City Environmental Quality Review

ENVIRONMENTAL ASSESSMENT STATEMENT FULL FORM

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

PART I: GENERAL INFORMATION

PROJECT NAME **West 106th Street Rezoning**

1. *Reference Numbers*

CEQR REFERENCE NUMBER (To Be Assigned by Lead Agency)	BSA REFERENCE NUMBER (If Applicable)
14DCP084M	**N/A**
ULURP REFERENCE NUMBER (If Applicable)	OTHER REFERENCE NUMBER(S) (If Applicable) (e.g., Legislative Intro, CAPA, etc.)
130208ZMM	**N/A**

2a. *Lead Agency Information*

NAME OF LEAD AGENCY
New York City Department of City Planning

NAME OF LEAD AGENCY CONTACT PERSON
Robert Dobruskin, AICP
Director Environmental Assessment and Review

ADDRESS **22 Reade Street**

CITY **New York** STATE **NY** **10007**

TELEPHONE **212-720-3420** FAX **212-720-3495**

EMAIL ADDRESS **rdobrus@planning.nyc.gov**

2b. *Applicant Information*

NAME OF APPLICANT
PWV Owner LLC, c/o The Chetrit Group, LLC.

NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON
Toni L. Finger, Esq.,
Kramer Levin Naftalis & Frankel LLP

ADDRESS **1177 Avenue of the Americas**

CITY **New York** STATE **NY** ZIP **10036**

TELEPHONE **212-715-9239** FAX **212-715-8000**

EMAIL ADDRESS **tfinger@kramerlevin.com**

3. *Action Classification and Type*

SEQRA Classification

■ UNLISTED ☐ TYPE I; SPECIFY CATEGORY *(see 6 NYCRR 617.4 and NYC Executive Order 91 of 1977, as amended):*

Action Type *(refer to Chapter 2, "Establishing the Analysis Framework" for guidance)*

■ LOCALIZED ACTION, SITE SPECIFIC ☐ LOCALIZED ACTION, SMALL AREA ☐ GENERIC ACTION

4. *Project Description:*

The applicant proposes to rezone a portion of the block between West 105th and 106th Streets and Columbus and Amsterdam Avenues (Block 1860) from R7-2 with a C1-5 overlay district in the northeastern portion of the project site (along West 106th Street) to R8A (with no change to the C1-5 overlay) and R8B in the southern portion of the site (along West 105th Street). The proposed action would allow for the development of approximately 628,886 gross square feet (gsf) of primarily residential uses on the project site (the With-Action Reasonable Worst-Case Development Scenario) consisting of 507,649 gsf of residential space (up to 597 residential units), approximately 31,006 gsf of community facility space, and 208 accessory parking spaces. It is anticipated that the With-Action Reasonable Worst-Case Development Scenario would be completed by 2019. See also Section 1.0 in attached "Supplemental Analyses."

4a. *Project Location: Single Site* *(for a project at a single site, complete all the information below)*

ADDRESS **111-143 West 105th Street/120 West 106th Street (Lot 20) and 156 West 106th Street (Lot 57)**

NEIGHBORHOOD NAME **Manhattan Valley/Upper West Side**

TAX BLOCK AND LOT **Manhattan Block 1860 Lots 20 and 57**

BOROUGH **Manhattan**

COMMUNITY DISTRICT **7**

DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS
The project site is located midblock between Columbus and Amsterdam Avenues and bounded by West 106th Street to the north and West 105th Street to the south.

EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY **R7-2/C1-5**

ZONING SECTIONAL MAP NO: **5d**

4b. *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.)*

N/A

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

City Planning Commission: YES ■ NO ☐		***Board of Standards and Appeals:*** YES ☐ NO ■
☐ CITY MAP AMENDMENT	☐ ZONING CERTIFICATION	☐ SPECIAL PERMIT
■ ZONING MAP AMENDMENT	☐ ZONING AUTHORIZATION	EXPIRATION DATE MONTH DAY YEAR
☐ ZONING TEXT AMENDMENT	☐ HOUSING PLAN & PROJECT	
☐ UNIFORM LAND USE REVIEW PROCEDURE (ULURP)	☐ SITE SELECTION—PUBLIC FACILITY	
☐ CONCESSION	☐ FRANCHISE	☐ VARIANCE (USE)
☐ UDAAP	☐ DISPOSITION—REAL PROPERTY	
☐ REVOCABLE CONSENT		☐ VARIANCE (BULK)
ZONING SPECIAL PERMIT, SPECIFY TYPE		SPECIFY AFFECTED SECTION(S) OF THE ZONING RESOLUTION
☐ MODIFICATION OF		
☐ RENEWAL OF		
☐ OTHER		

Department of Environmental Protection: YES ☐ NO ■

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
- ☐ RULEMAKING
- ☐ CONSTRUCTION OF PUBLIC FACILITIES
- ☐ FUNDING OR PROGRAMS; SPECIFY
- ☐ PERMITS; SPECIFY
- ☐ OTHER; EXPLAIN
- ☐ PERMITS FROM DOT'S OFFICE OF CONSTRUCTION MITIGATION AND COORDINATION (OCMD) (*not subject to CEQR*)

6. ***State or Federal Actions/Approvals/Funding:*** YES ☐ NO ■ IF "YES," IDENTIFY

7. ***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 11x17 inches in size and must be folded to 8.5x11 inches for submission.*

- ■ Site location map **See Figure 1**
- ■ Sanborn or other land use map **See Figure 2**
- ■ Zoning map **See Figure 4**
- ■ Tax map **See Figure 3**
- ■ Photographs of the project site taken within 6 months of EAS submission and keyed to the site location map **See Figures 5 and 5a-5c**
- ☐ For large areas or multiple sites, a GIS shape file that defines the project sites

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.):
88,731 sq. ft.	**0**	**88,731 sq. ft.**

Other, describe (sq. ft.):

8. ***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: **628,886 sq. ft.** (gross sq. ft.)

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: Total square feet of non-applicant owned development:

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):

Area: **88,731 sq. ft.** sq. ft. (width x length) Volume: **1,330,695 sq. ft.** cubic feet (width x length x depth)

Does the proposed project increase the population of residents and/or on-site workers? YES ■ NO ☐

Number of additional residents? **1,242 (451 more than the No Action Scenario)**

Number of additional workers? **59 (10 more than the No Action Scenario)**

Provide a brief explanation of how these numbers were determined:

Estimate of number of residents is based on number of residential units multiplied by average household size for the surrounding census tracts (2.08 persons per household).The employment estimate is based on the assumption of one full time equivalent (FTE) employee per: 25 residential units, 1,000 sf community facility, and one per 50 parking spaces.

Does the project create new open space? YES ☐ NO ■ If Yes: (sq. ft)

Using Table 14-1, estimate the project's projected operation solid waste generation, if applicable: **±25,417 (8,898 more than the No Action Scenario)** (pounds per week)

Using energy modeling or Table 15-1, estimate the project's projected energy use: **±72,092 million (28,231 million more than the No Action Scenario)** (annual BTUs)

9. ***Analysis Year*** *CEQR Technical Manual, Chapter 2*

ANTICIPATED BUILD YEAR (DATE THE PROJECT WOULD BE COMPLETED AND OPERATIONAL):	ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS:
2019*	**24+**

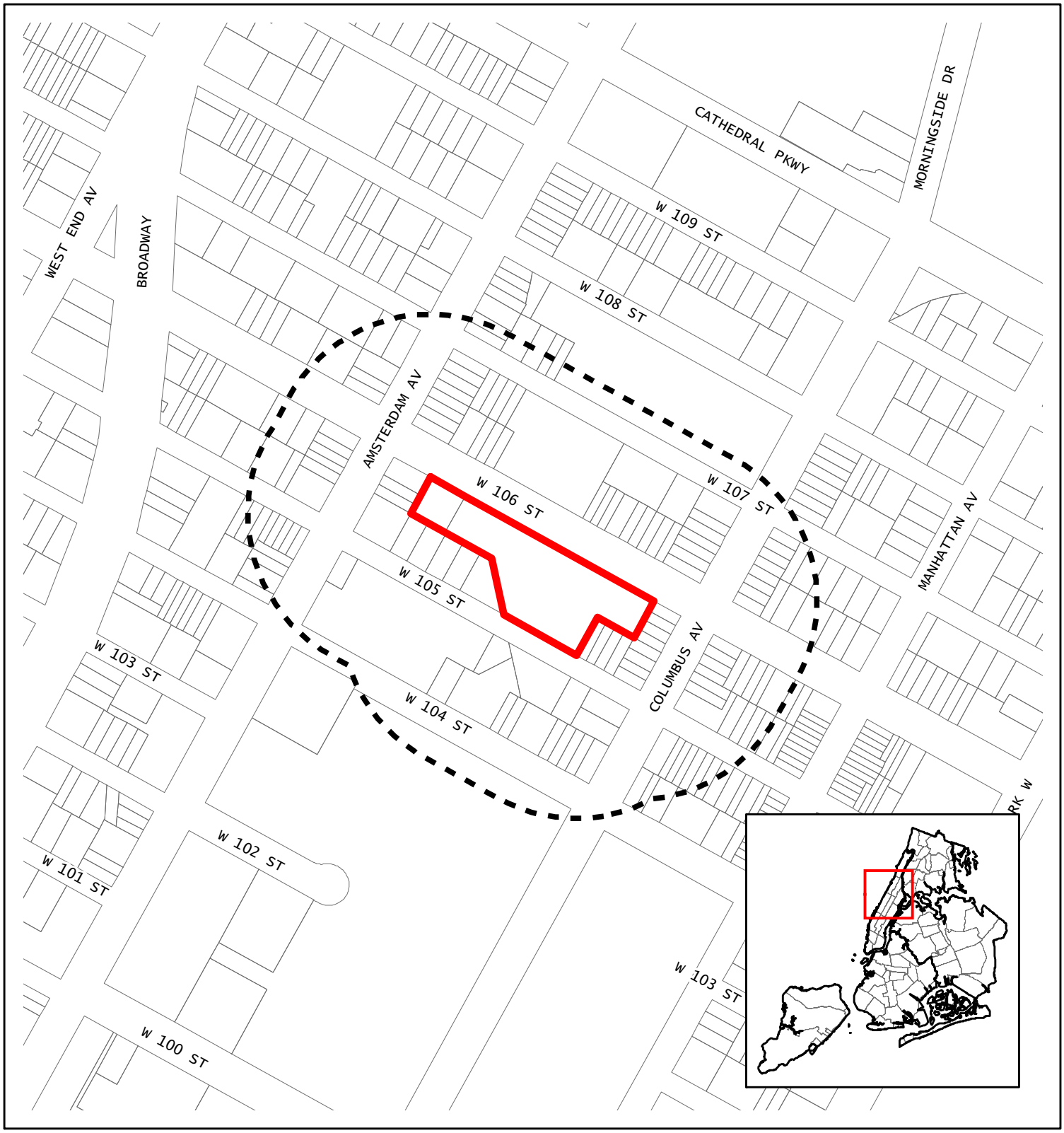
WOULD THE PROJECT BE IMPLEMENTED IN A SINGLE PHASE? YES ■ NO ☐ IF MULTIPLE PHASES, HOW MANY PHASES:

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE: **N/A**

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

■ RESIDENTIAL ☐ MANUFACTURING ■ COMMERCIAL ☐ PARK/FOREST/OPEN SPACE ■ OTHER, Describe: **Institutional**

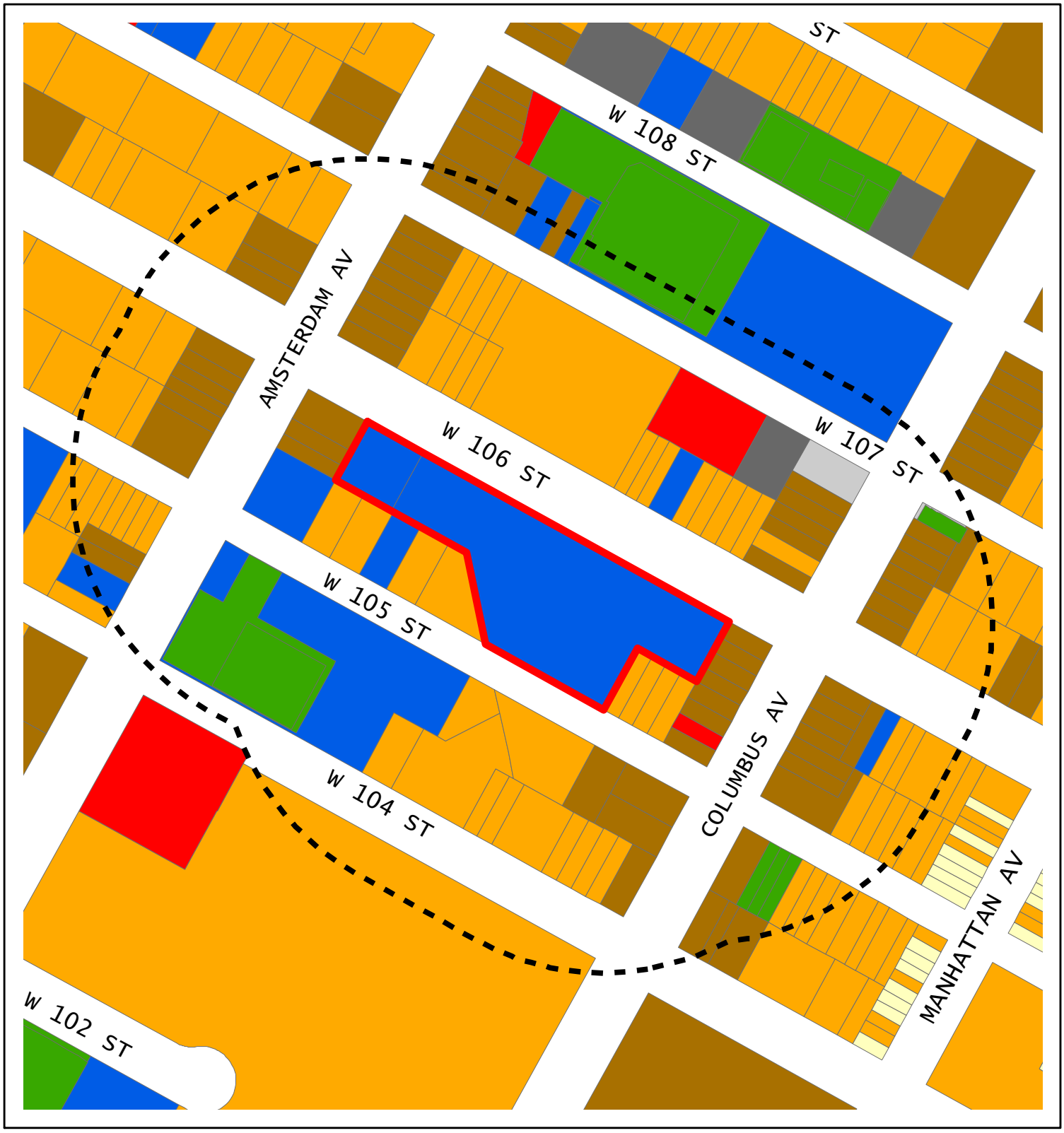
* **Construction is anticipated to begin in 2017.**



West 106th Street Rezoning
New York, NY 10025

Site Location Map
Figure 1

Source: MapPluto copyrighted by the New York City Department of City Planning (2011)



Project Site
400-Foot Radius
Single-Family Residential
Multi-Family Residential
Mixed Residential and Commercial/Retail
Commercial and Office
Industrial and Manufacturing
Transportation and Utility
Public Facilities and Institutions
Open Space and Outdoor Recreation
Parking Facilities
Vacant Building

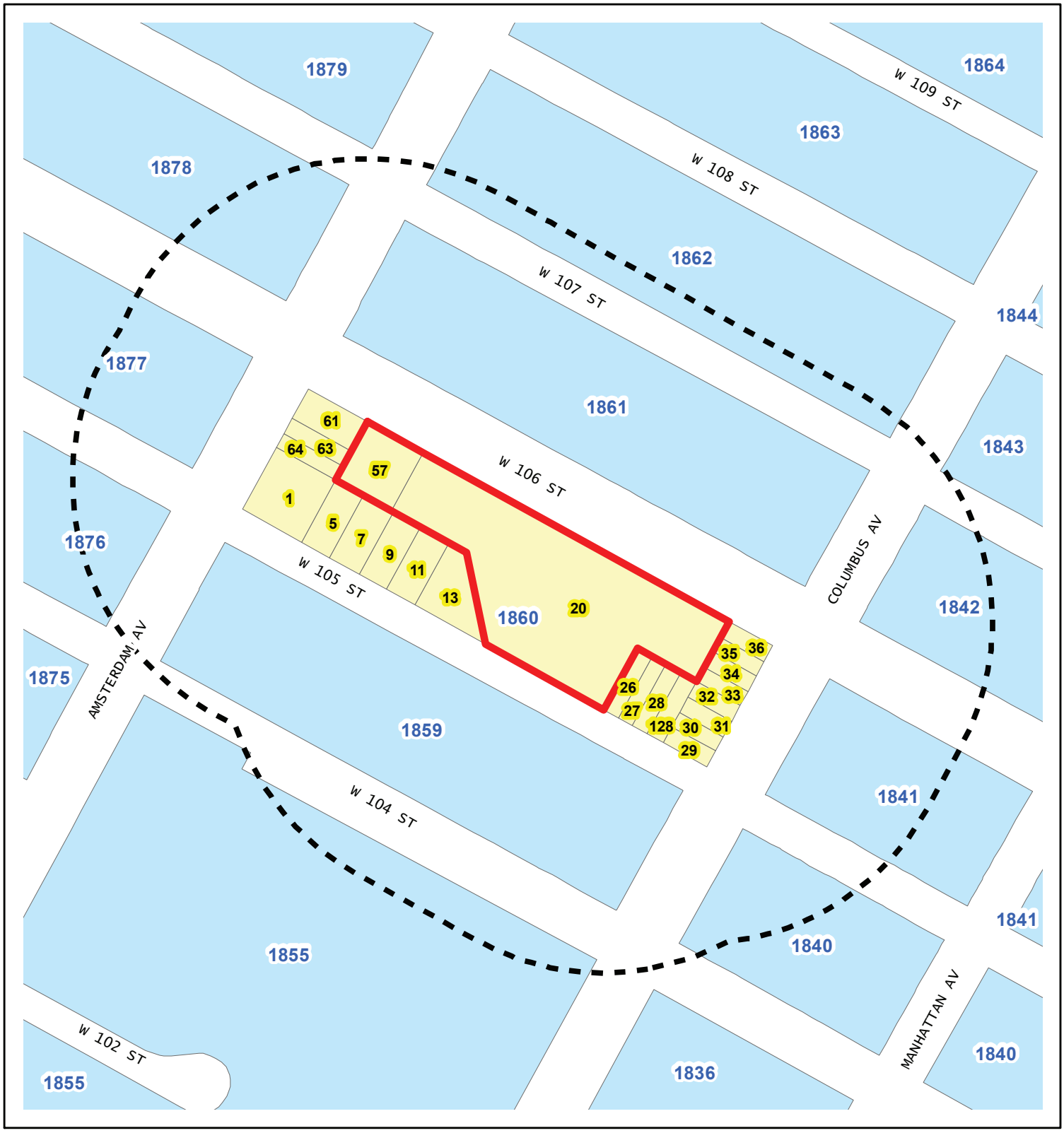
0 55 110 220 330 440
Feet

N

West 106th Street Rezoning
New York, NY 10025

Land Use Map
Figure 2

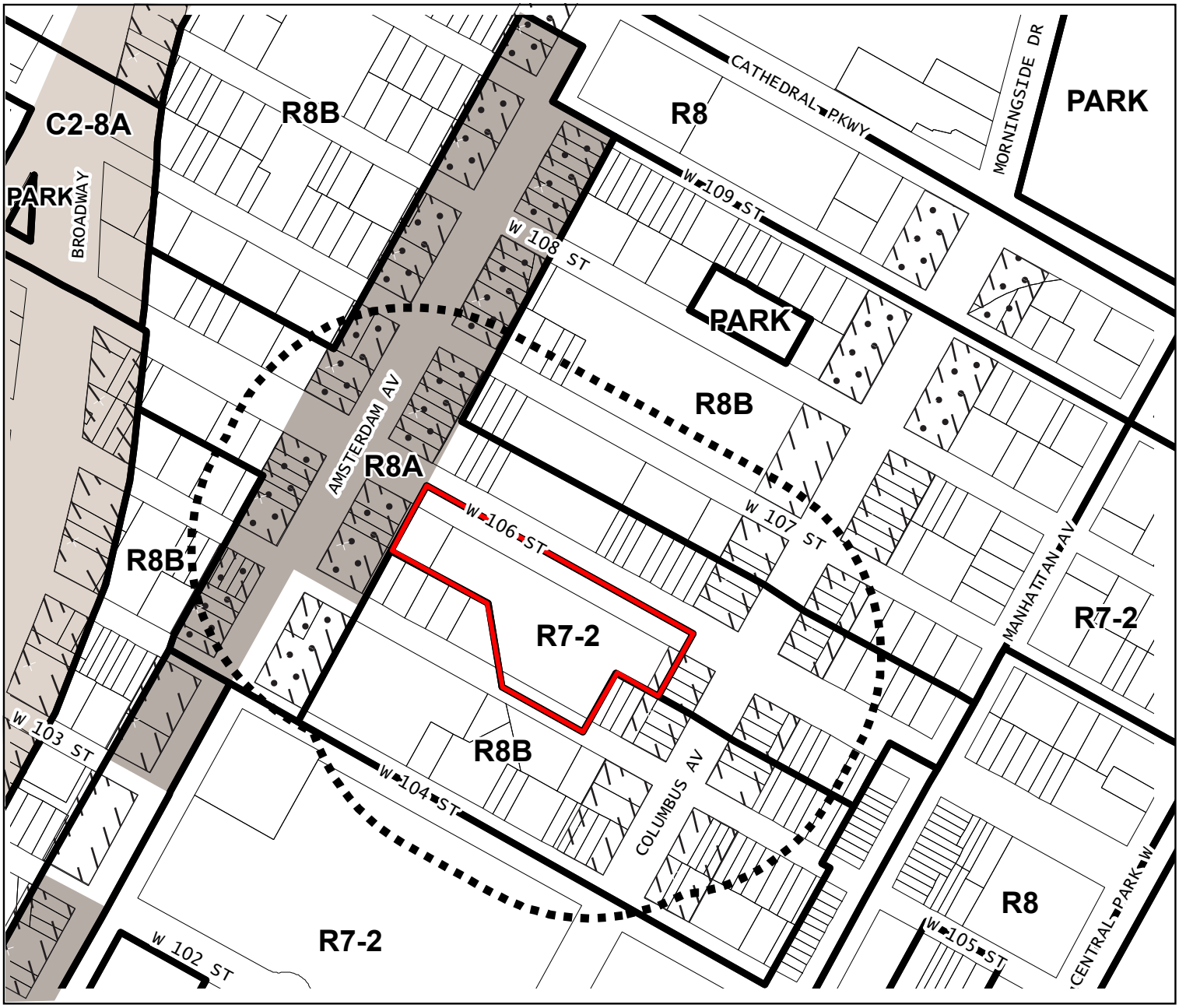
Source: MapPluto copyrighted by the New York City Department of City Planning (2011)



West 106th Street Rezoning
New York, NY 10025

Tax Map
Figure 3

Source: MapPluto copyrighted by the New York City Department of City Planning (2011)



Rezoning Area

400-Foot Radius

Zoning District Boundary

C1-5 Overlay

C2-5 Overlay

EC-2 Special Enhanced Commercial Use District 2 (EC-2)

EC-3 Special Enhanced Commercial Use District 3 (EC-3)

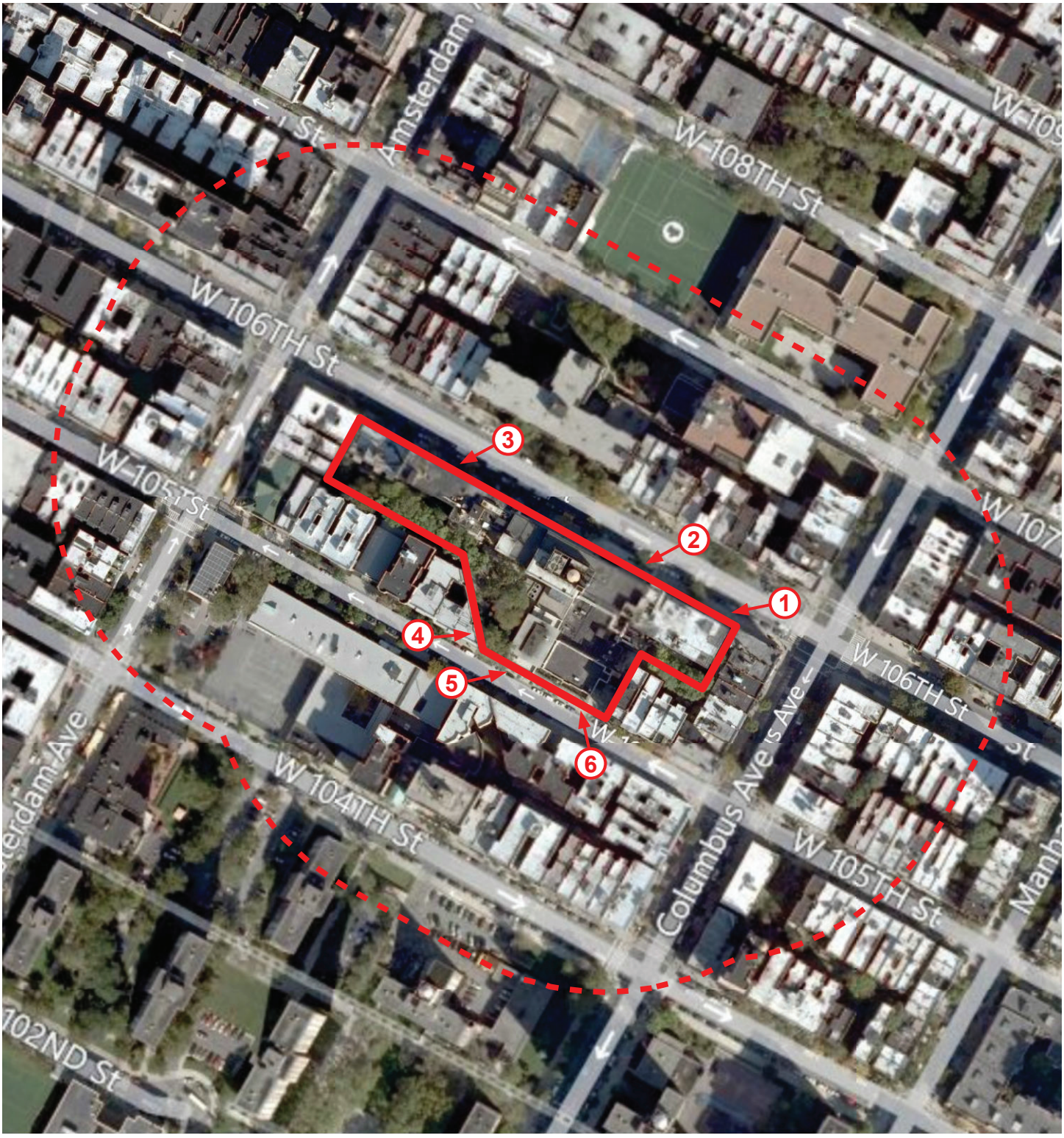
0 95 190 380 570 760 Feet

N

West 106th Street Rezoning
New York, NY 10025

Existing Zoning
Figure 4

Source: MapPluto copyrighted by the New York City Department of City Planning (2010)



Project Site

400 Foot Radius

Photo View Direction and Reference Number

0 55 110 220 330 440 Feet

N

West 106th Street Rezoning
New York, NY 10025

Photograph Key
Figure 5

Source: MapPluto copyrighted by the New York City Department of City Planning (2010); (c) 2010 Microsoft Corporation and its data suppliers; VHB Field Survey, January 2012



View of the northeast corner of the project site.



View of project site frontage along 106th Street.



View of project site frontage along 106th Street.



View of project site frontage along 105th Street.



View of project site frontage along 105th Street.



View of the southeast corner of the project site.

DESCRIPTION OF EXISTING AND PROPOSED CONDITIONS

The information requested in this table applies to the directly affected area. The directly affected area consists of the project site and the area subject to any change in regulatory control. The increment is the difference between the No-Action and the With-Action conditions.

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
Land Use				
Residential	Yes ☐ No ■	Yes ■ No ☐	Yes ■ No ☐	
If yes, specify the following				
No. of dwelling units		**380**	**597**	**217**
No. of low- to moderate-income units		**0**	**0**	**0**
No. of stories		**7 and 6 stories**	**7, 11, and 11 stories**	**5 stories**
Gross Floor Area (sq. ft.)		**323,715**	**507,649**	**184,474**
Describe Type of Residential Structures		**2 mid-rise building**	**3 mid-rise buildings**	**N/A**
Commercial	Yes ☐ No ■	Yes ☐ No ■	Yes ■ No ☐	
If yes, specify the following:				
Describe type (retail, office, other)				**N/A**
No. of bldgs				**N/A**
GFA of each bldg (sq. ft.)				**N/A**
Manufacturing/Industrial	Yes ☐ No ■	Yes ☐ No ■	Yes ☐ No ■	
If yes, specify the following:				
Type of use				**N/A**
No. of bldgs				**N/A**
GFA of each bldg (sq. ft.)				**N/A**
No. of stories of each bldg.				**N/A**
Height of each bldg				**N/A**
Open storage area (sq. ft.)				**N/A**
If any unenclosed activities, specify				**N/A**
Community Facility	Yes ■ No ☐	Yes ■ No ☐	Yes ■ No ☐	
If yes, specify the following	**See Footnote***			
Type	**health care services and assistance for elders**	**Community center**	**Community center**	**N/A**
No. of bldgs	**6**	**ground floor 1 bldg**	**ground floor 2 bldgs**	**N/A**
GFA of each bldg (sq. ft.)	**Total = 263,000**	**31,006**	**31,006**	**0**
No. of stories of each bldg	**Range: 2 -9-stories**	**1 (ground floor)**	**1 (ground floor)**	**0**
Height of each bldg		**13 feet ground floor only**	**15.4 feet and 11 feet ground floor only**	**2.4 feet**
Vacant Land	Yes ☐ No ■	Yes ☐ No ■	Yes ☐ No ■	
If yes, describe				**N/A**
Publicly Accessible Open Space	Yes ☐ No ■	Yes ☐ No ■	Yes ☐ No ■	
If yes, specify type (mapped City, State, or Federal Parkland, wetland—mapped or otherwise known, other)				**N/A**
Other Land Use	Yes ☐ No ■	Yes ☐ No ■	Yes ☐ No ■	
If yes, describe				**N/A**
Parking				
Garages	Yes ☐ No ■	Yes ■ No ☐	Yes ■ No ☐	
If yes, specify the following:				
No. of public spaces		**0**	**0**	**0**
No. of accessory spaces		**141**	**208**	**67**
Operating hours		**24 hours/day**	**24 hours/day**	**N/A**
Attended or non-attended		**Attended**	**Attended**	**N/A**

*** The project site contains six buildings that functions as the Manhattan campus for the Jewish Home Lifecare facility. The facility provides a range of services for seniors including adult day care, short-stay rehabilitation, and nursing home care. The existing facility currently contains approximately 298 rooms for 514 residents.**

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
Parking *(continued)*				
Lots	Yes ☐ No ■	Yes ☐ No ■	Yes ☐ No ■	
If yes, specify the following:				
No. of public spaces				**N/A**
No. of accessory spaces				**N/A**
Operating hours				**N/A**
Other (includes street parking)	Yes ☐ No ■	Yes ☐ No ■	Yes ☐ No ■	
If yes, describe				**N/A**
Storage Tanks				
Storage Tanks	Yes ■ No ☐	Yes ■ No ☐	Yes ■ No ☐	
If yes, specify the following:				
Gas/Service stations:	Yes ☐ No ■	Yes ☐ No ■	Yes ☐ No ■	
Oil storage facility:	Yes ■ No ☐	Yes ■ No ☐	Yes ■ No ☐	
Other; identify:	Yes ☐ No ☐	Yes ☐ No ■	Yes ☐ No ■	
If yes to any of the above, describe:				
Number of tanks		**TBD**	**TBD**	**N/A**
Size of tanks		**TBD**	**TBD**	**N/A**
Location of tanks		**TBD**	**TBD**	**N/A**
Depth of tanks		**TBD**	**TBD**	**N/A**
Most recent FDNY inspection date		**N/A**	**N/A**	**N/A**
Population				
Residents	Yes ■ No ☐	Yes ■ No ☐	Yes ■ No ☐	
If any, specify number	**514**	**791**	**1,242**	**451**
Briefly explain how the number of residents was calculated	**Estimate of residents in the No-Action and With-Action Condition is based on number of residential units multiplied by average household size for the surrounding census tracts (2.08 persons per household)**			
Businesses	Yes ■ No ☐	Yes ☐ No ■	Yes ☐ No ■	
If any, specify the following:				
No. and type	**staff for existing community facility use**	**No commercial uses Employment for other uses in buildings**	**No commercial uses Employment for other uses in buildings**	**N/A**
No. and type of workers by business	**775 (source: Jewish Home Lifecare facility)**	**49 total (Residential: 15; Community facility: 31; Parking: 3)**	**59 total (Residential: 24; Community facility: 31; Parking: 4)**	**10 workers**
No. and type of non-residents who are not workers	**0**	**0**	**0**	**0**
Briefly explain how the number of businesses was calculated	**Employment estimates based on the assumption of one full time equivalent (FTE) employee per: 25 residential units; 1,000 sf community facility; and one per 50 parking spaces.**			
Zoning*				
Zoning classification	**R7-2/C1-5**	**R7-2/C1-5**	**R8A/C1-5 & R8B**	**N/A**
Maximum amount of floor area that can be developed (in terms of bulk)	**Residential: 305,235 Community facility (CF): 576,752**	**Residential: 305,235 Community facility (CF): 576,752**	**See footnote***	**Residential: 177,096 CF: -64,145**
Predominant land use and zoning classification within a 0.25-radius of proposed project	**See footnote****	**See footnote****	**See footnote****	**N/A**

Attach any additional information as may be needed to describe the project.

If your project involves changes in regulatory controls that affect one or more sites not associated with a specific development, it is generally appropriate to include the total development projections in the above table and attach separate tables outlining the reasonable development scenarios for each site.

**This section should be completed for all projects, except for such projects that would apply to the entire city or to areas that are so extensive that site-specific zoning information is not appropriate or practicable.*

*** R8A (63,073 sf): 379,699 zsf residential use, 409,975 zsf community facility use**
R8B (25,658 sf): 102,632 zsf residential use and community facility use
TOTAL: 482,331 zsf residential use and 512,607 zsf community facility use

**** The predominant land uses within ¼ mile of the project site include residential and institutional. The zoning classifications within a ¼-mile radius of the project site include residential R8A, R8B, and R7-2, C1-5 and C2-5 Overlays. Also, see Figure 2 and Figure 4.**

PART II: TECHNICAL ANALYSES

INSTRUCTIONS: For each of the analysis categories listed in this section, assess the proposed project's impacts based on the thresholds and criteria presented in the *CEQR Technical Manual*. Check each box that applies.

- 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.
- For each 'Yes' response, answer the subsequent questions for that technical area and consult the relevant chapter of the *CEQR Technical Manual* for guidance on providing additional analyses (and attach supporting information, if needed) to determine whether the potential for significant impacts exists. Please note that a 'Yes' answer does not mean that 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 to either provide additional information to support the Full EAS Form. For example, if a question is answered 'No,' an agency may request a short explanation for this response.

		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. **See Section 2.1 "Land Use, Zoning, and Public Policy" in the attached "Supplemental Analyses."**		✓
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?		✓
(b)	If 'Yes' to any of the above, attach supporting information to answer the following questions, as appropriate. If 'No' was checked for each category above, the remaining questions in this technical area do not need to be answered. **See Section 2.2 "Socioeconomic Conditions" in the attached "Supplemental Analyses."**		
(1)	***Direct Residential Displacement***		
	If more than 500 residents would be displaced, would these displaced represent more than 5% of the primary study area population?		
	If 'Yes,' is the average income of the directly displaced population markedly lower than the average income of the rest of the study area population?		
(2)	***Indirect Residential Displacement***		
	Would the expected average incomes of the new population exceed the average incomes of the study area populations?		
	If 'Yes,' would the population increase represent more than 5% of the primary study area population or otherwise potentially affect real estate market conditions?		
	If 'Yes,' would the study area have a significant number of unprotected rental units?		
	Would more than 10 percent of all the housing units be renter-occupied and unprotected?		
	Or, would more than 5 percent of all the housing units be renter-occupied and unprotected where no readily observable trend toward increasing rents and new market rate development exists within the study area?		

		YES	NO
(3)	***Direct Business Displacement***		
	Do any of the displaced businesses provide goods or service that otherwise could not be found within the trade area, either under existing conditions or in the future with the proposed project?		
	Do any of the displaced businesses provide goods or services that otherwise could not be found within the trade area, either under existing conditions or in the future with the proposed project?		
	Or is any category of business to be displaced the subject of other regulations or publicly adopted plans to preserve, enhance, or otherwise protect it?		
(4)	***Indirect Business Displacement***		
	Would the project potentially introduce trends that make it difficult for businesses to remain in the area?		
	Would the project capture the retail sales in a particular category of goods to the extent that the market for such goods would become saturated as a result, potential resulting in vacancies and disinvestment on neighborhood commercial streets?		
(5)	***Effects on Industry***		
	Would the project significantly affect business conditions in any industry or any category of businesses within or outside the study area?		
	Would the project indirectly substantially reduce employment or impair the economic viability in the industry or category of businesses?		
3.	***COMMUNITY FACILITIES:*** *CEQR Technical Manual, Chapter 6*		
(a)	Would the project directly eliminate, displace, or alter public or publicly funded community facilities such as educational facilities, libraries, hospitals and other health care facilities, day care centers, police stations, or fire stations?		✓
(b)	Would the project exceed any of the thresholds outlines in Table 6-1 in Chapter 6?		✓
(c)	If 'No' was checked above, the remaining questions in this technical area do not need to be answered. If 'Yes' was checked, attach supporting information to answer the following, if applicable.		
(1)	***Child Care Centers***		
	Would the project result in a collected utilization rate of the group child care/Head Start centers in the study area that is greater than 100 percent?		
	If 'Yes,' would the project increase the collective utilization rate by 5 percent from the No-Action scenario?		
(2)	***Libraries***		
	Would the project increase the study area population by 5 percent from the No-Action levels?		
	If 'Yes,' would the additional population impair the delivery of library services in the study area?		
(3)	***Public Schools***		
	Would the project result in a collective utilization rate of the elementary and/or intermediate schools in the study area that is equal to or greater than 105 percent?		
	If 'Yes,' would the project increase this collective utilization rate by 5 percent from the No-Action scenario?		
(4)	***Health Care Facilities***		
	Would the project affect the operation of health care facilities in the area?		
(5)	***Fire and Police Protection***		
	Would the project affect the operation of fire or police protection in the area?		
4.	***OPEN SPACE:*** *CEQR Technical Manual, Chapter 7*		
(a)	Would the project change or eliminate existing open space?		✓
(b)	Is the project located within an underserved area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?		✓
(c)	If 'Yes,' would the proposed project generate more than 50 additional residents or 125 additional employees?		
(d)	Is the project located within a well-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?	✓	
(e)	If 'Yes,' would the project generate more than 350 additional residents or 750 additional employees?	✓	
(f)	If the project is not located within an underserved or well-served area, would it generate more than 200 additional residents or 500 additional employees?		
(g)	If 'Yes' to any of the above questions, attach supporting information to answer the following: • Does the project result in a decrease in the open space ratio of more than 5%? **See Section 2.3 "Open Space" in the attached "Supplemental Analyses."**		✓
	• If the project site is within an underserved area, is the decrease in open space between 1% and 5%?		
	• If 'Yes,' are there qualitative considerations, such as the quality of open space, that need to be considered?		

		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?		✓
(c)	If 'Yes' to either of the above questions, attach supporting information explaining whether the project's shadow reach any sunlight-sensitive resource at any time of the year. **See Section 2.4 "Shadows" in the attached "Supplemental Analyses.**		
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 proposed project would affect any of these resources. **Also see Appendix A.**		✓
7.	***URBAN DESIGN AND VISUAL RESOURCES:*** *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?		✓
(c)	If "Yes" to either of the questions above, please provide the information requested in Chapter 10.		
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: Attach supporting information on whether the proposed project would affect any of these resources.		✓
9.	***HAZARDOUS MATERIALS:*** *CEQR Technical Manual, Chapter 12*		
(a)	Would the proposed 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 proposed 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)	Does 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)	Does 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 or unknown origin?		✓
(e)	Does 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)	Does 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)	Does 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:	✓	
(i)	Based on a Phase I Assessment, is a Phase II Assessment needed? **See Section 2.6 "Hazardous Materials" in the attached "Supplemental Analyses."**		✓
10.	***WATER AND SEWER INFRASTRUCTURE:*** *CEQR Technical Manual, Chapter 13*		
(a)	Would the 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 sq. ft. or more of commercial space in Manhattan or at least 400 residential units or 150,000 sq. ft. 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 in Chapter 13?		✓
(d)	Does the proposed project involve development on a site five acres or larger where the amount of impervious surface would increase?		✓
(e)	Would the proposed 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)	Would the proposed project be 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?		✓
(i)	If "Yes" to any of the above, conduct the appropriate preliminary analyses and attached supporting documentation.		

		YES	NO
11. *SOLID WASTE AND SANITATION:* *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?		✓
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 in Chapter 16?	✓	
(b)	If "Yes," conduct the screening analyses, attach appropriate back up data as needed for each stage, and answer the following questions: **See Section 2.7 "Transportation" in the attached "Supplemental Analyses."**		
	(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 in Chapter 16 for more 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 in Chapter 17?		✓
(b)	*Stationary Sources:* Would the proposed project result in the conditions outlined in Section 220 in 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?		✓
(f)	If "Yes," conduct the appropriate analyses and attach any supporting documentation. **See Section 2.8 "Air Quality."**		
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?		
(c)	If "Yes," attach supporting documentation to answer the following; Would the project be consistent with the City's GHG reduction goal?		
16. *NOISE:* *CEQR Technical Manual, Chapter 19*			
(a)	Would the proposed project generate or reroute the vehicular traffic?	✓	
(b)	Would the proposed project introduce new or additional receptors (see Section 124 in 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 sight 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?		✓
(e)	If "Yes," conduct the appropriate analyses and attach any supporting documentation. **See Section 2.9 "Noise."**		
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.		✓
(b)	If "Yes," explain here why or why not an assessment of neighborhood character is warranted based on the guidance in Chapter 21, "Neighborhood Character." Attach a preliminary analysis, if necessary.		

19. *CONSTRUCTION IMPACTS:* *CEQR Technical Manual, Chapter 22*
Would the project's construction activities involve (check all that apply): **See Section 2.10 "Construction."**

	YES	NO
• 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 or 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.

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 or 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

Environmental Consultant (APPLICANT/SPONSOR) of **PWV Owner LLC, c/o The Chetrit Group, LLC.** (NAME OF 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)

APPLICANT/SPONSOR NAME:	LEAD AGENCY REPRESENTATIVE NAME:
Nancy Doon, AICP, VHB Engineering, Surveying and Landscape Architecture, P.C.	**Robert Dobruskin, Director Environmental Assessment and Review**
SIGNATURE: Nancy Doon	DATE: 12-11-13

PLEASE NOTE THAT APPLICANT 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.

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. — ✓

3. ***LEAD AGENCY'S CERTIFICATION***

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

EAS Supplemental Analyses

West 106th Street Rezoning

Manhattan Block 1860
Lots 20 and 57
CEQR# 14DCP084M
ULURP# 130208ZMM

Lead Agency
New York City Department of City Planning
22 Reade Street
New York, New York 10007

Applicant
PWV Owner LLC

Prepared by


Transportation, Land Development, Environmental Services
Two Penn Plaza, Suite 2602
New York, New York 10121

December 2013

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1.0

Project Description

1.1 Introduction

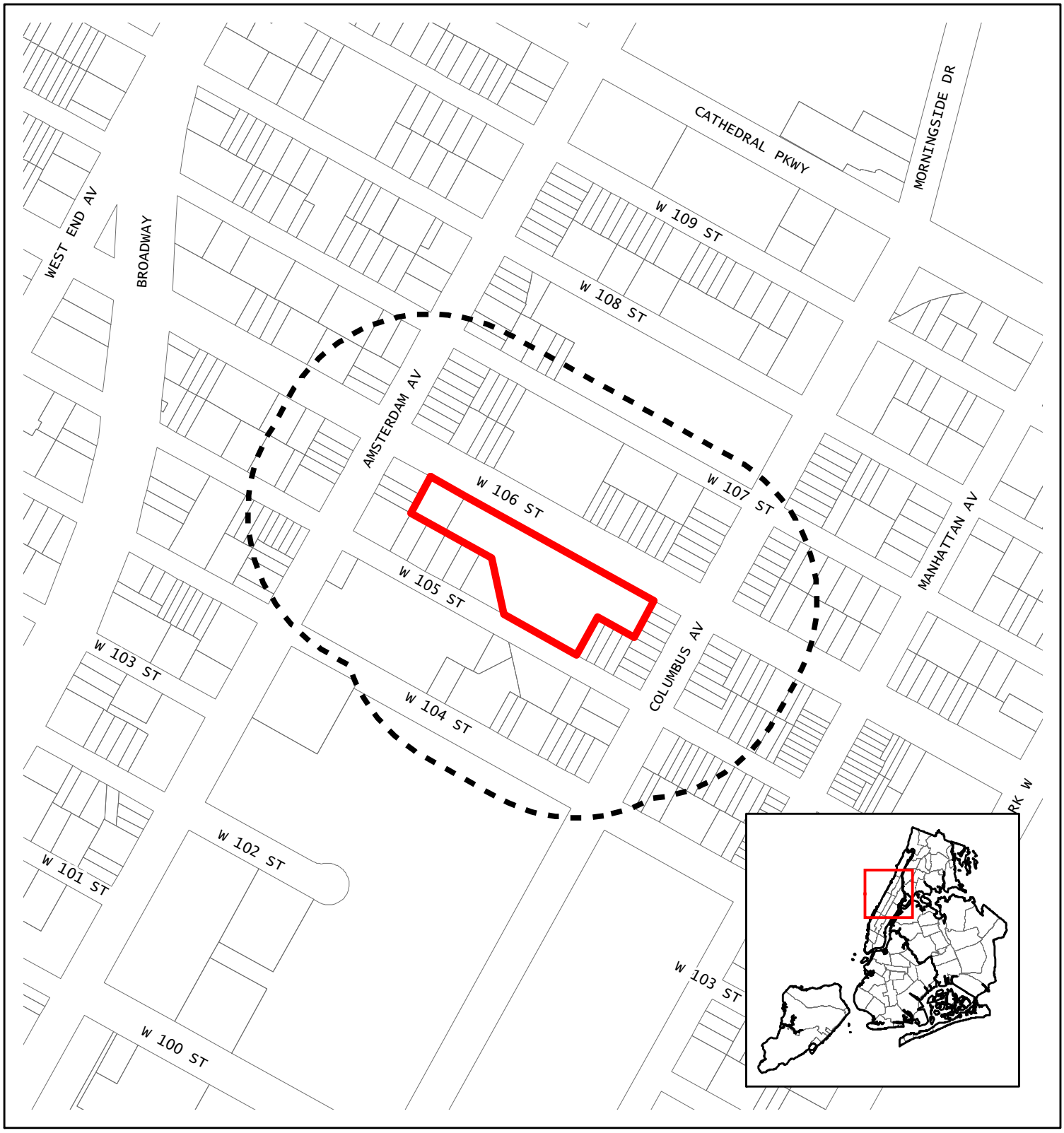
This section provides a description of the proposed action and the resulting development, as well as the purpose and need for the proposed action. Section 2.0 of the attachment examines the potential for the proposed action to result in significant adverse impacts, based on the procedures set forth in the *City Environmental Quality Review (CEQR) Technical Manual* (2012 edition).

1.2 Project Site

The project site is located in the Manhattan Valley neighborhood of Community District 7 (see Figure 1-1). The project site is situated on Block 1860, Lots 20 and 57, located midblock between Columbus and Amsterdam Avenues, fronting on both West 105th and West 106th Streets. The project site contains approximately 625 feet of frontage along West 106th Street, a wide two-way street with a bike lane and wide sidewalks, and 209 feet of frontage along West 105th Street, a narrow one-way westbound street.

The project site contains several buildings that function as the Manhattan campus for the Jewish Home Lifecare facility, having a business address at 120 West 106th Street. The project site is currently mapped within an R7-2 zoning district (see Figure 1-2), a residential height factor zoning district (no required street wall), which promotes tower-in-park development. R7-2 districts have a maximum floor area ratio (FAR) of 3.44 for residential uses and 6.5 for community facility uses. The easternmost portion of the project site along West 106th Street (extending a distance of 25 feet from the eastern property line) is also mapped with a C1-5 overlay district, which has a maximum commercial FAR of 2.0, with commercial uses limited to the ground floor when located in a mixed-use building.

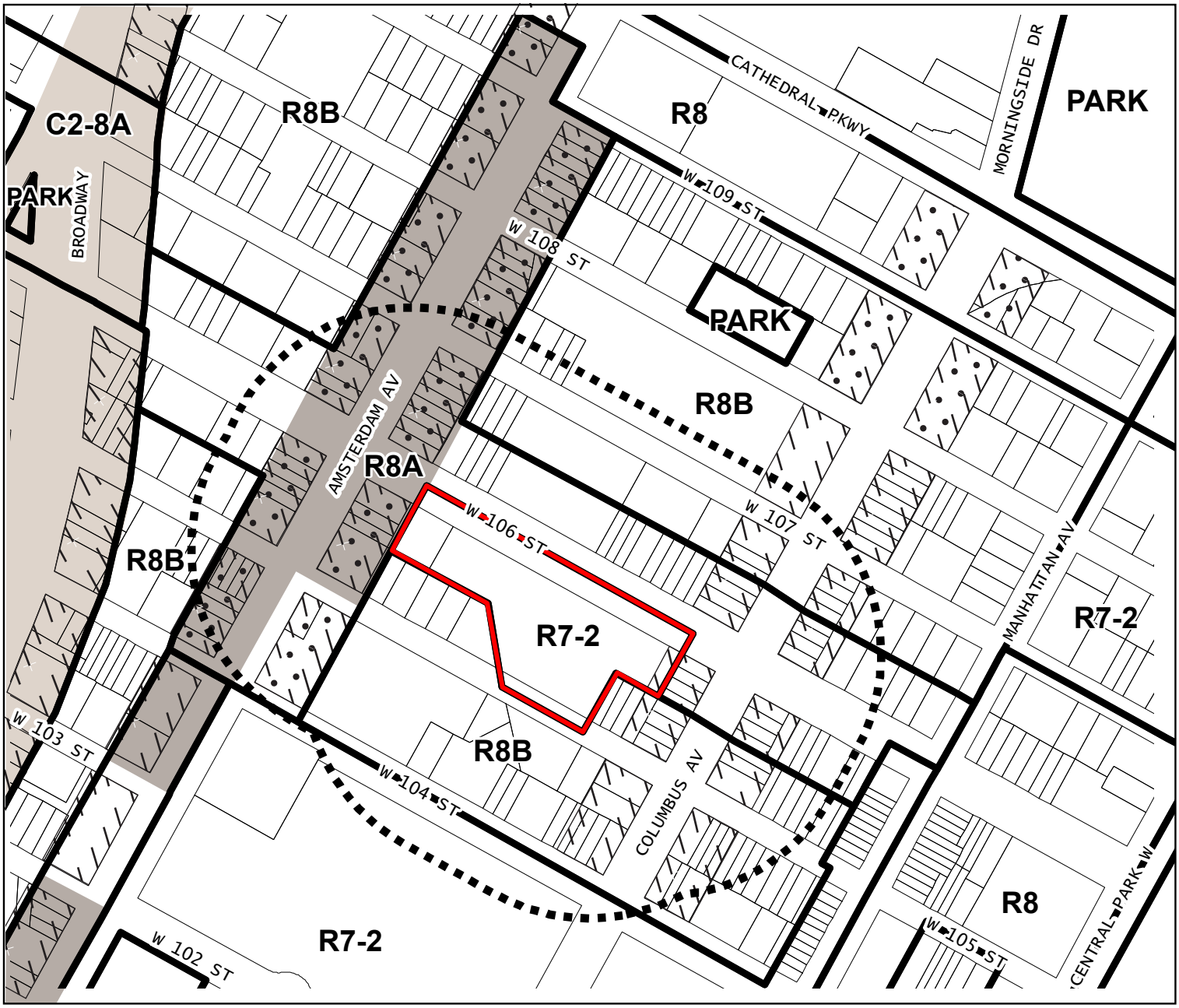
The project site is comprised of approximately five interconnected community facility buildings ranging in heights between two and nine-stories that total approximately 263,000 gross square feet (gsf). The facility provides a range of services for seniors including adult day care, short-stay rehabilitation, and nursing



West 106th Street Rezoning
New York, NY 10025

Site Location Map
Figure 1-1

Source: MapPluto copyrighted by the New York City Department of City Planning (2011)



Rezoning Area

400-Foot Radius

Zoning District Boundary

C1-5 Overlay

C2-5 Overlay

EC-2 Special Enhanced Commercial Use District 2 (EC-2)

EC-3 Special Enhanced Commercial Use District 3 (EC-3)

0 95 190 380 570 760 Feet

N

West 106th Street Rezoning
New York, NY 10025

Existing Zoning
Figure 1-2

Source: MapPluto copyrighted by the New York City Department of City Planning (2010)

home care. The existing facility currently contains approximately 298 rooms for a total of approximately 514 residents. Main access to the building is from West 106th Street.

1.3 Proposed Action

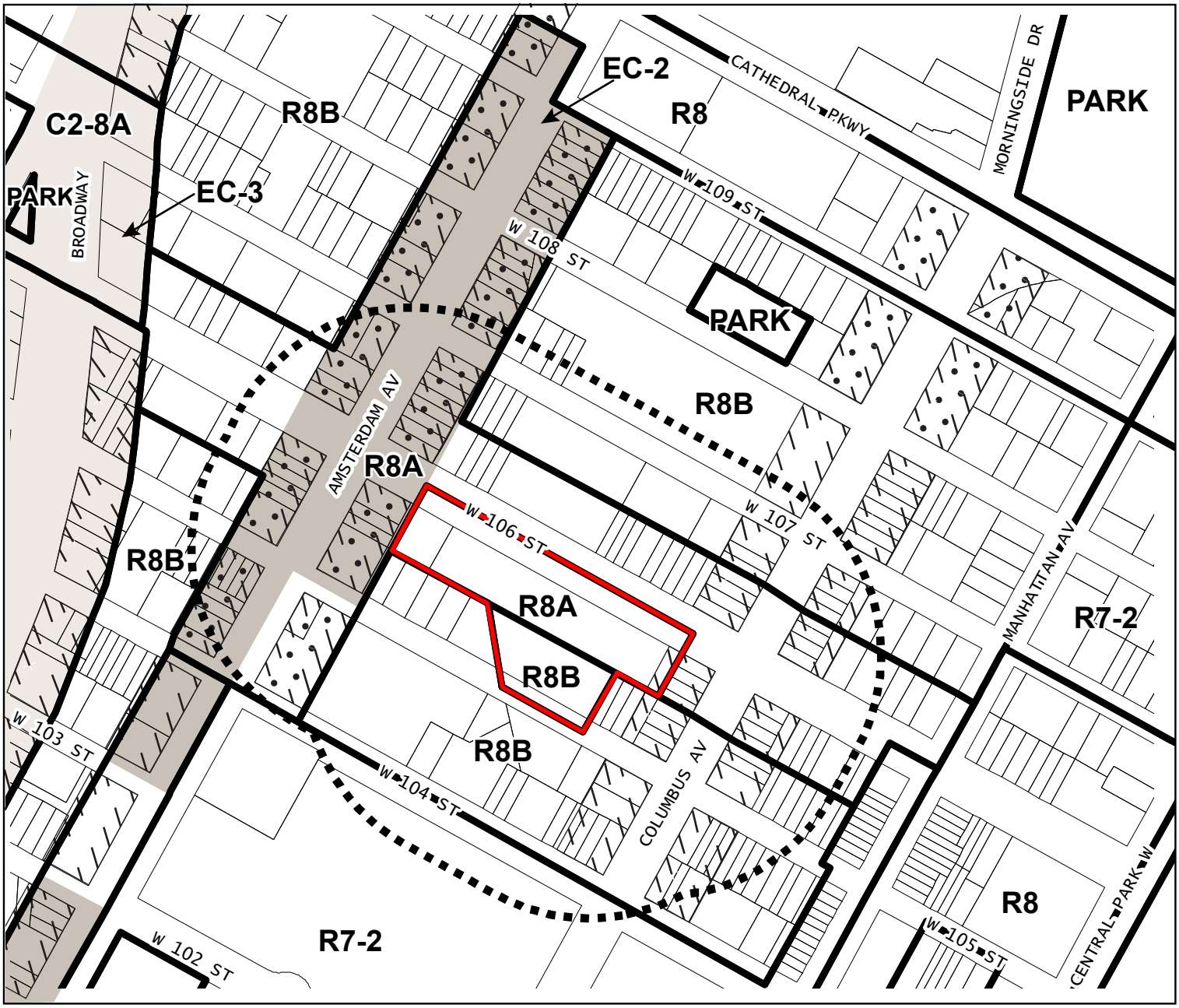
The proposed action would rezone the project site from the R7-2 district to an R8A district and an R8B district. The R8A would be mapped in the northern portion of the site (to a depth of 100 feet, 11 inches from West 106th Street) and the R8B district would be mapped in the southern portion of the site (see Figure 1-3). The proposed action would not change the C1-5 overlay.

The proposed R8A and R8B districts are contextual zoning districts that limit building heights and require buildings to be built to the street line or line up with abutting buildings, and have maximum and minimum street wall heights. The R8A district would allow a maximum FAR of 6.02 for residential uses and 6.50 for community facility uses. The R8A district would limit the maximum building height to 120 feet and require setbacks above a height of 85 feet. The R8B district would allow a maximum FAR of 4.0 for both residential and community facility uses. The R8B district would also limit the building height to 75 feet and require setbacks above a height of 60 feet. In addition, buildings in R8B districts would have a maximum base height of 60 feet and must be built to the street line or have street walls that match-up with adjacent buildings.

1.4 Purpose and Need

The New York City Department of City Planning (DCP) approved zoning map changes for approximately 50 blocks in the Upper West Side of Manhattan in Community District 7 in the fall of 2007. This rezoning responded to community concerns that recent residential development in the Upper West Side had been inconsistent with the established scale and character of the neighborhood. The rezoning changed R8 and R7-2 districts to three contextual districts—R9A, R8A, and R8B districts. The Upper West Side Rezoning was intended to provide opportunities for new residential development which better reflects the area's existing built character. The 2007 rezoning action continued the contextual rezoning of the Upper West Side that began in 1984, albeit at a lower density for Broadway, which introduced a variety of contextual zoning districts to reflect the differentiation between mid blocks and avenues and to promote street wall presence of new development.

The project site was included in the Upper West Side Rezoning Study in 2007. Based on the study, an R8A was proposed for the northern portion of Block 1860 along



Rezoning Area

400-Foot Radius

Zoning District Boundary

C1-5 Overlay

C2-5 Overlay

EC-2 Special Enhanced Commercial Use District 2 (EC-2)

EC-3 Special Enhanced Commercial Use District 3 (EC-3)

0 95 190 380 570 760 Feet

N

West 106th Street Rezoning
New York, NY 10025

Proposed Zoning
Figure 1-3

Source: MapPluto copyrighted by the New York City Department of City Planning (2010)

West 106th Street and an R8B was proposed for the southern portion of the Block along West 105th Street. However, at the time, the Jewish Home Life Care Nursing Home was planning to redevelop their facility and wanted their property excluded from the rezoning, since the rezoning would not have been compatible with their development plans. In 2007, the City Council modified the Upper West Side rezoning (C 070427 ZMM; Cal. No. 25/ CC Resolution No. 1073) to exclude the subject site and the existing R7-2 remained. Subsequently, the Nursing Home decided not to proceed with their development plans and instead pursue relocation of their operations in a new nursing home. The proposed new nursing home would be located on the north side of West 97th Street between Columbus and Amsterdam Avenues. The project, part of a separate land use application, was approved by the City Planning Commission on March 26, 2012 (N 120043 ZCM; CEQR No. 12DCP022M).

The purpose of the proposed action is to facilitate the Applicant's proposal to redevelop the project site with a mixed-use development. The proposed rezoning would be consistent with what was proposed in the original 2007 Upper West Side Rezoning before the City Council modifications, as noted above. The proposed action would further respond to the community's concerns that new residential construction in R7-2 districts has the potential to result in buildings of excessive height and low street walls, which is inconsistent with the existing character of the neighborhood. Therefore, the purpose of the proposed action is to establish contextual zoning districts on the project site that would facilitate the Applicant's development proposal and be consistent with the established built form, density and existing zoning districts in the surrounding Manhattan Valley neighborhood.

1.5 Analysis Year

It is anticipated that the future analysis year (build year) for the proposed action would be 2019. Construction on the project site would begin in 2017, after the existing institutional use has been relocated to its new off-site facility (described in more detail below as the future No-Action condition).

1.6 Reasonable Worst-Case Development Scenario (RWCDS)

A reasonable worst-case development scenario (RWCDS) for both "future No-Action" and "future With-Action" conditions are considered for a 2019 build year.

The future With-Action RWCDS identifies the amount and type of development that is expected to occur by 2019 as a result of the proposed action. The future No-Action RWCDS identifies similar development projections for 2019 absent the proposed action. The incremental difference between the With-Action and No-Action RWCDS serves as the basis for the impact analyses.

1.6.1 No-Action

Absent the proposed action, in the future No-Action condition, the Jewish Home Life Care Nursing Home institutional uses at the project site will be relocated to a new facility within Park West Village at West 97th Street. As noted above, the proposed relocation required a certification pursuant to Section 22-42 of the NYC Zoning Resolution by the City Planning Commission, which was approved on March 26, 2012.

After this relocation and absent the approval of the proposed actions,, the project site would be redeveloped as-of-right, without any discretionary actions, in accordance with the existing R7-2 zoning. This No-Action condition allows a maximum FAR of 3.44 for residential uses (up to 305,234 zoning square feet) and 6.5 for community facility uses (576,731 zoning square feet). The applicant (PWV Owner LLC) anticipates that absent the proposed action, the project site would be redeveloped as-of-right with an approximately 423,754 gsf building that would contain a mix of residential (approximately 380 units) and 31,006 gsf of community facility space and below-grade accessory parking for 141 spaces (see Table 1-1). This represents the No-Action RWCDS.

Table 1-1: No-Action RWCDS

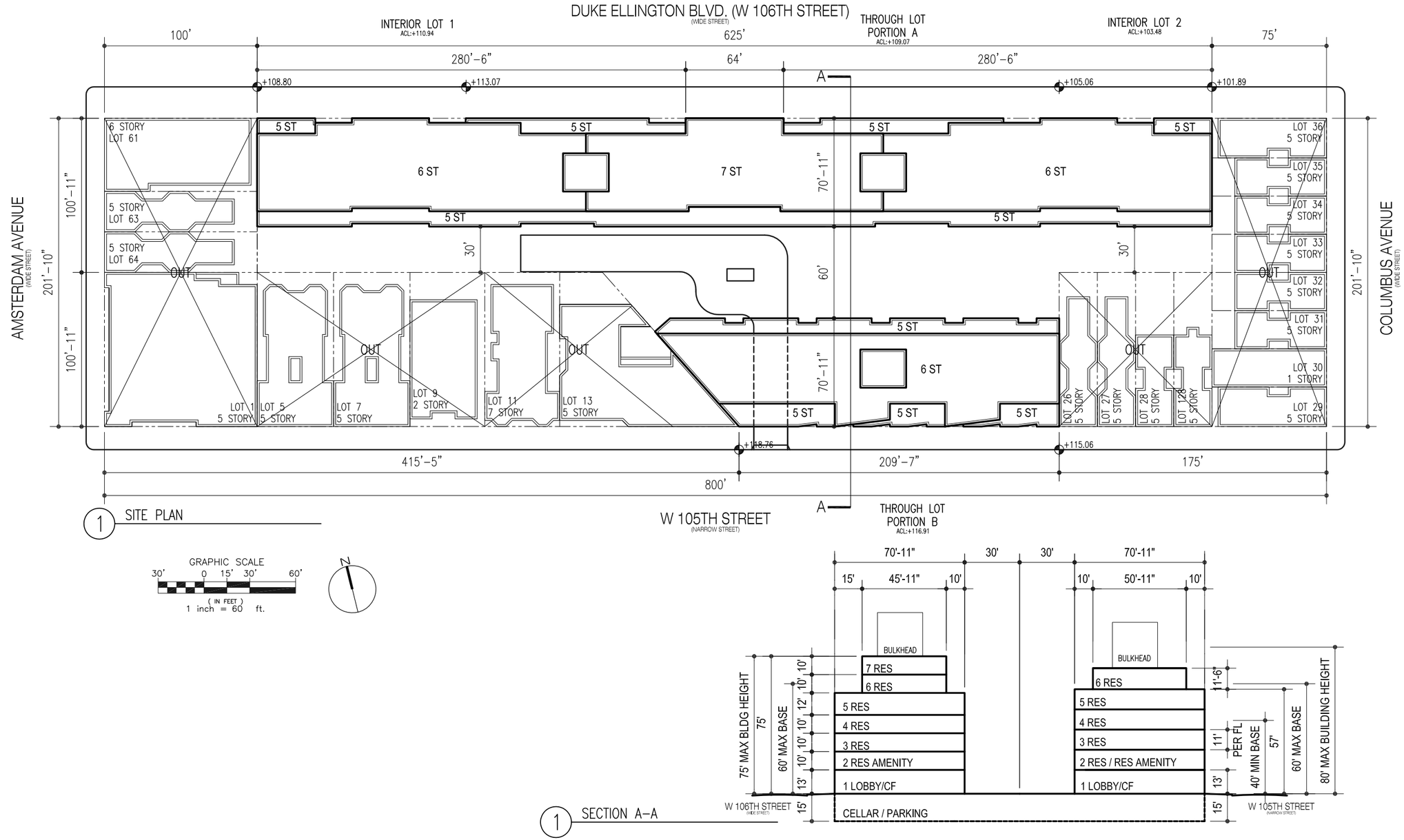
Use	Size (gsf)
Residential	323,175 (380 units)
Community Facility	31,006
Parking	31,958 (141 spaces)
Mechanical – not program space	37,615
TOTAL	**423,754**

Notes: Based on assumption of 850 GSF per residential unit
Source: Goldstein, Hill & West Architects, LLP

Further, in the No-Action condition, the project site would be redeveloped with one building fronting on West 106th Street and one building fronting on West 105th Street. See Figure 1-4 for the site plan and section of the No-Action RWCDS. The majority of the building fronting along West 106th Street would contain 6-stories (approximately 65 feet). The central portion of the building would contain 7-stories (approximately 75 feet). Community facility space would be located in the base of the building located along West 106th Street. The building along West 105th Street would contain a maximum of 6-stories (approximately 65 feet). For both buildings, the streetwall would rise straight up from the lot line, without any setback. Access to the parking garage would be from West 105th Street.

1.6.2 With-Action

The proposed action would allow for the development of a With-Action RWCDS comprising approximately 628,886 gsf of primarily residential uses on the project



1 SITE PLAN

GRAPHIC SCALE
30' 0 15' 30' 60'
(IN FEET)
1 inch = 60 ft.

1 SECTION A–A

For Illustrative Purposes Only

West 106th Street Rezoning
New York, NY 10025

Source: Goldstein, Hill & West Architects, LLP

No-Action RWCDS
Figure 1-4

site. For analysis purposes, the With-Action RWCDS is assumed to include approximately 597 residential units, 31,006 gsf of community facility space, 208 below-grade accessory parking spaces, and 47,233 gsf of mechanical and non-program space. Table 1-2 summarizes the With-Action RWCDS.

Table 1-2: With-Action RWCDS

Use	Size (gsf)
Residential	507,649 (597 units)
Community Facility	31,006
Parking	42,998 (208 spaces)
Mechanical – not program space	47,233
TOTAL	**628,886**

Notes: Based on assumption of 850 GSF per unit.
Source: Goldstein, Hill & West Architects, LLP

Based on the shape of the project site, the With-Action RWCDS would be comprised of three buildings, with two 11-story buildings (120 feet tall), North Building 1 and 2, located along West 106th Street (in the R8A district) and one 7-story building (75 feet tall), South Building, located along West 105th Street, (in the R8B district). See Figure 1-5 for the site plan and section of the With-Action RWCDS. The buildings would comply with the maximum building height and street wall requirements for the R8A and R8B districts. Community facility use would be located in the base of the two buildings along West 106th Street. Access to the parking garage would be from West 105th Street.

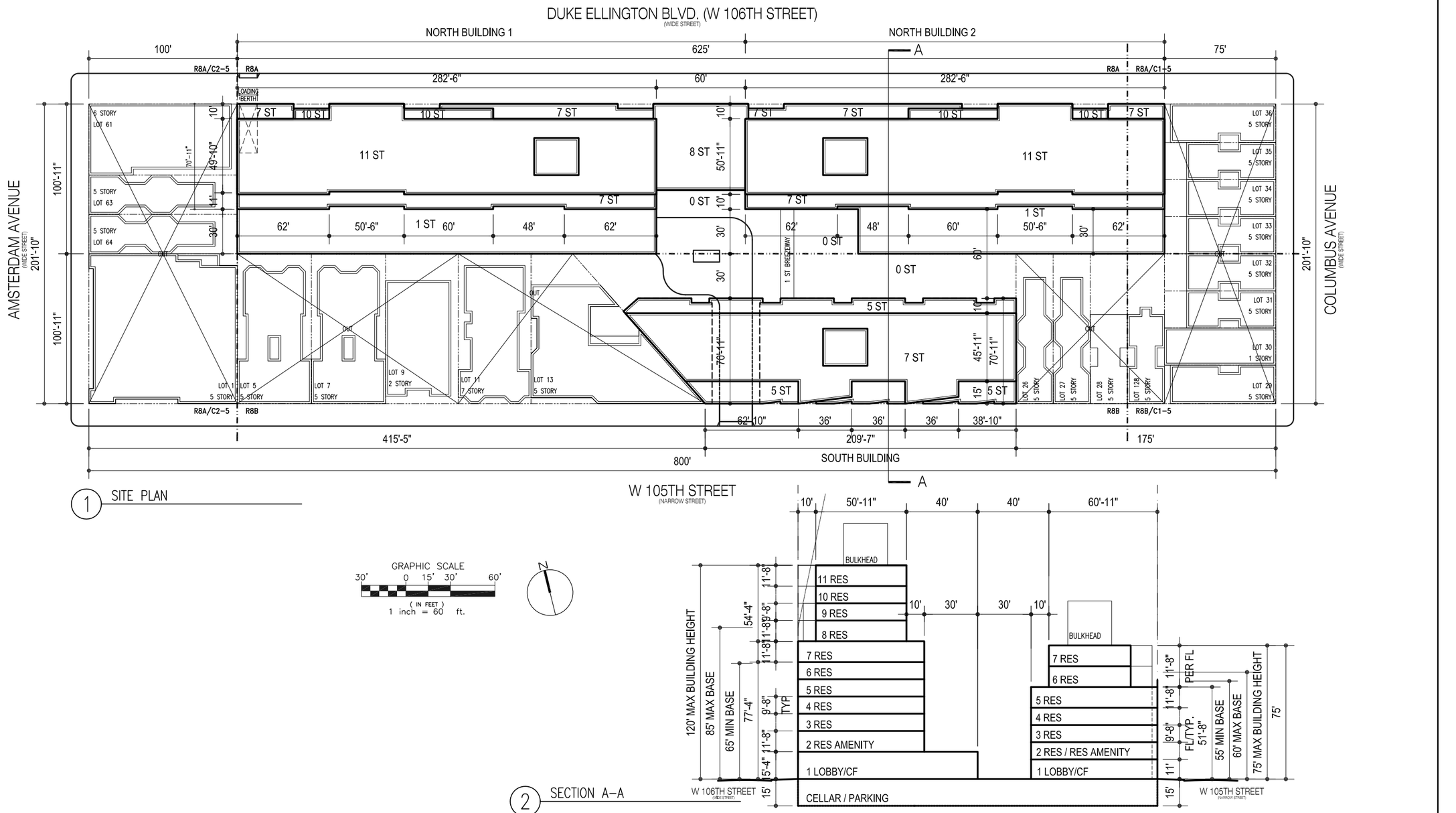
1.6.3 Increment

In each of the technical areas in Section 2.0 of the Supplemental Analyses, the With-Action RWCDS is compared to the No-Action RWCDS. Table 1-3 summarizes the increments for analysis.

Table 1-3: Increment

Use	No-Action RWCDS	With-Action RWCDS	Increment
Residential	323,175 gsf (380 units)	507,649 gsf (597 units)	184,474 gsf (217 units)
Community Facility	31,006 gsf (community center)	31,006 gsf (community center)	0
Parking	31,958 gsf (141 spaces)	42,998 gsf (208 paces)	11,040 gsf (67 spaces)
Mechanical / Storage (below grade) – not program space	37,615 gsf	47,233 gsf	9,618 gsf
TOTAL	**423,754 gsf**	**628,886 gsf**	**205,132 gsf**

Notes: Based on assumption of 850 GSF per residential unit



For Illustrative Purposes Only

West 106th Street Rezoning
New York, NY 10025

With-Action RWCDS
Figure 1-5

Source: Goldstein, Hill & West Architects, LLP

2.0

Impact Analyses

2.1 Land Use, Zoning and Public Policy

This analysis of land use, zoning, and public policy follows the guidelines set forth in the *CEQR Technical Manual* (2012 edition). It characterizes the existing conditions in the area surrounding the project site and addresses potential impacts to land use, zoning, and public policy that would be associated with the proposed action.

The land use study area is defined as the area within 400 feet of the project site and is generally bounded by West 107th Street to the north, the midblock between Manhattan and Columbus Avenues to the east, West 104th Street to the south, and the midblock between Amsterdam Avenue and Broadway to the west. This is the area in which the proposed action would be most likely to have effects in terms of land use, zoning, or public policy. Sources used to conduct this analysis include field surveys, evaluation of land use and zoning maps, discussions with DCP, and consultation of other sources, such as the *Zoning Resolution of the City of New York*.

2.1.1 Existing Conditions

Land Use

Project Site

The project site is located midblock between Columbus and Amsterdam Avenues, fronting on both West 105th and West 106th Streets (Block 1860, Lots 20 and 57). The project site contains approximately 625 feet of frontage along West 106th Street, a wide two-way street with a bike lane and wide sidewalks, and 209 feet of frontage along West 105th Street, a narrow one-way westbound street.

The project site contains one institutional use, the Manhattan campus for the Jewish Home Lifecare facility, having a business address at 120 West 106th Street. The project site is comprised of approximately five interconnected community facility buildings ranging in heights between two and nine-stories that total approximately 263,000 gross square feet (gsf). The facility provides a range of services for seniors including adult day care, short-stay rehabilitation, and nursing home care. The

existing facility currently contains approximately 298 rooms for a total of approximately 514 residents. Main access to the building is from West 106th Street.

Study Area

The project site is located in the Manhattan Valley neighborhood, which is generally bounded by Amsterdam Avenue, Manhattan Avenue, West 104th Street, and West 110th Street. Manhattan Valley is notable for its consistent four-to five-story residential buildings and row houses built to the street line, on both avenues and streets. This building type, generally constructed between 1900 and 1920, creates a lower-scale neighborhood framed by Central Park West, West 110th Street and West 106th Street, which are wide streets with several larger residential and community facility buildings.

West 106th Street, a wide two-way street with a bike lane and wide sidewalks along the southern side of the street, is a major corridor throughout the study area. West 105th Street is a narrow one-way westbound street.

As shown in EAS Figure 2, the area surrounding the project site is predominantly characterized by residential and community facility/ institutional uses. The majority of the residential buildings along Columbus and Amsterdam Avenues are multi-family walk-up, five-story row houses with ground floor retail. Similar residential buildings, without ground floor retail, are also located along the side streets. The Red Oak/ Manhattan Valley Golden Age Senior Center, a nine-story senior residence building, is located directly across West 106th Street from the project site. Frederick Douglass Houses, a New York City Housing Authority (NYCHA) development, is located in the southern most portion of the study area. This tower-in-park development contains several buildings ranging in height. The two buildings closest to the study area are 17-and 20-stories.

Located directly across West 105th Street is public school 145 (PS 145), the Bloomingdale School. The southwest corner of West 105th Street and Amsterdam Avenue contains a YMCA facility. The project block, on the north side of West 105th Street, contains two churches, one on the corner and in the midblock. The Cluster House, an Urban Pathways facility for formerly homeless single adults living with mental illness, is located along Amsterdam Avenue between West 104th and West 105th Streets. Veritas, a residential facility associated with substance abuse recovery, is located across from the project site on West 106th Street. The northernmost portion of the study area, along West 107th Street, contains two religious institutions as well as the Booker T. Washington Middle School (MS 54).

Retail uses in the study area are predominately found in the ground floor of residential buildings located along Columbus and Amsterdam Avenues. The retail uses include delicatessens and bodegas, restaurants/ food service establishments, personal service (dry cleaners, laundromats, hair care), and restaurants. A larger

Manhattan Mini Storage facility is located on the south side of West 107th Street. Adjacent to this building is a four-story parking garage.

The study area also contains two public park and playground areas owned and operated by the New York City Department of Parks and Recreation (DPR). Bloomingdale Playground (approximately 0.71 acre) is a paved area between West 104th and West 105th Streets that contains basketball courts and playground equipment. Booker T. Washington Playground (approximately 1.44 acres), located between West 107th and West 108th Streets, contains a large turf field area and paved basketball and handball courts. The portion of the study area east of Columbus Avenue contains several community gardens on the side streets.

Zoning and Public Policy

Project Site

The project site is currently mapped within an R7-2 zoning district (see EAS Figure 4). R7-2 is a medium-density residential height factor zoning district (no required street wall) that promotes tower-in-park development. The R7-2 district has a maximum floor area ratio (FAR) of 3.44 for residential uses and 6.5 for community facility uses. The easternmost portion of the project site along West 106th Street (extending a distance of 25 feet from the eastern property line) is also mapped with a C1-5 overlay district, which has a maximum commercial FAR of 2.0, with commercial uses limited to the ground floor when located in a mixed-use building. The maximum height of residential buildings in R7-2 districts is regulated by a sky exposure plane, which begins at a height of 60 feet above the front lot line. Other than zoning, there are no other public policies in place that govern any portion of the project site.

Study Area

Zoning designations in the study area primarily include two contextual districts—R8A and R8B districts—with only the southernmost portion of the study area, the location of the Frederick Douglass Houses, zoned R7-2 (see EAS Figure 4). C1-5 and C2-5 overlay districts are mapped along Columbus and Amsterdam Avenues, respectively.

The R8A district allows a maximum FAR of 6.02 for residential uses and 6.50 for community facility uses. The R8A district limits the maximum building height to 120 feet and requires setbacks above a height of 85 feet. The R8B district allows a maximum FAR of 4.0 for both residential and community facility uses. The R8B district limits the building height to 75 feet and requires setbacks above a height of 60 feet. In addition, buildings in R8B districts must have a maximum base height of 60 feet. Both the C1-2 and C2-5 commercial overlay districts allow a maximum 2.0 FAR

for local retail uses on the ground floor (and potentially on the second floor) for buildings within 100 feet from each avenue. The C2 overlay districts permit a slightly wider array of local retail services than C1 overlays. Other than zoning, there are no other public policies in place that govern any portion of the study area.

The City recently established two Special Enhanced Commercial Districts in Manhattan Community District 7. Within the study area, Special Enhanced Commercial District – 2 (EC-2) is located along Amsterdam Avenue, bounded by West 75th Street and West 110th Street on the west side, excluding the block between West 102nd and West 103rd Streets, and bounded by West 105th and West 109th Streets on the east side of the avenue. Located just outside the study area, Special Enhanced Commercial District – 3 (EC-3) is located along Broadway between West 72nd and West 110th Streets. This recent rezoning intends to maintain, over time, the general multi-store character of Amsterdam and Columbus Avenues, while promoting a varied and active retail environment on Broadway, which is typified by larger and second story retail establishments. The zoning requirements only apply to new or expanding establishments, and do not regulate overall store size or type of retail, the ownership, or method of operation of any business.

The Special Enhanced Commercial Districts include requirements pertaining to ground floor street frontage and transparency. Specifically, for EC–2, a minimum of two non-residential establishments is required for new developments for every 50 feet of street frontage for all zoning lots with a lot width of 50 feet or more, as measured along the street line of Amsterdam Avenue. All new and expanding commercial establishments (other than banks or loan offices) cannot exceed 40 feet in width along Amsterdam Avenue, except for grocery stores and houses of worship. Banks and loan offices are limited to 25 feet of ground floor frontage and residential lobbies are limited to 15 feet of ground floor frontage. Each new ground floor establishment required along Amsterdam Avenue must have a depth equal to at least 30 feet, as measured from the street wall along the designated commercial street. Transparency/ glazing is required for 50 percent of the area of new developments between a height of two and 12 feet as measured above the sidewalk level for all uses fronting on Amsterdam in new buildings. No portion of a ground floor may have a blank wall with a width exceeding 10 feet.

2.1.2 The Future Without The Proposed Action

Land Use

Project Site

Absent the proposed action, in the future without the proposed action (No Build condition), the institutional uses at the project site will be relocated to a new facility within Park West Village at West 97th Street. The Nursing Home will be relocating

their operations in a new nursing home located on the north side of West 97th Street between Columbus and Amsterdam Avenues. The project, part of a separate land use application, was approved by the City Planning Commission on March 26, 2012 (N 120043 ZCM; CEQR No. 12DCP022M). After this relocation, the project site would be redeveloped as-of-right, without any discretionary actions, in accordance with the existing R7-2 zoning. The applicant anticipates that absent the proposed action, the project site would be redeveloped as-of-right with approximately 423,754 gsf containing a mix of residential (approximately 380 units) and 31,006 gsf of community facility space and below-grade accessory parking for 141 spaces. This represents the No-Action RWCDS.

Study Area

Based on discussions with DCP, no known projects are anticipated to be developed in the study area in the future without the proposed action.

Zoning and Public Policy

In the future without the proposed action, there are no known zoning or other public policy changes that are anticipated to affect the project site or the study area.

2.1.3 The Future With The Proposed Action

Land Use

Project Site

As noted above, the Nursing Home will be relocating their operations in a new nursing home located on the north side of West 97th Street between Columbus and Amsterdam Avenues. The proposed action would allow for the development of a With-Action RWCDS of approximately 628,886 gsf of primarily residential uses on the project site. For analysis purposes, the With-Action RWCDS is assumed to include approximately 597 residential units, 31,006 gsf of community facility space, 208 below-grade accessory parking spaces, and 47,233 gsf of mechanical and non-program space.

Study Area

The With-Action RWCDS would not introduce new land uses to the study area. The With-Action RWCDS would reflect and be compatible with the existing residential, and community facility land use patterns of the surrounding area. Therefore, the proposed action would not adversely affect the land use character of the study area and would not result in significant adverse land use impacts.

Zoning and Public Policy

Project Site

The proposed action would replace the existing R7-2 zoning district with two contextual districts—R8A and R8B, which were originally proposed for the project site in the 2007 Upper West Side Rezoning. The northern portion of the project site, along West 106th Street, would be zoned R8A and the southern portion of the project site, along West 105th Street, would be zoned R8B (see Figure 1-3). The proposed action would not change the C1-5 overlay.

The project site was included in the Upper West Side Rezoning Study in 2007. Based on the study, an R8A was proposed for the northern portion of Block 1860 along West 106th Street and an R8B was proposed for the southern portion of the Block along West 105th Street. However, at the time, the Jewish Home Life Care Nursing Home was planning to redevelop their facility and wanted their property excluded from the rezoning, since the rezoning would not have been compatible with their development plans. In 2007, the City Council modified the Upper West Side rezoning (C 070427 ZMM; Cal. No. 25/ CC Resolution No. 1073) to exclude the subject site and the existing R7-2 remained. Subsequently, the Nursing Home decided not to proceed with their development plans and instead pursue relocation of their operations in a new nursing home. The proposed new nursing home would be located on the north side of West 97th Street between Columbus and Amsterdam Avenues. The project, part of a separate land use application, was approved by the City Planning Commission on March 26, 2012 (N 120043 ZCM; CEQR No. 12DCP022M). The Applicant is seeking the proposed action to rezone the project site with contextual zoning districts that were originally proposed for the site in the 2007 Rezoning. The proposed zoning districts would facilitate a proposed mixed-use development

Table 2-1.1: Summary of Zoning District Changes

Zoning District	FAR	Street Wall Height	Maximum Building Height
Existing			
R7-2	3.44 Res / 6.50 CF	None	Sky Exposure Plane
C1-5	2.00 C	N/A - per underlying zoning	N/A - per underlying zoning
Proposed			
R8A	6.02 Res / 6.50 F	85 feet	120 feet
R8B	4.00 Res / 4.00 CF	60 feet	75 feet
C1-5	2.00 C	N/A - per underlying zoning	N/A - per underlying zoning
Notes: R = Residential, CF = Community Facility, C = Commercial			

Study Area

The proposed rezoning action would better reflect the existing built character and be consistent with the zoning districts within the study area and throughout much of Manhattan Valley. The proposed higher density R8A district would be consistent with the existing R8A district located along West 106th Street throughout the study area. The lower density R8B district proposed along West 105th Street, which has a more restrictive height, would be consistent with the existing R8B that is located throughout the mid-blocks of the study area. The proposed contextual zoning would maintain and reinforce the existing zoning and built form of the blocks in the surrounding neighborhood. Therefore, the proposed action would not result in significant adverse impacts to zoning. The proposed action would not involve any new policy actions and would not result in significant adverse impacts on existing public policy.

2.1.4 Conclusion

As described above, the proposed action would establish contextual zoning districts that would maintain and reinforce the prevailing built character of the surrounding area. Development on the site under the proposed zoning—the With-Action RWCDS—would also be consistent with the surrounding area as compared to existing conditions. Accordingly, the proposed action would result in changes that would be compatible with and supportive of land use trends, zoning, and public policy. In effect, the proposed action would have a positive effect on preserving the surrounding neighborhood while providing opportunities for residential development. Therefore, the proposed action would not result in any significant adverse impacts to land use, zoning or public policy.

2.2 Socioeconomic Conditions

As described in Section 1.0, the relocation of the existing institutional uses on the project site will take place independent of the proposed action in the No Build condition. Therefore, the proposed action would not result in the involuntary direct displacement of any residents, businesses, or institutions. The proposed rezoning would continue to permit mixed-use redevelopment of the site. The With-Action RWCDS would result in approximately 31,006 gsf of community facility development. This is less than the *CEQR Technical Manual* threshold of 200,000 square foot for consideration of indirect business displacement. Therefore, no further analysis is required for direct residential, direct business or indirect business displacement.

As indicated on Part II of the EAS Form, the proposed action could potentially generate a net increase of 217 residential units as compared to the No Build condition. This would exceed the 200 unit threshold established for further assessment of potential indirect residential displacement. Therefore, the following

provides a preliminary assessment of the potential for the proposed action to result in any significant adverse impacts related to indirect residential displacement.

As indicated in the *CEQR Technical Manual*, "the objective of the indirect residential displacement analysis is to determine whether the proposed project may either introduce a trend 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." The risk of indirect residential displacement is typically associated with rising rents caused by new higher-income housing that may contribute to increased area housing costs to an extent that could potentially force lower-income residents out of the neighborhood. The potential for impact is generally limited to households in unprotected, private rental units.

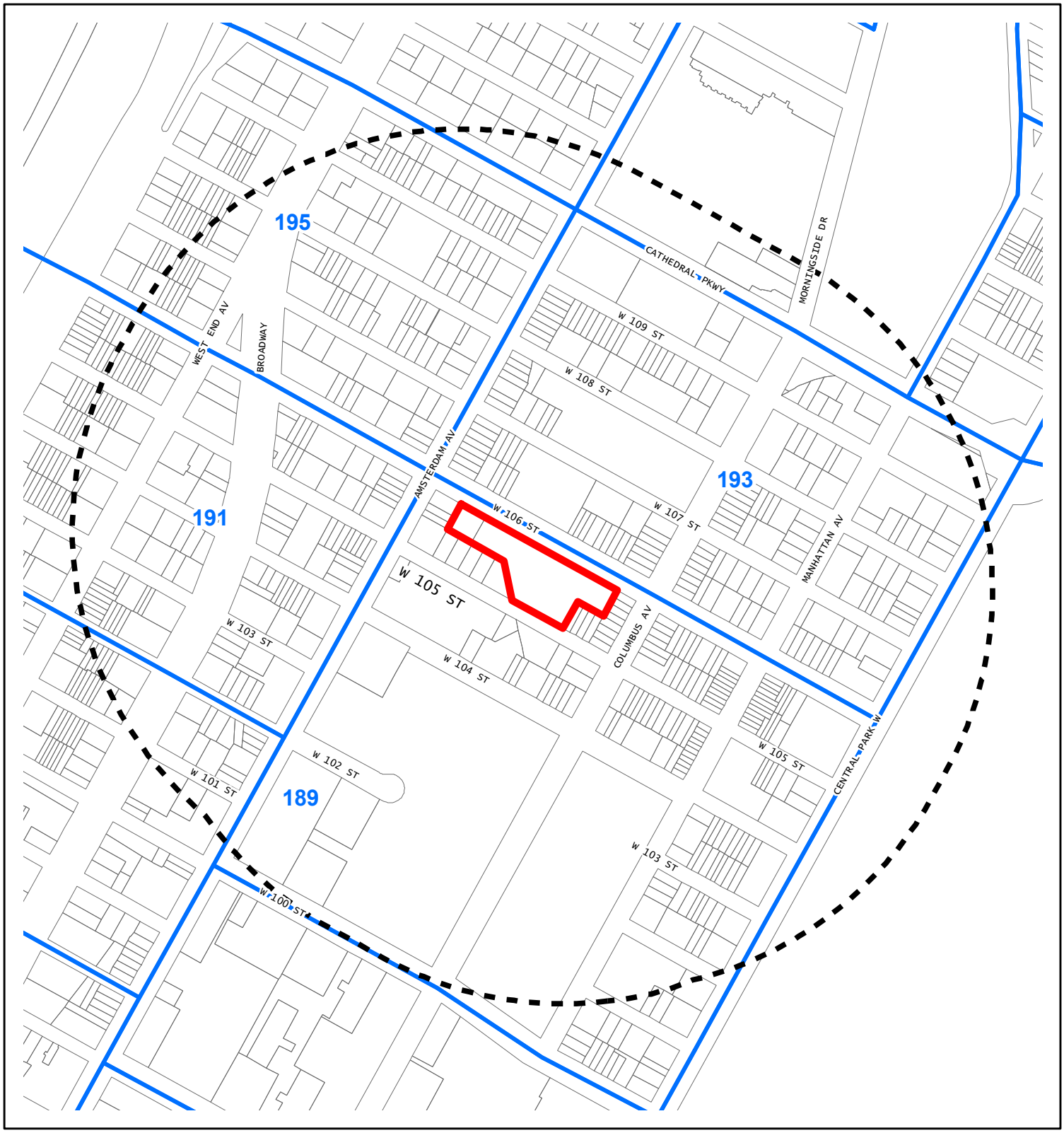
The first step in the preliminary assessment is to determine whether the proposed action would add a new higher income population as compared to the existing populations. The *CEQR Technical Manual* indicates that if a project would introduce a more costly type of housing, then the new population may be expected to have higher incomes. Since the proposed action is a rezoning action, the specific average costs/ rents for the new units are not known at this time. It is assumed for analysis purposes that the residences would, however, be market-rate and, as new construction, could be expected to rent or sell towards the high end of the market.

The project site is located within Manhattan Census Tract 189. The surrounding quarter-mile study area generally encompasses four Census Tracts: 189, 191, 193, and 195 (see Figure 2-2.1). As shown in the population, housing and economic information for these census tracts in Tables 2-2.1 and 2-2.2, the study area is economically mixed.

Table 2-2.1: Income and Housing Value/Rent

Census Tract	Median Household Income	Poverty Level: Families	Median Value: Ownership	Median: Gross Rent
189	$27,568	24.10%	$777,300	$673
193	$40,597	19.70%	$523,900	$1,020
191	$82,732	3.10%	$775,100	$1,312
195	$80,809	2.90%	$906,400	$1,402
Manhattan	$64,971	14.50%	$825,200	$1,234
New York City	$50,285	16.20%	$513,900	$1,071

Source: US Census, 2006-2010 American Community Survey 5-Year Estimates. While 2010 Census data for the larger geographies is available, the corresponding income and value data at the census tract level had not been released at the time of analysis. The ACS data set was used to maintain consistency across geographies since the issue under consideration is relative socioeconomic status.



Project Site

1/4-Mile Radius

189 Censust Tract

0 135 270 540 810 1,080 Feet

N

West 106th Street Rezoning
New York, NY 10025

Census Tracts Map
Figure 2-2.1

Source: MapPluto copyrighted by the New York City Department of City Planning (2011); U.S. Census Burea (2011)

Table 2-2.2: Population and Household Size

Census Tract	Population (2000)	Population (2010)	Average Household Size: Rental Unit	Average Household Size: Ownership Unit
189	11,883	11,547	2.21	2.68
193	9,416	9,009	2.23	2.20
191	9,077	8,807	1.86	2.22
195	8,067	8,197	2.03	2.24
Total	**38,443**	**37,560**	**--**	**--**

Source: US Census, 2010 Census.

Census Tracts 191 and 195 are located west of Amsterdam Avenue and generally exceed both Manhattan and New York City overall in terms of median household income, median ownership unit value (Census Tract 191 is slightly lower than the Manhattan median, though higher than the City median), and median gross rents. Family poverty levels are also significantly lower than the average Manhattan and New York City rates. Based on this information, these census tracts would be classified as relatively high-income areas.

Census Tracts 189 and 193 have lower median household incomes and higher poverty levels than the borough and the City overall. This information suggests that these tracts have a relatively lower average socioeconomic status. However, a large portion of Census Tract 189 consists of the NYCHA Frederick Douglass public housing development. The 2,000+ units in this development constitute approximately 40 percent of the housing units in the tract. This likely contributes to the lower average income levels and higher poverty rates when compared to the remainder of the study area. However, these units are publicly owned and residents would, therefore, be protected from private market indirect displacement pressures. It is also noted that approximately 67 percent of the rental stock in the Upper West Side sub-borough (which contains the project site) is rent-stabilized, public, or otherwise regulated, and therefore, insulated from indirect displacement pressure.[1]

As the residential units that would be developed as a result of the proposed action would be market-rate, it is reasonable to assume that new occupants would be relatively high-income. As indicated above, the study area has a diverse socioeconomic profile that includes substantial numbers of relatively high-income residents and relatively high-value housing units. (CitiHabitats' year-end review data indicate that the average rents for transactions it brokered in the Upper West Side submarket, which includes the project site, ranged from $1,908 for a studio to $5,970 for a three-bedroom.)[2] As a result, the socioeconomic characteristics of the new

▼

[1] New York City Department of Housing and Development, Housing New York City 2008.

[2] CitiHabitats, *Manhattan Residential Rental Market Report*, Fourth Quarter 2011/Year-End Review.

population would not be expected to differ substantially from existing socioeconomic conditions in the neighborhood.

Even if the socioeconomic characteristics of the population that would result from the proposed action were to be dramatically different, the associated increase in population would be relatively small in relation to the study area and would not be substantial enough to affect real estate market conditions. The proposed rezoning would allow for the development of approximately 597 units on the project site for the With-Action RWCDS. The average household size for the surrounding census tracts is 2.08 persons per household. Using the range of average household sizes found within the study area's census tracts of 1.86 to 2.68 persons per unit, the With-Action RWCDS would be expected to generate a total residential population ranging from 1,110 to 1,600. This would represent 3.0 - 4.3 percent of the study area population. The 217-unit incremental increase in residential units as compared to the No-Action RWCDS would generate a population ranging from 404 to 582. This equates to 1.1 - 1.6 percent of the study area population. The *CEQR Technical Manual* notes that "if the population increase is less than 5 percent within the study area, or identified sub-areas, further analysis is not necessary as this change would not be expected to affect real estate market conditions[3]." Therefore, the proposed action would not be expected to significantly impact the neighborhood's socioeconomic fabric and no further analysis is warranted.

2.3 Open Space

According to the *CEQR Technical Manual*, an open space analysis may be necessary if the proposed project could potentially have a direct or indirect effect on open space. A direct effect on an open space occurs when the proposed project results in the physical loss of open space, change of use so that it no longer serves the same user population, limiting public access, or causing increased noise or air pollutant emissions, odors, or shadows on public open space that affect its usefulness (whether on a permanent or temporary basis).

An indirect effect on open space can occur when a project adds enough population to the area to noticeably diminish the ability of an area's opens space to serve the future population. According to the *CEQR Technical Manual*, the project site is within a "well-served" area for open space. If a proposed project would result in the introduction of 350 or more residents or 750 or more employees to a well-served area, an assessment is performed to determine if the project would have an indirect effect on open space.

[3] *CEQR Technical Manual*, 2012 edition, page 5-8.

2.3.1 Direct Effects

The proposed action would not result in the physical loss or displacement of publicly accessible open space. The proposed action would not result in significant adverse shadow, noise, or air quality impacts on any of the open spaces in the study area. See Section 2.4 "Shadows," Section 2.8 "Air Quality," and Section 2.9 "Noise," for additional information. Therefore, the proposed action would not result in direct effects on open space that would result in significant adverse impacts.

2.3.2 Indirect Effects

Based on an average household size of 2.1 persons per unit for the census tracts immediately surrounding the project site (Manhattan Census Tracts 189, 191, 193, and 195), the With-Action RWCDS would introduce approximately 455 residents as compared to the No Action RWCDS. Since this exceeds the minimum threshold for a residential population increase in a well-served area of open space (350 or more residents), a preliminary open space assessment was performed to determine whether the proposed action would have the potential to have an indirect effect on open space in the area. There would be no significant worker population increase as a result of the proposed action; therefore, a worker population assessment was not warranted.

Methodology

According to *CEQR* guidelines, a preliminary assessment of a proposed project's effect on open space entails determining a study area, identifying all open space spaces within that area, and calculating the total open space acreage, taking into account any potential changes to open space in the future without the proposed project (No-Action condition). Then that number is compared with the total expected future population within the area for the No-Action condition to determine a No-Action open space ratio. The next step is to add the future population generated by the proposed project and determine the resulting change to the open space ratio under the With-Action condition as compared to the No-Action. Typically, if the decrease in open space is greater than five percent, it is generally considered to be a substantial change and would warrant more detailed analysis. If the study area exhibits a low open space ratio (less than the citywide average of 1.5 acres per 1,000 residents or 0.15 acres per 1,000 non-residential users), then a decrease of less than five percent may require detailed analysis. However, detailed analysis of open space effects on residents are generally unnecessary for decreases of less than one percent.

Study Area and Existing Conditions

As described in the *CEQR Technical Manual*, an open space study area for residential populations is defined by the reasonable walking distance users would travel to reach open spaces and recreational areas – typically 0.5 miles. According to CEQR

guidelines, all census tracts that have at least 50 percent of their area within the half-mile radius are entirely included in the study area, and all census tracts with less than 50 percent within the radius are entirely excluded. Based on this criterion, an open space study area was defined. The study area is comprised of Manhattan Census Tracts 181, 185, 187, 189, 191, 193, 195, 197.01, 197.02, 199 and 216. As depicted in Figure 2-3.1, 14 publicly accessible open space and recreational areas were identified within this study area. Details on each of these open spaces are provided in Table 2-3.1. The estimated current population is shown in Table 2-3.2.

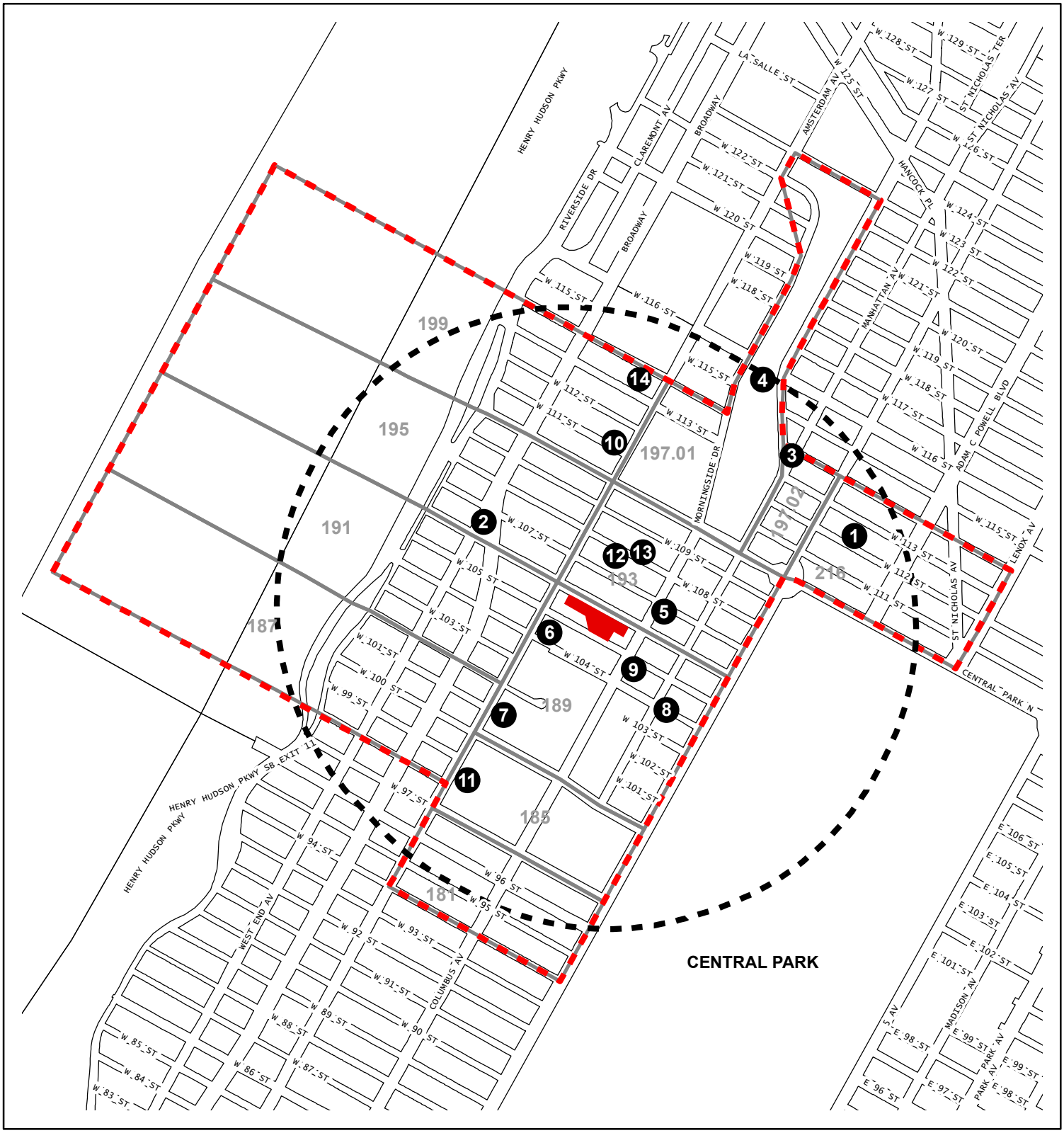
As shown in this table, there are 37.60 total acres of open space within the study area. Both Central and Riverside Parks are within close vicinity of the project site (2.5 blocks and 3.5 blocks, respectively) and substantial portions of these parks are well within walking distance to the project site. However, since less than 50 percent of the parks' areas are within a 0.5-mile radius of the project site, Central Park and Riverside Park were not included in the total open space acreage calculation.

Table 2-3.1: Open Space Resources

Map ID	Name	Owner/Agency	Size (Acres)
1	P.S. 241	BOE	0.66
2	Strauss Park	DPR	0.07
3	Lafayette Square	DPR	0.02
4	Morningside Park	DPR	29.89
5	Mobilization for Change	DPR	0.04
6	Bloomingdale Playground	DPR	0.72
7	Fredrick Douglass Playground	DPR	1.94
8	West 104th Street Garden	DPR	0.38
9	La Perla Garden	DPR	0.04
10	West 111th Street People's Garden	DPR	0.11
11	Happy Warrior Playground	DPR/Jointly Operated Playground	1.70
12	Booker T .Washington Playground	DPR/Jointly Operated Playground	1.44
13	Anibal Aviles Playground	DPR	0.52
14	113th Street PlayGarden	Trustees of Columbia	0.07*
Total			**37.60**

Sources: 1) NYCity Map (http://gis.nyc.gov/doitt/nycitymap/)
Notes: DPR – New York City Department of Parks and Recreation
*Estimated based on lot size

Date: 3.8.13



Legend:

- Project Site
- Half-Mile Radius
- Open Space Study Area Boundary
- Census Tract
- # Open Space I.D.

0 500 1,000 2,000 Feet

N

West 106th Street Rezoning
New York, NY 10025

Open Space Study Area Map
Figure 2-3.1

Source: MapPluto copyrighted by the New York City Department of City Planning (2012); New York City Department of Parks and Recreation (2012); US Census Bureau, Geography Division

Table 2-3.2: Population and Household Size

Census Tract	Population (2013)
181	8933
185	4222
187	9041
189	11634
191	8873
193	9077
195	8259
197.01	646
197.02	2106
199	10140
216	7613
Total	**71,611**

Note: 2013 population estimates were developed by growing US Census 2010 population data by 0.25 percent per year (CEQR's annual background growth rate for transportation volumes).

The total acreage of open space was then compared to the study area population to determine the open space ratio. As shown in Table 2-3.2, the estimated current population in the study area is 71,611 resulting in an open space ratio of 0.525 acres per 1,000 residents. As with many areas in New York City, this open space ratio is well below the City's planning goal of 2.5 acres per 1,000 residents, and it is also below the citywide average of 1.5 acres per 1,000 residents. However, were the portions of Central and Riverside Parks that are within a half-mile walk of the project site be included in this calculation, the study area's open space ratio would be substantially higher.

No-Action Condition

Under the 2019 No-Action RWCDS, a total of 380 residential units would be developed which, based on an average household size of 2.1 persons per unit in the study area, is estimated to add 798 persons to the area's residential population. This increment was then added to the future background population grown to year 2019 (using the *CEQR Technical Manual*'s annual background growth rate for transportation volumes of 0.25 percent per year in Manhattan) to represent a total future population of 74,036 in the study area under the No-Action condition. No open spaces would be created, displaced, or removed under the No-Action condition. As a result of the expected residential increases in the No-Action condition, the open space ratio in the study area would decrease slightly to 0.508 acres per 1,000 residents.

With-Action Increases

As mentioned, the proposed action would create a net increase of 217 residential units over what would be developed in the No-Action which, based on an average household size of 2.1 persons per unit in the study area, is estimated to add 455 persons to the area's residential population. No open spaces would be created, displaced, or removed under the With-Action condition. As shown in Table 2-3.3, the project-generated residential population increase would decrease the open space ratio in the study area by 0.62 percent as compared to the No-Action condition.

Table 2-3.3: With-Action Changes to Open Space

	Residential Population	Total Open Space (Acres)	Open Space Ratio (Acres per 1,000 Residents)
No-Action (2019)	74,036	37.6	.508
With-Action Increment	+456	0	-
Total With-Action	74,492	37.6	.505
Percent Change	+0.61%	0	-0.62%

Since this decrease is less than one percent, there would not be any indirect effect on open space and a detailed analysis is not necessary, as per *CEQR Technical Manual* guidelines. Therefore, the With-Action condition would not result in an indirect significant adverse impact on open space and further analysis is not warranted.

2.4 Shadows

A shadow is defined in the *CEQR Technical Manual* (2012 edition) 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 action 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 that contain features that depend on direct sunlight for their enjoyment by the public, 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 half of sunrise or sunset generally are also not considered significant under CEQR.

According to the *CEQR Technical Manual*, the longest shadow a structure will cast in New York City is 4.3 times its height. For actions resulting in structures less than 50 feet high, a shadows assessment is generally not necessary unless the site is adjacent

to a park, historic resource, or important sunlight dependent natural feature. The proposed action would allow for the development of the With-Action RWCDS—buildings with a maximum building height of 120 feet along West 106th Street and 75 feet along West 105th Street (see Section 1.0). Therefore, the longest shadow that would be cast by the proposed action would be approximately 516 feet for the two buildings along West 106th Street and 323 feet for the building along West 105th Street. Two public parks are located to the north of the project site two blocks away (within 500 feet) and one public park is located across the project site to the south (within 200 feet), within the maximum potential shadow radius of the With-Action RWCDS. Therefore, the following provides a shadow assessment to determine whether the proposed action would result in incremental shadows that could have significant adverse impacts.

2.4.1 Resources of Concern

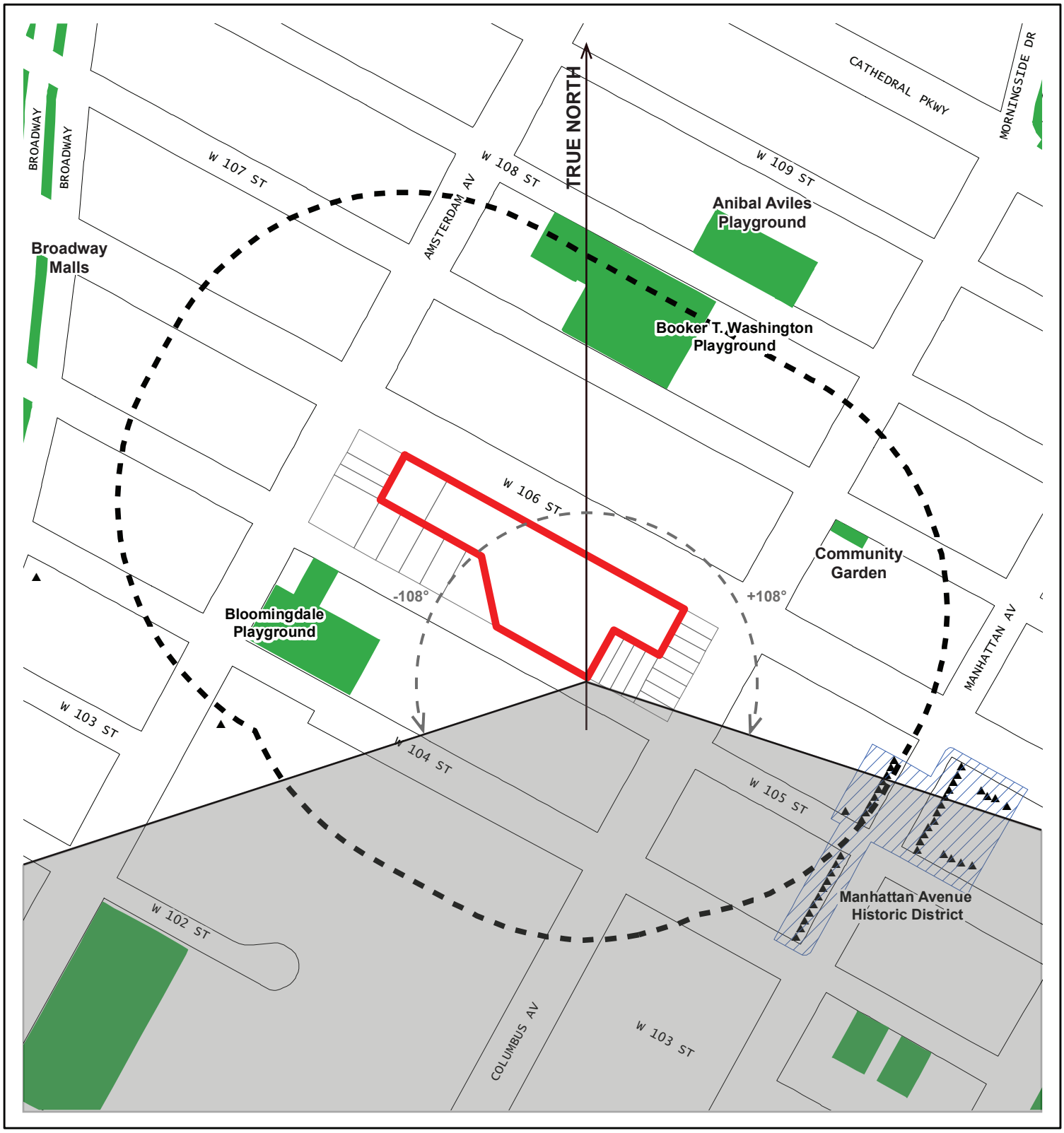
Because of the path that the sun travels across the sky in the northern hemisphere, no shadow can be cast in a triangle area south of any given project area. In New York City, this area lies between -108 and +108 degrees from true north. Therefore, open space and historic resources located in the area to the south the project site (where no project shadows could fall) are excluded from further assessment.

In accordance with the *CEQR Technical Manual*, a Tier 1 and Tier 2 screening assessment was first undertaken to: establish a base map that illustrates the project site in relation to the location of sunlight-sensitive resources; determine the longest shadow study area; and locate the triangular area that cannot be shaded by the With-Action RWCDS. The results of the Tier 1 and Tier 2 screening assessment are shown on Figure 2-4.1.

Open Space Resources

As illustrated in Figure 2-4.1, two public parks and playground areas, owned and operated by the DPR, and one community garden fall within the maximum shadow radius for the With-Action RWCDS. Bloomingdale Playground is located directly south of the project site between West 104th and West 105th Streets and Columbus and Amsterdam Avenues. Booker T. Washington Playground is located north of the project site between West 107th and West 108th Streets and Columbus and Amsterdam Avenues. The community garden is located at the southwest corner of Columbus Avenue and West 107th Street.

The majority of both playgrounds are devoid of natural vegetation. Bloomingdale Playground (approximately 0.71 acre) is a completely paved area that contains basketball courts, playground equipment, restroom facilities, and benches. The perimeter of the playground is lined with trees. Booker T. Washington Playground (approximately 1.44 acres) contains a large synthetic turf field area and paved half



Legend:

- Project Site
- 516 Foot Shadow Screening Radius
- New York City Parks Department Open Space
- LPC Historic District
- LPC Historic Landmark
- **Area That Cannot Be Shaded by the Proposed Buildings on the Project Site**

0 75 150 300 450 600 Feet

N

West 106th Street Rezoning
New York, NY 10025

Tier 1 & Tier 2 Shadows Screening Assessments
Figure 2-4.1

Source: MapPluto copyrighted by the New York City Department of City Planning (2012); New York City Department of Information Technology & Telecommunication, January 2012

basketball courts and handball courts. There are no benches or trees in the interior of the park area. The community garden, named Mobilization for Change, is a narrow 25-foot wide garden, approximately 0.04 acres, that is open to the public during limited times.

Historic Resources

A portion of the New York City Landmark Manhattan Avenue Historic District and several Landmark buildings within the district also fall within the maximum shadow radius for the With-Action RWCDS.

According to the *CEQR Technical Manual*, historic resources are considered sunlight-sensitive if the features that make the resource significant depend on sunlight. The following architectural features are identified by the *CEQR Technical Manual* as being sunlight sensitive: (a) buildings containing design elements that are part of a recognized architectural style that depends on the contrast between light and dark design elements (e.g., deep recesses or voids such as open galleries, arcades, recessed balconies, deep window reveals, and prominent rustication); (b) buildings distinguished by elaborate, highly carved ornamentation; (c) buildings with stained glass windows; (d) exterior materials and color that depends on direct sunlight for visual character; (e) historic landscapes; and (f) features in structures where the effect of direct sunlight is described as playing a significant role in the structure's significance as a historic resource.

Although Figure 2-4.1 shows that a small portion of the Manhattan Avenue Historic District, along Manhattan Avenue between West 105th and West 106th Streets, would fall within the With-Action RWCDS's maximum shadow radius, it should be noted that only resources facing the project site (i.e., facing west) could be covered by shadows created by the With-Action RWCDS. In this case, it would be the rear façade of the structures along the west side of Manhattan Avenue, which are not visible to the public from the street level. In addition, a review of the New York City Landmarks Preservation Commission (LPC) *Designation Report for the Manhattan Avenue Historic District* (May 15, 2007) does not indicate that the rear façade of the structures contain sunlight-dependent features, as defined above. Therefore, the Manhattan Avenue Historic District was excluded from further analysis and shadows from the proposed action would not adversely affect any historic resources in the study area.

2.4.2 Assessment of Potential Shadow Impacts

In accordance with the *CEQR Technical Manual*, a Tier 3 screening assessment was performed because the Tier 1 and Tier 2 assessments identified three open space areas within the With-Action RWCDS's maximum shadow radius.

Tier 3 Screening Assessment

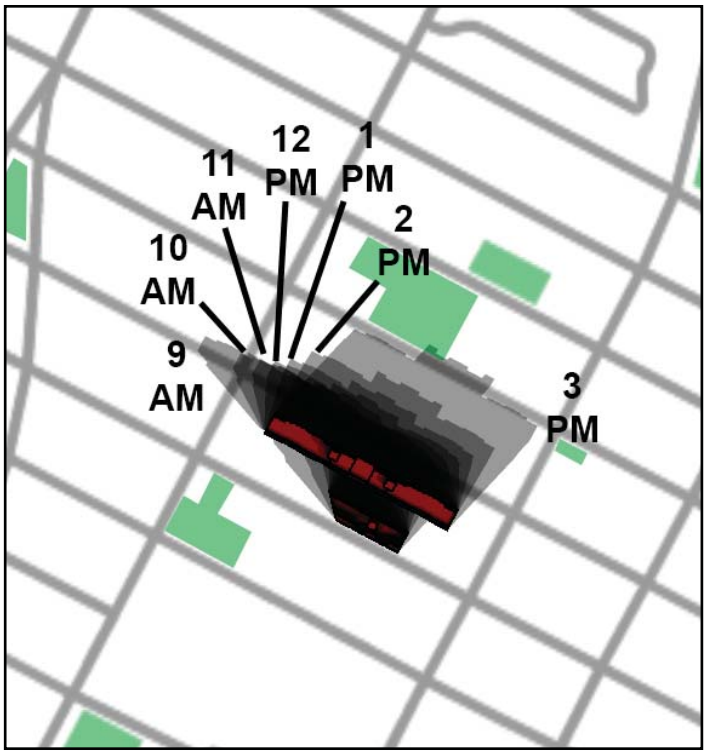
As the sun travels across the sky during the day, shadows fall in a curve on the ground opposite the sun. When the sun rises, shadows fall to the west. Because the sun rises in the east and travels across the southern part of the sky throughout the day to set in the west, a project's earliest shadows would be cast almost entirely westward. Throughout the day, shadows would shift clockwise, until sunset, when they would fall east. 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 the longest, move the most quickly along their paths and do not affect the growing season of outdoor trees and plants.

The Tier 3 screening assessment was performed for the four representative days of the year set forth in the *CEQR Technical Manual*: December 21, the winter solstice and shortest day 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); and June 21, the summer solstice and the longest 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.

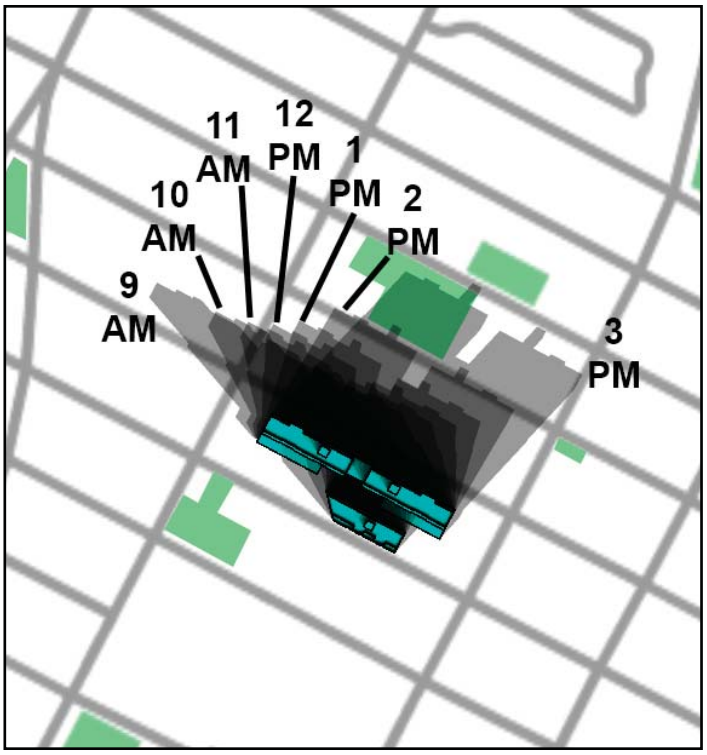
A three dimensional computer model was developed to represent the RWCDS on the project site in the future with and without the proposed action. In accordance with the *CEQR Technical Manual*, surrounding buildings are not included in the Tier 3 shadow assessment model. The results of the Tier 3 shadow assessment for the RWCDS for both the No-Action and With-Action scenarios are shown in Figures 2-4.2a and 2-4.2b

On the shortest day of the year (December 21 winter solstice) when the sun is low in the sky, shadows are the longest they will be all year, although they travel quickly. Figure 2-4.2a shows the shadows from the With-Action RWCDS that would be cast on portions of Booker T. Washington Playground. Although the No-Action RWCDS would also cast shadows on Booker T. Washington Playground, shadows from the No-Action RWCDS would cover a smaller area of the park (see Figure 2-4.2a) as compared to the With-Action RWCDS.

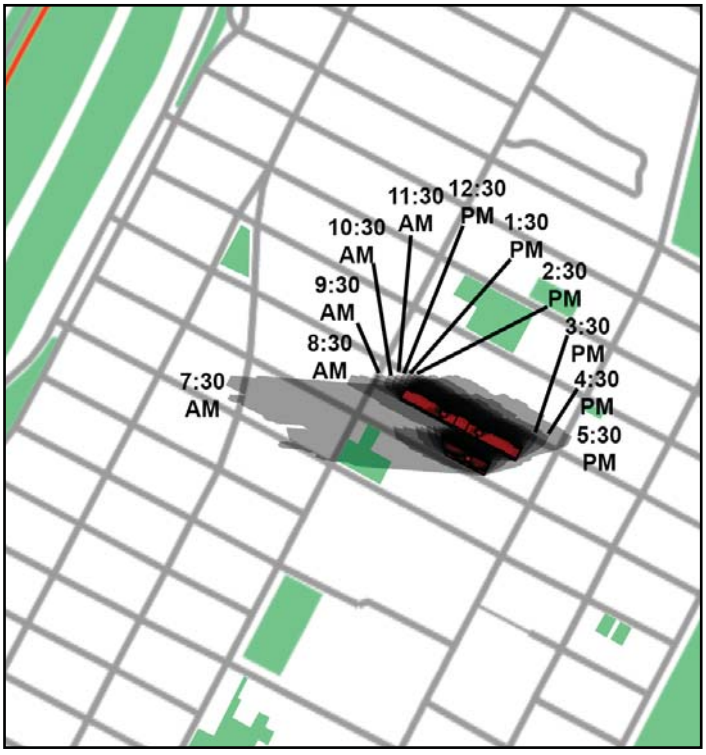
On the equinoxes (March 21/ September 21), the With-Action RWCDS would not result in any increase in incremental shadows on Bloomingdale Playground as compared to the No-Action RWCDS. Although shadows from the With Action RWCDS would fall on the playground at the start of the analysis period, shadows from the No-Action RWCDS would fall in the same location and for the same duration (see Figure 2-4.2a). This is the same condition between the equinoxes (May 6), the summer solstice (August 6), and on the summer solstice (June 21), as shown



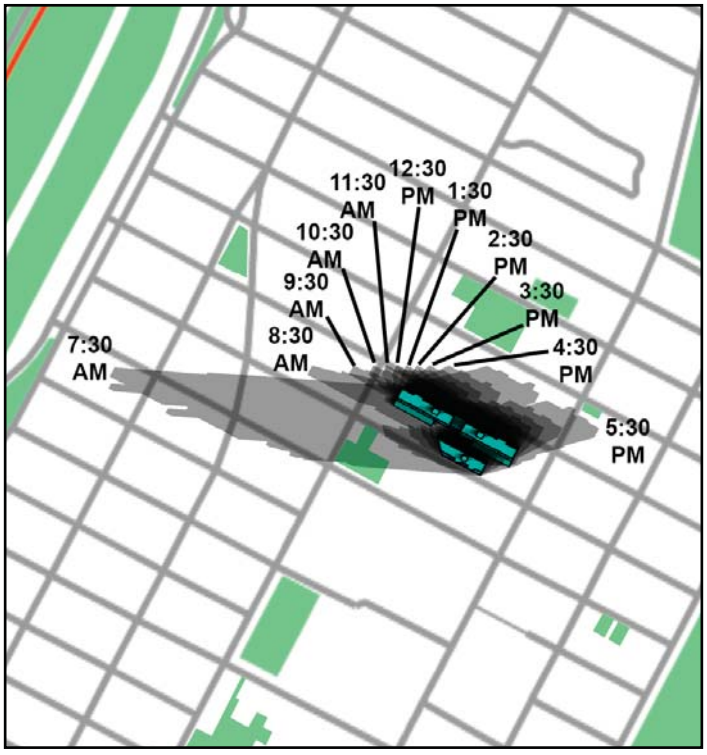
December 21
No-Action RWCDS



December 21
With-Action RWCDS



March 21/September 21
No-Action RWCDS



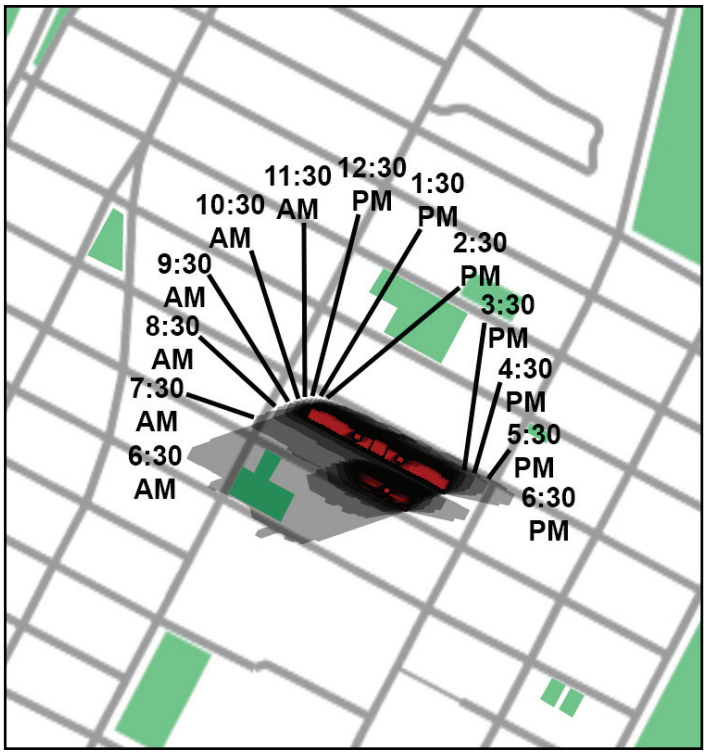
March 21/September 21
With-Action RWCDS

Public Open Space
Shadow

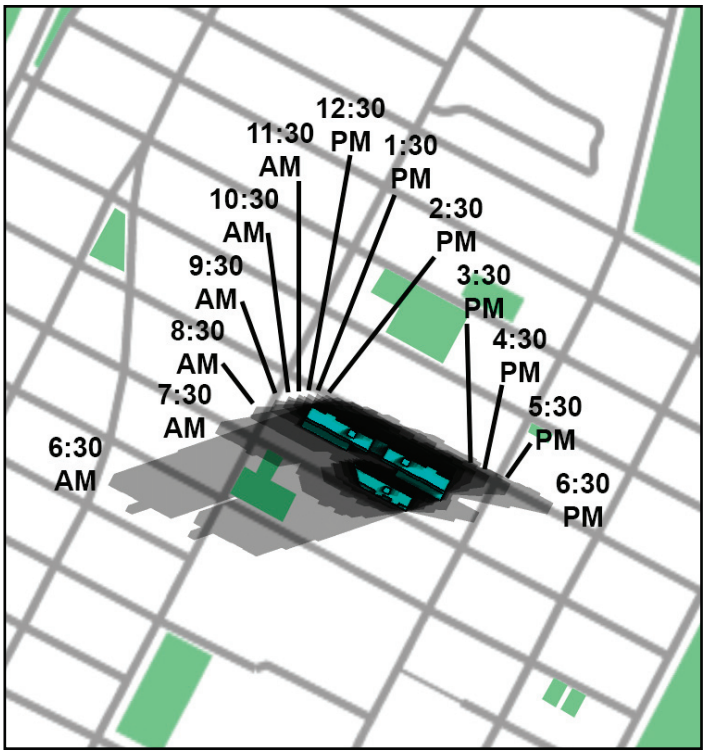
West 106th Street Rezoning
New York, NY 10025

Tier 3 Shadows Screening Assessments
Figure 2-4.2a

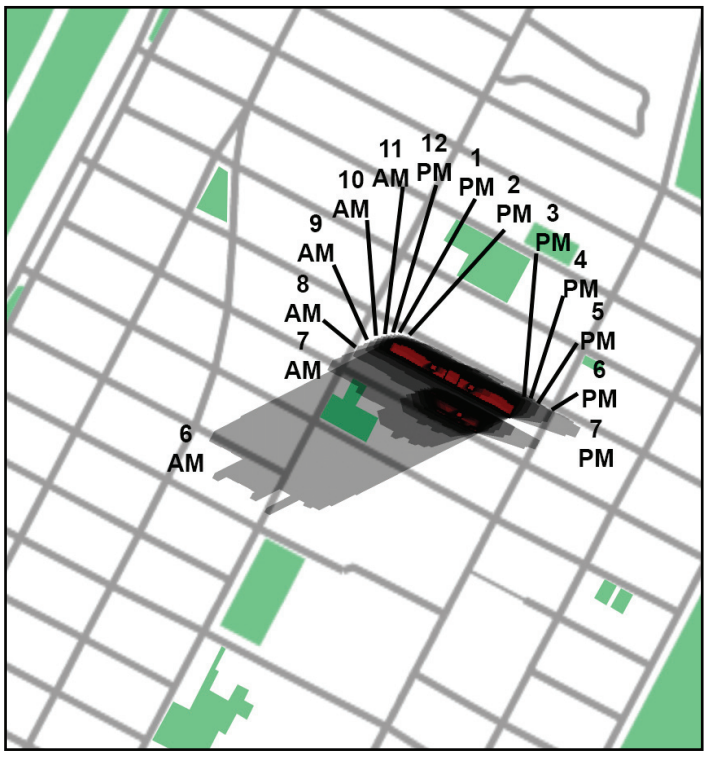
Source:



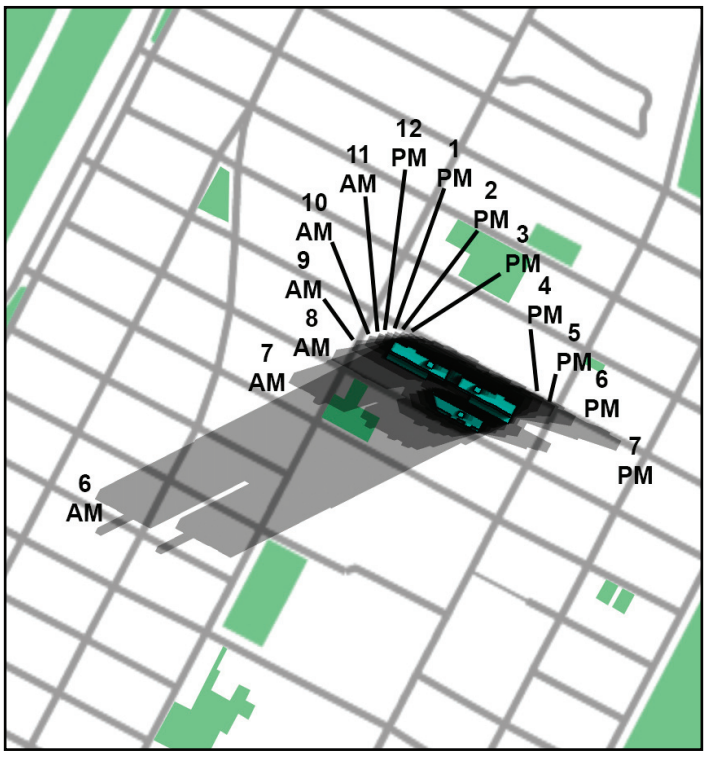
May 6/August 6
No-Action RWCDS



May 6/August 6
With-Action RWCDS



June 21
No-Action RWCDS



June 21
With-Action RWCDS

Public Open Space
Shadow

West 106th Street Rezoning
New York, NY 10025

Tier 3 Shadows Screening Assessments
Figure 2-4.2b

Source:

on Figure 2-4.2b, the With Action RWCDS would not result in any increase in incremental shadows on Bloomingdale Playground as compared to the No-Action RWCDS.

The Tier 3 screening assessment concluded that, in the absence of intervening buildings, incremental shadows from the With-Action RWCDS would reach portions of Booker T. Washington Playground on the December 21 analysis day. Therefore, a detailed analysis was conducted for that analysis period.

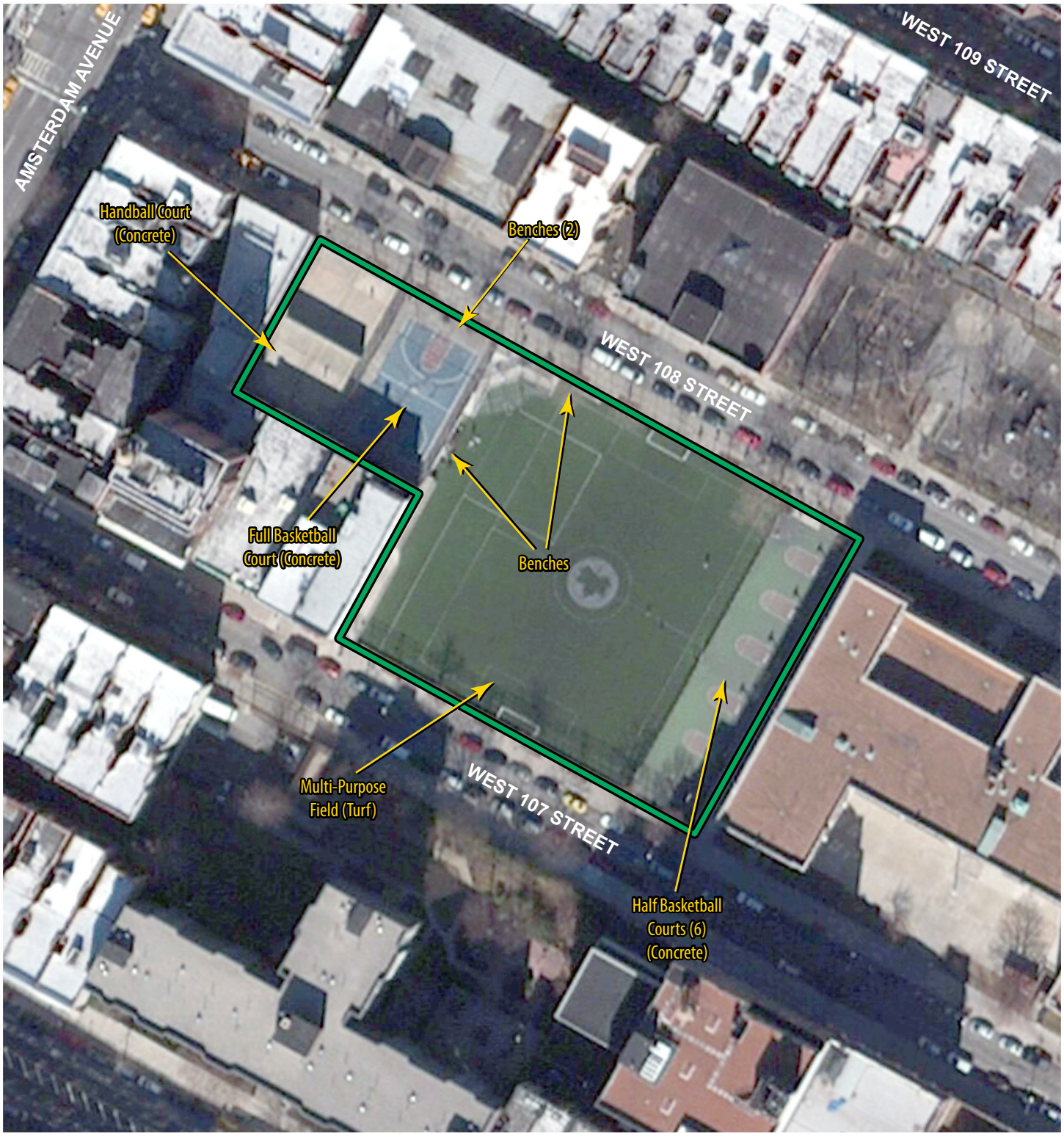
Detailed Shadow Analysis

For the detailed analysis, the computer model used in the Tier 3 assessment was further developed with three-dimensional representations of existing buildings in the study area using GIS data from NYC DoITT. The future condition of the With-Action RWCDS and its shadows was compared to the baseline shadows of the future condition of the No-Action RWCDS.

For the detailed shadows analysis, a site visit of Booker T. Washington Playground was conducted on the afternoon of Saturday November 2, 2013 to inventory the features in the park as well as survey existing conditions and the quality and level of use of the open spaces (see Figure 2-4.3 for a site plan of the park). Six concrete basketball half courts are located in the eastern portion of the site. A multi-purpose turf field, with soccer goal posts and a baseball backstop, is located in the center of the park. Full basketball and handball courts (concrete) are located in the western portion of the site. The park contains four benches (one on either side of the baseball backstop and two at the full-length basketball court). There are no trees, landscaping or natural vegetation located within the interior of the park.

The park was renovated in 2006, which included the creation of the turf field. The overall condition of the playground was rated as acceptable by DPR in their most recent inspection of the park. At the time of the site visit, the park was observed as being moderately utilized with all of the basketball half courts in use, the turf field in use for a children's baseball game and a few of the handball courts in use.

The detailed analysis showed that incremental shadow from the With-Action RWCDS would reach a portion of Booker T. Washington Playground in the afternoon (see Figure 2-4.4). Table 2-4.1 shows the entry and exists time and total durations of new shadows on this resource.



Park Boundary

0 25 50 Feet

N

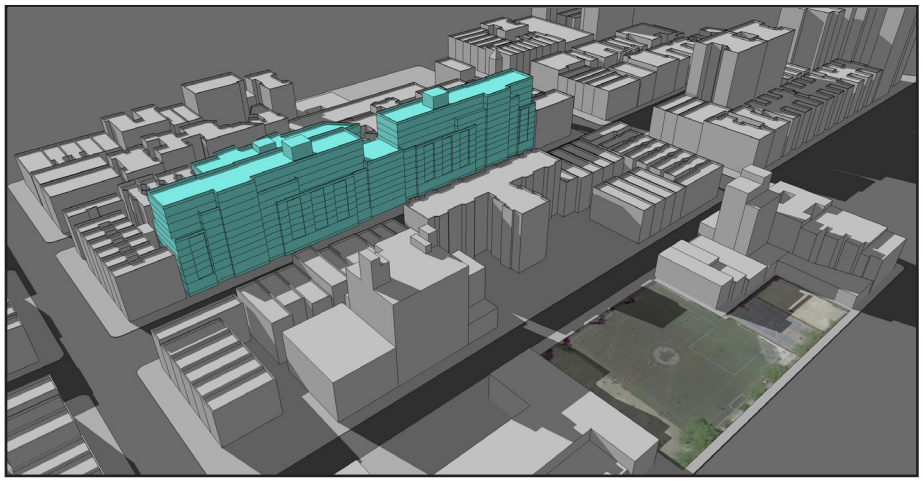
West 106th Street Rezoning
New York, NY 10025

Booker T. Washington Playground Site Plan
Figure 2-4.3

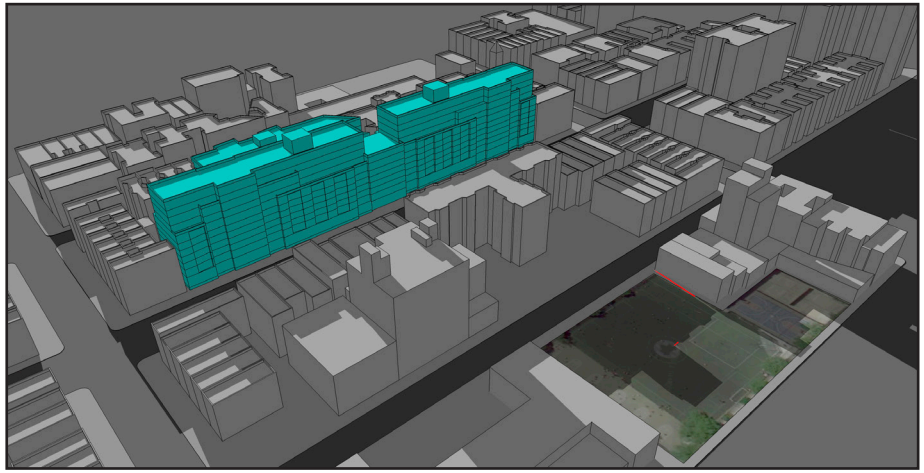
Source: MapPluto copyrighted by the New York City Department of City Planning (2011)



9 AM



12:48 PM



2:23 PM



2:53 PM

Public Open Space
Existing Shadow
Incremental Shadow from With-Action RWCDS

West 106th Street Rezoning
New York, NY 10025

Detailed Shadow Analysis December 21
Figure 2-4.4

Table 2-4.1: Incremental Shadow Duration

Resource	March 21 / Sept. 21 7:36 AM-4:29 PM	May 6 / August 6 6:27 AM-5:18 PM	June 21 5:57 AM-6:01 PM	December 21 8:51-2:53 PM
Booker T. Washington Park	—	—	—	2:23 PM -2:53 PM Total: 30 min
Notes: Daylight savings time not used, times shown are eastern standard time (EST)				

Shadows from the With-Action RWCDS would enter the playground at 2:23 PM and cast new shadow until 2:53 PM, the end of the analysis period, for a total duration of 30 minutes. At this time, existing shadows from intervening buildings also fall on the playground however, portions of the turf field would remain in sunlight.

2.4.3 Conclusion

As a result of the proposed action, new shadow would only fall on Booker T. Washington Playground during the December 21 analysis period. No incremental shadows generated by the With-Action RWCDS would fall on any other sun-sensitive resources for any other analysis period.

The new late afternoon shadows that would fall on Booker T. Washington Park would be limited in extent and duration. Booker T. Washington Playground is larger in size (1.44 acres) compared to other surrounding parks and the incremental shadows from the With-Action RWCDS would affect a small portion of the park, relative to the whole. The park is devoid of natural vegetation in the interior of the park, and is comprised of a large synthetic turf field area and paved half basketball courts and handball courts. Incremental shadow from the With-Action RWCDS would not fall on the benches located in the western portion of the site (see Figure 2-4.4). Therefore, the incremental shadows from the With-Action RWCDS would not affect any natural features or passive recreational facilities.

All the active recreation facilities would experience direct sunlight throughout the morning and early afternoon, with the largest amount of direct sunlight occurring mid-day. Starting at 2:53 PM on the winter analysis day until the end of the analysis period at 2:53, the park would experience 30 minutes of new shadow from the With-Action RWCDS on a narrow portion of the turf field. However, as shown in Figure 2-4.4, portions of the turf field would remain in sunlight during this time. The turf field as well as the basketball half courts and full court would experience full or partial sunlight the majority of the afternoon and therefore not subject to substandard sunlight conditions in the absence of additional incremental shadows from the project.

The incremental shadows from the With-Action RWCDS fall only on the turf field in the winter months, when utilization of the active uses would be the lowest throughout the year. Also, the incremental shadows on the turf field from the With-Action RWCDS would fall at the end of the December analysis period, when overall,

the park would experience the least amount of sunlight duration. At the time the incremental shadows fall on the turf field, other portion of the turf field remain in sunlight. Therefore, the incremental shadow is not expected to result in a substantial reduction in the usability of the turf field in the winter months as a result of the proposed action. Given all these factors, the proposed action would not result in significant adverse shadow impacts on this open space.

2.5 Urban Design and Visual Resources

Urban design is the totality of components that may affect a pedestrian's experience of public space. To determine if a proposed action has the potential to change the experience of a pedestrian, an urban design assessment under CEQR focuses on the components of a proposed action that may have the potential to alter the arrangement, appearance, and functionality of the built environment. In accordance with the *CEQR Technical Manual* (2012 edition), 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. As a rezoning action, from the R7-2 district to contextual zoning districts R8A and R8B, the proposed action meets this threshold. The following preliminary urban design assessment considers a 400-foot study area where the proposed action would be most likely to influence the built environment.

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. There are no natural or cultural visual resources on the project site or within the 400-foot study area. Therefore, no further analysis is warranted and the proposed action would not result any significant adverse impacts to visual resources.

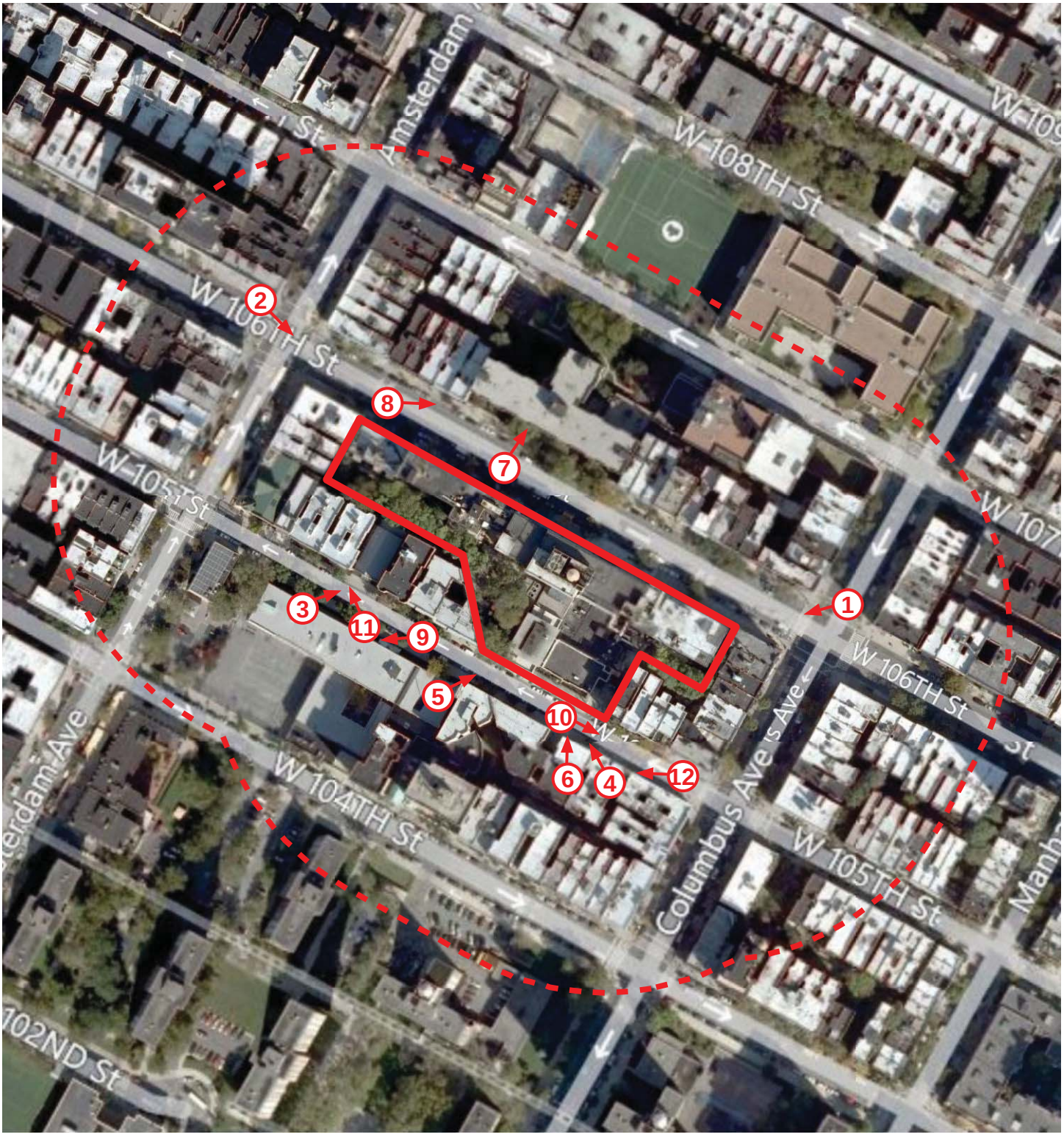
2.5.1 Existing Conditions

The existing conditions for both the project site and the study area are briefly discussed below. These discussions are supported by Figures 2-5.1 through 2-5.3.

Project Site

The project site is defined as Manhattan Block 1860, Lots 20 and 57. The project site contains several buildings that currently function as the Jewish Home Lifecare facility. Lot 20 has frontage on both West 105th and 106th Streets. Lot 57 (140 West 106th Street) only has frontage on West 106th Street.

The project site along West 106th Street is dominated by a complex of interconnected buildings that range in height between five and nine stories (see Figure 2-5.2a). There



Project Site

400 Foot Radius

(#) Photo View Direction and Reference Number

0 55 110 220 330 440 Feet

N

West 106th Street Rezoning
New York, NY 10025

Photograph Key
Figure 2-5.1

Source: MapPluto copyrighted by the New York City Department of City Planning (2010); (c) 2010 Microsoft Corporation and its data suppliers; VHB Field Survey, January 2012



View west of West 106th Street.



View east of West 106th Street.



View east of West 105th Street.



View west of West 105th Street,



View of project site frontage along 105th Street.



View of the southeast corner of the project site.



View north across West 106th Street from the project site.



View northeast across West 106th Street from the project site.



View southwest of the south side of West 105th Street.



View southeast of West 105th Street.



View northwest of the north side of West 105th Street.



View southwest of the south side West 105th Street.

are four distinct structures (built between the mid-1950s and 1970s) that total 625 feet of frontage along West 106th Street. Three of the structures are characterized by modern construction with a white mason façade and wide windows. The façade of the westernmost building is characterized by brick mason with narrow windows, which is consistent with that of other building stock in the surrounding area. The center of the project site is dominated by the largest building of the Jewish Home Lifecare complex, an approximately 9-story structure that contains the main entrance to the facility. To its east is a 5-story structure and to its west is a 7-story structure; the westernmost building is approximately 6-stories. The project site buildings fronting on West 106th Street are setback from the curb by approximately the same distance, with the exception of the easternmost building that has a slightly greater setback.

West 106th Street is a wide four-lane street with curbside parking and a bike lane on both sides. Street trees are systematically spaced along the West 106th Street curb side of the sidewalk, in front of the project site buildings, and extend intermittently for the length of the block in both directions.

The pedestrian experience of the project site along West 105th Street is much different than that from West 106th Street. With approximately 210 feet of frontage, the West 105th Street streetscape is dominated by the loading building (the easternmost building) for the Jewish Home Lifecare facility that contains a driveway and one-story loading dock structure (see Figure 2-5.2b). The West 105th Street streetwall along the length of the project site is broken by a chain linked fence, one of the Jewish Home Lifecare structures that extend to the sidewalk, and the loading dock and driveway. Visible from West 105th Street are the upper rear stories of the buildings along West 106th Street. The project site contains an interior courtyard in between each of the buildings and their respective abutting properties; this courtyard is somewhat visible through the fence along West 105th Street.

West 105th Street is a narrow one-way westbound street with curbside parking on both sides. Street trees are systematically spaced along the West 105th Street curb side of the sidewalk, in front of the project site buildings, and extend intermittently for the length of the block in both directions.

Study Area

The study area is defined as a 400-foot radius from the project site. Figure 2-5.1 shows the study area boundary, which coincides with the north side of West 107th Street, the east side of Columbus Avenue, the south side of West 104th Street, and the west side of Amsterdam Avenue.

The north side of West 106th Street between Amsterdam and Columbus Avenues is dominated by the presence of multifamily residential buildings (see Figure 2-5.3a).

Several of these buildings contain pedestrian level commercial uses that extend into the block from the avenue frontages (see Figure 2-5.2a). The buildings abut one another and are setback from the street curbs by sidewalks. The largest building on the north side of the street, with approximately 250 feet of frontage along West 106th Street, was built in 1981 and is approximately 9-stories. The remainder of the block is characterized by older (generally constructed between 1900 and 1920) multi-family walkup buildings, each approximately 5-stories tall with 25 feet of frontage.

The remainder of the project block along the south side of West 106th Street contains 5-story residential buildings to the east and west of the project site (see Figure 2-5.2a). Commercial uses extend onto the West 106th Street frontage in the base of a 5-story residential building at the corner of Columbus Avenue.

Residential buildings built out to the street line dominate the streetscape of both sides of West 105th Street (excluding the project site). The north side of the street also contains two religious facilities, a 5-story building at the corner of Amsterdam Avenue and a 2-story building midblock, and the south side of the street contains a 3-story public school (see Figure 2-5.3b and 2-5.3c). Commercial storefronts are only located at the corner intersections along Columbus and Amsterdam Avenues. The majority of the residential buildings along the block are similar in mass and height (between five and ten stories). The residential buildings commonly have single, staired entrances or ground-level entries. The relationship of the streetwall to the sidewalk and the street is similar to that on West 106th Street but there is a difference in scale. On the northside and the southeast sides of West 105th Street, the sidewalks are narrow. In the southwest side of the block, the public school building is set back at a slightly greater distance to the other buildings and therefore, the sidewalk is wider.

Both sides of Columbus Avenue between West 105th and West 106th Streets are lined with commercial uses on the ground floor of five-story residential buildings. Similarly, Amsterdam Avenue is characterized by the presence of ground floor commercial and community facility uses in five and six story residential walkup buildings built out to the street line. The southeast and northeast corners of Amsterdam and West 105th Street contain the West End Presbyterian Church, the Bloomingdale School, and the neighborhood YMCA center.

The urban design characteristics of the study area change to the north along West 107th Street where the Booker T. Washington Playground is the focal element on the north side of the street. Otherwise, the buildings contain the same functions as those previously described in the study area, including multifamily residential with limited commercial and community facility uses on the pedestrian level along the avenues. In the southern portion of the study area along the south side of West 104th Street, the building functions are predominantly residential. The large modernist “tower-in-the-park” development of the NYCHA Douglass Houses complex (between West 104th and West 100th Streets and Amsterdam and Manhattan

Avenues) overwhelms the smaller scale residential, community, and commercial buildings that surround it. The Douglass Houses effectively breaks the existing streetscape patterns in the study area by altering both the street grid and the building composition.

2.5.2 The Future Without The Proposed Action

Project Site

In the No-Action RWCDS, the project site would be redeveloped in accordance with the existing R7-2 zoning district comprising one building fronting on West 106th Street and one building fronting on West 105th Street. The majority of the building fronting along West 106th Street would contain 6-stories (approximately 65 feet). The central portion of the building would contain 7-stories (approximately 75 feet). Community facility space would be located in the base of the building located along West 106th Street. The building along West 105th Street would contain a maximum of 6-stories (approximately 65 feet). For both buildings, the streetwall would rise straight up from the lot line, without any setback (see Figures 2-5.4a and 2-5.4b). Access to a below-grade parking garage would be from West 105th Street.

Study Area

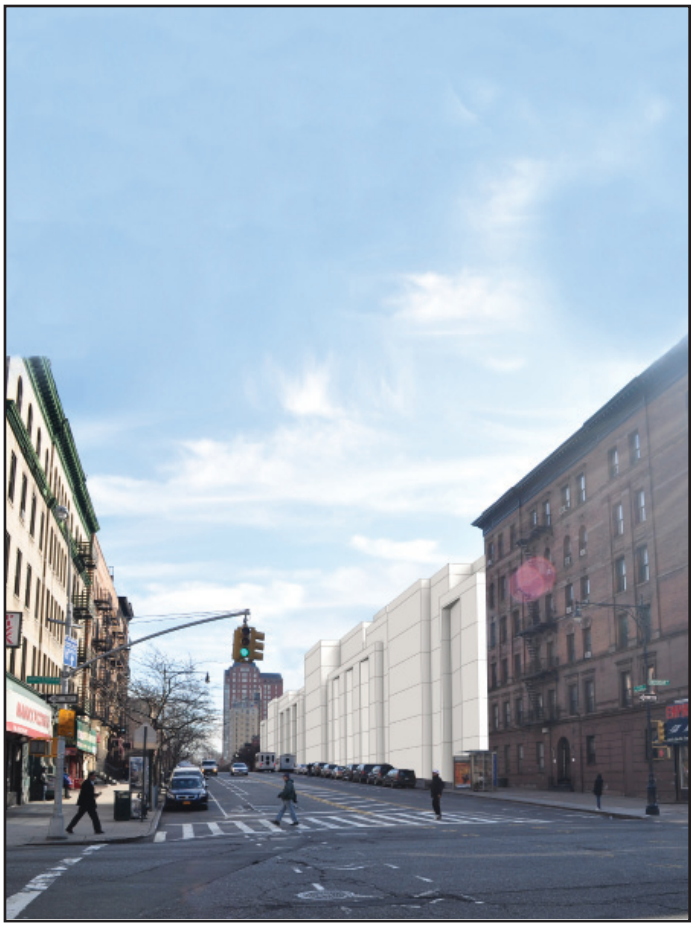
As described above in Section 2.1, no known projects are anticipated to be developed in the study area in the future without the proposed action.

The No Build condition on the project site would be consistent with the urban design, scale, and built context along West 106th Street. The six and seven stories of the No-Action RWCDS along West 106th Street would be consistent with the adjacent five and six story buildings on the remainder of the project block (see Figure 2-5.4.a). The No-Action RWCDS would also be consistent with the existing building on the north side of West 106th Street that range in height between five and nine stories. The streetwall frontage for the No-Action RWCDS, built out to the street line, would be consistent with the neighborhood's existing context.

The No Build condition on the project site would also be consistent with the urban design, scale, and built context along West 105th Street. The six stories of the No-Action RWCDS along West 105th Street would be consistent with the building on the remainder of the project block that range between two and seven stories (see Figure 2-5.4.b). The streetwall frontage along West 105th Street for the No-Action RWCDS, built out to the street line, would be consistent with the existing context on the remainder of the block and the streetscape would be activated by the pedestrian entrance for the new residential building. This is in contrast with the existing conditions on the project site in which no buildings directly front on West 105th



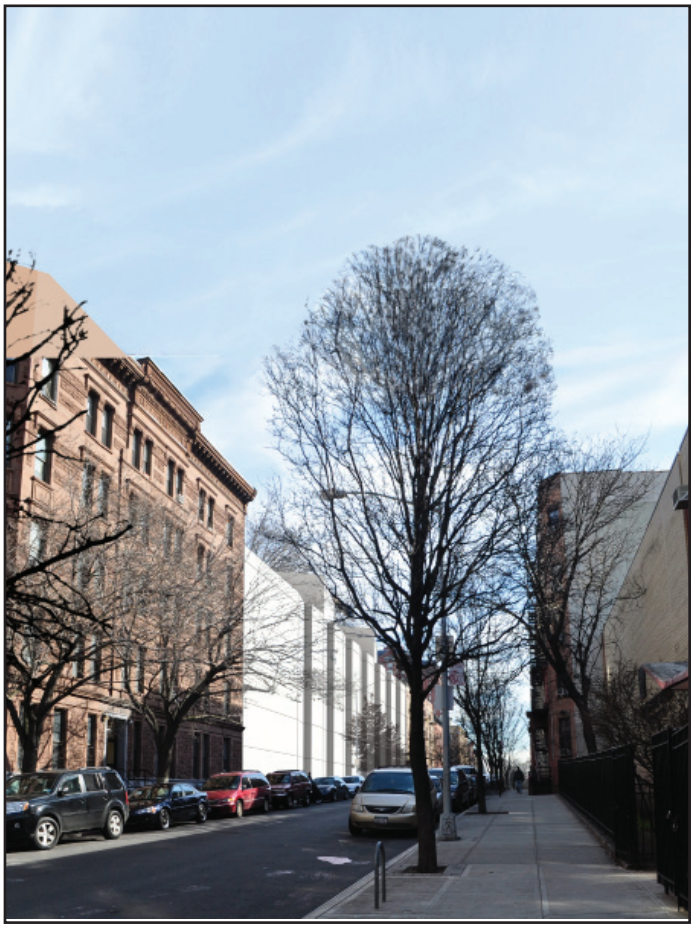
View East



View West

West 106th Street Rezoning
New York, NY 10025

No Build Condition:
West 106th Street Streetscape
Figure 2-5.4a



View East



View West

West 106th Street Rezoning
New York, NY 10025

No Build Condition:
West 105th Street Streetscape
Figure 2-5.4b

Street and the streetscape is dominated by the loading building (the easternmost building) for the Jewish Home Lifecare facility that contains a driveway and one-story loading dock structure. The street-level entrance along West 105th Street to the underground parking garage, although positioned differently, would not functionally differ from that used for the existing loading dock for the Jewish Home Lifecare facility.

Overall, under the No-Action RWCDS, the pedestrian experience along both West 105th and West 106th Street would be consistent with the urban design and built context of the immediately surrounding neighborhood. The No-Action RWCDS would result in the introduction of buildings that would be consistent with the neighborhood context and the relationship of the streetwalls to the sidewalk and adjacent buildings.

2.5.3 The Future With The Proposed Action

Project Site

The proposed action would allow for the development of the With-Action RWCDS—three buildings, including two 11-story buildings fronting on West 106th Street and one 7-story building on West 105th Street (the "Build condition"). The With-Action buildings would be taller than the No-Action RWCDS buildings, which would have a maximum of 7-stories (75 feet) fronting on West 106th Street and a maximum of 6-stories (65 feet) fronting on West 105th Street. See Figures 2-5.5a and 2-5.5b for the streetscape images of the Build condition. In accordance with the proposed R8A and R8B zoning districts, the proposed buildings would have a continuous streetwall and be setback above a height of 85 feet along West 106th Street and above a height of 60 feet along West 105th Street. The continuous streetwall would also be developed in the No-Action RWCDS. However, since the With-Action RWCDS would be taller than the No-Action RWCDS, in the With-Action RWCDS the streetwalls would setback above a height of 85 feet along West 106th Street and 60 feet along West 105th Street—a condition different than the No-Action RWCDS. Community facility space would be located in the base of the buildings along West 106th Street—the same as the No-Action RWCDS. The proposed buildings would not be set back from the front property line. The street-level entrance to the proposed underground parking would be along West 105th Street—the same as the No-Action RWCDS. Overall, the With-Action RWCDS would have a similar urban design and built form as compared to the No Build condition.

For illustrative purposes only, Figure 2-5.6 show renderings of the potential streetscape and façade treatment for the With-Action RWCDS. This illustrative development scenario would include a glass-enclosed pedestrian walkway that would connect the proposed buildings along West 106th Street and an open space center courtyard in the interior of the complex.



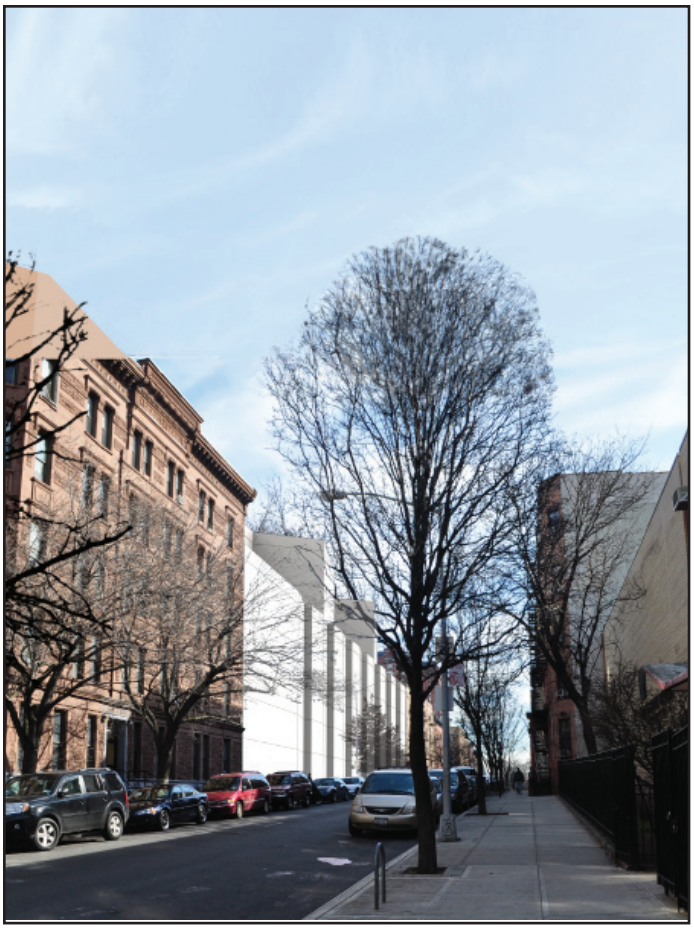
View East



View West

West 106th Street Rezoning
New York, NY 10025

Build Condition:
West 106th Street Streetscape
Figure 2-5.5a



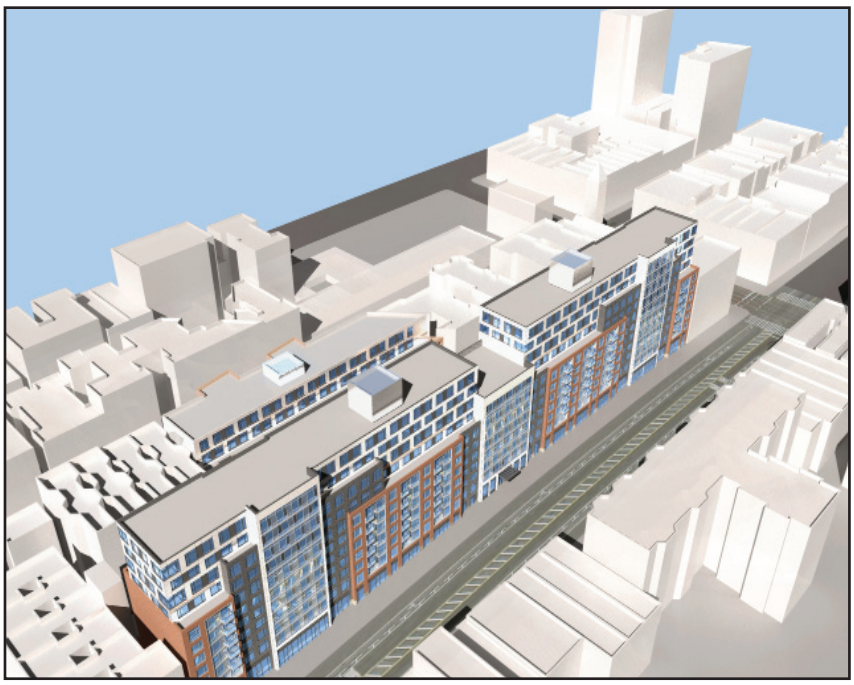
View East



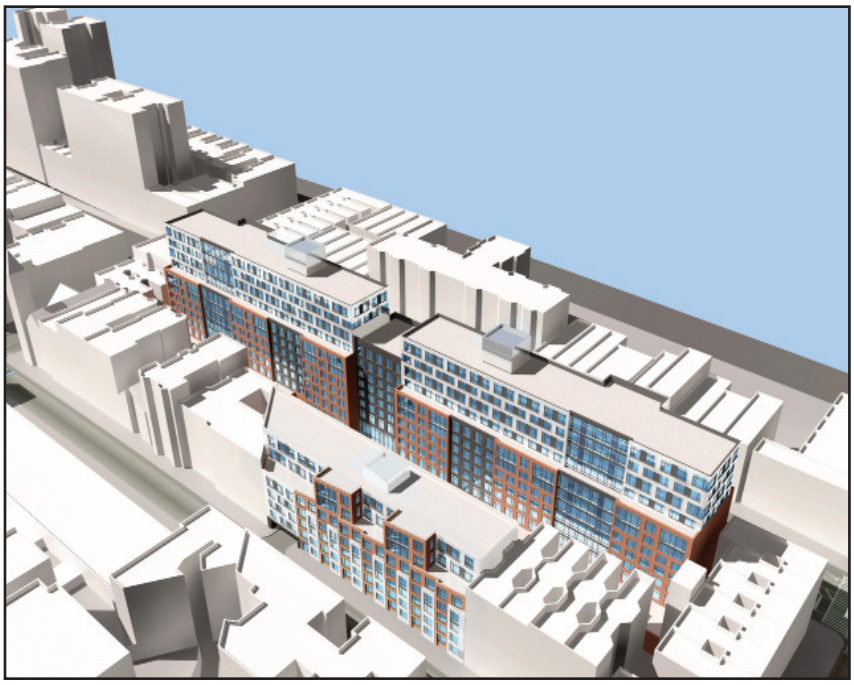
View West

West 106th Street Rezoning
New York, NY 10025

Build Condition:
West 105th Street Streetscape
Figure 2-5.5b



West 106th Street aerial



West 105th Street aerial

Although the proposed buildings on West 106th Street would be taller than the adjacent residential buildings on the remainder of the block and taller than the No-Action RWCDS, the With-Action RWCDS would be consistent with the urban design, scale, and built context along West 106th Street (see Figures 2-5.5 and 2-5.6). The With-Action RWCDS would be similar in scale to and would set back at the same height as the 9-story residential building located directly across from the project site on the north side of West 106th Street (shown in Figure 2-5.6). The primarily residential use, continuous streetwall built out to the lot line, and proposed setback above 85 feet for the proposed buildings would be consistent with the streetwall and massing of the surrounding residential five and six-story buildings. The scale would be similar to the existing context and the additional height after the setback would be felt less by the pedestrian. Further, with the With-Action RWCDS, the West 106th Street streetscape would also be activated with ground floor community facility uses and multiple pedestrian entrances for the residential buildings.

The glass enclosed walkway as proposed by the applicant and shown in the illustrative development scenario would offer an unimpeded view of the proposed building on the West 105th Street side and the interior courtyard of the complex. The introduction of the pedestrian walkway and central courtyard would be similar to a portion of the existing street-level condition along West 105th Street associated with the existing Jewish Home Lifecare complex.

The urban design and built form of the With-Action RWCDS, and therefore the pedestrian-level experience, along West 105th be consistent with the urban design, scale, and built context along the remainder of the block. The 7-story residential building along West 105th Street would be consistent with the majority of the existing residential buildings along the block that range between five and ten stories. The With-Action RWCDS building would also be consistent with the streetwall of the surrounding buildings, which are also built out to the lot line. The West 105th Street streetscape would be activated by the pedestrian entrance for the new residential building. This is in contrast with the existing conditions on the project site in which no buildings directly front on West 105th Street, The proposed West 105th Street building, at 7-stories and after setting back at 5-6 stories, would be consistent with the existing building heights, mass, façade presentation, and overall low-scale built context on that street.

Overall, the With-Action RWCDS, which is similar to the No Build condition's, bulk and form, would present to the street in a manner consistent with the surrounding residential buildings. The setbacks would occur at the same height of many of the surrounding buildings. Therefore, the With-Action RWCDS building would keep the streetwall and height consistent and minimize any affects that the pedestrian might feel of the additional height after the setbacks. The proposed building façade under the Build condition would also closely mirror the present surrounding building

contexts. The With-Action RWCDS would also result in the introduction of buildings that would be more consistent with the neighborhood context and the relationship of the streetwalls to the sidewalk and adjacent buildings than under existing conditions.

2.5.4 Conclusion

The project action would result in building uses—residential and community facility—that are currently located thorough the study area. The proposed integration of community facilities uses into the West 106th Street streetwall would duplicate the streetwall character found throughout the study area.

The proposed action would also result in development that would be consistent with the prevailing building size, form, height, bulk, streetwall character, and scale of the study area. The contextual setting that would result from the proposed action would not effectively alter that of the existing urban fabric and it would be appreciably similar to the built context to the development under the No Build condition. The With-Action building would not alter an entrenched, consistent urban context, obstruct a natural or built visual corridor or be inconsistent with the existing character and building forms typically seen in the area. The proposed action would not alter block forms, and would encourage a greater continuity in the street wall. In addition, the With-Action RWCDS would be more consistent with the neighborhood context than under existing conditions.

Overall, the proposed action and resultant development is not expected to result in any significant adverse urban design and visual resources in the study area. There will be no changes to the topography, natural features, street hierarchy, block shapes, or building arrangements. Consequently, the proposed action is not expected to have a significant adverse impact on urban design and therefore no further analysis is necessary.

2.6 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 semi-volatile 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* (2012 edition), 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.

This section presents the findings of the Phase I Environmental Site Assessment (ESA) performed for the project site and considers the potential for significant adverse hazardous materials impacts resulting from previous and existing uses on the site and the potential risks from the proposed action with respect to hazardous materials.

2.6.1 Existing Conditions

As previously indicated, the project site is comprised of two (2) contiguous tax parcels (Lots 20 and 57) and is improved with five (5) interconnected medical/ institutional buildings. The buildings as indicated by staff of the Jewish Home Lifecare facility are summarized as follows:

120 West 106th Street - "Friedman"

The Friedman Building is a nine-story nursing home/ institutional building with a full basement. The Friedman Building is the largest, and is considered the main building amongst each of the interconnected buildings that comprise the Jewish Home Lifecare facility. It also contains the main entrance to the facility located along West 106th Street. Other features of the Friedman Building include dining facilities, administrative offices, the main reception/ waiting area and auditorium. All maintenance activities for the Jewish Home Lifecare facility are conducted through the basement of the Friedman Building, including carpentry, parts, laundry/ linen, oxygen storage, etc. Portions of the Friedman Building (i.e., auditorium) have frontage along West 105th Street.

140 West 106th Street – "Frank"

The Frank Building is a seven-story nursing home/ institutional building with a full basement. Each floor consists of a nursing station, corridor, dining hall and patient/ resident rooms. The Frank Building is located adjacent to the west of the Friedman Building and fronts along West 106th Street.

110 West 106th Street – "Sutro"

The Sutro Building is a five-story nursing home/ institutional building with a full basement. The Sutro Building is located adjacent to the east and fronts along West 106th Street.

121 West 105th Street – "Loading Building"

The Loading Building is located along the southern portions of the project site, with frontage along West 105th Street. A driveway, loading dock and one-story dock structure are present and are interconnected with the Friedman Building basement and first floor.

The project site occupies the majority of the block along the south side of West 106th Street, and a portion of the block along the north side of West 105th Street. A

courtyard for patients/ residents is present between each of the buildings and their respective abutting properties with frontage along West 105th Street.

156 West 106th Street – "Stern Building"
The Stern Building is a six-story residential apartment building with a full basement and is the only structure located on Lot No. 57. Access was not provided to the Stern Residence Building at the time of the site visit. However, VHB was informed by Jewish Home Lifecare facility staff that the Stern Building is primarily vacant and was formerly used for staff housing. The Jewish Home Lifecare facility only utilizes two apartments for the superintendent and training purposes.

2.6.2 Phase I Environmental Site Assessment

A Phase I ESA, dated March 5, 2012, was completed by VHB Engineering, Surveying and Landscape Architecture, P.C. (VHB) for the project site and included all analyses as specified in the American Society for Testing and Materials (ASTM) Method E 1527-05. The goal of the Phase I Environmental Site Assessment process is to identify "Recognized Environmental Conditions" (RECs), which means the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property.

Per the ASTM Standard, the Phase I ESA reviewed a variety of information sources, including current and historic Sanborn Fire Insurance Maps; topographic maps and aerial photographs; historical land title records and city directories; state and federal environmental regulatory databases identifying listed sites; and local environmental records. The Phase I ESA also included reconnaissance of the site and surrounding neighborhood and interviews with the building manager.

As stated in Practice E1527-05, there may be environmental issues or conditions at the site, which may be requested by the user to be addressed as part of the Phase I ESA, which are not covered within the scope of ASTM Practice E1527-05. These issues are referred to as non-scope considerations. The following non-scope considerations were addressed in a limited capacity within the Phase I ESA: radon, lead-based paint (LBP), asbestos-containing materials (ACM), wetlands, and mold and water damage.

During a site visit, January 31, 2012, Mr. Edward Meehan, the Director of Facilities Management at the Jewish Home Lifecare facility informed the VHB representative that the subject property currently utilizes a dual-fired natural gas and No. 2 fuel oil heating system. Mr. Meehan also indicated the subject property currently utilizes one (1) 15,000-gallon No. 2 fuel oil underground storage tank (UST) for heating purposes, as well as one (1) 550-gallon diesel UST for emergency backup electricity. Mr. Meehan also indicated that the Stern Building is primarily vacant and was formerly

utilized as staff residences and is equipped with a 1,000-gallon No. 2 fuel oil UST that is no longer in-use.

Former structures, depicted on Sanborn maps prior to 1976, appeared on the property well before its current configuration. However, given the presence of basements located within each of the respective buildings, it is unlikely that any remaining building remnants (i.e., tanks and/ or building foundations) are present at the project site. As such, the presence of the former buildings at the project site are unlikely to present a significant environmental risk.

The project site is currently listed on the NYSPILLS database for nine (9) closed New York State Department of Environmental Conservation (NYSDEC) spill incidents. Spill closure documentation was provided by the NYSDEC for each of the nine spills. As such, it is unlikely that these spills are a significant environmental risk to the project site.

One (1) active NYSDEC spill was listed for the project site, as summarized below:

- NYSDEC Spill No. 10-08471, Jewish Home and Hospital for the Aged, 120 West 106th Street. According to the database report, this spill is related to a diesel tank tightness test failure that occurred on November 12, 2010. It is unknown the size of the tank in question. However, the spill report indicates a retest and/ or removal is currently pending. The spill currently carries a NYSDEC "active" status. Given the unknown status of the UST, there is a potential for the subsurface to have been impacted with leaks/ and/ or releases associated with the diesel UST.

Two in-service USTs were observed during the site inspection:

- One (1) 15,000-gallon No. 2 fuel oil double-walled UST with automatic spill monitoring
- One (1) 550-gallon diesel double-walled UST with automatic spill detection/ monitoring

The subject property is also listed in the petroleum bulk storage database of the EDR report with the following tanks:

- One (1) 18,500-gallon UST installed in 1962 and removed in 1996
- One (1) 10,000-gallon steel UST (unknown contents) abandoned in-place in 1996
- One (1) in-service 5,000-gallon UST (unknown contents) installed in 1969
- One (1) 550-gallon UST installed in 1962 and removed in 1996
- One (1) 1,000-gallon UST (unknown contents) installed in 1992 and removed in 2007.

Numerous hazardous materials were observed within each of the on-site buildings at the time of the site inspection. These items include, but are not limited to, maintenance supplies, detergents and health care materials. Furthermore, although

not confirmed due to restricted access to resident areas, it is expected that mercury-containing products (i.e., blood pressure devices, thermometers, etc.) as well as medical-related wastes (i.e., biohazard and radiological) are present within the upper floors of the building. In addition, several 35- and 55-gallon plastic antifreeze drums were observed within the boiler room of the Friedman Building basement.

Fluorescent light fixtures were observed throughout the building spaces, which based on the ages of the buildings, may contain polychlorinated biphenyls (PCBs). In addition, a hydraulic compactor was observed adjacent to the Loading Building along the exterior loading dock area. A hydraulic elevator lift was also observed within the Loading Building, connecting to the Friedman Building basement. These building features all have the potential to utilize PCB-containing hydraulic fluids.

Interior paint was in good condition with no evidence of chipping and/ or peeling. Exterior paint was in fair condition, with minor areas of chipping and peeling paint. The lead contents of the paints are unknown; however, based upon the ages of the buildings, the presence of LBP is possible.

Due to the ages of the site buildings, it is possible that roofing, roof flashing and other (inaccessible) building materials may contain asbestos.

While no mold or mildew was observed by VHB during the site inspection, a Phase I ESA conducted by Ethan C. Eldon Associates, dated January 28, 2007, noted that mold growth was visible on the 6th floor apartments of the Stern Building. VHB was unable to access the Stern Building at the time of the site inspection.

2.6.3 The Future Without the Proposed Action

As described in greater detail in Section 1.0, in the future without the proposed action the Jewish Home Lifecare facility at the project site will be relocated to a new facility within Park West Village at West 97th Street. After this relocation, the project site would be redeveloped as-of-right with the No-Action RWCDS with an approximately 632,000 gsf building that would contain a mix of residential and community facility uses and below-grade accessory parking.

In the future without the proposed action, the existing buildings on the project site would be demolished and subsurface disturbance of the site would be required. Because the No-Action RWCDS would be built as-of-right, controls typically required under New York State Environmental Quality Review Act (SEQRA), such as a subsurface (Phase II) investigation, Remedial Action Plan (RAP) and Construction Health and Safety Plan would not be required to be implemented. However, legal requirements (including NYSDEC regulations) would need to be followed: should petroleum tanks and/ or spills be identified; for offsite disposal of soil/ fill; and for handling of ACM, lead based paint and potentially PCB-containing equipment.

Specifically the procedures would include:

- Removal of the USTs (including any petroleum tanks unexpectedly encountered) and any associated soil or groundwater contamination would be undertaken in accordance with all applicable regulatory requirements, including NYSDEC and/ or New York City Fire Department requirements and NYSDEC Spill No. 10-08471 would be closed in accordance with NYSDEC requirements.

- The disposal of lead paint waste resulting from renovation or demolition activities would be subject to federal and State regulations.

- PCB surveys would be performed prior to any demolition and/ or renovation activities that may occur at the project site. Any identified PCB-containing equipment affected by the development of the site would be managed and removed in accordance with applicable federal, New York State, and New York City guidelines.

- If activities in the buildings (i.e., renovation or demolition) will disturb any suspect asbestos material, then an asbestos survey would be performed to determine if asbestos-containing materials (ACM) are present prior to the proposed work. Any ACM would be removed in accordance with federal, New York State and New York City regulations.

- All excavated soil and debris (whether contaminated or not) requiring off-site disposal would be handled and disposed of in accordance with all applicable regulatory requirements.

2.6.4 The Future With The Proposed Action

In the future with the proposed action, the project site would be redeveloped in accordance with the proposed zoning for the With-Action RWCDS. As with the No-Action RWCDS, the proposed action would result in new development that would involve demolition of the existing buildings and excavation for the construction of new buildings. The RWCDS for the future with and without the proposed action would result in similar subsurface disturbance, and therefore no additional hazardous materials impacts would result from the proposed action.

Based on the findings of the Phase I ESA, there is a potential for the subsurface to have been impacted as a result of leaks and/ or releases from onsite USTs. The Phase I ESA was reviewed by the New York City Department of Environmental Protection (DEP). In a letter dated March 20, 2013 (refer to Appendix A), DEP stated that a Phase II Environmental Site Assessment (Phase II ESA) is necessary to adequately identify and characterize the surface and subsurface soils of the project site. In

addition, an investigative Health and Safety Plan (HASP) must be submitted to DEP for review and approval prior to the start of any field work.

More specifically, a Phase II Investigative Protocol/ Work Plan summarizing the proposed drilling, soil, groundwater, and soil vapor sampling activities should be submitted to DEP for review and approval. The Work Plan 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 and soil vapor sampling locations.
In addition, asbestos containing materials, lead based paints, and suspected polychlorinated biphenyl containing materials may be present in the existing building structure. These materials should be properly removed and/ or managed prior to the start of any renovation/ construction activities and disposed of in accordance with all federal, state, and local regulations.

To avoid the potential for significant adverse impacts related to hazardous materials, the proposed action would include an (E) designation for Block 1860, Lots 20 and 57. The (E) designation requires that, prior to redevelopment, the property owner conduct a Phase I Environmental Site Assessment (ESA) in accordance with the American Society of Testing Materials (ASTM) E1527-05, a soil and groundwater testing protocol, and remediation where appropriate, to the satisfaction of the New York City Office of Environmental Remediation (OER) before issuance of construction-related New York City Department of Buildings (DOB) permits (pursuant to Section 11-15 of the *Zoning Resolution*—Environmental Requirements). The E-designation also requires mandatory construction-related health and safety plans, which must also be approved by OER. Under the E-designation, the following tasks must be undertaken:

Task 1 – The applicant must submit to the Mayor's Office of Environmental Remediation (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 excavation and construction 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.

2.6.5 Conclusion

With the measures set forth above, the proposed action would not result in any significant adverse impacts related to hazardous materials.

2.7 Transportation

The following provides a description of the transportation characteristics associated with the proposed action.

2.7.1 Methodology and Analytical Framework

According to *CEQR Technical Manual* procedures for transportation analysis, a two-tiered screening process is to be undertaken to determine whether a quantified analysis of potential transportation impacts is necessary. The first step, the Level 1 (Trip Generation) screening, determines whether the number of peak hour person and vehicle trips generated by the proposed development would remain below the minimum thresholds for further study. These thresholds are:

50 peak hour vehicle trips ends;
200 peak hour subway/ rail or bus transit riders; and
200 peak hour pedestrian trips.

If project-generated trips would exceed any of these thresholds, a Level 2 (Trip Assignment) screening assessment is performed. Under this assessment, project-generated trips that exceed Level 1 thresholds are assigned to and from the site through their respective modal networks (streets, bus and subway lines, sidewalks etc.) based on expected origin-destination patterns and travel routes.

Currently, institutional uses operate on the project site. In the future without the proposed action (No Build) condition, these uses would be relocated to a new facility. After this relocation, the project site could be redeveloped as-of-right with an approximately 423,754 gsf building that would contain a mix of residential

(approximately 380 units) and community facility space (31,006 gsf, same size as in the With-Action RWCDS) and below-grade storage space and accessory parking for 141 spaces, (the No-Action RWCDS).

In order to determine the net increase in travel demand from the proposed action, the With-Action RWCDS was compared to the No-Action RWCDS to develop a net increment. For this increment, as shown in Table 1-3, the residential use is the only trip generating component with a positive net development increment (217 units). Therefore, a trip generation analysis was performed to determine the net person and vehicle trips that would be generated as a result of the residential increment.

2.7.2 Level 1 Screening Assessment (Trip Generation)

Trip generation, modal split, and other travel demand assumptions were developed for the residential component of the No-Action and With-Action RWCDS programs to determine the number of trips that would be generated during weekday peak hours (AM, midday, PM) and during the Saturday midday peak hour. These estimates were based on data obtained from the *CEQR Technical Manual*, 2007-2011 American Community Survey (ACS) data, and from the Western Rail Yard FEIS (2009). Travel demand factors used to calculate trips generated by each land use are summarized in Table 2-7.1 and described in detail below.

For the residential component, trip generation rates of 8.075 daily person trips per dwelling unit for weekday and 9.6 daily person trips per dwelling unit for Saturday, and temporal distribution percentages (10 percent for the weekday AM peak hour, 5 percent for the midday peak hour, 11 percent for the PM peak hour, and 8 percent for the Saturday midday peak hour) were obtained from the *CEQR Technical Manual*. A directional distribution of 15 percent "in" during the weekday AM peak hour, 50 percent "in" during the midday peak hour, 70 percent "in" during the PM peak hour, and 50 percent "in" during the Saturday midday peak hour were obtained from the Western Rail Yard FEIS. Modal split information (11 percent by auto, 2 percent by taxi, 7 percent by bus, 61 percent by subway, and 18 percent by walk) for the weekday and Saturday peak hours were obtained from 2007-2011 ACS commuting data for Manhattan Census Tracts 185, 187, 189, 191, 193 and 195. Vehicle occupancies (1.65 persons per auto and 1.40 passengers per taxi) were also obtained from the Western Rail Yard FEIS.

Table 2-7.1: Travel Demand Characteristics

Rates	Residential
Person Trip Gen Rate (Weekday/ Saturday)	8.075/ 9.6[1]
	per unit
Temporal Distribution	
Weekday AM Peak	10%[1]
Weekday Midday Peak	5%[1]
Weekday PM Peak	10%[1]
Saturday Midday	8%[1]
Modal Split	
Auto	11%[2]
Taxi	2%[2]
Bus	7%[2]
Subway	61%[2]
Walk	18%[2]
Vehicle Occupancy	
Auto	1.65[3]
Taxi	1.40[3]
Directional Split (In/Out)	
Weekday AM Peak	15%/ 85%[3]
Weekday Midday Peak	50%/ 50%[3]
Weekday PM Peak	70%/ 30%[3]
Saturday Midday	50%/ 50%[3]
Truck Trip Gen	0.06/ 0.02[1]
(Weekday/ Saturday)	*per unit*
Truck Temporal Distribution	
Weekday AM Peak	12%[1]
Weekday Midday Peak	9%[1]
Weekday PM Peak	2%[1]
Saturday Midday	9%[1]
Truck Trip Directional Split (In/out) - 50%/ 50%	

Source:
(1) *2012 CEQR Technical Manual*
(2) *2007-2011 ACS, journey-to-work for Manhattan Census Tracts 185, 187, 189, 191, 193 and 195*
(3) *Western Rail Yard FEIS*

Daily truck trip generation rates of 0.06 trips per dwelling unit for weekday and 0.02 trips per dwelling unit for Saturday were obtained from the *CEQR Technical Manual*. Temporal distribution (12 percent during the weekday AM peak hour, 9 percent

during the midday peak hour, 2 percent during the PM peak hour, and 9 percent during the Saturday midday peak hour) and directional distribution assumptions (50 percent "in" during all peak hours) were also obtained from the *CEQR Technical Manual*.

Level 1 Screening Results

Table 2-7.2 summarizes the number of person trips generated by the No-Action and With-Action RWCDS, and shows the net increment of trips that would be generated as result of the proposed action.

Transit and Pedestrians

Table 2-7.2 indicates that the net increase in bus or subway trips (13 to130) is well under 200 trips during all four peak hours, and no further transit analysis would be necessary.

Table 2-7.2: Trip Generation Summary – Person Trips

No-Action RWCDS												
	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday		
Mode	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	4	21	25	6	6	12	19	8	27	12	12	24
Taxi	1	8	9	2	2	4	7	3	10	4	4	8
Bus	3	18	21	5	5	10	16	7	23	10	10	20
Subway	31	177	208	52	52	104	161	69	230	99	99	198
Walk	6	37	43	11	11	22	33	14	47	20	20	40
Total	**45**	**261**	**306**	**76**	**76**	**152**	**236**	**101**	**337**	**145**	**145**	**290**
With-Action RWCDS												
	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday		
Mode	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	6	33	39	10	10	20	30	13	43	18	18	36
Taxi	2	12	14	4	4	8	11	5	16	7	7	14
Bus	5	29	34	8	8	16	26	11	37	15	15	30
Subway	49	279	328	82	82	164	252	108	360	156	156	312
Walk	10	57	67	17	17	34	52	22	74	32	32	64
Total	**72**	**410**	**482**	**121**	**121**	**242**	**371**	**159**	**530**	**228**	**228**	**456**
Net Increment												
	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday		
Mode	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	2	12	14	4	4	8	11	5	16	6	6	12
Taxi	1	4	5	2	2	4	4	2	6	3	3	6
Bus	2	11	13	3	3	6	10	4	14	5	5	10
Subway	18	102	120	30	30	60	91	39	130	57	57	114
Walk	4	20	24	6	6	12	19	8	27	12	12	24
Total	**27**	**149**	**176**	**45**	**45**	**90**	**135**	**58**	**193**	**83**	**83**	**166**

The net increase in pedestrian trips (walk trips plus bus and subway trips) would range between 78 and 171 person trips per hour, and not exceed Level 1 thresholds during any peak hour. Therefore, no further pedestrian analysis is needed.

Traffic and Parking

As shown in Table 2-7.3, the net increase in vehicle trips ends ("ins" plus "outs") would be 12 to 17 during peak hours. Since the vehicle increases from the With-Action RWCDS would remain below CEQR's Level 1 thresholds for vehicle trips (50 peak hour trip ends) during all peak hours, no further traffic analysis is needed.

The With-Action RWCDS would provide 208 accessory parking spaces as compared to 141 in the No-Action RWCDS. However, as indicated in the C*EQR Technical Manual*, if the thresholds for traffic are not surpassed, a parking assessment is generally not needed. Since the Level 1 vehicle thresholds would not be exceeded as a result of the proposed action, no parking analysis is necessary

Table 2-7.3: Trip Generation Summary – Vehicle Trips

No-Action RWCDS												
	Weekday AM			**Weekday Midday**			**Weekday PM**			**Saturday Midday**		
Mode	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Auto	2	13	15	4	4	8	11	5	16	7	7	14
Taxi	7	7	14	4	4	8	6	6	12	6	6	12
Truck	3	3	6	2	2	4	0	0	0	1	1	2
Total	**12**	**23**	**35**	**10**	**10**	**20**	**18**	**11**	**29**	**14**	**14**	**28**
With-Action RWCDS												
Mode	**Weekday AM**			**Weekday Midday**			**Weekday PM**			**Saturday Midday**		
	In	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Auto	4	20	24	6	6	12	18	8	26	11	11	22
Taxi	11	11	22	6	6	12	9	9	18	9	9	18
Truck	4	4	8	4	4	8	1	1	2	1	1	2
Total	**19**	**35**	**54**	**16**	**16**	**32**	**28**	**18**	**46**	**21**	**21**	**42**
Net Increment												
Mode	**Weekday AM**			**Weekday Midday**			**Weekday PM**			**Saturday Midday**		
	In	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Auto	2	7	9	2	2	4	7	3	10	4	4	8
Taxi	4	4	8	2	2	4	3	3	6	3	3	6
Truck	1	1	2	2	2	4	1	1	2	0	0	0
Total	**7**	**12**	**19**	**6**	**6**	**12**	**10**	**7**	**17**	**7**	**7**	**14**

Notes: A 25 percent taxi trip credit (assumes 25 percent of all "in" taxi trips carrying an inbound fare is available for an outbound fare) was applied per CEQR guidelines.

2.7.3 Conclusion

Based on the Level 1 transportation screening analysis, the incremental number of new vehicle, transit and pedestrian trips generated by the With-Action RWCDS would remain below CEQR thresholds and would not require further analysis. Therefore, the proposed action would not result in any significant adverse transportation impacts.

2.8 Air Quality

2.8.1 Introduction

This section examines the potential for air quality impacts from the proposed action. According to the *CEQR Technical Manual*, an air quality analysis determines whether a proposed action would result in stationary or mobile sources of pollutant emissions that could have a significant adverse impact on ambient air quality, and also considers the potential of existing sources of air pollution to impact the proposed uses. Air quality impacts can be characterized as either direct or indirect impacts. Direct impacts stem from emissions generated by stationary sources, such as stack emissions from fuel burned for heating, ventilation, and air conditioning (HVAC) systems. Indirect effects include emissions from motor vehicles ("mobile sources") traveling to and from a project site.

2.8.2 Pollutants of Concern

Air pollution is of concern because of its demonstrated effects on human health. Of special concern are the respiratory effects of the pollutants and their potential toxic effects, as described below.

2.8.2.1 Carbon Monoxide

Carbon monoxide (CO) is a colorless and odorless gas that is a product of incomplete combustion. Carbon monoxide is absorbed by the lungs and reacts with hemoglobin to reduce the oxygen carrying capacity of the blood. At low concentrations, CO has been shown to aggravate the symptoms of cardiovascular disease. It can cause headaches, nausea, and at sustained high concentration levels, can lead to coma and death.

2.8.2.2 Particulate Matter

Particulate matter is made up of small solid particles and liquid droplets. PM_{10} refers to particulate matter with a nominal aerodynamic diameter of 10 micrometers or less,

and $PM_{2.5}$ refers to particulate matter with an aerodynamic diameter of 2.5 micrometers or less. Particulates can enter the body through the respiratory system. Particulates over 10 micrometers in size are generally captured in the nose and throat and are readily expelled from the body. Particles smaller than 10 micrometers, and especially particles smaller than 2.5 micrometers, can reach the air ducts (bronchi) and the air sacs (alveoli) in the lungs. Particulates are associated with increased incidence of respiratory diseases, cardiopulmonary disease, and cancer.

2.8.2.3 Nitrogen Oxides

When combustion temperatures are extremely high, such as engines, atmospheric nitrogen gas may combine with oxygen gas to form various oxides of nitrogen. Of these, nitric oxide (NO) and nitrogen dioxide (NO_2) are the most significant air pollutants. This group of pollutants is generally referred to as nitrogen oxides or NO_X. Nitric oxide is relatively harmless to humans but quickly converts to NO_2. Nitrogen dioxide has been found to be a lung irritant and can lead to respiratory illnesses. Nitrogen oxides, along with VOCs, are also precursors to ozone formation.

2.8.2.4 Sulfur Dioxide

Sulfur Dioxide (SO_2) emissions is the main component of the "oxides of sulfur", a group of highly reactive gases from fossil fuel combustion at power plants, other industrial facilities, industrial processes, and burning of high sulfur containing fuels by locomotives, large ships, and non-road equipment. High concentrations of SO_2 will lead to formation of other sulfur oxides. By reducing the SO2 emissions, other forms of sulfur oxides are also expected to decrease. When oxides of sulfur react with other compounds in the atmosphere, small particles that can affect the lungs can be formed. This can lead to respiratory disease, and can aggravate existing heart disease.

2.8.3 National Ambient Air Quality Standards

The National Ambient Air Quality Standards (NAAQS) were implemented as a result of the Clean Air Act (CAA), amended in 1990. The CAA requires the Environmental Protection Agency (EPA) to set standards on the pollutants that are considered harmful to public health and the environment. The NAAQS applies to six principal ("criteria") pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), particulate matter 10 (PM_{10}), particulate matter 2.5 ($PM_{2.5}$), sulfur dioxide (SO_2), lead

and ozone[4]. The NAAQS for the pollutants included in this air quality analysis are shown in Table 2-8.1

Table 2-8.1 NAAQS Standards

Pollutant	Averaging Time	NAAQS Standard
Carbon Monoxide (CO)	1-Hour	35 ppm (40,000 µg/m^3)
	8-Hour	9 ppm (10,000 µg/m^3)
Nitrogen Dioxide (NO_2)	Annual[1]	53 ppb (100 µg/m^3)
	1-Hour	100 ppb (189 µg/m^3)
Particulate Matter (PM_{10})	24-Hour	150 µg/m^3
Particulate Matter ($PM_{2.5}$)	Annual[1]	15.0 µg/m^3
	24-Hour	35.0 µg/m^3
Sulfur Dioxide (SO_2)	3-Hour	0.5 ppm (1,300 µg/m^3)
	1-Hour	75 ppb (200 µg/m^3)

1 Arithmetic average for average annual concentration

2.8.4 Methodology

2.8.4.1 Mobile Sources

On Street Sources

The results of the transportation analysis (see Section 2.7) indicate that the number of incremental trips generated by the With-Action RWCDS would be lower than the C*EQR Technical Manual* carbon monoxide (CO)-based screening threshold of 170 vehicles at an intersection, as well as the screening threshold for fine particulate matter ($PM_{2.5}$). Therefore, traffic from the proposed action would not result in a significant adverse on air quality, and a quantified assessment of on-street mobile source emissions is not warranted.

Parking Facility

The With-Action RWCDS would include an underground accessory parking garage located on the project site with a capacity of approximately 208 spaces. The outlet air from the garage's ventilation systems could contain elevated levels of carbon monoxide (CO) due to emissions from vehicular exhaust emissions in the garage.

▼

[4] Environmental Protection Agency (EPA). (2010, 16 April). *National Ambient Air Quality Standards*. Retrieved from http://www.epa.gov/air/criteria.html

The ventilation air could potentially affect ambient levels of CO at locations near the outlet vent. Therefore, an analysis of the emissions from the outlet vent and their dispersion in the environment was performed, calculating pollutant levels in the surrounding area, using the methodology set forth in the *CEQR Technical Manual*.

The CEQR procedures provide for an initial air quality screening analysis of parking garage emissions. The screening analysis uses a CEQR spreadsheet that has been developed for calculating CO emissions associated with a parking garage. This calculation is based on the layout of the parking garage, site geometry, vehicle trips accessing the project site, and mobile source emission factors from MOBILE6. The mobile emission factors were obtained from New York State Department of Transportation[5].

The results of the modeling indicate that the highest one-hour CO concentration that would occur around the project is 2.8 parts per million (ppm). The NAAQS for one-hour CO is 35 ppm. In addition, an eight-hour CO calculation was conducted, and the maximum eight-hour CO concentration was 0.14 ppm, which was noted to be below the "de minimis" criterion of 0.5 ppm as described in the *CEQR Manual*. Based upon the traffic analysis, the parking garage would only be at full capacity one-hour per week, the remainder of the time, the CO emissions would be substantially less.

Therefore, the parking garage would not result in a significant adverse impact on the ambient air quality of the surrounding neighborhood and no further analysis is required.

2.8.4.2 Stationary Sources

Emissions from fixed facilities are referred to as stationary source emissions. The *CEQR Technical Manual* procedures provide for two levels of analysis evaluating air quality impacts associated with stationary sources, such as boilers. The first level consists of a screening analysis of stationary sources based on the size of the development, the stack height of the stationary source equipment, and the distance to the nearest buildings. If a source fails the screening criteria, then a second level of analysis consists of a more detailed analysis using the EPA AERMOD dispersion model to determine potential impacts.

▼

[5] Mobile emission factors based on NYSDOT Table EF2 for Mobile6 CO emission factors for New York County for the Year 2019. The speeds 0 mph (which is a conservative estimate for 2.5 mph), 5.0 and 15.0 mph were used for LDGV as those are the vehicles that will utilize the parking garage.
https://www.dot.ny.gov/divisions/engineering/environmental-analysis/manuals-and-guidance/epm/repository/coeftab2.pdf

The *CEQR Technical Manual* procedures provide for an air quality screening analysis of stationary sources based on the size of the development, the stack height of the stationary source equipment, and the distance to the nearest buildings with similar or greater heights than the proposed project. Since specific design information associated with the With-Action RWCDS heat and hot water system, such as location and stack height, are not known at this time, in accordance with the *CEQR Technical Manual*, the following conservative assumptions were made for the air quality screening:

- Stack heights would be three feet above the proposed building's rooftops
- Stacks would be setback a minimum of 25 feet from each of the building's edges fronting West 105th and West 106th Streets, respectively, and
- Natural gas would be used as the fuel.

The air quality screening also evaluated the relationship of the With-Action RWCDS North and South Buildings on each other.

2.8.5 Existing Conditions

The total concentrations that receptor locations would experience include background concentrations from existing surrounding emission sources. Background concentrations are ambient pollution levels from other stationary, mobile, and area sources. NYSDEC maintains an air quality monitoring network and produces annual air quality reports that include monitoring data for CO, NO_x, $PM_{2.5}$ and SO_2. The background concentration values of the pollutants modeled in this air quality analysis over the five most recent years (2007-2011) are shown in Table 2-8.2.

Table 2-8.2 Background Concentrations (µg/m³)

Pollutant	Averaging Time	Monitoring Location	Background Concentration
Carbon Monoxide (CO)	1-Hour[1]	Botanical Gardens	3,494.2
	8-Hour[1]	Botanical Gardens	1,980.0
Nitrogen Dioxide (NO_2)	Annual[2]	Botanical Gardens	42.2
	1-Hour[1]	Botanical Gardens	131.8
Particulate Matter (PM_{10})[4]	24-Hour[1]	PS 19	40.0
Particulate Matter ($PM_{2.5}$)	Annual[2]	CCNY	10.5
	24-Hour[1]	CCNY	31.5
Sulfur Dioxide (SO_2)	3-Hour[3]	Botanical Gardens	132.4
	1-Hour[4]	Botanical Gardens	136.0

1 Represents the highest second-high value recorded in the five most recent years (2007-2011)
2 Represents the annual average value recorded in the five most recent years available (2007-2011).
3 Represents the maximum of the most recent years available (2010-2011) = 46.3 ppb=132.4 ug/ m^3
4 Represents the average of 99th percentile value recorded in the three most recent years available (2009-2011)

The monitoring site located closest to the project site was used in this analysis. For background concentrations, NYSDEC recommends using the highest value recorded in the five most recent years available for long-term averaging times (annual). For short-term averaging times (1-hour, 3-hour, 8-hour, or 24-hour), NYSDEC recommends using the highest second-high value recorded in the five most recent years.

2.8.6 Future without the Proposed Action

As described in Section 2.1, no known projects are anticipated to be developed in the study area in the future without the proposed action. Therefore no new sensitive receptors would be developed in the study area in the No Build condition.

2.8.7 Future with the Proposed Action

2.8.7.1 Parking Facility

The With-Action RWCDS would include an underground accessory parking garage with a capacity of approximately 208 spaces. Access would be gained from West 105th Street. The outlet air from the garage's ventilation systems could contain elevated levels of carbon monoxide (CO) due to emissions from vehicular exhaust emissions in the garage. The ventilation air could potentially affect ambient levels of CO at locations near the outlet vent. Therefore, an analysis of the emissions from the outlet vent and their dispersion in the environment was performed, calculating pollutant levels in the surrounding area.

The CEQR procedures provide for an initial air quality screening analysis of parking garage emissions. The screening analysis uses a CEQR recommended spreadsheet that has been developed for calculating CO emissions associated with a parking garage. This calculation is based on layout of parking garage, site geometry, vehicle trips accessing the project site, and mobile source emission factors from MOBILE6. The mobile emission factors were obtained from New York State Department of Transportation.

The air quality analysis evaluated AM and PM peak hour conditions for receptor location at the facade of the building, the middle of the near side sidewalk, and the middle of the far side sidewalk. The results of the modeling indicate that the highest one-hour CO concentration that would occur around the project is 3.5 parts per million (ppm) during both morning and evening peak hours. The project's contribution was 0.1 ppm, which was added to the general neighborhood background of 3.4 ppm. The NAAQS for one hour CO is 35 ppm. In addition, an eight hour CO calculation was conducted and the maximum eight hour CO concentration was 2.1 ppm for both morning and evening peak hours. The project's

contribution was less than 0.1 ppm, which was added to the general neighborhood background of 2.0 ppm. These value are also below the NAAQS of 9 ppm for eight hour CO. All of the results are presented in Appendix B.

The peak hour concentration from the parking garage is 0.1 ppm, which is below the "de minimis" criterion of 0.5 ppm as described in the *CEQR Technical Manual*. Based upon the traffic analysis, the parking garage would only be at full capacity one hour per week, the remainder of the time, the CO emissions would be substantially less.

Therefore, the parking garage would not result in a significant adverse impact on the ambient air quality of the surrounding neighborhood and no further analysis is required.

2.8.7.2 HVAC Source Analysis: Project-on-Existing Screening

The *CEQR Technical Manual* procedures provide for an air quality screening analysis of stationary sources based on the size of the development, the stack height of the stationary source equipment, and the distance to the nearest buildings with similar or greater heights than the proposed project. Since specific design information associated with the With-Action RWCDS heat and hot water system, such as location and stack height, are not known at this time, in accordance with the *CEQR Technical Manual*, the analysis included assumptions for these parameters.

The With-Action RWCDS assumes three buildings (See Figure 1-5), two that would front on West 106th Street (North Buildings 1 and 2) and one that would front on West 105th Street (South Building). The building that would front on West 105th Street (South Building) is assumed to have a roof height of 75 feet and a building area of 131,393 square feet (sf). The buildings that would front on West 106th Street are assumed to have a roof height of 120 feet and building areas of 265,695 and 231,798 sf respectively.

- Development size: South Building on West 105th Street - 131,393 sf
  North Building 1 on West 106th Street - 265,695 sf
  North Building 2 on West 106th Street - 231,798 sf

- Stack heights: South Building, one stack on West 105th Street - 78 feet
  North Buildings, two stacks on West 106th Street - each 123 feet

Based upon the project specific data and assuming natural gas, Figure APP 17-7 (see Appendix B) provides the distances that the nearest neighborhood buildings with similar heights must be in order to pass the screening test.

The distance to the nearest building with a similar or greater height to the South Building is the building located at 149 West 105th Street. The distance from the stack

on the South Building to the building at 149 West 105th Street is approximately 135 feet (see Figure 2-8.1a). A minimum distance of 95 feet from the stack location on the South Building to the building at 149 West 105th passes the screening criteria (see Figure 2-8.2a). Therefore the stack location proposed for the South Building would pass the screening criteria.

The distance to the nearest building with similar height to the North buildings is located at 171 West 107th Street. As noted above, the North Building is assumed to have two stacks. The stack closest (North Building 1) to 171 West 107th Street is over 400 feet from the building (see Figure 2-8.1a). The *CEQR Technical Manual* recommends using a maximum distance of 400 feet when the actual distances are greater than 400 feet. The stack locations for the North Buildings pass the screening criteria (see Figure 2-8.2b).

Based upon the *distance* to the nearest neighborhood building with a similar height, (see Figures 2-8.2a and 2-8.2b) the With-Action RWCDS passes the neighborhood screening test.

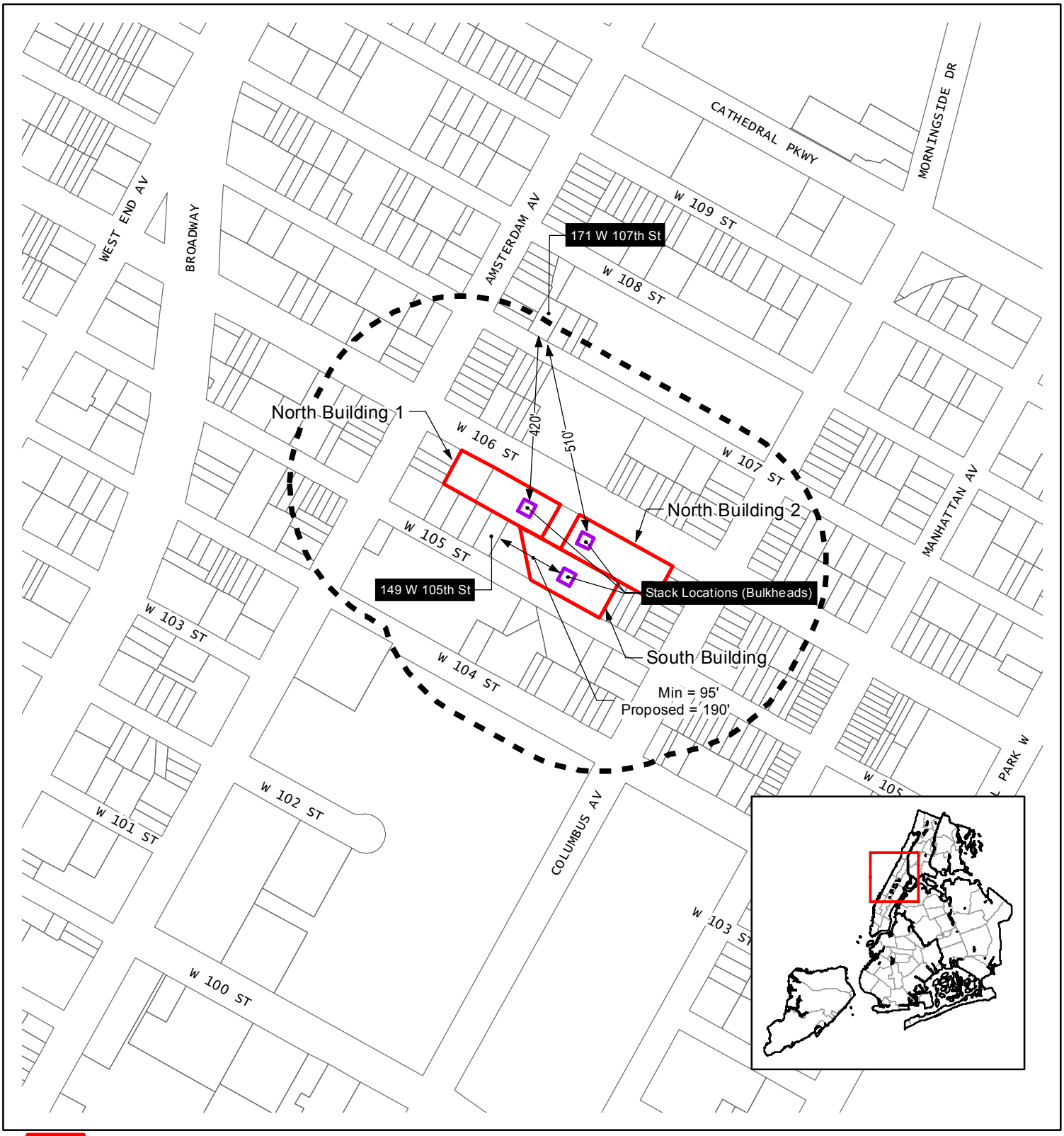
2.8.7.3 HVAC Source Analysis: Project-on-Project Screening

The air quality screening also evaluated the relationship of the proposed project's North and South Buildings on each other as well as each of the North Buildings on each other. The North buildings would not impact the South building because its stack height is taller.

- Development size: South Building on West 105th Street - 131,393 sf
- Stack heights: South Building on West 105th Street - 78 feet

As noted above, stacks would be setback a minimum of 25 feet from the building's edges. As shown in Figure 2-8.1b, the seventh floor of the North Building is the nearest location at or above the height of the stack on the South Building. This distance from the South Building stack to the North building on West 106th Street is approximately 95 feet (see Figure 2-8.1b). As shown in Figure 2-8.2a, this passes the screening criteria.

Assessing the North Buildings on each other considered the closest distance of the stack of the North Building 1 on the operable window/ air intake of the North Building 2 and vice versa. This distance from the North Building 1 stack to the North Building 2 operable windows/ air intake is approximately 135 feet (see Figure 2-8.1b). Similarly, the distance from the North Building 2 stack to the North Building 1 operable windows/ air intake is also approximately 135 feet. As shown in Figure 2-8.2b, this passes the screening criteria.

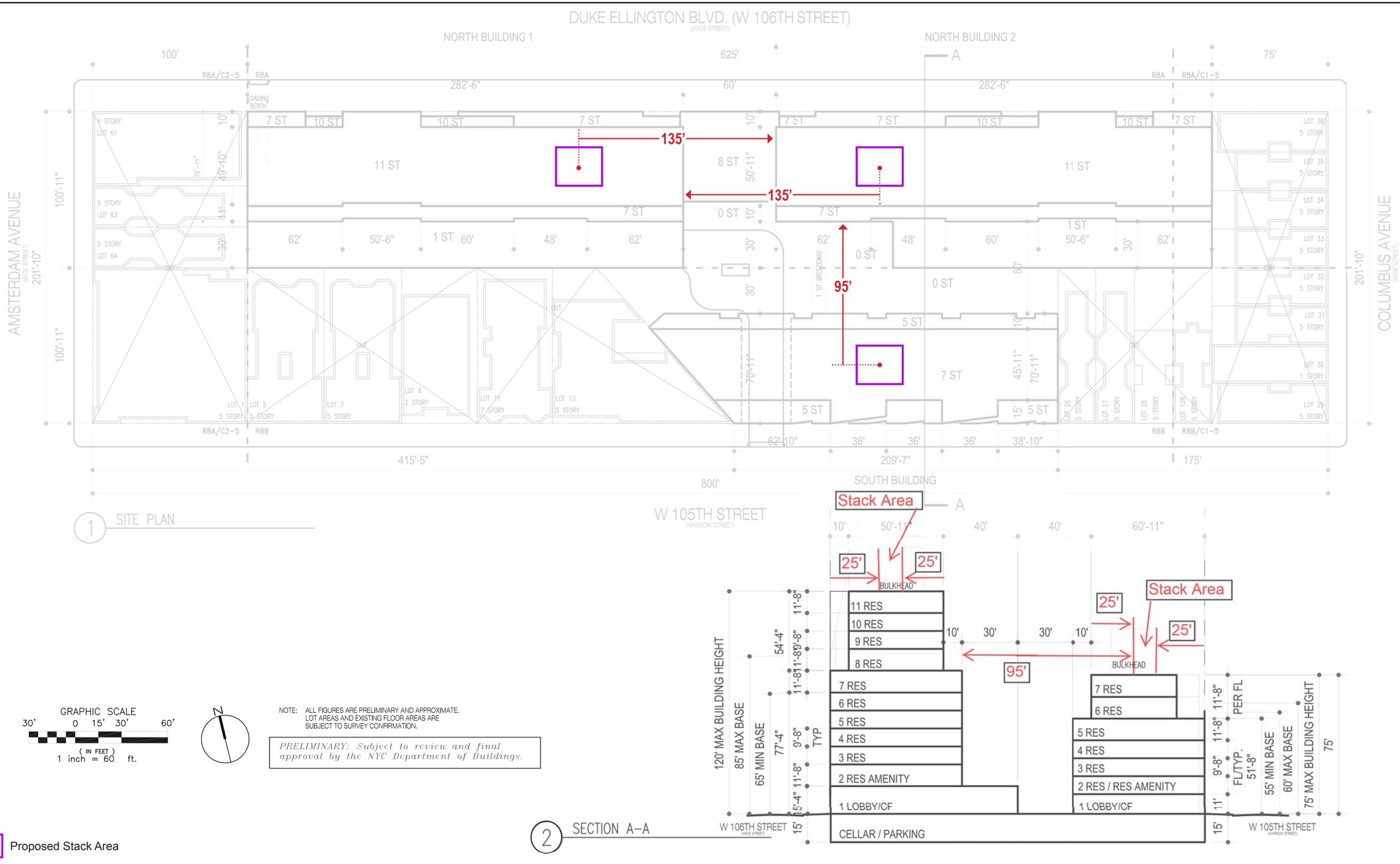


* Distances are from the project stack to the closest buildings of similar or greater height and were used for project screening.

West 106th Street Rezoning
New York, NY 10036

Project Stacks to Existing Buildings*
(Project on Existing)
Figure 2-8.1a

Source: MapPluto copyrighted by the New York City Department of City Planning (2011)

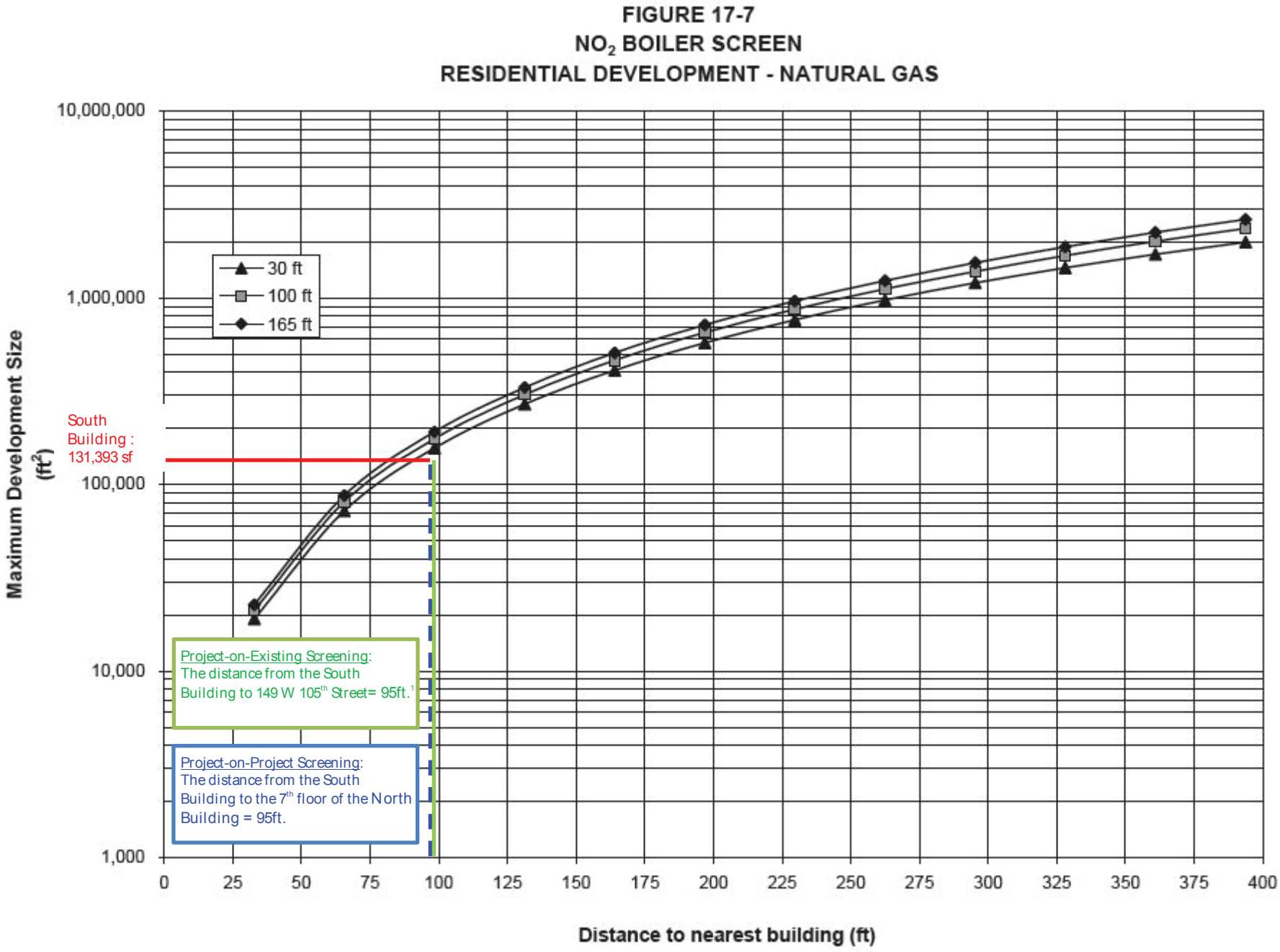


West 106th Street Rezoning
New York, NY 10036

Source: Goldstein, Hill & West Architects, LLP

Project Stacks to Project Buildings*
(Project on Project)
Figure 2-8.1b

* Distances are from the project stack to the closest buildings of similar or greater height and were used for project screening.

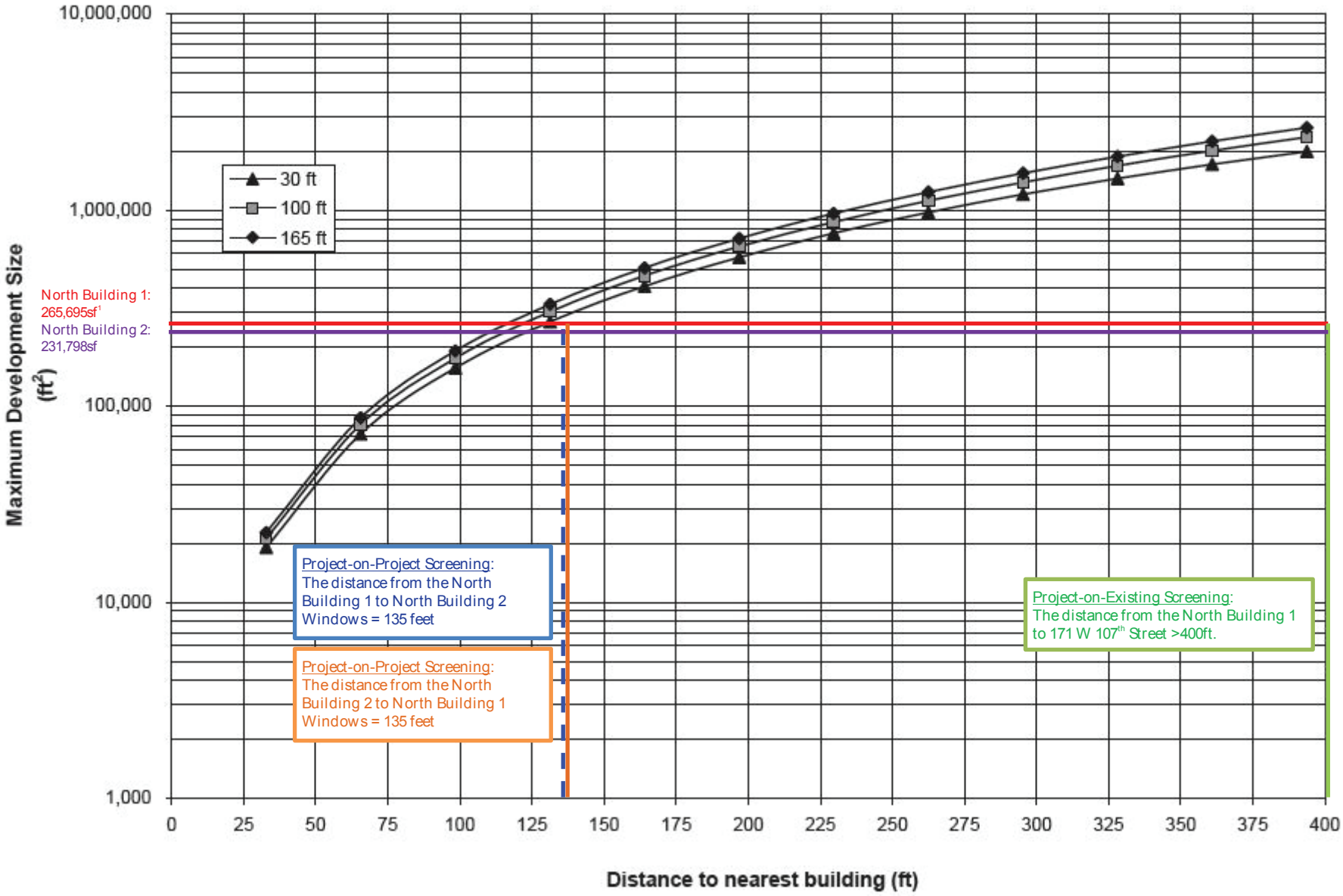


West 106th Street Rezoning
New York, NY 10036

Stationary Source Analysis: Proposed South Building
Figure 2-8.2a

Source: 2012 CEQR Technical Manual Appendix

FIGURE 17-7
NO_2 BOILER SCREEN
RESIDENTIAL DEVELOPMENT - NATURAL GAS



West 106th Street Rezoning
New York, NY 10036

Stationary Source Analysis: Proposed North Buildings
Figure 2-8.2b

Source: 2012 CEQR Technical Manual Appendix

2.8.7.4 Industrial Source Screening

The *CEQR Technical Manual* requires that the area surrounding the proposed project be evaluated to determine if there are any industrial emission sources that adversely impact existing neighborhood and/ or the proposed project. Section *322.1. Screening Analyses* identifies Environmental Protection Agency (EPA) and the Department of Environmental Conservation (DEC) web sites that list industrial sources with air quality permits. A review of the proposed project study area (see Appendix A for a complete list) and the EPA and DEC web sites indicates that there are no major industrial sources within 1,000 feet of the proposed project. The closest emission sources are:

- Residential building at 225 West 106th Street
- Residential building at 230 West 106th Street and
- The Booker T Washington Jr. High School located on West 107th Street.

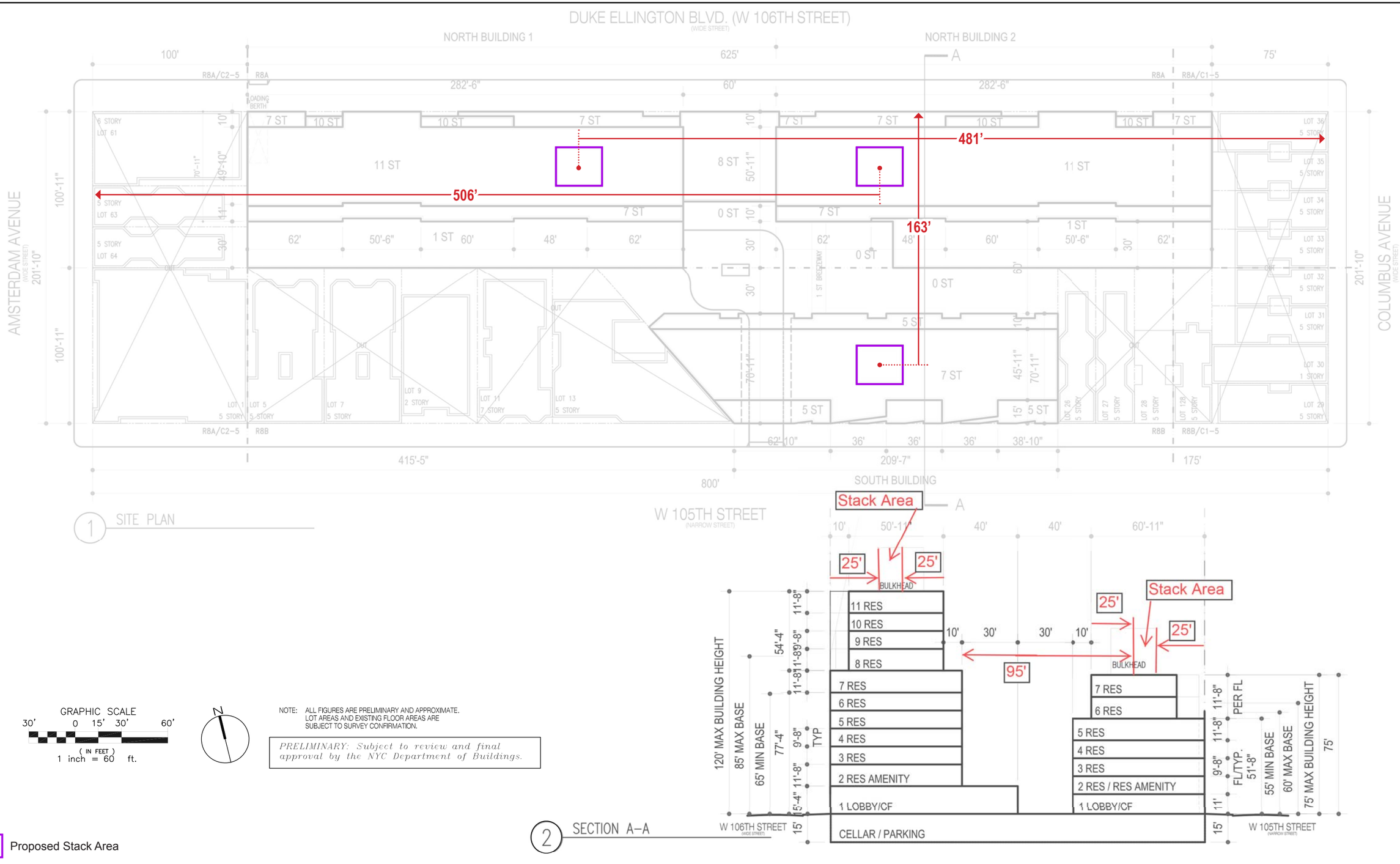
These are small emission sources that, according to the web sites, are all in compliance with their air permits and are located more than 400 feet away from the project site. Therefore, the existing industrial emission sources are not expected to cause an air quality impact on the proposed project and in combination with the proposed project are not expected to adversely impact the surrounding neighborhood.

2.8.7.5 Proposed (E) Designation

To ensure that there are no significant adverse impacts from the HVAC emissions associated with the With-Action RWCDS, certain restrictions would be required regarding fuel type and exhaust stack location (see Figure 2-8.3). The text of the (E) designation would be as follows:

- **The South Building**
  Any new development on the above-referenced property must ensure that the fossil-fuel fired heating and hot water equipment utilize only natural gas, and that the heating and hot water equipment exhaust stack(s) are located at least 163 feet from the lot line facing West 106 Street and at a height of at least 78 feet, to avoid any potential significant adverse air quality impacts.

- **The North Building 1**
  Any new development on the above-reference property must ensure that the fossil-fuel fired heating, and hot water equipment utilize only natural gas, and that the heating and hot water equipment exhaust stack(s) are located at least 481 feet from the lot line facing Columbus Avenue and at a height of at least 123 feet, to avoid any potential significant adverse air quality impacts.



West 106th Street Rezoning
New York, NY 10036

Source: Goldstein, Hill & West Architects, LLP

Proposed (E) Designation Distances
Figure 2-8.3

- **The North Building 2**
  Any new development on the above-referenced property must ensure that the fossil-fuel fired heating and hot water equipment utilize natural gas only, and that the heating and hot water equipment exhaust stack(s) are located at least 506 feet from the lot line facing Amsterdam Avenue and at a height of at least 123 feet, to avoid any potential significant adverse air quality impacts.

2.8.8 Conclusion

Overall, as discussed above, the maximum predicted pollutant concentrations and concentration increments from mobile sources associated with the proposed action would be below the corresponding guidance thresholds and ambient air quality standards. The accessory parking facility associated with the With-Action RWCDS would also not result in any significant adverse air quality impacts. Thus, the proposed project would not have significant adverse impacts from mobile source emissions.

The existing industrial emission sources are not expected to cause an air quality impact on the proposed project and in combination with the proposed project are not expected to adversely impact the surrounding neighborhood. The requirements set forth in the (E) designation described above would ensure that stationary source emissions from the With-Action condition would avoid significant adverse air quality impacts. Therefore, the proposed action would not result in any significant adverse impacts to air quality.

2.9 Noise

2.9.1 Introduction

In terms of noise, the purpose of an assessment under CEQR is to determine both (1) a proposed project's potential effects on sensitive noise receptors, including the effects on the level of noise inside residential, commercial, and institutional facilities (if applicable) and (2) the effects of ambient noise levels on new sensitive uses introduced by the proposed project. According to the *CEQR Technical Manual* (2012 edition), a noise analysis is appropriate if an action would generate any mobile or stationary sources of noise or would be located in an area with high ambient noise levels. Stationary sources include rooftop equipment such as emergency generators, cooling towers, and other mechanical equipment; mobile sources include traffic generated by an action.

The following analysis was performed to evaluate the potential for the proposed action to result in significant adverse noise impacts at nearby sensitive receptor locations. The analysis also evaluates the existing sound levels in the vicinity of the

project site to determine if existing noise sources would have an impact on the residential units associated with the With-Action RWCDS.

2.9.2 Noise Background

Noise is defined as unwanted or excessive sound. Sound becomes unwanted when it interferes with normal activities such as sleep, work, or recreation. How people perceive sound depends on several measurable physical characteristics. These factors include:

- Intensity - Sound intensity is often equated to loudness.
- Frequency - Sounds are comprised of acoustic energy distributed over a variety of frequencies. Acoustic frequencies, commonly referred to as tone or pitch, are typically measured in Hertz. Pure tones have all their energy concentrated in a narrow frequency range.

Sound levels are most often measured on a logarithmic scale of decibels (dB). The decibel scale compresses the audible acoustic pressure levels which can vary from the threshold of hearing (0 dB) to the threshold of pain (120 dB). Because sound levels are measured in dB, the addition of two sound levels is not linear. Adding two equal sound levels creates a 3 dB increase in the overall level. Research indicates the following general relationships between sound level and human perception:

- A 3 dB increase is a doubling of acoustic energy and is the threshold of perceptibility to the average person.
- A 10 dB increase is a tenfold increase in acoustic energy but is perceived as a doubling in loudness to the average person.

The human ear does not perceive sound levels from each frequency as equally loud. To compensate for this phenomenon in perception, a frequency filter known as A-weighted [dB(A)] is used to evaluate environmental noise levels. Table 2-9.1 presents a list of common outdoor and indoor sound levels

Table 2-9.1: Indoor and Outdoor Sound Levels

Outdoor Sound Levels	Sound Pressure (μPa)		Sound Level (dBA)	Indoor Sound Levels
	6,324,555	-	110	Rock Band at 5 m
Jet Over-Flight at 300 m		-	105	
	2,000,000	-	100	Inside New York Subway Train
Gas Lawn Mower at 1 m		-	95	
	632,456	-	90	Food Blender at 1 m
Diesel Truck at 15 m		-	85	
Noisy Urban Area—Daytime	200,000	-	80	Garbage Disposal at 1 m
		-	75	Shouting at 1 m
Gas Lawn Mower at 30 m	63,246	-	70	Vacuum Cleaner at 3 m
Suburban Commercial Area		-	65	Normal Speech at 1 m
	20,000	-	60	
Quiet Urban Area—Daytime		-	55	Quiet Conversation at 1 m
	6,325	-	50	Dishwasher Next Room
Quiet Urban Area—Nighttime		-	45	
	2,000	-	40	Empty Theater or Library
Quiet Suburb—Nighttime		-	35	
	632	-	30	Quiet Bedroom at Night
Quiet Rural Area—Nighttime		-	25	Empty Concert Hall
Rustling Leaves	200	-	20	
		-	15	Broadcast and Recording Studios
	63	-	10	
		-	5	
Reference Pressure Level	20	-	0	Threshold of Hearing

μPA MicroPascals describe pressure. The pressure level is what sound level monitors measure.
dBA A-weighted decibels describe pressure logarithmically with respect to 20 μPa (the reference pressure level).
Source: Highway Noise Fundamentals, Federal Highway Administration, September 1980.

A variety of sound level indicators can be used for environmental noise analysis. These indicators describe the variations in intensity and temporal pattern of the sound levels. The following is a list of other sound level descriptors:

- L_{10} is the sound level which is exceeded for 10 percent of the time during the time period. The unit is used in the *CEQR Technical Manual* in evaluating thresholds for noise exposure.
- L_{eq} is the A-weighted sound level, which averages the background sound levels with short-term transient sound levels and provides a uniform method for comparing sound levels that vary over time.

2.9.3 Mobile Sources

The traffic analysis conducted for the With-Action RWCDS (see Section 2.7) demonstrated that the increment of trips generated by the proposed action would be below the traffic screening level threshold. The With-Action RWCDS would not generate sufficient traffic to have the potential to cause a significant noise impact (i.e., it would not result in a doubling of noise passenger car equivalents [Noise PCEs], which would be necessary to cause a 3 dBA increase in noise levels). Therefore, the

proposed action would not cause a significant adverse vehicular noise impact, and no further mobile source noise analysis is needed.

2.9.4 Stationary Sources

The With-Action RWCDS is not anticipated to include any substantial stationary source noise generators, such as unenclosed cooling or ventilation equipment (other than single-room units), truck loading docks, loudspeaker systems, stationary diesel engines, car washes, or other similar types of uses. It is anticipated that the buildings on the project site associated with the With-Action RWCDS would include mechanical rooms on the roof to house the mechanical equipment. Design and specifications for mechanical equipment, such as heating, ventilation, and air conditioning are not known at this time. However, this equipment would be designed to incorporate sufficient noise reduction devices to comply with applicable noise regulations and standards (including the standards contained in the revised New York City Noise Control Code), and to ensure that this equipment does not result in any significant increases in noise levels by itself or cumulatively with other project noise sources. Therefore, the proposed action is not expected to generate significant adverse stationary source noise levels to the surrounding residential neighborhood, and no further analysis is warranted.

2.9.5 Sensitive Receptor Assessment

For developments introducing new sensitive receptors (i.e., residential units and hotels), the *CEQR Technical Manual* requires an evaluation of existing ambient sound levels from surrounding sources on the proposed project. The *CEQR Technical Manual* noise exposure guidelines to determine acceptability is shown in Table 2-9.2.

Table 2-9.2
Noise Exposure Guidelines for Use in City Environmental Impact Review

Receptor Type	Time Period	Acceptable External Exposure	Marginally Acceptable External Exposure	Marginally Unacceptable External Exposure	Clearly Unacceptable External Exposure
Residence, hotel, or motel	7 AM to 10 PM	$L_{10} \leq 65$ dB(A)	$65 \leq L_{10} \leq 70$ dB(A)	$70 \leq L_{10} \leq 80$ dB(A)	$L_{10} > 80$ dB(A)
	10 PM to 7 AM	$L_{10} \leq 55$ dB(A)	$55 \leq L_{10} \leq 70$ dB(A)	$70 \leq L_{10} \leq 80$ dB(A)	$L_{10} > 80$ dB(A)

Source: Table 19-2, *CEQR Technical Manual*, January 2012.

A noise monitoring program was conducted on Wednesday May 22, 2013 to determine the maximum existing sound levels. In accordance with the *CEQR Technical Manual*, sound levels were collected in the traffic AM, mid-day, and PM peak periods. With the Bloomingdale School (PS 145) located across the street from

the project site on the south side of West 105th Street, school bus schedules[6] were reviewed to identify the time periods with the most school activity. The noise measurements were collected during the following time periods:

- AM Peak – 8 AM to 9 AM
- Midday: 12 PM – 1 PM
- Pre-PM Peak: 2:30 PM to 3:30 PM
- PM Peak – 5 PM to 6 PM

Measurements were conducted using a Type I noise meter (Larson Davis 831) that meet the appropriate ANSI standards for calibration and include the following parameters:

- Measurements was conducted at ground level;
- Measurements included: Lmax, Lmin, L1, L10, L50, L90, Leq descriptors;
- Measurements included octave band data;
- Measurements were conducted for 20 minutes at each location with the exception of the Pre-PM Peak which was conducted for 30 minutes.

Noise measurements were collected at two (2) ground level locations along the project block—at the project site frontage along West 105th and West 106th Streets. The measurements represent exterior sound levels at the edge of the roadways surrounding the project site. The measured sound levels were predominantly vehicular traffic noise, but also included typical neighborhood activities. These measured sound levels were projected to the ground level façade of each side of the project site. The existing daytime sound levels are presented in Table 2-9.3. The measured daytime sound levels range from 59 dB(A) to 72 dB(A).

The exterior sound levels range from 59 dB(A) to 65 dB(A) along West 105th Street. These external sound levels are below the noise exposure guideline of 70 dB(A) and are considered either acceptable or marginally acceptable according to the thresholds presented in Table 2-9.2.

Table 2-9.3: Measured Sound Levels, dB(A)

	West 105th Facade		West 106th Facade	
Time Period	Sound Level	Exposure	Sound Level	Exposure
AM Peak Hour	62	Acceptable	71	Marginally Unacceptable
Midday	59	Acceptable	71	Marginally Unacceptable
Pre-PM Peak Hour	65	Marginally Acceptable	70	Marginally Unacceptable
PM Peak Hour	62	Acceptable	72	Marginally Unacceptable
Source: VHB, May 22, 2013				

[6] http://www.opt-osfns.org/opt/Resources/SchoolRouteStSearch/schTrans.aspx?coptsch=03145

The exterior sound levels along West 106th Street range from 70 dB(A) to 72 dB(A). These external sound levels exceed the noise exposure guideline of 70 dB(A) and are considered marginally unacceptable according to the thresholds presented in Table 2-9.2.

2.9.6 Noise Attenuation Measures

The evaluation of existing exterior sound levels indicates that the residential uses fronting on West 106th Street associated with the With-Action RWCDS could be exposed to thresholds exceeding the CEQR's noise exposure guidelines. Therefore, the proposed action would provide noise attenuation measures to achieve a maximum interior sound levels to 45 dB(A).

The maximum measured exterior sound levels along West 106th Street was 72 dB(A). Therefore attenuation of that façade of the building must provide up to 28 dB(A) of attenuation to achieve interior noise levels of 45 db(A). To ensure implementation of the specified noise attenuation, an (E) designation for noise would be applied to the project site. The text for the (E) designation for the project site requiring a minimum of 28 dB(A) of attenuation is as follows:

> **In order to ensure an acceptable interior noise environment of 45 dbA or lower, future residential uses must provide up to 28 dB(A) of window/wall attenuation in the north façade facing West 106th Street. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation include, but are not limited to, central air conditioning or air conditioning sleeves containing air conditioners.**

2.9.7 Conclusion

The analysis concludes that the traffic generated by the With-Action RWCDS would not have the potential to produce significant noise level increases at any sensitive receptors near the project site. The With-Action RWCDS would also not generate stationary sound levels that would adversely impact nearby receptor locations. The attenuation measures set forth in the (E) designation described above would ensure that an acceptable exterior to interior noise attenuation is achieved for the With-Action noise condition at the project site. Therefore, the proposed action would not result in any significant adverse noise impacts and no further analysis is required.

2.10 Construction

2.10.1 Introduction

Construction activities, although temporary in nature, can sometimes result in significant adverse environmental impacts. Consideration of several factors including the location and setting of the project in relation to other uses, and the intensity and duration of the construction activities, may indicate that a project's construction activities warrant analysis.

The proposed action would result in the development of three buildings, with two 11-story buildings (120 feet) fronting West 106th Street and one 7-story building (75 feet tall) fronting West 105th Street, which would include approximately 597 residential units, 31,006 gsf of community facility space, and 208 below-grade accessory parking spaces (the "With-Action RWCDS"). Construction activity associated with the With-Action RWCDS would be located along West 106th Street, a major crosstown street, and could require closing, narrowing, or otherwise affecting traffic, transit or pedestrian conditions; therefore, a preliminary assessment of potential construction impacts was prepared in accordance with the guidelines of the *2012 CEQR Technical Manual*, and is presented below.

2.10.2 Construction Schedule and Activities

The construction activities associated with the development of the With-Action RWCDS are expected to result in conditions that are typical of construction sites in Manhattan. Construction of all three buildings associated with the With-Action RWCDS would be "short-term," i.e. occurring over a period of less than 24 months. Further, it is anticipated that all three buildings associated with the With-Action RWCDS would be constructed at the same time on the project site.

As described in Section 1.0, "Project Description," construction on the project site would begin in 2017, after the Jewish Home Life Care Nursing Home institutional use has been relocated to its new off-site facility. With a 24-month construction period, the With-Action RWCDS would be completed by 2019 (see Figure 2-10.1). The sequencing applies to all three buildings of the With-Action RWCDS since the buildings would be constructed at the same time.

Figure 2-20.1: Construction Schedule

Construction Phase	2017			2018												2019								
	Q4			Q1			Q2			Q3			Q4			Q1			Q2			Q3		
	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Demolition																								
Excavation/Foundation																								
Superstructure																								
Exterior Closure																								
Interior Buildout																								

Notes: Q = Quarter of the year
Source: PWV Owner LLC

- *Site Clearance, Excavation, and Foundations*
  Construction would begin with the demolition of the existing structures on the project site, which would last approximately three months. Demolition and site clearing would be followed by excavation and foundation work which would last for approximately six months. This would entail 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 includes 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.

- *Superstructure and Exterior Closure*
  This stage of construction would last approximately seven months and would include construction of the building frame (installation of beams and columns), floor decks, façade (exterior walls and cladding), and roof construction. These activities typically require the use of tower cranes, compressors, hoists, front-end loaders, concrete pumps, welding machines, and a variety of hand-held tools, in addition to the delivery trucks bringing construction materials to the site. As shown in Figure 2-10.1 the construction of the superstructure would overlap with the exterior closure and the interior buildout and finishing.

- *Interior Construction and Finishing*
  Interior construction would last up to ten months for the With-Action RWCDS. This stage includes the construction of interior walls, installation of lighting fixtures, and interior finishes (flooring, painting, etc.), as well as mechanical and electrical work, such as the installation of elevators. Equipment used during interior construction would include hoists, pneumatic equipment, delivery trucks, and a variety of small hand-held tools.

Construction of the With-Action RWCDS would be carried out in accordance with New York City laws and regulations, which allow construction activities between 7 AM and 6 PM on weekdays. However, it is anticipated that workers would arrive as early as 6 AM to prepare work areas. It is also anticipated that most construction-related activity would conclude around 3 PM. However, at times the workday could be extended to 6 PM to complete some specific tasks, 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 not include all construction workers on-site, but just those involved in the specific task requiring additional work time. Extended workdays are expected to occur on weekdays over the course of construction on a limited basis.

Occasionally, Saturday or overtime hours may be required to complete some time-sensitive tasks. Weekend work or weekday work outside of the hours of 7 AM to 6 PM would require a permit from the New York City Department of Buildings (DOB) and, in certain instances, approval of a noise mitigation plan from the New York City Department of Environmental Protection (DEP) under the City's Noise Code. The New York City Noise Control Code limits construction (absent special circumstances as described below) to weekdays between the hours of 7 AM and 6 PM, and sets noise limits for certain specific pieces of construction equipment. Construction activities occurring outside of these hours 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 AM with worker arrival and site preparation to 5 PM for site cleanup.

As a result, most construction-generated vehicle traffic would occur outside of background traffic peak hours, and would not represent a significant increase in overall traffic volumes during background weekday traffic peak hours.

2.10.3 Preliminary Assessment

In accordance with the guidelines of the *CEQR Technical Manual*, this preliminary assessment evaluates the effects associated with the proposed action's construction related activities including transportation, air quality, noise, historic and cultural 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

Construction of the With-Action RWCDS would generate trips from construction workers traveling to and from the site as well as from the delivery of materials and equipment, and the removal of debris. A construction trip generation was performed to determine the average number of peak hour construction worker vehicle trips and trucks that would be generated during the peak phase of construction in order to determine if further analysis is necessary. This determination is based on the *CEQR Technical Manual*'s threshold of 50 passenger car equivalents (PCEs) per hour.

Daily Workers and Deliveries

Average daily construction worker and truck trips per quarter were projected for the entire 24-month construction period to determine when peak construction traffic would occur and how much traffic would be expected. Data obtained from the *625 West 57th Street FSEIS* (2012) were used to determine the number of construction worker and truck trips expected to be generated by the With-Action RWCDS throughout the construction period. This study was chosen as a comparable since it was a single site, multiple building, primarily residential project with a community facility component (and a commercial component) near the Upper West Side of Manhattan. Based on the study's construction data, the following average daily construction worker and truck generation rates were developed[7]:

- 54.1 workers and 5 trucks per 100,000 gross square feet (gsf) of demolition during the demolition phase of construction
- 10.5 workers and 3.5 trucks per 100,000 gsf of development during the excavation and foundation phase of construction
- 34 workers and 2.7 trucks per 100,000 gsf of development during the superstructure phase of construction
- 11.9 workers and 0.3 trucks per 100,000 gsf of development during the exterior closure phase of construction
- 35 workers and 0.9 trucks per 100,000 gsf of development during the interior fit-out phase of construction.

These rates were applied to the total overall square footage of demolition and construction for the With-Action RWCDS, and were distributed according to the construction sequencing schedule presented above. As a result, the estimated number of daily construction workers and trucks generated to the site during the various stages of construction are as follows:

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[7] These rates were developed by taking an average of the each of the daily worker and truck trips by month for all months of each phase, and then dividing that by the total gross square footage of development (not including mechanical space and parking) on Site 1 of 625 *West 57th Street FSEIS* proposed development program, the project's primary development site. To the extent possible, only months where a single phase of construction would be occurring were used in this calculation. Since Site 2 had a demolition component, it was used to derive worker and truck rates for the demolition phase.

- Demolition and clearance of the site would require an average of 143 workers and 13 trucks per day
- Excavation and foundation work would require 57 workers and 19 trucks on the site per day
- Superstructure work on the site would require 183 workers and 14 trucks per day
- The combination of superstructure and exterior closure construction would require 247 workers and 16 trucks per day

- The combination of exterior closure and interior fit-in construction would require 252 workers and 7 trucks per day
- Interior fit-in construction would require 188 workers and 5 trucks per day.

A detailed table showing average daily construction worker and truck estimates are included in Appendix C.

Peak Hour Construction Worker Vehicle and Truck Trips

Peak hour vehicle trip estimates were developed following standard assumptions regarding construction worker and truck activity. For construction workers, most (80 percent) of the arrival trips would occur during the hour of 6-7 AM (the hour before the beginning of a regular day shift), and the same percentage of departure trips would occur during the hour of 3-4 PM, at the end of the shift. Based on recent survey data[8] cited in other Manhattan EAS/ EISs, it is assumed that most construction workers - approximately 70 percent - would travel to the site using public transportation, and that approximately 29 percent of workers would travel by personal vehicle, with a vehicle occupancy rate of 2.04 persons per vehicle. For trucks, deliveries are usually spread throughout the day but have peak activity (approximately 25 percent) during the 6 to 7 AM hour. Also, for analysis purposes, it was assumed that all trucks would make both trip ends (in and out) within the same hour. Since the peak of construction worker and truck vehicle activity both occur during this time, the early morning peak hour of 6 to 7 AM was used to determine the peak of construction-related traffic activity.

These percentages were applied to the average daily worker and truck trips to determine average peak hour construction worker and truck vehicle trips and passenger car equivalents (PCEs), shown in Table 2-10.1. As shown in the table, peak construction traffic would occur during the fourth quarter of 2018. During this period, the average weekday peak hour construction vehicle traffic would be 28 construction worker auto trip ends and 8 truck trip ends, resulting in 44 peak hour PCEs (assuming 1 PCE per worker auto and an average of 2 PCE per truck). Since this would be below the *CEQR Technical Manual*'s 50 PCE threshold for peak hour

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[8] AKRF survey of the construction site of the New York Times building (2006), as cited in the *625 West 57th Street FSEIS*, page 16-15.

construction vehicle traffic, no further traffic analysis is warranted. Detailed hourly construction worker vehicle and truck trip tables are included in Appendix C.

Table 2-10.1: Daily and Peak Hour Construction Vehicle Trip Projections

Year	2017	2018				2019		
Quarter	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Average Daily Construction Activity								
Workers	143	57	57	183	247	188-252	188	188
Trucks	13	19	19	14	16	5-7	5	5
Average Construction Traffic Peak Hour (6 to 7 AM) Vehicle Trips								
Autos[1]	16	6	6	21	28	22-29	22	22
Trucks	6	10	10	8	8	2-4	2	2
Total Vehicles	22	16	16	29	36	24-33	24	24
Total PCEs[2]	**28**	**26**	**26**	**37**	**44**	**26-37**	**26**	**26**

Notes:

1) Construction worker vehicles
2) Assumes 1 PCE per construction worker auto trip and an average of 2 PCEs per construction truck

Parking

Construction activities from the proposed development would generate an estimated daily construction worker vehicle parking demand of 7 to 35 spaces during the peak phase of construction[9]. This relatively modest parking demand is expected to be fully accommodated by on- and off-street parking in the available within a quarter-mile radius of the site, and no construction parking analysis is needed.

Transit and Pedestrians

Since fewer than 200 average peak hour transit and pedestrian trips are expected to be generated during the peak phase of construction (approximately 140)[10], there would be no potential for transit or pedestrian trip thresholds (200 peak hour bus or subway rider trips and 200 peak hour pedestrian trips) to be exceeded, and no construction-related transit or pedestrian analysis is needed.

Sidewalk and Street Lane Closures

West 106th is considered a major crosstown street on the Upper West Side of Manhattan and, while it is possible that some staging and unloading of construction materials and equipment would take place on adjoining portions of the public right-of-way, traffic flow is not expected to be heavily affected by project construction. While some temporary parking lane closures may be required, all travel lanes would be expected to remain open during construction, especially since West 106th street has a wide painted center median which could provide additional roadway space, if

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[9] See Appendix C for hourly worker parking demand during the peak construction period.

[10] See Appendix C for hourly transit and pedestrian trips during the peak construction period.

needed. In the event that closure of any portion of roadway (including bicycle facilities) or sidewalk elements is needed, it would be fully addressed by a permit and Pedestrian Access Plan required by the New York City Department of Transportation's Office of Construction Mitigation and Coordination at the time of closure so that impacts would not be expected to occur. Additionally, it is expected that access to the construction site for delivery of materials would be controlled, scheduled, and managed to minimize impacts on street traffic, to the extent possible. Also, construction activity would not affect access points to transit.

Conclusion

Overall, traffic, pedestrian and transit trips generated by construction activities would be below thresholds requiring further analysis. Additionally, the overall concentration of construction activity would be short-term, and its effects would be minimized by implementing measures to avoid or reduce disruption to existing traffic and pedestrian circulation during scheduling and staging of activities. Therefore, the development of the With-Action RWCDS would not have significant adverse construction-related transportation impacts.

Air Quality

Construction impacts on air quality may occur because of particulate matter (fugitive dust) created by demolition, excavation, earth moving operations, etc., and increased truck traffic to and from the construction site on local roadways or because of temporary road closings.

Since the majority of the particles within construction-related fugitive dust are relatively large in size, much of the fugitive dust would settle to the ground within a short distance from the site and would not significantly affect nearby land uses. In addition, all appropriate fugitive dust control measures—including watering of exposed areas and dust covers for trucks—would be employed during construction of the With-Action RWCDS. As a result, no significant air quality impacts from fugitive dust emissions would be anticipated during construction.

As noted above, the three buildings associated with the With-Action RWCDS would be under construction at the same time. Therefore, none of the residential units in any building would be occupied (and, thus, a sensitive receptor) during the entire construction period.

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. While these increases are also temporary, localized increases in mobile source emissions would be minimized by following standard traffic maintenance requirements, such as:

- Construction requiring temporary street closings would be performed during off-peak hours wherever possible;
- The existing number of traffic lanes would be maintained to the maximum extent possible (see also "Transportation," above); and
- Idling of delivery trucks or other equipment would not be permitted during unloading or other inactive times in accordance with local law.

As described in above in Transportation, the vehicular trip generation from construction would be below the threshold for a detailed mobile source analysis. Therefore, a more detailed assessment of construction-related air quality analysis is not warranted.

Noise

Construction noise impacts that could be caused by the operation of construction equipment on or near the site, and by the travel of construction-related car and truck traffic through the community, would be temporary. 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 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 the proposed buildings on the project site are 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 With-Action RWCDS would be spread out over a 24-month 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 EPA 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 AM and 6 PM; and 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, the three buildings associated with the With-Action RWCDS would be under construction at the same time. Therefore, none of the residential units in any building would be occupied or become a sensitive receptor during the entire construction period. 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, the proposed action would not result in significant adverse construction-related noise impacts.

Historic and Cultural Resources

As noted in Appendix A, the Landmarks Preservation Commission has determined that the project site is not sensitive for archaeological resources. Therefore, it is not anticipated that construction induced by the proposed action would have any significant adverse impacts on archaeological resources in the area. In addition, as noted in the EAS and Appendix A, the project site does not contain buildings that are architecturally significant, nor is it located adjacent to any designated historic resources. Therefore, it is not anticipated that construction induced by the proposed action would have any significant impacts on architectural resources in the area.

Hazardous Materials

As described in Section 2.6, the proposed action would not result in significant adverse hazardous materials impacts. The analysis noted that the project site may contain hazardous materials contamination. To ensure that the proposed action would not result in significant, adverse hazardous materials impacts, an (E) designation would be mapped on the project site as part of the proposed action. As discussed in Section 2.6, an (E) designated site is an area designated on a zoning map within which no change of use or development requiring a DOB permit may be issued without approval of 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 Section 2.6, 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 DOB. The environmental requirements for the (E) designation also include mandatory construction-related health and safety plan, which must also be approved by the OER.

In addition, demolition of interiors, portions of buildings or entire buildings are regulated by the DOB 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 the project site.

2.10.4 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, historic and cultural 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 A

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ENVIRONMENTAL REVIEW

Final Sign-Off

Project number: DEPARTMENT OF CITY PLANNING / LA-CEQR-M
Project:
Address: 111 WEST 105 STREET, **BBL:** 1018600020
Date Received: 1/31/2012

[X] No architectural significance

[X] No archaeological significance

[ ] Designated New York City Landmark or Within Designated Historic District

[ ] Listed on National Register of Historic Places

[ ] Appears to be eligible for National Register Listing and/or New York City Landmark Designation

[ ] May be archaeologically significant; requesting additional materials

Comments:

Gina Santucci 2/3/2012

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 27890_FSO_DNP_02032012.doc

NYC Environmental Protection

Carter H. Strickland, Jr.
Commissioner

Angela Licata
Deputy Commissioner
of Sustainability
alicata@dep.nyc.gov

59-17 Junction Boulevard
Flushing, NY 11373
T: (718) 595-4398
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March 20th, 2013

Mr. Robert Dobruskin
Director, Environmental Assessment and Review Division
New York City Department of City Planning
22 Reade Street, Room 4E
New York, New York 10007-1216

Re: West 106 Street Rezoning
111 West 105th Street & 156 West 106th Street
Block 1860 Lots 20 and 57
DEP # 13DEPTECH094M / CEQR # 77DCP062M
Manhattan, New York

Dear Mr. Dobruskin:

The New York City Department of Environmental Protection, Bureau of Environmental Planning and Analysis (DEP) has reviewed the Environmental Assessment Statement prepared by Kramer Levin Naftalis & Frankel LLP, and the March 2012 Phase I Environmental Site Assessment Reports (Phase I) prepared by VHB Engineering, Surveying and Landscape Architecture, P.C. (VHB) on behalf of PWV Owner LLC, c/o The Cheri Group, LLC (applicant) for the above referenced project. It is our understanding that the applicant is seeking a zoning map amendment from the New York City Department of City Planning to rezone two midblock parcels, Tax Block 1860, Lots 20 and 57. As currently proposed, Lots 20 and 57 will be rezoned from an R7-2 district to R8A with a C1-5 overlay district in the northern portion of the project (along West 106th street) and R8B in the southern portion of the site (along west 105th street). The subject property is located on the south side of West 106th Street, between Columbus Avenue to the east and Amsterdam Avenue to the west, in the Upper West Side of the Borough of Manhattan, Community District 7.

The requested zoning map amendment would facilitate the construction of two 11-story buildings (north building one and two located along West 106th street in the R8A district) and one 7-story building (south building, located along West 105th street), in the R8B district. The project will consist of approximately 628,886 gross square feet (gsf) of residential uses (approximately 597 units), approximately 31,006 gsf of community facility space, 208 below-grade accessory parking spaces and approximately 47,233 gsf of mechanical and non-program space. The subject property is comprised of six buildings (ranging from 2 to 9 stories) that functions as the Manhattan campus for the Jewish Home Lifecare facility.

The March 2012 Phase I report revealed that historical on-site and surrounding area land uses consisted of residential and commercial structures including a dry cleaning facility, commercial stores with residential uses on the upper floor, and a

nursing home. There is an existing 15,000-gallon No. 2 fuel oil underground storage tank (UST); a 1,000-gallon No. 2 fuel oil UST; and 550-gallon diesel fuel oil UST currently on-site. An active New York State Department of Environmental Conservation (NYSDEC) spill (NYSDEC Spill No. 10-08471) is associated with the on-site diesel UST. The Phase I revealed that mercury-containing products (i.e., blood pressure devices, thermometers, etc.) as well as medical-related wastes (i.e., biohazard and radiological) are present within the upper floors of the on-site structures. In addition, several 35 and 55-gallon plastic antifreeze drums were observed within the boiler room of the Friedman Building basement which is the nine-story on-site nursing home/institutional building. Fluorescent light fixtures were observed throughout the building spaces and based on the ages of the buildings, may contain polychlorinated biphenyls (PCBs). In addition, a hydraulic compactor was observed adjacent to the Loading Building (a one-story structure located along the southern portions of the site) along the exterior loading dock area. A hydraulic elevator lift was also observed within the Loading Building, connecting to the Friedman Building basement. These building features may have the potential to utilize PCB-containing hydraulic fluids. Based on the age of the on-site buildings, Asbestos containing materials (ACM) and lead based paints (LBP) may be present in the on-site structures. Environmental Data Resources, Inc. (EDR) database report revealed 61 Leaking Underground Storage Tanks (LTANKS) sites within one-half mile radius of the site; three New York Bulk Storage Tanks (NYTANKS), 37 Petroleum Bulk Storage-Underground Storage Tank Database sites (PBS-UST), 186 Petroleum Bulk Storage Aboveground Storage Tank Database sites (PBS-AST), 67 New York Manifest Data sites (NYMANIFEST), and 10 drycleaner sites within one-quarter mile radius of the site. In addition, 29 Spills and five E-Designation sites were noted within one-eighth mile radius of the subject property. The subject property is listed on the NYSPILLS/LTANKS database for ten (10) NYSDEC spill incidents.

Based upon our review of the submitted documentation, we have the following comments and recommendations to DCP:

- DCP should inform the applicant that past on-site and or surrounding area land uses may have impacted the soil and groundwater at this site. Therefore, a Phase II Environmental Site Assessment Investigation (Phase II) is necessary to adequately identity/characterize the surface and subsurface soils prior to the proposed development. A Phase II Investigative Protocol/Work Plan summarizing the proposed drilling, soil/groundwater and soil vapor sampling activities should be submitted to DEP for review and approval. The Work Plan should include blueprints and/or site plans displaying the current surface grade and sub-grade elevations and a site map depicting soil boring locations and groundwater sampling locations. Soil, groundwater and soil vapor samples should be collected and analyzed by a New York State Department of Health Environmental Laboratory Approval Program-CERTIFIED laboratory for the presence of Volatile Organic Compounds (VOCs) by United States Environmental Agency (EPA) Method 8260, Semi-Volatile Organic Compounds (SVOCs) by EPA method 8270, Pesticides/Polychlorinated Biphenyls by EPA Method 8081/8082 and Target Analyte List (TAL) metals (filtered and unfiltered for groundwater samples). The soil vapor sampling will be conducted in accordance with the New York State Department of Health's (NYSDOH) October 2006 Guidance for Evaluating Soil Vapor Intrusion in the State of New York and analyzed for VOCs by EPA Method TO-15. An investigative Health and Safety Plan (HASP) should also be submitted to DEP for review and approval.

- DCP should inform the applicant that ACM, LBP, mercury-containing products and suspected PCB 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 renovation/construction activities and disposed of in accordance with federal, state, and local regulations. It should be also noted that an active NYSDEC spill (Spill # 10-08471) is associated with the subject property. The spill should be close in accordance with NYSDEC 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 the start of any fieldwork. Future correspondence related to this project should include the following tracking number **13DEPTECH094M.** If you have any questions, you may contact Ms. Callista Nazaire at (718) 595-4401.

Sincerely,

Maurice S. Winter
Deputy Director, Site Assessment

c: E. Mahoney
M. Winter
C. Nazaire
W. Yu
T. Estesen
C. Evans- DCP
File

APPENDIX B

AIR QUALITY

West 106th Rezoning Project - Parking Garage Vent Air Quality Screening **07/02/13**

Future Analysis Year :	**2019**		
1-Hr Background :	3.4	ppm	
8-Hr Background :	2.0	ppm	
Persistence Factor :	0.70		

Note: Maximum 2nd-highest CO concentration of the latest five years of data at the nearest monitoring station.

2019 CO Emission Factors

Departing Idle @ 50F [CI] :	76.0	g/hr-veh
5mph Departing Auto @ 50F [CA] :	6.6	g/mi-veh
5mph Arrival Auto @ 50F [HA] :	6.6	g/mi-veh
15 mph Local Mix Autos @ 50F:	3.4	g/mi-veh

Note: Emission facctors from NYSDOT Emission Table (EF2).

Mobile 6.2 Emissions (grams/mile-vehicle)

	2.5 mph	5mph	15mph
Departing LDGV	30.4	6.6	
Arrival LDGV		6.6	
Local LDGV			3.38

Analysis Period : **AM** (8AM-9AM)

2019 INS/OUTS AM	INS	OUTS	Parking Garage [A] (gsf)	Mean Travel (feet)
Peak Hour	5	28		
Eight Hour Average:	6	12	628,886	551

On Street Traffic Volumes:

	No. of Vehicles	
WB	140	Along W 105th Street
EB	NA	
Total	140	

Garage Exhaust Parameters :

Number of Vents :	1
Height of Vents (ft) :	10
Ventilation Rate (cfm per gsf) :	1

Peak Hourly Arrivals (Qa):	9.57E-04	g/sec	8-Hr Average Arrivals (Qa):	1.15E-03 g/sec
Peak Hourly Departures (Qd):	1.52E-02	g/sec	8-Hr Average Departures (Qd):	6.31E-03 g/sec
Total Peak Hourly (Qt):	1.62E-02	g/sec	Total 8-Hr Average (Qt):	7.46E-03 g/sec

Garage CO Concentration :

Peak Hourly Concentration :	5.45E-05	g/m3	0.05	ppm
8-Hr Average Concentration :	2.51E-05	g/m3	0.02	ppm

Receptor CO Concentrations:

Receptor	Distance from Source (ft)	Height of Receptor (ft)	Distance from Source (m)	Height of Receptor (m)
A: Near Side Sidewalk	7.5	6.0	2	2
B: Building Receptor	0.0	16.0	0	5
C: Far Side Sidewalk	47.0	6.0	14	2

Receptor	Distance from Source X (m)	Height Diff Y (m)	dy (m)	dz (m)	Peak Hr Conc. (ppm)	8-Hr Avg Conc. (ppm)
A: Near Side Sidewalk	2	1	10	10	**0.04**	**0.01**
B: Building Receptor	0	-2	10	10	**0.05**	**0.02**
C: Far Side Sidewalk	14	1	12	12	**0.03**	**0.01**

On-Street CO Contribution:

Peak Hourly Concentration :	0.03	ppm
8-Hr Average Concentration :	0.02	ppm

Total CO Concentration with Backgrounds:

	Peak Hr Conc. (ppm)	8-Hr Avg Conc. (ppm)
A: Near Side Sidewalk	**3.4**	**2.0**
B: Building Receptor	**3.4**	**2.0**
C: Far Side Sidewalk	**3.5**	**2.0**

West 106th Rezoning Project - Parking Garage Vent Air Quality Screening **07/02/13**

Future Analysis Year :	**2019**		
1-Hr Background :	3.4	ppm	
8-Hr Background :	2.0	ppm	
Persistence Factor :	0.70		

Note: Maximum 2nd-highest CO concentration of the latest five years of data at the nearest monitoring station.

2019 CO Emission Factors

Departing Idle @ 50F [CI] :	76.0	g/hr-veh
5mph Departing Auto @ 50F [CA] :	6.6	g/mi-veh
5mph Arrival Auto @ 50F [HA] :	6.6	g/mi-veh
15 mph Local Mix Autos @ 50F:	3.4	g/mi-veh

Note: Emission facctors from NYSDOT Emission Table (EF2).

Mobile 6.2 Emissions (grams/mile-vehicle)

	2.5 mph	5mph	15mph
Departing LDGV	30.4	6.6	
Arrival LDGV		6.6	
Local LDGV			3.38

Analysis Period : **PM** (5PM-6PM)

2019 INS/OUTS PM	INS	OUTS	Parking Garage [A] (gsf)	Mean Travel (feet)
Peak Hour	25	11		
Eight Hour Average:	13	9	628,886	551

On Street Traffic Volumes:

	No. of Vehicles	
WB	140	Along W 105th Street
EB	NA	
Total	140	

Garage Exhaust Parameters :

Number of Vents :	1
Height of Vents (ft) :	10
Ventilation Rate (cfm per gsf) :	1

Peak Hourly Arrivals (Qa):	4.78E-03	g/sec	8-Hr Average Arrivals (Qa):	2.53E-03 g/sec
Peak Hourly Departures (Qd):	5.97E-03	g/sec	8-Hr Average Departures (Qd):	4.62E-03 g/sec
Total Peak Hourly (Qt):	1.08E-02	g/sec	Total 8-Hr Average (Qt):	7.15E-03 g/sec

Garage CO Concentration :

Peak Hourly Concentration :	3.62E-05	g/m3	0.03	ppm
8-Hr Average Concentration :	2.41E-05	g/m3	0.02	ppm

Receptor CO Concentrations:

Receptor	Distance from Source (ft)	Height of Receptor (ft)	Distance from Source (m)	Height of Receptor (m)
A: Near Side Sidewalk	7.5	6.0	2	2
B: Building Receptor	0.0	16.0	0	5
C: Far Side Sidewalk	47.0	6.0	14	2

Receptor	Distance from Source X (m)	Height Diff Y (m)	dy (m)	dz (m)	Peak Hr Conc. (ppm)	8-Hr Avg Conc. (ppm)
A: Near Side Sidewalk	2	1	10	10	**0.03**	**0.01**
B: Building Receptor	0	-2	10	10	**0.03**	**0.01**
C: Far Side Sidewalk	14	1	12	12	**0.02**	**0.01**

On-Street CO Contribution:

Peak Hourly Concentration :	0.03	ppm
8-Hr Average Concentration :	0.02	ppm

Total CO Concentration with Backgrounds:

	Peak Hr Conc. (ppm)	8-Hr Avg Conc. (ppm)
A: Near Side Sidewalk	**3.4**	**2.0**
B: Building Receptor	**3.4**	**2.0**
C: Far Side Sidewalk	**3.4**	**2.0**

MOBILE6 CO Emission Factor Table
(Arterial, Collector, and Local Road)

For New York County

Year: 2019

CO Rate (grams/hour for 0.0 mph; grams/mile for 5 - 65 mph)

	Average Vehicle Speed (mph)													
Veh. Type	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0	55.0	60.0	65.0
LDGV	30.04	6.60	4.11	3.38	3.01	2.81	2.75	2.79	3.06	3.32	3.58	3.84	4.10	4.36
LDGT1	25.96	5.88	3.73	3.07	2.74	2.55	2.51	2.55	2.80	3.05	3.30	3.55	3.79	4.04
LDGT2	27.80	6.28	3.99	3.29	2.94	2.74	2.70	2.75	3.02	3.29	3.56	3.83	4.10	4.37
LDGT3	28.66	6.47	4.11	3.39	3.03	2.83	2.78	2.83	3.10	3.37	3.65	3.92	4.19	4.47
LDGT4	29.19	6.59	4.19	3.45	3.09	2.88	2.83	2.88	3.16	3.44	3.72	3.99	4.27	4.55
HDGV2B	82.73	26.44	17.59	12.37	9.18	7.21	5.97	5.23	4.84	4.73	4.89	5.34	6.16	7.50
HDGV3	105.55	33.74	22.44	15.78	11.72	9.19	7.62	6.68	6.18	6.04	6.24	6.81	7.85	9.57
HDGV4	105.05	33.57	22.34	15.70	11.66	9.15	7.59	6.64	6.15	6.01	6.21	6.78	7.82	9.52
HDGV5	121.46	38.82	25.83	18.15	13.48	10.58	8.77	7.68	7.11	6.95	7.18	7.84	9.04	11.01
HDGV6	128.10	40.94	27.24	19.15	14.22	11.16	9.25	8.10	7.50	7.33	7.57	8.27	9.53	11.61
HDGV7	146.12	46.70	31.07	21.84	16.22	12.73	10.55	9.24	8.55	8.36	8.64	9.43	10.87	13.25
HDGV8A	157.70	50.40	33.53	23.57	17.51	13.74	11.39	9.97	9.23	9.03	9.32	10.18	11.73	14.30
LDDV	7.17	2.34	1.61	1.16	0.88	0.70	0.57	0.50	0.45	0.43	0.42	0.44	0.48	0.54
LDDT12	2.43	0.79	0.55	0.39	0.30	0.24	0.19	0.17	0.15	0.14	0.14	0.15	0.16	0.18
LDDT34	2.81	0.92	0.63	0.46	0.35	0.27	0.23	0.20	0.18	0.17	0.17	0.17	0.19	0.21
HDDV2B	1.73	0.57	0.39	0.28	0.21	0.17	0.14	0.12	0.11	0.10	0.10	0.11	0.12	0.13
HDDV3	2.07	0.68	0.47	0.34	0.25	0.20	0.17	0.14	0.13	0.12	0.12	0.13	0.14	0.16
HDDV4	2.31	0.76	0.52	0.38	0.28	0.22	0.19	0.16	0.15	0.14	0.14	0.14	0.15	0.18
HDDV5	2.71	0.89	0.61	0.44	0.33	0.26	0.22	0.19	0.17	0.16	0.16	0.17	0.18	0.21
HDDV6	3.21	1.05	0.72	0.52	0.39	0.31	0.26	0.22	0.20	0.19	0.19	0.20	0.21	0.24
HDDV7	4.16	1.36	0.94	0.68	0.51	0.40	0.33	0.29	0.26	0.25	0.25	0.26	0.28	0.32
HDDV8A	6.95	2.27	1.56	1.13	0.85	0.67	0.56	0.48	0.44	0.41	0.41	0.43	0.46	0.53
HDDV8B	5.80	1.89	1.31	0.94	0.71	0.56	0.47	0.40	0.37	0.35	0.34	0.36	0.39	0.44
HDGB	172.38	55.09	36.65	25.77	19.14	15.01	12.45	10.90	10.09	9.87	10.19	11.12	12.83	15.63
HDDBT	13.66	4.46	3.07	2.22	1.68	1.32	1.10	0.95	0.86	0.81	0.81	0.84	0.91	1.04
HDDBS	7.43	2.42	1.67	1.21	0.91	0.72	0.60	0.52	0.47	0.44	0.44	0.46	0.50	0.56
MC	202.99	46.77	22.47	14.60	10.97	8.75	7.14	5.95	5.12	4.60	4.38	4.38	9.66	14.94

APPENDIX C

CONSTRUCTION

West 106th Street Rezoning
Average Daily Construction Worker and Truck Projections

	2017			2018												2019								
	Q4			Q1			Q2			Q3			Q4			Q1			Q2			Q3		
	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S
Construction Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Demo	143	143	143																					
	13	13	13																					
Excavation/Foundations				57	57	57	57	57	57															
				19	19	19	19	19	19															
Superstructure										183	183	183	183	183	183									
										14	14	14	14	14	14									
Exterior Closure													64	64	64	64								
													2	2	2	2								
Interior Buildout																188	188	188	188	188	188	188	188	188
																5	5	5	5	5	5	5	5	5
Average Daily Worker Autos[1]	20	20	20	8	8	8	8	8	8	26	26	26	35	35	35	36	27	27	27	27	27	27	27	27
Average Daily Trucks (Total)	13	13	13	19	19	19	19	19	19	14	14	14	16	16	16	7	5	5	5	5	5	5	5	5
Total Average Daily Vehicles	34	34	34	27	27	27	27	27	27	40	40	40	51	51	51	43	32	32	32	32	32	32	32	32

XX = Average Daily Workers (Worker rate x [gsf of demolition or development/100,000]). See tables below.
XX = Average Daily Trucks (Truck rate x [gsf of demolition or development/100,000]). See tables below.

Notes:

1) Total average daily workers x 0.289 [auto share]/2.04 [vehicle occupancy] - rates from 2006 AKRF survey of New York Times buidling construction site, as cited in the *625 West 57th Street FSEIS* (pg 16-15)

Rates and Assumptions:

Approximate Size of Construction

Proposed Demolition	265,000	gsf
Proposed Devlopment[1]	538,000	gsf

(1) Not including parking or mechanical space

Daily Worker Rates and Projections*

Average Daily Workers (per 100,000 gsf demolition/development)

Phase of Construction	Rate	x Unit	= Projection
Demolition	54.1	2.65	143
Excavation/Foundation	10.5	5.38	57
Superstructure	34	5.38	183
exterior	11.9	5.38	64
interior	35	5.38	188

Daily Truck Rates and Projection*

Average Daily Trucks (per 100,000 gsf demolition/development)

Phase of Construction	Rate	x Unit	= Projection
Demolition	5	2.65	13
Excavation/Foundation	3.5	5.38	19
Superstructure	2.7	5.38	14
exterior	0.3	5.38	2
interior	0.9	5.38	5

* Rates developed based on construction truck and worker estimates obtained from the *625 West 57th Street FSEIS* (2012), Table 16-2. These rates were developed by taking an average of the each of the daily worker and truck trips by month for all months of each phase, and then dividing that by the total gross square footage of development (not including mechanical space and parking) on Site 1 of the *625 West 57th Street FSEIS* proposed development program, the project's primary development site, to develop a per 100,000 gsf rate. To the extent possible, only months where a single phase of construction would be occurring were used in this calculation. Since Site 2 had a demolition component, it was used to derive worker and truck rates for the demolition phase.

West 106th Street Rezoning
Hourly Construction Traffic, Parking and Transit Estimates - Peak Period of Constructio (2018 Q4)

1: 2018 (Q4) Peak Construction Vehicle Trip Projections

Hour	Temporal Distribution						Worker Auto Trips			Truck Trips			Total Vehicle Trips			Total PCEs [3]		
	Worker Autos [1]			Trucks [2]														
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
6 AM – 7 AM	80%	0%	80%	25%	25%	50%	28	0	28	4	4	8	32	4	36	36	8	44
7 AM – 8 AM	20%	0%	20%	10%	10%	20%	7	0	7	2	2	3	9	2	10	10	3	13
8 AM – 9 AM	0%	0%	0%	10%	10%	20%	0	0	0	2	2	3	2	2	3	3	3	6
9 AM – 10 AM	0%	0%	0%	7%	7%	14%	0	0	0	1	1	2	1	1	2	2	2	4
10 AM – 11 AM	0%	0%	0%	7%	7%	14%	0	0	0	1	1	2	1	1	2	2	2	4
11 AM – Noon	0%	0%	0%	7%	7%	14%	0	0	0	1	1	2	1	1	2	2	2	4
Noon – 1 PM	0%	0%	0%	7%	7%	14%	0	0	0	1	1	2	1	1	2	2	2	4
1 PM – 2 PM	0%	0%	0%	7%	7%	14%	0	0	0	1	1	2	1	1	2	2	2	4
2 PM – 3 PM	0%	0%	0%	7%	7%	14%	0	0	0	1	1	2	1	1	2	2	2	4
3 PM – 4 PM	0%	80%	80%	7%	7%	14%	0	28	28	1	1	2	1	29	30	2	30	32
4 PM – 5 PM	0%	20%	20%	3%	3%	6%	0	7	7	1	1	2	1	8	9	2	9	11
5 PM – 6 PM	0%	0%	0%	3%	3%	6%	0	0	0	0	0	1	0	0	1	1	1	2
Total	100%	100%	200%	100%	100%	200%	35	35	70	16	16	32	52	52	103	66	66	132
Workers	**35**																	
Trucks	**16**																	

Notes:

1) Approximately 80 percent of the construction worker autos trips would be expected to travel to arrive and depart from the work site during the hour before and after each shift.

2) Construction truck trips were assumed to be spread throughout the day (but mostly in the morning hours) with 25% of trips assumed to occur during the hour before the main shift. For analysis purposes, each truck delivery was assumed to result in two truck trips during the same hour.

3) PCEs assumed to be 1.0 PCE per worker auto, and 2 per truck.

West 106th Street Rezoning
Hourly Construction Traffic, Parking and Transit Estimates - Peak Period of Constructio (2018 Q4)

2: 2018 (Q4) Peak Construction Vehicle Parking Demand

Hour	Worker Auto Trips			Accumulated Parking Demand
	In	Out	Total	
6 AM – 7 AM	28	0	28	28
7 AM – 8 AM	7	0	7	35
8 AM – 9 AM	0	0	0	35
9 AM – 10 AM	0	0	0	35
10 AM – 11 AM	0	0	0	35
11 AM – Noon	0	0	0	35
Noon – 1 PM	0	0	0	35
1 PM – 2 PM	0	0	0	35
2 PM – 3 PM	0	0	0	35
3 PM – 4 PM	0	28	28	7
4 PM – 5 PM	0	7	7	0
5 PM – 6 PM	0	0	0	0
Total	35	35	70	-

3: 2018 (Q4) Peak Construction Transit/Pedestrian Trip Projections

Hour	Transit		
6 AM – 7 AM	140	0	140
7 AM – 8 AM	35	0	35
8 AM – 9 AM	0	0	0
9 AM – 10 AM	0	0	0
10 AM – 11 AM	0	0	0
11 AM – Noon	0	0	0
Noon – 1 PM	0	0	0
1 PM – 2 PM	0	0	0
2 PM – 3 PM	0	0	0
3 PM – 4 PM	0	140	140
4 PM – 5 PM	0	35	0
5 PM – 6 PM	0	0	0
Total	175	175	0

Notes:

1) Construction transit trips are assumed to be all non-auto residential trips

2) Since It is assumed that there would be no walk-only worker trips so pedestrian trips would be comprised of worker trips by transit

2)175 Transit Trips = 247 average total daily worker trips for peak construction period (2018 Q4) x 71% by transit mode

3) Temporal distribution assumed to be similar to worker vehicle trips (80% during hour before and after work day)