_2 impact for natural gas was conducted for the largest projected development site that is not adjacent to a taller building (Site 5 with 263,131 square feet) and the largest projected development site that is adjacent to a taller building (Site 3 with 85,491 square feet). The highest estimated annual NO_2 concentration (including a background concentration of 68 ug/m^3) is 88 ug/m^3. As this value is below the NAAQS, no significant adverse annual NO_2 impact is predicted with the use of natural gas. Therefore, all of the other development sites, which have smaller floor areas (and therefore smaller emission rates), are assumed to pass this analysis using natural gas.

In addition, analyses with natural gas were conducted for two sites that are existing buildings – Site 8 and Site 9. Stacks on projected development sites 8 and 9 were located at a distance of 10 feet from the impacted sites and the maximum annual NO_2 impacts were estimated, as follows:

Site 8 impacts on Sites A and D are 4 and 7 ug/m^3, respectively; and
Site 9 impacts on Sites 5 and 6 are 4 and 2 ug/m^3, respectively.

The resulting maximum estimated annual NO_2 concentrations (including a background concentration of 68 ug/m^3) for these sites are 75 ug/m^3, which is below the NO_2 NAAQS. Therefore, no significant adverse annual NO_2 impacts are predicted for Sites 8 and 9 with the use of natural gas. Based on this, (E)-designations can be placed on each of these two sites requiring the exclusive use of natural gas in their HVAC system.

The results of analyses for Group 2 development sites using fuel oil (No. 2 or No. 4) are as follows:

- Table J-7 shows the results of analyses that were conducted for Group 2 development sites that did not exceed the NAAQS for SO_2 using fuel oil. No additional restrictions on stack locations beyond the Building Code mandated minimum distance (i.e., 10 feet) would be required for these development sites.

- Table J-8 shows the results of analyses that were conducted for the Group 2 development sites that did not pass the analysis on building-on-building impacts or impacts on existing land uses and the stack setback distances required to comply with air quality standards. "E" designations would be required on these development sites to ensure that there would be no significant air quality impacts on adjacent sites. Since these development sites did not exceed the applicable air quality standard using natural gas, "E" designation would be required that would specify either that natural gas be used or the distance that the stack on the building roof must be from the edge of an adjacent development site.

The results of these analyses are that with the use of "E" designations to ensure adequate distance between HVAC exhaust points and nearby taller buildings or the use of natural gas, the potential impacts from the heating systems of the projected and potential development sites under the Proposed Action would not cause violations of the NAAQS and would therefore have no significant adverse air quality impacts.

TABLE J-7
Group 2 Development Sites That Passed the 10-Foot Threshold Distance for Building-on-Building Impacts and Do Not Require Stack Location Restrictions (Fuel Oil Only)

Site No.	Total Floor Area (sq. feet)	Stack Height (feet)	Source and Receptor Sites	24-hr SO_2 Emission Rates (gm/sec)	Maximum Estimated 24-hr SO_2 Conc.* ($\mu g/m^3$)	24-hr SO_2 NAAQS ($\mu g/m^3$)
Projected Sites						
Site 3	85,491	201	3 on 1	0.048	349	365
Site 7	52,332	138	7 on B	0.030	249	

* Total estimated 24-hr SO_2 concentrations include a background value of 110 ug/m^3.

TABLE J-8
Group 2 Development Sites That Did Not Pass the 10-Foot Threshold Distance for Building-on-Building Impacts or Impacts on Existing land Uses with Fuel Oil and Required Stack Setback Distances Beyond the Building Code Minimum

Site No.	Total Floor Area (sq. feet)	Stack Height (Feet)	Source and Receptor Sites	Stack Distances from Nearest Taller Building (Feet)	24-hr SO_2 Emission Rates (gm/sec)	Total Estimated 24-hr SO_2 Conc.* (ug/m^3)	24-hr SO_2 NAAQS (ug/m^3)
Proposed Development Site							
Building A	180,930	213	A on B	41	0.103	346	365
Building B	180,930	213	B on A	46	0.103	349	365
Projected Development Sites							
Site 1	93,683	213	1 on A	28	0.053	347	365
			1 on 16-story EB**	30		351	
Site 3	85,491	213	3 on 2	31	0.048	349	
Site 5	263,131	213	5 on 6	45	0.149	351	
Site 6	57,787	213	6 on 21-story EB**	22	0.033	328	
			6 on 16-story EB**	18		353	
Site 7	52,332	138	7 on 4	22	0.030	358	
			7 on 15-story EB**	19		329	
			7 on 14-story EB**	20		345	
Potential Development Sites							
Site A	23,397	213	A on 1	13	0.013	339	
			A on 16-story EB**	11		355	
Site B	23,959	213	B on 17-story EB**	12	0.014	352	
Site D	104,728	168	D on 21-story EB**	30	0.059	361	

* Total estimated 24-hr SO_2 concentrations include a background value of 110 ug/m^3.
** EB = Existing Building

Required Set-Back Distances

To preclude the potential for significant adverse air quality impacts, the "E" designations shown in Table J-9 would be required for the projected and potential development sites. These "E" designations would specify the required stack setback distance for fuel oil or the exclusive use of natural gas.

TABLE J-9
Minimum Stack Setback Requirements

Site Number	Block Number	Lot Number(s)	Set-Back Requirement
Proposed Development Site			
Building A	778	13,16,18,66	41 feet from Building B
Building B	778	13,16,18,66	46 feet from Building A
Projected Development Sites			
1	778	29, 30, 31	28 feet from Site A; 30 feet from 16-story Existing Building on Block 778, Lot 48
3	778	25, 27	31 feet from Site 2
5	779	25-28, 53,55,56	45 feet from Site 6
6	779	31	22 feet from 21-story Existing Building on Block 779, Lot 39; 18 feet from 16-story Existing Building on Block 779, Lot 41
7	779	69	22 feet from Site 4; 19 feet from 15-story Existing building on Block 779, Lot 7501; 20 feet from 14-story Existing Building on Block 779, Lot 66
Potential Development Sites			
A	778	47	13 feet from Site 1; 11 feet from 16-story Existing Building on Block 778, Lot 48
B	779	12	12 feet from 17-story Existing Building on Block 779, Lot 13
D	778	34	30 feet from 21-story Existing Building on Block 778, Lot 21

The proposed (E) designations for the applicable projected and potential development sites with respect to HVAC systems are presented below in Table J-10.

TABLE J-10
Air Quality E-Designations for Development Sites - HVAC Restrictions

Site #	Block	Lot(s)	Restrictions
Proposed Development Site			
Building A	778	13,16,18,66	Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 41 feet for fuel oil No.4/2 from the building line facing W. 29th Street or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant adverse air quality impacts.
Building B	778	13,16,18,66	Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 46 feet for fuel oil No.4/2 from the building line facing W. 28th Street or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant adverse air quality impacts.
Projected Development Sites			
1	778	29, 30, 31	Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 28 feet for fuel oil No.4/2 from the lot lines facing W. 29th Street and 7th Avenue and 30 feet from lot line facing W. 29th Street or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant adverse air quality impacts.
3	778	25, 27	Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 31 feet for fuel oil No.4/2 from the lot line facing W. 29th Street or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant adverse air quality impacts.
5	779	25-28, 53,55,56	Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 20 feet for fuel oil No.4/2 from the lot line facing 7th Avenue or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant adverse air quality impacts.
6	779	31	Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 22 feet for fuel oil No.4/2 from the lot line facing 7th Avenue and 18 feet from the lot line facing W.30th Street or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant adverse air quality impacts.
7	779	69	Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 22 feet for fuel oil No.4/2 from the lot line facing W. 29th Street, and 19 feet from lot line facing 8th Avenue, and 20 feet from lot line facing 7th Avenue or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant adverse air quality impacts.
8	778	46	Any new residential and/or commercial development on the above-referenced properties must use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant adverse air quality impacts.
9	779	52	Any new residential and/or commercial development on the above-referenced properties must use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant adverse air quality impacts.

TABLE J-10 (continued)

A	778	47	Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 13 feet for fuel oil No.4/2 from the lot line facing W. 28th Street and 11 feet from the lot line facing 8th Avenue or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant adverse air quality impacts.
B	779	12	Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 12 feet for fuel oil No.4/2 from the lot line facing 7th Avenue or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant adverse air quality impacts.
D	779	34	Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 30 feet for fuel oil No.4/2 from the lot line facing 7th Avenue or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant adverse air quality impacts.

Cluster Analysis

The Proposed Action would result in projected and potential development sites with the same heights (or approximately the same heights) that are located in close proximity to one another. Therefore, in addition to estimating the potential impacts of the HVAC emissions of development sites individually, emissions from these development sites were also considered as "clusters" of emission sources.
As the potential impacts of these development site clusters could not be evaluated using 2010 *CEQR Technical Manual* screening procedures, the impacts of the HVAC systems emissions of these clusters were estimated using the detailed analyses. This analysis was performed in the same manner described for the non-adjacent development sites, except that this analysis was conducted using a single representative stack located in the approximate geographic center of each cluster as the emission source.

The following two clusters of HVAC emissions were identified and considered in the analysis:

- Cluster # 1: Projected Development Sites 5 (Block 779, Lots 25-28, 53, 55, and 56) and 6 (Block 779, Lot 31) with a total floor area of 320,918 square feet and a representative stack height of 213 feet.
- Cluster # 2: Projected Development Sites 1 (Block 778, Lots 29, 30, 31), 2 (Block 778, Lot 55), and 3 (Block 778, Lots 25, 27), and Potential Development Site A (Block 778, Lot 47) with a total floor area of approximately 259,811 gross square feet and a representative stack height of 213 feet.

Building-on-Building Impact Analysis

The potential impact of the emissions of these clusters on other nearby development sites and existing sensitive land uses was evaluated using fuel oil and natural gas. The maximum 24-hr SO_2 and annual NO_2 concentrations for the Cluster 1 impacts on the proposed developments are estimated to be 149 ug/m^3 and 0.7 ug/m3, respectively. The result of this analysis is that the 24-hr SO_2 and annual NO_2 impacts of combined emissions from these clusters using fuel oil or natural gas) would not cause an exceedance of the respective NAAQS for these pollutants. The result of this analysis, therefore, is that no exceedances of the NAAQS for all applicable pollutants are predicted as a result of all clusters impacts on proposed, projected or potential developments and surrounding sensitive land uses.

Potential Impacts on Existing Land Uses

Dispersion analysis was conducted using the USEPA AERMOD model and procedures described above to estimate potential impacts of the combined emissions from all development sites on the existing building on Block 752, Lot 1 that is the tallest building within 400 feet of the rezoning area identified based on surveys of existing land uses. Receptors on the existing building were placed at heights where the highest impacts are likely to occur (at approximately 213 feet).

Because the maximum 24-hr SO_2 impact is the critical pollutant and time period for determining potential project impacts, 24-hr SO_2 concentrations were considered for this analysis. The total highest 24-hour SO_2 concentration at any of the selected receptor sites on the existing building was estimated to be (121 ug/m^3), which is below the 24-hour SO_2 standard of 365 ug/m^3. As such, the cumulative air quality impacts of the HVAC emissions of the development sites on existing residential land uses are not considered to be significant. The HVAC emissions of the Proposed Action, therefore, do not have the potential to significantly impact existing nearby land uses.

Impacts from "Major" Existing Emission Sources

Following *CEQR Technical Manual* guidelines, a survey of land uses and development site heights was conducted to determine whether there are any existing "major" sources of boiler emissions (i.e., emissions from boiler facilities with heat inputs of 20 million Btu per hour or greater) located within 1,000 feet of the development sites. As a result of this survey, the following six major HVAC emission sources were identified:

- 21-story mixed-use building at 311 West 24th Street (Block 748, Lot 1) with a floor area of 817,041 square feet
- 22-story mixed use building at 270 9th Avenue (Block 751, Lot 1) with a floor area of 1,467,268 square feet
- 55-story commercial building at 206 West 34 Street (Block 783, Lot 70) with a floor area of 2,366,380 square feet
- 26-story commercial building at 399 7th Avenue (Block 807, Lot 1) with a floor area of 1,103,075 square feet
- 14-story commercial building at 1275 Broadway (Block 808, Lot 40) with a floor area of 1,105,991 square feet
- 22-story building at 139 West 32 Street (Block 808, Lot 7501) with a floor area of 1,213,324 square feet

Detailed dispersion analyses were conducted, using the AERMOD model and procedures described above, to determine whether the emissions from these emission sources have the potential to significantly impact the proposed, projected or potential developments.

The result of this analysis is that the maximum 24-hour SO_2 impacts (6 ug/m^3), which was found at projected development site 6 -- the closest site to the emission source at 399 7th Avenue. When added with the 24-hour SO_2 background concentration, the maximum total concentration is below the 24-hour SO_2 standard of 365 ug/m^3. Therefore, no exceedances of the NAAQS are predicted as a result of "major' existing emission source impacts.

An additional examination was conducted to determine if there is any "large" combustion emission source (e.g., power plant, co-generation facility, etc) located within 1,000 feet of any of the

development sites. The result of this survey is that no large boiler emission sources are located within 1,000 feet of the development sites and, therefore, no further analysis is required.

V. HEALTH RISK ASSESSMENT OF TOXIC AIR EMISSIONS FROM EXISTING INDUSTRIAL SOURCES

Introduction

The Proposed Action would allow development of residential uses within existing manufacturing and industrial zones. As such, emissions of toxic pollutants from the operation of existing industrial emission sources might affect proposed residential uses.

An analysis was therefore conducted to determine whether the impacts of these emissions would be significant. Data necessary to perform this analysis, which include facility type, source identification and location, pollutant emission rates, and exhaust stack parameters, were obtained from regulatory agencies (e.g., from existing air permits). All existing industrial facilities located within 400 feet of the rezoning area that are permitted to exhaust toxic pollutants were considered in this analysis.

Data Sources

Information regarding emissions of toxic air pollutants from existing industrial sources was obtained from New York State and New York City databases using the following procedure:

- The boundaries of the rezoning area were used to identify the extent of the study area for determining air quality impacts associated with the Proposed Action. All permitted industrial toxic air pollutant emission sources located within 400-feet radius of each development site were included in this analysis.

- New York State Department of Environmental Conservation (NYSDEC's) DAR-1 software, which includes a toxic pollutants database with their respective guideline values, was used to evaluate the potential impacts of the toxic pollutants from the facilities located within the area that had received the current state air quality permits.

- The New York City Open Accessible Space Information System Cooperative (OASIS) data base, which is an interactive mapping and data analysis application, was used to identify existing industrial uses located within the analysis area;

- A search was performed to identify NYSDEC Title V permits and permits listed in the USEPA Envirofacts database.

- Air permits for active (currently permitted) industrial facilities within the analysis area that are included in the New York City Department of Environmental Protection (NYCDEP) Clean Air Tracking System database were acquired and reviewed to obtain pollutant emission rates and stack parameters. The data on these permits, which include source locations, stack parameters, pollutant emission rates, etc., are considered to be the most current and served as the primary basis of data for this analysis. This information was compiled into DAR-1 software format for use in the following analyses.

Health Risk Assessment Methodology

Toxic air pollutants can be grouped into two categories: carcinogenic air pollutants, and non-carcinogenic air pollutants. These include hundreds of pollutants, ranging from high to low toxicity. While no federal standards have been promulgated for toxic air pollutants, USEPA and NYSDEC have issued guidelines that establish acceptable ambient levels for these pollutants based on human exposure criteria.

In order to evaluate short-term and annual impacts of non-carcinogenic toxic air pollutants, the NYSDEC has established short-term guideline concentrations (SGCs) and annual guideline concentrations (AGCs) for exposure limits. These are maximum allowable 1-hour and annual guideline concentrations, respectively, that are considered acceptable concentrations below which there should be no adverse effects on the health of the general public.

Based on SGCs and AGCs, USEPA has developed methodologies that can be used to estimate the potential impacts of air toxic pollutants from multiple emission sources. The "Hazard Index Approach" can be used to estimate the potential impacts of non-carcinogenic pollutants. If the sum of the combined ratios of estimated pollutant concentrations divided by the respective SGCs or AGCs value for each of the toxic pollutants is found to be less than 1, no significant air quality impact is predicted to occur.

For carcinogenic pollutants, unit risk factors based on the toxicity of each pollutant are used. USEPA does not consider an overall incremental cancer risk from a Proposed Action of less the one-in-one million to be significant. Using these factors, the potential cancer risk associated with each carcinogenic pollutant, as well as the total cancer risk of the releases of all of the carcinogenic toxic pollutants combined, can be estimated. If the total incremental cancer risk of all of the carcinogenic toxic pollutants combined is less than one in one million, no significant air quality impacts are predicted to occur due to these pollutant releases.

These methods are based on equations that use USEPA health risk information (established for individual compounds with known health effects) to determine the level of health risk posed by an increased ambient concentration of that compound at a potentially sensitive receptor. The derived health risk values are additive and can be used to determine the total risk posed by the release of multiple air contaminants.

Non-Carcinogens

Public health risk estimates for inhalation of non-carcinogenic compounds are based on the following calculation:

$$\text{Hazard Index} = C/AGCs$$

Where:

C = annual average ambient air concentration of compound in $\mu g/m^3$

$AGCs$ = NYSDEC annual guideline concentration is an equivalent to reference dose concentrations RfC, established by the EPA, in $\mu g/m^3$.

Once the hazard index of each compound is established, they are summed together. If the total hazard index is less than or equal to one, then the non-carcinogenic risk is considered to be insignificant.

Carcinogens

Public health risk estimates for inhalation of carcinogenic compounds are based on the following calculation:

Incremental Risk = C x URF

Where:

C = annual average ambient air concentration of the compound in $\mu g/m^3$

URF = compound-specific inhalation unit risk factor in $(\mu g/m^3)^{-1}$

Once the incremental risk of each compound is established, they are summed together. If the total risk is less than or equal to one in one million (1.0 E-06), the carcinogenic risk is considered to be insignificant.

Dispersion Analyses

Dispersion analyses were conducted using USEPA's Hazard Index Approach for non-carcinogenic pollutants and USEPA's Unit Risk Factors for carcinogenic pollutants to determine the potential of the toxic emissions released from the permitted emission sources to adversely affect the new residential areas. NYSDEC DAR-1 database and modeling software was employed to estimate:

- The maximum cumulative short-term (1-hour) and annual impacts for each air toxic pollutant,
- To determine whether facilities have the potential to exceed short-term or annual guidelines values (i.e., SGCs or AGCs),
- To estimate total hazard index for the non-carcinogenic pollutants, and
- To estimate incremental cancer risk associated with carcinogenic pollutants.

Emission sources for the dispersion analysis were located using geographical information system (GIS) software and the Universal Transverse Mercator coordinate system with appropriate projection information (Datum NAD83, UTM Zone 18).

The dispersion analysis was performed by modeling the emissions of all identified toxic air pollutants from the existing industrial facilities in one modeling run. The estimated ambient concentrations of each air toxic pollutant were then compared with the guideline concentrations established by the NYSDEC and USEPA and contained in the DAR-1 database. The DAR-1 guideline concentrations contained in the database were updated using the latest NYSDEC tables to reflect the current values of the SGC and AGC dated October 18, 2010. These procedures were developed to assure that conservative impacts are estimated for all source conditions using worst case stack, building, and modeling parameters.

Two types of analyses were conducted – an analysis of non-carcinogenic pollutants (where the results were compared to the total Hazard Index of 1.0), and analysis of the carcinogenic pollutants (where results were compared to the USEPA threshold level of one per million).

The analysis for this project was conducted prior to the issuance of the *2010 New York CEQR Technical Manual* and as such, used a methodology based on DAR-1 software that has since been updated. The current model is to be used for the air toxic analysis in NY State is the EPA AERMOD model. However, DAR-1 methodology is still valid and can be used in certain cases. As stated in NYSDEC's current guidelines (DAR-10), entitled *NYSDEC Guidelines on Dispersion Modeling Procedures for Air Quality Impact Analysis*, NYSDEC's

> "approach to the control of toxic contaminants is still contained in DAR-1. The guide uses screening procedures and a software program as the initial step in analyzing source impacts. These methods were formulated in the early 1990s and are currently outdated in terms of recommended EPA procedures, as well as the adopted AERMOD procedures. However, for

> most situations, the procedures should still provide conservative (overestimated) long-term (annual) average and short-term (1-hour) impacts in relation to corresponding Annual and Short-term Guideline Concentrations (AGCs and SGCs) due to the conservative modeling assumptions incorporated in the procedures."

As there are a number of existing industrial uses (e.g., dry cleaners, jewelry manufacturing, printing, etc.) located near proposed new residential uses there is a concern regarding the health risks associated with the emissions from these facilities. However, if results of dispersion analysis with DAR-1 are that none of the guideline concentrations or health related impact thresholds due to the project emissions are exceeded, no significant air quality impacts are anticipated.

An additional level of conservatism was used in the analysis. A significant carcinogenic threshold of one in a million for carcinogenic pollutants was applied to determine whether project impacts were significant even though an incremental cancer risk of 10 in a million can be applied (according to DAR-1 guidance) to emission sources using Best Available Control Technologies (such as fourth-generation control equipment that are being used to minimize PERC emissions from the applicable dry cleaning operations).

Industrial Source Emissions Analysis

Thirty-three (33) current industrial source permits for the facilities located within 400-foot of the rezoning area were identified from NYCDEP Clean Air Tracking System database (212 permits found in the database were cancelled). Emission data and stack parameters were obtained for these facilities either directly from the data or, when these data were not included in the database, directly from the permit applications for these facilities.

Based on a review of these data, the permits for four of these facilities (Permits PA038988 and PA039088 for Vornado Two Penn Plaza, Permit PA075390 for Vornado Office MGMT LLC at 11 Penn Plaza, and Permit PA045196 for Manhattan E. Suit Hotels at 371 7th Avenue) are for emergency generators, and the emissions from these facilities were omitted from further consideration because emergency generators only operate during emergency conditions and for short durations during equipment testing periods, and the health impacts of these emissions are minimal.

Information for the other 29 permits was compiled into a DAR-1 database format of source parameter and locations, air toxic emission rates, and other pertinent data, and was used to determine industrial source impacts.

In some permits, some of the air toxic contaminants were registered as compound groups (e.g., total hydrocarbons or hydrocarbons C1-3). Because there are no guideline concentrations for these compound groups, it was necessary to use a substitute contaminant that was representative of the compound group, so that a comparison to the guidelines concentrations could be made for the analysis. In these instances, the type of source operation was considered in making these assumptions.

Control equipment efficiencies listed in these permits were included in estimating emission rates. For example, emissions from dry cleaning facilities (such as New York School of Dry Cleaning, Penn Plaza and Penn House Cleaners, and others) consist of tetrachloethylene (PERC) that is a carcinogenic contaminant. According to the permit, all these facilities are equipped with high efficiency emission control system of four generation with built-in carbon adsorber capable of removing 98 percent of PERC from the gas streams before they enter the atmosphere, so that these units would comply with emission limits for PERC established by the NYSDEC Part 232, Subpart 232.6 Regulation for Dry

Cleaning Facilities. Therefore, this control efficiency was applied to the emission rates listed in the permits for these facilities.

The active permits identify emission sources of twenty (20) non-carcinogenic pollutants and three (3) carcinogenic pollutants (tetrachloroetylene, dichloromethane, and cadmium).

Results of the Cancer Risk and Hazard Index Evaluation

Non-Carcinogens

Table J-11, entitled, "Analysis of the Non-Carcinogenic Toxic Pollutants under the Proposed Action," lists the identified facilities that emit non-carcinogenic pollutants together with the type and location of each facility and its permit number, emission point(s), contaminant name, and CAS registry number. Also provided are the respective pollutant guidelines values, estimated pollutant concentrations (short-term and long-term), and hazard indexes. As shown on this table, the maximum estimated concentrations for each non-carcinogenic toxic contaminant are below the NYSDEC short-term guideline concentrations (SGC) and annual guideline concentrations (AGC), and the total hazard index caused by the all non-carcinogenic pollutants (1.16×10^{-1}) is below the level (1.0) that is considered by USEPA to be significant.

Carcinogens

Table J-12, entitled, "Analysis of the Carcinogenic Toxic Pollutants under the Proposed Action," lists the identified facilities that emit carcinogenic pollutants together with the type and location of each facility and its permit number, emission point(s), contaminant name, and CAS registry number. Also provided are the estimated annual concentrations, unit risk factors, and incremental cancer risks. As shown on this table, the maximum total estimated incremental cancer risk caused by carcinogenic pollutants emitted from all of sources combined is estimated to be 7.36×10^{-2} per million under the RWCDS. This value is below the level of one per million that is considered by USEPA to be significant.

Summary of Results

The result of this analysis is that no exceedance of both the NYSDEC SGC or AGC acceptable limits and the USEPA's incremental risk threshold limit is predicted under the Proposed Action.

VI. CONCLUSION

As detailed above, the Proposed Action and associated RWCDS would not result in violations of ambient air quality standards or exceedances of health-related guideline values, and would therefore not result in any significant adverse air quality impacts.

As the number of project-generated vehicles would be far below 2010 CEQR screening threshold values for mobile source air quality analysis, no detailed air quality analysis is required and no significant mobile source air quality impacts are expected as a result of the Proposed Action.

Emissions from the proposed 325-space public parking garage would not cause significant air quality impacts.

To preclude the potential for significant adverse air quality impacts associated with emissions from the HVAC systems of the projected and potential developments, (E) designations would be required on most of the projected and potential development sites. These (E) designations would specify the required stack setback distance for fuel oil (i.e., the distance that the stack on the building roof must be from the edge of an adjacent development site) or the exclusive use of natural gas. The use of (E) designations would ensure adequate distance between HVAC exhaust stacks and nearby taller or same height development for oil use or the use of natural gas. These measures would in turn ensure that the Proposed Action would not cause violations of the NAAQS and would therefore have no significant adverse air quality impacts.

Finally, potential air quality impacts of existing manufacturing and industrial zones on future residential development were considered. The results of the analysis indicated that no exceedance of the NYSDEC SGC or AGC acceptable limits and USEPA's hazard index is predicted and no significant air quality impacts are predicted from emissions of air toxic pollutants associated with existing industrial sources.

TABLE J-11

Analysis of the Non-Carcinogenic Toxic Pollutants Under the Proposed Action

No.	Facility Name	Facility Address	Type of Business	Permit/ Emission Point	CAS Registry No.	Compound	Permitted Emission Rates		Estimated ST Conc.	NYSDEC SGC	Estimated Annual Av. Conc.	NYSDEC AGC	Hazard Index
							lb/hr	lb/year	ug/m^3	ug/m^3	ug/m^3	ug/m^3	
1	FASHION INSTITUTE OF TECH	300 7th AVE.	Commercial art & Woodworking	PA053090 X8M800001	00067-63-0	ISOPROPYL ALCOHOL	2.48	446	2623.8	98,000	4.19E-01	7,000	5.99E-05
					00067-64-1	ACETONE	0.025	4.5	26.45	180,000	1.32E-03	28,000	4.71E-08
					00071-55-6	METHYL CHLOROFORM	4.8	864	5078.3	9.000	8.27E-01	5,000	1.65E-04
					00123-86-4	BUTYL ACETATE	1.8	324	1904.3	95,000	3.10E-01	17,000	1.82E-05
				PA053190 X8M800002	00067-63-0	ISOPROPYL ALCOHOL	2.48	446	566.2	98,000	0.00E+00	7,000	0.00E+00
					00067-64-1	ACETONE	4.5	810	1027.5	180,000	4.50E-02	28,000	1.61E-06
					00071-55-6	METHYL CHLOROFORM	4.8	864	1095.9	68,000	8.27E-01	5,000	1.65E-04
					00123-86-4	BUTYL ACETATE	1.8	324	410.9	95,000	0.00E+00	17,000	0.00E+00
2	HARVEST PRINTING CO INC	229 W. 28 ST.	Printing	PA054894 XP5V00001	00111-76-2	BUTOXYETHANOL	0.1	248	105.79	14,000	1.99E-02	13,000	1.53E-06
3	PE JAY CREATIONS LTD	322 8th AVE	Jewelry MFG	PA033885 X94EI0002	00102-44-0	NITROGEN DIOXIDE	0.008	13.0	0.3659	0	2.21E-04	100	2.21E-06
					NY075-00-0	PARTICULATE.	0.001	1.6	0.0457	380	3.86E-05	50	7.72E-07
					07446-09-5	SULFUR DIOXIDE	0.001	1.6	0.0457	196.5	3.23E-05	80	9.14E-07
				PA034085 X94EI0003	NY075-00-0	PARTICULATE	0.001	1.6	0.0457	910	7.31E-05	80	9.14E-07
4	REHAN PRINTING	229 W. 28 ST.	Printing	PA018595 XDIFI0001	00108-88-3	TOLUENE	0.001	1.6	0.2739	380	3.92E-05	50	7.84E-07
					01330-20-7	XYLENE	2.12	4.23	464.7	37,000	0.00E+00	400	0.00E+00
					00111-76-2	BUTOXYETHANOL	0.06	110	13.152	4,300	5.65E-03	100	5.65E-05
5	MILOCRAFT INC.	229 W. 28 ST.	Printing	PA053989 X4O4I0001	00067-63-0	ISOPROPYL ALCOHOL	0.07	147	15.34	14,000	0.00E+00	13,000	0.00E+00
					00108-88-3	TOLUENE	8	4,000	2635.7	98,000	4.24E+00	7,000	6.05E-04

TABLE J-11 continued

6	METAL ART STUDIO	150 W. 28 ST.	Bronze Grinding & Polishing	PA036899 XHOW	NY075-00-0	PARTICULATE	10.3	18,025	3393.5	37,000	1.09E+00	400	2.73E-03
7	CHARMED I'M SURE	243 W. 30 ST.	Jewelry Mfg	PB472203 Y17243	NY075-00-0	PARTICULATE	0.001	0.48	0.3953	380	8.16E-05	50	1.63E-06
				PB472103 Y17242	01310-73-2	SODIUM HYDROXIDE	0.001	1.6	0.3953	200	1.42E-04	0	0.00E+00
8	HYAN CHO	236 W. 30 ST.	Jewelry Mfg	PA003995 XD1PI0002	NY075-00-0	PARTICULATE	0.001	2.0	0.1631	380	0.00E+00	50	0.00E+00
9	SO ACCURATE GROUP, INC	236 W. 30 ST.	Gold Precipitation	PA030797 XGCKI0004	00143-33-9	SODIUM CYANIDE	0.001	2.0	0.1631	380	4.88E-05	45	1.08E-06
					07439-92-1	LEAD	0.09	180	14.6779	0	4.07E-03	0.038	1.07E-01
					NY075-00-0	PARTICULATE	0.001	0.25	0.1631	380	0.00E+00	50	0.00E+00
				PA030597 XGCKI0002	10102-44-0	NITROGEN DIOXIDE	0.001	2.0	0.1631	0	4.88E-05	100	4.88E-07
					07697-37-2	NITRIC ACID	0.001	2.0	0.1631	86	4.88E-05	12	4.07E-06
				PA030697 XGCKI0003	10102-44-0	NITROGEN DIOXIDE	0.018	370	2.9356	0	9.03E-03	100	9.03E-05
					07647-01-0	HYDROGEN CHLORIDE	0.002	2.25	0.0326	2,100	5.50E-05	20	2.75E-06
					07697-37-2	NITRIC ACID	0.032	62.25	5.2188	86	1.52E-03	12	1.27E-04
10	CAST CO INC	236 W. 30 ST.	Wax Burnout	PA031287 XMHZI0002	00108-88-3	TOLUENE	0.015	30	4.3480	37,000	2.25E-03	400	5.63E-06
11	KOS TRADING CORP	236 W. 30 ST.	Jewelry MFG	PA036597 XGH2I0001	00108-88-3	TOLUENE	0.024	60	12.1775	37,000	6.24E-03	400	1.56E-05
					NY075-00-0	PARTICULATE	0.19	475	96.41	380	1.84E-01	50	3.68E-03
				PA036697 XGH2I0002	NY075-00-0	PARTICULATE	0.001	0.75	0.5073	380	2.98E-04	50	5.96E-06
					07664-93-9	SULFURIC ACID	0.001	0.75	0.5074	120	2.98E-04	1	2.98E-04
12	UNIMOLD LTD	236 W. 30 ST.	Cleaning	PA051097 XGSEI0001	NY075-00-0	PARTICULATE	0.001	0.2	0.2283	380	0.00E+00	50	0.00E+00
					00108-88-3	TOLUENE	0.001	0.02	0.2283	37,000	6.03E-07	400	1.51E-09
13	J BOTKIN & CO INC	259 W. 30 ST.	Jewelry Mfg	PA016476 X79BI000A	01310-73-2	SODIUM HYDROXIDE	0.001	2.08	1.0579	200	2.14E-03	0	0.00E+00
					NY075-00-0	PARTICULATE	0.026	54.1	27.51	380	1.33E-02	50	2.66E-04

TABLE J-11 continued

14	PREFERRED CASTING CO.INC	259 W. 30 ST.	Jewelry Polishing	PA018576 XN8MI0001	00108-88-3	TOLUENE	0.007	100	1.1281	37,000	2.27E-03	400	5.68E-06
15	A ALLARD INC/ROB ALLAND-V.P.	259 W. 30 ST.	Jewelry Cleaning	PA024475 X3PSI0001	01310-73-2	SODIUM HYDROXIDE	0.002	0.1	0.2491	200	0.00E+00	0	0.00E+00
					00143-33-9	SODIUM CYANIDE	0.001	0.05	0.1245	380	2.18E-06	50	4.36E-08
16	BENKAY JEWELRY CO. INC.	259 W. 30 ST.	Jewelry Cleaning	PA055794 XMHXI0001	00074-90-8	HYDROGEN CYANIDE	0.001	0.25	0.1427	520	6.16E-08	3	2.05E-08
					00143-33-9	SODIUM CYANIDE	0.001	0.25	0.1427	380	3.86E-07	50	7.72E-09
				PA083986 XMHXI0004	00143-33-9	SODIUM CYANIDE	0.001	0.25	0.1427	380	8.22E-06	50	1.64E-07
					00074-90-8	HYDROGEN CYANIDE	0.001	0.25	0.1427	520	1.50E-05	3	5.00E-06
				PA083586 XMHXI0003	07664-41-7	AMMONIA	0.001	0.002	0.1427	2,400	1.06E-07	100	1.06E-09
					NY075-00-0	PARTICULATE	0.001	0.002	0.1427	380	9.58E-08	50	1.92E-09
17	ALLSTAR CASTING CORP.	214 W. 29 ST.	Wax Burnout	PA104789 X7EI0001	00630-08-0	CARBON MONOXIDE	0.001	2.0	0.3953	14,000	5.88E-04	0	0.00E+00
					07446-09-5	SULFUR DIOXIDE	0.001	0.07	0.3953	196.5	3.39E-06	80	4.24E-08
					NY075-00-0	PARTICULATE	0.001	1.2	0.3953	380	1.85E-04	50	3.70E-06
					10102-44-0	NITROGEN DIOXIDE	0.01	20	3.9533	188.1	5.51E-03	100	5.51E-05
18	KAGAN-LERER ASSOCIATES	259 W. 30 ST.	Jewelry MFG	PA009493 XB2CI0001	07646-85-7	ZINC CHLORIDE	0.001	2.0	0.1343	200	3.21E-05	2.4	1.34E-05
					07439-92-1	LEAD	0.001	2.0	0.1343	0	2.71E-05	0.038	7.12E-04
Total Hazard Index													**1.16E-01**

TABLE J-12
Analysis of the Carcinogenic Toxic Pollutants under the Proposed Action

No.	Facility Name	Facility Address	Type of Business	Permit/ Emission Point	CAS Registry No.	Compound	Permitted Emission Rates		NYSDEC AGC	Estimated Annual Av. Conc.	Incremental Cancer Risk
							lb/hr	lb/year	ug/m^3	ug/m^3	per million
1	REHAN PRINTING	229 W. 28 ST.	Printing	PA018595 XDIFI0001	00075-09-2	DICHLOROMETHANE	0.2	413	2.1	2.12E-02	4.71E-03
2	NEW YORK SCHOOL OF DRYCLEANING	252 W. 29 ST.	Dry Cleaning	PAB048296 XB11I0001	00127-18-4	TETRACHLOROETHYLENE	0.032	32.4	1	2.29E-03	1.59E-03
3	KAGAN-LERER ASSOCIATES	259 W. 30 ST.	Jewelry MFG	PA009493 XB2CI0001	07440-43-9	CADMIUM	0.001	2.0	0.0005	3.21E-05	6.40E-02
4	PENN PLAZA CLEANERS	160 W. 30 ST.	Dry Cleaning	PB019200 X9VFI0001	00127-18-4	TETRACHLOROETHYLENE	0.0082	12.42	1	1.57E-04	2.64E-03
5	PENN HOUSE CLEANERS	339 8th AVE.	Dry Cleaning	PA113288 X7DPI0001	00127-18-4	TETRACHLOROETHYLENE	0.039	47.6	1	4.95E-02	6.46E-04
										Total Incremental Cancer Risk	**7.36E-02**

ATTACHMENT K
NOISE

I. INTRODUCTION

The Proposed Action consists of zoning map and text changes affecting portions of Manhattan Blocks 778 and 779 in the northern Chelsea of Manhattan's Community District 5, and a special permit for a public parking garage. 249 W 28th Street Properties, LLC (a.k.a. "the applicant") is the applicant for the proposed zoning map changes, whereas the New York City Department of City Planning (NYCDCP) is the applicant for the proposed zoning text amendment. The proposed zoning map change would affect an approximately 236,906 square foot (sf) area ("rezoning area") comprising the mid-block portions of two City blocks and extending along the north side of West 28th Street, on either side of West 29th Street, and on the south side of West 30th Street between Seventh and Eighth Avenues (see Figure K-1). The area is currently zoned M1-5, which allows commercial and light industrial uses as well as some community facilities, but prohibits new residential development. The Proposed Action would map an M1-6D contextual zoning district to permit residential uses as-of-right up to a maximum floor area ratio (FAR) of 9.0 FAR, which could be increased to 12.0 pursuant to the Inclusionary Housing Program, and a maximum 10.0 FAR for non-residential uses, with a cap of 12.0 (including the bonus for inclusionary housing) for all uses. In addition to the proposed zoning and text amendments, the applicant (249 W 28th Street Properties, LLC) is requesting a special permit for a public parking garage to be located at the Proposed Development Site (Block 778, Lots 13, 16, 18 and 66) pursuant to Sections 13-562 and 74-52 of the New York City Zoning Resolution. The proposed zoning map and text changes and public parking special permit collectively comprise the Proposed Action that is the subject of this environmental assessment document.

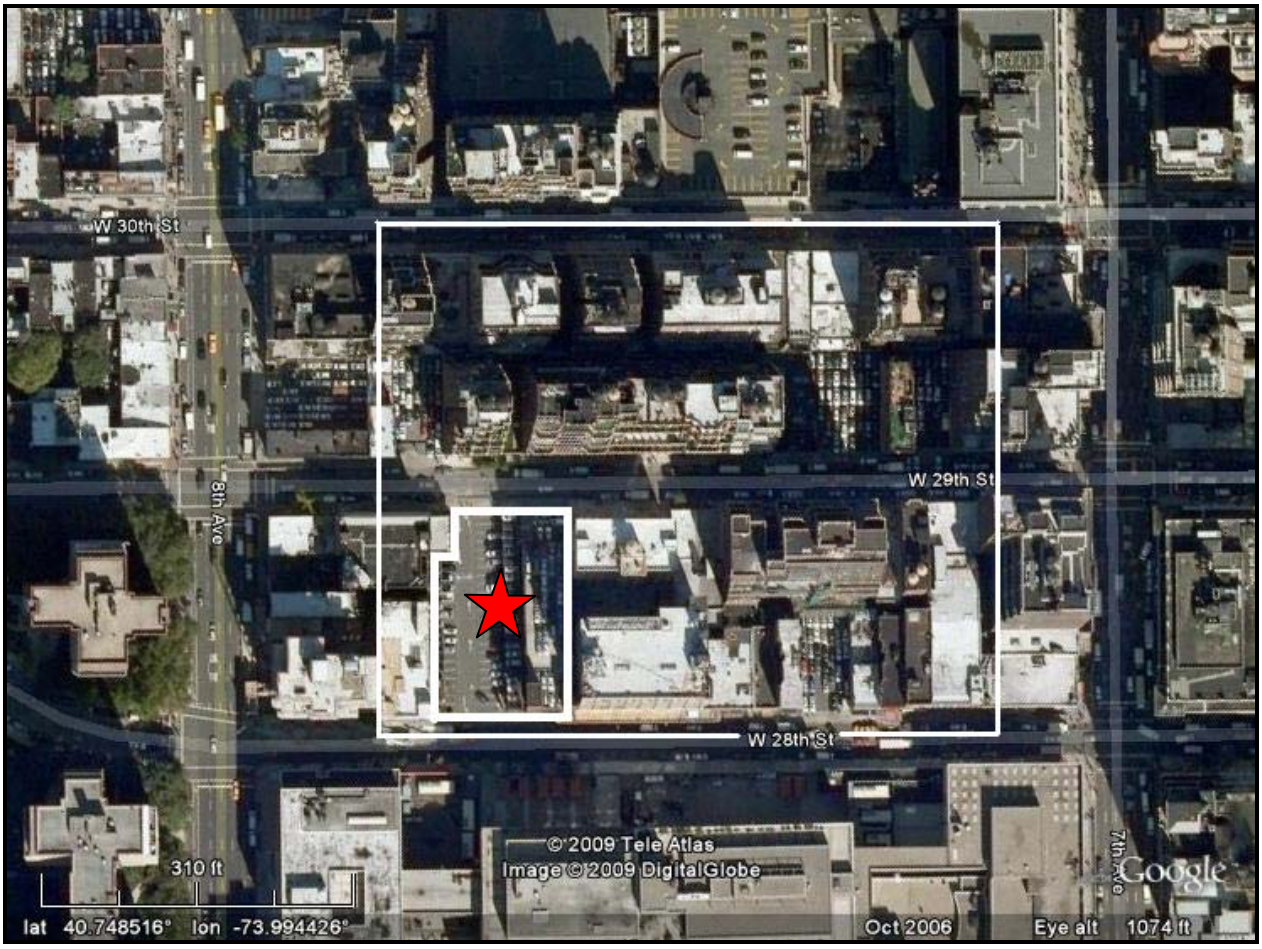
II. SCOPE OF WORK

This attachment establishes the baseline noise levels for the rezoning area and projects noise levels for a future year of 2019 with and without the Proposed Action (i.e., With Action and No-Action conditions). The work was carried out in compliance with the guidelines in the 2010 *CEQR Technical Manual*.

Noise Fundamentals

Noise is measured in sound pressure level (SPL), which is converted to a decibel scale. The decibel is a relative measure of the sound level pressure with respect to a standardized reference quantity. Decibels on the A-weighted scale are termed "dBA." The A-weighted scale is used for evaluating the effects of noise in the environment because it most closely approximates the response of the human ear. On this scale, the threshold of discomfort is 120 dB, and the threshold of pain is about 140. Table K-1 shows the range of noise levels for a variety of indoor and outdoor noise levels.

Figure K-1
Rezoning Area Boundary and Proposed Development Site



= Proposed Development Site.

TABLE K-1
Sound Pressure Level and Loudness of Typical Noises in Indoor and Outdoor Environments

Noise Level (dBA)	Subjective Impression	Typical Sources		Relative Loudness (Human Response)
		Outdoor	Indoor	
120-130	Uncomfortably Loud	Air raid siren at 50 feet (threshold of pain)	Oxygen torch	32 times as loud
110-120	Uncomfortably Loud	Turbo-fan aircraft at take-off power at 200 feet	Riveting machine Rock band	16 times as loud
100-110	Uncomfortably Loud	Jackhammer at 3 feet		8 times as loud
90-100	Very Loud	Gas lawn mower at 3 feet Subway train at 30 feet Train whistle at crossing Wood chipper shredding trees Chain saw cutting trees at 10 feet	Newspaper press	4 times as loud
80-90	Very Loud	Passing freight train at 30 feet Steamroller at 30 feet Leaf blower at 5 feet Power lawn mower at 5 feet	Food blender Milling machine Garbage disposal Crowd noise at sports event	2 times as loud
70-80	Moderately Loud	NJ Turnpike at 50 feet Truck idling at 30 feet Traffic in downtown urban area	Loud stereo Vacuum cleaner Food blender	Reference loudness (70 dBA)
60-70	Moderately Loud	Residential air conditioner at 100 feet Gas lawn mower at 100 feet Waves breaking on beach at 65 feet	Cash register Dishwasher Theater lobby Normal speech at 3 feet	½ as loud
50-60	Quiet	Large transformers at 100 feet Traffic in suburban area	Living room with TV on Classroom Business office Dehumidifier Normal speech at 10 feet	1/4 as loud
40-50	Quiet	Bird calls, Trees rustling, Crickets, Water flowing in brook	Folding clothes Using computer	1/8 as loud
30-40	Very quiet		Walking on carpet Clock ticking in adjacent room	1/16 as loud
20-30	Very quiet		Bedroom at night	1/32 as loud
10-20	Extremely quiet		Broadcast and recording studio	
0-10	Threshold of Hearing			

Sources: Noise Assessment Guidelines Technical Background, by Theodore J. Schultz, Bolt Beranek and Newman, Inc., prepared for the US Department of Housing and Urban Development, Office of Research and Technology, Washington, D.C., undated; Sandstone Environmental Associates, Inc.; Highway Noise Fundamentals, prepared by the Federal Highway Administration, US Department of Transportation, September 1980; Handbook of Environmental Acoustics, by James P. Cowan, Van Nostrand Reinhold, 1994.

Because the scale is logarithmic, a relative increase of 10 decibels represents a sound pressure level that is 10 times higher. However, humans don't perceive a 10 dBA increase as 10 times or louder; they perceive it as twice as loud. The following is typical of human response to relative changes in noise level:

- 3 dBA change is the threshold of change detectable by the human ear,
- 5 dBA change is readily noticeable, and
- 10 dBA increase is perceived as a doubling of noise level.

The sound pressure level (SPL) that humans experience typically varies from moment to moment. Therefore, a variety of descriptors are used to evaluate environmental noise levels over time. Some typical descriptors are defined below:

- L_{eq} is the continuous equivalent sound level. The sound energy from the fluctuating sound pressure levels is averaged over time to create a single number to describe the mean energy or intensity level. High noise levels during a monitoring period will have greater effect on the L_{eq} than low noise levels. The L_{eq} has an advantage over other descriptors because L_{eq} values from different noise sources can be added and subtracted to determine cumulative noise levels.

- L_{max} is the highest SPL measured during a given period of time. It is useful in evaluating L_{eq}s for time periods that have an especially wide range of noise levels.

- L_{10} is the SPL exceeded 10% of the time. Similar descriptors are the L_{50}, L_{01}, and L_{90}.

- L_{dn} is the day-night equivalent sound level. It is similar to a 24-hour L_{eq}, but with 10 dBA added to SPL measurements between 10 pm and 7 am to reflect the greater intrusiveness of noise experienced during these hours. L_{dn} is also termed DNL.

Vehicular traffic volumes can be converted into Passenger Car Equivalent (PCE) values, for which one medium-duty truck (having a gross weight between 9,900 and 26,400 pounds) is assumed to generate the noise equivalent of 13 cars, one bus (capable of carrying more than nine passengers) is assumed to generate the noise equivalent of 18 cars, and one heavy-duty truck (having a gross weight of more than 26,400 pounds) is assumed to generate the noise equivalent of 47 cars, as summarized below from the 2010 *CEQR Technical Manual*.

- Autos and light trucks = 1 passenger car,
- Medium trucks = 13 passenger cars,
- Heavy trucks = 47 passenger cars, and
- Buses = 18 passenger cars.

Thus, Passenger Car Equivalents (PCEs) are the numbers of autos that would generate the same noise level as the observed vehicular mix of autos, medium trucks, and heavy trucks. PCEs are useful for comparing the effects of traffic noise on different roadways or for different future scenarios.

Where traffic volumes are projected to change, proportional modeling techniques, as described in the 2010 *CEQR Technical Manual*, typically are used to project incremental changes in traffic noise levels. This technique uses the relative changes in traffic volumes to project changes between (e.g.) No-Action and With Action noise levels. The change in future noise levels is calculated using the following equation:

FNA NL =10 log (NA PCE/E PCE) + E NL

Where:

FNA NL = Future No Action Noise Level
NA PCE = No Action PCEs
E PCE = Existing PCEs
E NL = Existing Noise Level

Because sound levels use a logarithmic scale, this model proportions logarithmically with traffic change ratios. For example, assume that traffic is the dominant noise source at a particular location. If the existing traffic volume on a street is 100 PCEs, and if the future traffic volume were increased by 50 PCEs to a total of 150 PCEs, the noise level would increase by 1.8 dBA. If the future traffic were increased by 100 PCEs, (i.e., doubled to a total of 200 PCEs), the noise level would increase by 3.0 dBA.

Although the SPL heard in the environment typically is composed of many different frequencies, it can be broken down into the numerous individual frequencies. These frequencies are grouped into octave bands. An octave band is a group of frequencies in the interval between a given frequency (such as 350 Hz) and twice that frequency (e.g., 710 Hz). The standard octave bands are each named by their center frequencies. Thus, each octave band will be represented by a single SPL. When the representative SPLs from the individual octave bands are added together, they are weighted so that the resulting total SPL will represent dBA. Octave bands are used in some noise models because the different components of a noise source will have different frequencies. For example, a truck traveling downhill will have a different set of frequencies than a truck traveling uphill.

Noise Standards and Guidelines

In 1983, the New York City Department of Environmental Protection (NYCDEP) adopted the City Environmental Quality Review (CEQR) noise standards for exterior noise levels. These standards are the basis for classifying noise exposure into four categories based on the L_{10}: Acceptable, Marginally Acceptable, Marginally Unacceptable, and Clearly Unacceptable, as shown in Table K-2.

Table K-3 shows the required attenuation for sensitive uses within the last three categories. For example, an L_{10} may approach 80 dBA provided that buildings are constructed of materials that reduce exterior to interior noise levels by at least 35 dBA.

III. EXISTING CONDITIONS

Noise Monitoring

Noise monitoring was carried out on May 7, 2009 at six locations to establish existing noise levels near the rezoning area. Figure K-2 shows the six locations, which are described briefly below:

1. 207 West 28th Street- southeastern corner of the rezoning area boundary on West 28th Street;
2. 255 West 28th Street- southwestern corner of the rezoning area boundary on West 28th Street;
3. 257 West 29th Street- western edge of the rezoning area boundary on West 29th Street;
4. 254 West 30th Street- northwest corner of the rezoning area boundary on West 30th Street;
5. 204 West 30th Street- northeast corner of the rezoning area boundary on West 30th Street; and
6. 207 West 29th Street- eastern edge of the rezoning area boundary on West 29th Street.

TABLE K-2
CEQR Noise Exposure Guidelines for Use in City Environmental Impact Review [1]

Receptor Type	Time Period	Acceptable General External Exposure	Airport[3] Exposure	Marginally Acceptable General External Exposure	Airport[3] Exposure	Marginally Unacceptable General External Exposure	Airport[3] Exposure	Clearly Unacceptable General External Exposure	Airport[3] Exposure
1.Outdoor area requiring serenity and quiet[2]		$L_{10} \leq 55$ dBA	Ldn ≤ 60 dBA		60 < Ldn £ 65 dBA		(1) 65 < Ldn £ 70 dBA, (II) 70 £ Ldn		Ldn ≤ 75 dBA
2. Hospital, Nursing Home		$L_{10} \leq 55$ dBA		55<L_{10}≤65 dBA		65<L_{10}≤80 dBA		L_{10}>80dBA	
3. Residence, residential hotel or motel	7 am to 10 pm	L_{10}≤65dBA		65<L_{10}≤70dBA		70<L_{10}≤80 dBA		L_{10}>80dBA	
	10 pm to 7 am	L10≤55dBA		55<L_{10}≤70dBA		70<L_{10}≤80 dBA		L_{10}>80dBA	
4. School, museum, library, court house of worship, transient hotel or motel, public meeting room, auditorium, out-patient public health facility		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM- 10 PM)		Same as Residential Day (7 AM –10 PM)	
5. Commercial or office		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM –10 PM)		Same as Residential Day (7 AM-10 PM)	
6. Industrial, public areas only[4]	Note 4	Note 4		Note 4		Note 4		Note 4	

Notes:

(i) In addition, any new activity shall not increase the ambient noise level by 3 dBA or more;

Table Notes:

1 Measurements and projections of noise exposures are to be made at appropriate heights above site boundaries as given by American National Standards Institute (ANSI) Standards; all values are for the worst hour in the time period.

2 Tracts of land where serenity and quiet are extraordinarily important and serve an important public need and where the preservation of these qualities is essential for the area to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of parks or open spaces dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet. Examples are grounds for ambulatory hospital patients and patients and residents of sanitariums and nursing homes.

3 One may use the FAA-approved L_{dn} contours supplied by the Port Authority, or the noise contours may be computed from the federally approved INM Computer Model using flight data supplied by the Port Authority of New York and New Jersey.

4 External Noise Exposure standards for industrial areas of sounds produced by industrial operations other than operating motor vehicles or other transportation facilities are spelled out in the New York City Zoning Resolution, Sections 42-20 and 42-21. The referenced standards apply to M1, M2, and M3 manufacturing districts and to adjoining residence districts (performance standards are octave band standards).

Source: New York City Department of Environmental Protection (adopted policy 1983).

TABLE K- 3
Required Attenuation Values to Achieve Acceptable Interior Noise Levels

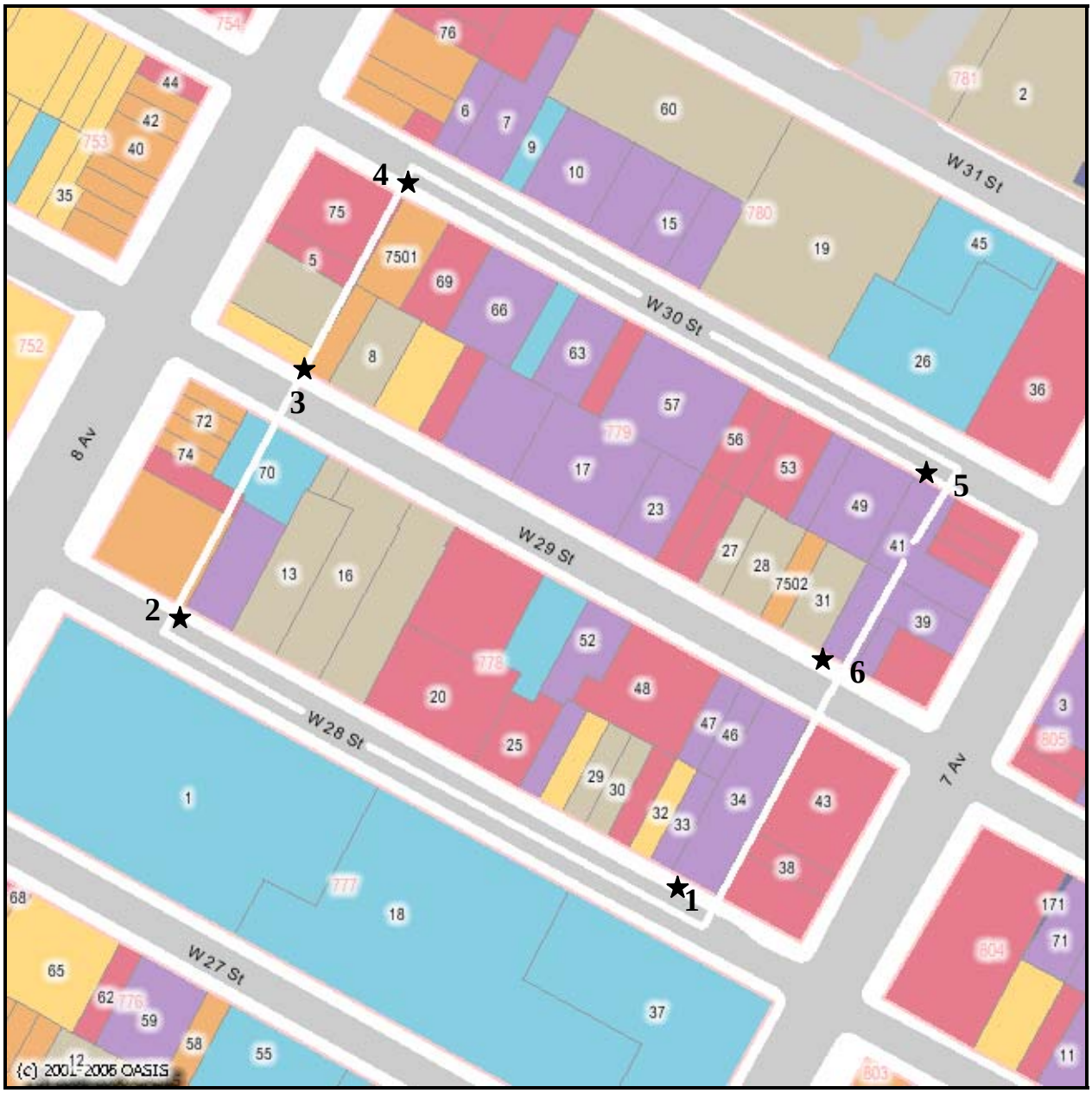
	Marginally Acceptable	Marginally Unacceptable				Clearly Unacceptable
Noise level with proposed project	65<L_{10}≤70	70<L_{10}≤73	73<L_{10}≤76	76<L_{10}≤78	78<L_{10}≤80	80<L_{10}
Attenuation[A]	25 dB(A)	(I) 28 dB(A)	(II) 31 dB(A)	(III) 33 dB(A)	(IV) 35 dB(A)	36 + (L_{10} - 80)[B] dB(A)

Note: [A] The above composite window-wall attenuation values are for residential dwellings. Commercial office spaces and meeting rooms would be 5 dB(A) less in each category. All the above categories require a closed window situation and hence an alternate means of ventilation.

[B] Required attenuation values increase by 1 dB(A) increments for L_{10} values greater than 80 dBA.

Source: New York City Department of Environmental Protection

Figure K-2
Noise Monitoring Locations



★ = Noise Monitoring Sites.

Noise levels were monitored for the peak AM (7:45-9:00 a.m.), midday (12:00-1:15 p.m.), and PM (4:45-6:00 p.m.) periods. The noise levels were monitored according to the procedures outlined in the *CEQR Technical Manual*. The instrument used was a Brüel & Kjær Sound Level Meter Type 2236, an ANSI Type I instrument. It was mounted on a tripod at a height of 5 feet above the ground. The noise monitor was calibrated before and after use. A windscreen was used during all sound measurements except for calibration. All measurement procedures conformed to the requirements of ANSI Standard S1.13-1971 (R1976). During the monitoring periods, the temperatures were in the low 50s to low 60s (°F), and the conditions were overcast to partly sunny. Local traffic volumes along West 28th, West

29th, and West 30th Streets were the primary sources of noise. Other sources of noise included traffic along 7th and 8th Avenues, pedestrian voices, aircraft flyovers, and occasional car alarms or emergency sirens.

Table K-4 shows the noise monitoring results, and Table K-5 summarizes the traffic for the equivalent 1-hour period. The highest L_{10} value recorded was 75.9 dBA at Monitoring Site 5 (204 West 30th Street) near the corner of West 30th Street and Seventh Avenue during the peak midday period. This site is in the Marginally Unacceptable III noise exposure category while all of the other monitored values are in the Marginally Unacceptable I or Marginally Unacceptable II category.

TABLE K-4
Monitored Noise Levels (dBA)

	Monitoring Site	Time of Day	L_{eq}	L_{10}	MinL	MaxL	L_{01}	L_{90}
Weekday AM Peak Period								
1	207 West 28th Street	8:16 a.m. - 8:36 a.m.	69.1	70.5	62.4	90.5	77.0	65.0
2	255 West 28th Street	7:50 a.m. - 8:10 a.m.	69.4	72.5	59.3	83.3	79.0	62.0
3	257 West 29th Street	8:43 a.m. - 9:03 a.m.	71.0	72.0	59.8	93.2	81.5	63.0
4	254 West 30th Street	8:23 a.m. - 8:43 a.m.	70.9	73.7	58.7	84.8	81.8	61.7
5	204 West 30th Street	7:57 a.m. -8:17 a.m.	70.9	72.8	64.2	87.1	80.4	66.0
6	207 West 29th Street	8:50 a.m. - 9:10 a.m.	71.5	74.0	60.7	88.0	79.9	63.6
Weekday Midday Peak Period								
1	207 West 28th Street	12:03 p.m. - 12:23 p.m.	69.8	72.5	62.5	86.3	79.5	64.5
2	255 West 28th Street	12:28 p.m. - 12:48 p.m.	70.1	72.0	59.2	88.4	80.0	61.5
3	257 West 29th Street	12:57 p.m. - 1:17 p.m.	67.8	70.0	59.6	85.3	75.5	62.0
4	254 West 30th Street	12:23 p.m. - 12:43 p.m.	71.6	73.4	60.2	89.9	82.0	62.6
5	204 West 30th Street	12:00 p.m. - 12:20 p.m.	72.8	75.9	60.4	84.7	83.1	65.0
6	207 West 29th Street	12:50 p.m. - 1:10 p.m.	68.1	70.0	62.8	82.1	76.0	64.2
Weekday PM Peak Period								
1	207 West 28th Street	4:48 p.m. - 5:10 p.m.	71.0	71.0	61.0	99.2	78.0	63.5
2	255 West 28th Street	5:18 p.m. - 5:38 p.m.	70.0	73.0	61.3	84.3	79.0	63.0
3	257 West 29th Street	5:49 p.m. - 6:09 p.m.	68.7	71.5	60.0	81.7	76.5	63.0
4	254 West 30th Street	5:55 p.m. - 6:15 p.m.	69.7	70.9	60.2	89.8	79.6	62.2
5	204 West 30th Street	4:45 p.m. - 5:05 p.m.	67.7	70.2	60.6	86.2	76.1	62.3
6	207 West 29th Street	5:10 p.m. - 5:30 p.m.	71.7	72.4	63.2	91.2	81.2	65.0

Source: Sandstone Environmental Associates, Inc.

TABLE K-5
1-hour Equivalent Traffic & PCE Volumes

	Monitoring Site	Period	Autos	Medium Trucks	Heavy Trucks	Buses	Motor-cycles	Total	Aircraft	Total PCEs
1	207 West 28th Street	AM	357	24	3	6	6	396	3	996
2	255 West 28th Street		345	42	6	3	3	399	3	1,266
3	257 West 29th Street		345	24	3	9	0	381	3	960
4	254 West 30th Street		513	48	9	3	0	573	0	1,614
5	204 West 30th Street		318	99	6	3	6	432	6	2,019
6	207 West 29th Street		348	30	6	3	0	387	0	1,074
1	207 West 28th Street	MID	348	21	6	6	0	381	12	1,011
2	255 West 28th Street		294	21	6	0	0	321	0	849
3	257 West 29th Street		282	18	3	0	0	303	6	657
4	254 West 30th Street		456	30	9	0	6	501	9	1,347
5	204 West 30th Street		519	63	3	0	6	591	12	1,557
6	207 West 29th Street		282	21	0	0	0	303	9	555
1	207 West 28th Street	PM	297	15	3	12	3	330	9	888
2	255 West 28th Street		303	3	0	6	3	315	6	489
3	257 West 29th Street		435	33	9	0	6	483	6	1,365
4	254 West 30th Street		444	15	0	6	6	471	9	825
5	204 West 30th Street		429	6	3	0	0	438	9	648
6	207 West 29th Street		381	33	3	3	3	423	0	1,044

Source: Sandstone Environmental Associates, Inc.

IV. FUTURE WITHOUT THE PROPOSED ACTION (NO-ACTION CONDITION)

In absence of the Proposed Action, the rezoning area would retain its existing light industrial M1-5 zoning. As many of the lots within the rezoning area already exceed their current maximum allowable commercial/industrial FAR of 5.0, only one new development is expected to occur and the existing uses would generally remain unchanged. As described in Attachment A, "Project Description," it is assumed that a new as-of-right hotel would be developed on projected development site 5 within the rezoning area in the future without the Proposed Action (on Block 779, lots 25, 26, 27, 28, 53, 55, and 56), with an estimated 363 rooms. Therefore, for CEQR analysis purposes, the No-Action condition would essentially be identical to the existing conditions, except for the new hotel development on projected development site 5.

Traffic for the Future without the Proposed Action was based on an annual background growth rate of 0.25% from 2009 to 2019. The proportionality equation was used to compare PCEs for observed traffic with projected No-Action traffic and to determine the incremental increase in noise levels. Table K-6 shows the projected traffic and PCEs, and Table K-7 shows the noise levels. The projected L_{10} noise levels range from 70.1 dBA to 76.0 dBA. Projected noise levels fall within the Marginally Unacceptable I or Marginally Unacceptable II categories.

TABLE K-6
No-Action Traffic and PCE Volumes

	Monitoring Site	Time of Day	Autos	Medium Trucks	Heavy Trucks	Buses	Motor-cycles	Total	PCEs
1	207 West 28th Street	AM	366	25	3	6	6	406	1,021
2	255 West 28th Street		354	43	6	3	3	409	1,298
3	257 West 29th Street		354	25	3	9	0	391	984
4	254 West 30th Street		526	49	9	3	0	587	1,655
5	204 West 30th Street		326	102	6	3	6	443	2,070
6	207 West 29th Street		357	31	6	3	0	397	1,101
1	207 West 28th Street	MID	357	22	6	6	0	391	1,037
2	255 West 28th Street		301	22	6	0	0	329	870
3	257 West 29th Street		289	18	3	0	0	311	674
4	254 West 30th Street		468	31	9	0	6	514	1,381
5	204 West 30th Street		532	65	3	0	6	606	1,596
6	207 West 29th Street		289	22	0	0	0	311	569
1	207 West 28th Street	PM	305	15	3	12	3	338	910
2	255 West 28th Street		311	3	0	6	3	323	501
3	257 West 29th Street		446	34	9	0	6	495	1,400
4	254 West 30th Street		455	15	0	6	6	483	846
5	204 West 30th Street		440	6	3	0	0	449	664
6	207 West 29th Street		391	34	3	3	3	434	1,070

Source: Sandstone Environmental Associates, Inc.

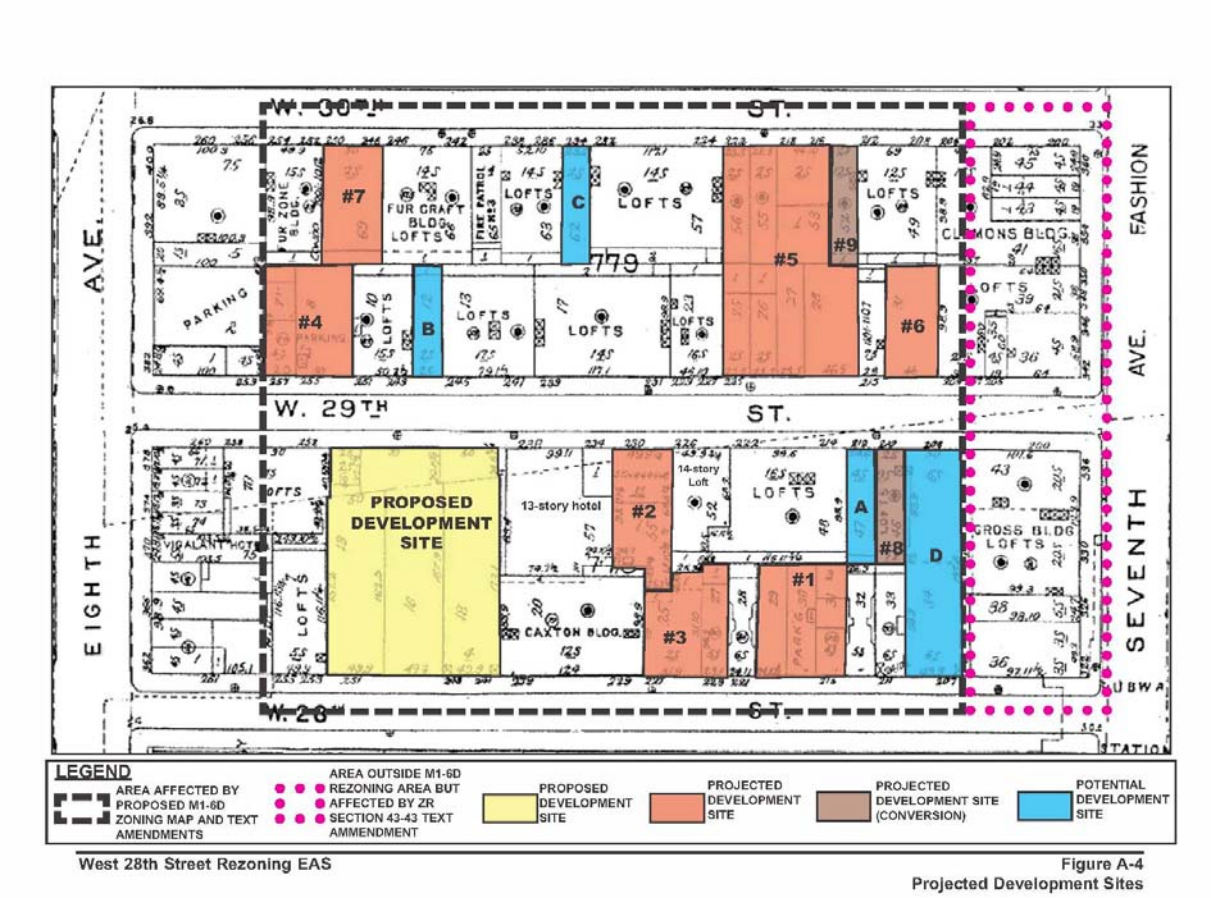
TABLE K-7
No-Action Noise Levels (dBA)

Site ID	Monitoring Site	Time of Day	L_{eq}	L_{10}
1	207 West 28th Street	AM	69.2	70.6
		MID	69.9	72.6
		PM	71.1	71.1
2	255 West 28th Street	AM	69.5	72.6
		MID	70.2	72.1
		PM	70.1	731
3	257 West 29th Street	AM	71.1	72.1
		MID	67.9	70.1
		PM	68.8	71.6
4	254 West 30th Street	AM	71.0	73.8
		MID	71.7	73.5
		PM	69.8	71.0
5	204 West 30th Street	AM	71.0	72.9
		MID	72.9	76.0
		PM	67.8	70.3
6	207 West 29th Street	AM	71.6	74.1
		MID	68.2	70.1
		PM	69.8	71.0

Source: Sandstone Environmental Associates, Inc.

V. FUTURE WITH THE PROPOSED ACTION (WITH ACTION CONDITION)

The Proposed Action is anticipated to result in the construction of new residential development, and some limited residential conversion of existing buildings, in an area currently zoned for industrial uses. Based on reasonable worst-case assumptions, 10 projected development sites (including the Proposed Development Site) and 4 potential development sites are expected to be developed as a result of the proposed zoning and text changes. Table A-5 in Attachment A, "Project Description" shows the projected numbers of new residential dwelling units and commercial space for each of the development sites in the Future with the Proposed Action. Figure A-4 from Attachment A, shown below, shows the location of each development site.



West 28th Street Rezoning EAS

Figure A-4
Projected Development Sites

Project-generated vehicular trips were obtained from the Transportation Demand Forecast provided in Table H-5 of Attachment H, "Transportation." The net project-generated increment of vehicles is 43 in the peak AM period, 51 vehicle trips in the peak Midday period, and 53 trips in the peak PM period. Table K-8 shows the total projected traffic and the resulting PCEs.

TABLE K- 8
2019 With-Action Traffic and PCE Volumes

	Monitoring Site	Time of Day	Autos	Medium Trucks	Heavy Trucks	Buses	Motor-cycles	Total	PCEs
1	207 West 28th Street	AM	409	25	3	6	6	449	1,064
2	255 West 28th Street		397	43	6	3	3	452	1,341
3	257 West 29th Street		397	25	3	9	0	434	1,027
4	254 West 30th Street		569	49	9	3	0	630	1,698
5	204 West 30th Street		369	102	6	3	6	486	2,113
6	207 West 29th Street		400	31	6	3	0	440	1,144
1	207 West 28th Street	MID	408	22	6	6	0	442	1,088
2	255 West 28th Street		352	22	6	0	0	380	921
3	257 West 29th Street		340	18	3	0	0	362	725
4	254 West 30th Street		519	31	9	0	6	565	1,432
5	204 West 30th Street		583	**65**	**3**	**0**	**6**	**657**	**1,647**
6	207 West 29th Street		340	22	0	0	0	362	620
1	207 West 28th Street	PM	358	15	3	12	3	391	963
2	255 West 28th Street		364	3	0	6	3	376	554
3	257 West 29th Street		499	34	9	0	6	548	1,453
4	254 West 30th Street		508	15	0	6	6	536	899
5	204 West 30th Street		493	6	3	0	0	502	717
6	207 West 29th Street		444	34	3	3	3	487	1,123

Source: Sandstone Environmental Associates, Inc.

The proportionality equation was used to compare PCEs for projected traffic for the future No-Action and future With Action conditions to determine the incremental increase in noise levels. Table K-9 shows the projected noise levels. The maximum projected L_{10} noise levels would range from 70.4 dBA to 76.1 dBA. Based on Table K-8, all monitoring sites would continue to fall within the Marginally Unacceptable I or Marginally Unacceptable II categories except for Site 5, which would be in the Marginally Unacceptable III range.

TABLE K-9
With-Action Noise Levels (dBA)

Site ID	Monitoring Site	Time of Day	L_{eq}	L_{10}	Action- No-Action L_{10} Difference	Attenuation Category
1	207 West 28th Street	AM	69.4	70.8	0.2	Marginally Unacceptable I
		MID	70.1	72.8	0.2	
		PM	71.4	**71.4**	0.2	
2	255 West 28th Street	AM	69.6	72.7	0.1	Marginally Unacceptable II
		MID	70.5	72.4	0.2	
		PM	70.5	**73.5**	0.4	
3	257 West 29th Street	AM	71.3	**72.3**	0.2	Marginally Unacceptable I
		MID	68.2	70.4	0.3	
		PM	69.0	71.8	0.2	
4	254 West 30th Street	AM	71.1	**73.9**	0.1	Marginally Unacceptable II
		MID	71.9	73.7	0.2	
		PM	70.1	71.3	0.3	
5	204 West 30th Street	AM	71.1	73.0	0.1	Marginally Unacceptable III
		MID	73.0	**76.1**	0.1	
		PM	68.1	70.6	0.3	
6	207 West 29th Street	AM	71.8	**74.3**	0.2	Marginally Unacceptable II
		MID	68.6	70.5	0.4	
		PM	70.0	71.2	0.2	

Note: Numbers in bold type show the highest L10 noise level for that site.
Source: Sandstone Environmental Associates, Inc.

Table K-10 shows the recommended attenuation levels at each subject site given the With Action condition. All development sites would require (E) designations for noise. Attenuation levels for individual sites within the rezoning area are based upon projected noise levels at the six monitored locations. The relevant monitoring site that governs the noise levels for each façade is also shown.

Based on Table K-10, the Proposed Development site would require 31 dBA along West 28th Street and 28 dBA of attenuation on all other facades.

For the projected and potential development sites, the following would apply:

- Projected and Potential Development Sites 1, 3, 4 and B would require 28 dBA of attenuation.
- Projected and Potential Development Sites 2, 6, 7, 8, A, and C would require 31 dBA of attenuation.
- Potential Development Site D would require 31 dBA of attenuation on the north façade and 28 dBA on all other facades.
- Projected Development Site 5 would require 33 dBA of attenuation on the north façade and 31 dBA of attenuation on all other facades.
- Projected Development Site 9 would require 33 dBA of attenuation.

TABLE K-10
Recommended Attenuation Values for Each Development Site

Development Site	Monitoring Site Address (Number)	Block Number	Lot (s) Number	Build Max L_{10} (dBA)	Attenuation Category	Maximum Required Attenuation
Proposed Development Site	255 West 28th Street (2)	778	13	73.5	MU II	31 dB(A)
	255 West 28th Street (2)	778	16	73.5	MU II	31 dB(A)
	255 West 28th Street (2)	778	18	73.5	MU II	31 dB(A)
	257 West 29th Street (3)	778	66	72.3	MU I	28 dB(A)
Projected Development Site 1	207 West 28th Street (1)	778	29	72.8	MU I	28 dB(A)
	207 West 28th Street (1)	778	30	72.8	MU I	28 dB(A)
	207 West 28th Street (1)	778	31	72.8	MU I	28 dB(A)
Projected Development Site 2	207 West 29th Street (6)	778	55	74.3	MU II	31 dB(A)
Projected Development Site 3	207 West 28th Street (1)	778	25	72.8	MU I	28 dB(A)
	207 West 28th Street (1)	778	27	72.8	MU I	28 dB(A)
Projected Development Site 4	257 West 29th Street (3)	779	7	72.3	MUI	28 dB(A)
	257 West 29th Street (3)	779	8	72.3	MU I	28 dB(A)
Projected Development Site 5	207 West 29th Street (6)	779	25	74.3	MU II	31 dB(A)
	207 West 29th Street (6)	779	26	74.3	MU II	31 dB(A)
	207 West 29th Street (6)	779	27	74.3	MU II	31 dB(A)
	207 West 29th Street (6)	779	28	74.3	MU II	31 dB(A)
	204 West 30th Street (5)	779	52	76.1	MU III	33 dB(A)
	204 West 30th Street (5)	779	52	76.1	MU III	33 dB(A)
	204 West 30th Street (5)	779	52	76.1	MU III	33 dB(A)
Projected Development Site 6	207 West 29th Street (6)	779	31	74.3	MU II	31 dB(A)
Projected Development Site 7	254 West 30th Street (4)	779	69	73.9	MU II	31 dB(A)
Projected Development Site 8	207 West 29th Street (6)	778	46	74.3	MU II	31 dB(A)
Projected Development Site 9	204 West 30th Street (5)	779	52	76.1	MU III	33 dB(A)
Potential Development Site A	207 West 29th Street (6)	778	47	74.3	MU II	31 dB(A)
Potential Development Site B	257 West 28th Street (3)	779	12	72.3	MU I	28 dB(A)
Potential Development Site C	254 West 30th Street (4)	779	62	73.9	MU II	31 dB(A)
Potential Development Site D	207 West 28th Street (1)	778	34	72.8	MU I	28 dB(A)
	207 West 29th Street (6)	778	34	74.3	MU II	31 dB(A)

Note: MU = Marginally Unacceptable
Source: Sandstone Environmental Associates, Inc.

The applicant, 249 W 28th Street Properties, LLC, owns the Proposed Development Site (Block 778, Lots 13, 16, 18, and 66), and will provide attenuation of 31 dBA at the south facades and 28 dBA on all other facades. This can be achieved by including standard double-glazed windows with good sealing properties, and closed window condition with an alternative method of ventilation (in order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, central air conditioning. Such measures would provide sufficient attenuation to satisfy CEQR requirements.

All projected and potential development sites (including the Proposed Development Site) would receive an (E)-designation to ensure an acceptable interior noise environment of 45 dBA. Table K-11 provides a list of all projected and potential development sites and their (E)-designations.

TABLE K-11
Projected and Potential Development Sites with (E)-Designations

Projected Development Site	Tax Block: Lot(s)	(E)-Designation	Attenuation Required	Potential Development Site	Tax Block: Lot(s)	(E)-Designation	Attenuation Required
Proposed Development	778: 13, 16, 18, 66	Yes	28 dB(A); 31 dB(A) on south facade	A	778: 47	Yes	31 dB(A);
1	778: 29, 30, 31	Yes	28 dB(A)	B	779: 12	Yes	28 dB(A)
2	778: 55	Yes	31 dB(A)	C	779: 62	Yes	31 dB(A)
3	778: 25, 27	Yes	28 dB(A)	D	778: 34	Yes	28 dB(A), 31 dBA on north façade
4	779: 7, 8	Yes	28 dB(A)				
5	779: 25, 26, 27, 28, 53, 55, 56	Yes	31 dB(A), 33 dB(A) on the north façade,				
6	779: 31	Yes	31 dB(A)				
7	779: 69	Yes	31 dB(A)				
8	778: 46	Yes	31 dB(A				
9	779: 52	Yes	33 dB(A)				

For sites requiring 28 dBA of noise attenuation, the following E-designation noise text would apply:

> **"In order to ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed window condition with a minimum of 28 dBA window/wall attenuation on all façades in order to maintain an interior noise level of 45 dBA. In order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, central air conditioning."**

For sites requiring 31 dBA of noise attenuation, the following E-designation noise text would apply:

> **"In order to ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed window condition with a minimum of 31 dBA window/wall attenuation on all façades in order to maintain an interior noise level of 45 dBA. In order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, central air conditioning."**

For sites requiring 33 dBA of noise attenuation, the following E-designation noise text would apply:

> **"In order to ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed window condition with a minimum of 33 dBA window/wall attenuation on all façades in order to maintain an interior noise level of 45 dBA. In order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, central air conditioning."**

The attenuation of a composite structure is a function of the attenuation provided by each of its component parts and how much of the area is made up of each part. Normally, a building façade is composed of the wall, glazing, and any vents or louvers for HVAC systems in various ratios of area. The design for all buildings proposed to be located on (E)-designated projected or potential

development sites would be designed to provide a composite Outdoor-Indoor Transmission Class (OITC) rating greater than or equal to the attenuation requirements listed in Table K-11. The OITC classification is defined by the American Society of Testing and Materials (ASTM E1332-90 [Reapproved 2003]) and provides a single-number rating that is used for designing a building façade including walls, doors, glazing, and combinations thereof. The OITC rating is designed to evaluate building elements by their ability to reduce the overall loudness of ground and air transportation noise.

Mechanical Equipment

It is assumed that the building mechanical system (i.e., rooftop HVAC and mechanical systems) would be designed to meet all applicable noise regulations (i.e., Subchapters 5, §24-227 of the New York City Noise Control Code, the New York City Department of Buildings Code) and to avoid producing levels that would result in any significant increase in ambient noise levels.

VI. CONCLUSION

Noise from increased traffic generated by the Proposed Action would not cause noise level impacts on sensitive receptors along affected roadways because the relative increases in noise level would fall below the impact criterion of 3.0 dBA.

Projected development sites 1, 3, 4, and B, fall within the Marginally Unacceptable (I) category, which requires 28 dBA of attenuation. Projected development site 5 falls within the Marginally Unacceptable II and III categories, which require 31 dBA and 33 dBA of attenuation. Projected development site 9 falls within the Marginally Unacceptable III category. It would require 33 dBA of attenuation. Projected and potential development sites 2, 6, 7, 8, A, and C fall within the Marginally Unacceptable II category requiring 31 dBA of building attenuation. Potential development site D falls within the marginally Unacceptable I and II categories, which require 28 dBA and 31 dBA of attenuation. Recommended noise attenuation values for the buildings shown in Table K-11, are designed to maintain interior noise levels of 45 dBA or lower for residential uses and 50 dBA for commercial uses and are determined from exterior L_{10} levels.

The recommended interior sound levels can be achieved through installing double-glazed windows on a heavy frame in masonry structures and windows with laminated glass. The 2010 *CEQR Technical Manual* states that when maximum L_{10} levels exceed 70 dBA, alternate methods of ventilation should be incorporated into buildings in addition to window-wall attenuation to ensure proper attenuation.

Based on the projected noise levels, these design measures would provide sufficient attenuation to satisfy CEQR requirements. With the specified attenuation measures, the Proposed Action would not have any significant adverse noise impacts and would comply with all CEQR noise requirements. The (E)-designation would preclude the potential for significant adverse noise impacts.

ATTACHMENT L
SHADOWS

I. INTRODUCTION

According to the *CEQR Technical Manual*, a shadow is defined as the circumstance in which a building or other built structure blocks the sun from the land. An adverse shadow impact is considered to occur when the incremental shadow from a proposed project falls on a sunlight-sensitive resource and substantially reduces or completely eliminates direct sunlight exposure, thereby significantly altering the public's use of the resource or threatening the viability of vegetation or other resources. Sunlight-sensitive resources include publicly accessible open space, historic architectural resources if the features that make the resource significant depend on sunlight, natural resources, and greenstreets. In general, shadows on city streets and sidewalks or on other buildings are not considered significant under CEQR. In addition, shadows occurring within an hour and a half of sunrise or sunset generally are also not considered significant under CEQR.

In accordance with CEQR guidelines, this chapter provides a shadows assessment to determine whether the Proposed Action would result in new shadows long enough to reach any sunlight-sensitive resources (except within an hour and a half of sunrise or sunset). For actions resulting in structures less than 50 feet high, a shadow assessment is generally not necessary unless the site is adjacent to a park, historic resource, or important natural feature (if the features that make the structure significant depend on sunlight).

The Proposed Action would permit buildings in excess of 50 feet tall (as assumed in the RWCDS a maximum building height of 210 feet tall in the proposed M1-6D district). In accordance with CEQR guidelines, a shadows assessment was undertaken to determine whether the Proposed Action would result in new shadows long enough to reach a publicly accessible open space or sunlight-sensitive historic resource, compared to No-Action conditions.

II. RESOURCES OF CONCERN

In coordination with the analysis set forth in Attachment F, "Open Space," and the Historic Resources section of Attachment B, "Supplemental Screening," publicly accessible open spaces and sunlight-sensitive architectural resources to the north, east and west of the projected development sites were identified, as shadows created by the development associated with the RWCDS could potentially fall on these resources. According to the *CEQR Technical Manual*, historic resources that need to be considered in a shadows analysis must have sunlight-dependent features such as stained glass windows, historic landscapes, design elements that are part of a recognized architectural style that depends on contrast between light and dark design features, exterior materials and color that depend on direct sunlight for visual character, or elaborate, highly carved ornamentation.

According to the *CEQR Technical Manual*, the longest shadow a structure will cast in New York City, except for periods close to dawn or dusk, is 4.3 times its height. Following CEQR guidelines, a radius of 4.3 times the maximum proposed height (i.e., a 903-foot radius) for all projected and potential

development sites was drawn (Tier 1 Assessment). The radius was adjusted to exclude the triangular area south of the rezoning area between –108 degrees from true north and 108 degrees from true north, as in New York City no shadow can be cast from a building within this triangular area (Tier 2 Assessment). Any resource that fell outside the shadow radius was screened out from further consideration, as no shadows cast by projected or potential development sites would reach it.

Within an approximate 903-foot radius of the proposed rezoning area, there are five open space resources as well as three potential historic resources that could be affected by incremental shadows (see Table L-1 and Figure L-1). These resources are described briefly below.

According to the *CEQR Technical Manual*, a Tier 3 screening assessment should be performed if any portion of a sunlight-sensitive resource is within the area that could be shaded by the proposed project. The Tier 3 screening assessment is used to determine if shadows resulting from a proposed project can reach a sunlight-sensitive resource. Given the presence and proximity of sunlight-sensitive resources in the vicinity of the rezoning area (refer to Figure L-1), it was apparent that shadows from the RWCDS would reach one or more of these resources on at least one of the representative analysis days. As such, this intermediate step in the assessment was skipped, and a detailed shadows assessment was conducted, as detailed on Section III below.

Open Space Resources

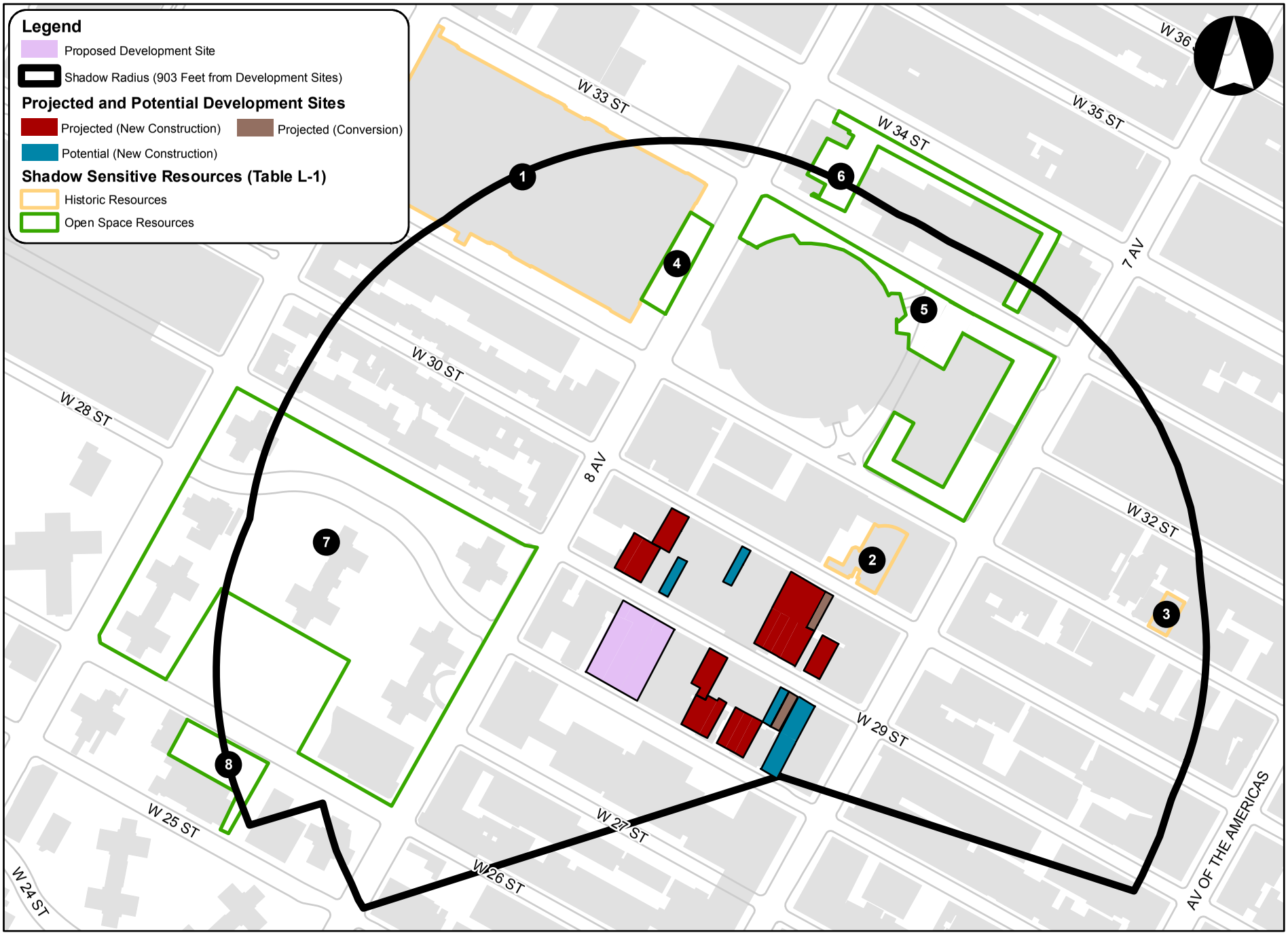
The open space resources within the maximum shadow radius include four passive recreational resources and one active recreational resource, namely: the 0.42-acre plaza at Two Penn Plaza; the 1.15-acre plaza at One Penn Plaza; the Farley Building's stairs, which offer approximately 0.38 acres of passive space; the approximately 1.42-acre Penn South Houses open space, which features numerous sitting areas and landscaped paths, along with play equipment for children; and the 0.60-acre Penn South Houses playground, which features basketball courts, paved walkways, benches, a jungle gym, trees and planters.

TABLE L-1
Potentially Affected Designated and/or Potentially Eligible
Historic Resources and Open Space Resources

Map #	Resources	Location
Historic Resources		
1	The James Farley Building	Eight Avenue & W. 31st Street
2	St. John the Baptist RC Church	207 W. 30th Street
3	St. Francis RC Church	129 W. 31st Street
Open Space Resources		
4	Farley Building Stairs	Eighth Avenue between W. 31st & W. 33rd Sts.
5	2 Penn Plaza - plaza area	W. 31st to W. 33rd Sts. between Seventh & Eighth Aves.
6	1 Penn Plaza – plaza area	W. 33rd to W. 34th Sts. between Seventh & Eighth Aves.
7	Penn South Houses Open Space	W. 23 to W. 28th Sts between Eighth & Ninth Aves.
8	Penn South Houses Playground	W. 26th St. between Eighth & Ninth Avenues

Notes: (Map # corresponds to Figure L-1)

The plaza areas of One and Two Penn Plaza are located at least 600 feet to the north of the rezoning area and extend along either side of West 33rd Street between Seventh and Eighth Avenues (see Figure L-1). As both of these plazas are located in a dense urban area and are surrounded by very large structures, incremental shadows created by the RWCDS are not expected to adversely impact these plazas. The One Penn Plaza building, which occupies the entire block bounded by West 34th Street, Seventh Avenue, West 33rd Street, and Eighth Avenue, has a paved plaza that contains benches,



West 28th Street Rezoning EAS

Figure L-1
Shadow Radius for Proposed Rezoning Area

planters, trees, and lighting. The building is centered on the block and has 57-stories, rising to a height of approximately 750 feet with its plaza extending along its western, northern, and eastern facades. The building at Two Penn Plaza fronts along the west side of Seventh Avenue between West 31st and West 33rd Street. It contains 29 floors with a height of approximately 412 feet. The urban plaza at Two Penn Plaza rings the office building on three sides – its Seventh Avenue frontage and north and south sides – and provides some seating and gathering areas. However, the plaza at Two Penn Plaza is mostly paved, and includes very little usable space, primarily ledges used as seating. MSG is approximately 8-stories tall with a height of 80 feet. The rezoning area is separated from both plazas by a City block, which contains a number of 12-to 17-story buildings along the north side of West 30th Street. All of these buildings are located closer to the open space areas of One and Two Penn Plaza and would cast shadows of similar length and similar direction as the RWCDS. Therefore, development on the projected and potential development sites is not expected to create any significant new incremental shadows affecting these two plazas (see detailed assessment below).

Historic Resources

The historic resources within the maximum shadow radius include the Farley Building, which is listed on the National Register for Historic Places and a New York City landmark, and two churches (St. John the Baptist RC Church and St. Francis RC Church), which are eligible for both New York City Landmarks Preservation Commission (NYCLPC) designation and listing on the State and National Registers for Historic Places. The Eighth Avenue façade of the Farley Building is considered the most sensitive element of this resource, and the sunlight that is cast upon it articulates the architectural features that distinguish this public building. Its colonnade and portico are reached by an almost block-wide flight of stairs, and light effects on the colonnade contribute to the articulation of the rhythm of the columns and the depth of the entrance.

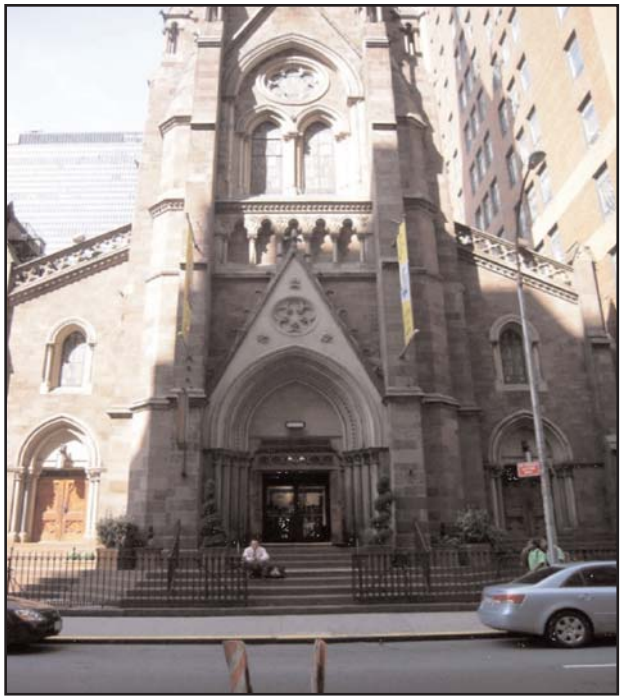
Both churches contain sunlight sensitive stained glass windows on their facades. St. Francis RC Church is located on the north side of West 31st Street between Sixth and Seventh Avenues, more than 800 feet to northeast of the rezoning area. The Church includes stained glass windows, a recessed arched mosaic of St. Francis on its West 31st Street façade, as well as mosaic roundels on the upper portion of its tower. There are a number of high-rise buildings, ranging in height from 16 to 28-stories, along the Seventh Avenue corridor between West 28th and West 31st Streets that cast shadows of similar or longer length and in a similar direction as the RWCDS, and are located closer to St. Francis RC Church. As these existing buildings currently cast shadows on St. Francis RC Church, the RWCDS is not expected to create any significant new incremental shadows affecting St. Francis RC Church (see detailed assessment below).

St. John the Baptist RC Church is located on the north side of West 30th Street between Seventh and Eighth Avenues, immediately across the street from the rezoning area. Although the church has been identified as an eligible historic resource, it is not currently designated as a landmark in the City, State, or Federal registers, nor is it calendared for consideration. The Church contains twelve glass decorative window features – six stained glass windows on the south façade and the second level of the west facade, and six small quatrefoil windows above the entryway – which are set back from the front plane in deep embrasures. In addition, as shown in the bird's eye view in Figure L-2, there is a row of stained glass windows on the bottom portion of the east and west facades are located in the main sanctuary, but are not visible from the street. The windows along the eastern façade are entirely blocked by an adjacent building. St. John the Baptist RC Church also contains many vertical setbacks and deep reveals along its façade (see Figure L-2). For shadows analysis purposes, the six stained glass windows on the south façade and the second level of the west facade, which are numbered in Figure L-2, were considered, as were the stained glass windows on the bottom of the western facade. Although there is one additional rose window at the upper portion of the church, it was not considered

Figure L-2
Views of St. John the Baptist RC Church



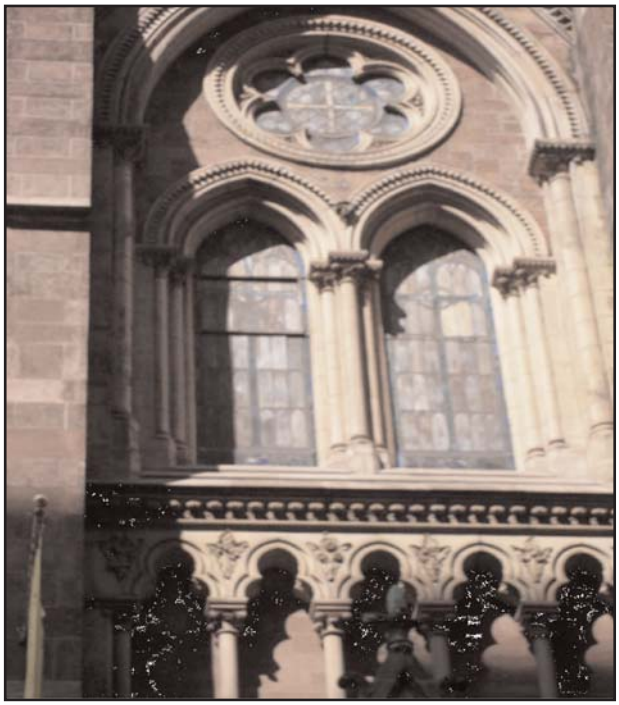
1. South facade showing rose window and four stained glass windows



2. South facade showing rose window and four stained glass windows



3. Stained glass window on the west facade



4. Rose window and stained glass pair

Figure L-2 (cont'd)

St. John the Baptist RC Church - Aerial View



as it is located above the bell tower and is therefore not an element of any portion of the building that is publicly accessible.

III. ASSESSMENT OF POTENTIAL SHADOW IMPACTS

An adverse shadow impact is considered to occur when the incremental shadow from a development falls on a sunlight-sensitive resource and substantially reduces or completely eliminates direct sunlight exposure, thereby significantly altering the public's use of the resource or threatening the viability of vegetation or other resources. The uses and vegetation in an open space establish its sensitivity to shadows. This sensitivity is assessed for both (1) warm-weather- dependent features like wading pools and sand boxes, or vegetation that could be affected by a loss of sunlight during the growing season; and (2) features, such as benches, that could be affected by a loss of winter sunlight. Uses that rely on sunlight include: passive use, such as sitting or sunning; active use, such as playfields or paved courts; and such activities as gardening, or children's wading pools and sprinklers. Where lawns are actively used, the turf requires extensive sunlight. Vegetation requiring direct sunlight includes the tree canopy, flowering plants and plots in community gardens. Generally, four to six hours a day of sunlight, particularly in the growing season (defined as March to October), is often a minimum requirement.

For historic resources, the shadow sensitivity of the sunlight-sensitive features of a historic structure depends on its design and setting. If any of the characteristics or elements that make the resource historically significant depend on sunlight, it is necessary to inventory those features to determine their sensitivity to a reduction in sunlight, by determining the historic significance of the affected features and how the features are enjoyed by the public, including views from streets and other publicly accessible places. As per the guidelines of the 2010 *CEQR Technical Manual*, the assessment of shadows on a historic resource focuses only on those features or portions of the historic resource that are sunlight-sensitive and can be enjoyed by the public.

The shadow analysis considers the times when the projected and potential development sites would increase shadows falling on open space or historic resources, compared to No-Action conditions. As noted in Attachment A, "Project Description," in the future without the Proposed Action, the rezoning area will likely remain mostly unchanged from existing conditions with the exception of a 20-story (approximately 210 feet) as-of-right hotel development that is assumed to be located on projected development site 5. As described in Attachment A, "Project Description," this hotel is assumed to be massed on the northern portion of the site (closer to midtown). Conservatively, no development is assumed on any of the other 9 projected development sites or 4 potential development sites in absence of the Proposed Action.

As the sun travels across the sky during the day, shadows fall in a curve on the ground opposite the sun. When the sun rises, shadows fall to the west. As the sun travels across the southern part of the sky throughout the day, shadows move in a clockwise direction until they stretch east, as the sun sets in the west. Midday shadows are always shorter than those at other times of the day because the sun is highest in the sky at that time. Further, because of the tilt of the earth's axis, the angle at which the sun's rays strike the earth varies throughout the year, so that during the summer, the sun is higher in the sky and shadows are shorter than during the winter. Winter shadows, although longest, move the most quickly along their paths (because of the earth's tilt) and do not affect the growing season of outdoor trees and plants.

As directed by the *CEQR Technical Manual*, shadow analyses were performed for the projected and potential development sites, for four representative days of the year: March 21/September 21, the equinoxes; May 6, the midpoint between the summer solstice and the equinox (and equivalent to August 6); June 21, the summer solstice and the longest day of the year; and December 21, the winter solstice and shortest day of the year. The *CEQR Technical Manual* defines the temporal limits of a shadow analysis period to fall from an hour and a half after sunrise to an hour and a half before sunset. The results of the shadow analysis on the resources of concern are summarized in Tables L-2 and L-3, and discussed below. The "enter" times shown in the table represent the time that shadows first hit any part of the resource being considered, and the "exit" times represent the time that shadows would leave that resource completely. As shown in Table L-2, the shadows cast by the projected and potential developments would reach three of the eight identified resources – one historic resource and two open space resources: St. John the Baptist RC Church; 2 Penn Plaza; and Penn South Houses Open Space. In assessing the potential shadow effects on St. John the Baptist RC Church, its architectural features were taken into consideration in the computer model to provide a more accurate assessment. Most notably, as illustrated in Figure L-2,[1] the Church's windows are deeply recessed, and thus currently experience contributory shadows cast on the building by its own architectural features. Also, it should be noted that shadows from the Proposed Development planned by the applicant would not reach St. John the Baptist RC Church on any of the analysis days. The shadow increments shown in Table L-2 and illustrated in Figure L-4 below are from the projected and potential development sites assumed for the RWCDS only.

Figure L-3 (a through d) illustrates incremental shadows cast by the RWCDS on open space resources, and Figure L-4 (a and b) illustrates the incremental shadows cast on St. John the Baptist RC Church.

TABLE L-2
Results of Shadows Analysis

Site No.	Resource	**Shadow Increment March 21/September 21** Timeframe Window – 7:36 AM – 4:29 PM	**Shadow Increment May 6/August 6** Timeframe Window – 6:27 AM – 5:18 PM	**Shadow Increment June 21** Timeframe Window – 5:57 AM – 6:01 PM	**Shadow Increment December 21** Timeframe Window – 8:51 AM – 2:53 PM
1	The James Farley Building	None.	None.	None.	None.
2	St. John the Baptist RC Church	Refer to Table L-3	Refer to Table L-3	None.	None.
3	St. Francis RC Church	None.	None.	None.	None.
4	Farley Building Stairs	None.	None.	None.	None.
5	2 Penn Plaza	None.	None.	None.	None.
6	1 Penn Plaza	None.	None.	None.	None.
7	Penn South Houses Open Space	Enter: 7:36 AM Exit: 9:27 AM	Enter: 6:27 AM Exit: 8:18 AM	Enter: 6:05 AM Exit: 8:22 AM	Enter: 9:02 AM Exit: 10:14 AM
	Incremental shadow duration	1 hrs. 51 mins.	1 hrs. 51 mins.	2 hrs. 17 mins.	1 hrs. 12 mins
8	Penn South Houses Playground	None.	None.	None.	None.
Times shown are eastern standard time (EST)					

March 21/September 21

On the spring (and fall) equinoxes, as shadows grow in length, the projected and potential development sites would cast incremental shadows on the Penn South Houses open space (see Figure L-3a) and St. John the Baptist RC Church, (see Figure L-4a). No incremental shadows would fall on the James Farley Building, St. Francis RC Church, Farley Building Stairs, 1 Penn Plaza, 2 Penn Plaza, or the Penn South Houses Playground.

[1] The photos shown in Figure L-2 were taken on August 6, 2009 (the equivalent of the May 6 analysis day).

Figure L-3a

March 21/September 21 Shadows on Open Space Resources



March 21/September 21 - 7:45 AM



March 21/September 21 - 9:00 AM

Incremental Shadow

Proposed Development Site

Projected/Potential Development Site (new construction)

7 Open Space Resource (refer to Table L-1)

May 6/August 6 Shadows on Open Space Resources



May 6 / August 6 - 7:00 AM



May 6 / August 6 - 8:00 AM

Incremental Shadow

Proposed Development Site

Projected/Potential Development Site (new construction)

7 Open Space Resource (refer to Table L-1)

Figure L-3c

June 21 Shadows on Open Space Resources



June 21 - 6:30 AM



June 21 - 7:30 AM

Incremental Shadow

Proposed Development Site

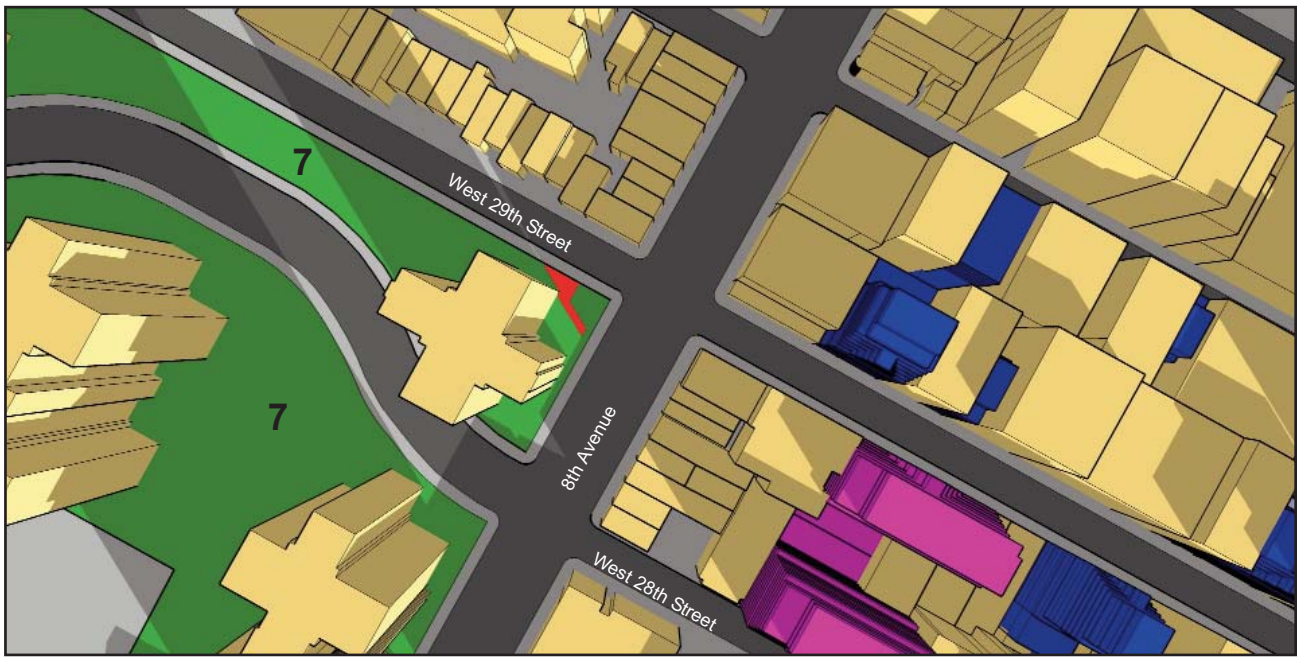
Projected/Potential Development Site (new construction)

7 Open Space Resource (refer to Table L-1)

December 21 Shadows on Open Space Resources



December 21 - 9:15 AM



December 21 - 9:45 AM

Incremental Shadow

Proposed Development Site

Projected/Potential Development Site (new construction)

7 Open Space Resource (refer to Table L-1)

Figure L-3d (cont'd)

December 21 Shadows on Open Space Resources



December 21 - 10:10 AM

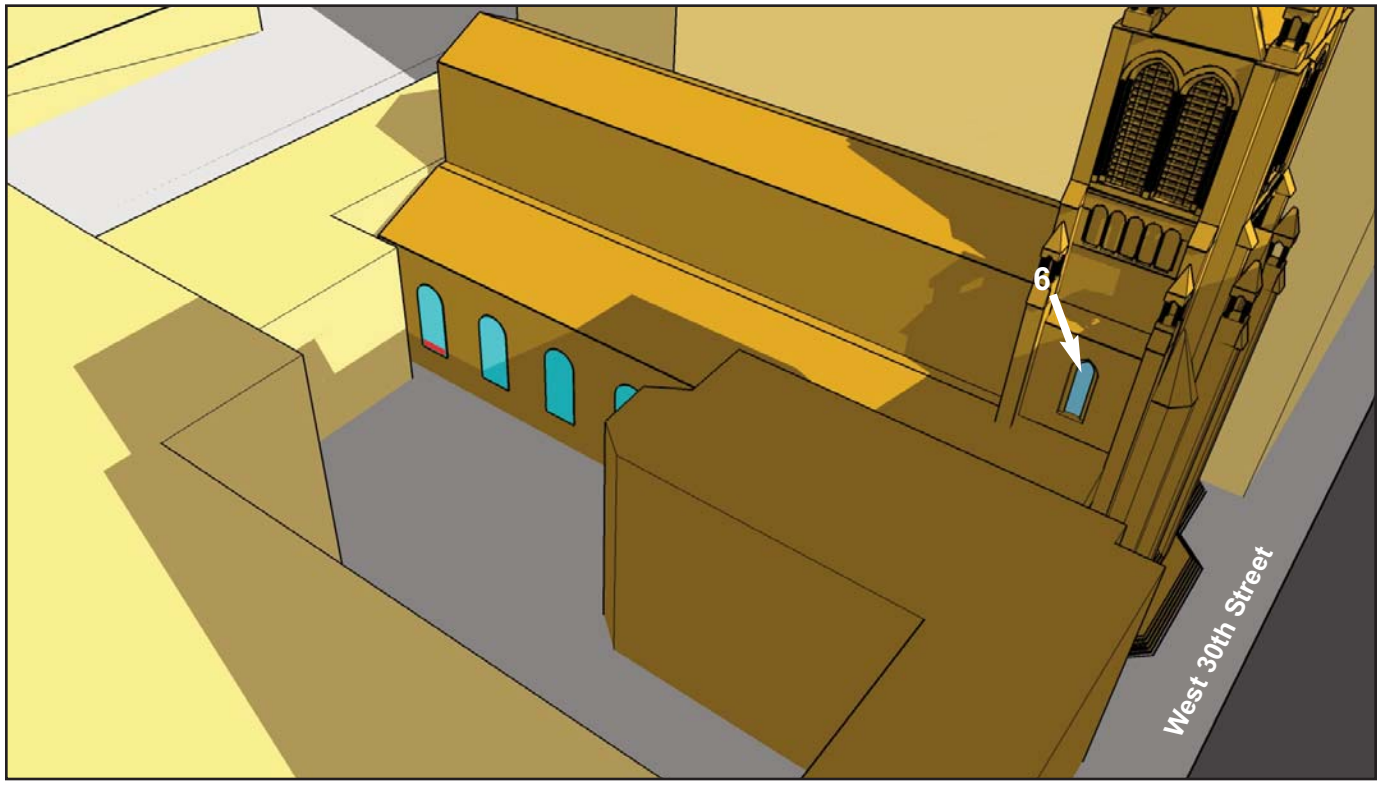
Incremental Shadow

Proposed Development Site

Projected/Potential Development Site (new construction)

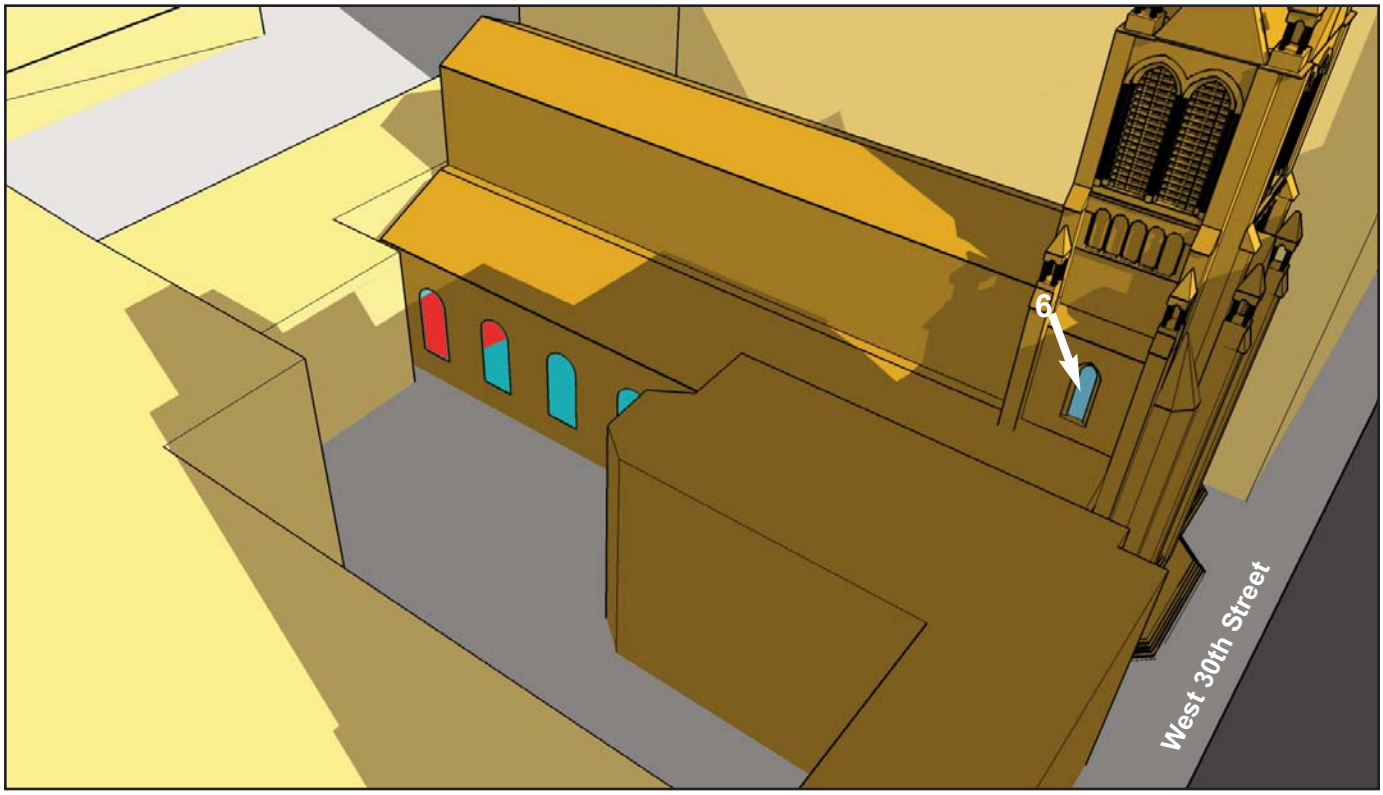
7 Open Space Resource (refer to Table L-1)

Incremental Shadows on St. John the Baptist RC Church's Stained Glass Windows - March 21



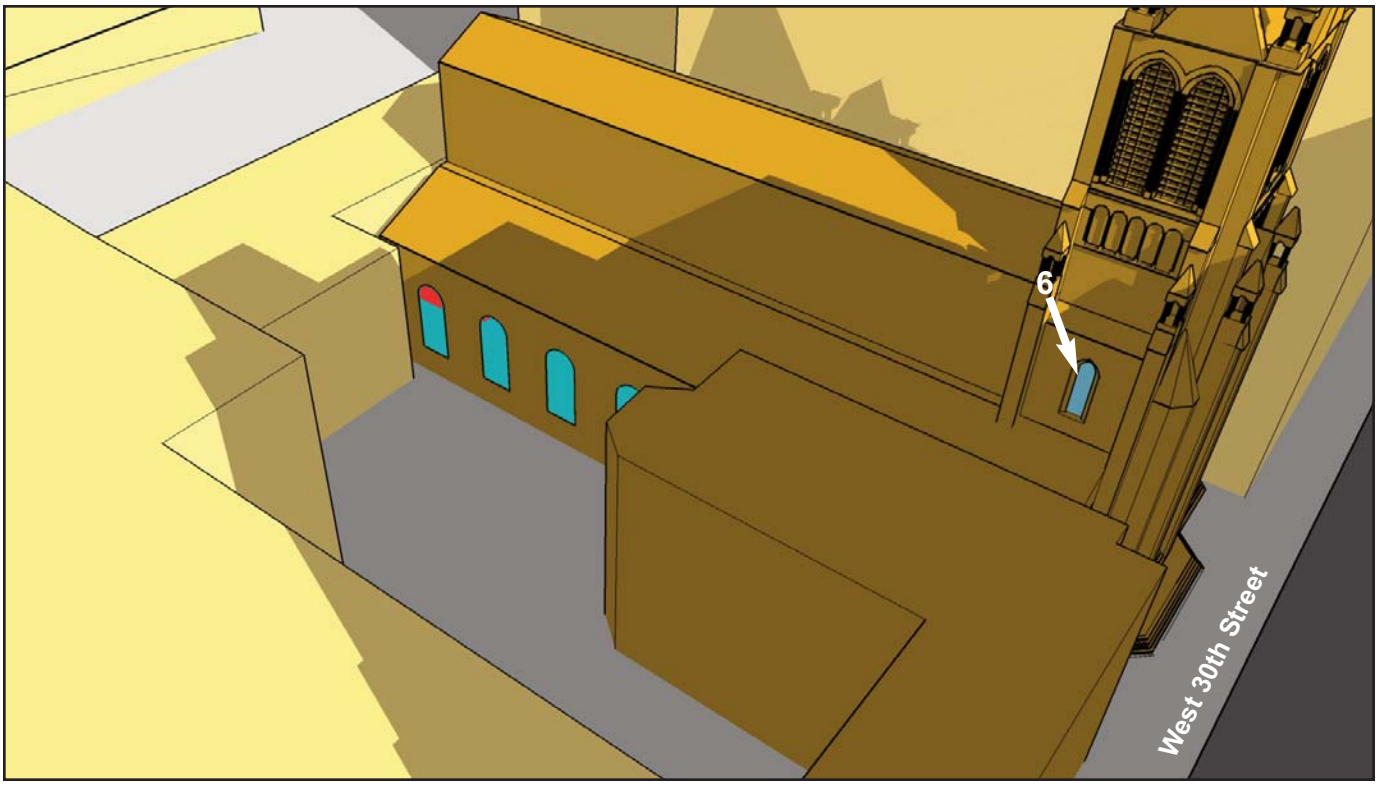
March 21 - 2:11 PM

Incremental Shadow



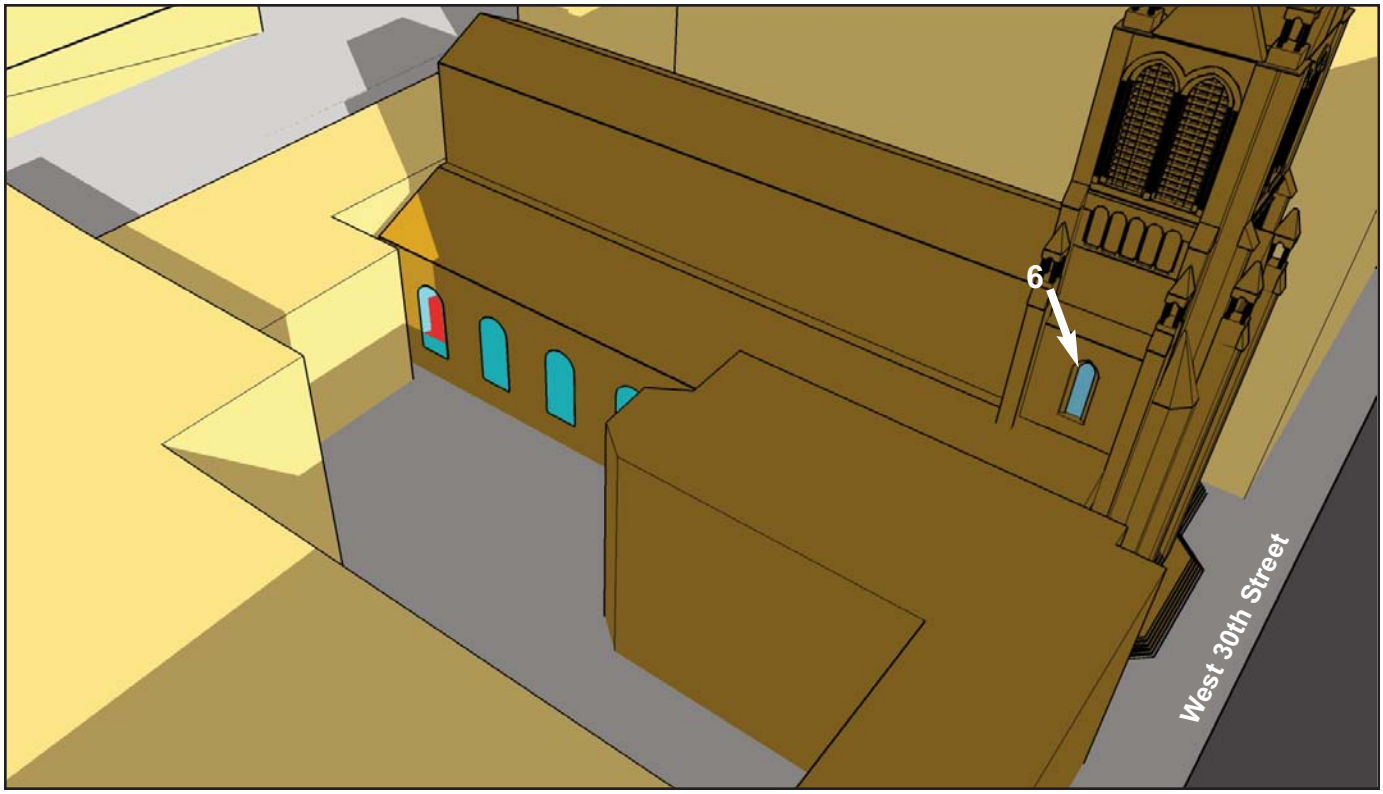
March 21 - 2:20 PM

Incremental Shadows on St. John the Baptist RC Church's Stained Glass Windows - March 21



March 21 - 2:28 PM

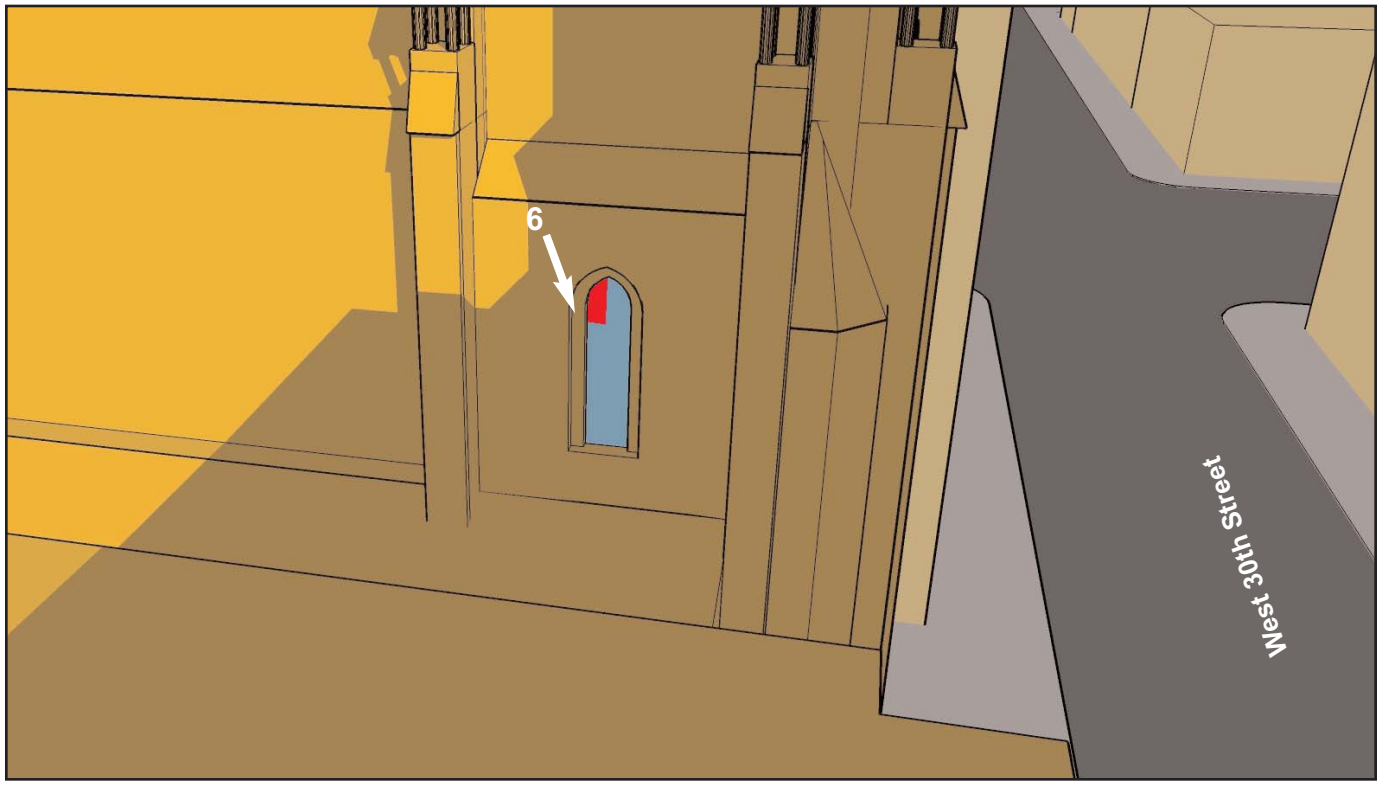
Incremental Shadow



March 21 - 3:25 PM

Figure L-4b

Incremental Shadows on St. John the Baptist RC Church's Stained Glass Windows - May 6/August 6



May 6 / August 6 - 2:14 PM

Incremental Shadow

TABLE L-3
Results of Shadow Analysis on the Stained Glass Windows at St. John the Baptist RC Church*

Window No. (refer to Figure L-2	Shadow Increment March 21/September 21	Shadow Increment May 6/August 6	Shadow Increment June 21	Shadow Increment December 21
1	None.	None.	None.	None.
2	None.	None.	None.	None.
3	None.	None.	None.	None.
4	None.	None.	None.	None.
5	None.	None.	None.	None.
6	None.	Enter: 4:13 PM; Exit: 4:16 PM *Incremental Shadow Duration: 0 hr. 3 min.*	None.	None.
Windows on bottom western façade (not visible from Street)	Enter: 2:11 PM; Exit: 2:29 PM *Incremental Shadow Duration: 18 min.* Enter: 3:21 PM; Exit: 3:28 PM *Incremental Shadow Duration: 7 min.* **Total for Analysis Day : 0 hrs 25 min.**	None		None.

Times shown are eastern standard time (EST)

* *Duration represents time that new shadow would fall on shadow-sensitive stained glass windows, rather than the church façade as a whole. The Proposed Development would not cast incremental shadows on any of the stained glass windows at St. John the Baptist RC Church.*

As indicated in Table L-2, incremental shadows from the projected and potential development sites would begin to fall on the Penn South Houses open space in the early morning at 7:36 AM and exit at 9:27 AM for a duration of 1 hour and 51 minutes. As shown in Figure L-3a, only a small portion of this open space resource would be cast in incremental shadows during this time. This area consists mostly of a fenced landscaped area with no public access that contains grass, flowers and trees, as well as a paved path.

As shown in Table L-3, on March 21, incremental shadows would fall across portions of the stained glass windows on the lower western façade of St. John the Baptist RC Church in the mid-afternoon. Incremental shadows would first enter a small portion at the bottom of one of these windows at 2:11 PM and would move quickly and fully exit after 18 minutes. A shadow would then reach a portion of the northernmost window, traveling quickly upward, before fully exiting after 7 minutes, for a total duration of 25 minutes on this analysis day.

May 6/August 6

On May 6 (and August 6), which is halfway between the solstice and equinox, the projected and potential development sites would cast incremental shadows on the Penn South Houses Open Space and St. John the Baptist RC Church. No incremental shadows would fall on St. Francis RC Church, the Farley Building, the Farley Building stairs, 2 Penn Plaza, 1 Penn Plaza, or the Penn South Houses Playground. Incremental shadows created by the projected development sites are depicted in Figure L-3b.

As indicated in Table L-2, incremental shadows from the projected and potential development sites would begin to fall on the Penn South Houses open space during the early morning at 6:27 AM until 8:18 AM, for a total duration of approximately 1 hour and 51 minutes. As illustrated in Figure L-3b, only very small portions of this open space resource would be cast in incremental shadows during this time, which mostly fall immediately adjacent to two of the complex's buildings. These affected areas include lawns and grassy areas with hedges and plantings, bushes, trees, and one bench.

As indicated in Table L-3, the projected and potential development sites would briefly cast incremental shadows on a portion of one stained glass window of St. John the Baptist RC Church (window #6) in the late afternoon, for approximately 3 minutes, from 4:13 to 4:16 PM.

June 21

On the longest day of the year, the sun is most directly overhead and shadows are shortest in length. Incremental shadows created by the development on projected and potential development sites during the morning hours on this date are depicted in Figure L-3c. As shown in Table L-2, in the early morning on this analysis day, the projected and potential development sites would cast incremental shadows on the Penn South Houses open space. No incremental shadows would fall on St. John the Baptist RC Church, St. Francis RC Church, the James Farley Building, the Farley Building stairs, the Penn South Houses Playground, 2 Penn Plaza, or 1 Penn Plaza.

As indicated in Table L-2, by 6:05 AM, shadows from the projected and potential development sites would begin to fall on the Penn South Houses Open Space, extending along very small portions of the southern edge of the site, until 8:17 AM (refer to Figure L-3c). These affected areas include lawns and grassy areas with hedges and plantings, bushes, and trees.

December 21

On the shortest day of the year, the shadows are the longest but move rapidly. As described in Table L-2, the projected and potential development sites would cast incremental shadows on the Penn South Houses Open Space during the afternoon (see Figure L-3d). No incremental shadows would fall on the James Farley Building, St. John the Baptist RC Church, St. Francis RC Church, Farley Building Stairs, 1 Penn Plaza, 2 Penn Plaza, or the Penn South Houses Playground.

As indicated in Table L-2, incremental shadows from the projected and potential development sites would begin to fall on the Penn South Houses open space in the early morning at 9:02 AM and exit at 10:14 AM for a duration of 1 hour and 12 minutes. As shown in Figure L-3d, only very small portions of this open space resource would be cast in incremental shadows during this time which mostly fall immediately adjacent to two of the complex's buildings. These affected areas include lawns and grassy areas with hedges and plantings, bushes, trees, and one bench.

Assessment

Overall, the Proposed Action is not expected to result in significant adverse shadow impacts on open space resources or sunlight-sensitive historic resources in the surrounding area, compared to No-Action conditions. The incremental shadows from the projected and potential development sites would reach very small portions of the Penn South Houses open space during all of the four representative analysis periods, and St. John the Baptist RC Church during the March and May analysis periods.

The projected and potential development sites would cast incremental shadows on the Penn South Houses open space during the early morning on the March 21/September 21, May 6/August 6, June 21, and December 21 analysis periods. However, as shown in Figures L-3a to L-3d, only very small portions of this open space resource would be cast in incremental shadows in the early morning. These small areas that are cast in shadow contain walking paths, grass, and trees, and do not contain any playgrounds or other recreational activities that may be adversely affected by a reduction in sunlight

during these periods. The Penn South Houses open space would experience sunlight for the afternoon and most of the mid- to late morning hours during all four of the analysis periods. With a maximum incremental shadow duration of 2 hours and 12 minutes over a very small area, it is expected that this open space would still obtain adequate sunlight for its vegetation during the plant growing season (more than the 4 to 6 hour minimum specified in the *CEQR Technical Manual*), and there would not be significant adverse shadow impacts. Furthermore, the incremental shadows created by the projected and potential development sites are not expected to substantially reduce the usability of this open space, as the affected sections do not contain any benches, playgrounds or other active recreation areas that require sunlight. Therefore, the new incremental shadows cast by the Proposed Action on the Penn South Houses open space would not adversely affect the utilization or enjoyment of this resource.

As also discussed above, although the Proposed Development would not cast any incremental shadows on St. John the Baptist RC Church, the RWCDS assumed for the projected and potential development sites would cast incremental shadows on the stained glass windows on the Church façade on two of the four analysis days, March 21 and May 6/August 6. The projected and potential development sites would cast incremental shadows on portions of two of the stained glass windows on the bottom western façade of St. John the Baptist RC Church for a total of 25 minutes during the afternoon on the March 21 analysis day (first for a period of 18 minutes, and then for a period of 7 minutes). Although these windows are not visible from the street, visual observation indicates that they are clearly visible from within the church's main sanctuary. As illustrated in Figure L-4a above, the incremental shadows cast by the projected and potential development sites (but not the Proposed Development Site, which does not cast any incremental shadows on the church), these incremental shadows would move quickly, and would only cover portions of two of the stained glass windows on the lower western façade at any given time. Projected and potential development sites would also cast incremental shadows on window #6 of St. John the Baptist RC Church for 3 minutes during the afternoon on the May 6/August 6 analysis day. Visual inspection indicated that window #6 is located within a foyer entry to the church, which has a dropped ceiling that blocks internal light to this window. Window #6 is not visible from the main pew area or the altar of the church, and therefore the very brief shadows cast on this window – for 3 minutes only during the May analysis day – would not adversely affect the church's functions or architectural character, nor hamper public enjoyment of its key architectural features.

No incremental shadows would be cast on any of the Church's remaining sunlight-sensitive stained glass windows by the Proposed Action compared to No-Action conditions. Hence, no significant adverse shadow impacts are expected on St. John the Baptist RC Church as a result of the Proposed Action. The NYC Landmarks Preservation Commission (NYCLPC) has concurred with this finding, in a letter dated April 1, 2011 (refer to sign-off letter in Appendix 1 at the end of this document).

As none of the projected and potential development sites are owned or controlled by the applicant, the shadows analysis presented above is based on reasonable worst-case assumptions, including maximum height and bulk for future development on those sites. Should future development on the projected and potential development sites be different from the assumptions made herein, its shadow increments would be less than depicted in the analysis above.

IV. CONCLUSION

Overall, there would be no noticeable reduction in the usability of any open space or public appreciation of sunlight-sensitive historic resources as a result of incremental shadows created by the

Proposed Action, compared to No-Action conditions. The incremental shadows from the projected and potential development sites would reach very small portions of the Penn South Houses open space during all of the four representative analysis periods, and the stained glass windows of St. John the Baptist RC Church during the March and May analysis periods. As detailed above, it is expected that the Penn South Houses open space would still obtain adequate sunlight for its vegetation during the plant growing season, and the incremental shadows created by the projected and potential development sites are not expected to substantially reduce the usability of this open space, as the affected sections do not contain any benches, playgrounds or other active recreation areas that require sunlight. As also discussed above, the incremental shadows cast on the stained glass windows on the bottom western façade of St. John the Baptist RC Church, while adding up to a total of 25 minutes during the afternoon on the March 21 analysis day, would move quickly, and would only cover portions of two of the stained glass windows on the lower western façade at any given time. Window #6 St. John the Baptist RC Church, which would experience 3 minutes of incremental shadows on the May 6/August 6 analysis day, is located within a foyer entry to the church, which has a dropped ceiling that blocks light to this window, and is not visible from the main pew area or the altar of the church. Therefore the shadows cast on the sunlight sensitive elements of St. John the Baptist RC church –would not adversely affect the church's functions or architectural character, nor hamper enjoyment of its key architectural features. Therefore, no significant adverse shadows impacts are anticipated as a result the Proposed Action.

ATTACHMENT M
WATER & SEWER INFRASTRUCTURE

I. INTRODUCTION

This chapter evaluates the potential for significant adverse impacts on water and sewer infrastructure that could result from the proposed rezoning. As discussed in the Project Description, the RWCDS for future conditions with the proposed rezoning anticipates 10 projected development sites, consisting of 1,153 residential units, 60,729 sf of local retail, 5,390 sf of community facility, 11,390 sf of office, 174 hotel rooms, 325 public parking spaces, and 62 accessory parking spaces. In addition there are four (4) potential development sites, which are considered less likely to be developed, but which are considered potential sites for future development. Compared to future conditions without the proposed rezoning (i.e., the No Action scenario), the incremental change that would result from the Proposed Action at the 10 projected development sites is 1,134 residential dwelling units, 42,206 sf of retail space, and 7 accessory parking spaces and a decrease of approximately 15,153 sf of office, 189 hotel rooms (56,700 sf), 8,596 sf of industrial / manufacturing / warehousing / wholesale space, 975 sf of vacant land, and 146 public parking spaces. Therefore, new demands would be placed on New York City's infrastructure network under future conditions with and without the Proposed Action.

The Proposed Action would affect 10 development sites on 5.44 acres, located on two City blocks. As described in detail below, the net change in stormwater discharge within the rezoning area from Existing conditions to With-Action conditions ranges from approximately 0.02 million gallons (MG) to 0.15 MG for the various rainfall intensity increments.

The Proposed Action does not require a preliminary analysis for water supply because it would not result in an exceptionally large demand for water and is not located in an area of New York City that experiences low water pressure.

As discussed below, the Proposed Action would not result in significant adverse impacts to water supply, wastewater or stormwater conveyance and treatment infrastructure.

II. METHODOLOGY

This assessment looks at the differences among three conditions: Existing Conditions, the Future without the Proposed Action, and the Future with the Proposed Actions. The analysis follows the methodologies set out in *2010 CEQR Technical Manual.* Water and sewer demands are calculated based on the proposed uses of the project and the generation rates set by the *CEQR Technical Manual.* The ability of the City's water and sewer infrastructure to handle the anticipated demand is determined by comparing the existing conditions to the Proposed Actions and Future without the Proposed Actions. The existing and future stormwater runoff and sanitary flow volumes were calculated using the New York City Department of Environmental Protection (NYC DEP) Volume Calculation Matrix.

III. EXISTING CONDITIONS

Water Supply

The New York City water supply system comprises three watersheds north and northwest of the City: the Delaware, Catskill, and Croton. From these watersheds, water is conveyed as far as 125 miles to the City via a system of reservoirs, aqueducts, and tunnels. The system has 19 collecting reservoirs, two balancing reservoirs, aqueducts, and tunnels, with several dams, 3 major aqueducts, and 2 large water distribution tunnels, with a third major tunnel under construction and partially in use, and a system of water mains and other facilities. The watersheds of the three systems encompass almost 2,000 square miles, with a storage capacity of about 550 billion gallons. The water flows to the City through aqueducts, reaching most consumers by gravity alone, although some four percent of the City's water must be pumped to its final destination. The current average daily water consumption for the City as a whole is approximately 1.3 billion gallons per day (gpd) according to NYC DEP, the municipal agency that operates the system.

The NYC potable water supply is treated with a variety of chemicals for various reasons, including fluoride added for dental hygiene. NYC DEP conducts regular water quality monitoring to check the levels of treated water and to document compliance with federal and state water quality regulations. The City does not filter its drinking water supply; however, under a consent decree with the US Environmental Protection Agency (EPA) and the NY State Department of Health it is constructing a filtration plant in Van Cortlandt Park in the Bronx to filter water from the Croton system. Currently, the City is not required and is not planning to filter water from the Catskill and Delaware systems.[1]

Within the City, a grid of underground distribution mains brings water to consumers. Large mains—up to 96 inches in diameter—feed smaller mains, such as 8, 12 and 20-inch water-mains, that distribute water to individual locations. These mains also provide water to fire hydrants along many of the City's streets. Pressure regulators control water pressure throughout the City's water supply system. City Water Tunnel No. 1 serves as the primary water supply to the area surrounding the proposed rezoning area. The larger 20- and 48-inch water-mains feed the smaller 12-inch water-mains that currently exist in the area. Buildings drawing upon the water supply connect into the smaller distribution mains for their water needs.

Existing water demand within the proposed rezoning area is shown below in Table M-1. As indicated in the table, just over approximately 159,300 gpd of water is estimated for sanitary uses.

[1] Ascher, Kate, *The Works: Anatomy of a City*, 2005.

TABLE M-1
Water Consumption and Sewage Generation within the Proposed Rezoning Area – Existing Conditions

Use	Size (sf)		Number of DUs	CEQR Water Usage Rate			Multiplier	Water Consumption (gpd)
	FA	Lot Size						
Residential	670,578	--	217	Domestic	100	gpd/person	1.54	33,418
Commercial (Retail/Other)	170,745	--	0	Domestic	0.1	gpd/sf	0	17,075
Commercial (Office)	828,004	--	0	Domestic	0.1	gpd/sf	0	82,800
Industrial	144,149	14,447 (0.33 ac)	0	Domestic	10,000	gpd/acre	5.0	16,500
Transportation / Warehousing	0	--	0	Domestic	10,000	gpd/acre	5.0	0
Institutional	56,154	--	0	Domestic	0.17	gpd/sf	0	9,546
Open Space	0	--	0	Domestic	N/A	gpd	0	0
Parking	33,073	50,796 (1.17 ac)	0	Domestic	N/A	gpd	0	0
Vacant	2,845	--	0	Domestic	N/A	gpd	0	0
Total Domestic (Sanitary) Generation =								**159,339**

Notes:
1. Use and generation rates from the *CEQR Technical Manual*, unless otherwise noted.
2. Because the *CEQR Technical Manual* does not provide industrial water consumption rates, NYC DEP factors were used in determining industrial water demand. These factors are contained in NYC DEP's *Rules Governing the Design and Construction of Private Sewers or Private Drains.*
3. Residential calculation assumes 1.54 persons per DU, per the 2000 Census information for Manhattan Community District #5.

Sanitary Sewage

Based on use and generation rates from the *CEQR Technical Manual*, Table M-1 shows the estimated sanitary sewage generation within the rezoning area for existing conditions. As shown in Table M-1, the existing uses within the study area are estimated to consume approximately 159,339 gpd for sanitary (domestic) uses.

Total combined flows to the combined sewer system were estimated for existing conditions within the rezoning area using the NYC DEP flow calculations matrix. Total volume of combined flows for the rezoning area (i.e., 236,906 sf or 5.44 acres) for different rainfall events is shown in Table M-2.

TABLE M-2
Stormwater[1] and Sanitary Sewage[2] Flow Volumes in the Proposed Rezoning Area – Existing Conditions

Rainfall Volume (inches)*	Rainfall Duration (hours)*	Area = 236,906 sf (5.44 Acres)		
		Runoff Volume to Combined Sewer System (MG)	Sanitary Volume to Combined Sewer System (MG)	Total Volume to Combined Sewer System (MG)
0.00	3.80	0.00	0.03	0.03
0.40	3.80	0.06	0.03	0.08
1.20	11.30	0.17	0.08	0.25
2.50	19.50	0.36	0.13	0.49

Notes:
MG = Million Gallons
* Based on information provided by NYC DEP

Sanitary Flows to the North River WWTP

The proposed rezoning area is located in the service area of the North River WWTP, located on the Hudson River. The North River WWTP service area includes approximately 6,030 acres along the northern and western portion of Manhattan. It provides secondary treatment (85 percent removal of solids and biological oxygen demand organics) of sanitary sewage, including: primary settling, aeration, final settling, and disinfection. Wastewater or "effluent" is discharged into the Hudson River. The effluent is regulated by a State Pollutant Discharge Elimination System (SPDES) permit issued by the New York State Department of Environmental Conservation (NYSDEC). The North River WWTP is permitted to treat a flow of 170 mgd. The primary treatment capacity of the WWTP is twice the design dry weather flow, or 340 mgd. This allows the plant to treat a certain volume of combined sanitary and storm flows during wet weather events. The average flow rate at the plant for the latest 12 months of available NYC DEP records (May 2008 to April 2009) is 122.8 mgd (see Table M-3). Consequently, the North River WWTP currently receives flow at approximately 72 percent of its permitted 170 mgd dry weather capacity.

TABLE M-3
Monthly Average Actual Flows to the North River WWTP

Year	Month	Flow (mgd)
2008	May	123
	June	126
	July	126
	August	125
	September	134
	October	125
	November	122
	December	129
2009	January	119
	February	113
	March	111
	April	121
12-Month Average		**122.8**
SPDES Permitted Capacity		**170**
Source: Riverside Center DSEIS		

The proposed rezoning area is located in the service area of the North River WWTP on the west side of Manhattan, in subcatchment NR-027. Within this catchment area, many lots are underutilized and there is opportunity for increased density.

The combined sewer at the northern limit of the rezoning area within West 30th Street between 7th and 8th Avenues is a 4 feet by 6 feet box sewer. The combined sewer within West 29th Street between 7th and 8th Avenues is a 4-foot wide circular sewer. The combined sewer within West 28th Street between 7th and 8th Avenues is a 4-foot wide circular sewer. The sewers located within the rezoning area slope to the west, toward 8th Avenue, while the sewers in 8th Avenue flow north towards West 30th Street. The sewer in 8th Avenue between West 28th and West 29th Streets is 6 feet by 5 feet, 6-inches. The sewer in 8th Avenue between West 29th and West 30th Streets is 6 feet, 4-inches by 5 feet, 6-inches.

According to the *CEQR Technical Manual*, for assessment purposes, estimates of an area's daily sanitary sewage generation (described in more detail below) are typically equivalent to the domestic

water usage rates. Wastewater from air conditioning systems is not included in the overall volumes used for analysis, as minimal volumes of wastewater are generated from the re-circulation and evaporation processes involved in the air-cooling process.

Stormwater Drainage and Management

Stormwater runoff is generated by rainwater that collects on the surfaces of land or built structures. The volume of runoff generated by these surfaces varies depending on the type of land cover, which can be pervious (soil or landscaped surfaces that allow more percolation to the ground below, generating less runoff) or impervious (surfaces such as roads and building rooftops, that impede percolation and generate greater runoff). For example, runoff from an undeveloped site (i.e., not consisting of buildings or asphalt) will percolate into the ground with less runoff to a local street, and the runoff coefficient from pervious land surface is typically about 0.20. In contrast, a building roof has no percolation and, therefore, has a runoff coefficient of 1.00. Paved areas (e.g., streets and sidewalks) primarily generate runoff, with some percolation to the ground below (a runoff coefficient of 0.85 percent).

Based on a visual inspection of the aerial of existing conditions for the rezoning area, approximately 82 percent of the area is comprised of roof (approximately 194,263 sf or 4.46 acres), which has a runoff coefficient of 1.0; approximately 17 percent paved (approximately 40,274 sf or 0.92 acres); and 1 percent permeable (approximately 2,369 sf or 0.06 acres). Table M-4 shows a summary of the surface types under existing conditions.

TABLE M-4
Surface Types in the Proposed Rezoning Area – Existing Conditions

Existing Conditions				
Weighted Runoff Coefficient, C				
Surface Type[1]	Roof[2]	Pavement & Walks	Grass & Softscape	Total
Percentage of Total Area	82%	17%	1%	100%
Surface Area (sf)	194,263	40,274	2,369	236,906
Runoff Coefficient	1.00	0.85	0.20	0.97

Notes:
1. Runoff coefficients for each surface type are as per NYC DEP.
2. Total roof areas within the catchment area.

As indicated in Table M-4, the catchment area consists predominantly of fully built lots, or paved lots, with very little pervious surfaces. Therefore, the existing runoff coefficient is 0.97. Table M-2 shows the total runoff volume to the combined sewer system for the various rainfall volumes and durations.

IV. THE FUTURE WITHOUT THE PROPOSED ACTION (NO-ACTION CONDITION)

As shown in Table A-5, some changes are anticipated under the future No-Action condition within the rezoning area, including the development of a hotel on Projected Development Site #5 as well as reuse of existing vacant space within buildings on Projected Development Sites #3 and #9 for office use.

One new development and minor conversions are anticipated within the rezoning area in the future without the Proposed Action.

Water Consumption

As a result of the anticipated development under No-Action conditions, water consumption within the rezoning area is expected to increase slightly to 168,400 gpd over existing conditions, as seen in Table M-5, "Water Consumption within the Proposed Rezoning Area – No-Action Condition."

TABLE M-5
Water Consumption within the Proposed Rezoning Area –No-Action Condition

Use	Size (sf)		Number of DUs	CEQR Water Usage Rate			Multiplier	Water Consumption (gpd)
	FA	Lot Size						
Residential	699,318	--	216	Domestic	100	gpd/person	1.54	33,264
Commercial (Retail / Other)	2663,539	--	0	Domestic	0.1	gpd/sf	0	26,654
Commercial (Office)	824,399	--	0	Domestic	0.1	gpd/sf	0	82,440
Industrial	139,923	14,447 (0.33 ac)	0	Domestic	10,000	gpd/acre	5.0	16,500
Transportation & Warehousing	0	0	0	Domestic	10,000	gpd/acre	5.0	0
Institutional	56,154	--	0	Domestic	0.17	gpd/sf	0	9,546
Open Space	0	0	0	Domestic	N/A	gpd	0	0
Parking	33,073	50,796 (1.17 ac)	0	Domestic	N/A	gpd	0	0
Vacant	0	0	0	Domestic	N/A	gpd	0	0
							Total Domestic (Sanitary) Generation =	**168,404**

Notes:
1. Use and generation rates from the *CEQR Technical Manual*, unless otherwise noted.
2. Because the *CEQR Technical Manual* does not provide industrial water consumption rates, NYC DEP factors were used in determining industrial water demand. These factors are contained in NYC DEP's *Rules Governing the Design and Construction of Private Sewers or Private Drains.*
3. Residential calculation assumes 1.54 persons per DU, per the 2000 Census information for Manhattan Community District #5.

Sanitary Sewage

As a result of the anticipated development under No-Action conditions, sanitary flows within the rezoning area are expected to increase by 9,065 gpd over existing conditions, as seen in Table M-5.

Stormwater Drainage and Management

The anticipated surface types under the No-Action condition increase slightly over existing conditions. These estimates are based on the planned developments and the related land uses within the rezoning area, as described above and as discussed in detail in Attachment C in Table C-2. As indicated below, when compared to existing conditions, the roof area under future No-Action conditions is expected to increase.

As the surface conditions would remain largely unchanged from existing conditions to future conditions without the Proposed Action, the weighted runoff coefficient for the No-Action condition would remain 0.97.

As compared to existing conditions, there would be slight increases in combined flows to the combined sewer system under No-Action conditions. However, the incremental flows are not considered significant and no impacts are anticipated within the catchment area, nor are any impacts to the WWTP anticipated.

V. FUTURE WITH THE PROPOSED ACTION (WITH-ACTION CONDITION)

Water Supply

In the future with the Proposed Action, it is estimated that the proposed rezoning would result in new water demand. The rezoning and the subsequent development that is expected to occur on the 10 projected development sites would add incremental demand to the catchment area. With the anticipated mix of uses that is expected on the projected development sites in the future with the Proposed Action, water consumption would likely increase as compared to the Existing and No-Action condition water demand. As shown below in Table M-6, the anticipated domestic (sanitary) water demand on the projected development sites is expected to be approximately 339,200 gpd.

As compared to the Existing water demand described above (see Table M-1), the proposed mix of uses associated with the Proposed Action would result in a net increase in water consumption. Table M-7 shows a comparison of the Existing water demand and compares it to the anticipated With-Action water demand. While the Existing water demand is approximately 159,300 gpd for domestic uses, the anticipated demand from the projected development sites for domestic uses is approximately 339,200 gpd. Therefore, the anticipated increase in sanitary flow resulting from the Proposed Action would be approximately 179,900 gpd.

TABLE M-6
Water Consumption and Sewage Generation on the Projected Development and Conversion Sites – With-Action Condition

Use	Size (sf)		Number of DUs	CEQR Water Usage Rate			Multiplier	Water Consumption (gpd)
	FA	Lot Size						
Residential	1,618,721	--	1,350	Domestic	100	gpd/person	1.54	207,900
Retail	243,449	--	0	Domestic	0.1	gpd/sf	0	24,345
Office/Other Commercial	809,246	--	0	Domestic	0.1	gpd/sf	0	80,925
Industrial	139,923	14,447 (0.33 ac)	0	Domestic	10,000	gpd/acre	5.0	16,500
Transportation & Warehousing	0	--	0	Domestic	10,000	gpd/acre	5.0	0
Institutional	56,154	--	0	Domestic	0.17	gpd/sf	0	9,546
Open Space	0	--	0	Domestic	N/A	gpd	0	0
Parking	82,173	--	0	Domestic	N/A	gpd	0	0
Vacant	0	--	0	Domestic	N/A	gpd	0	0
Total Domestic (Sanitary) Generation =								**339,216**

Notes:
1. Use and generation rates from the *CEQR Technical Manual*, unless otherwise noted.
2. Because the *CEQR Technical Manual* does not provide industrial water consumption rates, NYC DEP factors were used in determining industrial water demand. These factors are contained in NYC DEP's *Rules Governing the Design and Construction of Private Sewers or Private Drains.*
3. Residential calculation assumes 1.54 persons per DU, per the 2000 Census information for Manhattan Community District #5.

TABLE M-7
Incremental Water Consumption and Sewage Generation on the Projected Development and Conversion Sites (From Existing / No-Action Condition to With-Action Condition)

Land Use	Water Consumption (gpd)			
	Type of Water Use	Existing Condition	With-Action Condition	Increment
Residential	Domestic	33,418	207,900	174,482
Commercial (Retail/Other)	Domestic	17,075	24,345	7,270
Commercial (Office)	Domestic	82,800	80,925	(1,875)
Industrial	Domestic	16,500	16,500	0
Transportation & Warehousing	Domestic	0	0	0
Institutional	Domestic	9,546	9,546	0
Open Space	Domestic	0	0	0
Parking	Domestic	0	0	0
Vacant	Domestic	0	0	0
Total Domestic (Sanitary) Generation =		**159,339**	**339,216**	**179,877**

As indicated in Table M-7, the total anticipated sanitary volume that is expected to occur in the rezoning area in the future with the Proposed Action is approximately 339,200 gpd.

The incremental increase in water demand is negligible compared to the total Citywide demand for potable water. As such, the anticipated incremental water demand associated with the Proposed Action would therefore be unlikely to adversely impact the City's water supply or water pressure.

Sanitary Sewage

As indicated above, the anticipated incremental sewage demand as a result of the proposed rezoning would increase by just under approximately 179,900 gpd from Existing conditions (approximately 159,300 gpd) to proposed future conditions (339,200 gpd). This incremental increase of approximately 179,900 gpd in sanitary flow would not result in adverse impacts to the sewage system within the catchment area or to the North River WWTP as it is approximately 0.1 percent of the WPCP's dry weather capacity. The Proposed Action would not adversely affect the treatment efficiencies of the WWTP or cause the plant to not properly treat the wastewater prior to discharge to the Hudson River. Overall, the proposed rezoning would not cause significant adverse impacts on the sewer system. Furthermore, this analysis conservatively takes no credit for reductions that would be expected from the water saving features that may be associated with the projected developments (e.g., low-flow fixtures), which would help to reduce sewage generation.

Table M-8 estimates the total combined flow volume (stormwater runoff and sanitary flows) to the combined sewer system. As shown below, depending on the rainfall volume and duration, the total volume to the combined sewer system could be between 0.05 and 0.64 MG.

TABLE M-8
Combined Stormwater[1] and Sanitary Sewage[2] Flow Volumes to Combined Sewer System in the Proposed Rezoning Area – Future With-Action Condition

Rainfall Volume (inches)*	Rainfall Duration (hours)*	Area = 236,906 sf (5.44 Acres)		
		Runoff Volume to Combined Sewer System (MG)	Sanitary Volume to Combined Sewer System (MG)	Total Volume to Combined Sewer System (MG)
0.00	3.80	0.00	0.05	0.05
0.40	3.80	0.06	0.05	0.11
1.20	11.30	0.17	0.16	0.33
2.50	19.50	0.36	0.28	0.64

Notes:
MG = Million Gallons
* Based on information provided by NYC DEP

Stormwater Drainage and Management

In the future with the Proposed Action, the projected development sites would continue to contain impervious surfaces such as roofs or asphalt. As compared to existing and No-Action conditions, there would be no substantial increase in the amount of impervious surface on the projected development sites as these sites are currently comprised of impervious roof or asphalt surfaces. Table M-9 shows the surface types that are anticipated in the catchment area under future With-Action conditions. As indicated below, the future With-Action conditions are expected to result in increased roof areas and decreased asphalt areas, while the pervious surface area is expected to remain unchanged.

TABLE M-9
Surface Types in the Proposed Rezoning Area – Future With-Action Condition

	Weighted Runoff Coefficient, C			
Surface Type[1]	Roof[2]	Pavement & Walks	Grass & Softscape	Total
Percentage of Total Area	89%	10%	1%	100%
Surface Area (sf)	210,846	23,691	2,369	236,906
Runoff Coefficient	1.00	0.85	0.20	0.98

Notes:
1. Runoff coefficients for each surface type are as per NYC DEP.
2. Total roof areas within the catchment area.

Depending on the rainfall volume and duration, the total volume to the combined sewer system could be between 0.05 and 0.64 MG. However, the incremental increase over Existing conditions, shown below in Table M-10, indicates that the Proposed Action has the potential to result in incremental increases within the catchment area as compared to Existing conditions, with each analyzed scenario indicating an incremental increase of between 0.02 and 0.15 MG for the various rainfall volumes and duration as compared to Existing conditions. As the matrix indicates, the combined stormwater and sanitary volumes from the project area would increase by approximately 31 percent to 67 percent above existing conditions dependent on different storm events. Combined sewer overflows from the project area discharged to the Hudson River would increase between 0.02 and 0.15 MG dependent on duration of the storm event.

TABLE M-10
Incremental Increase in Combined Stormwater[1] and Sanitary Sewage[2] Flow Volumes to the Combined Sewer System in the Proposed Rezoning Area – Future With-Action Condition

Rainfall Volume (inches)*	Rainfall Duration (hours)*	Total Volume to Combined Sewer System (MG)			Percent Change (%)
		Existing Conditions	With-Action Conditions	Increment	
0.00	3.80	0.03	0.05	0.02	67
0.40	3.80	0.08	0.11	0.03	38
1.20	11.30	0.25	0.33	0.08	32
2.50	19.50	0.49	0.64	0.15	31

Notes:
MG = Million Gallons
* Based on information provided by NYC DEP

New flows and volumes would be introduced to the combined sewer system as a result of the Proposed Action. These increased volumes and flows would be conveyed to the North River WPCP, or discharged directly to the Hudson River, dependent upon the storm event. As such, a Best Management Practices (BMPs) concept plan has been developed to illustrate the opportunities for development lots within the rezoning area to incorporate on-site stormwater source controls during site planning and building design phases of project development.

Stormwater Best Management Practices Concept Plan

The following BMP Concept Plan illustrates opportunities for development lots within the proposed rezoning area to incorporate on-site stormwater source controls during site planning and building design phases of project development and help achieve a target stormwater release rate of 0.25 cfs or 10 percent of the allowable flow per the drainage plan, whichever is greater.

The increased flows to the combined sewer within the affected CSO subcatchment area is a direct result of the increased densities and sanitary flows associated with the Proposed Action. The implementation of low-flow fixtures, as per the New York City Plumbing Code, Local Law 33 of 2007 and the US Environmental Protection Agency's WaterSense Program, will help to control sanitary flows. To further offset these increases, onsite stormwater source controls or BMPs would be implemented to retain or slowly release stormwater runoff with controlled discharge rates to the City's combined sewer system.

Enhanced stormwater management throughout the City is consistent with recent policies including the *NYC Green Infrastructure Plan* and Mayor Bloomberg's *PlaNYC 2030* and *Sustainable Stormwater Management Plan*. The *NYC Green Infrastructure Plan*, released September 2010, includes a goal of capturing the first inch of rainfall on 10 percent of the impervious areas in combined sewer watersheds through detention or infiltration techniques over 20 years.

A BMP concept plan has been prepared for this area. The typical BMP measures described would help to avoid an exacerbation of existing CSOs discharged to the Hudson River. These measures may include the implementation of BMPs described in the NYC Green Infrastructure Plan, including blue and green roofs, subsurface detention, porous pavement, enhanced tree pits, rain gardens or infiltration swales and rain cisterns.

Self-certification of house or site connection proposals will not be permitted by the Department of Buildings or NYC DEP in connection with any proposed new developments or expansions of existing development as per the Rules of the City of New York, Title 15, Chapter 31, "Rule Governing House / Site Connections to the Sewer System." Because the City's sewers are sized and designed based on the designated zoning of an area, and related population density and surface coverage characteristics, proposed rezoning may result in development that is inconsistent with the design of the existing built sewer system. At this time, there are no plans to amend the drainage plan for the proposed affected area or upgrade the affected sewer system. To be issued a permit to connect to a City sewer within the proposed rezoning area, an applicant proposing a new development or expansion of an existing development would be required to submit a site-specific hydraulic analysis to NYC DEP for review and approval. The site-specific hydraulic analysis would establish the adequacy of the existing combined sewer system that would serve the development lot. Based on this site-specific hydraulic analysis, sewer improvements, incorporation of a variety of the BMPs, may be required of the applicant at the time of the house or site connection proposal.

The applicant would incorporate BMPs to achieve a 0.25 cfs release rate (or 10 percent of the allowable flow, whichever is greater) from the site to the sewer system. To achieve this release rate, the applicant will manage stormwater by utilizing one or more detention or infiltration techniques identified in the *NYC Green Infrastructure Plan*, which may include green roofs, blue roofs, subsurface detention and infiltration, or permeable pavement, or a combination of these green technologies. These green technologies would retain or release stormwater with slowed discharge rates to control peak runoff rates. Trees planted per NYC's street tree requirements could also be utilized to capture and store water below an enhanced tree pit.

The Proposed Action would increase flows into the City's combined sewer system that may discharge as CSOs into the Hudson River during rain events. Because of the available assimilative capacity of the Hudson River, the projected increased flows to the combined sewer system would not have a significant adverse impact on water quality.

Based on the analysis described above, conducted pursuant to *CEQR Technical Manual* methodologies, and in concert with the measures described above, it is concluded that the Proposed Action would not result in significant adverse impacts to local water supply or wastewater and stormwater conveyance and treatment infrastructure with the above measures in place.

VI. CONCLUSION

Water Supply

The incremental additional water usage as a result of the Proposed Action is expected to total 78,146 gpd. This incremental demand would represent less than one-tenth of one percent of the overall water supply and less than half of one percent of Manhattan's water supply. Changes of this magnitude would not be large enough to have a significant adverse impact on the city's water system. Since the water mains that supply the project area are generally cast iron pipes, occasional water service disruptions for the project area are anticipated similar to the no action condition.

Sanitary Sewage

The North River WWTP handles an average of 122.8 mgd of sewage flow over the 12 month period that was analyzed and it is designed to treat a dry weather flow of 170 mgd. Based on rates in the *CEQR Technical Manual*, the proposed rezoning has the potential to result in an incremental sanitary sewage discharge of just under approximately 179,900 gpd over the existing condition. This incremental increase in sanitary flow would not result in significant adverse impacts to the sewage system within the catchment area or to the North River WWTP as it is approximately 0.1 percent of the dry weather capacity. As described above, the projected increase in sanitary sewage would not result in new impacts within the catchment area or cause the North River WWTP to exceed its operational capacity or the SPDES-permitted capacity of 170 mgd.

Stormwater Drainage and Management

As described above, there would be increases of combined sewer volumes in the subcatchment areas affected by the proposed development as compared to existing conditions. No measurable change in stormwater runoff from the new development as a result of the Proposed Action is expected as projected development sites are already occupied by buildings or other impervious surfaces.

Based on the analysis pursuant to the *CEQR Technical Manual*, with the above mentioned BMPs, it is concluded that the Proposed Action would not result in significant adverse impacts on the water supply, wastewater or stormwater conveyance and treatment infrastructure.

ATTACHMENT N
CONSTRUCTION IMPACTS

I. INTRODUCTION

Although temporary, construction impacts can include noticeable and disruptive effects from an action that is associated with construction or could induce construction. Determination of the significance of construction impacts and need for mitigation is generally based on the duration and magnitude of the impacts. Construction impacts are usually important when construction activity could affect traffic conditions, archaeological resources, the integrity of historic resources, community noise patterns, and air quality conditions.

The Proposed Action would result in the development and construction of new residential, commercial, and mixed-use buildings with building heights of up to 210 feet. Ten projected development sites (including the Proposed Development Site) are expected to be developed within eight years following the adoption of the proposed zoning changes. As discussed in Attachment A, Project Description," the ten projected development sites (eight new construction sites and two conversion sites) are expected to accommodate a total of 1,153 residential units, 174 hotel rooms and 72,119 sf of commercial uses (including local retail/food store and office space). The applicant's Proposed Development Site is the largest of the projected developments, with an estimated 407 units and 16,075 sf of commercial uses. The next largest site is projected development site 5 which would accommodate an estimated 263 units and 39,828 sf of local retail/food store uses. Projected development site 7 would be developed as a 174 room hotel. The remaining seven projected development sites would be of a smaller scale, averaging approximately 70 units and 2,700 sf of commercial use per site. In addition, there are four potential development sites considered less likely to be developed over the eight-year analysis period, which are considered potential sites for future development.

As construction activity associated with the RCWDS would occur over an eight-year period, and as the rezoning area is located within the Manhattan CBD, a preliminary assessment of potential construction impacts was prepared in accordance with the guidelines of the *2010 CEQR Technical Manual*, and is presented in this attachment.

II. CONCEPTUAL CONSTRUCTION SCHEDULE AND ACTIVITIES

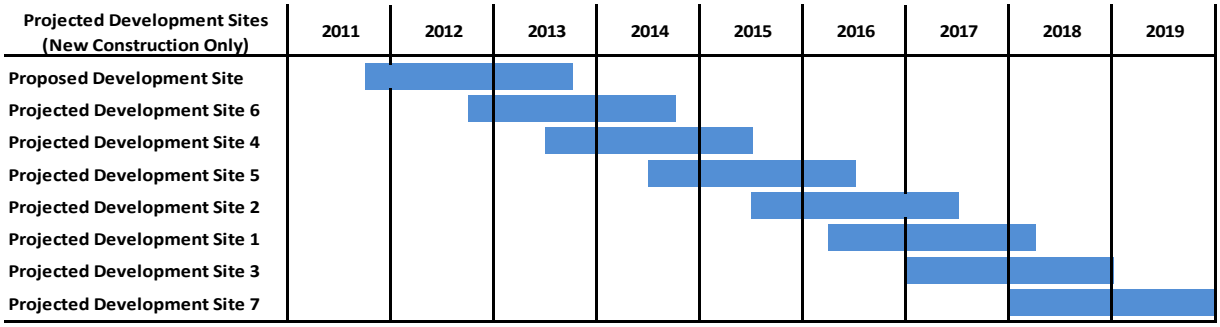
Construction induced by the Proposed Action would be gradual, taking place over an eight-year period. The larger projected development sites, such as the Proposed Development Site and projected development site 5, would generally take 18-24 months for construction, whereas the construction period for the remaining sites, which are smaller, is expected to last for 12 to 18 months. The two conversion sites are much smaller, and would require a much shorter conversion period. Based on the total square footage of the eight projected development sites that would entail demolition and new construction, and estimated construction costs, it is estimated that construction of the projected

development sites would generate approximately 1,360 person-years[1] of construction employment over the eight-year analysis timeframe. This represents the equivalent of about 170 workers per year over an 8-year span.

Apart from the Proposed Development planned by the applicant, the Proposed Action is not intended to facilitate any specific development on the remaining projected development sites. As such, the reasonable worst case development scenario presented in Attachment A, "Project Description," does not describe which of the sites would be developed first or assume a particular sequence of development. However, it is assumed that construction of all projected development sites, including the Proposed Development Site, would likely be completed by 2019. Market considerations will ultimately determine the demand for residential development. For the purposes of assessing potential construction impacts, it is assumed the construction of the Proposed Development Site would begin first, immediately after approval of the Proposed Action, with construction of the remaining seven projected development sites entailing new construction staggered throughout the analysis period as illustrated in Figure N-1. It is also conservatively assumed that each projected development site would be under construction for 24 months.

The sequencing shown in Figure N-1 was projected based on lot size, lot ownership, and proximity to the Proposed Development Site (with the assumption that larger vacant sites and parking lots near the Proposed Development Site would be developed first for example), as well as number of dwelling units currently occupying the lots (5 units or fewer versus 6 or more). As shown in Figure N-1, up to 3 of the identified projected development sites may be under construction at any given time. Thus, for conservative analysis purposes, in order to account for surge or peak activity, it is also estimated that 50% additional person-years of construction employment per year – or an estimated 255 construction jobs – would occur within the rezoning area at any given time. This represents the peak construction employment estimate for the rezoning area.

Figure N-1
Assumed Construction Schedule for Assessment of Construction Impacts*



* The two conversion sites are not included in the above schedule, which only reflects the eight projected development sites entailing new construction.

Following is a general outline of typical scheduling for construction on the projected development sites. It should be noted however that the duration and extent of new construction activities would vary based on which site is being developed. Also, for conversion sites, the construction process is much simpler and shorter in duration and involves much less external work.

[1] A person-year is the equivalent of one person working full time for one year. Number is estimated based on RIMS II analysis, based on a total construction cost estimate of $363.93 million for all 8 projected development sites entailing new construction ($325/sf for Proposed Development Site, $350/sf for all other projected development sites).

- Months 1-4: Site clearance, excavation, and foundation. The first 4 months of construction would entail site clearance; digging, pile-driving, pile capping, and excavation for the foundation; dewatering (to the extent required), and reinforcing and pouring of the foundation. Typical equipment used for these activities would include excavators, backhoes, tractors, pile-drivers, hammers, and cranes. Trucks would arrive at the site with pre-mixed concrete and other building materials, and would remove any excavated material and construction debris.
- Months 5-10: Erection of the superstructure and underground parking foundation, if any. Once the foundations have been completed, the construction of the building's steel framework, parking ramp, and decking would take place. This process involves the installation of beams, columns and decking, and would require the use of cranes, derricks, hoists, and welding equipment.
- Months 11-24: Façade and roof construction, mechanical installation, interior and finishing work. This would include the assembly of exterior walls and cladding; installation of heating, ventilation and air conditioning (HVAC) equipment and ductwork; installation and checking of elevator, utility, and life safety systems; and work on interior walls and finishes. During these activities, hoists and cranes would continue to be used, and trucks would remain in use for material supply and construction waste removal. It should be noted that much of this work occurs when the building is fully enclosed, and therefore is not disruptive to the surrounding area.

In accordance with city laws and regulations, construction work would generally begin at 7:00 AM on weekdays, with some workers arriving to prepare work areas between 6:00 AM and 7:00 AM. Normally, work would end at 3:30 PM, but it can be expected that at times, the workday could be extended to complete some specific tasks beyond normal work hours, such as completing the drilling of piles, finishing a concrete pour for a floor deck, or completing the bolting of a steel frame erected that day. The extended workday would generally last until about 6:00 PM and would not include all construction workers on-site, but just those involved in the specific task requiring additional work time. Limited extended workdays are expected to occur on weekdays over the course of construction.

Occasionally, Saturday or overtime hours may be required to complete some time-sensitive tasks. Weekend work requires a permit from the NYCDOB and, in certain instances, approval of a noise mitigation plan from the NYCDEP under the City's Noise Code. The New York City Noise Control Code, as amended December 2005 and effective July 1, 2007 limits construction (absent special circumstances as described below) to weekdays between the hours of 7:00 AM and 6:00 PM, and sets noise limits for certain specific pieces of construction equipment. Construction activities occurring after hours (weekdays between 6:00 PM and 7:00 AM and on weekends) may be permitted only to accommodate: (i) emergency conditions; (ii) public safety; (iii) construction projects by or on behalf of city agencies; (iv) construction activities with minimal noise impacts; and (v) undue hardship resulting from unique site characteristics, unforeseen conditions, scheduling conflicts and/or financial considerations. In such cases, the numbers of workers and pieces of equipment in operation would be limited to those needed to complete the particular authorized task. Therefore, the level of activity for any weekend work would be less than a normal workday. The typical weekend workday would be on Saturday from 7:00 AM with worker arrival and site preparation to 5:00 PM for site cleanup.

Construction staging would most likely occur on the projected and potential development sites themselves and may, in some cases, extend within portions of sidewalks and curb and travel lanes of public streets adjacent to the construction sites. During the course of construction, traffic lanes and sidewalks may have to be temporarily closed or protected for varying periods of time. The Proposed Development Site, which is the largest of the identified sites, has two street frontages, and therefore the north curb lane on West 28th Street as well as the south curb on West 29th Street between Seventh

and Eighth Avenues would likely be used for construction purposes for the duration of the construction of the Proposed Development. Similarly, as projected development site 5 also has two street frontages, the north curb lane on West 29th Street and the south curb lane on West 30th Street between Seventh and Eighth Avenues would likely be used for construction purposes for the duration of construction on projected development site 5. Given the rezoning area's midblock location and the identified projected development sites, it is likely that the north curb lane on West 28th Street between Seventh and Eighth Avenues would be used for construction purposes for the duration of constructing projected development sites 1 and 3; the south curb lane on West 29th Street would be used for construction purposes for the duration of constructing projected development site 2; the north curb lane on West 29th Street would be used for construction purposes for the duration of constructing projected development sites 4 and 6; and the south curb lane on West 30th Street would be used for construction purposes for the duration of constructing projected development site 7.

Some other lanes and sidewalks may be closed intermittently to allow for certain construction activities. Any sidewalk or street closures require the approval of the New York City Department of Transportation's Office of Construction Management and Coordination (NYCDOT-OCMC), the entity that insures critical arteries are not interrupted, especially in peak travel periods. There are no bus stops on any of the affected cross-streets, and construction of the projected development sites would not affect either Seventh or Eighth Avenues (both of which are designated local truck routs, as is West 29th Street).

Builders would be required to plan and carry out noise and dust control measures during construction. Construction activities would be subject to compliance with the New York City Noise Code and by EPA noise emission standards for construction equipment. In addition, there would be requirements for street crossing and entrance barriers, protective scaffolding, and strict compliance with all applicable construction safety measures.

III. PRELIMINARY ASSESMENT

In accordance with the guidelines of the *2010 CEQR Technical Manual*, this preliminary assessment evaluates the effects associated with the Proposed Action's construction related activities including transportation, air quality, noise, archaeological resources, historic resources, and hazardous materials. As discussed below, based on the results of the preliminary assessment, a detailed analysis of construction impacts is not warranted for the Proposed Action.

Transportation

The Proposed Action would result in residential, commercial, and mixed-use development over an eight-year period in newly constructed buildings on eight of the ten projected development sites and on the four potential development sites in the rezoning area. These developments would replace No-Action uses on the development sites, including commercial, light industrial/warehousing, residential, and parking uses. During construction periods, projected development sites would generate trips by workers traveling to/from the construction sites, and in relation to the movement of materials and equipment. Given typical construction hours, worker trips would be concentrated in off-peak hours and would not represent a substantial increment during the area's peak travel periods.

Construction Traffic Projections

Average daily construction worker and truck activities were projected for the entire period of construction. These projections were further refined to account for worker modal splits and vehicle occupancy, and arrival and departure distribution. For a reasonable worst-case analysis of potential transportation-related impacts during construction, the peak daily workforce and truck trip projections were used as the basis for estimating peak hour construction trips. As noted above, the daily average number of construction workers during peak construction was estimated at 255 workers, and the number of truck deliveries per day was estimated at 12.[2] These represent peak days of work, and many days during the construction period would have fewer construction workers and delivery trucks. These estimates of construction activities are further discussed below.

Construction Worker Modal Splits

Based on the analysis presented in the 15 Penn Plaza FEIS (2010), it is anticipated that construction workers' travel within or commute to midtown Manhattan would be primarily by public transportation (approximately 70 percent), with a smaller percentage by private auto (approximately 30 percent) and an average auto occupancy rate of 2.04.

Peak Hour Construction Worker Vehicle and Truck Trips

The construction schedule assumes that all site activities would take place during the typical construction shift of 7:00 AM to 3:30 PM. While construction truck trips would be made throughout the day (with more trips made during the early morning), and trucks would remain in the area for shorter durations, construction worker travel would typically take place during the hours before and after the work shift. Table N-1 summarizes construction worker vehicle and truck trips during the peak construction periods for the RWCDS. As shown in the table, approximately 3 trucks and 29 autos are expected to come to the rezoning area during the 6 AM to 7 AM peak arrival hour for construction-related activity, while 2 trucks and no autos are expected to do likewise during the 8 AM to 9 AM peak travel hour for the study area. In the afternoon, as shown in the table, no trucks and approximately 29 autos are expected to take construction workers out of the rezoning area during the 3 PM to 4 PM peak departure hour for construction-related activity, while no constructed-related traffic would occur during the 5 PM to 6 PM peak travel hour for the study area. The maximum number of passenger car equivalents (PCEs), estimated at 45, would occur in the 6 AM to 7 AM period, while PCE values during the peak AM and PM travel periods would be 10 and 0, respectively.

Distributed to various roadways and parking facilities near the rezoning area, these incremental construction vehicle trips would not result in more than 50 vehicle-trips (the CEQR analysis threshold) at any intersection. Therefore, a detailed study area construction traffic analysis is not warranted and the proposed project is not expected to result in significant adverse construction traffic impacts.

Cumulative Construction and Operational Effects in 2018

Given that construction of the 8 projected developments sites entailing new construction would be spread out over an 8 year period, for analysis purposes, it is assumed that 2018 represents the worst-case year for assessing the cumulative effects resulting from most of the sites being occupied and in operation while others are under construction. An assessment was conducted in order to estimate the

[2] Truck estimate calculated based on the ratio of construction workers to trucks derived from the analysis presented in the FEIS for the 15 Penn Plaza office development on Seventh Avenue between West 32nd and West 33rd Streets (where a maximum of 1,145 workers were predicted to yield 55 trucks at the same period).

TABLE N-1

Peak Construction Vehicle Trip Projections

Hour	Auto Trips			Truck Trips			Total Vehicle Trips			Total PCEs *		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
6 AM – 7 AM	29	0	29	3	3	6	32	3	35	37	8	45
7 AM – 8 AM	7	0	7	2	2	4	9	2	11	12	5	17
8 AM – 9 AM	0	0	0	2	2	4	2	2	4	5	5	10
9 AM – 10 AM	0	0	0	2	2	4	2	2	4	5	5	10
10 AM – 11 AM	0	0	0	1	1	2	1	1	2	3	3	6
11 AM – Noon	0	0	0	1	1	2	1	1	2	3	3	6
Noon – 1 PM	0	0	0	1	1	2	1	1	2	3	3	6
1 PM – 2 PM	0	0	0	0	0	0	0	0	0	0	0	0
2 PM – 3 PM	0	3	3	0	0	0	0	3	3	0	3	3
3 PM – 4 PM	0	29	29	0	0	0	0	29	29	0	29	29
4 PM – 5 PM	0	4	4	0	0	0	0	4	4	0	4	4
5 PM – 6 PM	0	0	0	0	0	0	0	0	0	0	0	0

NOTES:

1. Construction auto trips for the RWCDS were based on 255 daily workers with a 28.9 percent auto split and an average auto occupancy rate of 2.04. It is assumed that 80% of construction worker arrival and departure trips would take place during the hour before and after each shift.

2. Construction truck trips for the proposed project were based on 12 daily trucks with 25% of daily deliveries occurring in the early morning hour.

***** PCEs calculated at 1.0 PCE per personal Auto, and 2.5 per construction truck (to be conservative, all construction vehicles were assumed to be heavy trucks).

total traffic generated (from both construction activities as well as operational activity) in the year 2018. Based on the sequencing shown in Figure N-1 above, it is anticipated that by the year 2018, the Proposed Development Site as well as projected development sites 6, 4, 5, and 2 would be completed and operational, while sites 1, 3, and 7 would be undergoing different stages of construction. At the same time, all of the No-Action uses on the projected development sites would be eliminated (five of the sites would be already redeveloped and occupied and the three remaining sites would be under construction).

Level 1 (Project Trip Generation) Screening Assessment

Under *2010 CEQR Technical Manual* Level 1 screening assessment criteria, if a proposed action in any area of the City would generate fewer than 50 peak hour vehicle trip ends, it is unlikely to result in significant adverse impacts, and further analysis is not warranted. For conservative analysis purposes, the peak hours of construction activities were used in assessing the 2018 worst-case cumulative scenario. Based on Table N-1 above, these are 6-7 AM, 7-8 AM, and 3-4 PM.

The transportation planning factors used to estimate the travel demand associated with this scenario (for both No-Action and With-Action conditions) are summarized in Table N-2, and Tables N-3 and N-4 show an estimate of the peak hour person trips and vehicle trips (auto, taxi and truck) associated with uses on these five projected development sites (including the Proposed Development Site) in 2018 under both No-Action and With-Action conditions. Table N-5 shows the utilization of the proposed 325-space public parking garage on the Proposed Development Site in 2018.

TABLE N-2
Transportation Planning Assumptions

Land Use:	Local Retail/ Foodstore	Office		Residential	Industrial/ Wholesale		Hotel	
Trip Generation:	(1)	(1)		(1)	(7)		(3)	
Weekday	205 per 1,000 sf	18 per 1,000 sf		8.075 per DU	9.55 per 1,000 sf		9.4 per room	
Temporal Distribution:	(8)	(8)		(8)	(8)		(8)	
AM (6-7 AM)	0.0%	0.0%		0.6%	0.0%		2.0%	
AM (7-8 AM)	0.0%	1.1%		3.9%	2.1%		4.1%	
PM (3-4 PM)	6.8%	3.5%		5.4%	6.0%		4.0%	
	(2)	(5)		(6)	(5)		(3)	
Modal Splits:	AM/PM	AM/PM	AM/PM	AM/MD/PM	AM/PM	AM/PM	AM/PM	AM/PM
Auto	2.0%	14.7%	14.7%	7.0%	14.7%	14.7%	9.1%	9.1%
Taxi	3.0%	1.0%	1.0%	5.1%	1.0%	1.0%	17.5%	17.5%
Subway	6.0%	67.3%	67.3%	50.8%	67.3%	67.3%	24.2%	24.2%
Bus	6.0%	12.4%	12.4%	5.8%	12.4%	12.4%	3.1%	3.1%
Walk	83.0%	4.6%	4.6%	31.3%	4.6%	4.6%	46.1%	46.1%
	100.0%	100.0%	100%	100.0%	100.0%	100%	100.0%	100%
	(8)	(8)		(8)	(8)		(8)	
In/Out Splits:	In Out	In	Out	In Out	In	Out	In	Out
AM (6-7 AM)	50% 50%	50.0%	50.0%	15.0% 85.0%	88.0%	12.0%	15.0%	85.0%
AM (7-8 AM)	50% 50%	90.0%	10.0%	15.0% 85.0%	85.0%	15.0%	20.0%	80.0%
PM (3-4 PM)	50% 50%	48.0%	52.0%	60.0% 40.0%	30.0%	70.0%	45.0%	55.0%
Vehicle Occupancy:	(2)	(5)		(6)	(3)		(3)	
Auto	1.65	1.20		1.11	1.30		1.40	
Taxi	1.40	1.20		1.40	1.40		1.80	
Truck Trip Generation:	(1)	(1)		(1)	(3)		(3)	
	0.35 per 1,000 sf	0.32 per 1,000 sf		0.06 per DU	0.52 per 1,000 sf		0.06 per 1,000 sf	
Truck Temporal Distribution:	(9)	(9)		(9)	(9)		(9)	
AM (6-7 AM)	2.0%	5.0%		6.0%	7.0%		6.2%	
AM (7-8 AM)	8.0%	10.0%		12.0%	14.0%		12.2%	
PM (3-4 PM)	2.0%	2.0%		2.0%	1.0%		0.0%	
Truck In/Out Splits:	In Out	In	Out	In Out	In	Out	In	Out
AM/MD/PM	50.0% 50.0%	50.0%	50.0%	50.0% 50.0%	50.0%	50.0%	50.0%	50.0%

Notes :

(1) 2010 City Environmental Quality Review (CEQR) Technical Manual.

(2) Western Rail Yard FEIS, October 2009.

(3) Special West Chelsea District Rezoning and High Line Open Space FEIS, December 2004.

(4) Pushkarev & Zupan, "Urban Space for Pedestrian," 1975.

(5) Based on 2000 census Reverse Journey to Work data for tracts 91, 93, 95, 97, 101, 103.

(6) Modal split and vehicle occupancy data are based on 2000 census Journey to Work data for tracts 91, 93, 95, 97, 101, 103. Pushkarev & Zupan, "Urban Space for Pedestrians" for temporal distribution and in/out directional splits.

(7) ITE Trip Generation, 8th Edition, Land Use Code 110 (Light Industry), converted into person's trip.

(8) Hudson Yard FGEIS

(9) Assumed 6-7 AM Truck Temporal Distribution will be half of the 8-9 AM rate; 7-8 AM will be the same as 8-9 AM; 3-4 PM will be the same as 5-6 PM.

TABLE N-3
Transportation Demand Forecast Summary- No Action Condition for Projected Development Sites

Land Use:	Local Retail	Office	Residential	Industrial/ Wholesale	Hotel	Subtotal
Size/Units:	18,523 sf	26,543 sf	19 DU	8,596 sf	363 rooms 103,840 sf	
Peak Hour Person Trips:						
AM (6-7)	0	0	1	0	68	69
AM (7-8)	0	5	4	2	140	151
PM (3-4)	256	16	9	5	136	422

Person Trips:

		Local Retail In	Local Retail Out	Office In	Office Out	Residential In	Residential Out	Industrial/ Wholesale In	Industrial/ Wholesale Out	Hotel In	Hotel Out	Subtotal In	Subtotal Out	Subtotal Total
AM (6-7)	**Auto**	0	0	0	0	0	0	0	0	1	5	1	5	6
	Taxi	0	0	0	0	0	0	0	0	2	10	2	10	12
	Subway	0	0	0	0	0	0	0	0	2	14	2	14	16
	Bus	0	0	0	0	0	0	0	0	0	2	0	2	2
	Walk	0	0	0	0	0	0	0	0	5	27	5	27	32
	Total	0	0	0	0	0	0	0	0	10	58	10	58	68
AM (7-8)	**Auto**	0	0	1	0	0	0	0	0	3	10	4	10	14
	Taxi	0	0	0	0	0	0	0	0	5	20	5	20	25
	Subway	0	0	3	0	0	2	1	0	7	27	11	29	40
	Bus	0	0	1	0	0	0	0	0	1	3	2	3	5
	Walk	0	0	0	0	0	1	0	0	13	52	13	53	66
	Total	0	0	5	0	0	3	1	0	29	112	35	115	150
PM (3-4)	**Auto**	3	3	1	1	0	0	0	1	6	7	10	12	22
	Taxi	4	4	0	0	0	0	0	0	11	13	15	17	32
	Subway	8	8	6	6	3	2	1	2	15	18	33	36	69
	Bus	8	8	1	1	0	0	0	0	2	2	11	11	22
	Walk	105	105	0	0	2	1	0	0	28	34	135	140	275
	Total	128	128	8	8	5	3	1	3	62	74	204	216	420

Vehicle Trips :

		Local Retail In	Local Retail Out	Office In	Office Out	Residential In	Residential Out	Industrial/ Wholesale In	Industrial/ Wholesale Out	Hotel In	Hotel Out	Subtotal In	Subtotal Out	Subtotal Total	Public Parking (471 Spaces) Note 1 In	Public Parking (471 Spaces) Note 1 Out	Total Vehicle Trips In	Total Vehicle Trips Out	Total Vehicle Trips **Total**
AM (6-7)	**Auto (Total)**	0	0	0	0	0	0	0	0	1	4	1	4	5	20	0	21	4	25
	Taxi Balanced	0	0	0	0	0	0	0	0	7	7	7	7	14	0	0	7	7	14
	Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	8	11	8	11	19	20	0	**28**	**11**	**39**
AM (7-8)	**Auto (Total)**	0	0	1	0	0	0	0	0	2	7	3	7	10	41	0	44	7	51
	Taxi Balanced	0	0	0	0	0	0	0	0	13	13	13	13	26	0	0	13	13	26
	Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	1	0	0	0	0	0	15	20	16	20	36	41	0	**57**	**20**	**77**
PM (3-4)	**Auto (Total)**	2	2	1	1	0	0	0	1	4	5	7	9	16	28	14	35	23	58
	Taxi Balanced	5	5	0	0	0	0	0	0	10	10	15	15	30	0	0	15	15	30
	Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	7	7	1	1	0	0	0	1	14	15	22	24	46	28	14	**50**	**38**	**88**

NOTE 1: Includes No-Action Parkers to Remain in the Area.

TABLE N-4
Transportation Demand Forecast Summary - Partial With-Action Condition In 2018
For Proposed Development Site and Sites 6, 4, 5 and 2

Land Use:	**Local Retail/**	**Office**	**Residential**	**Subtotal**
Size/Units:	53,688 sf	11,390 sf	950 DU	
Peak Hour Person Trips:				
AM (6-7)	0	0	46	46
AM (7-8)	0	2	297	299
PM (3-4)	749	7	415	1,171

Person Trips:

		Local Retail/ In	Local Retail/ Out	Office In	Office Out	Residential In	Residential Out	Subtotal In	Subtotal Out	Total
AM (6-7)	**Auto**	0	0	0	0	0	3	0	3	3
	Taxi	0	0	0	0	0	2	0	2	2
	Subway	0	0	0	0	4	21	4	21	25
	Bus	0	0	0	0	0	2	0	2	2
	Walk	0	0	0	0	2	12	2	12	14
	Total	0	0	0	0	6	40	6	40	46
AM (7-8)	**Auto**	0	0	0	0	3	18	3	18	21
	Taxi	0	0	0	0	2	13	2	13	15
	Subway	0	0	1	0	23	128	24	128	152
	Bus	0	0	0	0	3	15	3	15	18
	Walk	0	0	0	1	14	79	14	80	94
	Total	0	0	1	1	45	253	46	254	300
PM (3-4)	**Auto**	7	7	0	1	17	12	24	20	44
	Taxi	11	11	0	0	13	8	24	19	43
	Subway	22	22	3	3	125	84	150	109	259
	Bus	22	22	0	0	14	10	36	32	68
	Walk	311	311	0	0	78	52	389	363	752
	Total	373	373	3	4	247	166	623	543	1,166

Vehicle Trips :

		Local Retail/ In	Local Retail/ Out	Office In	Office Out	Residential In	Residential Out	Subtotal In	Subtotal Out	Subtotal Total	Displaced Public Parking Garage Trips (Note 1) In	Displaced Public Parking Garage Trips (Note 1) Out	Total Vehicle Trips In	Total Vehicle Trips Out	Total Vehicle Trips **Total**
AM (6-7)	**Auto (Total)**	0	0	0	0	0	3	0	3	3	6	6	6	9	15
	Taxi Balanced	0	0	0	0	1	1	1	1	2	0	0	1	1	2
	Truck	0	0	0	0	2	2	2	2	4	0	0	2	2	4
	Total	0	0	0	0	3	6	3	6	9	6	6	**9**	**12**	**21**
AM (7-8)	**Auto (Total)**	0	0	0	0	3	16	3	16	19	13	12	16	28	44
	Taxi Balanced	0	0	0	0	10	10	10	10	20	0	0	10	10	20
	Truck	1	1	0	0	3	3	4	4	8	0	0	4	4	8
	Total	1	1	0	0	16	29	17	30	47	13	12	**30**	**42**	**72**
PM (3-4)	**Auto (Total)**	4	4	0	1	15	11	19	16	35	9	14	28	30	58
	Taxi Balanced	12	12	0	0	11	11	23	23	46	0	0	23	23	46
	Truck	0	0	0	0	1	1	1	1	2	0	0	1	1	2
	Total	16	16	0	1	27	23	43	40	83	9	14	**52**	**54**	**106**

NOTE 1: Vehicle trips generated by displaced public parkers that can be accommodated within the proposed public parking garage (based on Table N-5).

TABLE N-5
Public Parking Demand Forecast for Partial RWCDS in 2018 and Utilization of Proposed Garage

	Proposed RWCDS (Excluding Site 5)									Demand from Site 5 not Accommodated in On-Site Accessory Parking Garage			Demand from Transient Displaced Parkers that can be Accommodated Within Proposed Garage *			Demand from Residential Displced Parkers that Can be Accommodated Within Proposed Garage *			Total Garage Accumulation		
	Residential Demand (687 units)*			Retail Demand (13,860 gsf)			Office Demand (11,390 gsf)														
Time	**#IN**	**#OUT**	**ACC.**	**#IN**	**#OUT**	**ACC.**	**#IN**	**#OUT**	**ACC.**	**#IN**	**#OUT**	**ACC.**	**#IN**	**#OUT**	**ACC.**	**#IN**	**#OUT**	**ACC.**	**#IN**	**#OUT**	**ACC.**
12-1 AM	0	0	206	0	0	0	0	0	0	0	0	17	0	0	0	0	0	102	0	0	325
1-2	0	0	206	0	0	0	0	0	0	0	0	17	0	0	0	0	0	102	0	0	325
2-3	0	0	206	0	0	0	0	0	0	0	0	17	0	0	0	0	0	102	0	0	325
3-4	0	0	206	0	0	0	0	0	0	0	0	17	0	0	0	0	0	102	0	0	325
4-5	0	0	206	0	0	0	0	0	0	0	0	17	0	0	0	0	0	102	0	0	325
5-6	2	4	204	0	0	0	0	0	0	0	0	17	0	0	0	1	2	101	3	6	322
6-7	2	11	195	0	0	0	0	0	0	0	1	16	5	0	5	1	6	96	8	18	312
7-8	2	17	180	0	0	0	0	0	0	1	2	15	12	2	15	1	10	87	16	31	297
8-9	6	29	157	1	1	0	3	0	3	2	4	13	20	3	32	3	15	75	35	52	280
9-10	4	11	150	1	1	0	3	0	6	3	3	13	16	1	47	2	5	72	29	21	288
10-11	8	9	149	1	1	0	0	0	6	4	2	15	13	3	57	4	5	71	30	20	298
11-12	8	8	149	1	1	0	0	1	5	4	4	15	12	5	64	4	4	71	29	23	304
12-1 PM	9	9	149	3	3	0	0	0	5	10	10	15	10	6	68	4	4	71	36	32	308
1-2	8	8	149	1	1	0	0	0	5	5	5	15	8	8	68	4	4	71	26	26	308
2-3	10	6	153	1	1	0	1	0	6	5	4	16	7	12	63	5	3	73	29	26	311
3-4	11	4	160	1	1	0	0	0	6	5	4	17	5	12	56	4	2	75	26	23	314
4-5	19	8	171	2	2	0	0	2	4	5	6	16	5	14	47	10	4	81	41	36	319
5-6	26	13	184	2	2	0	0	3	1	7	6	17	6	19	34	13	6	88	54	49	324
6-7	17	8	193	2	1	1	0	1	0	5	4	18	6	20	20	9	4	93	39	38	325
7-8	12	7	198	1	1	1	0	0	0	3	4	17	4	14	10	7	3	97	27	29	323
8-9	12	7	203	0	1	0	0	0	0	2	2	17	2	10	2	6	3	100	22	23	322
9-10	7	7	203	0	0	0	0	0	0	1	1	17	4	5	1	3	3	100	15	16	321
10-11	6	5	204	0	0	0	0	0	0	1	1	17	3	4	0	3	2	101	13	12	322
11-12	6	4	206	0	0	0	0	0	0	1	1	17	0	0	0	3	2	102	10	7	325
Total	175	175		17	17		7	7		64	64		138	138		87	87		488	488	

Note:
* Public demand pattern based on counts at existing public parking facilities within rezoning area

Table N-6 shows the resulting estimated total vehicle trips within the rezoning area under the 2018 worst-case cumulative scenario. As shown in the table, in the year 2018, the cumulative traffic resulting from both operational and construction activity associated with the Proposed Action would fall below the CEQR threshold of 50 vehicle trips in any peak hour, and therefore a detailed traffic analysis is not warranted as no impacts are likely.

TABLE N-6
Change in Peak Hour Traffic Volumes Due to the Proposed Action –
2018 Worst-Case Cumulative Scenario

	Weekday 6-7 AM			Weekday 7-8 AM			Weekday 3-4 PM		
	In	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
PCEs Generated by Construction Activities *(from Table N-1 above)*	37	8	45	12	5	17	0	29	29
PCEs Generated by Proposed Development Site and Projected Development Sites 6, 4, 5, and 2, and Vehicle Trips Generated by Public Parkers *(refer to Table N-4 above)*	11	14	25	34	46	80	53	55	108
PCE Credit for No-Action Trips Eliminated From All Projected Development Sites (*refer to Table N-3 above*)	-28	-11	-39	-57	-20	-77	-50	-38	-88
Cumulative Total PCEs in 2018	***20***	***11***	***31***	***-11***	***31***	***20***	***3***	***46***	***49***

* PCEs calculated at 1.0 PCE per personal auto and 2 per truck.

Street Lane and Sidewalk Closures

The rezoning area encompasses three cross-town streets, and has four separate street frontages - north side of west 28th Street, both sides of West 29th Street, and the south side of West 30th Street. As discussed above, there could be various curbside lane and/or sidewalk closures associated with the projected development sites' construction activities. Truck movements would be spread throughout the day and would generally occur between the hours of 6:00 AM and 3:00 PM, depending on the stage of construction. No rerouting of traffic is anticipated, and moving lanes of traffic are expected to be available at all times. It is anticipated that the sidewalks immediately adjacent to the projected development sites under construction would also be closed to accommodate heavy loading areas for at least several months of the construction period for each site. Flaggers are expected to be present during construction to manage the access and movements of trucks. Pedestrians would either walk on the opposite side of the street or in a sectioned-off portion of the street. Detailed Maintenance and Protection of Traffic (MPT) Plans approved by NYCDOT's Office of Construction Mitigation and Coordination (OCMC) would implement the appropriate protective measures for ensuring pedestrian safety surrounding each of the projected development sites.

Transit and Pedestrians Screening

The net incremental transit trips in the 2018 worst-case cumulative scenario would be below 200 in all peak hours. As illustrated in Tables N-3 and N-4, the net incremental subway trips would be 9, 112, and 190 in the 6-7 AM, 7-8 AM and 3-4 PM peak construction periods, respectively, while the incremental bus trips would be 0, 13, and 46 in the same peak periods, respectively. As the Proposed Action would not exceed the *CEQR Technical Manual* threshold of 200 or more peak hour subway or bus trips during the 2018 worst-case cumulative scenario for construction, significant adverse transit impacts are very unlikely and no further analysis is warranted.

In the 2018 worst-case cumulative scenario, there would also be incremental pedestrian trips (including both walk-only and trips to and from transit facilities) of -9, 153, and 713 in the 6-7 AM, 7-

8 AM and 3-4 PM peak construction periods, respectively. This would not exceed the CEQR threshold of 200 or more pedestrian trips in either the 6-7 AM or 7-8 AM periods, and therefore no further analysis of those two periods is warranted. Although approximately 713 incremental trips would be generated in the 3-4 PM period under this scenario, those trips would be divided among the five projected development sites that would be operational by 2018, which have frontages on West 28th, West 29th, and West 30th Streets, with the two largest sites, the Proposed Development Site and projected development site 5, each having entrances on two different block-fronts. As such, the 713 incremental pedestrian trips would be distributed among at least 4 different sidewalks and multiple corners and crosswalks, and therefore it is not anticipated that more than 200 pedestrian trips would occur at any single pedestrian facility in the vicinity of the rezoning area, and a detailed analysis is not warranted.

Air Quality

Possible impacts on local air quality during construction induced by the Proposed Action include fugitive dust (particulate) emissions from land clearing operations and demolition as well as possible mobile source emissions generated by construction equipment vehicles.

Fugitive dust emissions from land clearing operations can occur from excavation, hauling, dumping, spreading, grading, compaction, wind erosion, and traffic over unpaved areas. Actual quantities of emissions depend on the extent and nature of clearing operations, the type of equipment employed, the physical characteristics of underlying soil, the speed at which construction vehicles are operated, and the type of fugitive dust control methods employed. Much of the fugitive dust generated by construction activities generally consists of relatively large-size particles (greater than 100 microns in diameter), which are expected to settle within a short distance (within 20 to 30 feet) from the construction site and to not significantly impact nearby buildings or people. All appropriate fugitive dust control measures—including watering of exposed areas and dust covers for trucks—would be employed during construction of each projected and potential development site. As a result, no significant air quality impacts from fugitive dust emissions would be anticipated during construction.

Mobile source emissions typically result from the operation of construction equipment, trucks delivering materials and removing debris, workers' private vehicles, or occasional disruptions in traffic near the construction site. In accordance with the *2010 CEQR Technical Manual* guidelines, a peak hour heavy duty diesel truck equivalent emissions (PM2.5) screening was conducted, using the worksheet referenced on Page 17-10 of the Manual. Assuming peak hour volumes of 29 passenger vehicles and 6 trucks (3 in and 3 out, as per Table N-1 above), and that the streets in the vicinity of the rezoning area are classified as collector roads (i.e., more than 5,000 average daily vehicle volumes)[3], the Proposed Action passed the screening assessment. Therefore, no significant air quality construction impacts from mobile sources are anticipated, and a detailed analysis is not warranted.

Moreover, according to the *CEQR Technical Manual*, if the operational analysis indicates that the project would not result in significant mobile source impacts, and the vehicular trip generation from construction would be less than that of the proposed project, then a more detailed assessment is usually not necessary. As discussed in Attachment J, "Air Quality," the trip generation analysis conducted for the Proposed Action indicates that the number of project-generated vehicles would be far below 2010 CEQR screening threshold values during both the AM and PM peak periods at any affected intersection. Therefore, no significant mobile source air quality impacts are expected as a result of the Proposed Action. Moreover, as discussed above, the vehicular trip generation from

[3] ATR data for West 29th and West 30th Streets between 7th and 8th Avenues indicate that average daily volumes on those streets exceed 5,000.

construction, as well as the cumulative traffic in the 2018 worst-case scenario, would be significantly less than that of the Proposed Action. Therefore, pursuant to CEQR guidelines, a detailed assessment of construction-related mobile source air quality is not warranted.

Noise

Noise and vibration from construction equipment operation and noise from construction workers' vehicles and delivery vehicles traveling to and from construction sites can affect community noise levels. The level of impact of these noise sources depends on the noise characteristics of the equipment and activities involved, the construction schedule, and the location of potentially sensitive noise receptors.

Noise and vibration levels at a given location are dependent on the kind and number of pieces of construction equipment operated, as well as the distance of the location from the construction site and the types of structures, if any, between the location and the noise source. Noise levels caused by construction activities can vary widely, depending on the phase of construction (e.g., demolition, land clearing and excavations, foundation, erection of structure, construction of exterior walls) and the specific task being undertaken. Increased noise levels caused by construction activities can be expected to be most significant during the early phases of construction before a building on a projected development site is enclosed. The most significant noise source associated with construction equipment would be the use of jackhammers, paving breakers, and possibly pile drivers during the site clearance, excavation, and foundation period of construction, which is a small portion of the construction period. This noise would be intrusive and would be heard by the employees at surrounding businesses and the residents that live within several blocks of any given projected development site. Increases in noise levels caused by delivery trucks and other construction vehicles would not be significant. Small increases in noise levels are expected to be found near a few defined truck routes and the streets in the immediate vicinity of the rezoning area. As the number of construction-related vehicle trips generated by the Proposed Action would be relatively small, and construction activity associated with the RWCDS would be spread out over an eight-year analysis period and be dispersed throughout the rezoning area and vicinity, no significant adverse noise construction impacts from mobile sources are anticipated.

Construction noise is regulated by the New York City Noise Code and by USEPA noise emission standards for construction equipment. These local and federal requirements mandate that certain classifications of construction equipment and motor vehicles meet specified noise emissions standards; that, except under exceptional circumstances, construction activities be limited to weekdays between the hours of 7:00 AM and 6:00 PM; and that construction materials be handled and transported in such a manner not to create unnecessary noise. In addition, whenever possible, appropriate low noise emission level equipment and operational procedures can be utilized to minimize construction noise and its effect on adjacent uses.

As noted above, it is conservatively assumed that up to 3 of the identified projected development sites may be under construction at any given time, and therefore, projected development sites that are completed earlier would become sensitive receptors for sites constructed in the latter part of the 8-year construction period. However, as discussed in Attachment K, "Noise," all of the projected development sites would provide adequate attenuation (as required by E-designations) to ensure acceptable interior noise levels. Construction noise at other receptors in the study area would at times produce noise levels that would be noisy and intrusive, but due to their limited duration would not result in significant adverse noise impacts.

As the number of construction-related vehicle trips generated by the Proposed Action would be relatively small, and as construction activity associated with the RWCDS would be spread out over an eight-year analysis period and be dispersed throughout the rezoning area, the Proposed Action would not result in significant adverse construction-related noise impacts.

Historic and Cultural Resources

As described in the *Historical Resources* section above, the New York City Landmarks Preservation Commission (NYCLPC) has determined that none of the projected or potential development sites is sensitive for archaeological resources (refer to Appendix 1, NYCLPC Environmental Review Letters). Therefore, it is not anticipated that construction induced by the Proposed Action would have any significant adverse impacts on archaeological resources in the area.

As discussed in more detail in the *Historical Resources* section of Attachment B, "Supplemental Screening," none of the projected or potential developments sites contain buildings that are architecturally significant, nor are they located adjacent to any designated historic resources.

Should the Fur Craft Building, and the loft building at 214-222 West 29th Street (which are adjacent to projected development sites 1 and 3) become designated/listed as historic resources, they would be subject to the construction protection procedures. Building Code section 27-166 (C26-112.4) serves to protect historic structures by requiring that all lots, buildings, and service facilities adjacent to foundation and earthwork areas be protected and supported in accordance with the requirements of Building Construction Subchapter 7 (Article) and Building Code Subchapters 11 and 19 (Article). In addition, the New York City Department of Buildings' Technical Policy and Procedure Notice (TPPN) #10/88, supplements these procedures by requiring a monitoring program to reduce the likelihood of construction damages to adjacent historic structures and to detect at an early stage the beginnings of damage so that construction procedures can be changed. Adjacent historic resources, as defined in the procedure notice, only include designated NYCLs, properties within NYCL historic districts, and listed S/NR properties that are within 90 feet of a lot under development or alteration. They do not include S/NR-eligible, NYCL-eligible, potential, or unidentified architectural resources, but if some of those resource types were to be designated as NYCLs, calendared for LPC designation, or listed on the S/NR, they would be afforded protection through the implementation of construction protection plans and monitoring procedures, in accordance with the guidelines set forth in TPPN #10/88, which would be required by the NYC Department of Buildings for adjacent construction. Therefore, construction period impacts on any designated historic resources would be minimized, and the historic structures would be protected, by ensuring that adjacent development projected as a result of the Proposed Action adheres to all applicable construction guidelines and follows the requirements laid out in TPPN #10/88.

Hazardous Materials

The Proposed Action would result in new residential development and conversions within existing structures in areas currently zoned for high performance industrial uses. As such, a detailed hazardous materials assessment of the 10 projected and four potential development sites was undertaken, and is described in Attachment I, "Hazardous Materials." As described in Attachment I, the Proposed Action would not result in significant adverse hazardous materials impacts. The analysis revealed that all 14 of the development sites, encompassing 27 tax lots, have past or present use suggesting that they may contain hazardous materials contamination. To ensure that the Proposed Action would not result in significant, adverse hazardous materials impacts, (E) designations would be mapped on 13 projected

and potential development sites as part of the Proposed Action. As discussed in Attachment I, an (E) designated site is an area designated on a zoning map within which no change of use or development requiring a New York City Department of Buildings permit may be issued without approval of the Mayor's Office of Environmental Remediation (OER). These sites require the OER's review to ensure protection of human health and the environment from any known or suspected hazardous materials associated with the site. As described in Attachment A, "Project Description," the (E) designation ensures that the fee owner conduct a testing and sampling protocol and remediation, where appropriate, to the satisfaction of the OER before the issuance of a permit by the Department of Buildings. The environmental requirements for the (E) designation also include mandatory construction-related health and safety plan, which must also be approved by the OER.

The Proposed Development Site, which is owned/controlled by the applicant, would be subject to a hazardous materials Restrictive Declaration. The applicant recorded a Restrictive Declaration on March 14, 2011, requiring sampling and, if necessary, remediation to the satisfaction of the NYCDEP.

In addition, demolition of interiors, portions of buildings or entire buildings are regulated by the NYC Department of Buildings requiring abatement of asbestos prior to any intrusive construction activities including demolition. OSHA regulates construction activities to prevent excessive exposure of workers to contaminants in the building materials including lead in paint. New York State Solid Waste regulations control where demolition debris and contaminated materials associated with construction are handled and disposed. Adherence to these existing regulations would prevent impacts from development activities at any of the projected development sites in the proposed rezoning area.

IV. CONCLUSION

As discussed above, construction-related activities resulting from the Proposed Action are not expected to have any significant adverse impacts on traffic, air quality, noise, archaeological/historical resources, or hazardous materials conditions, and a detailed analysis of construction impacts is not warranted. Moreover, the construction process in New York City is highly regulated to ensure that construction period impacts are eliminated or minimized.

APPENDIX 1
NYC LANDMARKS PRESERVATION COMMISSION
ENVIRONMENTAL REVIEW LETTERS

THE CITY OF NEW YORK LANDMARKS PRESERVATION COMMISSION
1 Centre Street, 9N, New York, NY 10007 (212) 669-7700 www.nyc.gov/landmarks

ENVIRONMENTAL REVIEW

DEPARTMENT OF CITY PLANNING/LA-CEQR-M 8/4/2008

Project number **Date received**

Project: W. 28/W. 29 STS REZONING

Properties with no Architectural or archaeological significance:

253 WEST 29 STREET, BBL 1007790008
225 WEST 29 STREET, BBL 1007790025
223 WEST 29 STREET, BBL 1007790026
WEST 29 STREET, BBL 1007790027
219 WEST 29 STREET, BBL 1007790028
210 WEST 29 STREET, BBL 1007780046
241 WEST 29 STREET, BBL 1007790013
231 WEST 29 STREET, BBL 1007790017
211 WEST 28 STREET, BBL 1007780033
207 WEST 28 STREET, BBL 1007780034
212 WEST 29 STREET, BBL 1007780047
247 WEST 29 STREET, BBL 1007790012
WEST 29 STREET, BBL 1007790031
251 WEST 28 STREET, BBL 1007780013
247 WEST 28 STREET, BBL 1007780016
241 WEST 28 STREET, BBL 1007780018
250 WEST 29 STREET, BBL 1007780066
219 WEST 28 STREET, BBL 1007780029
217 WEST 28 STREET, BBL 1007780030
215 WEST 28 STREET, BBL 1007780031
228 WEST 29 STREET, BBL 1007780055
227 WEST 28 STREET, BBL 1007780025
223 WEST 28 STREET, BBL 1007780027
257 WEST 29 STREET, BBL 1007790007

The following properties possess architectural significance:

In the radius: 14th Police Precinct Stationhouse, LPC and S/NR listed.

8/12/2008

SIGNATURE DATE

Gina Santucci

THE CITY OF NEW YORK LANDMARKS PRESERVATION COMMISSION
1 Centre Street, 9N, New York, NY 10007 (212) 669-7700 www.nyc.gov/landmarks

ENVIRONMENTAL REVIEW

DEPARTMENT OF CITY PLANNING/LA-CEQR-M 9/5/2008

Project number **Date received**

Project: W. 28/29 REZONING

Properties with no Architectural or archaeological significance:

253 WEST 28 STREET, BBL 1007780007
239 WEST 28 STREET, BBL 1007780020
221 WEST 28 STREET, BBL 1007780028
213 WEST 28 STREET, BBL 1007780032
214 WEST 29 STREET, BBL 1007780048 (archaeology only)
224 WEST 29 STREET, BBL 1007780052
232 WEST 29 STREET, BBL 1007780057
252 WEST 29 STREET, BBL 1007780070
249 WEST 29 STREET, BBL 1007790010
227 WEST 29 STREET, BBL 1007790023
350 7 AVENUE, BBL 1007790039
215 WEST 29 STREET, BBL 1007797502

The following properties possess architectural significance:

214 WEST 29 STREET, BBL 1007780048 appears eligible for LPC and S/NR listing. Impacts to this property as a result of this undertaking should be disclosed.

9/10/2008

SIGNATURE DATE

Gina Santucci

24869_FSO_DNP_09102008.doc

THE CITY OF NEW YORK LANDMARKS PRESERVATION COMMISSION
1 Centre Street, 9N, New York, NY 10007 (212) 669-7700 www.nyc.gov/landmarks

ENVIRONMENTAL REVIEW

DEPARTMENT OF CITY PLANNING/LA-CEQR-M 2/18/2009

Project number **Date received**

Project: EDISON REZONING BOUNDARY EXPANSION

Properties with no Architectural or archaeological significance:

BBL	Address
1007790062	234 WEST 30 STREET
1007790052	214 WEST 30 STREET
1007790069	250 WEST 30 STREET
1007790056	222 WEST 30 STREET
1007790055	220 WEST 30 STREET
1007790053	216 WEST 30 STREET

The following properties in the expanded project area appear LPC and S/NR eligible as individual landmarks and part of a larger eligible historic district:

240 W. 30 St.
242-246 W. 30 St.

SIGNATURE DATE 3/5/09



24869_FSO_DNP_02242009.doc

Landmarks Preservation Commission

1 Centre Street
9th Floor North
New York, NY 10007

Voice (212)-669-7700
Fax (212)-669-7960
http://nyc.gov/landmarks

ENVIRONMENTAL REVIEW

Final Sign-Off

Project number: DEPARTMENT OF CITY PLANNING / 10DCP004M
Project: EDISON REZONING W. 28/W. 29 STS.
Date received: 3/31/2011

Comments: The LPC is in receipt of the EAS Shadows chapter dated 3/22/11. The text is acceptable for historic resources.

Gina Santucci 4/1/2011

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 24869_FSO_GS_04012011.doc

APPENDIX 2

Table 1 – 2019 No-Build Developments Containing Residential Uses Within an Approximate 1.75-Mile Radius of the Rezoning Area

APPENDIX 2
Table 1
2019 No-Build Developments Containing Residential Uses Within
An Approximate 1.75-Mile Radius of the Proposed Rezoning Area

Site Description/Address	Total Residential Units	Affordable Units
Within a 1/2-Mile Radius of the Rezoning Area		
124 W. 23rd St.	34	0
1182 Broadway	44	0
SW corner of 10th Ave./W. 30th St.	382	76
NE corner of 11th Ave. /W. 28th St.	600	120
Hudson Yards Site 24: Dyer Ave btw W. 37/W. 38 Sts.	448	90
Hudson Yards Site 28: Dyer Ave btw W. 36/W. 37 Sts.	361	72
885 6th Ave.	338	0
855 6th Ave.	433	0
815 6th Ave.	269	0
415 8th Ave.	106	0
West Chelsea Site 4: 547-59 W. 27th St.	118	24
West Chelsea Site 5: 507-17 W. 27th St.	283	57
West Chelsea Site 6: 299-311 10th Ave.	159	32
W. 26th St./10th Ave.	31	0
245 10th Ave.	18	0
515-517 W. 23rd St.	11	0
500 W. 23rd St.	68	0
35-41 W. 23rd St.	63	0
Ladies' Mile Rezoning	439	62
Expanded Moynihan Project	492	98
Taxi Garage Site (10th Ave. btw W. 28/29 Sts.)	46	9
140-8 W. 28th St.	252	50
Chelsea Elliott (401-5 W. 25th St./429-459 9th Ave.)	168	168
Half-Mile Subtotal	*5,163*	*859*
Within a 1/2-to 1.75-Mile Radius of the Rezoning Area		
West 44th Street/Eleventh Ave Rezoning	1,350	700
770 11th Avenue	900	180
West Clinton Rezoning	1,623	252
Riverside Center	3,000	360
Western Rail Yard Project*	2,056	498
East Village/Lower East Side Rezoning	1,383	348
Half-Mile to 1.75-Mile Subtotal	*10,312*	*2,338*
Overall Total	***15,475***	***3,197***

Notes:

* Project includes development anticipated to occur on the Western Rail Yards site located on the block bounded by W. 33rd St., 11th Avenue, W. 30th St., and Rt. 9A (incl. 1,948 dwelling units of which 390 units are affordable) and development anticipated for the 9th Avenue development site located on the east side of 9th Ave. between W. 53rd and W. 54th Sts. (incl. 108 affordable units).

Sources: NYCDCP and NYCHPD

APPENDIX 3
Proposed Zoning Text Amendments

M1-6D TEXT
2011.04.05

Matter in underline is new, to be added;
Matter in ~~strikeout~~ is to be deleted;
Matter with # # is defined in Section 12-10;
* * * indicates where unchanged text appears in the Zoning Resolution

* * *

Article 1
General Provisions

Chapter 1
Title, Establishment of Controls and Interpretation of Regulations

* * *

11-122
Districts established

In order to carry out the purposes and provisions of this Resolution, the following districts are hereby established:

* * *

Manufacturing Districts

* * *

M1-6 Light Manufacturing District (High Performance)
M1-6D Light Manufacturing District (High Performance)
M1-6M Light Manufacturing District (High Performance)

* * *

Chapter 5
Residential Conversion of Existing Non-Residential Buildings

* * *

15-012
Applicability within C6-1G, C6-2G, M1-5A, ~~or~~ M1-5B or M1-6D Districts

#Conversions# in #buildings# or portions thereof, in C6-1G or C6-2G Districts shall be permitted only by special permit pursuant to Section 74-782 (Residential conversion within C6-1G, C6-2G, C6-2M, C6-4M, M1-5A, M1-5B, M1-5M and M1-6M Districts).

Except as specifically set forth in Sections 15-013 and 15-026, the provisions of this Chapter are not applicable in M1-5A or M1-5B Districts.

In M1-6D Districts, the conversion to #dwelling units# of non-#residential buildings# erected prior to January 1, 1977, or portions thereof, shall be permitted subject to Sections 15-11 (Bulk Regulations), 15-12 (Open Space Equivalent) and 15-30 (Minor Modifications), paragraph (b), except as superseded or modified by the provisions of Section 42-481 (Residential uses).

* * *

Article II
Residence District Regulations

Chapter 3
Bulk Regulations for Residential Buildings in Residence Districts

* * *

23-90
INCLUSIONARY HOUSING

* * *

23-954
Additional requirements for compensated developments

(a) Height and setback in #Inclusionary Housing designated areas#

(1) In #Inclusionary Housing designated areas#, except within:

(i) #Special Mixed Use Districts#;

(ii) R10 Districts without a letter suffix; and

(iii) #large-scale general developments# in C4-7 Districts within the boundaries of Manhattan Community District 7, subject to the provisions of a restrictive declaration~~,~~ ;

the #compensated development# must comply with the height and setback regulations of Sections 23-633 (Street wall location and height and setback regulations in certain districts) or 35-24 (Special Street Wall Location and Height and Setback Regulations in Certain Districts), as applicable.

(2) In #Inclusionary Housing designated areas# within #Special Mixed Use Districts#, the #compensated development# must comply with the provisions of paragraphs (a) or (b) of Section 123-662 (All buildings in Special Mixed Use Districts with R6, R7, R8, R9 and R10 District designations), as applicable. However, where the #Residence District# designation is an R6 District without a letter suffix, the #compensated development# must comply with the height and setback regulations of Section 23-633, regardless of whether the #building# is #developed# or #enlarged# pursuant to the Quality Housing Program.

* * *

Article IV
Manufacturing District Regulations

Chapter 1
Statement of Legislative Intent

* * *

41-10
PURPOSES OF SPECIFIC MANUFACTURING DISTRICTS

41-11
M1 Light Manufacturing Districts (High Performance)

These districts are designed for a wide range of manufacturing and related uses which can conform to a high level of performance standards. Manufacturing establishments of this type, within completely enclosed buildings, provide a buffer between Residence (or Commercial) Districts and other industrial uses which involve more objectionable influences. ~~New residential development is~~ New residences are excluded from these districts, except for:

(a) joint living-work quarters for artists in M1-5A and M1-5B Districts;

(b) dwelling units in M1-5M and M1-6M Districts; ~~and~~

(c) dwelling units in M1-1D, M1-2D, M1-3D, M1-4D and M1-5D Districts, where authorized by the City Planning Commission, both to protect residences from an undesirable environment and to ensure the reservation of adequate areas for industrial development; and

(d) dwelling units in M1-6D Districts.

* * *

Chapter 2
Use Regulations

* * *

42-02
Residential Use

In M1-1D, M1-2D, M1-3D, M1-4D and M1-5D Districts, the #use# regulations governing M1 Districts shall apply, except that #residential uses# may be permitted by authorization of the City Planning Commission in accordance with the provisions of Section 42-47 (Residential Uses in M1-1D through M1-5D Districts), subject to the regulations of Sections 43-61 (Bulk Regulations for Residential Uses in M1-1D through M1-5D Districts) and 44-28 (Parking Regulations for Residential Uses in M1-1D through M1-5D Districts).

In M1-6D Districts, #residences# shall be permitted in accordance with the #use# regulations set forth in Section 42-48, the #bulk# regulations set forth in Section 43-62, and the parking regulations applicable in C6-4 Districts as set forth in Article III, Chapter 6, and as modified, pursuant to Article I, Chapter 3 (Comprehensive Off-Street Parking Regulations in Community Districts 1, 2, 3, 4, 5, 6, 7 and 8 in the Borough of Manhattan and a Portion of Community Districts 1 and 2 in the Borough of Queens).

* * *

42-10
USES PERMITTED AS-OF-RIGHT

42-131
M1-5A and M1-5B Districts

M1-5A M1-5B

The regulations governing M1 Districts shall apply in M1-5A and M1-5B Districts except where the special #use# regulations set forth in Section 42-14, paragraph D (Special Uses in M1-5A and M1-5B Districts) provide otherwise.

* * *

42-133
Provisions for dwelling units in certain M1-5 or M1-6 Districts

(a) In M1-5 and M1-6 Districts, except for M1-6D Districts, located within the rectangle formed by West 23rd Street, Fifth Avenue, West 31st Street, and Eighth Avenue, no new #dwelling units# shall be permitted. However, #dwelling units# which the Chairperson of the City Planning Commission determines were occupied on September 1, 1980 shall be a permitted #use# provided that a complete application to permit such #use# is filed by the owner of the #building# or the occupant of a #dwelling unit# in such #building# not later than June 21, 1983.

Such #dwelling units# shall comply with the requirements of Sections 15-026 or 15-22, where applicable and with Section 15-23. For the purposes of Article 7C of the New York State Multiple Dwelling Law, such a determination of #residential# occupancy on September 1, 1980, shall be deemed to permit #residential use# as-of-right for such #dwelling units#.

(b) In M1-6 Districts located within the rectangle formed by West 35th Street, Fifth Avenue, West 40th Street and Sixth Avenue, no #dwelling units# shall be permitted, except that:

(1) #dwelling units# which the Chairperson of the City Planning Commission determines were occupied on May 18, 1981 shall be a permitted #use# provided that a complete application to permit such #use# is filed by the owner of the #building# or the occupant of the #dwelling unit# not later than June 21, 1983. For the purposes of Article 7C of the New York State Multiple Dwelling Law, such a determination of #residential# occupancy shall be deemed to permit #residential use# as-of-right for such #dwelling unit#; ~~and~~

(2) in any #building# for which an alteration application for conversion of #floor area# used for non-#residential use# to #dwelling units# or for an #extension# or minor #enlargement# of existing #residential use#, was filed prior to May 18, 1981, #dwelling units# shall be permitted, provided that such alterations shall comply with the regulations in effect on the date of such filing. The right to #convert# to #dwelling units# or #extend# or #enlarge# existing #residential use# pursuant to the provisions of this subsection shall expire one year from July 23, 1981, unless a temporary or permanent certificate of occupancy has been issued~~.~~ ; and

(3) in M1-6D Districts, #residential use# shall be permitted as-of-right subject to the supplemental #use# regulations set forth in Section 42-48 (Supplemental Use Regulations in M1-6D Districts).

* * *

42-40
SUPPLEMENTARY USE REGULATIONS AND SPECIAL PROVISIONS APPLYING ALONG DISTRICT BOUNDARIES

* * *

42-47
Residential Uses in M1-1D through M1-5D Districts

In M1-1D, M1-2D, M1-3D, M1-4D and M1-5D Districts, new #residences# or #enlargements# of existing #residences# may be permitted by authorization of the City Planning Commission provided the #zoning lot# existing on June 20, 1988 meets the criteria of paragraph (a), (b), or (c) of this Section.

* * *

42-48
Supplemental Use Regulations in M1-6D Districts

All permitted #uses# in M1-6D Districts, as set forth in Section 42-10 (USES PERMITTED AS-OF-RIGHT), shall comply with the provisions set forth in this Section, inclusive.

42-481
Residential use

#Residential use# shall be permitted in M1-6D Districts only in accordance with the provisions of this Section . For the purposes of this Section, a "qualifying #building#" shall be any #building# that existed on (date of referral), and which contained at least 50,000 square feet of #floor area# on such date.

(a) Residential use as-of-right

#Residential use# shall be permitted as-of-right on any #zoning lot# that, on (date of referral), was not occupied by a qualifying #building#. Prior to issuance of a building permit on such #zoning lot#, an affidavit shall be submitted to the Department of Buildings from a professional engineer or a registered architect, licensed under the laws of the State of New York, stating that no #building# on such #zoning lot# contained at least 50,000 square feet of #floor area# on (date of referral).

(b) Residential use by certification

#Residential use# shall be permitted on a #zoning lot# that, on (date of referral), was occupied by one or more qualifying #buildings#, only upon certification by the Chairperson of the City Planning Commission that the #zoning lot# will contain at least the amount of non-#residential floor area# that existed within qualifying #buildings# on the zoning lot on (date of referral), subject to the following:

(1) preservation of non-#residential floor area# within existing non-qualifying #buildings# on the #zoning lot# shall not be counted toward meeting the requirements of this certification;

(2) #floor area# from #community facility uses# with sleeping accommodations shall not be counted toward meeting the requirements of this certification; and

(3) non-#residential floor area# converted to #residential# vertical circulation and lobby space need not be replaced as non-#residential floor area#.

A restrictive declaration acceptable to the Department of City Planning shall be executed and recorded, binding the owners, successors and assigns to provide the amount of non-#residential floor area# that existed within qualifying #buildings# on (date of referral) on the #zoning lot#. Such restrictive declaration shall be recorded in the Office of the City Register. A copy of such declaration shall be provided to the Department of Buildings upon application for any building permit related to a change in #use# from non-#residential# to #residential#, or for the demolition of a qualifying #building# and its replacement by a new #building# containing #residences#.

42-482
Community facility uses

The #community facility use# regulations applicable in M1 Districts shall not apply in M1-6D Districts. In lieu thereof, all #community facility uses# listed in Use Groups 3 and 4 shall be permitted, except that #community facilities# with sleeping accommodations shall only be permitted in accordance with paragraphs (a) or (b) of this Section, as applicable.

For the purposes of this Section, a "qualifying #building#" shall be any #building# that existed on (date of referral), and which contained at least 50,000 square feet of #floor area# on such date.

(a) #Community facilities# with sleeping accommodations shall be permitted as-of-right on any #zoning lot# that, on (date of referral), was not occupied by a qualifying #building#. Prior to issuance of a building permit on such #zoning lot#, an affidavit shall be submitted to the Department of Buildings from a professional engineer or a registered architect, licensed under the laws of the State of New York, stating that no #building# on such #zoning lot# contained at least 50,000 square feet of #floor area# on (date of referral).

(b) #Community facilities# with sleeping accommodations shall be permitted on a #zoning lot# that, on (date of referral), was occupied by one or more qualifying #buildings#, only upon certification by the Chairperson of the City Planning Commission that the #zoning lot# will contain at least the amount of non-#residential floor area# that existed within qualifying #buildings# on the zoning lot on (date of referral), subject to the following:

(1) preservation of non-#residential floor area# within existing non-qualifying #buildings# on the #zoning lot# shall not be counted toward meeting the requirements of this certification;

(2) #floor area# from #community facility uses# with sleeping accommodations shall not be counted toward meeting the requirements of this certification; and

(3) non-#residential floor area# converted to #community facility# with sleeping accommodations or #residential# vertical circulation and lobby space need not be replaced as non-#residential floor area#.

A restrictive declaration acceptable to the Department of City Planning shall be executed and recorded, binding the owners, successors and assigns to provide the amount of non-#residential floor area# that existed within qualifying #buildings# on (date of referral) on the #zoning lot#. Such restrictive declaration shall be recorded in the Office of the City Register. A copy of such declaration shall be provided to the Department of Buildings upon application for any building permit related to a change in #use# from non-#residential# to #community facility# with sleeping accommodations, or for the demolition of a qualifying #building# and its replacement by a new #building# containing a #community facility# with sleeping accommodations.

(c) on #narrow streets#, ground floor #community facility uses# shall be subject to the streetscape provisions set forth in Section 42-485 (Streetscape Provisions).

42-483
Commercial uses

The #commercial use# regulations applicable in M1 Districts shall apply in M1-6D Districts except as follows:

(a) #Transient hotels# shall be allowed, except that #developments# or #enlargements# of #transient hotels# with greater than 100 sleeping units on #zoning lots# where #residential use# is permitted as-of-right, in accordance with paragraph (a) of Section 42-481 (Residential use), shall only be allowed upon certification by the Chairperson of the City Planning Commission to the Commissioner of Buildings that the residential development goal has been met for the area in which such #transient hotel# is located, as set forth below, or, where such “residential development goal” has not been met, by special permit pursuant to Section 74-802 (In M1-6D Districts).

Residential Development Goal Specified by Area

For #zoning lots# located within an area bounded by West 28th Street, West 30th Street, a line 100 feet west of Seventh Avenue, and a line 100 feet east of Eighth Avenue, the residential development goal shall be met when at least 865 #dwelling units# within such area have received certificates of occupancy subsequent to [date of enactment].

(b) Food stores, including supermarkets, grocery stores, or delicatessen stores, shall not be limited as to size of establishment.

(c) On #narrow streets#, ground floor #commercial uses# shall be subject to special streetscape provisions as set forth in Section 42-485 (Streetscape Provisions).

(d) All #uses# listed in Use Group 10 shall be permitted without limitation, except as provided for in paragraph (c) of this Section.

42-484
Manufacturing uses

In M1-6D Districts, the #manufacturing use# regulations applicable in #Special Mixed Use Districts#, as set forth in Section 123-22 (Modification of Use Groups 16, 17 and 18), inclusive, shall apply.

42-485
Streetscape Provisions

On #narrow streets#, for #zoning lots# with #street# frontage of 50 feet or more, ground floor #uses# limited to Use Groups 6A, 6C, 7B, 8A, 8B, 9A, 10A, 12A and 12B shall have a depth of at least 30 feet from the #street wall# and shall extend along a minimum of 50 percent of the width of the #street# frontage of the #zoning lot#. The remainder of the #street# frontage of the #zoning lot# may be occupied by any permitted #uses#, lobbies, or entrances to parking spaces, except that lobbies shall be limited to a total width of 40 feet. No minimum 30 foot depth requirement shall apply where a reduction in such depth is necessary in order to accommodate a #residential lobby# or vertical circulation core.

On #narrow streets#, for #zoning lots# with #street frontage# of less than 50 feet, no special ground floor #use# limitations or minimum 30 foot depth of #use# requirement shall apply.

Enclosed parking spaces, or parking spaces covered by a #building#, including such spaces #accessory# to #residences#, shall be permitted to occupy the ground floor provided they are located beyond 30 feet of the #street wall#.

For any #development# or #enlargement# that includes a ground floor #street wall#, each ground floor #street wall# occupied by #uses# listed in Use Groups 1 through 15, not including #dwelling units#, shall be glazed with transparent materials which may include show windows, transom windows or glazed portions of doors. Such transparency shall occupy at least 50 percent of the surface area of that portion of the ground floor #street wall# located between a height of two feet and 12 feet, or the height of the ground floor ceiling, whichever is higher, above the level of the adjoining sidewalk. The lowest point of any such required transparency shall not be higher than four feet above the level of the adjoining sidewalk, with the exception of transom windows, and the minimum width of any such required transparency shall be two feet. In addition, the maximum width of a portion of the ground floor level #street wall# without transparency shall not exceed ten feet. However, the transparency requirements of this Section shall not apply to that portion of the ground floor level #street wall# occupied by an entrance to a parking facility.

* * *

42-50
SIGN REGULATIONS

* * *

42-59
Sign Regulations in M1-6D Districts

In M1-6D Districts, #signs# are permitted subject to the signage regulations applicable in C6-4 Districts, as set forth in Section 32-60 (Sign Regulations), inclusive.

* * *

Chapter 3
Bulk Regulations

* * *

43-01
Applicability of this Chapter

* * *

In M1-1D, M1-2D, M1-3D, M1-4D and M1-5D Districts, the #bulk# regulations governing M1 Districts shall apply to #community facility#, #commercial# and #manufacturing uses#, and the regulations of Section 43-61 (Bulk Regulations for Residential Uses in M1-1D through M1-5D Districts) shall apply to #residential uses# authorized pursuant to Section 42-47 (Residential Uses in M1-1D through M1-5D Districts). M1-6D Districts shall be subject to the #bulk# regulations set forth in Section 43-62 (Bulk Regulations in M1-6D Districts).

* * *

43-12
Maximum Floor Area Ratio

M1 M2 M3

In all districts, as indicated, for any #zoning lot#, the maximum #floor area ratio# shall not exceed the #floor area ratio# set forth in the following table, except as otherwise provided in the following Sections:

Section 43-121 (Expansion of existing manufacturing buildings)

Section 43-122 (Maximum floor area ratio for community facility buildings)

Section 43-13 (Floor Area Bonus for Public Plazas)

Section 43-14 (Floor Area Bonus for Arcades)

Section 43-15 (Existing Public Amenities for which Floor Area Bonuses Have Been Received)

Section 43-16 (Special Provisions for Zoning Lots Divided by District Boundaries)

Section 43-61 (Bulk Regulations for Residential Uses in M1-1D through M1-5D Districts)

Section 43-62 (Bulk Regulations in M1-6D Districts)

Any given #lot area# shall be counted only once in determining the #floor area ratio#.

Maximum Permitted #Floor Area Ratio#	Districts
1.00	M1-1
2.00	M1-2 M1-4 M2-1 M2-3 M3

5.00	M1-3 M1-5 M2-2 M2-4
10.00	M1-6

For #zoning lots# containing both #community facility use# and #manufacturing# or #commercial use#, the total #floor area# used for #manufacturing# or #commercial use# shall not exceed the amount permitted in the preceding table or by the bonus provisions in Sections 43-13 or 43-14.

Notwithstanding any other provisions of this Resolution, the maximum #floor area ratio# in an M1-6 District shall not exceed 12.0.

* * *

43-122
Maximum floor area ratio for community facilities

M1

In the districts indicated, for any #community facility use# on a #zoning lot#, the maximum #floor area ratio# shall not exceed the #floor area ratio# set forth in the following table:

Maximum Permitted #Floor Area Ratio#	Districts
2.40	M1-1
4.80	M1-2
6.50	M1-3 M1-4 M1-5
10.00	M1-6

In M1-1D, M1-2D, M1-3D, M1-4D and M1-5D Districts, for any #zoning lot# containing both #residential use# and #community facility use#, the total #floor area# used for #residential use# shall not exceed the amount permitted in Section 43-61 (Bulk Regulations for Residential Uses in M1-1D through M1-5D Districts).

* * *

43-13
Floor Area Bonus for Public Plazas

M1-6

In the district indicated, except for M1-6D Districts, for each square foot of #public plaza# provided on a #zoning lot#, in accordance with the provisions of Section 37-70, inclusive, the total #floor area# permitted on that #zoning lot# under the provisions of Section 43-12 (Maximum Floor Area Ratio) may be increased by six square feet. However, the provisions of this Section shall not apply to #zoning lots# that are both within 100 feet of the western #street line# of Seventh Avenue and between West 28th and West 30th Streets in the Borough of Manhattan.

43-14
Floor Area Bonus for Arcades

M1-6

In the district indicated, except for M1-6D Districts, for each square foot of #arcade# provided on a #zoning lot#, the total #floor area# permitted on the #zoning lot# under the provisions of Section 43-12 (Maximum Floor Area Ratio) may be increased by three square feet. However, the provisions of this Section shall not apply to #zoning lots# that are both within 100 feet of the western #street line# of Seventh Avenue and between West 28th and West 30th Streets in the Borough of Manhattan.

* * *

43-43
Maximum Height of Front Wall and Required Front Setbacks

M1 M2 M3

In all districts, as indicated, if the front wall or any other portion of a #building or other structure# is located at the #street line# or within the #initial setback distance# as set forth in the following table, the height of such front wall or other portion of a #building or other structure#, except as otherwise set forth in this Section, shall not exceed the maximum height above #curb level# set forth in the following table. Above such maximum height and beyond the #initial setback distance#, the #building or other structure# shall not penetrate the #sky exposure plane# set forth in the following table.

The regulations of this Section shall apply except as otherwise provided in Sections 43-42 (Permitted Obstructions), 43-44 (Alternate Front Setbacks) or 43-45 (Tower Regulations). In M1-1 Districts, for #community facility buildings# the maximum height of a front wall shall be 35 feet or three #stories#, whichever is less, and the height above the #street line# shall be 35 feet, and in M1-4 Districts, for #community facility buildings#, the maximum height of a front wall shall be 60 feet or six #stories#, whichever is less.

For #zoning lots# in M1-6 Districts that are both within 100 feet of the western #street line# of Seventh Avenue and between West 28th and West 30th Streets in the Borough of Manhattan, the #street wall# of a #building# shall be located on the #street line# and extend along the entire #street# frontage of the #zoning lot# up to a minimum height of 125 feet or the height of the #building#, whichever is less, and a maximum height of 150 feet. Above a height of 150 feet, no portion of a #building# may penetrate a #sky exposure plane# except for towers, pursuant to Section 43-45 (Tower Regulations). The #sky exposure plane# shall begin at a height of 150 feet above the #street line# and rise over the #zoning lot# at a slope of 5.6 feet of vertical distance for each foot of horizontal distance on a #wide street#, and at a slope of 2.7 feet of vertical distance for each foot of horizontal distance on a #narrow street#. The provisions of Section 43-44 (Alternate Front Setbacks) shall not apply. On the ground floor, recesses shall be permitted where required to provide access to the #building#, provided such recesses do not exceed three feet in depth as measured from the #street line#. Above the level of the second #story#, up to 30 percent of the #aggregate width of street walls# may be recessed beyond the #street line#. However, no recesses shall be permitted within 20 feet of an adjacent #building# and within 30 feet of the intersection of two #street lines#.

* * *

43-61
Bulk Regulations for Residential Uses in M1-1D through M1-5D Districts

The following regulations shall apply to any #development# or #enlargement# authorized pursuant to Section 42-47 (Residential Uses in M1-1D through M1-5D Districts):

(a) The total amount of #residential floor area# permitted on any #zoning lot# shall not exceed a #floor area ratio# of 1.65.

On #zoning lots# containing both #residential use# and #community facility#, #manufacturing# or #commercial use#, the maximum #floor area# shall be the maximum #floor area# permitted for either the #commercial# or #manufacturing use# as set forth in Sections 43-12 (Maximum Floor Area Ratio) through 43-14 (Floor Area Bonus for Arcades), or the #community facility use# as set forth in Section 43-122 (Maximum floor area ratio for community facility buildings), or the #residential use# as set forth in this Section, whichever permits the greatest amount of #floor area#.

On #zoning lots# containing both #residential use# and #manufacturing# or #commercial use#, the total #floor area# used for #manufacturing# or #commercial use# shall not exceed the amount permitted by Sections 43-12 through 43-14.

(b) The maximum number of #dwelling units# shall equal the total #residential floor area# provided on the #zoning lot# divided by 675. Fractions equal to or greater than three quarters resulting from this calculation shall be considered to be one #dwelling unit#.

(c) The maximum #building# height above #curb level# shall be 32 feet.

(d) No such #development# or #enlargement# shall be permitted within 30 feet of the #rear lot line#.

(e) The maximum distance from the #street line# to the #street wall# of such #development# shall be ten feet, unless modified by the Commission pursuant to Section 44-28 (Parking Regulations for Residential Uses in M1-1D through M1-5D Districts).

(f) No #side yards# shall be required. However, if any open area extending along a #side lot line# is provided at any level it shall have a width of not less than eight feet. However, #enlargements# of #single-family# or #two-family residences# existing as of June 20, 1988, shall be exempt from this requirement, provided such #enlarged building# does not exceed a height of two #stories#.

* * *

43-62
Bulk Regulations in M1-6D Districts

43-621
Floor area regulations in M1-6D Districts

(a) The maximum #floor area# ratio for #zoning lots# shall be 10.0, and no #floor area# bonuses shall apply, except as set forth in paragraph (b) of this Section.

(b) In #Inclusionary Housing designated areas#

For M1-6D Districts mapped within an #Inclusionary Housing designated area#, the provisions of Section 23-90 (INCLUSIONARY HOUSING) applicable to R10 Districts without a letter suffix shall apply, as modified in this Section.

(1) For #zoning lots# that do not contain #residences#, the maximum #floor area ratio# shall be 10.0.

(2) The maximum base #floor area ratio# for #zoning lots# containing #residences# shall be 9.0 plus an amount equal to 0.25 times the non-#residential floor area ratio# provided on the #zoning lot#, provided that such base #floor area ratio# does not exceed 10.0. Such #floor area ratio# may be increased to a maximum of 12.0 only through the provision of #lower income housing# pursuant to Section 23-90 (INCLUSIONARY HOUSING), inclusive.

43-622
Maximum lot coverage in M1-6D Districts

Any story of a #building# containing #dwelling units# shall not exceed a maximum #lot coverage# of 70 percent for #interior# or #through lots# and 100 percent for #corner lots#. However, where any such level contains parking spaces or non-#residential uses#, such level shall be exempt from #lot coverage# regulations.

43-623
Density in M1-6D Districts

The provisions of 35-40 (APPLICABILITY OF DENSITY REGULATIONS TO MIXED BUILDINGS) shall apply. The applicable factor shall be 790.

43-624
Yard regulations in M1-6D Districts

In M1-6D Districts, the provisions of Section 43-20 (Yard Regulations) shall apply, except that #residential# portions of a #building# shall provide a #rear yard# with a minimum depth of 30 feet at any level not higher than the floor level of the lowest #story# containing #dwelling units# with a #window# opening upon such #rear yard#. On any #through lot# that is 110 feet or more in depth from #street# to #street#, a #rear yard equivalent# shall be provided within 15 feet of the centerline of the #through lot# or #through lot# portion. In the case of a #through lot# on which a #rear yard equivalent# is provided, the requirements of this Section shall apply as if such #rear yard equivalent# were two adjoining #rear yards#.

43-625
Height and setback in M1-6D Districts

In M1-6D Districts, the height and setback provisions of this Section shall apply to all #buildings#.

(a) Rooftop regulations

(1) Permitted obstructions

The provisions of Section 33-42 (Permitted Obstructions) shall apply to all #buildings#, except that elevator or stair bulkheads, roof water tanks, cooling towers or other mechanical equipment (including enclosures) may penetrate a maximum height limit or #sky exposure plane#, provided that either the product, in square feet, of the #aggregate width of street walls# of such obstructions facing each #street# frontage, times their average height, in feet, shall not exceed a figure equal to eight times the width, in feet, of the #street wall# of the #building# facing such frontage; or the #lot coverage# of all such obstructions does not exceed 20 percent of the #lot coverage# of the #building#, and the height of all such obstructions does not exceed 40 feet.

In addition, on #narrow streets#, a maximum base height or #sky exposure plane# may be penetrated pursuant to the following.

(i) Structural columns

Structural columns may penetrate a maximum height limit or #sky exposure plane#, provided that they are one story or less in height, have a #street wall# no greater than 30 inches in width, and are spaced not less than 15 feet on center.

(ii) Dormers

(a) On any #street# frontage, the aggregate width of all dormers at the maximum base height shall not exceed 60 percent of the length of the #street wall# of the highest #story# entirely below the maximum base height. For each foot of height above the maximum base height, the

aggregate width of all such dormers shall be decreased by one percent of the #street wall# width of the highest #story# entirely below the maximum base height.

(b) The aggregate width of dormers at the maximum base height facing the #rear yard line# or #rear yard equivalent# shall not exceed 60 percent of the length of wall of the #building# facing a #rear yard line# at the highest #story# entirely below the maximum base height. For each foot of height above the maximum base height, the aggregate width of all such rear dormers shall be decreased by one percent of the width of the #building# wall facing the #rear lot line#, at the level of the highest #story# entirely below the maximum base height.

Where two rear setbacks are provided as set forth in paragraph (b)(3)(ii) of this Section, the aggregate width of rear dormers, measured separately within each setback, shall not exceed 60 percent of the length of #building# wall facing a #rear yard line# at the highest #story# entirely below each rear setback. For each foot of height that a dormer is above the level of a setback, the aggregate width of dormers within such setback shall be decreased by one percent of the width of the highest #story# entirely below such setback.

In the case of a #through lot# on which a #rear yard equivalent# is provided, the requirements of this Section shall apply as if such #rear yard equivalent# were two adjoining #rear yards#.

(2) Screening requirements for mechanical equipment

For all #developments# and #enlargements#, and conversions of non-#residential buildings# to #residences#, all mechanical equipment located on any roof of a #building or other structure# shall be fully screened on all sides. However, no such screening requirements shall apply to water tanks.

(b) Height and setback

(1) #Street wall# location

The #street wall# shall be located on the #street line# and extend along the entire #street# frontage of the #zoning lot# up to at least the minimum base height specified in paragraph (b)(2) of this Section. On the ground floor, recesses shall be permitted where required to provide access to the #building#, provided such recesses do not exceed three feet in depth as measured from the #street line#.

Above the level of the second #story#, up to 30 percent of the #aggregate width of street walls# may be recessed beyond the #street line#. However, no recesses shall be permitted within 20 feet of an adjacent #building# and within 30 feet of the intersection of two #street lines#.

(2) Base height

On #wide streets#, and on #narrow streets# within 50 feet of their intersection with a #wide street#, the #street wall# of a #building# shall

rise without setback to a minimum base height of 125 feet and a maximum base height of 150 feet.

On #narrow streets#, beyond 50 feet of their intersection with a #wide street#, the #street wall# of a #building# shall rise without setback to a minimum base height of 85 feet and a maximum base height of 125 feet.

As an alternative, the minimum and maximum base heights applicable to a #wide street# may apply along a #narrow street# to a distance of 100 feet from a #wide street#.

(3) Required setbacks and maximum #building# heights

(i) Along #wide streets#

The provisions of this paragraph, (b)(3)(i), shall apply to #buildings#, or portions thereof, located on #wide streets# and on #narrow streets# within 100 feet of a #wide street#. The portion of such #building# above a height of 150 feet shall be set back from the #street wall# of the #building# at least 10 feet along a #wide street# and at least 15 feet along a #narrow street#, except such dimensions may include the depth of any permitted recesses in the #street wall#. The maximum height of such #buildings# shall be 290 feet. In addition, the gross area of each of either the highest two or three #stories# of such #building# shall not exceed 80 percent of the gross area of the #story# directly below such highest two or three #stories#.

(ii) Along #narrow streets#

The provisions of this paragraph, (b)(3)(ii), shall apply to #buildings#, or potions thereof, located on #narrow streets# beyond 100 feet of a #wide street#. No portion of such #building or other structure# shall penetrate a #sky exposure plane# which begins at a height of 125 feet above the #narrow street line# and rises over the #zoning lot# with a slope of four feet of vertical distance for every foot of horizontal distance. The maximum height of such #buildings# shall be 210 feet. However, any portion of such #building or other structure# that is located beyond 15 feet of the #street line# may penetrate such #sky exposure plane#, provided such portion does not exceed a height of 210 feet. In addition, the gross area of each of the top two #stories# of a #building# may not be greater than 80 percent of the gross area of the #story# directly below such top two #stories#.

In addition, for #buildings# containing #residences#, no portion of such #building# exceeding a height of 125 feet shall be nearer to a #rear yard line# than ten feet. Alternatively, a pair of setbacks may be provided in accordance with the following:

(a) a setback of five feet from the #rear yard line# shall be provided between a height of 85 feet and 125 feet; and

(b) a setback of ten feet from the #rear yard line# shall be provided between a height of 125 and 165 feet.

However the heights of such setbacks shall be vertically equidistant from a height of 125 feet.

In the case of a #through lot# on which a #rear yard equivalent# is provided, the requirements of this Section shall apply as if such #rear yard equivalent# were two adjoining #rear yards#.

(4) Maximum length of #building# wall

The maximum length of any #story# located entirely above a height of 150 feet shall not exceed 150 feet. Such length shall be measured in plan view by inscribing within a rectangle the outermost walls at the level of each #story# entirely above a level of 150 feet.

43-626
Courts in M1-6D Districts

Residential portions of #buildings# shall be subject to the court provisions applicable in R10 Districts as set forth in Section 23-80 (Court Regulations, Minimum Distance between Windows and Walls or Lot Lines and Open Area Requirements), inclusive.

* * *

Chapter 4
Accessory Off-Street Parking and Loading Regulations

* * *

44-022
Applicability of regulations in Community Districts 1, 2, 3, 4, 5, 6, 7 and 8 in the Borough of Manhattan and a portion of Community Districts 1 and 2 in the Borough of Queens

Special regulations governing permitted or required #accessory# off-street parking are set forth in Article I, Chapter 3.

44-023
Applicability of regulations in M1-1D through M1-5D Districts

In M1-1D, M1-2D, M1-3D, M1-4D and M1-5D Districts, the parking regulations governing M1 Districts shall apply to #manufacturing#, #commercial# or #community facility uses#, and the regulations of Section 44-28 (Parking Regulations for Residential Uses in M1-1D through M1-5D Districts) shall apply to #residential uses# authorized pursuant to Section 42-47 (Residential Uses in M1-1D through M1-5D Districts).

44-024
Applicability of regulations in M1-6D Districts

In M1-6D Districts, the parking regulations governing M1 Districts shall apply to #commercial# and #manufacturing uses#. For #residential# and #community facility uses#, the parking regulations applicable in C6-4 Districts as set forth in Article III, Chapter 6, shall apply.

In addition, parking regulations shall be modified by Article 1, Chapter 3 (Comprehensive Off-Street Parking Regulations in Community Districts 1, 2, 3, 4, 5, 6, 7 and 8 in the Borough of Manhattan and a Portion of Community Districts 1 and 2 in the Borough of Queens), as applicable.

~~**44-024**~~ **44-025**
Applicability of regulations in an M1-1 District in Community District 12 in the Borough of Queens

In the M1-1 District bounded by 95th Avenue, 148th Street, 97th Avenue and 147th Place in Community District 12 in the Borough of Queens, the #accessory# off-street parking regulations of an M1 District shall apply, except that the #accessory# off-street parking regulations for an R5 District set forth in Article II, Chapter 5, shall apply to #residential uses#.

* * *

44-28
Parking Regulations for Residential Uses in M1-1D through M1-5D Districts

In M1-1D, M1-2D, M1-3D, M1-4D and M1-5D Districts, the regulations of this Section shall apply to #residential uses# authorized pursuant to Section 42-47 (Residential Uses in M1-1D through M1-5D Districts).

* * *

52-46
Conforming and Non-conforming Residential Uses in M1-1D through M1-5D Districts

In M1-1D, M1-2D, M1-3D, M1-4D and M1-5D Districts, a #building# containing conforming or #non-conforming residential uses# may be #enlarged# and the #residential uses extended# thereby, provided that no non-#residential uses# exist above the level of the first #story# ceiling.

~~S~~such #enlargement# is subject to all of the following regulations:

(1) There shall be no increase in the number of #dwelling units# in the #building# beyond the lawful number in existence on December 21, 1989.

(2) The total amount of #residential floor area# in the #building# shall not exceed 500 square feet additional to the #residential floor area# in existence on December 21, 1989, or a #floor area ratio# of 1.65, whichever is less.

(3) No #residential enlargement# shall be permitted within 30 feet of the #rear lot line#.

(4) No #enlarged# portion shall exceed a height of 32 feet above #curb level#.

(5) No #side yards# shall be required. However, if any open area extending along a #side lot line# is provided at any level it shall have a width of not less than eight feet. However, #enlargements# of #single-family# or #two-family residences# existing as of June 20, 1988 shall be exempt from this requirement, provided such #enlarged building# does not exceed a height of two #stories#.

#Enlargements# in excess of those permitted above, and #enlargements# that create additional #dwelling units# may be permitted by authorization of the City Planning Commission, pursuant to the regulations of Section 42-47 (Residential Uses in M1-1D through M1-5D Districts) and Section 42-48 (Supplemental Use Regulations in M1-6D Districts).

* * *

52-50
DAMAGE OR DESTRUCTION

* * *

52-53
Buildings or Other Structures in All Districts

* * *

52-531
Permitted reconstruction or continued use

In all districts, if any #building#, except a #building# subject to the provisions of Section 52-54 (Buildings Designed for Residential Use in Residence Districts), or of Section 52-56 (Multiple Dwellings in M1-D Districts), which is substantially occupied by a #non-conforming use# is damaged or destroyed by any means, including any demolition as set forth in Sections 52-50 et seq., to the extent of 50 percent or more of its total #floor area#, such #building# may either:

* * *

For the purposes of this Section, any #single-family# or #two family residence# located within an M1-1D, M1-2D, M1-3D, M1-4D, ~~or~~ M1-5D or M1-6D District and existing on June 20, 1988 shall be a conforming #use#.

* * *

52-56
Multiple Dwellings in M1-1D through M1-5D Districts

In the case of damage or destruction of less than 75 percent of the total #floor area# of a #non-conforming building# containing three or more #dwelling units# in an M1-1D, M1-2D, M1-3D, M1-4D or M1-5D District, such #building# may be repaired or reconstructed, and its #residential use# continued, subject to the following regulations:

(a) there shall be no increase in the number of #dwelling units# in the #building# beyond the lawful number in existence prior to such damage and destruction; and

(b) there shall be no increase to the pre-existing amount of #floor area# except as expressly provided in Section 52-46 (Conforming and Non-conforming Residential Uses in M1-D Districts).

#Enlargements# in excess of those permitted above, and #enlargements# that create additional #dwelling units# may be permitted by authorization of the City Planning Commission pursuant to the regulations of Section 42-47 (Residential Uses in M1-1D through M1-5D Districts).

* * *

52-62
Buildings Containing Residences in M1-1D through M1-5D Districts

In M1-1D, M1-2D, M1-3D, M1-4D and M1-5D Districts, vacant #floor area# in a #building# originally designed as #dwelling units# or #rooming units# may be occupied by a #residential use# provided that the requirements of either paragraph (a) or (b) are met.

* * *

74-80
Transient Hotels

~~74-80~~ 74-801
~~Transient Hotels~~ In R10H Districts

In R10H Districts, the City Planning Commission may permit #transient hotels#. Where a #building# in existence on December 15, 1961, is located on a #zoning lot#, a substantial portion of which is located in an R10H District and the remainder in a #Commercial District#, the Commission may also permit the #conversion# of specified #floor area# within such #building# from #residential use# to #transient hotel use# without regard to the #floor area#, supplementary #use# or density regulations otherwise applicable in the #Commercial District#. The Commission may also allow any subsequent #conversion# of such specified #floor area# to and from #residential# or #transient hotel use# to occur without further Commission approval, subject to the conditions of the special permit.

* * *

74-802
In M1-6D Districts

In M1-6D Districts, in areas that have not met the "residential development goal" set forth in paragraph (a) of Section 42-483 (Commercial uses), the City Planning Commission may permit #developments# or #enlargements# of #transient hotels# with greater than 100 sleeping units on #zoning lots# where #residential use# is permitted as-of-right, in accordance with Section 42-481 (Residential use), provided the Commission finds that:

(a) sufficient development sites are available in the area to meet the residential development goal; or

(b) a harmonious mix of #residential# and non-#residential uses# has been established in the area, and such #transient hotel# resulting from a #development# or #enlargement# is consistent with such character of the surrounding area.

The Commission may prescribe additional conditions and safeguards to minimize adverse effects on the character of the surrounding area.

* * *

APPENDIX F: Inclusionary Housing Designated Areas

* * *

Manhattan, Community District 3

In the R7A, R8A and R9A Districts within the areas shown on the following Map 1:

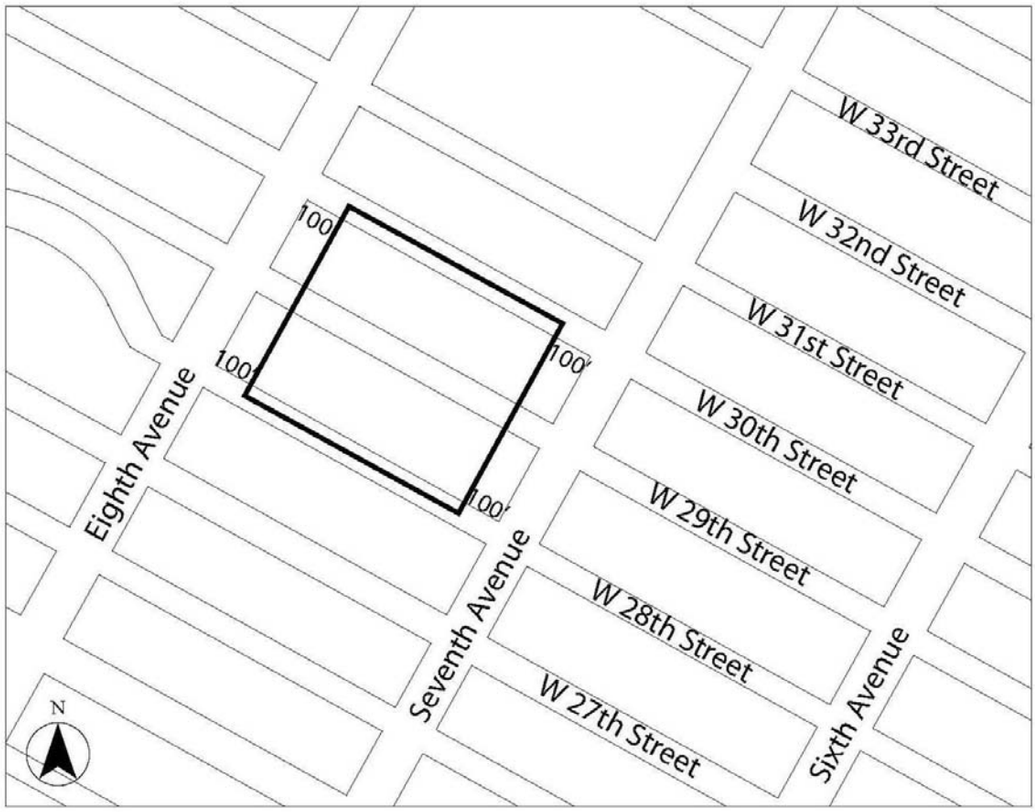
Map 1

- MAP -

Manhattan, Community District 5

In the M1-6D Districts within the areas shown on the following Map 1:

Map 1



Map _____. Portion of Community District 5, Manhattan

APPENDIX 4
NYC DEPARTMENT OF ENVIRONMENTAL PROTECTION
ENVIRONMENTAL REVIEW LETTER

NYC Environmental Protection

Caswell F. Holloway
Commissioner

Angela Licata
Deputy Commissioner
Bureau of Environmental
Planning and Analysis
alicata@dep.nyc.gov

59-17 Junction Boulevard
Flushing, NY 11373
T: (718) 595-4398
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December 30, 2010

Mr. Robert Dobruskin
New York City Department of City Planning
22 Reade Street, Room 4E
New York, New York 10007-1216

Re: West 28th Street Rezoning
Block 788, Lots 13, 16, 18 and 66 (Proposed Development Site)
CEQR # 10DCP004M/11DEPTECH022M
Manhattan, New York

Dear Mr. Dobruskin:

The New York City Department of Environmental Protection, Bureau of Environmental Planning and Analysis (DEP) has reviewed the December 2010 Revised Environmental Assessment Statement prepared by Philip Habid & Associates and the January 2009 Phase I Environmental Site Assessment Report (Phase 1) prepared by ATC Associates Inc., on behalf of 249 W 28th Street Properties LLC (applicant) for the above reference project. The applicant is proposing a zoning map and text amendment from the New York City Department of City Planning (DCP) for a M1-5 to a M1-6D zoning district change for portions of of two City blocks (Blocks 788 and 799), bounded by West 30th Street to the north, Seventh Avenue to the east, West 28th Street to the south, and Eight Avenue to the West in the Chelsea section of Manhattan Community District 5. The proposed action would permit development of two approximately 20-story residential buildings with ground floor retail and office on **Block 788, Lots 13, 16, 18 and 66** (proposed development site). It is anticipated that the proposed development site would accommodate approximately 407 residential dwelling units, of which approximately 81 units (20%) would be affordable residences, approximately 4,685 gross square feet (gsf) of retail and 11,390 gsf of office uses are expected to be located at ground level. The development would include a 325 car garage that would replace the 371 public parking spaces currently located on the proposed development site.

The January 2009 Phase I report revealed that historical on-site and surrounding area land uses consisted of a variety of residential, commercial and manufacturing/industrial uses including dry cleaning facilities, a Consolidated Edison Facility, a garage with Underground Storage Tanks (USTs), auto repair facilities, a printing ink compound company, a fur processing and cleaning company, several garages/parking facilities and a trucking company. The New York State Department of Environmental Conservation database identified 26 Leaking Storage Tanks and 38 spills within 1/4-mile radius and 1/8 mile radius of subject property respectively. In addition, oil-filled hydraulic automobile elevators may contain polychlorinated biphenyls (PCBs). Based on the age of the site buildings, Asbestos Containing Materials (ACM) and lead based paints (LBP) may be present in the on-site structures.

Based upon our review of the submitted documentation, we have the following comments/recommendations to DCP:

Proposed Development Site under the control or ownership of the applicant
(Block 788, Lots 13, 16, 18 and 66)

DCP should inform the applicant that based on prior on-site and surrounding area land uses, a Phase II Environmental Site Assessment (Phase II) is necessary to adequately identify/characterize the surface and subsurface soils of the subject parcels prior to on-site soil disturbance. A Phase II Investigative Protocol/Workplan summarizing the proposed drilling and soil/groundwater sampling activities should be submitted to DEP for review and approval. The Workplan should include blueprints and/or site plans displaying the current surface grade and sub-grade elevations and a site map depicting the proposed soil boring locations. Soil and groundwater samples should be collected and analyzed by a New York State Department of Health Environmental Laboratory Approval Program certified laboratory (NYSDOH) for the presence of Volatile Organic Compounds by United States Environmental Protection Agency (EPA) Method 8260, Semi-Volatile Organic Compounds by EPA Method 8270, Pesticides/Polychlorinated Biphenyl by EPA Method 8081/8082 and Target Analyte List (TAL) metals. An investigative Health and Safety Plan (HASP) should also be submitted to DEP for review and approval.

Site not under the control or ownership of the applicant

Projected and or Potential Development sites

Since these sites are not under the control or ownership of the applicant, DEP recommends that an "E" designation for hazardous materials should be place on the zoning map pursuant to 11-15 of the New York City Zoning Resolution for any projected and or potential development sites. The "E" designation will ensure that testing and mitigation will be provided as necessary before any future development. Soil and groundwater samples should be collected and analyzed by an NYSDOH ELAP-CERTIFIED laboratory for the presence of VOCs by EPA Method 8260, SVOCs by EPA Method 8270, Pesticides/PCBs by EPA Method 8081/8082 and TAL Metals. An investigative Health and Safety Plan (HASP) will also be required to be submitted for review and approval.

DCP should inform the applicant that ACM, lead based paint and suspected PCBs containing materials may be present in the on-site structures. These materials should be properly removed and or managed prior to the start of any demolition activities and disposed of in accordance with all federal, state and local regulations.

DCP should also instruct the applicant that the Phase II Work plan and HASP should be submitted to DEP for review and approval prior to start of any fieldwork. Future correspondence related to this project should include the following tracking number **11DEPTECH022M**. If you have any question, you may contact Maurice Winter at 718-595-4514.

Sincerely,

Gary C. Heath
Director, Bureau Operations and Environmental Analysis

cc: G. Heath
M. Winter
M. Myrie
D. Cole-OER
C. Bitet- DEP Legal
C. Evans- DCP
O. Abinader-DCP
File

Environmental Protection

Caswell F. Holloway
Commissioner

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April 13, 2011

Robert Dobruskin
New York City Department of City Planning
22 Reade Street, Room 4E
New York, New York 10007

Re: **West 28th Street Rezoning**
Block 778, Lots 13, 16, 18 and 66
10DCP004M/ 11DEPTECH022M

Dear Mr. Dobruskin:

The New York City Department of Environmental Protection Bureau of Environmental Planning and Analysis (DEP) is in receipt of a signed copy of a DEP approved Restrictive Declaration with proof of recording for the above referenced parcel. A copy is attached for your reference.

If you have any questions please contact me at (718) 595-4473.

Sincerely,

Terrell Estesen
Director, Office of Wastewater Review and Special Projects

c (w/encl): D. Cole

c (w/o encl): M. Winter
M. Myrie
T. Estesen
C. Bitet
O. Abinader – DCP