50-25 Barnett Avenue
Environmental Assessment Statement

CEQR # 20DCP038Q

Prepared for:
Phipps Houses

Prepared by:
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October 2nd, 2020

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Environmental Assessment Statement

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City Environmental Quality Review
ENVIRONMENTAL ASSESSMENT STATEMENT (EAS) SHORT FORM

FOR UNLISTED ACTIONS ONLY • *Please fill out and submit to the appropriate agency* (see instructions)

Part I: GENERAL INFORMATION

1. *Does the Action Exceed Any Type I Threshold in 6 NYCRR Part 617.4 or 43 RCNY §6-15(A) (Executive Order 91 of 1977, as amended)?* ☐ YES ☒ NO

If "yes," **STOP** and **complete the FULL EAS FORM**.

2. *Project Name* 50-25 Barnett Avenue

3. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency)	BSA REFERENCE NUMBER (if applicable)
20DCP038Q	
ULURP REFERENCE NUMBER (if applicable)	**OTHER REFERENCE NUMBER(S) (if applicable)** (*e.g.*, legislative intro, CAPA)
200243ZMQ, N200244ZRQ	

4a. *Lead Agency Information*			**4b. *Applicant Information***		
NAME OF LEAD AGENCY			NAME OF APPLICANT		
New York City Department of City Planning			Phipps Houses		
NAME OF LEAD AGENCY CONTACT PERSON			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON		
Olga Abinader			Michael Wadman		
ADDRESS 120 Broadway			ADDRESS 902 Braodway, 13th Floor		
CITY New York	STATE NY	ZIP 10271	CITY New York	STATE NY	ZIP 10010
TELEPHONE 212-720-3493	EMAIL oabinad@planning.nyc.gov		TELEPHONE 212-243-9090	EMAIL mwadman@puippsny.org	

5. *Project Description*

Phipps Houses (the "applicant") is seeking a series of discretionary actions to facilitate the development of an approximately 161,230 gross square foot (gsf) predominantly residential building on Queens Block 119; Lot 143 in the Sunnyside neighborhood of Queens Community District (CD) 2 (the "project site"). The project site is located on the north side of Barnett Avenue between 50th and 52nd Streets and is bounded by the Long Island Railroad (LIRR) Sunnyside Rail Yards to the north.

The proposed development would consist of approximately 167 dwelling units (DUs), 5,323 gsf for non-profit office space, and 170 surface parking spaces. The Applicant intends for all of the housing units in the project area to be affordable to low- and moderate-income households. It is anticipated that 50% of the units would be affordable to households earning up to 60% of the Area Median Income (AMI) and the remaining units would be for moderate income households earning up to 110% AMI. The proposed development would not be considered the reasonable worst-case development scenario (RWCDS) under the proposed actions. Therefore, this Environmental Assessment Statement (EAS) will analyze the development of an eight-story building with approximately 189,387 gsf (189 DUs) of residential space and 5,323 gsf of non-profit office space on the ground floor (the "RWCDS Development"). This With-Action Development is expected to be completed in 2023.

To facilitate the proposed development the applicant is seeking zoning map and text amendments, discretionary actions subject to the City Environmental Quality Review (CEQR). The proposed zoning map amendment would rezone the project site (coterminous with the proposed rezoning area) from M1-1 to an R6A district. The proposed zoning text amendment would designate the project site as a Mandatory Inclusionary Housing (MIH) Area subject to the requirements of Option 1 of the MIH Program, which require at least 25 percent of the residential floor area to be reserved for residents with incomes averaging 60 percent AMI (an amendment to Appendix F of the ZR).

Project Location

BOROUGH Queens	COMMUNITY DISTRICT(S) 2	STREET ADDRESS 50-25 Barnett Avenue
TAX BLOCK(S) AND LOT(S) Block 119; Lot 143		ZIP CODE 11104
DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS Barnett Avenue to the south; LIRR Sunnyside Yard to the north		
EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY M1-1		ZONING SECTIONAL MAP NUMBER 9b, 9d

6. *Required Actions or Approvals* (check all that apply)

***City Planning Commission*:** ☒ YES ☐ NO ☒ UNIFORM LAND USE REVIEW PROCEDURE (ULURP)

☐ CITY MAP AMENDMENT	☐ ZONING CERTIFICATION	☐ CONCESSION
☒ ZONING MAP AMENDMENT	☐ ZONING AUTHORIZATION	☐ UDAAP
☒ ZONING TEXT AMENDMENT	☐ ACQUISITION—REAL PROPERTY	☐ REVOCABLE CONSENT
☐ SITE SELECTION—PUBLIC FACILITY	☐ DISPOSITION—REAL PROPERTY	☐ FRANCHISE
☐ HOUSING PLAN & PROJECT	☐ OTHER, explain:	

☐ SPECIAL PERMIT (if appropriate, specify type: ☐ modification; ☐ renewal; ☐ other); EXPIRATION DATE:

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION ZR 123-90 and ZR 23-90 Appendix F

***Board of Standards and Appeals*:** ☐ YES ☒ NO

☐ VARIANCE (use)

☐ VARIANCE (bulk)

☐ SPECIAL PERMIT (if appropriate, specify type: ☐ modification; ☐ renewal; ☐ other); EXPIRATION DATE:

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

***Department of Environmental Protection*:** ☐ YES ☒ NO If "yes," specify:

Other City Approvals Subject to CEQR (check all that apply)

☐ LEGISLATION	☒ FUNDING OF CONSTRUCTION, specify: HPD Our Space Program / HDC
☐ RULEMAKING	☐ POLICY OR PLAN, specify:
☐ CONSTRUCTION OF PUBLIC FACILITIES	☐ FUNDING OF PROGRAMS, specify:
☐ 384(b)(4) APPROVAL	☐ PERMITS, specify:
☐ OTHER, explain:	

Other City Approvals Not Subject to CEQR (check all that apply)

☐ PERMITS FROM DOT'S OFFICE OF CONSTRUCTION MITIGATION AND COORDINATION (OCMC)	☐ LANDMARKS PRESERVATION COMMISSION APPROVAL
	☐ OTHER, explain:

***State or Federal Actions/Approvals/Funding*:** ☐ YES ☐ NO If "yes," specify:

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

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

☒ SITE LOCATION MAP	☒ ZONING MAP	☒ SANBORN OR OTHER LAND USE MAP
☒ TAX MAP	☐ FOR LARGE AREAS OR MULTIPLE SITES, A GIS SHAPE FILE THAT DEFINES THE PROJECT SITE(S)	

☒ PHOTOGRAPHS OF THE PROJECT SITE TAKEN WITHIN 6 MONTHS OF EAS SUBMISSION AND KEYED TO THE SITE LOCATION MAP

Physical Setting (both developed and undeveloped areas)

Total directly affected area (sq. ft.): 64,366

Roads, buildings, and other paved surfaces (sq. ft.): 64,366

Waterbody area (sq. ft) and type:

Other, describe (sq. ft.):

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

SIZE OF PROJECT TO BE DEVELOPED (gross square feet): 194,710

(RWCDS)

NUMBER OF BUILDINGS: 1

GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): 194,710

HEIGHT OF EACH BUILDING (ft.): 85 ft.

NUMBER OF STORIES OF EACH BUILDING: 8

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

If "yes," specify: The total square feet owned or controlled by the applicant: 64,366

The total square feet not owned or controlled by the applicant:

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 permanent and temporary disturbance (if known):

AREA OF TEMPORARY DISTURBANCE: 26,060 sq. ft. (width x length) VOLUME OF DISTURBANCE: 26,060 cubic ft. (width x length x depth)

AREA OF PERMANENT DISTURBANCE: 26,060 sq. ft. (width x length)

Description of Proposed Uses (please complete the following information as appropriate)				
	Residential	***Commercial***	***Community Facility***	***Industrial/Manufacturing***
Size (in gross sq. ft.)	189,387		5,323	
Type (*e.g.,* retail, office, school)	189 units		Non-Profit Office Space	

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

If "yes," please specify: NUMBER OF ADDITIONAL RESIDENTS: 448 NUMBER OF ADDITIONAL WORKERS: 25

Provide a brief explanation of how these numbers were determined: Based on the average household size of 2.37 for the Hunters Point-Sunnyside-West Maspeth Neighborhood Tabulation Area (2010 U.S. Census), one residential employee per 25 DU, one employee per 50 accessory parking spaces, and one employee per 250 sf of community facility (non-profit office) space.

Does the proposed project create new open space? ☐ YES ☒ NO If "yes," specify size of project-created open space: sq. ft.

Has a No-Action scenario been defined for this project that differs from the existing condition? ☐ YES ☒ NO

If "yes," see Chapter 2, "Establishing the Analysis Framework" and describe briefly:

9. *Analysis Year* CEQR Technical Manual Chapter 2

ANTICIPATED BUILD YEAR (date the project would be completed and operational): 2023

ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: 24

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

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE: N/A

10. *Predominant Land Use in the Vicinity of the Project* (check all that apply)

☒ RESIDENTIAL ☒ MANUFACTURING ☐ COMMERCIAL ☐ PARK/FOREST/OPEN SPACE ☒ OTHER, specify: Transportation

Part II: TECHNICAL ANALYSIS

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, provide additional analyses (and, if needed, attach supporting information) based on guidance in the CEQR Technical Manual to determine whether the potential for significant impacts exists. Please note that a "yes" answer does not mean that an EIS must be prepared—it means that more information may be required for the lead agency to make a determination of significance.
- The lead agency, upon reviewing Part II, may require an applicant to provide additional information to support the Short 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 different from surrounding land uses?	☒	☐
(b) Would the proposed project result in a change in zoning different from surrounding zoning?	☒	☐
(c) Is there the potential to affect an applicable public policy?	☐	☒
(d) If "yes," to (a), (b), and/or (c), complete a preliminary assessment and attach.		
(e) Is the project a large, publicly sponsored project?	☐	☒
o If "yes," complete a PlaNYC assessment and attach.		
(f) Is any part of the directly affected area within the City's Waterfront Revitalization Program boundaries?	☐	☒
o If "yes," complete the Consistency Assessment Form.		
2. *SOCIOECONOMIC CONDITIONS*: CEQR Technical Manual Chapter 5		
(a) Would the proposed project:		
o Generate a net increase of 200 or more residential units?	☐	☒
o Generate a net increase of 200,000 or more square feet of commercial space?	☐	☒
o Directly displace more than 500 residents?	☐	☒
o Directly displace more than 100 employees?	☐	☒
o Affect conditions in a specific industry?	☐	☒
3. *COMMUNITY FACILITIES*: CEQR Technical Manual Chapter 6		
(a) Direct Effects		
o 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) Indirect Effects		
o **Child Care Centers:** Would the project result in 20 or more eligible children under age 6, based on the number of low or low/moderate income residential units? (See Table 6-1 in Chapter 6)	☐	☒
o **Libraries:** Would the project result in a 5 percent or more increase in the ratio of residential units to library branches? (See Table 6-1 in Chapter 6)	☐	☒
o **Public Schools:** Would the project result in 50 or more elementary or middle school students, or 150 or more high school students based on number of residential units? (See Table 6-1 in Chapter 6)	☐	☒
o **Health Care Facilities and Fire/Police Protection:** Would the project result in the introduction of a sizeable new neighborhood?	☐	☒
4. *OPEN SPACE*: CEQR Technical Manual Chapter 7		
(a) Would the proposed project change or eliminate existing open space?	☐	☒
(b) Is the project located within an under-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?	☐	☒
o If "yes," would the proposed project generate more than 50 additional residents or 125 additional employees?	☐	☐
(c) Is the project located within a well-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?	☐	☒
o If "yes," would the proposed project generate more than 350 additional residents or 750 additional employees?	☐	☐
(d) If the project in located an area that is neither under-served nor well-served, would it generate more than 200 additional residents or 500 additional employees?	☒	☐
5. *SHADOWS*: CEQR Technical Manual Chapter 8		

	YES	NO
(a) Would the proposed project result in a net height increase of any structure of 50 feet or more?	☒	☐
(b) Would the proposed project result in any increase in structure height and be located adjacent to or across the street from a sunlight-sensitive resource?	☒	☐
6. *HISTORIC AND CULTURAL RESOURCES*: CEQR Technical Manual Chapter 9		
(a) Does the proposed project site or an adjacent site contain any architectural and/or archaeological resource that is eligible for or has been designated (or is calendared for consideration) as a New York City Landmark, Interior Landmark or Scenic Landmark; that is listed or eligible for listing on the New York State or National Register of Historic Places; or that is within a designated or eligible New York City, New York State or National Register Historic District? (See the GIS System for Archaeology and National Register to confirm)	☒	☐
(b) Would the proposed project involve construction resulting in in-ground disturbance to an area not previously excavated?	☒	☐
(c) If "yes" to either of the above, list any identified architectural and/or archaeological resources and attach supporting information on whether the proposed project would potentially affect any architectural or archeological resources. See Attachment G		
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 not currently allowed by existing zoning?	☐	☒
8. *NATURAL RESOURCES*: CEQR Technical Manual Chapter 11		
(a) Does the proposed project site or a site adjacent to the project contain natural resources as defined in Section 100 of Chapter 11?	☐	☒
o If "yes," list the resources and attach supporting information on whether the proposed project would affect any of these resources.		
(b) Is any part of the directly affected area within the Jamaica Bay Watershed?	☐	☒
o If "yes," complete the Jamaica Bay Watershed Form, and submit according to its instructions.		
9. *HAZARDOUS MATERIALS*: CEQR Technical Manual Chapter 12		
(a) Would the proposed project allow commercial or residential uses 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) designation or Restrictive Declaration) relating to hazardous materials that preclude the potential for significant adverse impacts?	☐	☒
(c) Would the project require soil disturbance in a manufacturing area or any development on or near a manufacturing area or existing/historic facilities listed in Appendix 1 (including nonconforming uses)?	☒	☐
(d) Would the project result in the development of a site where there is reason to suspect the presence of hazardous materials, contamination, illegal dumping or fill, or fill material of unknown origin?	☒	☐
(e) Would the project result in development on or near a site that has or had underground and/or aboveground storage tanks (*e.g.*, gas stations, oil storage facilities, heating oil storage)?	☒	☐
(f) Would the project result in renovation of interior existing space on a site with the potential for compromised air quality; vapor intrusion from either on-site or off-site sources; or the presence of asbestos, PCBs, mercury or lead-based paint?	☐	☒
(g) Would the project result in development on or near a site with potential hazardous materials issues such as government-listed voluntary cleanup/brownfield site, current or former power generation/transmission facilities, coal gasification or gas storage sites, railroad tracks or rights-of-way, or municipal incinerators?	☒	☐
(h) Has a Phase I Environmental Site Assessment been performed for the site?	☒	☐
o If "yes," were Recognized Environmental Conditions (RECs) identified? Briefly identify: See Attachment B	☒	☐
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) If the proposed project located in a combined sewer area, would it result in at least 1,000 residential units or 250,000 square feet or more of commercial space in Manhattan, or at least 400 residential units or 150,000 square feet or more of commercial space in the Bronx, Brooklyn, Staten Island, or Queens?	☐	☒
(c) If the proposed project located in a separately sewered area, would it result in the same or greater development than the amounts listed in Table 13-1 in Chapter 13?	☐	☐
(d) Would the proposed project involve development on a site that is 5 acres or larger where the amount of impervious surface would increase?	☐	☒
(e) If the project 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, would it involve development on a site that is 1 acre or larger where the amount of impervious surface would increase?	☐	☒
(f) Would the proposed project be located in an area that is partially sewered or currently unsewered?	☐	☒

	YES	NO
(g) Is the project proposing an industrial facility or activity that would contribute industrial discharges to a Wastewater Treatment Plant and/or generate contaminated stormwater in a separate storm sewer system?	☐	☒
(h) Would the project involve construction of a new stormwater outfall that requires federal and/or state permits?	☐	☒
11. *SOLID WASTE AND SANITATION SERVICES*: CEQR Technical Manual Chapter 14		
(a) Using Table 14-1 in Chapter 14, the project's projected operational solid waste generation is estimated to be (pounds per week): (189 households * 41 lbs. per week) + (28 employees * 13 lbs. per week) = 8,113 lbs. per week		
o 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) Using energy modeling or Table 15-1 in Chapter 15, the project's projected energy use is estimated to be (annual BTUs): (189,387 gsf * 126.7 MBtu) + (5,323 gsf * 216.3 MBtu) = 24,893,297 MBtu		
(b) 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:		
o Would the proposed project result in 50 or more Passenger Car Equivalents (PCEs) per project peak hour?	☐	☒
If "yes," would the proposed project result in 50 or more vehicle trips per project peak hour at any given intersection? ***It should be noted that the lead agency may require further analysis of intersections of concern even when a project generates fewer than 50 vehicles in the peak hour. See Subsection 313 of Chapter 16 for more information.***	☐	☐
o 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?	☐	☐
o 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?	☒	☐
o If "yes," would the proposed project exceed the thresholds in Figure 17-3, Stationary Source Screen Graph in Chapter 17? (Attach graph as needed) see Attachment B	☐	☒
(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) designation or Restrictive Declaration) relating to air quality that preclude the potential for significant adverse impacts?	☐	☒
15. *GREENHOUSE GAS EMISSIONS*: CEQR Technical Manual Chapter 18		
(a) Is the proposed project a city capital project or a power generation plant?	☐	☒
(b) Would the proposed project fundamentally change the City's solid waste management system?	☐	☒
(c) If "yes" to any of the above, would the project require a GHG emissions assessment based on the guidance in Chapter 18?	☐	☒
16. *NOISE*: CEQR Technical Manual Chapter 19		
(a) Would the proposed project generate or reroute vehicular traffic?	☒	☐
(b) Would the proposed project introduce new or additional receptors (see Section 124 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 site to that rail line?	☒	☐
(c) Would the proposed project cause a stationary noise source to operate within 1,500 feet of a receptor with a direct line of sight to that receptor or introduce receptors into an area with high ambient stationary noise?	☐	☒
(d) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to noise that preclude the potential for significant adverse impacts?	☐	☒
17. *PUBLIC HEALTH*: CEQR Technical Manual Chapter 20		

	YES	NO
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Air Quality; Hazardous Materials; Noise?	☒	☐
(b) If "yes," explain why an assessment of public health is or is not warranted based on the guidance in Chapter 20, "Public Health." Attach a preliminary analysis, if necessary. See Attachment B		
18. *NEIGHBORHOOD CHARACTER*: CEQR Technical Manual Chapter 21		
(a) Based upon the analyses conducted, do any of the following technical areas require 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 why an assessment of neighborhood character is or is not warranted based on the guidance in Chapter 21, "Neighborhood Character." Attach a preliminary analysis, if necessary. See Attachment B		
19. *CONSTRUCTION*: CEQR Technical Manual Chapter 22		
(a) Would the project's construction activities involve:		
o Construction activities lasting longer than two years?	☐	☒
o Construction activities within a Central Business District or along an arterial highway or major thoroughfare?	☐	☒
o Closing, narrowing, or otherwise impeding traffic, transit, or pedestrian elements (roadways, parking spaces, bicycle routes, sidewalks, crosswalks, corners, *etc.*)?	☒	☐
o Construction of multiple buildings where there is a potential for on-site receptors on buildings completed before the final build-out?	☐	☒
o The operation of several pieces of diesel equipment in a single location at peak construction?	☒	☐
o Closure of a community facility or disruption in its services?	☐	☒
o Activities within 400 feet of a historic or cultural resource?	☒	☐
o Disturbance of a site containing or adjacent to a site containing natural resources?	☐	☒
o Construction on multiple development sites in the same geographic area, such that there is the potential for several construction timelines to overlap or last for more than two years overall?	☐	☒
(b) If any boxes are checked "yes," explain why a preliminary construction assessment is or is not warranted based on the guidance in Chapter 22, "Construction." It should be noted that the nature and extent of any commitment to use the Best Available Technology for construction equipment or Best Management Practices for construction activities should be considered when making this determination. See Attachment B		

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 the pertinent books and records and/or after inquiry of persons who have personal knowledge of such information or who have examined pertinent books and records.

Still under oath, I further swear or affirm that I make this statement in my capacity as the applicant or representative of the entity that seeks the permits, approvals, funding, or other governmental action(s) described in this EAS.

APPLICANT/REPRESENTATIVE NAME	DATE
Philip Habib, P.E.	September 29th, 2020

SIGNATURE

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

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 or 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 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.

IMPACT CATEGORY	Potentially Significant Adverse Impact 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	☐	☒

2. Are there any aspects of the project relevant to the determination of 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? ☐ YES ☒ NO

If there are such impacts, attach an explanation stating whether, as a result of them, the project may have a significant impact on the environment.

3. Check determination to be issued by the lead agency:

☐ **Positive Declaration**: If the lead agency has determined that the project may have a significant impact on the environment, and if a Conditional Negative Declaration is not appropriate, then the lead agency issues a *Positive Declaration* and prepares a draft Scope of Work for the Environmental Impact Statement (EIS).

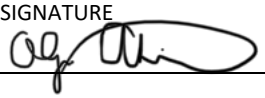
☐ **Conditional Negative Declaration:** A *Conditional Negative Declaration* (CND) may be appropriate if there is a private applicant for an Unlisted action AND when conditions imposed by the lead agency will modify the proposed project so that no significant adverse environmental impacts would result. The CND is prepared as a separate document and is subject to the requirements of 6 NYCRR Part 617.

☒ **Negative Declaration:** If the lead agency has determined that the project would not result in potentially significant adverse environmental impacts, then the lead agency issues a *Negative Declaration*. The *Negative Declaration* may be prepared as a separate document (see template) or using the embedded Negative Declaration on the next page.

4. ***LEAD AGENCY'S CERTIFICATION***

TITLE	LEAD AGENCY
Director, Environmental Assessment and Review Division	Dept of City Planning on behalf of the City Planning Commission
NAME	DATE
Olga Abinader	October 2, 2020

SIGNATURE



NEGATIVE DECLARATION

Statement of No Significant Effect

Pursuant to Executive Order 91 of 1977, as amended, and the Rules of Procedure for City Environmental Quality Review, found at Title 62, Chapter 5 of the Rules of the City of New York and 6 NYCRR, Part 617, State Environmental Quality Review, the Department of City Planning acting on behalf of the City Planning Commission assumed the role of lead agency for the environmental review of the proposed actions. Based on a review of information about the project contained in this environmental assessment statement (EAS) and any attachments hereto, which are incorporated by reference herein, the lead agency has determined that the proposed actions would not have a significant adverse impact on the environment.

Reasons Supporting this Determination

The above determination is based on information contained in this EAS, which finds the proposed actions sought before the City Planning Commission would not have a significant adverse impact on the environment. Reasons supporting this determination are noted below.

Land Use, Zoning, and Public Policy

A detailed analysis of land use, zoning, and public policy is included in the EAS. The proposed actions are a Zoning Map Amendment to rezone the project area (Queens Block 119, Lot 143) from an M1-1 district to an R6A district and a Zoning Text Amendment to establish a Mandatory Inclusionary Housing area with MIH options 1 coterminous with the rezoning area in the Sunnyside neighborhood of Brooklyn Community District 14. The project area is located just south of the Long Island Rail Road Sunnyside Yard on the north side of Barnett Avenue within a band of industrial, auto-oriented, and transportation and utility uses, northeast of Sunnyside Gardens Park and across the street from the Phipps Garden Houses. The proposed actions would facilitate the development of a mixed-use buildings on Brooklyn Block 5159, Lot 1, containing residential and non-profit office space. The proposed actions are anticipated to result in a change on the project area, however, given the predominantly residential character and the immediate built context of the surrounding area, the change in land use and zoning would not constitute a significant adverse impact.

Open Space

A detailed analysis related to Open Space is included in this EAS. The proposed actions would introduce new residential open space users to the project area which would exacerbate an existing shortfall of open space in the surrounding area. The population introduced by the proposed actions would reduce the open space ration in the open space study area by approximately one percent in an area that is currently underserved by open space. However, open space resources which serve the study area user population are lightly utilized and in good condition and based upon these conditions are expected to be able to accommodate the additional demand introduced by the proposed actions. Additionally, Sunnyside Gardens Park, a private six-acre open space is located across the street from the project area, and while access is limited to fee-paying members of the park, helps to accommodate the demand for open space in the surrounding area. Therefore, the proposed actions would not result in significant adverse impacts to open space.

Shadows

A detailed analysis related to shadows is included in this EAS. The proposed actions would result in incremental shadows on two sunlight-sensitive open space resources during two analysis periods: the Sunnyside Gardens Park and the Sunnyside Gardens Park Community Garden. During the May/August and June analysis periods shadows would be for less than one hour on each resource during the early morning hours. Given the duration and time of shadows coverage, shadows cast by the proposed actions would not be anticipated to affect the viability or condition of these resources. Therefore, the proposed actions would not result in significant adverse impacts related to shadows.

Historic and Cultural Resources

A detailed analysis related to Historic and Cultural Resources is included in this EAS. The proposed actions would result in new development adjacent to the Landmarks Preservation Commission-designated and State and National Register of Historic Places-listed Sunnyside Gardens Historic District. However, the resulting development would not result in significant adverse visual effects to features of the historic resource that make it significant. Construction-related impacts, incremental shadows on sunlight-sensitive features, or physical changes to resources would not occur as a result of the proposed actions. Therefore, the proposed actions would not result in significant adverse impacts to historic and cultural resources.

Urban Design and Visual Resources

A detailed analysis related to urban design and visual resources is included in this EAS. The proposed actions would result in new development on a site that is currently used as a surface parking lot and would alter the bulk regulations governing the project area to allow development with a substantially different bulk form than what is currently allowed as-of-right. However, the permitted bulk form of development pursuant to the proposed actions would not significantly differ from its built context to the south, namely, the Phipps Garden Houses. Additionally, the project area is on an irregular block abutting a railroad right-of-way and is generally removed from the predominant low-rise built context beyond the Phipps Garden Houses to the south and southeast. Though the proposed actions would modify the bulk regulations applicable to the project area, development permitted pursuant to the proposed actions would not negatively affect pedestrian's experience of the public realm, but rather, would introduce new density and contextual development near a significant open space resource and an existing predominantly residential neighborhood. Therefore, the proposed actions would not result in significant adverse impacts to urban design and visual resources.

Air Quality

A detailed analysis related to Air Quality is included in this EAS. Based on a preliminary assessment it was determined that the proposed actions do not have the potential to result in significant adverse air quality impacts related to mobile and stationary air quality sources, with the exception of emissions from nearby industrial sources, a detailed assessment was warranted for two nearby industrial processing facilities. Based upon detailed dispersion analysis, air toxics emissions from nearby industrial sources would not result in exceedances of NYS Department of Environmental Conservation DAR-1 guidelines, CEQR impact criteria, and National Ambient Air Quality standards thresholds at receptors introduced by the proposed action. Therefore, the proposed action would not result in significant adverse air quality impacts.

Project Name: 50-25 Barnett Avenue Rezoning
CEQR # 20DCP038Q
SEQRA Classification: Unlisted

Hazardous Materials and Noise

An (E) designation (E-573) related to hazardous materials and noise would be established as part of the approval of the proposed actions. Refer to "Determination of Significance Appendix: (E) designation" for the applicable (E) designation requirements. The hazardous materials and noise analyses conclude that with the (E) designation in place, the proposed actions would not result in a significant adverse impact related to hazardous materials or noise.

No other significant effects upon the environment that would require the preparation of a Draft Environmental Impact Statement are foreseeable. This Negative Declaration has been prepared in accordance with Article 8 of the New York State Environmental Conservation Law (SEQRA). Should you have any questions pertaining to this Negative Declaration, you may contact Diane McCarthy at 212-720-3417.

TITLE	LEAD AGENCY
Director, Environmental Assessment and Review Division	Department of City Planning on behalf of the City Planning Commission 120 Broadway, 31st Fl. New York, NY 10271 | 212.720.3493
NAME Olga Abinader	DATE October 2, 2020
SIGNATURE	

TITLE	
Vice Chair, City Planning Commission	
NAME Marisa Lago	DATE October 5, 2020
SIGNATURE	

Project Name: 50-25 Barnett Avenue Rezoning
CEQR # 20DCP038Q
SEQRA Classification: Unlisted

Determination of Significance Appendix

The Proposed Action(s) were determined to have the potential to result in changes to development on the following site(s):

Development Site	Borough	Block and Lot
Projected Development Site 1	Queens	Block 119, Lot 143

(E) Designation Requirements

To ensure that the proposed actions would not result in significant adverse impacts related to hazardous materials and noise an (E) designation (**E-573**) would be established as part of approval of the proposed actions on **Projected Development Site 1** as described below:

Development Site	Hazardous Materials	Air Quality	Noise
Projected Development Site 1	X		X

Hazardous Materials

The (E) designation requirements applicable to **Projected Development Site 1** for hazardous materials would apply as follows:

Task 1-Sampling Protocol

The applicant submits to OER, for review and approval, a Phase I of the site along with a soil, groundwater and soil vapor 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 samples should be selected to adequately characterize the site, specific sources 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-Remediation Determination and Protocol

A written report with findings and a summary of the data must he 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 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.

A construction-related health and safety plan should be submitted to OER and would be implemented during excavation and construction activities to protect workers and the community from potentially significant adverse impacts associated with contaminated soil, groundwater and/or soil vapor. This plan would be submitted to OER prior to implementation.

Project Name: 50-25 Barnett Avenue Rezoning
CEQR # 20DCP038Q
SEQRA Classification: Unlisted

Noise

The (E) designation requirements for noise would apply as follows:

> ***Projected Development Site 1:*** *In order to ensure an acceptable interior noise environment, future residential/community facility uses must provide a closed window condition with a minimum of 33 dBA window/wall attenuation on the facades facing 48th Street and 31 dBA of attenuation on facades facing the Long Island Rail Road (LIRR) and the facades facing Woodside Avenue and 28 dBA of attenuation on the facades facing Barnett Avenue to maintain an interior noise level not greater than 45 dBA for residential and community facility uses. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.*

Figure 1

Project Location Map

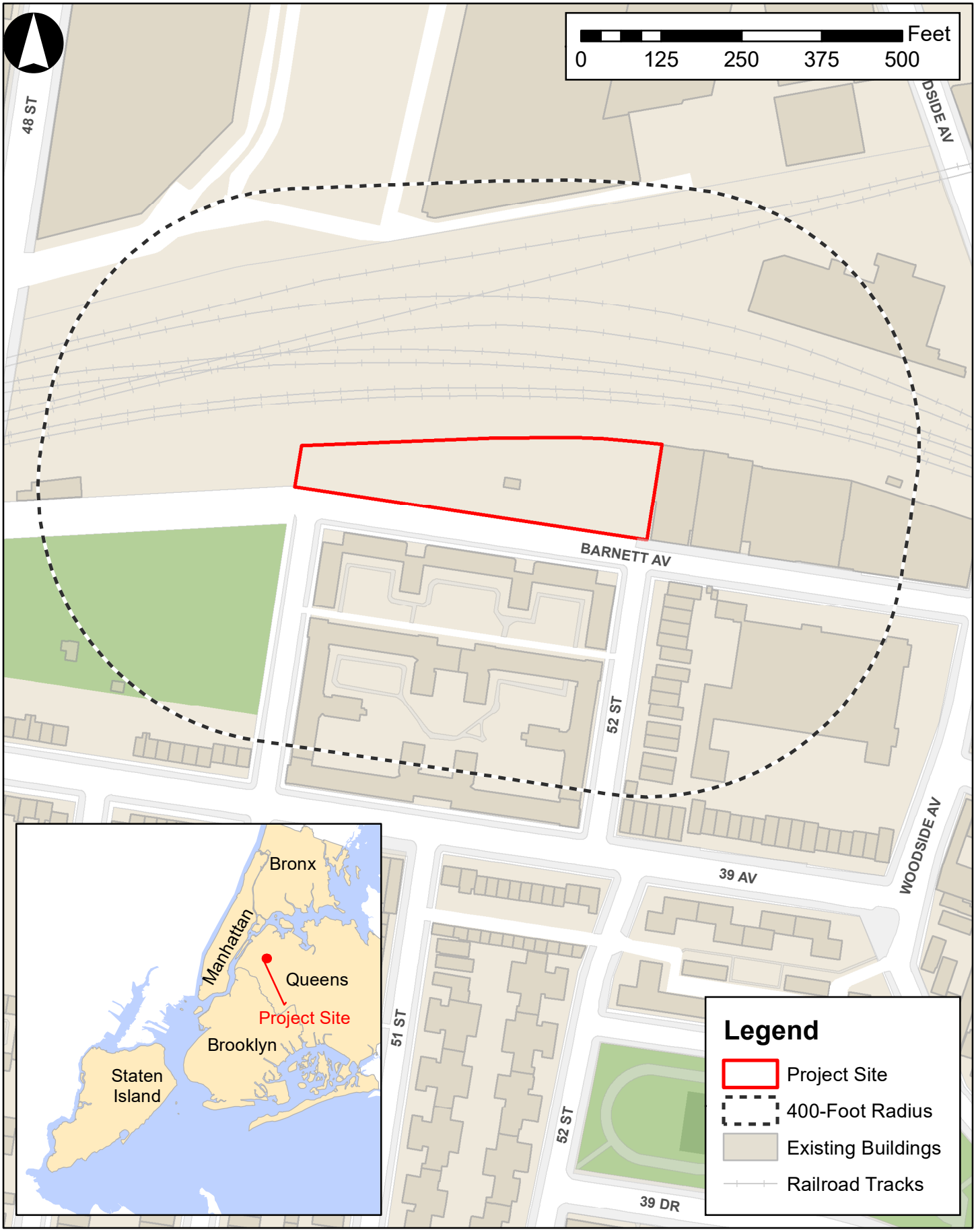
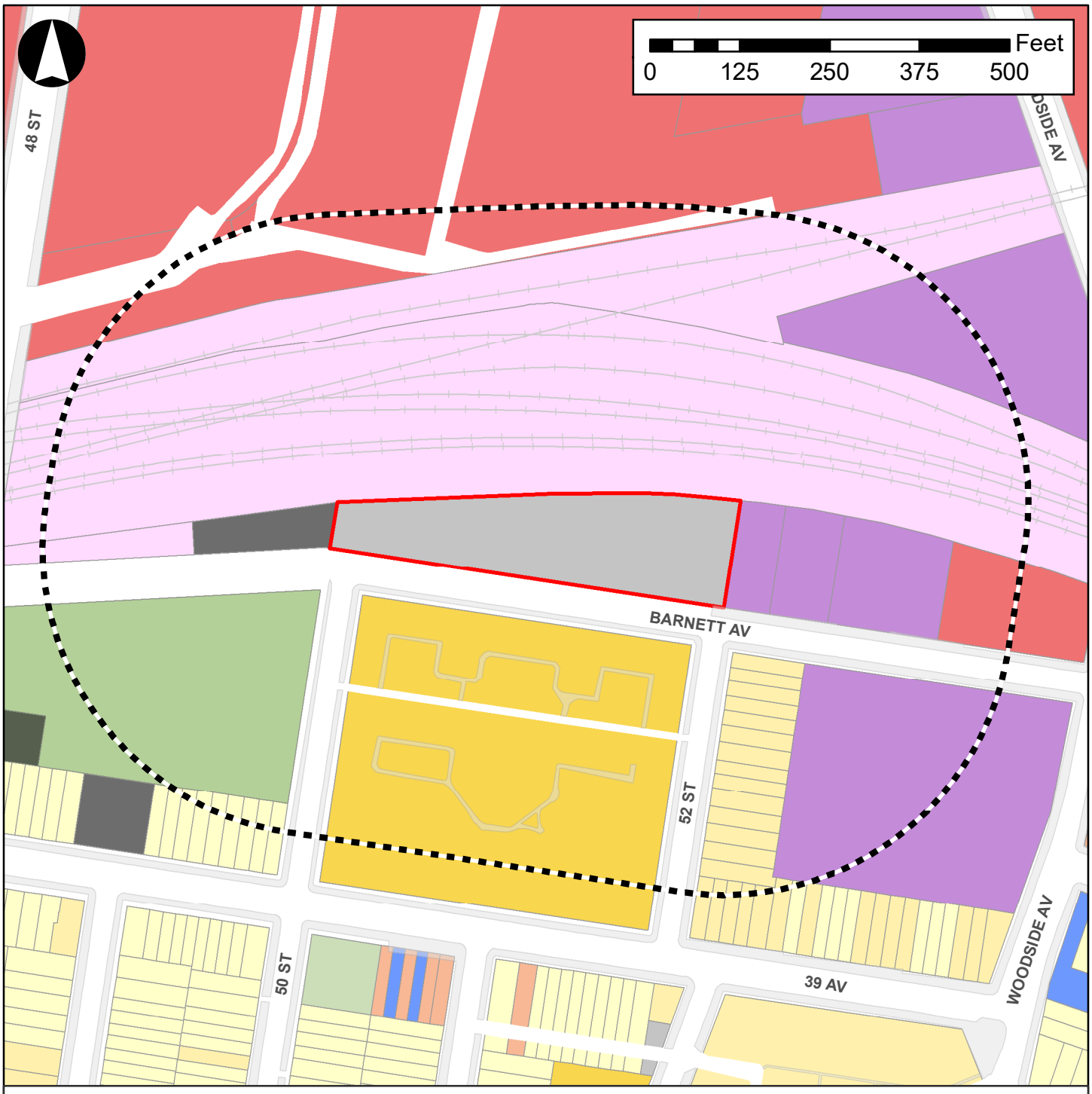


Figure 2
Land Use Map



Legend

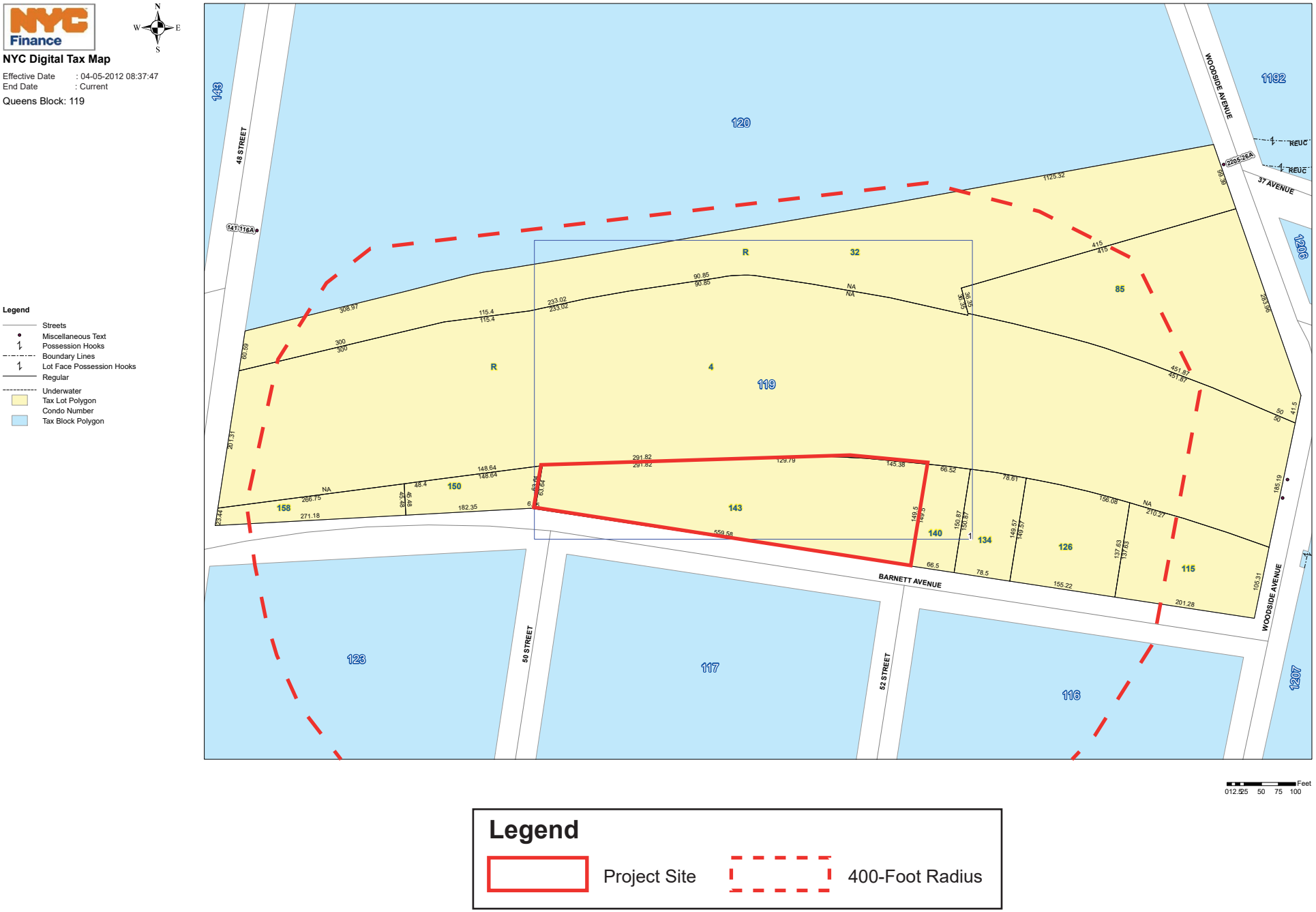
- Project Site
- 400-Foot Radius
- Railroad Tracks

Land Use

- One & Two Family Buildings
- Multi-Family Walkup Buildings
- Multi-Family Elevator Buildings
- Mixed Commercial/Residential Buildings
- Commercial/Office Buildings
- Industrial/Manufacturing
- Transportation/Utility
- Public Facilities & Institutions
- Open Space
- Parking Facilities
- Vacant Land
- All Others or No Data

Figure 3
Zoning Map





50-25 Barnett Avenue EAS

Figure 4

Tax Map



1. Taken from the middle of the Project Site's Barnett Avenue frontage, facing north.


2. Facing north from the western side of the Project Site.


3. Facing north from the southeast corner of the Project Site.


4. Facing northwest from the southwestern edge of the Project Site.

Environmental Assessment Statement

(EAS) Form

Attachment A

Project Description

I. INTRODUCTION

Phipps Houses (the "applicant") is seeking zoning map and text amendments from the New York City Planning Commission (the "proposed actions"), to facilitate the development of an approximately 161,230 gross square foot (gsf) predominantly residential building on Queens Block 119; Lot 143 in the Sunnyside neighborhood of Queens Community District (CD) 2 (the "project site"), with approximately 167 dwelling Units (DUs), 5,323 gsf of non-profit office space, and 170 surface parking spaces. In addition, the applicant is seeking construction financing from the New York City Department of Housing Preservation and Development (HPD), as well as other potential funding from HPD and the New York City Housing Development Corporation (HDC). The project site is located on the north side of Barnett Avenue between 50th and 52nd Streets and is bounded by the Long Island Railroad (LIRR) Sunnyside Rail Yards to the north. The proposed project is expected to be completed in 2023.

The applicant's proposed project would not be considered the reasonable worst-case development scenario (RWCDS) under the proposed actions. Therefore, this Environmental Assessment Statement (EAS) analyzes a development that maximizes the allowable building height under the proposed zoning (the "RWCDS Development"). Due to the height restrictions imposed by the proposed R6A zoning district, along with the 30-foot rear yard requirement, the RWCDS Development building constitutes the largest development that could be achieved on the project site. The RWCDS Development assumed for analysis purposes would consist of approximately 189,387 gsf of residential use with 189 DU, approximately 5,323 gsf of non-profit office space, and 170 surface parking spaces, 59 of which would be accessory off-street parking space for residents and 111 would be public parking spaces. The Applicant intends for all of the housing units in the project area to be affordable to low- and moderate-income households. It is anticipated that 50% of the units would be affordable to households earning up to 60% of the Area Median Income (AMI) and the remaining units would be for moderate income households earning up to 110% AMI. For conservative analysis purposes, the most conservative assumption regarding affordability has been made in each technical area[1].

In the absence of the proposed actions, under the No-Action scenario, it is assumed that the project site would continue to be occupied by an approximately 223-space public parking lot, as under existing conditions.

This attachment provides a summary and description of the proposed actions, including project site location, existing conditions of the project site, project purpose and need, project description, RWCDS under No-Action and With-Action conditions, and the governmental approvals required. The attached supplemental studies examine the potential for the proposed actions to result in impacts in any City Environmental Quality Review (CEQR) technical areas, including separate attachments with detailed analyses of land use, zoning, and public policy; open space; historic and cultural resources; urban design and visual resources; air quality; and noise in Attachments C through I, respectively. All other preliminary screening assessments are summarized in Attachment B, "Supplemental Screening."

[1] For example, the Community Facilities assessment would assume 50% of DUs would be for households earning below 80% AMI as intended by the Applicant. The Socioeconomic assessment would assume affordable units would only be units created through the MIH program.

II. BACKGROUND AND EXISTING CONDITIONS

Project Site

The 64,366 sf project site (Queens Block 119, Lot 143) is located south of the LIRR Sunnyside Rail Yards in the Sunnyside neighborhood of Queens with approximately 560 feet of frontage along Barnett Avenue (see Figure A-1). The project site is located in the southern section of the block (Queens Block 119) that is generally bounded by the LIRR Sunnyside Rail Yards to the north, Woodside Avenue to the east, Barnett Avenue to the south, and 48th Street to the west. The project site is 64 feet deep at its western edge and 150 feet deep at its eastern edge.

As indicated in Figure A-2, the project site is located in an existing M1-1 district, which permits a maximum Floor Area Ratio (FAR) of 1.0 for light industrial uses (Use Group 17) and general service (Use Group 16), including woodworking shops, repair shops, and wholesale service and storage facilities, retail and commercial uses (Use Groups 5 through 14), and specific community facility uses (Use Group 4). The project site is currently occupied by a 223-space public parking lot (see Figure A-3), which is used by local residents and employees of area businesses. The project site has a flat topography and is mostly paved. A small one-story approximately 200-sf attendant's booth is located near the Barnett Avenue lot entrance, and a chain link fence lines the project site's Barnett Avenue frontage. Because there is no curb along the north side of Barnett Avenue at this location, there are no curb cuts at the project site, but there are driveways into the parking lot at the eastern end and middle of the site.

Surrounding Area

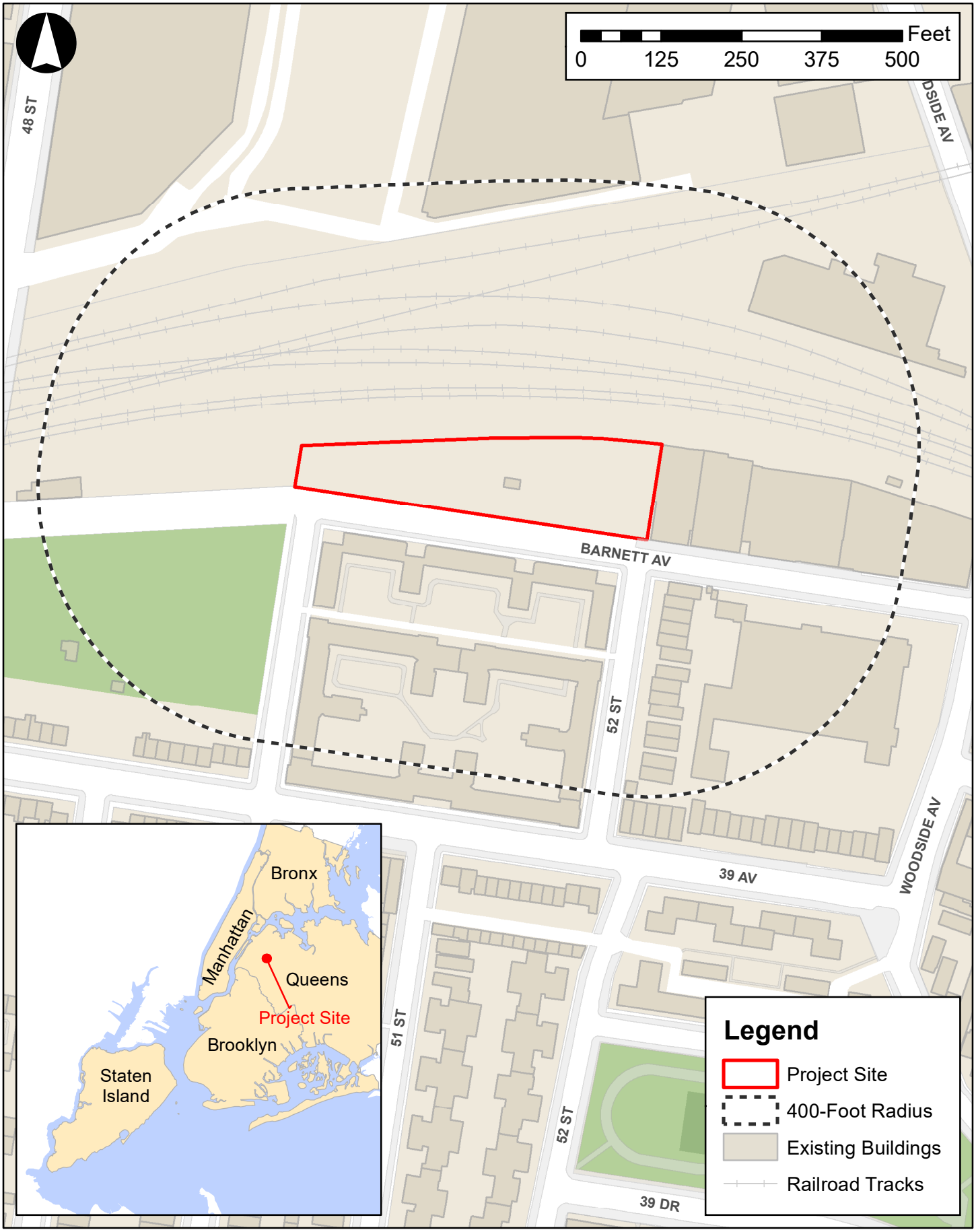
Land uses in the vicinity of the project site include a mix of residential, light industrial, and transportation-related uses, with some vacant land, commercial/mixed-use, and open spaces. Residential uses are typically to the south and southwest of the project site, light industrial uses are generally located to the northeast and east, and transportation-related and commercial uses are generally located to the north; one vacant lot is located to the west of the project site, and one open space is located to the southwest of the project site.

Directly south of the project site, Block 117 contains the Phipps Sunnyside Garden Apartments, a residential complex built in 1932 made up of five six-story buildings arranged around interior courtyards. The Phipps Sunnyside Garden Apartments are within the 2007 Landmarks Preservation Commission-designated (LPC-designated) and the 1984 State and National Register of Historic Places-listed (S/NR-listed) Sunnyside Gardens Historic District. The Sunnyside Gardens Historic District comprises portions of 16 blocks generally bounded by Barnett Avenue to the north, 52nd, 49th, and 48th Streets to the east, Queens Boulevard to the south, and 47th and 43rd Streets to the west. To the west of the Phipps Sunnyside Garden Apartments is the Sunnyside Gardens Park (also located within the Sunnyside Gardens Historic District), a private open space that features a ball field, picnic area, tennis courts, a children's pool, gardens, and a playground.

Directly north of the project site is the LIRR Sunnyside Yards, one of the largest rail yards in New York City, connecting to Pennsylvania Station in Midtown Manhattan via the East River Tunnel. Currently, the Sunnyside Yards are owned by Amtrak, but are also used by New Jersey Transit. The shared tracks of the LIRR's Main Line and Amtrak's Northeast Corridor pass along the southern edge of the Sunnyside Yards, directly north of the project site.

To the east of the project site, Block 119 is occupied by a mix of light industrial and commercial uses; directly east of the project site (at 50-45 Barnett Avenue) is a glass and window company. To the west of the project site (at 49-39 Barnett Avenue) is a vacant lot.

Project Location Map



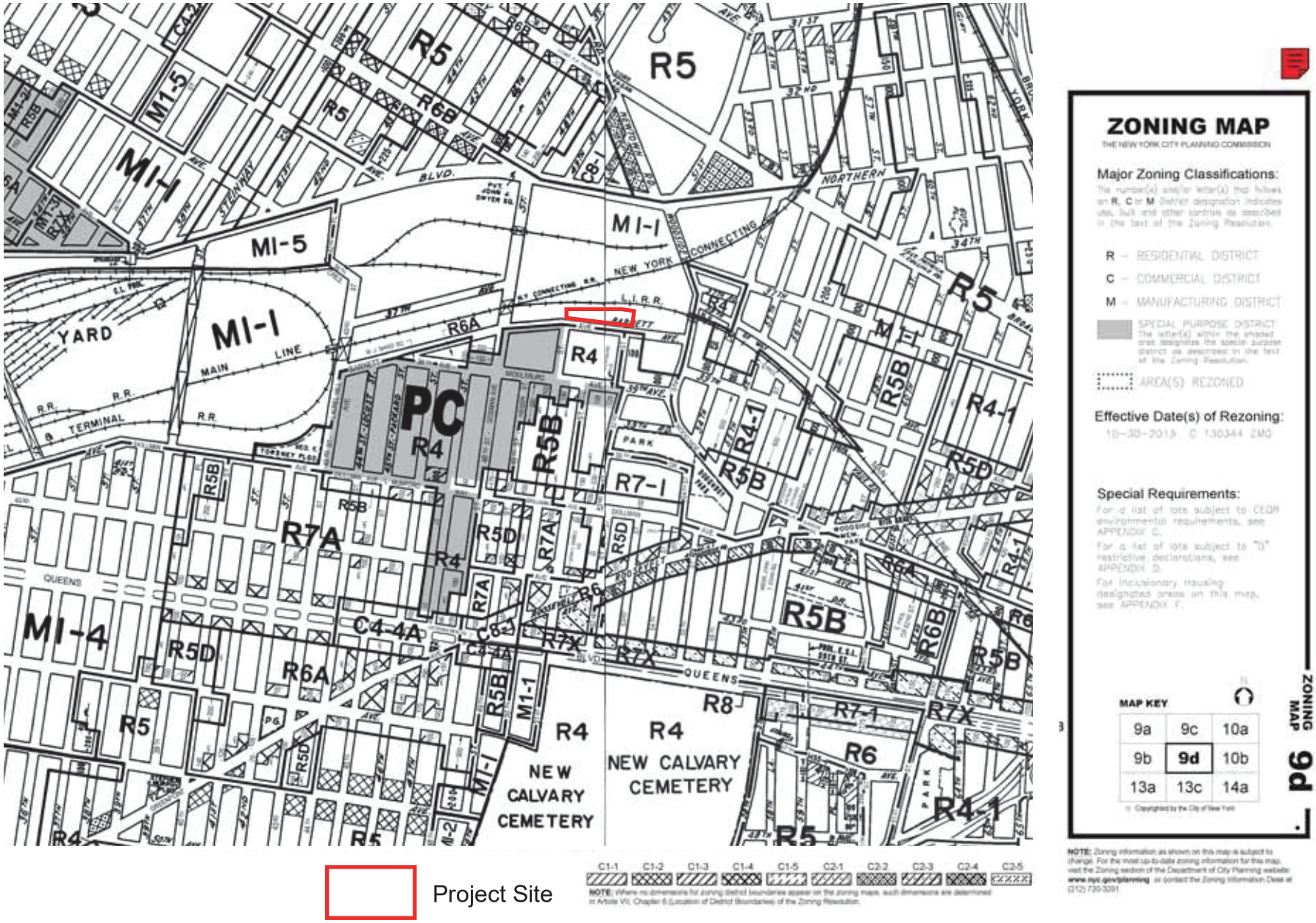
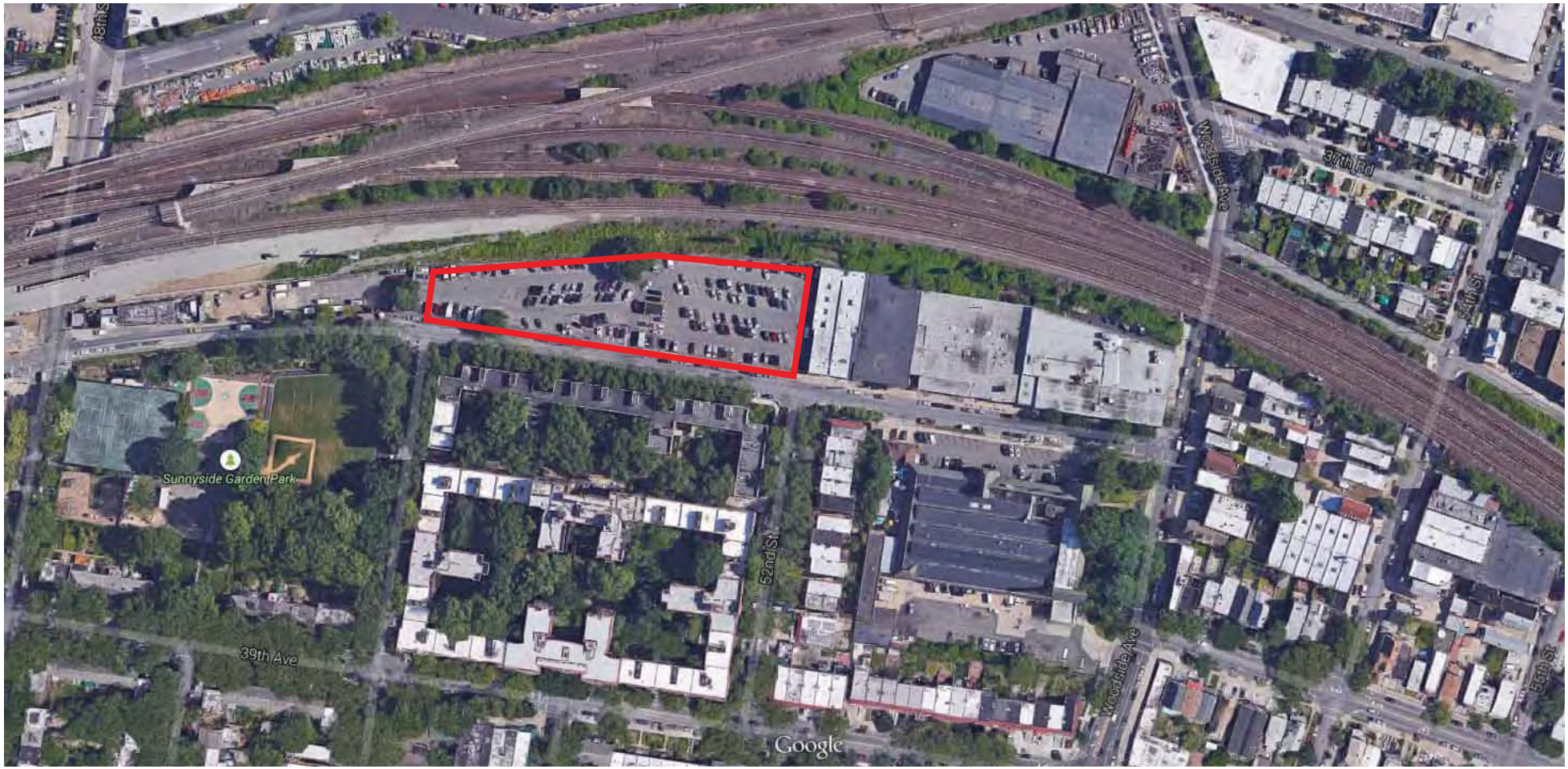


Figure A-2
Existing Zoning



Legend

Project Site

The area surrounding the project site is served by several public transit options. The Northern Boulevard and 46th Street stations are located along Broadway (to the north of the project site) and are served by the M and R lines. The 52nd Street station is located at the intersection of 52nd Street and 43rd Street (to the south of the project site) and is served by the 7 line. The Woodside LIRR station is located approximately 0.7 miles to the southeast of the project site. The MTA-NYCT bus line most proximate to the project site is the Q104, which runs along 48th Street and connects Sunnyside to Ravenswood, Queens.

Representative of the mix of land uses in the surrounding area, zoning districts in the vicinity of the project site include R4, R4-1, R5B, R6A, and R7-1 residential districts (generally to the south), M1-1 light manufacturing districts (to the north), and C8-1 commercial districts (generally to the north) and C1-3 and C1-4 commercial overlays (generally to the south). A Special Planned Community Preservation (PC) District is located to the southwest of the project site and is generally coterminous with the boundaries of the Sunnyside Gardens Historic District (an approximately 16-block area located between 43rd and 52nd Streets, Queens Boulevard, and Barnett Avenue) (refer to Figure A-4). The PC District was first established in 1974 with the intention of protecting the unique character of communities that have been planned and developed as a unit and was extended to include the aforementioned 16 Sunnyside blocks in 2009.

Several of the existing zoning designations to the south of the project site reflect zoning map amendments approved as part of the 2011 Sunnyside-Woodside Rezoning. The Sunnyside-Woodside rezoning area encompassed 130 blocks roughly bounded by the LIRR Sunnyside Yards and 37th Avenue to the north; the Brooklyn-Queens Expressway, the New York Connecting Railroad, and 72nd Street to the east; Woodside, Roosevelt, and 48th Avenues to the south; and 39th Street to the west. The rezoning included four components: (1) a zoning map amendment to change all or portions of the 130-block area, previously zoned R4, R5, R6, R7-1, C4-2, C8-1, and M1-1 to R4, R4-1, R5B, R5D, R6A, R7A, and C4-4A; (2) a zoning map amendment to update commercial overlay districts in the rezoning area by reducing overlay depth or eliminating overlays where only residential uses existed and establishing new C1-3 and C1-4 overlay districts to reflect existing commercial uses patterns; (3) a zoning text amendment to Appendix F of the *Zoning Resolution of the City of New York* to make the Inclusionary Housing Program applicable in R7A and C4-4A districts that were mapped on Queens Boulevard as part of the rezoning; and (4) a zoning text amendment to ZR Sections 14-41 and 14-43 to make small sidewalk cafes permissible on Queens Boulevard and allow only small sidewalk cafes on Skillman Avenue. The primary objectives of the 2011 Rezoning were to: (1) prevent out-of-character development; (2) reinforce the higher scale and density of the apartment buildings along Queens Boulevard; (3) provide incentives to promote the development of affordable housing; (4) update commercial zoning to reinforce existing land use patterns; and (5) allow small sidewalks cafes along portions of Queens Boulevard and Skillman Avenue. It should also be noted that, as part of the Sunnyside-Woodside rezoning, an (E) designation (E-272) was assigned to 19 lots located within the rezoning area to avoid the potential for significant adverse impacts in the areas of air quality, noise, and hazardous materials. As the project site was not included in the Sunnyside-Woodside rezoning area, no (E) designation was assigned to the project site as part of that action.

III. THE PROPOSED ACTIONS

The proposed actions consist of zoning map and text amendments, as outlined in greater detail below.

Zoning Map Amendment

The applicant is proposing a zoning map amendment to rezone Queens Block 119, Lot 143 (the project site) from M1-1 to R6A (see **Figure A-5**). Table A-2, below, compares the use and bulk requirements under the existing and proposed zoning districts. The proposed rezoning area is conterminous with the project site.

Figure A-4

Special PC District and Sunnsyside Gardens Historic District Boundaries

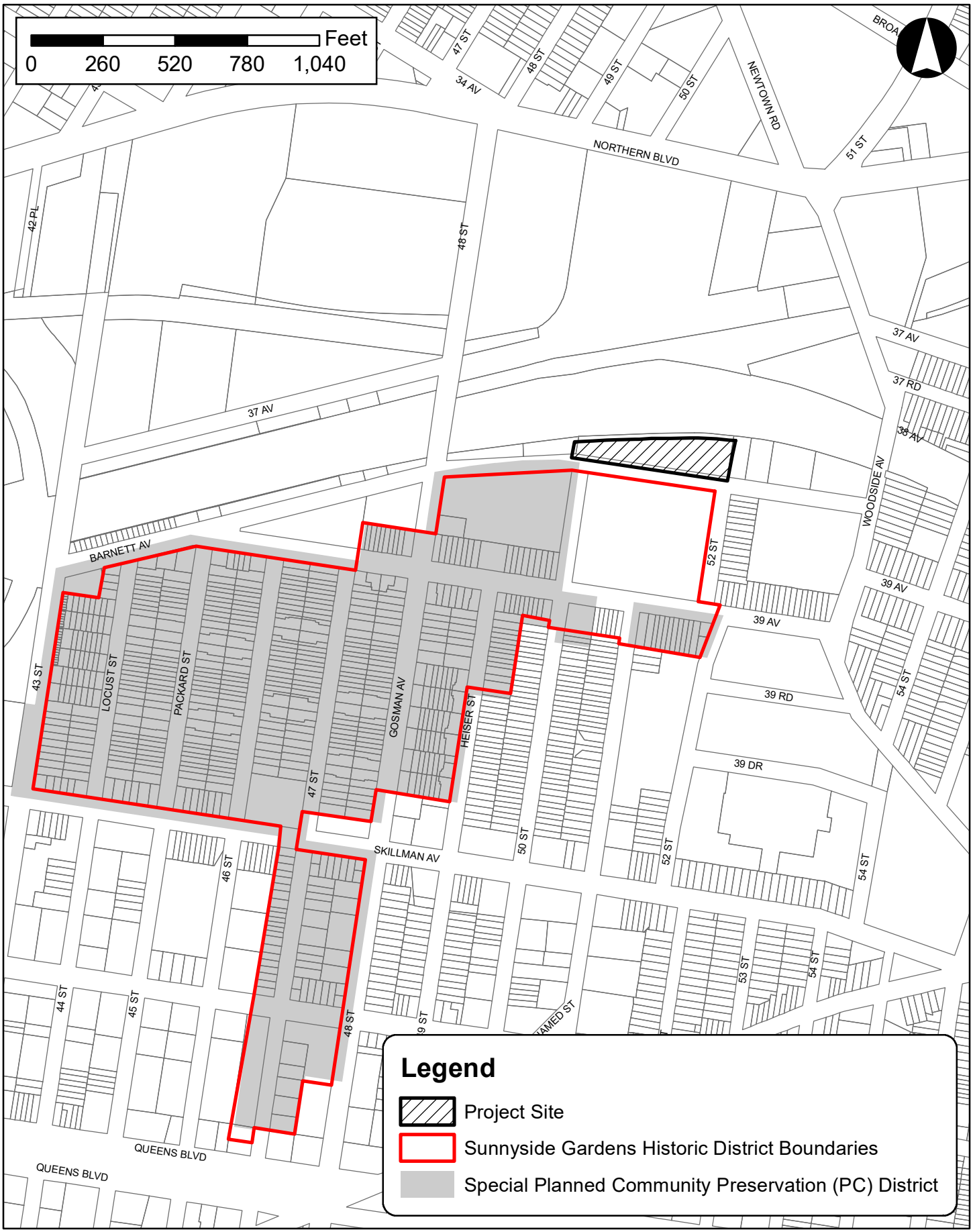
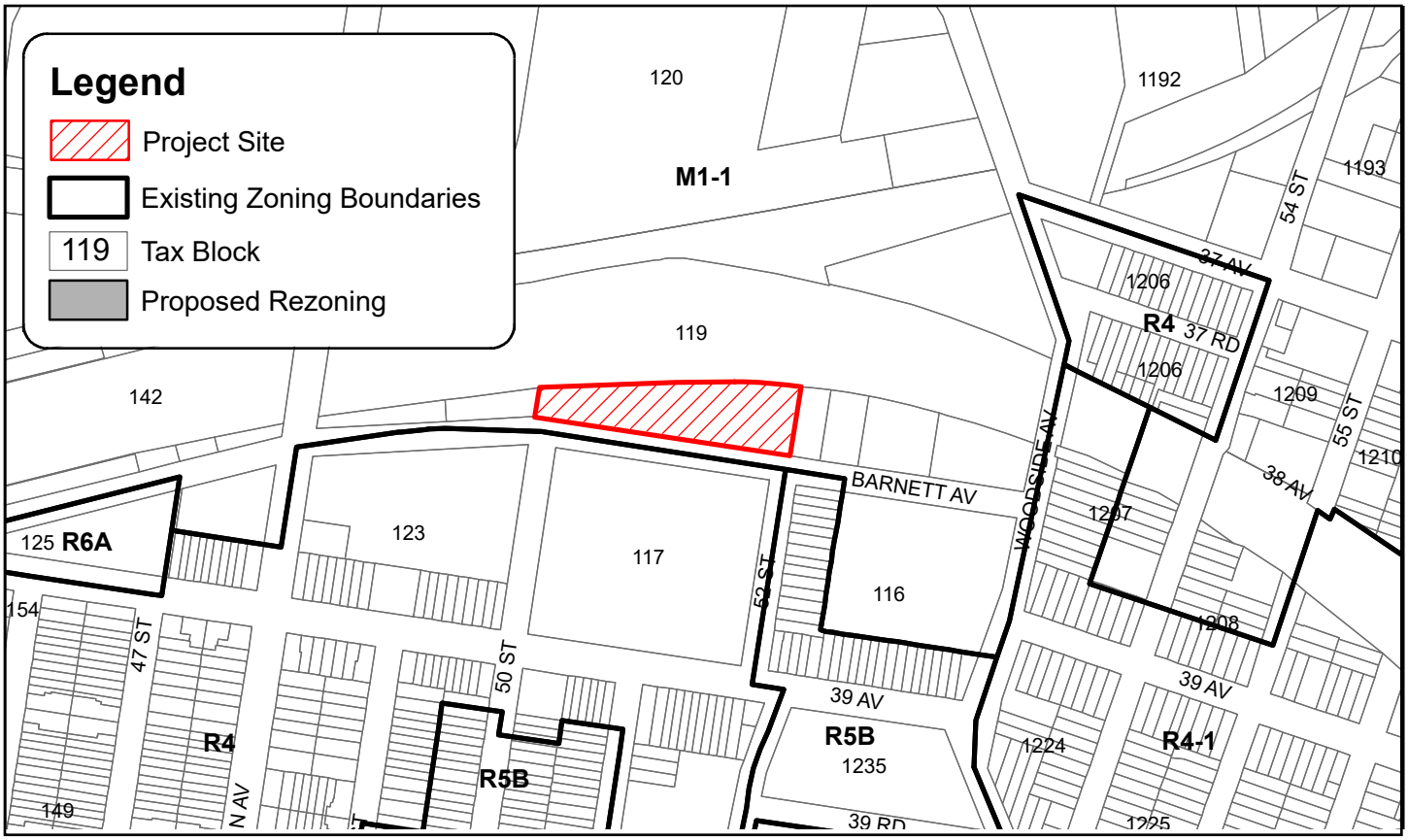
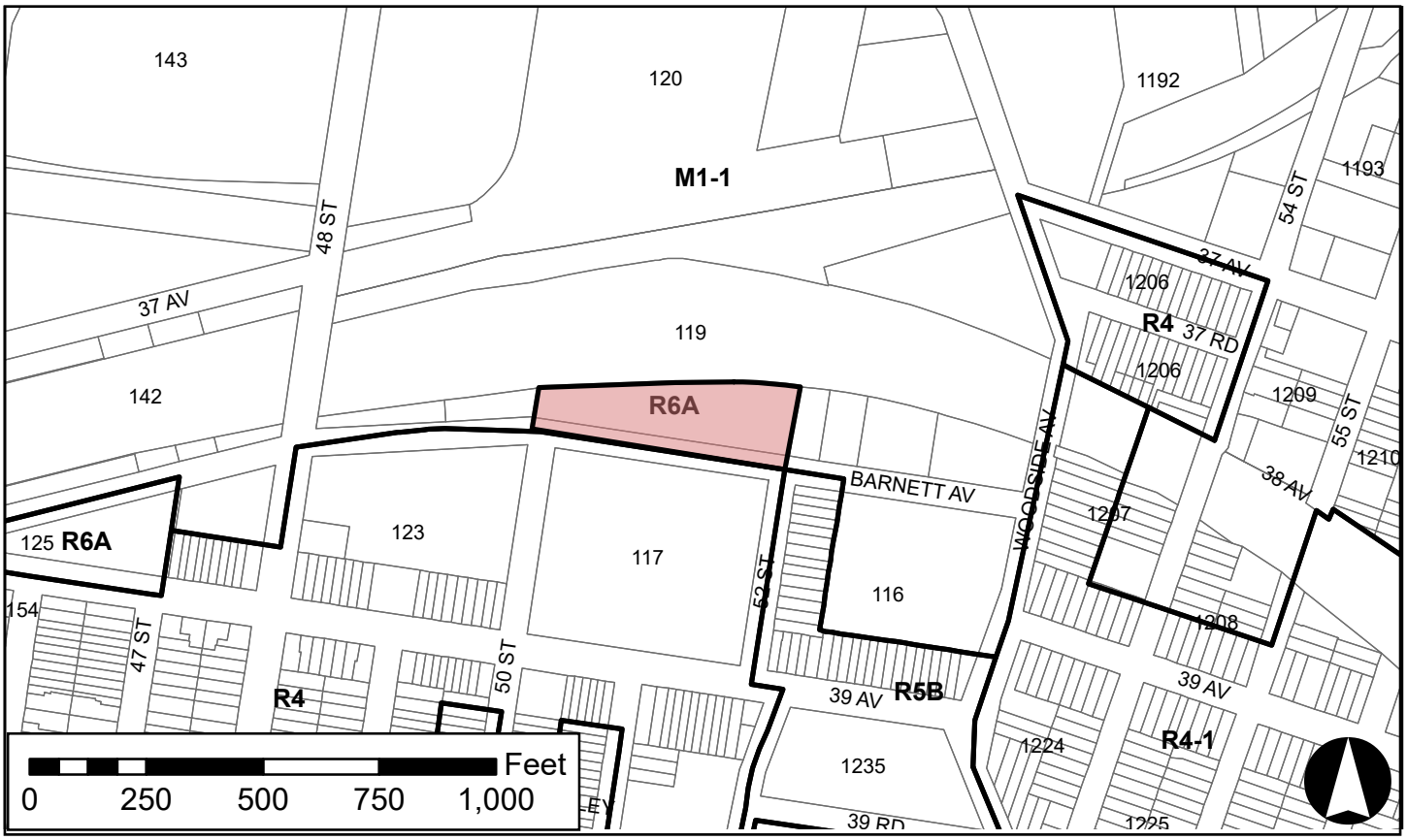


Figure A-5

Existing and Proposed Zoning



Existing



Proposed

Within the R6A district, a medium-density residential contextual district, the Quality Housing program bulk regulations are mandatory. The district permits a maximum FAR of 3.60 for developments that include affordable housing under the Mandatory Inclusionary Housing (MIH) Program. Buildings can reach a maximum base height of 65 feet without a setback from the streetwall. Above the maximum base height, a setback of 10 feet from the streetwall is required for developments on or within 100 feet of a wide street (75 feet or more). For developments along narrow streets, like the project site, a setback of 15 feet from the streetwall is required above the maximum base height. The R6A district allows a maximum building height of 80 feet (85 feet for building that includes a Qualifying Ground Floor).

Table A-2: Comparison of Existing and Proposed Zoning

	Existing M1-1	**Proposed R6A**
Use Groups	4-14, 16, 17	1-4
Maximum FAR		
Residential	0.0	3.6[1]
Community Facility	2.4	3.0
Commercial	1.0	0.0
Manufacturing	1.0	0.0

Source: *Zoning Resolution of the City of New York.*
Notes:
[1] Under the proposed Mandatory Inclusionary Housing Program.

Zoning Text Amendments

The applicant is proposing a zoning text amendment to designate the project site as a Mandatory Inclusionary Housing (MIH) Area subject to the requirements of Option 1 of the MIH Program, which requires at least 25 percent of the residential floor area to be reserved for residents with incomes averaging 60 percent AMI (refer to Table A-1).

A zoning text amendment to Section Appendix F of the *Zoning Resolution of the City of New York* is required to designate the project site as an MIH Area. The proposed zoning text amendment to Appendix F would designate the project site as an MIH Area subject to the affordability requirements of Option 1 of the MIH Program. The permanent affordable housing would be required on the project site in accordance with the requirements of Option 1 of the MIH Program. Option 1 requires that at least 25 percent of the residential floor area be reserved for residents with incomes averaging 60 percent AMI, with no unit targeted at a level exceeding 130 percent AMI.

(E) Designations

As described in greater detail in Attachment B, "Supplemental Screening," the proposed actions include the placement of an (E) designation for hazardous materials and noise on the project site (Block 119, Lot 143). The (E) designation is a mechanism that ensures no significant adverse impacts would result from a proposed action because of steps that would be undertaken prior to the development of a rezoned site. The (E) designation would ensure that the project site would not be developed unless necessary remedial measures are implemented. The (E) designation for noise would make sure that the building constructed on the project site would provide sufficient attenuation to achieve the 2014 *CEQR Technical Manual* interior noise level guidance of 45 dBA or lower for residential and community facility uses.

Additional Actions Not Subject to ULURP

Public Financing

The applicant also intends to seek public financing approval from the City and State. The sources for funding for the proposed project are expected to include construction funding from the New York City Department of Housing Preservation and Development (HPD) through HPD's Mixed Middle Income (M2), and Our Space Programs, as well as potential additional funding from HPD and the New York City Housing Development Corporation (HDC). Under HPD's Mixed Income (M2) Program, 20 percent of the units in a new development must be reserved for low-income households earning less than 50 percent of AMI. A minimum of 30 percent of the units would be set aside for moderate-income households earning between 80 percent and 100 percent of AMI. The applicant has stated that half of the total units would be for households earning less than 80 percent AMI.

It is anticipated that the public financing would be sought once the proposed zoning map and text amendments have been approved, and would call for approved building permits from the New York City Department of Buildings (DOB). The anticipated public funding sources would also mandate the building uses planned for the proposed development site (outlined in further detail below).

IV. PURPOSE AND NEED FOR PROPOSED ACTIONS

The proposed actions are intended to facilitate a new residential development containing income-restricted units, on a site currently occupied by a parking lot. The purpose and need of each of the actions are discussed below:

Zoning Map Amendment

Under the current M1-1 zoning district, the project site is restricted to light industrial use (Use Group 17), general services (Use Group 16), commercial use (Use Group 5 through 14) and specific community facilities (Use Group 4), and limited to a total FAR of 1.0. The proposed zoning map amendment, which would rezone the project site as R6A, would allow the applicant to develop residential use up to a maximum FAR of 3.60, and would therefore facilitate the proposed residential and non-profit office uses. The proposed zoning map amendment, and subsequent development, would allow for new mixed-use residential and community facility uses on an underutilized site in a predominantly residential neighborhood. The proposed project would create new affordable housing consistent with the City's Mandatory Inclusionary Housing (MIH) program. The development achieved as a result of the proposed zoning map amendment would enliven the streetscape with new uses and replace an underutilized parking lot.

Zoning Text Amendment

As part of the city's Mandatory Inclusionary Housing (MIH) program, land actions involving the creation of new housing in medium- and high-density districts would be required to provide a percentage of their total number of dwelling units as income-restricted. Since the Applicant is proposing to establish a new zoning district that would permit new residential use, the proposed development is subject to the requirements of MIH. The applicant is therefore proposing a zoning text amendment to Appendix F of the *Zoning Resolution of the City of New York,* to designate the project site as an MIH Area, subject to the requirements of Option 2 of the MIH program. Subsequently, the applicant would be required to build at least 30 percent of the residential floor area for residents with incomes averaging 80 percent AMI, with no unit targeted at a level exceeding 130 percent AMI.

V. DESCRIPTION OF THE PROPOSED DEVELOPMENT

The applicant is proposing the redevelopment of the project site with a 161,230 gsf mixed-use building with 155,907 gsf of residential space and 5,323 gsf of non-profit office space on the ground floor. The proposed project would include up to 167 residential units (Use Group 2). It is the applicant's position that 166 dwelling units (all units not including the superintendents unit) would be designated affordable. The Applicant intends for all of the housing units in the project area to be affordable to low- and moderate-income households. It is anticipated that 50% of the units would be affordable to households earning up to 60% of the Area Median Income (AMI) and the remaining units would be for moderate income households earning up to 110% AMI. The proposed development would have an FAR of 2.5 and would cover approximately 26,060 sf of the zoning lot (40 percent building coverage).

As shown in Figures A-6 through A-8, the proposed building would be oriented along Barnett Avenue and would occupy approximately 441 feet of lot frontage. The proposed building would incorporate a variety of building heights, with a maximum height of approximately 69 feet. The base of the proposed building would rise to a height of six-stories, approximately 58 feet, on portions of the site closest to Barnett Avenue with a maximum overall height of seven-stories. The seven-story portion of the building closer to Barnett Avenue would be set back from the sidewalk at distances ranging from approximately 7'6" to 11'3".

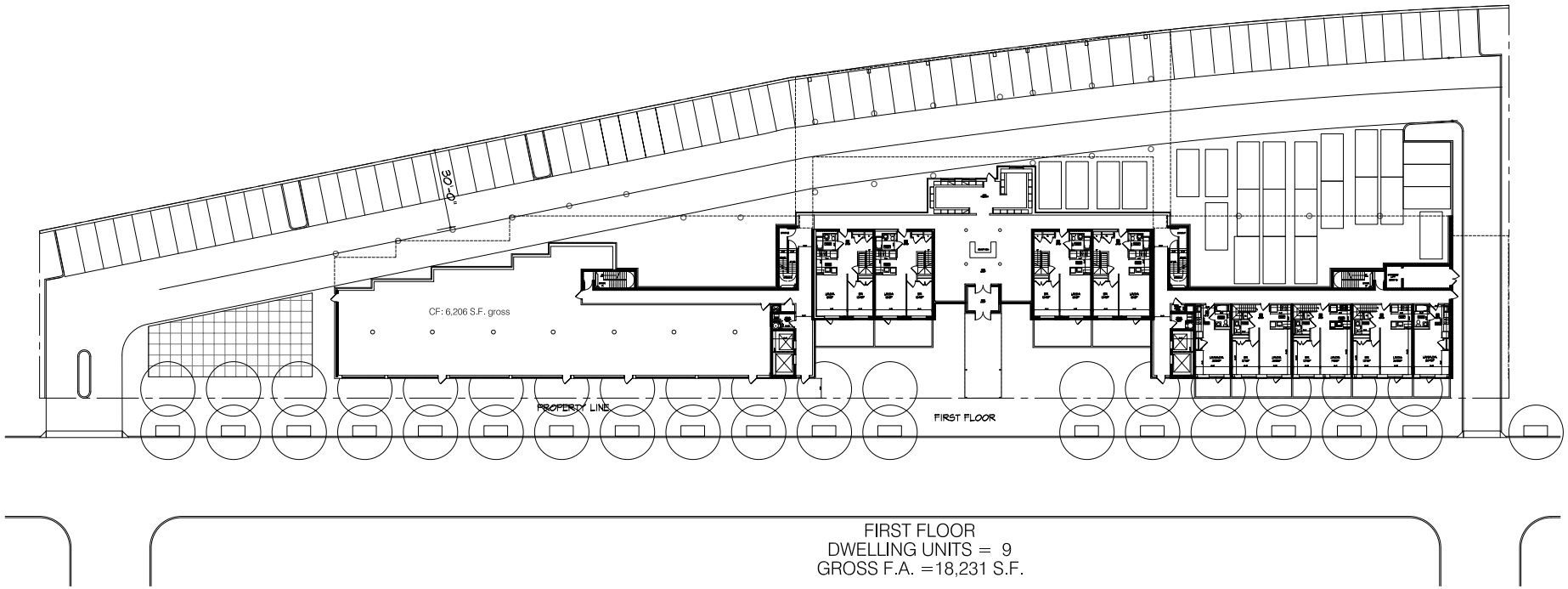
The main residential entrance would be provided along Barnett Avenue and would be set back approximately 29'10" to 35'11" from the sidewalk, creating a small courtyard around the entrance to the residential lobby (see Figure A-7). The ground floor would include a residential lobby and "maisonette" apartments with small front yards along Barnett Avenue. The western end of the ground floor would include the approximately 5,323-gsf community facility space.

The proposed project would also include 170 parking spaces to be located along the northern portion of the project site, at the rear of the building and partially underneath a portion of the proposed building where the rear second floor of the structure would be supported on columns with open parking at-grade beneath. Of those 170 parking spaces, 59 would be attended accessory parking spaces reserved for the use of the tenants of the proposed building and the remaining 111 parking spaces that would be available for public use. Entrances to the parking area would be provided via two curb cuts along Barnett Avenue: a 20-foot wide curb cut (including splays) would be provided at the easternmost edge of the project site and a 34-foot wide curb cut (including splays) would be provided at the westernmost edges of the project site (see Figure A-6). The eastern curb cut would be located across Barnett Avenue from the intersection of 52nd Street, where traffic flows one-way southbound, and the western curb cut would be located across Barnett Avenue from the intersection of 50th Street, where traffic flows one-way northbound.

VI. ANALYSIS FRAMEWORK AND RWCDS

Build Year

In order to assess the potential effects of the proposed actions, a RWCDS for both the future without the proposed actions ("No-Action") and the future with the proposed actions ("With-Action") conditions will be analyzed. As the project site does not require substantial building demolition activities prior to building construction, and the applicant has completed numerous buildings of a similar scale within 24-month construction schedules, it is anticipated that construction of the proposed project would be short-term (approximately 24-months) and the building would be built and occupied in 2023. Accordingly, the RWCDS would use a 2023 Build Year for analysis purposes.


30'-0"
CF: 6,206 S.F. gross
PROPERTY LINE
FIRST FLOOR
FIRST FLOOR
DWELLING UNITS = 9
GROSS F.A. =18,231 S.F.



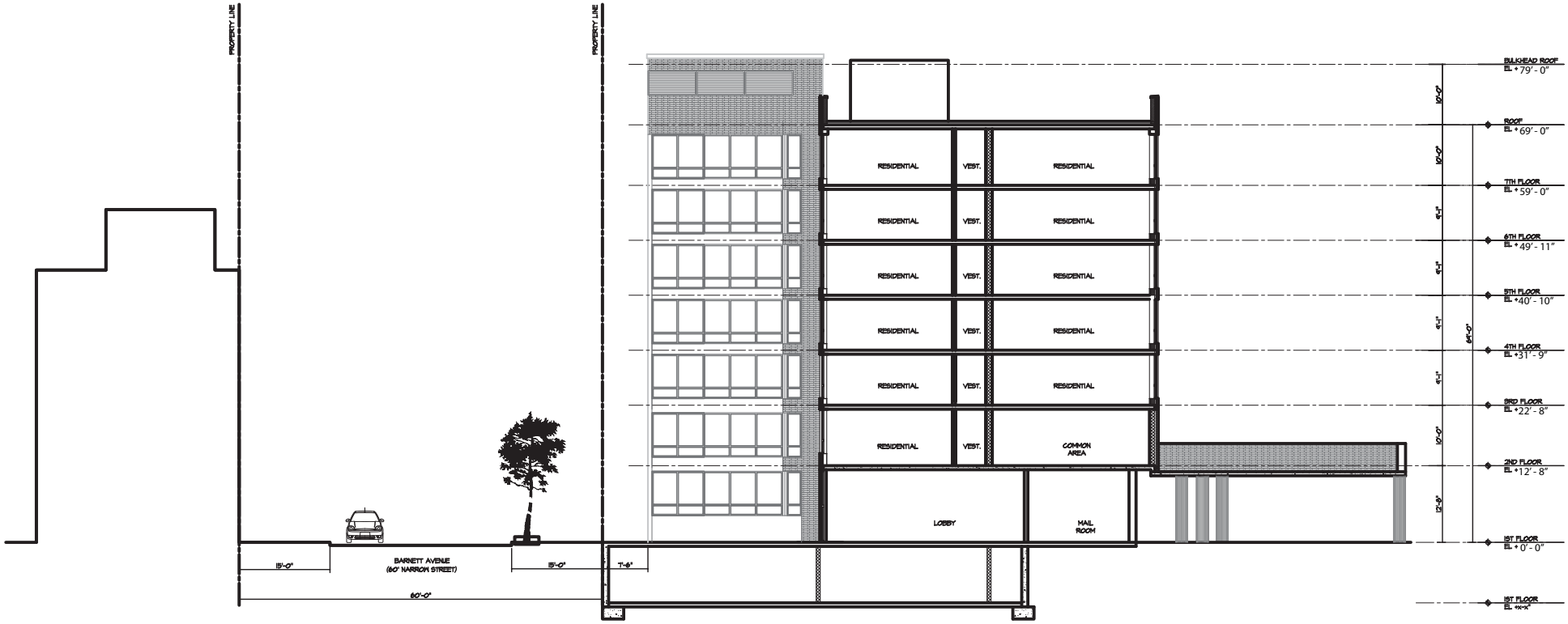
PHIPPS HOUSES

*For Illustrative Purposes Only

THE BARNETT

Queens, New York

VIEW FACING EAST



*Not to scale

PHIPPS HOUSES

THE BARNETT

Queens, New York

VIEW FACING WEST

The future No-Action and With-Action scenarios identifies the amount, type, and location of development that is expected to occur by 2023 without and with approval of the proposed actions. The incremental difference between the future No-Action and future With-Action scenarios is the basis for the impact category analyses of this EAS. Table A-3 provides a comparison of the 2023 No-Action and With-Action conditions.

The Future without the Proposed Actions (No-Action Condition)

In the future without the proposed actions, the project site's existing M1-1 manufacturing zoning would remain in place. Under the existing zoning, it is possible to develop the project site with a variety of uses including light industrial and manufacturing uses, limited community facility uses, and commercial uses such as office, hotels, and most retail uses; residential uses are not allowed. The maximum permitted FAR for the project site in the No-Action scenario is 1.0 for manufacturing and commercial uses and 2.4 for community facility uses. However, for this environmental review, absent the proposed actions, the applicant has stated that the project site, consisting of Block 119, Lot 143, would continue to be used as a 223-space public parking lot, as under existing conditions.

Table A-3: Comparison of 2023 No-Action and RWCDS With-Action Conditions

	No-Action	RWCDS With-Action	Increment
Land Use			
Residential	0	189,387 gsf	+ 189,387 gsf
Non-Profit Office	0	5,323 gsf	+ 5,323 gsf
Total Building Floor Area	0	194,710 gsf	+ 194,710,593 gsf
Public Parking Spaces	223	111 spaces	-112 spaces
Accessory Parking Space	0	59 spaces	+59 spaces
Population[1]			
Residents	0	448 residents	+ 448 residents
Workers	4	29	+25

Notes:

[1] Proposed project's population based on the following assumptions Based on the average household size of 2.37 for the Hunters Point-Sunnyside-West Maspeth Neighborhood Tabulation Area (2010 U.S. Census), one residential employee per 25 DU, one employee per 50 accessory parking spaces, and one employee per 250 sf of community facility (non-profit office) space.

The Future with the Proposed Actions (With-Action Condition)

With the proposed zoning map change from M1-1 to R6A, residential and community facility uses would be permitted on the project site. The proposed R6A district would allow residential uses up to a maximum FAR of 3.6 pursuant to the MIH Program, community facilities up to 3.0 FAR, and would reduce commercial and light manufacturing uses to 0.0 FAR.

As discussed above, the Proposed Project does not maximize the allowable building height or FAR in the proposed R6A district. Therefore, this EAS assumes a RWCDS development that maximizes the potential for development as a result of the proposed actions. As noted above, the largest development that could be constructed as a result of the proposed actions (referred to as the RWCDS development) would consist of an approximately 194,710 gsf predominantly residential building and an accessory at-grade parking lot with approximately 170 spaces. The RWCDS Development would contain an additional floor and a total of up to 189 affordable residential units and approximately 5,323 gsf of non-profit office space on the ground floor. The 189 affordable units assumes approximately 1,050 sf per dwelling unit. It is assumed that the

affordability bands for the proposed project would also apply to the RWCDS (refer to Table A-1 above). As stated previously, half of the RWCDS (95 DUs) would be for households earning less than 80 percent AMI.

The With-Action Development is expected to introduce an estimated 448 residents and 25 employees on the project site, over the No-Action condition[2].

VII. REQUIRED APPROVALS

The applicant requires zoning map and text amendments, as well as public financing approval, to implement the proposed project. The proposed zoning map and text amendments are discretionary public actions that are subject to both the Uniform Land Use Review Procedure (ULURP) and CEQR; the requested public funding is a discretionary public action that is subject to CEQR.

The City's ULURP process, mandated by Sections 197-c and 197-d of the New York City Charter, is designed to allow public review of ULURP applications at four levels: Community Board, Borough President, the New York City Planning Commission (CPC), and the City Council. The procedure has mandated time limits for review at each stage to ensure a maximum review period of approximately seven months. The process begins with certification by the Department of City Planning (DCP) that the ULURP application is complete. The application is then referred to the relevant Community Board (in this case Queens Community Board 2). The Community Board has up to 60 days to review and discuss the proposal, hold a public hearing, and adopt an advisory resolution on the ULURP application. The Borough President then has up to 30 days to review the application. CPC then has up to 60 days, during which time a public hearing is help on the ULURP application. If CPC approved, the application is then forwarded to the City Council, which has 50 days to review the ULURP application.

The requested public financing would be closed subsequent to approval of the proposed zoning map and text amendments (the ULURP application) by the City Council. The sources for funding for the proposed project are expected to include funding from the New York City Department of Housing Preservation and Development (HPD) and the New York City Housing Development Corporation (HDC) and would call for approved building permits from the New York City Department of Buildings (DOB).

CEQR is a process by which agencies review discretionary actions for the purpose of identifying the effects those actions may have on the environment. The City of New York established CEQR regulations in accordance with the New York State Environmental Quality Review Act (SEQRA). In addition, the City has published a guidance manual for environmental review, the *CEQR Technical Manual*. CEQR rules guide environmental review through the following steps:

- *Establish a Lead Agency*. Under CEQR, the "lead agency" is the public entity responsible for conducting environmental review. The environmental review for the proposed action is a coordinated review, with DCP serving as the lead agency for this project, and HPD as an involved agency under CEQR.
- *Environmental Review and Determination of Significance*. The lead agency will determine whether the proposed actions may have a significant impact on the environmental. To do so, an EAS must be prepared. This EAS will be reviewed by the lead agency, which will determine if the proposed actions and development would result in any significant adverse impacts on the environment.

[2] Based on the average household size of 2.37 for the Hunters Point-Sunnyside-West Maspeth Neighborhood Tabulation Area (2010 U.S. Census),

Attachment B

Supplemental Screening

I. INTRODUCTION

This Environmental Assessment Statement (EAS) has been prepared in accordance with the guidance and methodologies presented in the 2014 *City Environmental Quality Review* (CEQR) *Technical Manual*. For each technical area, thresholds are defined, which, if met or exceeded, require that a detailed technical analysis be undertaken. Using these guidelines, preliminary analyses were conducted for all aspects of the proposed actions to determine whether detailed analyses of any technical areas would be appropriate.

Part II of the EAS Form identifies those technical areas that warrant additional assessments, and a supplemental screening assessment for each of the identified analysis areas is provided in this attachment. All remaining technical areas detailed in the *CEQR Technical Manual* were not deemed to require supplemental screening, as they do not trigger initial CEQR thresholds and are unlikely to result in significant adverse impacts.

The supplemental screening assessment contained herein identified that detailed assessments are required in the areas of land use, zoning, and public policy; open space; shadows; historic and cultural resources; urban design and visual resources; air quality; and noise. These analyses are provided in Attachments C through I, and are summarized below. Table B-1 identifies for each CEQR technical area whether (a) the potential for impacts can be screened out based on the EAS Form, Part II, Technical Analyses; (b) the potential for impacts can be screened out based on a supplemental screening provided herein per the *CEQR Technical Manual*; or (c) a more detailed assessment is required to make an impact determination.

II. LAND USE, ZONING, AND PUBLIC POLICY

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

As the proposed actions include zoning map and text amendments, a detailed assessment of land use, zoning, and public policy is warranted and is provided in Attachment C, "Land Use, Zoning, and Public Policy." As shown in Attachment C, the proposed actions would be consistent with the established mixed-use character of the surrounding neighborhood and with the predominantly residential uses located to the south of the project site. The proposed actions would not directly displace any land uses so as to adversely affect surrounding land uses, nor would it generate land uses that would be incompatible with land uses, zoning, or public policy in the secondary study area. The proposed actions would not create land uses or structures that would be incompatible with the underlying zoning in the surrounding area, nor would they cause a substantial number of existing structures to become nonconforming. The proposed actions would not result in land uses that conflict with public policies applicable to the primary or secondary study areas.

Table B-1: Summary of CEQR Technical Areas Screening

Technical Area	Screened out per EAS Form	Screened out per Supplemental Screening	Detailed Analysis Required
Land Use, Zoning, & Public Policy			X
Socioeconomic Conditions	X		
Community Facilities		X	
Open Space			X
Shadows			X
Historic & Cultural Resources			X
Urban Design & Visual Resources			X
Natural Resources	X		
Hazardous Materials		X	
Water & Sewer Infrastructure	X		
Solid Waste & Sanitation Services	X		
Energy	X		
Transportation		X	
Air Quality			X
Greenhouse Gas Emissions	X		
Noise			X
Public Health		X	
Neighborhood Character		X	
Construction		X	

III. COMMUNITY FACILITIES

Potential direct or indirect effects of a proposed action can trigger the need for analysis of community facilities. Direct effects occur if a project would "physically alter a community facility, whether by displacement or other physical change." Indirect effects occur if a project would add population to an area, which may potentially affect service delivery. While no community facilities would be directly displaced by the proposed actions and subsequent proposed project, the proposed actions would facilitate the development of up to 189 affordable residential units. The *CEQR Technical Manual* provides density thresholds, which are used to make an initial determination of whether detailed studies are necessary to determine potential indirect impacts. These density thresholds are summarized in Table B-2.

Public Schools

The RWCDS Development is not expected to generate more than 50 elementary and intermediate school students or 150 high school students, which are the *CEQR Technical Manual* thresholds for analysis, and therefore a detailed assessment of the potential impacts of the proposed actions on public schools is not warranted. The New York City School Construction Authority (SCA) recently released new Projected Public School Ratios data as part of the documents used in drafting the DOE/SCA Fiscal Year (FY) 2020-2024 Capital Plan (February 2019). According to these data, multipliers for primary and intermediate schools have been refined to reflect how many pupils are generated by new housing at the community school district level based on the 2010 Decennial Census, housing completions from the Department of

Buildings, and administrative enrollment data from the Department of Education(multipliers for high schools have been maintained at the borough level).

Based on the newly released student generation rates for Queens Community School District (CSD) 30 (0.11 elementary school students per unit; 0.04 intermediate school students per unit; and 0.10 high school students per unit), the 189-unit RWCDS Development is expected to generate 21 elementary school students, 8 intermediate school students, and 19 high school students. As this number of students is less than the *CEQR Technical Manual* analysis thresholds, a detailed assessment of public schools is not warranted, and significant adverse impacts are not anticipated in this technical area.

Table B-2: Preliminary Screening Analysis Criteria

Community Facility	Threshold for Detailed Analysis	Minimum Number of Residential Units in Queens that Trigger Detailed Analyses
Public Elementary/Intermediate Schools	50 or more elementary/intermediate school students	333 (in Queens CSD 30)[1]
Public High Schools	150 or more high school students	1,500 (in Queens)[1]
Libraries	More than five percent increase in ratio of residential units to libraries in the borough	622
Health Care Facilities (outpatient)	Introduction of sizeable new neighborhood	N/A
Child Care Centers (publicly funded)	More than 20 eligible children under age six based on number of low- to moderate-income units	139
Fire Protection	Introduction of sizeable new neighborhood	N/A
Police Protection	Introduction of sizeable new neighborhood	N/A

Source: *CEQR Technical Manual*

[1] Based on newly released student generation rates for Queens CSD 30 (0.11 elementary school students per unit; 0.04 intermediate school students per unit; and 0. high school students per unit).

Child Care Facilities

The *CEQR Technical Manual* requires a detailed analysis of publicly-funded child care centers when a proposed action would produce substantial numbers of subsidized, low- to moderate-income affordable housing units that may therefore generate a sufficient number of eligible children to affect the availability of slots at group child care facilities. Typically, a proposed action that generates 20 or more eligible children under age six requires further analysis. As shown in Table B-2, above, based on *CEQR Technical Manual* multipliers, 139 affordable housing units in Queens would yield more than 20 children under age six eligible for publicly-funded child care.

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

While, as noted above, the proposed actions would facilitate the construction of up to 189 affordable dwelling units in the RWCDS, up to approximately 95 are currently envisioned to be affordable to households earning up to 80 percent AMI. As the number of housing units expected to be subsidized and targeted for incomes of 80 percent AMI or below (the affordable units considered in a CEQR child care analysis) is less than the *CEQR Technical Manual* analysis threshold of 139 units in Queens, the proposed project would generate less than 20 children under age six eligible for publicly funded child care, and a detailed assessment is not warranted.

Libraries, Health Care Facilities, and Fire and Police Protection

As the proposed actions would not result in the introduction of a sizeable new neighborhood and would not result in a more than five percent increase in the ratio of residential units to libraries in Queens (i.e., would result in the development of fewer than 622 DU), analyses of fire and police protection, health care facilities, and libraries are not warranted, and significant adverse impacts are not anticipated in these technical areas.

IV. OPEN SPACE

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

The RWCDS Development would generate 448 residents on the project site and therefore requires further assessment pursuant to *CEQR Technical Manual* guidance.[1] As the number of employees generated by the RWCDS Development would be less than the *CEQR Technical Manual* analysis threshold of 500, an analysis of non-residential indirect open space impacts is not warranted and the analysis focuses solely on the potential for residential study area indirect open space impacts.

As shown in Attachment D, the proposed actions would not result in significant adverse open space impacts. While the residential open space study area would continue to have a shortfall of open space in the future with the proposed actions, the demand for open space generated by the RWCDS Development would not significantly exacerbate the No-Action deficiency, and the population added as a result of the proposed actions is not expected to noticeably affect utilization of the area's open spaces. Most of the study area open space resources are only lightly utilized and are in good condition, and could therefore handle additional demand. Residents of the study area would also continue to use additional open space resources not included in the quantitative assessment, including the 6.07-acre Sunnyside Gardens Park, a significant study area open space resource located one block southwest of the project site. Therefore, while the proposed actions would result in an incremental decrease in open space ratios in the future, given the level of decrease anticipated, the existing low utilization of many of the study area's open spaces, and the availability of additional open spaces conservatively not included in the quantitative analysis, the proposed actions would not result in a significant adverse impact on open space. In addition, the proposed actions would not have a direct effect on any study area open spaces due to construction or operation.

[1] Based on the average household size of 2.37 for the Hunters Point-Sunnyside-West Maspeth Neighborhood Tabulation Area (2010 U.S. Census),

V. SHADOWS

As stated in the *CEQR Technical Manual*, a shadow assessment considers projects that result in new shadows long enough to reach a sunlight-sensitive resource. Therefore, a shadow assessment is generally required only if the project would either (a) result in new structures (or additions to existing structures, including the addition of rooftop mechanical equipment) of 50 feet or more; or (b) be located adjacent to, or across the street from, a sunlight-sensitive resource.

As discussed in Attachment A, "Project Description," the proposed actions would facilitate the development of a building with a maximum height of approximately 85 feet in the RWCDS. As such, a shadows analysis was prepared for the RWCDS Development, which is provided in Attachment E, "Shadows." As presented in Attachment E, the RWCDS Development would cast incremental shadows on a portion of Sunnyside Gardens Park and Sunnyside Park Community Garden, each located to the southwest of the project site. While Sunnyside Gardens Park nor Sunnyside Park Community Garden is considered a publicly accessible open space warranting analysis, the park is a contributing resource of the LPC-designated and S/NR-listed Sunnyside Gardens Historic District and therefore, a detailed analysis of the incremental shadows on this resource was conducted in accordance with *CEQR Technical Manual* methodology. The shadows analysis determined that the duration and coverage of incremental shadows on Sunnyside Gardens Park would not be significant or adverse. Project-generated incremental shadows would occur during the early morning hours and would last for approximately five minutes on May 6/August 6 and 33 minutes on June 21. On both analysis days, new incremental shadows would be limited to small northeastern portions of the park which contain a grassy baseball field surrounded by trees. Sunnyside Gardens Park would not receive project-generated incremental shadows after 6:32 AM on either analysis day, and as such, any project-generated shadows would exit the park several hours before the park opens at 10:00 AM. Incremental shadows as a result of the proposed actions would be cast on the Sunnyside Park Community Garden for 22 minutes during the May 6/August 6 and for 51 minutes during the June 21 analysis days. The community garden would not receive incremental shadows after 6:49 AM on either analysis day. The park and community garden would each continue to receive adequate sunlight during the morning, afternoon, and evening hours, and as such, the RWCDS building would not have significant adverse effects on the utilization, enjoyment, or any vegetation in Sunnyside Gardens Park or Sunnyside Park Community Garden.

VI. HISTORIC AND CULTURAL RESOURCES

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

According the *CEQR Technical Manual* guidelines, impacts on historic resources are considered on those sites affected by proposed actions and in the area surrounding identified development sites. The historic resources study area is therefore defined as the project site as well as an approximately 400-foot radius around the project site. Archaeological resources are considered only in those areas where new excavation

or ground disturbance is likely and would result in new in-ground disturbance, as compared to No-Action conditions (the project site).

As the project site is located across the street from the LPC-designated and S/NR-listed Sunnyside Gardens Historic District, a detailed analysis of historic and cultural resources in warranted. In consultation with the LPC it was determined that there is no potential for significant archaeological resources to be located on the project site, and the analysis focuses solely on the potential indirect effects of the proposed actions on nearby historic resources. As presented in Attachment F, "Historic and Cultural Resources," the proposed actions would not result in significant adverse impacts on historic architectural resources. The proposed actions would replace an existing surface parking lot with a new building that reflects and complements the aesthetics of the adjacent LPC-designated and S/NR-listed Sunnyside Gardens Historic District. The proposed new building would have a positive visual effect in the neighborhood, allowing a long underutilized site to be redeveloped and activated with street level residential and community facility uses, extending the streetwall of Barnett Avenue in a manner that would be appropriate with the surrounding historic context. As such, the proposed actions would not result in significant adverse contextual impacts. Additionally, the proposed actions would not result in direct impacts or construction-related impacts to historic resources, nor would it result in shadows being cast on sunlight-sensitive features of historic resources.

VII. URBAN DESIGN AND VISUAL RESOURCES

An area's urban design components and visual resources together define the look and character of the neighborhood. The urban design characteristics of the neighborhood encompass the various components of buildings and streets in the area, including building bulk, use, and type; building arrangement; block form and street pattern; streetscape elements; street hierarchy; and natural features. An area's visual resources are its unique or important public view corridors, vistas, or natural or built features. For CEQR analysis purposes, this includes only views from public and publicly accessible locations and does not include private residences or places of business.

An analysis of urban design and visual resources is appropriate if a proposed action would (a) result in buildings that have substantially different height, bulk, form, setbacks, size, scale, use, or arrangement than exists in an area; (b) change block form, demap an active street or map a new street, or affect the street hierarchy, street wall, curb cuts, pedestrian activity or streetscape elements; or (c) would result in above-ground development in an area that includes significant visual resources.

As the proposed actions include zoning map and text amendments that would change the allowable floor area ratio (FAR) and other zoning characteristics of the project site, a preliminary urban design analysis is required and is provided in Attachment G, "Urban Design and Visual Resources." In addition, as the LPC-designated and S/NR-listed Sunnyside Gardens Historic District is located in close proximity to the project site, an analysis of the potential impacts of the proposed actions on visual resources is also provided in Attachment G. As discussed therein, the proposed actions and subsequent development would not have a significant adverse impact on the area's urban design and visual resources. The proposed actions would facilitate new development, including residential and community facility uses adjacent to existing residential uses. The RWCDS Development would replace an existing public parking lot with a new residential building and landscaping that would enliven the streetscape. The RWCDS Development would be consistent with and complement the existing building context, which includes a variety of residential building typologies, as well as other uses. While the project site is located in proximity to the LPC-designated and S/NR-listed Sunnyside Gardens Historic District, the RWCDS Development would not block significant or unique views of any visual resources or obstruct important views or view corridors. It

is expected that the proposed actions would have a beneficial impact on the urban design and visual resources of the primary and secondary study areas.

VIII. 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*, the potential for significant impacts from hazardous materials can occur when: (a) hazardous materials exist on a site and (b) an action would increase pathways to their exposure; or (c) an action would introduce new activities or processes using hazardous materials.

The proposed actions would facilitate the redevelopment of Queens Block 119, Lot 143 with residential uses in an area that had formerly been used by industrial uses and that is adjacent to active light industrial uses. As such, a Phase I Environmental Site Assessment (ESA) and a Phase II Environmental Site Investigation (ESI) were prepared for the project site, excerpts of which are included in Appendix III. The Phase I ESA and Phase II ESI were reviewed and approved by the New York City Department of Environmental Protection (DEP) in a correspondence dated October 20th, 2015, provided in Appendix II. The findings of the Phase I ESA and subsequent Phase II ESI are summarized below. As outlined in the following, with implementation of the Phase II recommendations, the proposed actions and subsequent development would not result in significant adverse hazardous materials impacts. Adherence to these recommendations would be ensured by through an (E) designation, to be assigned to the project site.

Phase I Environmental Site Assessment (2007)

Merritt Engineering Consultants, P.C. performed a Phase I ESA in July 2007 in accordance with ASTM Standard E1527-05, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Practice*, which was the standard at the time. Assessment findings included:

- City directories from 1962 to 1967 and Historical Sanborn maps from 1970 to 1992 indicated that a gasoline filling station and service center operated on the center of the southern portion of the project site. Sanborn maps from 1993 to 1996 indicated that an auto repair facility operated on the central southern portion of the project site.
- The property directly east of the project site, Cleaners Products Supply, Inc., located at 50-45 Barnett Avenue, was an active chemical bulk storage facility.

According to the New York State Department of Environmental Conservation's (NYSDEC's) Environmental Site Remediation Database, Cleaners Products Supply, Inc. operated a dry cleaning supply business from 1952 to 2007. The database indicated that, during a subsurface investigation, tetrachloroethylene (PCE) was detected in soil ten to 14 feet below grade at concentrations ranging from 32 to 71 parts per million (ppm) and in groundwater at concentrations ranging from 530 to 3,800 parts per billion (ppb). PCE was detected at 13,000 micrograms per cubic meter ($\mu g/m^3$) in one sub-slab soil vapor sample collected near the former chemical storage area. PCE concentrations in off-site soil ranged from non-detect to 9,000 ppb. No further information was included in the database.

It should be noted that Cleaners Products Supply, Inc. vacated the property in 2007 and the property is currently occupied by the Capital Glass and Sash Co., a company that specializes in the design, fabrication, and installation of windows, mirrors, shower/tub enclosures, partition walls, and storefronts.

Ground Penetrating Radar Report (2008)

Enviroprobe performed a Ground Penetrating Radar (GPR) survey to locate potential underground structures associated with former on-site operations. Findings included: (1) two suspect underground storage tanks (USTs) identified on the central southern portion of the project site, adjacent to the existing parking lot entrance; and (2) a possible septic tank identified at the center of the project site, north of the existing parking attendant building.

Phase II Environmental Site Investigation (2015)

In May 2015, AKRF prepared a Phase II ESI to determine whether former on-site and/or off-site activities had adversely affected the project site's subsurface. The scope of the Phase II ESI was based on Merritt Engineering Consultants, P.C.'s July 2007 Phase I ESI and AKRF's October 2014 Sampling Protocol and associated Health and Safety Plan (HASP). Field activities were performed on March 31 and April 1, 2015 and included: (1) the advancement of six borings with the collection of 12 soil samples; (2) the installation of three temporary well points in the soil borings and collection of a groundwater sample from each; (3) the installation of three soil vapor points with the collection of a soil vapor sample from each; and (4) the collection of one ambient air sample.

As summarized in the Phase II ESI:

- No volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, or polychlorinated biphenyls (PCBs) were detected in the soil samples at concentrations exceeding their respective Unrestricted Use Soil Cleanup Objectives (USCOs) or Restricted-Residential Use Soil Cleanup Objectives (RRSCOs). Mercury and lead were detected at concentrations exceeding their respective USCOs in three soil samples, but below their respective RRSCOs. These exceedances are typical of urban soil quality and are not likely related to a spill or release.
- Tetrachloroethene (PCE) was detected above its respective NYSDEC Ambient Water Quality Value (AWQV) in groundwater sample MW-3 (in the southeastern portion of the project site). Based on the close proximity of MW-3 to the former Cleaners Products Supply, Inc. directly east of the project site, the PCE detection is likely related to the contamination present at the former cleaners and not an on-site spill or release. One SVOC [bis(2-ethylhexyl)phthalate] was detected slightly above its respective AWQV in sample MW-2 (in the central portion of the project site). Metals were detected in both the unfiltered and filtered groundwater samples, with 12 metals (barium, beryllium, chromium, copper, iron, lead, magnesium, manganese, nickel, selenium, sodium, and thallium) exceeding their respective AWQVs in one or more unfiltered samples. Concentrations in the filtered samples were significantly lower (with the exception of sodium), with manganese and sodium exceeding their respective AWQVs in at least two samples. These metals are likely naturally occurring or reflective of regional groundwater quality and do not indicate the likelihood of an on-site release.
- Up to 16 VOCs were detected in the soil vapor samples and seven VOCs were detected in the ambient air. PCE was detected in sample SV-3 (in the southeastern portion of the project site) at a concentration of 6,010 µg/m^3, which is above its Air Guideline Value (AGV) of 30 µg/m^3. Based on the close proximity of SV-3 to the former Cleaners Products Supply, Inc. directly east of the project site, the PCE detection is likely related to the contamination present at the former cleaners and not to an on-site spill or release. None of the remaining VOCs with established AGVs or Matrices were detected above their respective guidelines. VOCs associated with petroleum were detected in soil vapor samples at a maximum concentration of 20.2 µg/m^3.

DEP reviewed the Phase I ESA and Phase II ESI and outlined their recommendations in a letter dated October 20th, 2015 (refer to Appendix II). To address the findings of the Phase I and Phase II, a hazardous

materials (E) designation will be assigned to the projects site. By assigning an (E) designation to the project site (where there is known or suspect environmental concern), the potential for an adverse impact to human health and the environment resulting from the proposed actions would be reduced or avoided. The (E) designation provides the impetus to identify and address environmental conditions so that significant adverse impacts during site development would be reduced, with the New York City Mayor's Office of Environmental Remediation (OER) providing the regulatory oversight of the environmental investigation and remediation during the process. Building permits are not issued by DOB without prior OER approval of the investigation and/or remediation pursuant to the provisions of Section 11-15 of the Zoning Resolution of the City of New York (Environmental Requirements).

The text of the hazardous materials (E) designation for the project site **(E-573)** (Block 119, Lot 143) would be as follows:

Task 1-Sampling Protocol

The applicant submits to OER, for review and approval, a Phase I of the site along with a soil, groundwater and soil vapor 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 samples should be selected to adequately characterize the site, specific sources 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-Remediation Determination and Protocol

A written report with findings and a summary of the data must he 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 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.

A construction-related health and safety plan should be submitted to OER and would be implemented during excavation and construction activities to protect workers and the community from potentially significant adverse impacts associated with contaminated soil, groundwater and/or soil vapor. This plan would be submitted to OER prior to implementation.

With this (E) designation in place, no significant adverse impacts related to hazardous materials are expected, and no further analysis is warranted.

IX. TRANSPORTATION

The *CEQR Technical Manual* identifies minimum development densities that have the potential to result in significant adverse impacts to transportation and therefore require a detailed transportation analysis. As shown in Table 16-1 of the *CEQR Technical Manual*, actions which may result in fewer than 50 peak hour vehicle trips are generally unlikely to cause significant adverse impacts. For projects in Zone 3 (which includes areas within a 0.5-mile of a subway station in Queens), the development thresholds requiring trip generation analysis are 200 DUs and 15,000 gsf of local retail space.

The RWCDS net increment for the Proposed Actions would result in the introduction of 189 DUs, and approximately 5,323 gsf of community facility/service space to the proposed rezoning area. To ensure the RWCDS development would result in less than 50 peak hour vehicle trips, 200 subway/bus trips, or 200 pedestrian trips, a travel demand forecast was prepared and is shown in Table B-4. As shown in Table B-4, the maximum incremental number of peak hour vehicle trips at the RWCDS development is 22 vehicles. Additionally, the Proposed Actions would not result in an incremental 200 subway/bus or 200 pedestrian trips. Therefore, a detailed analysis of transportation is not warranted.

50-25 Barnett Avenue - With-Action Scenario

Table B-3: Transportation Planning Assumptions

Land Use:	**Office**		**Residential**	
Size/Units:	5,323 gsf		189 DU	
Trip Generation:	(1)		(1)	
Weekday	18		8.075	
Saturday	3.9		9.6	
	per 1,000 gsf		per DU	
Temporal Distribution:	(2)		(2)	
AM	11.8%		9.1%	
MD	14.5%		4.7%	
PM	13.7%		10.7%	
SatMD	17.0%		8.0%	
	0.0%		0.0%	
Modal Splits:	All Periods		All Periods	
Auto	12.5%		12.5%	
Taxi	1.4%		1.4%	
Subway	66.6%		66.6%	
Bus	4.8%		4.8%	
Walk/Bike/Other	14.7%		14.7%	
	100.0%		100.0%	
	(2)		(2)	
In/Out Splits:	In	Out	In	Out
AM	96.0%	4.0%	20%	80%
MD	39.0%	61.0%	51%	49%
PM	5.0%	95.0%	65%	35%
Sat MD	60.0%	40.0%	50%	50%
Vehicle Occupancy:	(2)		(2)	
	All Periods		All Periods	
Auto	1.17		1.27	
Taxi	1.4		1.50	
Truck Trip Generation:	(1)		(1)	
Weekday	0.32		0.06	
Saturday	0.01		0.02	
	per 1,000 sf		per DU	
	(1)		(1)	
AM	10.0%		12.0%	
MD	11.0%		9.0%	
PM	2.0%		2.0%	
Sat MD	11.0%		9.0%	
	In	Out	In	Out
AM/MD/PM/SMD	50.0%	50.0%	50.0%	50.0%

Notes :

(1) Based on 2014 *City Environmental Quality Review (CEQR) Technical Manual.*

(2) Based on 2011 Woodside/Sunnyside Rezoning EAS

50-25 Barnett Avenue - With-Action Scenario
Table B-4: Travel Demand Forecast

Land Use:		**Office**		**Residential**		**Total**	
Size/Units:		5,323 gsf		189 DU			
Peak Hour Person Trips:							
	AM	12		140		152	
	MD	14		72		86	
	PM	14		164		178	
	Sat MD	4		146		150	
Person Trips:							
		In	Out	In	Out	In	Out
AM	**Auto**	1	1	4	14	5	15
	Taxi	0	0	0	2	0	2
	Subway	8	0	19	75	27	75
	Bus	1	0	1	5	2	5
	Walk/Other	2	0	4	16	6	16
	Total	12	1	28	112	40	113
		In	Out	In	Out	In	Out
MD	**Auto**	1	1	5	4	6	5
	Taxi	0	0	1	0	1	0
	Subway	4	6	25	23	29	29
	Bus	0	0	2	2	2	2
	Walk/Other	1	1	5	5	6	6
	Total	6	8	38	34	44	42
		In	Out	In	Out	In	Out
PM	**Auto**	0	2	13	7	13	9
	Taxi	0	0	1	1	1	1
	Subway	0	9	71	38	71	47
	Bus	0	1	5	3	5	4
	Walk/Other	0	2	16	8	16	10
	Total	0	14	106	57	106	71
		In	Out	In	Out	In	Out
Sat MD	**Auto**	0	0	9	9	9	9
	Taxi	0	0	1	1	1	1
	Subway	1	0	48	48	49	48
	Bus	0	0	4	4	4	4
	Walk/Other	0	0	11	11	11	11
	Total	1	0	73	73	74	73
Vehicle Trips :							
		In	Out	In	Out	In	Out
AM	**Auto (Total)**	1	1	3	11	4	12
	Taxi	0	0	0	1	0	1
	Taxi Balanced	0	0	0	0	0	0
	Truck	0	0	1	1	1	1
	Total	1	1	4	12	5	13
		In	Out	In	Out	In	Out
MD	**Auto (Total)**	1	1	4	3	5	4
	Taxi	0	0	1	0	1	0
	Taxi Balanced	0	0	1	1	1	1
	Truck	0	0	1	1	1	1
	Total	1	1	6	5	7	6
		In	Out	In	Out	In	Out
PM	**Auto (Total)**	0	2	10	6	10	8
	Taxi	0	0	1	1	1	1
	Taxi Balanced	0	0	2	2	2	2
	Truck	0	0	0	0	0	0
	Total	0	2	12	8	12	10
		In	Out	In	Out	In	Out
Sat MD	**Auto (Total)**	0	0	7	7	7	7
	Taxi	0	0	1	1	1	1
	Taxi Balanced	0	0	2	2	2	2
	Truck	0	0	0	0	0	0
	Total	0	0	9	9	9	9

	Total Vehicle Trips		
	In	Out	Total
AM	5	13	18
MD	7	6	13
PM	12	10	22
Sat MD	9	9	18

X. AIR QUALITY

Heating and Hot Water Systems

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

The RWCDS Development would use fossil fuels for HVAC purposes. Emissions from the HVAC system of the development may affect air quality levels at other nearby existing land uses. According to *CEQR Technical Manual* guidelines, the impacts of these emissions would be a function of fuel type, stack height, building size, and location of each emissions source relative to nearby sensitive land uses.

The preliminary screening analysis was conducted using Figure 17-3 of the *CEQR Technical Manual*, which was specifically developed to predict the threshold of development size below which a project would not likely have a significant impact. Figure 17-3 indicates the size of the proposed development and distance to the nearest building of a height similar to or greater than the stack height of the proposed building. If the distance between the source and receptor buildings is less than or equal to the threshold distance (i.e., falls above the curve on the nomograph), further analysis is required using the U.S. Environmental Protection Agency's (EPA's) AERSCREEN or AERMOD models. If the source building is taller than the receptor building or the distance between the two buildings falls below the applicable curve provided in the *CEQR Technical Manual* nomographs, a potential significant impact due to boiler stack emissions is unlikely and no further analysis is needed.

A survey of existing residential land uses and other sensitive receptor sites within 400 feet of the project site was conducted through field observation and use of the Zoning and Land Use (Zola) interactive mapping tool created by the Department of City Planning. The closest residential building of similar or greater height that could be affected by HVAC emissions generated by the proposed project is the 8-story multi-family residential building located at 39-65 52nd Street, approximately 1,060 feet to the southeast of the project site (see Figure B-1).[2] As this building is the closest sensitive receptor of similar or greater height, if the proposed project would not cause significant impacts at this site, no impacts would occur at sensitive receptors located further from the project site.

To determine whether a detailed project-on-existing HVAC analysis is warranted, an air quality nomograph screening was performed using Figure 17-3 of the *CEQR Technical Manual*, as described above. The nomograph screening was performed based on an anticipated minimum distance between the proposed project's HVAC stack height, the distance to 39-65 52nd Street, and the RWCDS building's total gross floor area (194,710 gsf). Based on the nomograph screening (presented in Figure B-2), it was determined that the proposed project's HVAC system would not result in significant adverse impacts on this sensitive receptor (the closest sensitive receptor). As such, a detailed HVAC analysis is not warranted.

Industrial Source Analysis

To assess air quality impacts on the proposed project associated with emission from nearby industrial sources, an investigation of industrial sources was conducted. Initially, land use maps were reviewed to identify potential sources of emissions from manufacturing/industrial or transportation/utility operations. Next, a list of the identified businesses was submitted to DEP's Bureau of Environmental Compliance to obtain the available certificates of operation for these locations and to determine whether manufacturing or

[2] As the proposed project would be shorter than the RWCDS Development, it is conservatively used for HVAC emissions screening purposes.

The Barnett **Figure B-1**

Closest Building of Similar or Greater Height

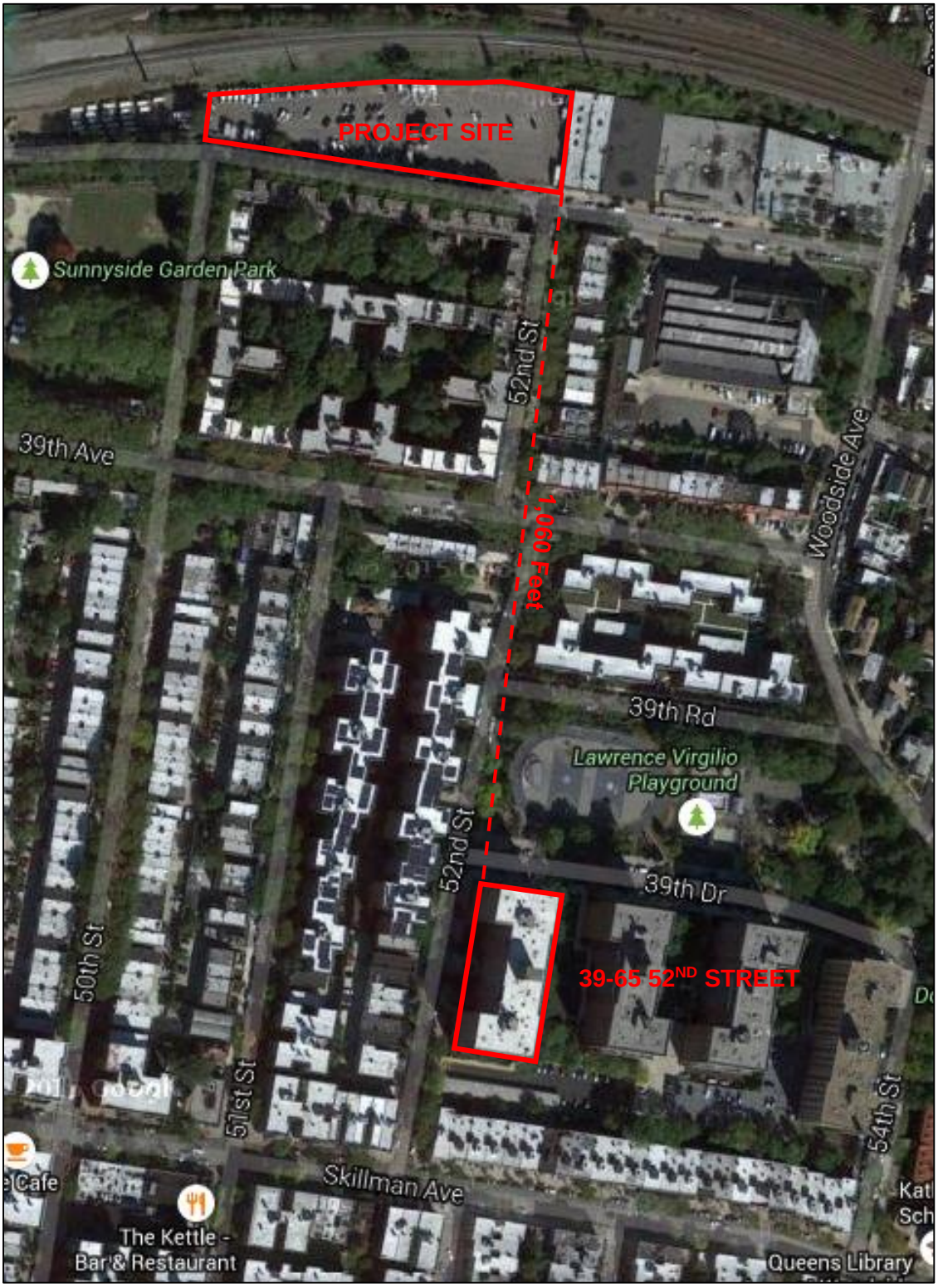
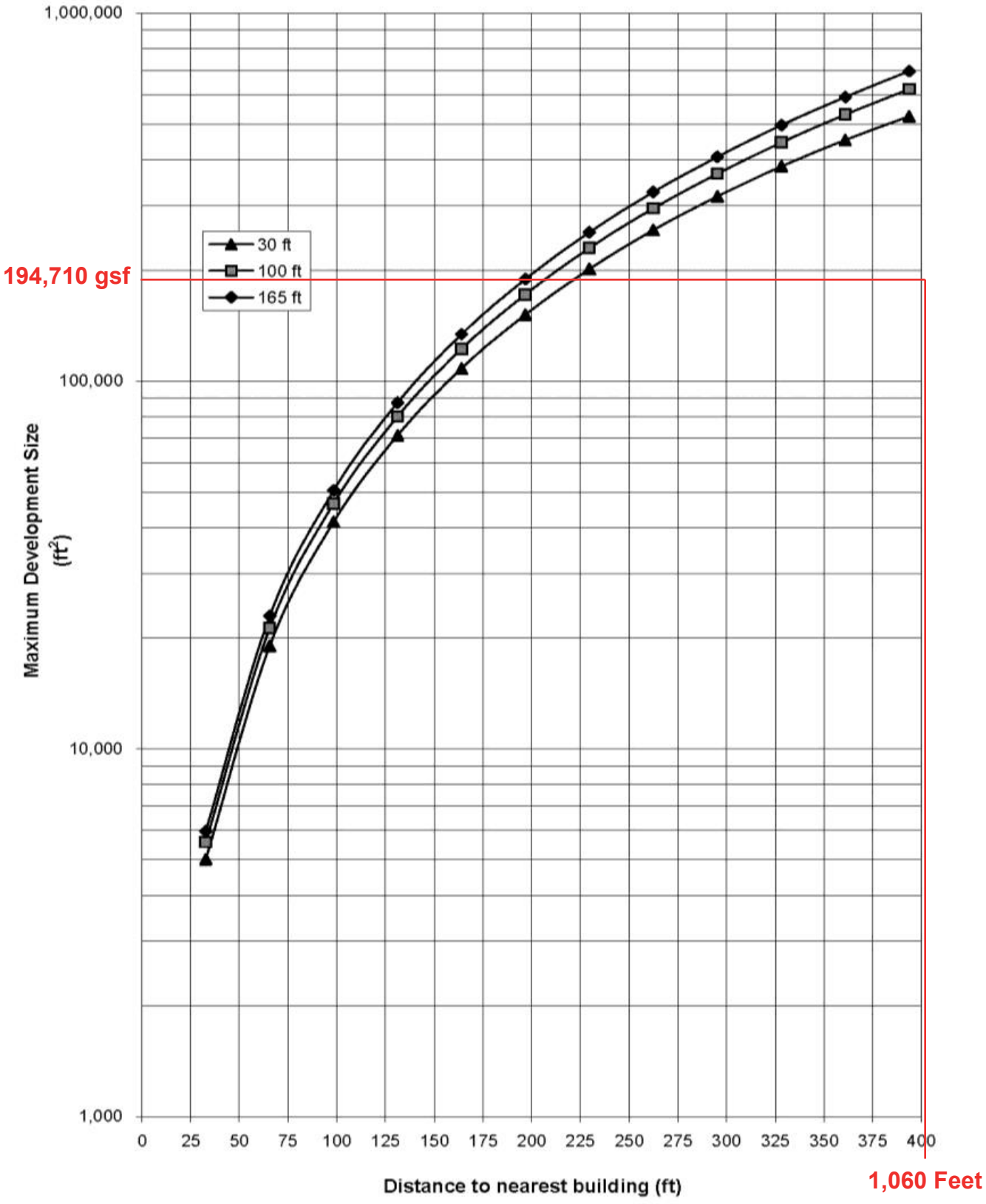


Figure 17-3:
Stationary Source Screen



industrial emissions occur. Based on information provided by DEP, two permits were identified for the Steve Madden Corporation, located at 52-16 Barnett Avenue (to the southeast of the project site at the southwest corner of Barnett and Woodside Avenues) and one permit for Blue Menas Construction, located at 52-25 Barnett Avenue. Based on a field survey in February 2020, the Menas Construction no longer operates or ceased its operations in the area. Therefore, this facility was removed from the further consideration. DEP correspondence related to the identified expired industrial source permits is provided in Appendix II. An industrial source analysis was conducted to determine the potential for impacts from the two identified industrial sources on the proposed project, which is provided in Attachment I, "Air Quality." As presented in Attachment I, the result of the air toxics emissions analysis determined that no exceedances of the New York State Department of Environmental Conservation (NYSDEC) guideline values or applicable National Ambient Air Quality Standards (NAAQS) are predicted.

Mobile Sources

As stated in the *CEQR Technical Manual*, a project – whether site-specific or generic- may result in significant mobile source air quality impacts when they increase or cause a redistribution of traffic, create any other mobile sources of pollutants, or add new users near mobile sources. According to the *CEQR Technical Manual* screening threshold criteria for the City, if 170 or more project-generated vehicles pass through an intersection in any given peak period a detailed analysis of carbon monoxide (CO) is required. If a project would result in a substantial number of local or regional diesel vehicle trips, there is potential for mobile air quality impacts and a detailed analysis of $PM_{2.5}$ and PM_{10} is required.

As the Proposed Actions would generate a maximum of 22 incremental vehicle truck trips in any peak hour (refer to Table B-4), and, as such, would not exceed the *CEQR Technical Manual* carbon monoxide (CO) mobile source air quality screening of 170 vehicles. As shown below, using the Equivalent Truck Calculator provided in the *CEQR Technical Manual* the incremental trucks generated by the Proposed Actions would not exceed the screening threshold for $PM_{2.5}$ and $PM_{10,}$ Therefore, a detailed analysis of mobile source air quality impacts is not warranted (refer to Table B-5).

Table B-5: $PM_{2.5}$/PM_{10} Equivalent Truck Calculation

Road Types	Equ. truck	Screen value	PM2.5 Screen
Paved road < 5000 veh/day	11	13	Pass Screen
Collector roads	4	20	Pass Screen
Principal and minor arterials	1	23	Pass Screen
Expressways and limited access roads	1	23	Pass Screen

Source: *CEQR Technical Manual* & NYS Department of Transportation Functional Class Viewer

Parking Facilities

As stated in the *CEQR Technical Manual*, projects that would result in parking facilities may require a microscale air quality analysis. While the proposed project would include a 170-space surface parking lot, construction of the proposed project would entail the displacement of the existing 223-space public parking lot on the project site. As such, the proposed actions would result in a net reduction of 53 parking spaces on the project site and would be expected to result in lesser mobile source emissions than under existing

conditions. Therefore, a detailed mobile source parking garage analysis is not warranted, and the proposed actions would not result in a significant adverse mobile source parking garage related impacts.

XI. NOISE

A noise analysis examines an action for its potential effects on sensitive noise receptors (which can be both indoors and outdoors), including the effects on the interior noise levels of residential, commercial, and certain community facility uses, such as hospitals, schools, and libraries. The principal types of noise sources affecting the City are mobile sources (primarily motor vehicles), stationary sources (typically machinery or mechanical equipment associated with manufacturing operations, building HVAC systems, or playgrounds) and construction noise (e.g., trucks, bulldozers, power tools, etc.). An initial impact screening would consider whether a proposed action would generate any mobile or stationary source noise, or would be located in an area with high ambient noise levels.

Sensitive Receptor Analysis

According to the *CEQR Technical Manual*, a detailed noise analysis may be warranted if the proposed action would introduce a new noise-sensitive use in an area with high ambient noise levels. As the proposed actions would introduce new residential and community facility uses within 1,500 feet of an existing rail line with a direct line of sight to that noise source and a playground near existing sensitive receptors, a detailed assessment of train noise has been provided in Attachment I, "Noise." As indicated in Attachment I, based on a cumulative noise analysis from incremental traffic, railway activity, and the new playground, the maximum L_{10} noise level along the project site's Barnett Avenue frontage is expected to be 72.8 dBA (at receptor location 2). Based on the FTA noise prediction methodology, which estimated noise emissions for the eight tracks located to the north of the project site, it was determined that the peak L_{10} noise levels from the LIRR and Amtrak trains would be 71.8 dBA along the project site's northern facade. The FTA noise prediction methodology also determined the L_{eq} levels along the Project Site's northern façade facing the LIRR railroad would be 74.5 dBA[3]. The cumulative noise calculation found that along the western façade of the Project Site, cumulative noise from traffic, the railroad, and proposed playground would result in a peak L_{10} level of 76.3 dBA. Based on these maximum predicted With-Action noise levels, 28 dBA of attenuation along the proposed project's Barnett Avenue façade, 31 dBA of attenuation along the proposed project's northern façade (facing the LIRR railroad) and eastern façade, and 33 dBA of attenuation along the proposed project's western facade is needed to maintain interior noise levels of 45 dBA or lower for the proposed project's residential and community facility uses.

To achieve this, an (E) designation would be placed on the site. If an area is proposed to be rezoned, and the accompanying environmental analysis indicates that development on a property may be adversely affected by noise, then an (E) designation for window/wall attenuation and alternate means of ventilation may be placed on the property by the lead agency in order to address such issues in conjunction with any new development or new use of the property. For new developments, enlargements of existing buildings, or changes in use, the NYC Department of Buildings will not issue a building permit until the environmental requirements of the (E) designation are satisfied. The Office of Environmental Remediation (OER) administers the (E) Designation Environmental Review Program. With this institutional control in place, the proposed project would not result in any significant adverse noise impacts related to building attenuation and no significant adverse impacts would result.

[3] Per DCP guidance, in instances where a monitoring results in an L_{10} that is lower than its corresponding L_{eq}, the L_{eq} should be used to determine the attenuation requirements.

Mobile Source Screening

According to the *CEQR Technical Manual*, a detailed mobile source analysis is generally performed if the proposed action would increase noise passenger car equivalent (Noise PCE) values by 100 percent or more. Compared to the No-Action condition, the proposed actions would generate a maximum of 22 vehicle trips in any peak hour. The Project Site is located adjacent to the Long Island Railroad's (LIRR) Sunnyside Yard which contains eight tracks utilized by LIRR and Amtrak. As such, a detailed mobile source analysis is warranted and provided in Attachment I, "Noise".

Stationary Screening

According to the *CEQR Technical Manual*, a detailed stationary source analysis is generally performed if the proposed action would cause a substantial stationary source (i.e., unenclosed equipment for building ventilation purposes) to be operating within 1,500 feet of a receptor with a direct line of sight to that receptor; or introduce a receptor in an area with high ambient noise levels resulting from stationary sources, such as unenclosed manufacturing activities or other loud uses.

The proposed actions are expected to generate a small playground for children of all ages for residents at the Project Site. The playground would be located along the western façade along Barnett Avenue, within 1,500 feet of the Sunnyside Garden Apartments located on the south side of Barnett Avenue. Therefore, further analysis is warranted and included in Attachment I, "Noise".

XII. PUBLIC HEALTH

Public health involves the activities that society undertakes to create and maintain conditions in which people can be health. Many public health concerns are closely related to air quality, water quality, hazardous materials, and noise.

According to the guidelines of the *CEQR Technical Manual*, a public health assessment may be warranted if a project results in (a) increased vehicular traffic or emissions from stationary sources resulting in significant adverse air quality impacts; (b) increased exposure to heavy metals and other contaminants in soil/dust resulting in significant adverse impacts, or the presence of contamination from historic spills or releases of substances that might have affected or might affect groundwater to be used as a source of drinking water; (c) solid waste management practices that could attract vermin and result in an increase in pest populations; (d) potential significant adverse impacts to sensitive receptors from noise and odors; (e) vapor infiltration from contaminants within a building or underlying soil that may result in significant adverse hazardous materials or air quality impacts; (f) exceedances of accepted federal, state, or local standards; or (g) other actions that might not exceed the preceding thresholds but might, nonetheless, result in significant health concerns.

As detailed in the analyses provided in this EAS, the proposed actions and subsequent development would not result in significant adverse impacts in the areas of air quality, water quality, hazardous materials, or noise.

Therefore, the proposed actions do not have the potential to result in significant adverse public health impacts, and further assessment is not warranted.

XIII. NEIGHBORHOOD CHARACTER

As the proposed actions required detailed analyses of land use, zoning, and public policy, open space, historic and cultural resources, urban design and visual resources, and noise, a supplemental screening analysis is necessary to determine if a detailed neighborhood character analysis is warranted.

The proposed actions would not adversely affect any component of the surrounding area's neighborhood character. The proposed actions would facilitate the redevelopment of an underutilized lot into a productive residential and community facility development by 2023. The proposed project would not conflict with the surrounding activities, nor would it significantly impact land use patterns. The proposed zoning map amendment is intended to encourage residential development in an appropriate location along Barnett Avenue near existing residential uses. The proposed residential uses would further expand housing options in the area.

Moreover, the proposed actions are not expected to result in any significant adverse impacts in the technical areas relating to neighborhood character, including land use, urban design and visual resources, historic and cultural resources, and noise. The *CEQR Technical Manual* also states that a combination of moderate effects in these technical areas could result in an impact to neighborhood, though this only occurs under unusual circumstances. Therefore, the proposed actions and the resultant proposed project would not result in a significant adverse impact to neighborhood character.

XIV. CONSTRUCTION

Although temporary, construction impacts can include noticeable and disruptive effects from an action that is associated with construction or could induce construction. Determination of the significance of the construction impacts and the need for mitigation is generally based on the duration and magnitude of the impacts. Construction impacts are usually important when construction activity could affect traffic conditions, archaeological resources, the integrity of historic resources, community noise patterns, and/or air quality conditions.

Construction of the proposed project is expected to begin in 2021, with an anticipated 24-month construction schedule (i.e., completion by 2023), and is therefore considered short-term for CEQR analysis purposes. Most construction activity would take place Monday through Friday, although the delivery and installation of certain equipment could occur on weekend days. Hours of construction are regulated by the New York City Department of Buildings (DOB) and apply in all areas of the City. In accordance with those regulations, almost all work would occur between 7 AM and 6 PM on weekdays, although some workers would arrive and begin to prepare work areas before 7 AM. Occasionally, Saturday or overtime hours could be required to complete time-sensitive tasks. Weekend work requires a permit from the DOB and, in certain instances, approval of a noise mitigation plan from DEP under the New York City Noise Code.

Construction activities may result in short-term disruption of both traffic and pedestrian movements in the vicinity of the project site. This would occur primarily due to the potential temporary loss of curbside lanes from the staging of equipment and the movement of materials to and from the project site. Most construction traffic would take place outside of the AM and PM traffic peak hours in vicinity of the project site due to typical construction hours. Additionally, construction may at times result in temporary closings of sidewalks adjacent to the project site in order to accommodate construction vehicles, equipment, and supplies. During construction, access to all adjacent residences and other uses would be maintained according to regulations established by the DOB. Given the limited duration of any obstructions, these conditions would not result in significant adverse impacts on traffic and transportation conditions.

Noise associated with construction would be limited to typical construction activities and would be subject to compliance with the New York City Noise Code and the United States Environmental Protection Agency (EPA) noise emission standards for construction equipment. These controls and the temporary nature of construction activity would assure that there would be no significant adverse noise impacts associated with construction activity. It should also be noted that, as the project site is largely undeveloped, minimal demolition activities would be required, thereby further reducing the construction period associated with the greatest amount of noise and air quality emissions.

In addition, as the Phipps Sunnyside Garden Apartments, the Sunnyside Gardens Park and Sunnyside Park Community Garden are located within 90 feet of the project site and are included in the LPC-designated and S/NR-listed Sunnyside Gardens Historic District, they would be subject to DOB'S TPPN #10/88 during the proposed building's construction. Under the TPPN, a construction protection plan must be provided to the LPC for review and approval prior to any demolition and construction on the project site. The construction protection plan would take into account the guidance provided in the *CEQR Technical Manual*, Chapter 9, Section 523, "Construction Protection Plan." With the implementation of the appropriate construction protection measures mandated by TPPN #10/88, no construction-related impacts on historic resources would be anticipated as a result of the proposed actions.

While construction of the proposed project would result in temporary disruption in the surrounding area, including noise, dust, and traffic associated with the delivery of materials and arrival of workers on the development sites, the incremental effects of the RWCDS development, if any, would be negligible. Therefore, no impacts from construction are expected under the RWCDS.

Attachment C

Land Use, Zoning, and Public Policy

I. INTRODUCTION

Phipps Houses (the "applicant") is seeking zoning map and text amendments from the New York City Planning Commission (CPC) (the "proposed actions"), to facilitate the development of an approximately 161,230 gross square foot (gsf) predominantly residential building on Queens Block 119, Lot 143 in the Sunnyside neighborhood of Queens Community District (CD) 2 (the "project site"), with approximately 167 dwelling Units (DUs), 5,323 gsf of non-profit office space, and 170 surface parking spaces. The project site is located on the north side of Barnett Avenue between 50th and 52nd Streets and is bounded by the Long Island Railroad (LIRR) Sunnyside Rail Yards to the north. The proposed project is expected to be completed in 2023

As discussed in Attachment A, "Project Description," the proposed project does not maximize the allowable building height or floor area ratio (FAR) in the proposed R6A district. Therefore, this EAS assumes a reasonable worst-case development scenario (RWCDS) development that maximizes the potential for development as a result of the proposed actions. The RWCDS development would consist of up to 189 DUs, 5,323 gsf of non-profit office space on the ground floor, and 170 surface parking spaces, 59 of which would be accessory off-street parking spaces and the remaining 111 spaces would be for public use. It is the applicant's position that all DUs would be designated affordable. The Applicant intends for all of the housing units in the project area to be affordable to low- and moderate-income households. It is anticipated that 50% of the units would be affordable to households earning up to 60% of the Area Median Income (AMI) and the remaining units would be for moderate income households earning up to 110% AMI. .

This attachment considers the effects of the proposed zoning map and text amendments on the land use study area, as well as the proposed actions' potential effects on zoning and public policy in the study area.

II. PRINCIPAL CONCLUSIONS

No significant adverse impacts on land use, zoning, or public policy, as defined by the guidelines for determining impact significance set forth in the *CEQR Technical Manual*, are anticipated in the 2023 future with the proposed actions in the primary and secondary study areas. The proposed actions would not directly displace any land uses so as to adversely affect surrounding land uses, nor would they generate land uses that would be incompatible with land uses, zoning, or public policy in the secondary study area. The proposed actions would not create land uses or structures that would be incompatible with the underlying zoning in the surrounding area, nor would they cause a substantial number of existing structures to become nonconforming. The proposed actions would not result in land uses that conflict with public policies applicable to the primary or secondary study areas.

III. METHODOLOGY

As mentioned above, the proposed actions include zoning map and text amendments, which would affect land use, zoning and public policy, as well as public financing approval. Land use, zoning, and public policy are addressed and analyzed for two geographical areas for the proposed actions. For the purpose of this

assessment, the primary study area encompasses the project site, which is located along the north side of Barnett Avenue between 50th and 52nd Streets and is bounded by the LIRR Sunnyside Rail Yards to the north. The secondary study area encompasses areas that have the potential to experience indirect impacts as a result of the proposed actions. The secondary study area extends 400-foot radius from the boundary of the primary study area. The secondary study area is generally bound by 39th Avenue to the south, Woodside Avenue to the east, 48th Street to the west, and the LIRR Sunnyside Rail Yards to the north. Both the primary and secondary study areas have been established in accordance with *CEQR Technical Manual* guidelines and can be seen in Figure C-1.

The analysis of land use, zoning, and public policy first provides a description of the existing land use, zoning, and public policy conditions in the study areas. Existing land uses in the primary and secondary study areas were determined based on the New York City Primary Land Use Tax Lot Output (PLUTO) data files for 2018 and March 2019 field visits. New York City Zoning and Land Use (ZoLa), New York City Zoning maps, and the Zoning Resolution of the City of New York were consulted to describe existing zoning districts in the study areas. Relevant public policy documents, recognized by the New York City Department of City Planning (DCP) and other City agencies were utilized to describe existing public policies pertaining to the primary and secondary study areas.

Next, the analysis projects land use, zoning, and public policy conditions in the 2023 Build Year without the proposed actions. This is the "No-Action" or "future without the proposed actions" condition, which is developed by identifying proposed developments and other relevant changes anticipated to occur in the primary and secondary study areas within this time frame. The No-Action condition describes the baseline conditions in the study areas against which the proposed actions' incremental changes are measured. Finally, the analysis projects land use, zoning, and public policy conditions in 2023 with the completion of the proposed project. This is the "With-Action" or "future with the proposed actions" condition.

IV. PRELIMINARY ASSESSMENT

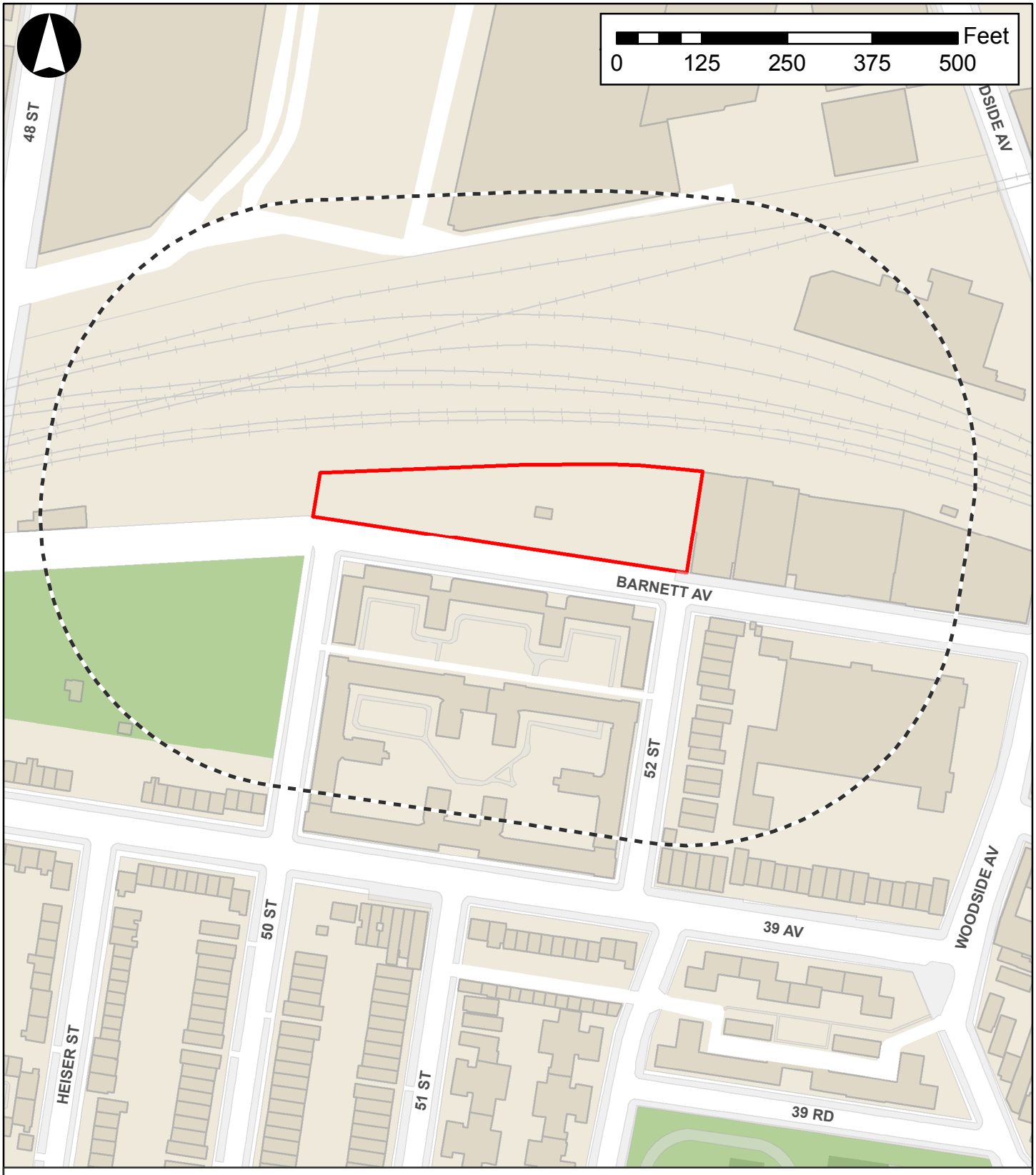
Land Use and Zoning

A preliminary assessment, which includes a basic description of existing and future land uses and zoning, should be provided for all projects that would affect land use or would change the zoning on a site, regardless of the project's anticipated effects. However, under *CEQR Technical Manual* guidelines, if a detailed assessment is required in the technical areas of socioeconomic conditions, neighborhood character, transportation, air quality, noise, infrastructure, or hazardous materials, a detailed land use assessment is appropriate. This EAS provides detailed assessments of open space, historic and cultural resources, urban design, air quality, and noise. Therefore, a detailed assessment of land use and zoning is warranted and is provided in Section V below.

Public Policy

According to the *CEQR Technical Manual*, a project that would be located within areas governed by public policies controlling land use, or that has the potential to substantially affect land use regulation or policy controlling land use, requires an analysis of public policy. A preliminary assessment of public policy should identify and describe any public policies, including formal plans or published reports that pertain to the study area. If the proposed project could potentially alter or conflict with identified policies, a detailed assessment should be conducted; otherwise, no further analysis of public policy is necessary.

Land Use Study Area



The primary and secondary study areas are not located in an urban renewal area, a designated Industrial Business Zone (IBZ), a Business Improvement District (BID), the coastal zone boundary, or within an area defined by an adopted 197-a plan; nor would the proposed actions involve the siting of any public facilities (Fair Share). While a portion of the Sunnyside Gardens Historic District is located within the secondary study area, as shown in Figure C-2, the proposed actions would not result in any development within this LPC-designated and S/NR-listed Historic District. As such, no significant material changes to existing regulations or policy would occur, and a detailed analysis of this public policy is not warranted. Potential direct and contextual effects on the Sunnyside Gardens Historic Districts are described in Attachment G, "Historic and Cultural Resources."

V. DETAILED ASSESSMENT

Existing Conditions

Land Use

Primary Study Area (Project Site)

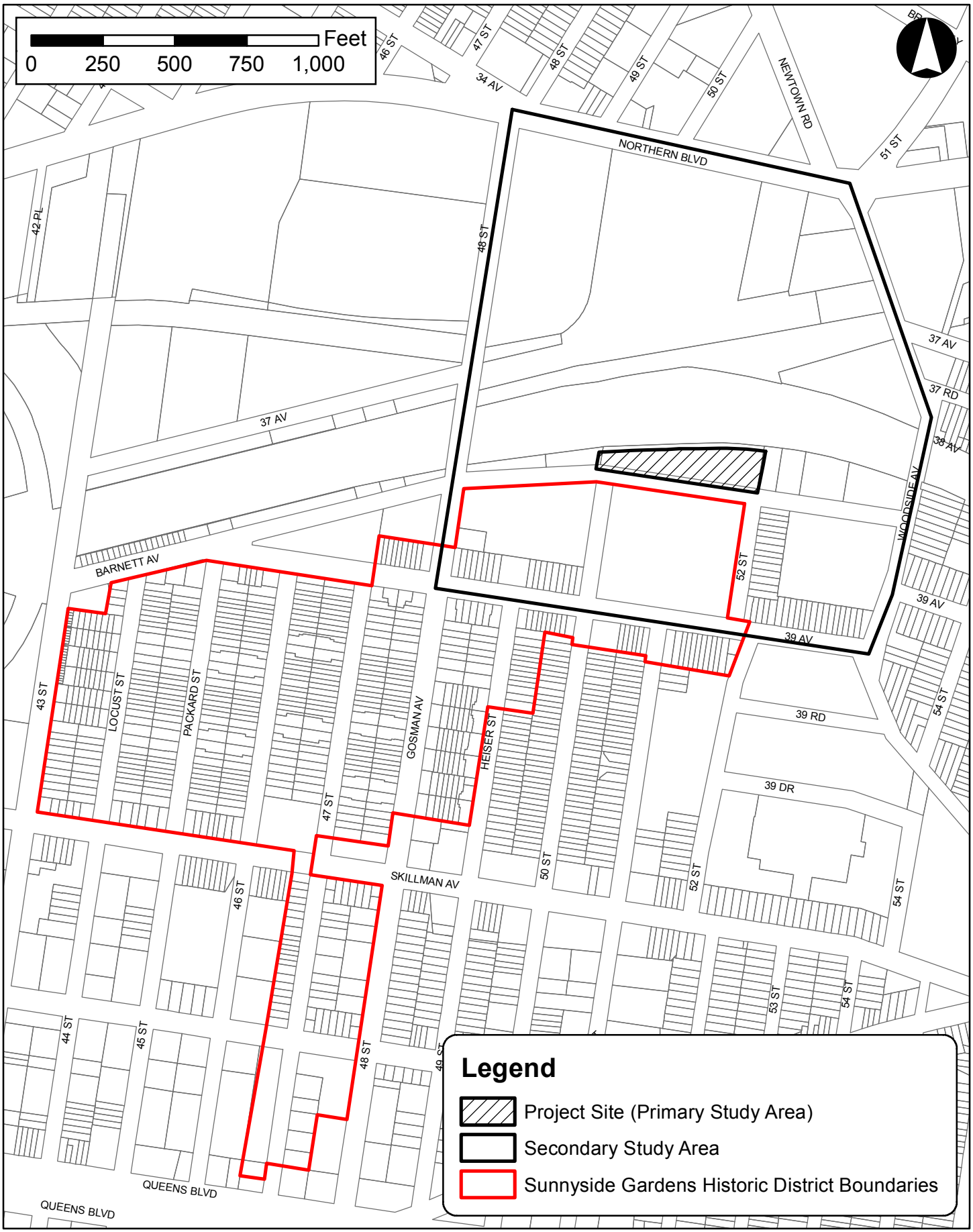
The approximately 64,366-sf project site is currently occupied by an approximately 223-space public surface parking lot, which is used by local residents and employees of local businesses. The project site has a flat topography and is mostly paved. A small one-story approximately 200-sf attendant's booth is located near the Barnett Avenue lot entrance, and a chain link fence lines the project site's Barnett Avenue frontage. The project site is located one block west of Woodside Avenue and approximately one block south of Northern Boulevard, both major thoroughfares in the area.

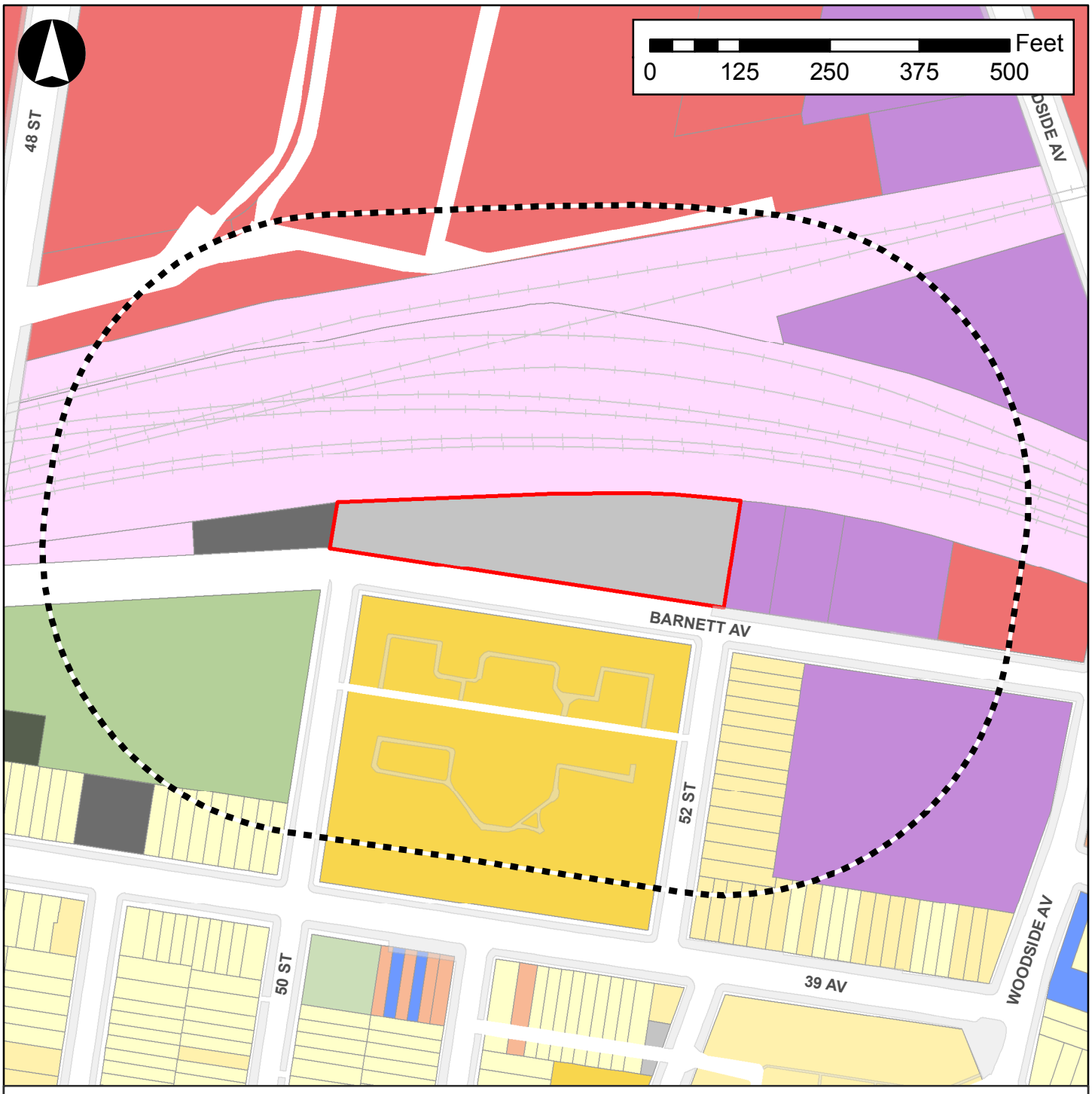
Secondary Study Area

As shown in Figure C-3 and Table C-1, land uses in the secondary study area include a mix of residential, commercial, light industrial, and transportation-related uses, with some vacant land and open spaces. Residential uses are typically to the south and southwest of the project site and comprise 69.6 percent of the lots in the secondary study area, 17.5 percent of the secondary study area lot area, and 55.5 percent of the secondary study area building area. While the majority of the residential uses in the secondary study area are one- and two-family buildings, directly south of the project site, Block 117 contains the Phipps Sunnyside Garden Apartments, a multi-family residential complex built in the early 1930s made up of multiple buildings arranged around interior courtyards.

Figure C-2

Sunnyside Gardens Historic District





Legend

- Project Site
- 400-Foot Radius
- Railroad Tracks

Land Use

- One & Two Family Buildings
- Multi-Family Walkup Buildings
- Multi-Family Elevator Buildings
- Mixed Commercial/Residential Buildings
- Commercial/Office Buildings
- Industrial/Manufacturing
- Transportation/Utility
- Public Facilities & Institutions
- Open Space
- Parking Facilities
- Vacant Land
- All Others or No Data

Table C-1: Existing Land Uses within the Secondary Study Area

Land Use	Number of Lots	Percentage of Total Lots (%)	Lot Area (sf)	Percentage of Total Lot Area (%)	Building Area (sf)	Percentage of Total Building Area (%)
Residential	32	69.6%	248,681	17.5%	446,607	55.5%
One & Two Family Buildings	*10*	*21.7%*	*20,292*	*1.4%*	*12,765*	*1.6%*
Multi-Family Walkup Buildings	*21*	*45.7%*	*44,389*	*3.1%*	*55,656*	*6.9%*
Multi-Family Elevator Buildings	*1*	*2.2%*	*184,000*	*13.0%*	*378,186*	*47.0%*
Mixed Commercial/Residential Buildings	0	0.0%	0	0.0%	0	0.0%
Commercial/Office Buildings	3	6.5%	468,100	33.0%	205,799	25.6%
Industrial/Manufacturing	5	10.9%	227,023	16.0%	147,780	18.3%
Transportation/Utility	3	6.5%	157,588	11.1%	5,032	0.6%
Public Facilities & Institutions	0	0.0%	0	0.0%	0	0.0%
Open Space	1	2.2%	247,000	17.4%	0	0.0%
Parking Facilities	1	2.2%	60,000	4.2%	200	0.0%
Vacant Land	1	2.2%	10,450	0.7%	0	0.0%
Total	**46**	**100.0%**	**1,418,842**	**100.0%**	**805,418**	**100.0%**

Source: 2018v2 MapPLUTO data.

Commercial uses, while only comprising 6.5 percent of the lots in the secondary study area, represent 33.0 percent and 25.6 percent of the secondary study area lot area and building area, respectively. The majority of the commercial land uses in the secondary study area are located on three lots to the north of the project site between the Sunnyside Rail Yards and Northern Boulevard, and include several chain retail establishments developed as part of a large shopping complex with an open parking lot on-site. One commercial lot is located to the east of the project site at the northwest corner of Barnett and Woodside Avenues, which is occupied by multiple tenants, including a Steve Madden corporate office and the AHRC Joseph T. Weingold Adult Day Center, a not-for-profit day rehabilitation and pre-vocational program for developmentally disabled adults.

There are seven secondary study area lots occupied by industrial uses to the east of the project site, which represent a combined 16.0 percent of the study area's lot area and 18.3 percent of the study area's building area. Directly east of the project site (at 50-45 Barnett Avenue) is a glass and window company. Other industrial uses in the secondary study area include a Verizon garage/vehicle and equipment storage facility, a self-storage facility, an internet service provider, and a multiple-tenant building occupied by a mix of light industrial and commercial businesses.

Transportation-related uses, dominated by the Long Island Railroad (LIRR) Sunnyside Rail Yards, are located directly north of the project site, and comprise 11.1 percent and 0.6 percent of the secondary study area's lot and building areas, respectively. The LIRR Sunnyside Yards are one of the largest rail yards in New York City, connecting to Pennsylvania Station in Midtown Manhattan via the East River Tunnel. Currently, the Sunnyside Yards are owned by Amtrak, but are also used by New Jersey Transit. The shared tracks of the LIRR's Main Line and Amtrak's Northeast Corridor pass along the southern edge of the Sunnyside Yards, directly north of the project site.

Open space and vacant land represent a combined 18.1 percent of the secondary study area's lot area. The only open space in the study area is located to the southwest of the project site and comprises Sunnyside Gardens Park, an approximately six-acre park created in 1926 that is open to fee-paying members residing in Sunnyside Gardens. There are no mixed commercial/residential, public facilities/institutions, or parking facilities in the secondary study area.

Within the secondary study area, the Q104 MTA-NYCT bus line runs along 48th Street (the secondary study area's western boundary) and connects Sunnyside to Ravenswood, Queens. Other public transit options in proximity to the secondary study area include the Northern Boulevard and 46th Street subway stations, which are located along Broadway (to the north of the secondary study area) and are served by the M and R lines; the 52nd Street subway station, which is located at the intersection of 52nd Street and 43rd Street (to the south of the secondary study area) and is served by the 7 line; and the Woodside LIRR station, which is located to the southeast of the secondary study area.

Zoning

Primary Study Area (Project Site)

As shown in Figure C-4, the project site is currently zoned M1-1. M1 districts are light manufacturing districts that often serve as buffers between M2 or M3 districts and adjacent residential or commercial districts. Almost all industrial uses can be located in M1 districts if they meet the stringent M1 performance standards. Offices and most retail uses, including hotels, are also permitted. Certain community facilities, such as hospital, are allowed in M1 districts only by special permit, but houses of worship are allowed as-of-right. M1-1 districts allow a maximum Floor Area Ratio (FAR) of 1.0. M1-1 districts are subject to parking requirements based on the type of use and size of an establishment.

Existing uses on the project site have a built FAR of 0.003, which is underbuilt for the allowable FAR.

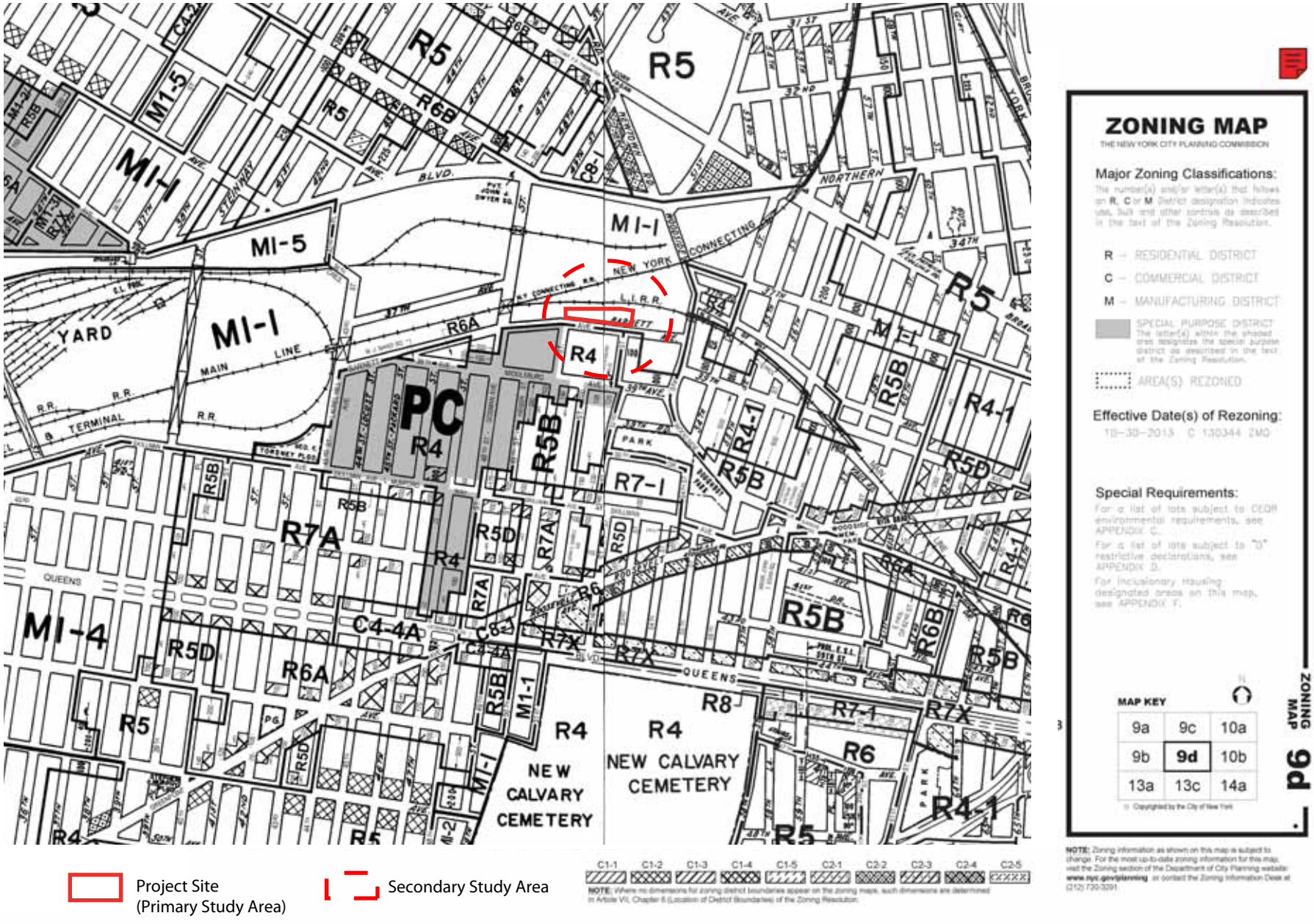
Secondary Study Area

Representative of the mix of land uses in the secondary study area, zoning districts in the vicinity of the project site include R4, R4 (PC), and R5B residential districts (generally south of Barnett Avenue) and a M1-1 light manufacturing district (generally north of Barnett Avenue).

The blocks directly south and to the southwest of the project site are mapped R4 residential zoning districts. R4 districts' maximum FAR of 0.75, plus an attic allowance of up to 20 percent for inclusion of space under the pitched rood common to these districts, usually produces three-story buildings. The maximum perimeter wall and building height in R4 districts are 25 feet and 35 feet, respectively. One parking space is required per dwelling unit.

The block to the southwest of the project site (bounded by 48th and 50th Streets and Barnett and 39th Avenues) is also within the Special PC Preservation District. Special PC Preservation District is generally coterminous with the boundaries of the Sunnyside Gardens Historic District (an approximately 16-block area located between 43rd and 52nd Streets, Queens Boulevard, and Barnett Avenue). The PC District was first established in 1974 with the intention of protecting the unique character of communities that have been planned and developed as a unit and was extended to include the aforementioned 16 Sunnyside blocks in 2009. No demolition, new development, enlargement, or alteration of landscaping or topography is permitted within the PC district except by special permit of the CPC.

To the southeast of the project site, an R5B zoning district is mapped along portions of the block bounded by 52nd Street and Barnett, Woodside, and 39th Avenues. R5B districts are contextual residential districts that are primarily characterized by three-story rowhouses. The maximum permitted FAR in R5B districts is 1.35, which typically produces buildings with maximum streetwall heights of 30 feet under the district's bulk regulations. Parking is required for a minimum of 66 percent of dwelling units in R5B contextual residential districts.



50-25 Barnett Avenue EAS

Figure C-4
Existing Zoning

The M1-1 zoning district that is mapped on the project site extends to the north, east, and west, and also encompasses the northeastern portion of the block bounded by 52nd Street and Barnett, Woodside, and 39th Avenues.

The Future without the Proposed Actions (No-Action Condition)

Land Use and Zoning

In the 2023 future without the proposed actions, it is assumed that the project site would remain as under existing conditions, and would continue to be occupied by a 223-space surface public parking lot. There are no known or anticipated development projects in the 400-foot land use study area.

In addition, the existing M1-1 zoning district mapped on the project site would remain.

The Future with the Proposed Actions (With-Action Condition)

Land Use and Zoning

Primary Study Area (Project Site)

In the 2023 future with the proposed actions, Queens Block 119, Lot 143 (the project site) would be rezoned from M1-1 to R6A (see Figure C-5). Table C-2, below, compares the use and bulk requirements under the existing and proposed zoning districts. The proposed rezoning area is conterminous with the project site.

Table C-2: Comparison of Existing and Proposed Zoning

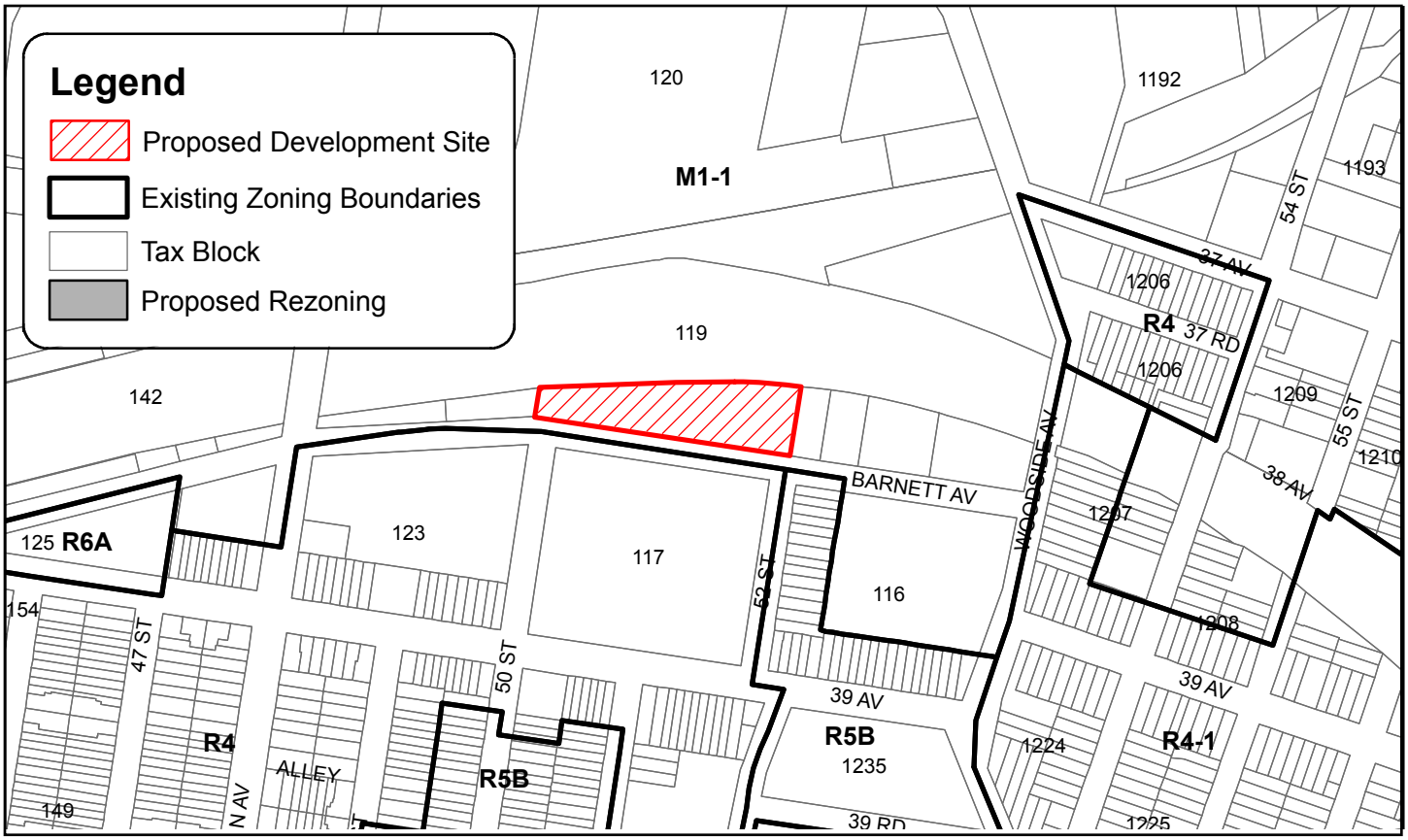
	Existing M1-1	**Proposed R6A**
Use Groups	4-14, 16, 17	1-4
Maximum FAR		
Residential	0.0	3.6[1]
Community Facility	2.4	3.0
Commercial	1.0	0.0
Manufacturing	1.0	0.0

Source: *Zoning Resolution of the City of New York.*
Notes:
[1] Under the proposed MIH.

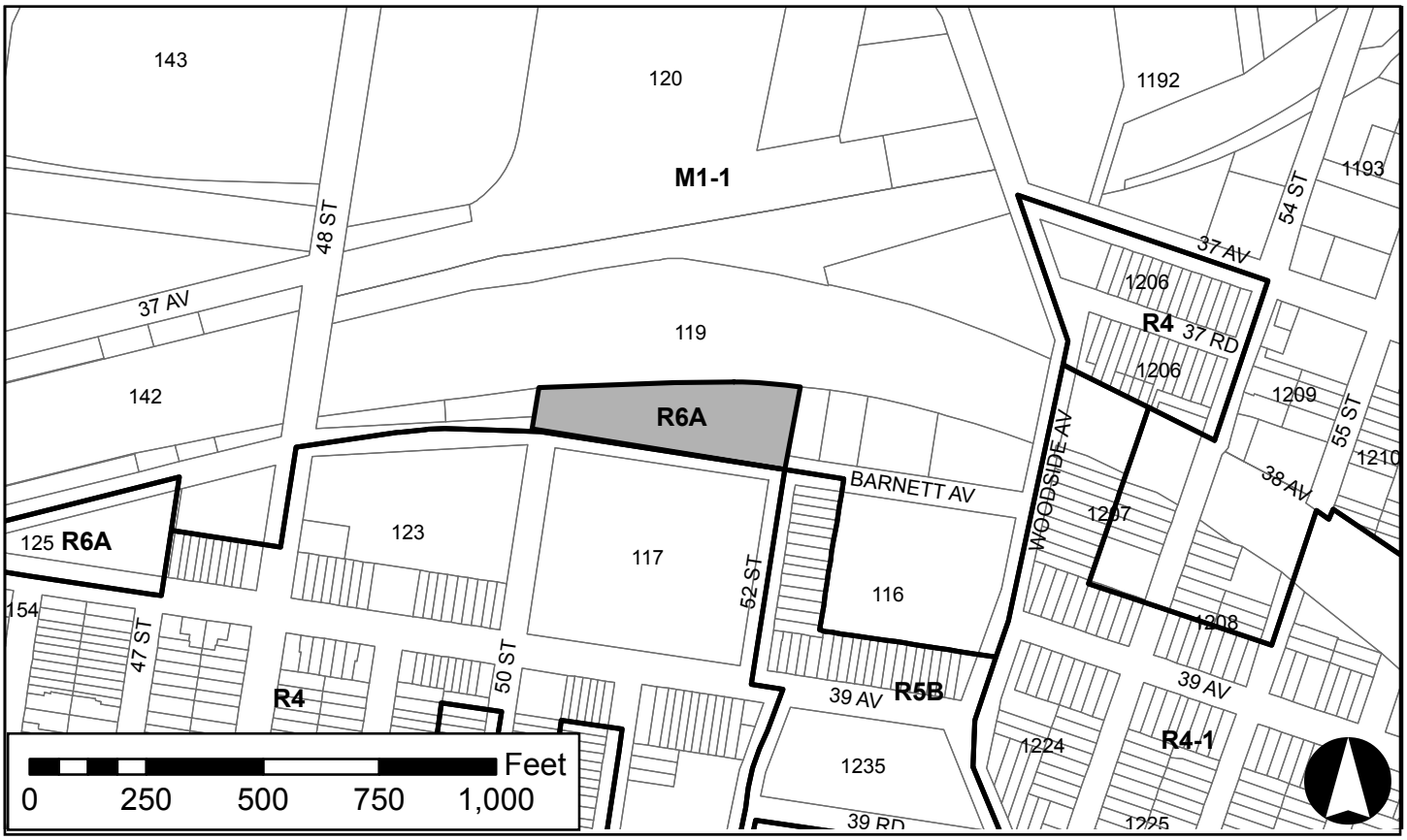
The applicant is also proposing a zoning text amendment to Appendix F of the *Zoning Resolution of the City of New York* is to designate the project site as a Mandatory Inclusionary Housing (MIH) Area. The proposed zoning text amendment to Appendix F would designate the project site as an MIH Area subject to the requirements of Option 1 of the MIH Program. If the designation of the project site is approved pursuant to this ULURP application, permanent affordable housing would be required on the project site in accordance with the requirements of Option 1 of the MIH Program. As noted above, Option 1 requires that at least 25 percent of the residential floor area be reserved for residents with incomes averaging 60 percent AMI, with no unit targeted at a level exceeding 130 percent AMI.

Approval of the proposed actions would facilitate a predominantly residential building on the project site. The RWCDS development assumed for analysis purposes would consist of an eight-story mixed-use building with 189 affordable DUs and 5,323 gsf of non-profit office (community facility) space on the

Existing and Proposed Zoning



Existing



Proposed

ground floor. The RWCDS development would include 170 attended parking spaces, of which 59 would be for residents and 111 would be for the public. The surface parking spaces would be located along the northern portion of the project site.

Compared to the future without the proposed actions, the proposed actions would introduce new residential and community facility uses on the project site, which would be compatible with adjacent land uses. The proposed residential uses would also provide much needed housing options. No additional changes to existing land uses on the project site are anticipated as a result of the proposed actions. Therefore, the proposed actions would not result in any significant adverse land use impacts on the project site.

Secondary Study Area

As noted above, the secondary study area is characterized by a mix of uses, with residential uses comprising the majority of the secondary study area land uses. The new residential and community facility land uses introduced on the project site as a result of the proposed actions would be compatible with the existing predominantly residential uses in the secondary study area, and the proposed actions would not result in any new development in the secondary study area. It is the applicant's position that the proposed actions would improve land use conditions on the project site and add vibrancy to the secondary study area by replacing an underutilized site with a new predominantly residential building. Therefore, the proposed actions would not result in any significant adverse land use impacts in the secondary study area.

Attachment D

Open Space

I. INTRODUCTION

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

Although the proposed actions would not have a direct effect on existing open space resources in the project area, development facilitated by the proposed actions (the reasonable worst-case development scenario (RWCDS)) is expected to result in an incremental increase of up to 189 dwelling units over the 2023 No-Action condition. This would result in an increase of 448 residents, which exceeds the *CEQR Technical Manual* threshold for a detailed open space analysis[1]. A quantitative assessment was conducted to determine whether the proposed actions would significantly reduce the amount of open space available for the area's residential population. While, the RWCDS is also expected to introduce a net increment of 25 employees to the project area, based on standard planning assumptions, this is below the *CEQR Technical Manual* threshold for analysis based on employee numbers. Therefore, the analysis of indirect open space impacts focuses exclusively on the open space needs of the area residential population.

II. PRINCIPAL CONCLUSIONS

The proposed actions would not result in significant adverse open space impacts. While the residential open space study area would continue to have a shortfall of open space in the future with the proposed actions, the demand for open space generated by the RWCDS would not significantly exacerbate the No-Action deficiency, and the population added as a result of the proposed actions is not expected to noticeably affect utilization of the area's open spaces. Most of the study area open space resources are only lightly utilized and are in good condition, and could therefore handle additional demand. Residents of the study area would also continue to use additional open space resources not included in the quantitative assessment, including the 6.07-acre Sunnyside Gardens Park, a significant study area open space resource located one block southwest of the project site. Therefore, while the proposed actions would result in an incremental decrease in open space ratios in the future, given the level of decrease anticipated, the existing low utilization of many of the study area's open spaces, and the availability of additional open spaces conservatively not included in the quantitative analysis, the proposed actions would not result in a significant adverse impact on open space. In addition, the proposed actions would not have a direct effect on any study area open spaces due to construction or operation.

[1] Based on the average household size of 2.37 for the Hunters Point-Sunnyside-West Maspeth Neighborhood Tabulation Area (2010 U.S. Census).

III. METHODOLOGY

The analysis of open space resources has been conducted in accordance with the guidelines established in the *CEQR Technical Manual*. Using CEQR methodology, the adequacy of open space in the study area is assessed quantitatively using a ratio of usable open space acreage to the study area population, referred to as the open space ratio. This quantitative measure is then used to assess the changes in the adequacy of open space resources in the future, both without and with the proposed actions. In addition, qualitative factors are considered in making an assessment of the proposed actions' effects on open space resources.

In accordance with the guidelines established in the *CEQR Technical Manual*, the open space study area is generally defined by a reasonable walking distance that users would travel to reach local open space and recreational resources. That distance is typically a half-mile radius for residential projects and a quarter-mile radius for commercial projects with a worker population. Because the worker population generated by the proposed actions falls well below the threshold of 500 additional employees, a half-mile radius is the appropriate study area boundary.

Open Space Study Area

Pursuant to *CEQR Technical Manual* guidelines, the residential open space study area includes all census tracts that have at least 50 percent of their area located within a half mile of the project site and all open spaces within it that are publicly accessible. As described above, residents typically walk up to a half mile for recreational spaces.

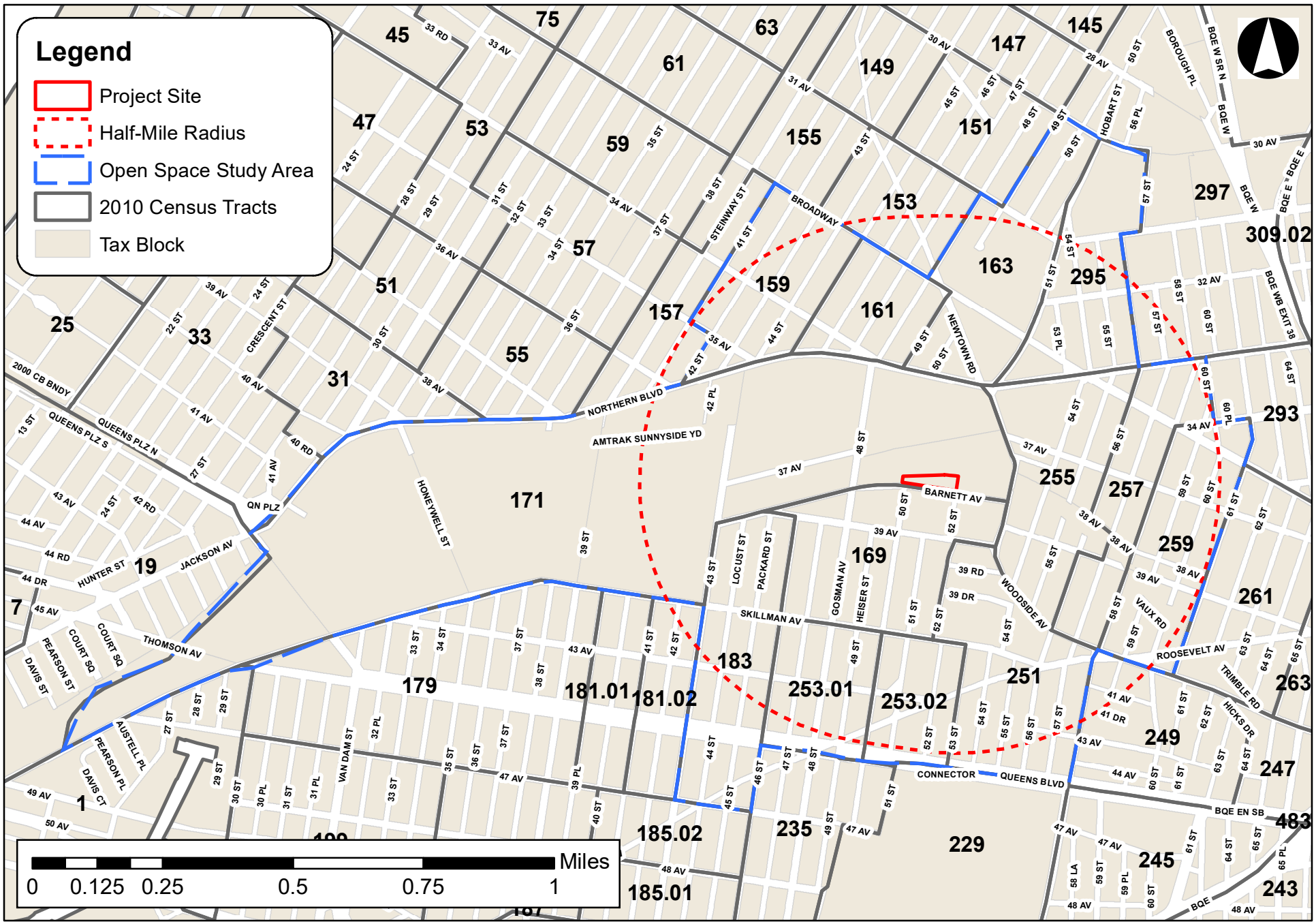
The project site encompasses Queens Block 119, Lot 143 in the Sunnyside neighborhood of Queens Community District (CD) 2. As shown in Figure D-1, the ½-mile open space study area includes the following census tracts in their entirety: census tracts 159, 161, 163, 169, 171, 183, 251, 253.01, 253.02, 255, 257, 259, and 295. The open space study area extends approximately to Northern Boulevard, Broadway, and 30th Avenue to the north; to 57th, 58th, and 61st Streets to the east; to Skillman Avenue, 47th Avenue, Queens Boulevard, and Woodside Avenue to the south; and to David Street to the west. As shown in Figure D-1, the project site is located within Census Tract 171. However, less than 50% of Census Tract 171's area is located within a half-mile radius. Under guidance from the *CEQR Technical Manual* this census tract would not be included in the open space study area. As the project site is within Census Tract 171, it is included in the open space study area.

Analysis Framework

Direct Effects Analysis

According to the *CEQR Technical Manual*, a proposed action would have a direct effect on an open space if it causes the physical loss of public open space because of encroachment onto the space or displacement of the space; changes the use of an open space so that it no longer serves the same user population; limits public access to an open space; or causes increased noise or air pollutant emissions, odors, or shadows that would affect its usefulness, whether on a permanent or temporary basis.

This attachment uses information from other attachments of this EAS to determine whether the proposed actions would directly affect any open spaces near the proposed developments. The direct effects analysis is included in the "The Future with the Proposed Actions (With-Action Condition)" section of this attachment.



50-25 Barnett Avenue EAS

Figure D-1
Open Space Study Area

Indirect Effects Analysis

Indirect effects occur to an area's open spaces when a proposed action would add enough population, either workers or residents, to noticeably diminish the ability of an area's open space to serve the existing or future population. The *CEQR Technical Manual* methodology suggests conducting an initial quantitative assessment to determine whether more detailed analyses are appropriate, but also recognizes that for projects that introduce a large population in an area that is underserved by open space, it may be clear that a full detailed analysis should be conducted. The study area is not located within an underserved or well-served area as determined by the *CEQR Technical Manual*.

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

- Characteristics of the residential users. To determine the number of residents in the study area, 2013-2017 Census data have been compiled for census tracts comprising the open space study area.
- An inventory of all publicly accessible passive and active recreational facilities in the open space study area.
- An assessment of the quantitative ratio of open space in the study area by computing the ratio of open space acreage to the population in the study area and comparing this open space ratio with certain guidelines.
    - As a planning goal, a ratio of 2.5 acres per 1,000 residents represents an area well-served by open spaces and is consequently used by the City as an optimal benchmark for residential populations in largD-scale plans and proposals. Ideally, this would be comprised of a balance of 80 percent active open space (2.0 acres per 1,000 residents) and 20 percent passive open space (0.5 acres per 1,000 residents).
    - Local open space ratios vary widely, and the median ratio at the citywide community district level is 1.5 acres of open space per 1,000 residents.
- An evaluation of qualitative factors affecting open space use.
- A final determination of the adequacy of open space in the residential open space study area.

Impact Assessment

As described in the *CEQR Technical Manual*, the significance of a project's effects on an area's open spaces is determined using both quantitative and qualitative factors, as compared to the No-Action condition. The determination of significance is based upon the context of a project, including its location, the quality and quantity of the open space in the future With-Action condition, the types of open space provided, and any new open space provided by the project.

The quantitative assessment considers how a project would change the open space ratios in the study area. The *CEQR Technical Manual* indicates that a significant adverse impact may result if a project would reduce the open space ratio by more than five percent in areas that are currently below the City's median community district open space ratio of 1.5 acres per 1,000 residents, or where there would be a direct displacement or alteration of existing open space within the study area that has a significant adverse effect on existing users. In areas that are underserved by open space (as identified in the *CEQR Technical Manual*), a reduction as small as one percent may be considered significant, depending on the

area of the City. Furthermore, in areas that are well-served by open space, a greater change in the open space ratio may be tolerated. As noted above, the project site is not located in an area that is either underserved or well-served by open space, as identified in the *CEQR Technical Manual*.

The qualitative assessment supplements the quantitative assessment and considers nearby destination resources, the connectivity of open space, the effects of new open space provided by the project, a comparison of projected open space ratios with established City guidelines, and open spaces created by the proposed project not available to the general public. It is recognized that the City's planning goals are not feasible for many areas of the City, and they are not considered impact thresholds on their own. Rather, these are benchmarks indicating how well an area is served by open space.

D. PRELIMINARY ASSESSMENT

According to the *CEQR Technical Manual*, an initial quantitative open space assessment may be useful to determine if a detailed open space analysis is necessary, or whether the open space assessment can be targeted to a particular user group. This initial assessment calculates an open space ratio by relating the existing residential and nonresidential populations to the total open space in the study area. It then compares that ratio with the open space ratio in the future with the proposed actions. If there is a decrease in the open space ratio that would approach or exceed five percent, or if the study area exhibits a low open space ratio from the onset (indicating a shortfall of open spaces), a detailed analysis is warranted. The detailed analysis examines passive and active open space resources available to both residents and nonresidents (e.g., daily workers and visitors) within study areas delineated in accordance with the *CEQR Technical Manual*.

Pursuant to the guidelines of the *CEQR Technical Manual*, a preliminary open space assessment was conducted. As the study area exhibits a low open space ratio (i.e., below the Citywide Community District median of 1.5 acres per 1,000 residents and the City's optimal planning goal of 2.5 acres per 1,000 residents) under existing and future conditions, a detailed open space analysis is warranted and is provided below.

E. DETAILED ANALYSIS

Existing Conditions

Demographic Characteristics of the Study Area

To determine the residential population served by existing open space resources, 2013-2017 American Community Survey (ACS) Census data were compiled for the census tracts comprising the ½-mile study area. With an inventory of available open space resources and the number of potential users, open space ratios were calculated and compared with the existing citywide median ratio and the City's planning goals. As mentioned above and shown in Figure D-1, the open space study area is comprised of thirteen census tracts. As shown in Table D-1 below, 2013-2017 Census data from the American Community Survey (ACS) indicate that the study area has a total residential population of approximately 45,690.

Within a given area, the age distribution of a population affects the way open spaces are used and the need for various types of recreational facilities. Typically, children four years old or younger use traditional playgrounds that have play equipment for toddlers and preschool children. Children ages five through nine typically use traditional playgrounds, as well as grassy and hard-surfaced open spaces, which are important for activities such as ball playing, running, and skipping rope. Children ages ten through 14 use playground equipment, court spaces, little league fields, and ball fields. Teenagers' and young adults' needs tend toward court game facilities such as basketball and field sports. Adults between

the ages of 20 and 64 continue to use court game facilities and fields for sports, as well as more individualized recreation such as rollerblading, biking, and jogging, requiring bike paths, promenades, and vehiclD-free roadways. Adults also gather with families for picnicking, ad hoc active sports such as Frisbee®, and recreational activities in which all ages can participate. Senior citizens engage in active recreation such as tennis, gardening, and swimming, as well as recreational activities that require passive facilities.

Table D-1: Residential Population and Age Distribution in the ½-Mile Study Area

Census Tracts	Residential Population													
	Total Population	Age Distribution												Median Age
		Under 5		5 - 9		10 - 14		15 - 19		20 - 64		65+		
		#	%	#	%	#	%	#	%	#	%	#	%	
159	3,948	207	5.24%	179	4.53%	161	4.08%	91	2.30%	2,782	70.47%	528	13.37%	**35.9**
161	2,482	109	4.39%	156	6.29%	125	5.04%	102	4.11%	1,729	69.66%	261	10.52%	**33.8**
163	3,558	145	4.08%	105	2.95%	129	3.63%	53	1.49%	2,199	61.80%	927	26.05%	**46.8**
169	6,038	265	4.39%	289	4.79%	161	2.67%	237	3.93%	3,970	65.75%	1116	18.48%	**40.7**
171	0	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	**-**
183	6,461	434	6.72%	373	5.77%	262	4.06%	252	3.90%	4,248	65.75%	892	13.81%	**38.4**
251	6,339	248	3.91%	346	5.46%	444	7.00%	241	3.80%	4,061	64.06%	999	15.76%	**41.1**
253.01	4,020	106	2.64%	66	1.64%	183	4.55%	166	4.13%	3,108	77.31%	391	9.73%	**40.2**
253.02	3,057	96	3.14%	40	1.31%	148	4.84%	137	4.48%	2,387	78.08%	249	8.15%	**38.3**
255	1,410	81	5.74%	54	3.83%	72	5.11%	36	2.55%	908	64.40%	259	18.37%	**34.1**
257	1,422	80	5.63%	36	2.53%	38	2.67%	41	2.88%	1,025	72.08%	202	14.21%	**39.7**
259	3,504	237	6.76%	323	9.22%	136	3.88%	113	3.22%	2,242	63.98%	453	12.93%	**37.4**
295	3,451	107	3.10%	122	3.54%	97	2.81%	198	5.74%	2,346	67.98%	581	16.84%	**43.3**
Total	**45,690**	**2,115**	**4.63%**	**2,089**	**4.57%**	**1,956**	**4.28%**	**1,667**	**3.65%**	**31,005**	**67.86%**	**6,858**	**15.01%**	

Source: 2013-2017 American Community Survey (ACS) 5-Year Sample

Therefore, the residential population of the study area was also broken down by age group. As shown in Table D-1, people between the ages of 20 and 64 make up the majority (approximately 68 percent) of the residential population. Children and teenagers (0 to 19 years old) account for approximately 17 percent of the entire residential population, and persons 65 years and over account for approximately 15 percent of the residential study area population. Compared to Queens and New York City as a whole, the study area residential population includes a larger percentage of people between the ages of 20 and 64, and a smaller percentage of children/teenagers and persons 65 years and over.

The median population age for individual census tracts within the residential study area ranges from a high of 46.8 years (census tract 163) to a low of 33.8 years (census tract 161).

Based on this data, the peak hours of open space demand would be expected to be concentrated during weekends and the early morning and late afternoon to evening hours during the week, as it could be assumed that most residents aged 20 to 64 would work or attend school on weekdays.

Inventory of Publicly Accessible Open Space

According to the *CEQR Technical Manual*, open space may be public or private and may be used for active or passive recreational purposes. Pursuant to the *CEQR Technical Manual*, public open space is defined as facilities open to the public at designated hours on a regular basis and is assessed for impacts under CEQR guidelines, whereas private open space is not accessible to the general public on a regular basis, and is therefore only considered qualitatively. Field surveys and secondary sources were used to determine the number, availability, and condition of publicly accessible open space resources in the study area. The study area open space inventory was reviewed by the New York City Department of Parks and Recreation (DPR).

An open space is determined to be active or passive by the uses that the design of the space allows. Active open space is the part of a facility used for active play such as sports or exercise and may include playground equipment, playing fields and courts, swimming pools, skating rinks, golf courses, and multi-purpose play areas (open lawns and paved areas for active recreation such as running games, informal ball-playing, skipping rope, etc.). Passive open space is used for sitting, strolling, and relaxation, and typically contains benches, walkways, and picnicking areas.

Within the defined study area, all publicly accessible open spaces were inventoried and identified by their location, size, owner, type, utilization, equipment, hours, and condition. The information used for this analysis was gathered through field inventories conducted in March and April 2019, DPR's website, and other secondary sources of information.

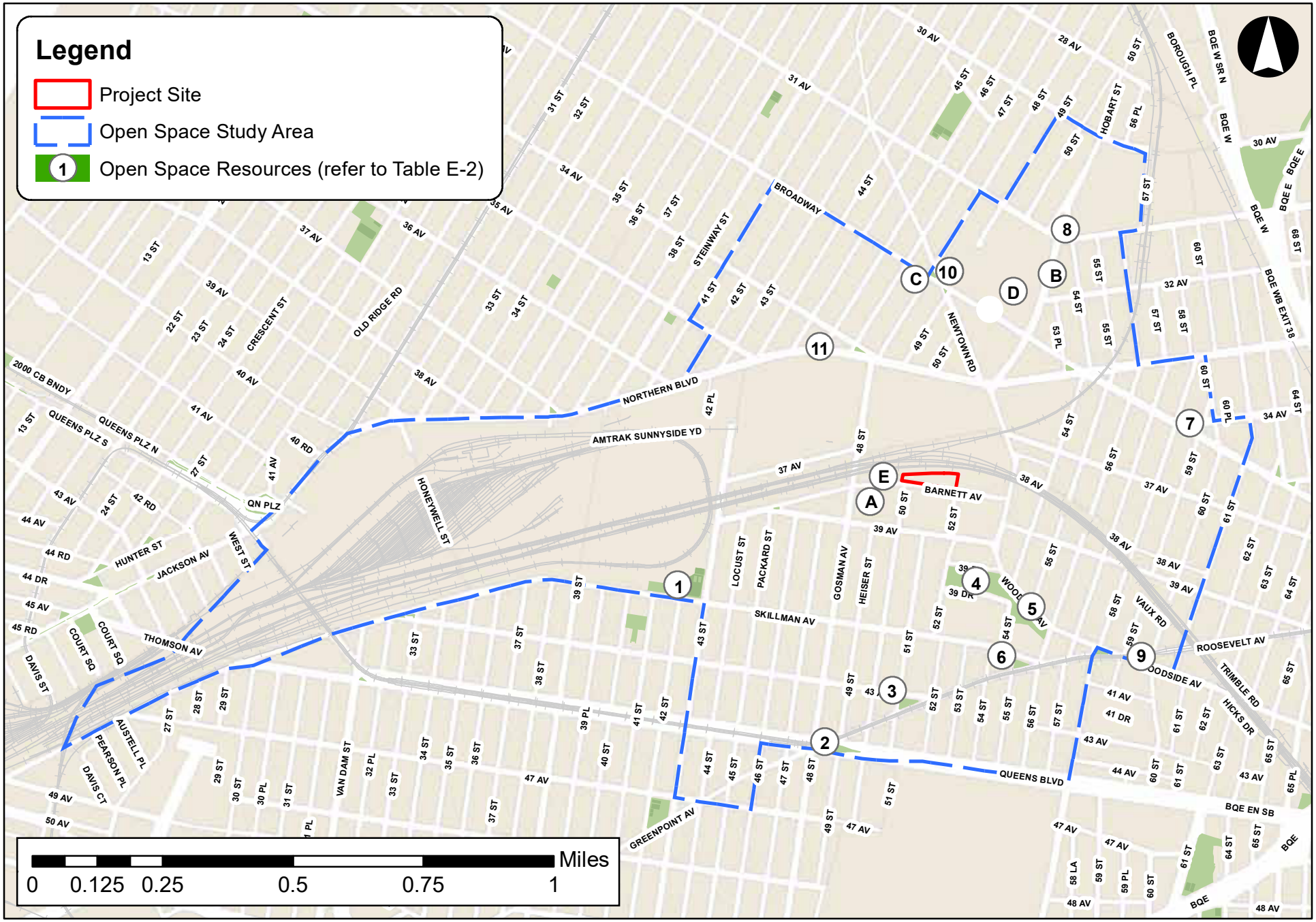
The condition of each open space facility was categorized as "Excellent," "Good," "Fair," or "Poor." A facility was considered in excellent condition if the area was clean and attractive and if all equipment was present and in good repair. A good facility had minor problems such as litter or older but operative equipment. A fair or poor facility was one that was poorly maintained, had broken or missing equipment or lack of security, or other factors that would diminish the facility's attractiveness. Determinations were made subjectively, based on a visual assessment of the facilities.

Likewise, judgments as to the intensity of use of the facilities were qualitative, based on an observed degree of activity or utilization on a weekday afternoon, which is considered the weekday peak utilization period according to the *CEQR Technical Manual*. If a facility seemed to be at or near capacity (i.e. the majority of benches or equipment was in use), then utilization was considered heavy. If the facility or equipment was in use but could accommodate additional users, utilization was considered moderate. If a playground or sitting area had few people, usage was considered light. Table D-2, "Inventory of Existing Open Space and Recreational Facilities in Study Area," identifies the address, ownership, hours, and acreage of active and passive open spaces in the study area, as well as their condition and utilization. Figure D-2 maps their location in the study area.

In addition to the open space resources included in the quantitative analysis pursuant to *CEQR Technical Manual* methodology, three resources (denoted by the letters A, B, and C in Table 5-2 and Figure D-2) fall within the study area but are excluded from the quantitative analysis due to limited hours and/or accessibility.

Open Space Resources

As shown in Table D-2, 8.07 acres of open space are included in the quantitative analysis, of which approximately 4.31 acres (53 percent) are active open space and 3.76 acres (47 percent) are passive open space. Most of the open spaces in the study area are neighborhood playgrounds or seating areas that occupy less than one acre. The playgrounds generally feature play equipment, benches, and drinking fountains, and the seating areas typically offer green spaces and benches. There are two primarily active



50-25 Barnett Avenue EAS

Figure D-2

Study Area Open Space Resources

recreational playgrounds within the open space study area: Torsney/Lou Lodati Playground and Lawrence Virgilio Playground, which, combined, constitute the majority of the open space available for recreation in the study area.

The Tornsey/Lou Lodati Playground encompasses 2.03 acres on the northwest corner of Skillman Avenue and 43rd Street, near the Long Island Railroad (LIRR) Sunnyside Rail Yards. This playground honors George F. Tornsey, a World War I veteran, New York State Assembly Member, and supporter of parks and playgrounds in the Sunnyside area. This open space resource also includes the Lodati Playground. Lou Lodati earned the nickname "Mayor of Sunnyside" for his dedicated service to the community. The Tornsey/Lou Lodati Playground features a playground, handball, basketball, and volleyball courts, a softball field, spray showers, dog-friendly areas, and a comfort station.

Table D-2: Inventory of Existing Open Space and Recreational Facilities in the Study Area

Map No.[1]	Name	Location	Owner/ Agency	Features	Total Acres	Active Acres	Active %	Passive Acres	Passive %	Condition	Utilization
Open Space Resources included in Quantitative Analysis											
1	Torsney Playground/Lou Lodati Playground	Skillman Ave. btwn. 41st & 43rd Sts.	DPR	Playgrounds, handball, basketball, and volleyball courts, spray showers, dog-friendly areas, bathrooms	2.03	1.83	90	0.20	10	Good	Light
2	Sabba Park	Queens Blvd. btwn. 48th St., Greenpoint Ave., & 50th St.	DPR	Trees, benches	0.47	0.0	0	0.47	100	Good/Fair	Light
3	John Vincent Daniel Jr. Square	43rd Ave. btwn. 50th, 51st, & 52nd Sts.	DPR	Trees, benches	0.25	0.0	0	0.25	100	Good	Light
4	Lawrence Virgilio Playground/ Windmuller Park	52nd St., Woodside Ave., btwn. 39th Rd. & 39th Dr.	DPR	Basketball court, bathrooms, fitness equipment, handball court, small outdoor pool, playground, running track, spray shower, trees, benches	3.01	2.41	80	0.60	20	Good/ Excellent	Moderate
5	Doughboy Plaza	Woodside Ave. btwn 54th & 56th Sts.	DPR	Trees, plantings, sitting area, paths, war monument, dog-friendly areas	1.71	0.0	0	1.71	100	Good/ Excellent	Light
6	Steinmann Triangle	Skillman Ave., Roowsevelt Ave, btwn. 55th & 56th Sts.	DPR	Trees, benches	0.21	0.0	0	0.21	100	Fair	Light
7	Sergeant Collins Triangle	Broadway, 34th Ave., btwn 58th & 59th Sts.	DPR	Trees, benches	0.12	0.0	0	0.12	100	Good	Light
8	Strippoli Square	31st Ave., 51st St., & 54th St.	DPR	Trees, benches	0.06	0.0	0	0.06	100	Good	Light
9	Sohncke Square	Roosevelt Ave., Woodside Ave., & 58th St.	DPR	Trees, benches	0.04	0.0	0	0.04	100	Fair	Moderate
10	Woodside Houses Open Space	51st St. btwn. Newtown Rd. & 31st Ave.	NYCHA	Playground	0.145	0.072	50	0.072	50	Good	Moderate
11	Dwyer Square	Northern Blvd. & 34th Ave. btwn. 47th & 48th Sts.	DPR	Trees, benches	0.03	0.0	0	0.03	100	Good	Light
				Total Included in Quantitative Analysis	8.07	4.31	53	3.76	47		
Open Space Resources not included in Quantitative Analysis											
A	Sunnyside Gardens Park	Middlebury/39th Ave. btwn. 48th & 50th Sts.	Members of Sunnyside Gardens	Trees, benches, ballfield, picnic area, tennis court, pool, gardens, playground	6.07	3.52	58	2.55	42		
B	Moore-Jackson Cemetery	54th St. & 31st Ave.	Queens Historic Society	Trees, benches	0.03	0.0	0	0.03	100		
C	Corporal Frank F. Fagan Square	48th St., Newtown Rd., & Broadway	DPR	Plantings	0.02	0.0	0	0.02	100		
D	Woodside Houses Open Space	51st St, btwn. Newtown Rd. & 31st Ave.	NYCHA	Trees, Benches, Basketball Courts, Grass Areas	1.70	0.17	10	1.53	90		
E	Sunnyside Park Community Garden	Middlebury/39th Ave. btwn. 48th & 50th Sts.	Members of Sunnyside Gardens	Plantings	0.27	0	0	0.27	100		
				Total Excluded from Quantitative Analysis	8.09	3.69	46	4.40	54		

Source: NYC Zola, DPR, April 16th,2019 field visits.
Notes:
[1] Refer to Figure D-2.
DPR = New York City Department of Parks and Recreation; NYCHA = New York City Housing Authority

Lawrence Virgilio Playground/Windmuller Park encompasses 3.01 acres with both active and passive recreational uses, and is generally bounded by 39th Road, Woodside Avenue, 39th Drive, and 52nd Street. The park was originally named Windmuller Park after Louis Windmuller, a civic leader and businessman who summered on this Woodside Hill until his death in 1913. In 2002, the park's playground was named for Lawrence Virgilio, a New York City Firefighter who died in the World Trade Center on September 11th, 2001. The park features a playground, handball courts, and a dog run. In 2007, a $2.1 million project added an open air stage, a renovated ADA-accessible comfort station, a mini-pool, an exercise track, pathways, fencing, basketball courts, and new exercise equipment.

In addition to these two predominantly active open space resources, there are eight public plazas, squares, or triangles located within the open space study area, that contain a combined 2.87 acres of open space. In addition, at the corner of Broadway and Newtown Road is a small 0.145-acre playground, part of the New York City Housing Authority (NYCHA) Woodside Houses that is publicly accessible. These spaces constitute important open space resources for neighborhood residents, as they provide passive and active recreational opportunities for residents as well as the local employee population.

As noted in Table D-2, none of the eleven open space resources included in the quantitative indirect open space impact assessment are in poor condition. In terms of utilization, all of the study are open space resources exhibit light to moderate utilization.

While excluded from the analysis due to its limited accessibility to the general public, to the southwest of the project site is Sunnyside Gardens Park, an approximately 6.07-acre private park accessible to residents of Sunnyside Gardens who are fee-paying members of the park. The privately-owned Sunnyside Gardens Park is the largest of the study area open space resources and features a ball field, picnic area, tennis courts, a children's pool, gardens, and a playground. Also located within the open space study area but excluded from the quantitative analysis is the 0.03-acre Moore-Jackson Cemetery, located to the northeast of the project site, on 51st Street between 31st and 32nd Avenues. A New York City Landmark, the Moore-Jackson Family Burial Ground was established in 1733. The cemetery is currently owned by the Queens Historical Society and features trees and benches, but is open only during limited hours. In addition, it should be noted that only 1.70 acres of the approximately 16.6 acres of publicly accessible NYCHA Woodside Campus open areas are included as qualitative open space; open areas adjacent to the campus's buildings in addition to the approximately three acres of pathways and benches are not included for conservative analysis purposes. While located in the study area, the 0.02-acre Corporal Frank F. Fagan Square consists entirely of plantings, with no benches or seating areas, it is excluded from the quantitative open space analysis. Finally, adjacent to Sunnyside Gardens Park, is the Sunnyside Park Community Garden. The community garden is an approximately 0.27-acre space that is accessible for members of the Sunnyside Gardens Park.

Existing Open Space Adequacy

The following analysis of the adequacy of existing open space resources within the study area takes into consideration the ratios of active, passive, and total open space resources per 1,000 residents. As an optimal planning goal, the City tries to achieve an overall residential open space ratio of 2.5 acres per 1,000 residents (80 percent [2 acres] active and 20 percent [0.5 acres] passive) for large-scale plans and proposals. Although a typical population mix may call for such a goal, it is often not feasible for many areas of the City (especially higher density areas). Therefore, the City does not consider these ratios as open space policy for every neighborhood. Rather, the ratios serve as benchmarks that represent how well an area is served by open space.

In calculating the open space ratio per 1,000 user population for the study area, all of the resources listed in the "Open Space Resources Included in the Quantitative Analysis" section of Table D-2 were included; Resources A, B, C, D, and E were not included in the calculations pursuant to *CEQR Technical Manual* guidance as they have limited accessibility/hours or do not offer seating. Table D-3 shows that,

with an existing study area residential population of approximately 45,690 people, the existing total open space ratio in the study area is approximately 0.176 acres of open space per 1,000 residents; the study area has 0.094 acres of active open space per 1,000 residents and 0.082 acres of passive open space per 1,000 residents. As indicated in Table D-3, the existing total and passive residential open space ratios are below the City's open space planning goals of 2.5 acres per 1,000 residents and the 1.5 acres per 1,000 residents Citywide Community District Median.

Table D-3: Adequacy of Open Space Resource in the Study Area – Existing Conditions

Existing Population	Open Space Acreage			Open Space per 1,000 Residents			City Open Space Planning Goals		
	Total	Passive	Active	Total	Passive	Active	Total	Passive	Active
45,690	8.07	3.76	4.31	0.176	0.082	0.094	2.50	0.50	2.0

The Future without the Proposed Actions (No-Action Condition)

Project Site

In the absence of the proposed actions in 2023, it is expected that the project site would not be redeveloped, and the existing approximately 223-space surface public parking lot would remain.

Study Area Population

As presented below in Table D-4, several new residential developments are currently planned and expected to be completed within the ½-mile open space study area in the future without the proposed actions by 2023, which would increase the residential population within the study area. It should be noted that these No-Action developments are located outside of the land use study area discussed in Attachment C, "Land Use, Zoning, and Public Policy," and were, therefore, not included in the land use analysis. The residential components of these No-Action developments have been added to the existing conditions residential population. Table D-4 shows that these No-Action developments are expected to increase the ½-mile study area population by approximately 229 residents by 2023 to a total of 45,919 residents.

Open Space Resources

No changes to study area open space resources are anticipated in the 2023 No-Action condition. As such, as under existing conditions, open space in the ½-mile open space study area would total 8.07 acres, comprised of 3.76 acres of passive open space and 4.31 acres of active open space.

Open Space Adequacy

Table D-5, below, presents the No-Action open space ratios for the ½-mile study area, based on the anticipated population increases outlined above. As indicated in Table D-5, as under existing conditions, the total, passive, and active open space ratios would be less than the City' open space planning goals of 2.5 acres of open space per 1,000 residents (including 0.5 acres of passive open space and two acres of active open space). The total open space ratio is expected to decrease to 0.209 acres per 1,000 residents in the No-Action condition, with No-Action passive and active open space ratios of 0.113 and 0.096 acres per 1,000 residents, respectively. As under existing conditions, residents of the study area are expected to continue to utilize other study area open space resources conservatively not included in the quantitative assessment, most notably the 6.07-acre Sunnyside Gardens Park.

Table D-4: 2023 No-Action Study Area Residential Development

No-Action Development	Program	Residents[1]
43-46 51st Street	Mixed-use development with 75 DU and 8,624 gsf of ground floor retail space	185
52-22 Roosevelt Avenue	Mixed-use development with 10 DU, 3,062 gsf of ground floor retail space, and 4,538 gsf of medical office space.	25
34-46 59th Street	Residential development with 3 DUs.	7
34-44 59th Street	Residential development with 3 DUs.	7
39-56 56th Street	Small apartment building with 2 DUs.	5
Total No-Action Study Area Population Increment		*229*
Existing Study Area Residential Population		*45,690*
Total No-Action Study Area Residential Population		***45,919***

Notes:
[1] Residential population for projects within the open space study area based on average household size of census tracts included in the open space study area of 2.46 (2010 U.S. Census).
Sources: New York City Department of Buildings (DOB) Buildings Information System (BIS)

Table D-5: Adequacy of Open Space Resource in the Study Area – No-Action Conditions

No-Action Population	Open Space Acreage			Open Space per 1,000 Residents			City Open Space Planning Goals		
	Total	Passive	Active	Total	Passive	Active	Total	Passive	Active
45,919	8.07	3.76	4.31	0.176	0.082	0.094	2.50	0.50	2.0

The Future with the Proposed Actions (With-Action Condition)

This section describes the open space conditions that would result from the reasonable worst-case development scenario (RWCDS) associated with the proposed actions by 2023. It evaluates the potential for the proposed actions to result in significant adverse impacts to open space resources directly and indirectly based on a comparison of the No-Action condition (described above) to the With-Action condition.

Project Site Population

As described in Attachment A, "Project Description," in the future with the proposed actions it is estimated that there would be a total of up to 189 DU on the project site. Using the average household size of households in the Hunters Point-Sunnyside-West Maspeth Neighborhood Tabulation Area (2010 Census) of 2.37 residents per DU, the proposed actions are expected to introduce a net increase of approximately 448 residents and would therefore increase the study area's population to a total of 46,367 residents in the 2023 With-Action condition.

Direct Effects Analysis

The proposed actions would not have a direct effect on any study area open spaces. Construction and operation of the proposed project would not cause the physical loss of public open space because of encroachment or displacement of the space; would not change the use of an open space so that it no longer serves the same user population; and would not limit public access to an open space. In addition, as discussed in other chapters of this EAS, the proposed actions would not significantly affect the

usefulness or utilization of any study area open spaces due to increased noise or air pollutant emissions, odors, or shadows.

Indirect Effects Analysis

Table D-6 compares the No-Action and With-Action open space ratios per 1,000 residents. As presented in Table D-6, in the With-Action condition, as under existing and No-Action conditions, the open space ratios in the ½-mile study area would be less than the City's open space planning goals of 2.5 acres of open space per 1,0000 residents, including 0.5 acres of passive open space and 2.0 acres of active open space. However, the proposed actions would not result in an appreciable decrease in the study area open space ratios. In the future with the proposed actions, the total open space ratio is expected to decrease by 0.002 acres (0.97 percent) from 0.176 to 0.174 acres of open space per 1,000 residents (as compared to the No-Action condition). The passive open space ratio is expected to decrease by 0.001 acres (approximately 0.97 percent) from 0.082 acres to 0.081 acres per 1,000 residents, and the active open space ratio is expected to decrease by 0.001 acres (approximately 0.97 percent) from 0.094 acres to 0.093 acres per 1,000 residents, as compared to the No-Action condition.

Table D-6: Adequacy of Open Space Resource in the Study Area – No-Action vs. With-Action Conditions

		Open Space Acreage			Open Space per 1,000 Residents (acres)			City Open Space Planning Goals		
	Population	Total	Passive	Active	Total	Passive	Active	Total	Passive	Active
No-Action Condition	45,919	8.07	3.76	4.31	0.176	0.082	0.094	2.50	0.50	2.0
With-Action Condition	46,367				0.174	0.081	0.093			
Incremental Change	+ 448				-0.002 (-0.97%)	-0.001 (-0.97%)	-0.001 (-0.97%)			

Assessment

While the study area would continue to have a shortfall of open space, the demand for open space generated by the RWCDS would not significantly exacerbate the No-Action deficiency, with an approximately one percent decrease in the study area's total open space ratio, the equivalent of 0.002 fewer acres of open space per 1,000 residents. The population added as a result of the proposed actions is not expected to noticeably affect utilization of the area's open spaces. In addition, the decrease in the open space ratio is partially ameliorated by several factors. First, most of the study area open space resources are only lightly utilized and are in good condition, and could therefore handle additional demand. The population generated by the proposed project is not expected to have any special characteristics, such as a disproportionately older or younger population, that would place heavy demands on facilities that cater to specific user groups; the residents in the future with the proposed actions are expected to exhibit similar characteristics to the current residents of the study area and the breakdown of the population is expected to remain the same. The RWCDS would result in the construction of a 5,959 sf outdoor deck for residents of the new building, which may partially lessen the utilization of passive open space near the Project Site. Finally, the open space study area includes several open space resources that were not discussed quantitatively (refer to Table D-2). The open space study area contains an additional 8.09 acres of open spaces that are partially accessible for residents of the study area[2].

While the proposed actions would result in an incremental decrease in open space ratios in the future, given the level of decrease anticipated, the existing low utilization of many of the study area's open

[2] As discussed above, Sunnyside Gardens Park is a fee-based private park that is only accessible for residents of Sunnyside Garden Apartments. Open space at the Woodside Houses is only accessible for residents of the NYCHA Woodside Houses.

spaces, the inclusion of an outdoor deck for residents at the Project Site, and the availability of additional open spaces conservatively not included in the quantitative analysis, the proposed actions would not result in a significant adverse impact on open space.

Attachment E

Shadows

I. INTRODUCTION

According to the 2014 *CEQR Technical Manual*, an adverse shadows impact is considered to occur when an incremental shadow from a proposed project falls on a sunlight-sensitive resource and substantially reduces or completely eliminates direct sunlight exposure, thereby significantly altering the public's use of the resource, or threatens the viability of vegetation or other resources. Pursuant to CEQR guidance, sunlight-sensitive resources of concern are those resources that depend on sunlight, or for which direct sunlight is necessary to maintain the resource's usability or architectural integrity. Sunlight-sensitive resources can include publicly accessible open spaces, architectural resources, natural resources, and Greenstreets. In general, shadows on city streets, sidewalks, buildings, or project-generated open spaces are not considered significant under CEQR. In addition, shadows occurring within an hour and a half of sunrise or sunset generally are not considered significant under CEQR.

According to the *CEQR Technical Manual*, a shadows assessment is required only if a proposed action would result in structures (or additions to existing structures) of 50 feet or more and/or be located adjacent to, or across the street from, a sunlight-sensitive resource. As described in Attachment A, "Project Description," the proposed actions would facilitate the development of a building on Barnett Avenue in Queens, with a maximum height of approximately 85 feet. Therefore, a detailed shadows analysis was prepared to determine the potential for the RWCDS building to result in significant adverse impacts on sunlight-sensitive resources.

II. PRINCIPAL CONCLUSIONS

The proposed actions would not result in significant adverse shadows impacts. While the RWCDS building would cast incremental shadows on a portion of Sunnyside Gardens Park and Sunnyside Park Community Garden, the shadows analysis determined that the duration and coverage of incremental shadows on each open space resource would not be significant or adverse. Project-generated incremental shadows would occur during the early morning hours and would last for approximately five minutes on May 6/August 6 and 33 minutes on June 21 at Sunnyside Gardens Park. At Sunnyside Park Community Garden, incremental shadow coverage from the RWCDS building would occur for 22 minutes on the May 6/August 6 analysis day and for 51 minutes on the June 21 analysis day. On both analysis days, new incremental shadows would be limited to small northeastern portions of the park that contain a grassy baseball field surrounded by trees. Sunnyside Gardens Park would not receive project-generated incremental shadows after 6:30 AM on either analysis day, and as such, any project-generated shadows would exit the park several hours before the park opens at 10:00 AM. Additionally, the park would continue to receive adequate sunlight during the morning, afternoon, and evening hours, and as such, the RWCDS building would not have significant adverse effects on any vegetation in Sunnyside Gardens Park. Similar to the park, the Sunnyside Park Community Garden would not experience incremental shadows past 6:50 AM on either analysis day. Incremental shadows would be limited to a small portion of the community garden. Vegetation within the community garden would continue to receive four to six hours of direct sunlight. Therefore, incremental shadows that would result from the RWCDS building are not anticipated to adversely affect the utilization or enjoyment of either open space resource, or detract from the character of the Sunnyside Gardens Historic District.

III. METHODOLOGY

According to the *CEQR Technical Manual*, the longest shadow a structure will cast in New York City, except for periods close to dawn or dusk, is 4.3 times its height. For projects resulting in structures less than 50 feet tall, a shadow assessment is generally not necessary, unless the site is adjacent to a park, historic resource, or important natural feature (if the feature that makes the structure significant depends on sunlight).

First, a preliminary screening assessment must be conducted to ascertain whether shadows resulting from a project could reach any sunlight-sensitive resource at any time of year. The *CEQR Technical Manual* defines sunlight-sensitive resources as those resources that depend on sunlight or for which direct sunlight is necessary to maintain the resource's usability or architectural integrity. The following are considered to be sunlight-sensitive resources:

- *Public open space* (e.g., parks, playgrounds, plazas, schoolyards, greenways, and landscaped medians with seating). Planted areas within unused portions or roadbeds that are part of the Greenstreets program are also considered sunlight-sensitive resources. The use of vegetation in an open space establishes its sensitivity to shadows. This sensitivity is assessed for both (1) warm-weather dependent features, like wading pools and sandboxes, or vegetation that could be affected by loss of sunlight during the growing season (i.e., March through October); and (2) features, such as benches, that could be affected by a loss of winter sunlight. Uses that rely on sunlight include: passive use, such as sitting or sunning; active use, such as playfields or paved courts; and such activities as gardening, or children's wading pools and sprinklers. Where lawns are actively used, the turf requires extensive sunlight. Vegetation requiring direct sunlight includes the tree canopy, flowering plants, and plots in community gardens. Generally, four to six hours a day of sunlight, particularly in the growing season, is a minimum requirement.

- *Features of historic architectural resources that depend on sunlight for their enjoyment by the public.* Only the sunlight-sensitive features are considered, as opposed to the entire architectural resource. Sunlight-sensitive features include the following: design elements that are part of a recognized architectural style that depends on the contrast between light and dark (e.g., deep recesses or voids, such as open galleries, arcades, recessed balconies, deep window reveals, and prominent rustication); elaborate, highly carved ornamentation; stained glass windows; exterior building materials and color that depend on direct sunlight for visual character (e.g., the polychromy [multicolored] features found on Victorian Gothic Revival or Art Deco facades); historic landscapes, such as scenic landmarks, including vegetation recognized as an historic feature of the landscape; and structural features for which the effect of direct sunlight is described as playing a significant role in the structure's importance as a historic landmark.

- *Natural resources where the introduction of shadows could alter the resource's condition or microclimate.* Such resources could include surface water bodies, wetlands, or designated resources, such as coastal fish and wildlife habitats.

The preliminary screening assessment consists of three tiers of analysis. The first tier determines a simple radius around the project site representing the longest shadow that could be cast. If there are sunlight-sensitive resources within the radius, the analysis proceeds to the second tier, which reduces the area that could be affected by project-generated shadows by accounting for a specific range of angles that can never receive shade in New York City due to the path of the sun in the northern hemisphere. If the second tier of analysis does not eliminate the possibility of new shadows on sunlight-sensitive resources, a third tier of screening analysis further refines the area that could be reached by new shadows by looking at specific

representative days of the year and determining the maximum extent of shadow over the course of each representative day.

If the third tier of analysis does not eliminate the possibility of new shadows on sunlight-sensitive resources, a detailed shadow analysis is required to determine the extent and duration of the incremental shadow resulting from the project. In accordance with the *CEQR Technical Manual*, shadows on sunlight-sensitive resources of concern were modeled for four representative days of the year. For the New York City area, the months of interest for an open space resource encompass the growing season (i.e., March through October) and one month between November and February representing a cold-weather month (usually December). Representative days for the growing season are generally the March 21 vernal equinox (or the September 21 autumnal equinox, which is approximately the same), the June 21 summer solstice, and a spring or summer day halfway between the summer solstice and equinoxes, such as May 6 or August 6 (which are approximately the same). For the cold-weather months, the December 21 winter solstice is included to demonstrate conditions when open space users rely most heavily on available sunlight warmth. As these months and days are representative of the full range of possible shadows, they are also used for assessing shadows on sunlight-sensitive historic and natural resources. The *CEQR Technical Manual* defines the temporal limits of a shadow analysis period to fall from an hour and a half after sunrise to an hour and a half before sunset.

The detailed analysis provides the data needed to assess the shadow impacts. The effects of the new shadows on the sunlight-sensitive resources are described, and their degree of significance is considered. The result of the analysis and assessment are documented with graphics, a table of incremental shadow durations, and narrative text. As described in the *CEQR Technical Manual*, an incremental shadow is generally not considered significant when its duration is no longer than ten minutes at any time of year and the resource continues to receive substantial direct sunlight. A significant shadow impact generally occurs when an incremental shadow of ten minutes or longer falls on a sunlight-sensitive resource and results in one of the following:

- *Vegetation:* a substantial reduction in sunlight available to sunlight-sensitive features of the resource to less than the minimum time necessary for its survival (when there would be sufficient sunlight in the future without the project) or a reduction in direct sunlight exposure where the sensitive feature of the resource is already subject to substandard sunlight (i.e., less than the minimum time necessary for its survival).

- *Historic and cultural resources:* a substantial reduction in sunlight available for the enjoyment or appreciation of the sunlight-sensitive features of an historic or cultural resource.

- *Open space utilization:* a substantial reduction in the usability of open space as a result of increased shadow, including information regarding anticipated new users and the open space's utilization rates throughout the affected time periods.

- *For any sunlight-sensitive feature of a resource:* complete elimination of all direct sunlight on the sunlight-sensitive feature of the resource, when the complete elimination results in substantial effects on the survival, enjoyment, or, in the case of open space or natural resources, the use of the resource.

In general, a significant adverse shadows impact occurs when the incremental shadows added by a proposed building fall on a sunlight-sensitive resource and substantially reduce or completely eliminate direct sunlight exposure, thereby significantly altering the public's use of the resource or threatening the viability of vegetation or other natural resources.

IV. PRELIMINARY SCREENING

Tier 1 Screening Assessment

According to the 2*014 CEQR Technical Manual*, the longest shadow that a structure will cast in New York City, except for periods close to dawn or dusk, is 4.3 times its height and occurs on December 21 (the winter solstice). The height of the RWCDS building, plus a bulkhead height of 12 feet, was used to determine the longest shadow study area (Tier 1 Assessment). Bulkheads of the proposed building range between nine and 12 feet. Therefore, the longest shadow study area would be approximately 417 feet. Within this longest shadow study area, there are three resources that are potentially sunlight-sensitive: Sunnyside Gardens Park, the Sunnyside Park Community Garden on the north side of Sunnyside Gardens Park, and the Sunnyside Gardens Historic District (refer to Figure E-1). Therefore, further screening was warranted in order to determine whether these resources could be affected by project-generated shadows. As the Sunnyside Garden Apartments, the only buildings within the Historic District that are also within the Tier 1 Longest Shadow Study Area, do not include any sunlight-sensitive features, further analysis will be concentrated on potential shadow impacts on the Sunnyside Gardens Park and the adjacent Sunnyside Park Community Garden.

Tier 2 Screening Assessment

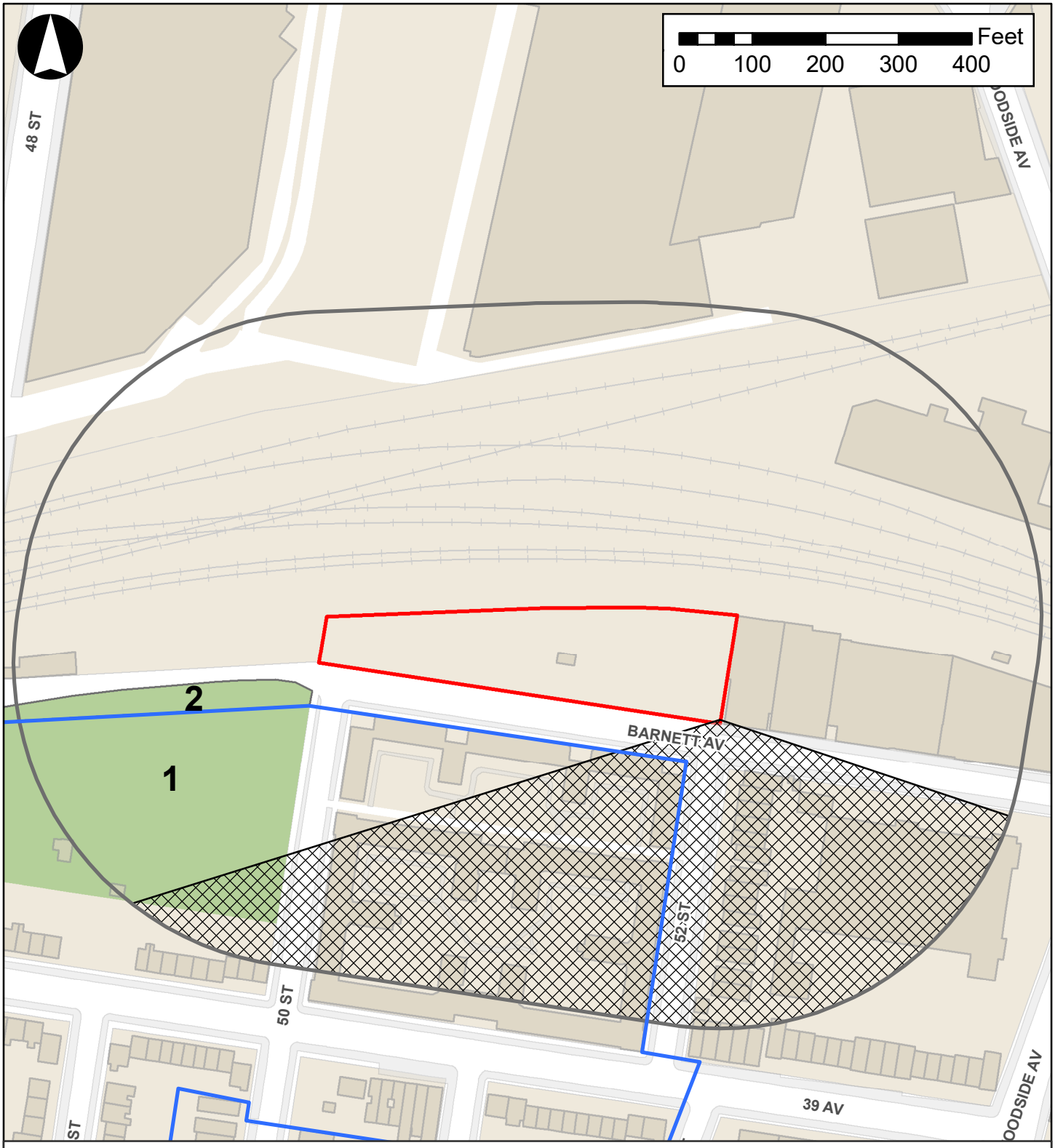
Due to the path of the sun across the sky in the northern hemisphere, no shadow can be cast in a triangular area south of any given project site. In New York City, this area lies between -108 and +108 degrees from true north. The purpose of the Tier 2 screening is to determine whether the sunlight-sensitive resources identified in the Tier 1 screening are located within portions of the longest shadow study area that can receive shade from the proposed building.

As presented in Figure E-1, portions of one historic resource (the LPC-designated and S/NR-listed Sunnyside Gardens Historic District) and two open space resources, the privately-operated membership-based Sunnyside Gardens Park, and the Sunnyside Park Community Garden adjacent to Sunnyside Gardens Park fall within the RWCDS' maximum shadow radius, and based on the Tier 2 Screening Assessment, it cannot be ruled out that the RWCDS would cast shadows on these locations.

Tier 3 Screening Assessment

According to the *CEQR Technical Manual*, a Tier 3 screening assessment should be performed to determine if, in the absence of intervening buildings, shadows resulting from a proposed project can reach a sunlight-sensitive resource, thereby warranting a detailed shadows analysis. The Tier 3 screening assessment is used to determine if shadows resulting from a proposed project can reach a sunlight-sensitive resource at any time between 1.5 hours after sunrise and 1.5 hours before sunset on representative analysis dates.

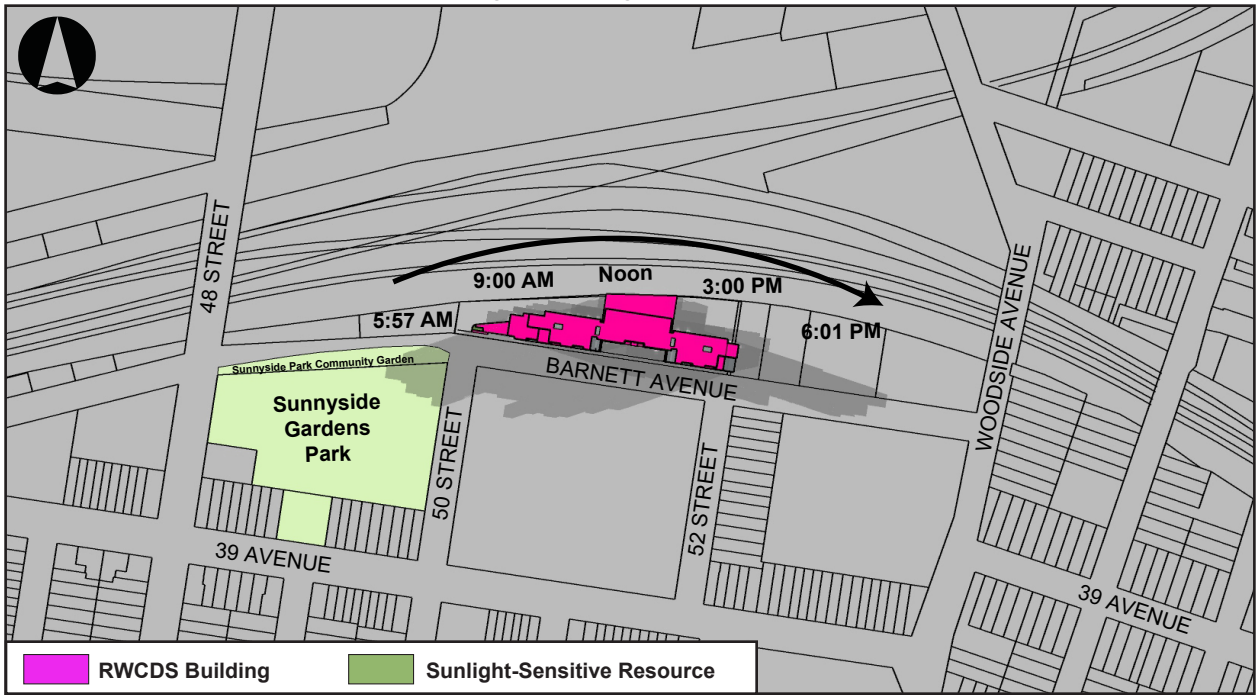
As project-generated shadows could reach nearby sunlight-sensitive resources, a Tier 3 assessment was performed using three dimensional (3D) computer mapping software. The 3D model was used to calculate and display project-generated shadows on individual representative analysis dates. The model contained 3D representations of the elements in the base map used in the preceding assessments and a 3D model of the RWCDS building. At this stage of the assessment, surrounding buildings and structures within the study area were not included in the model so that it may be determined whether project-generated shadows would reach any sunlight-sensitive resources.



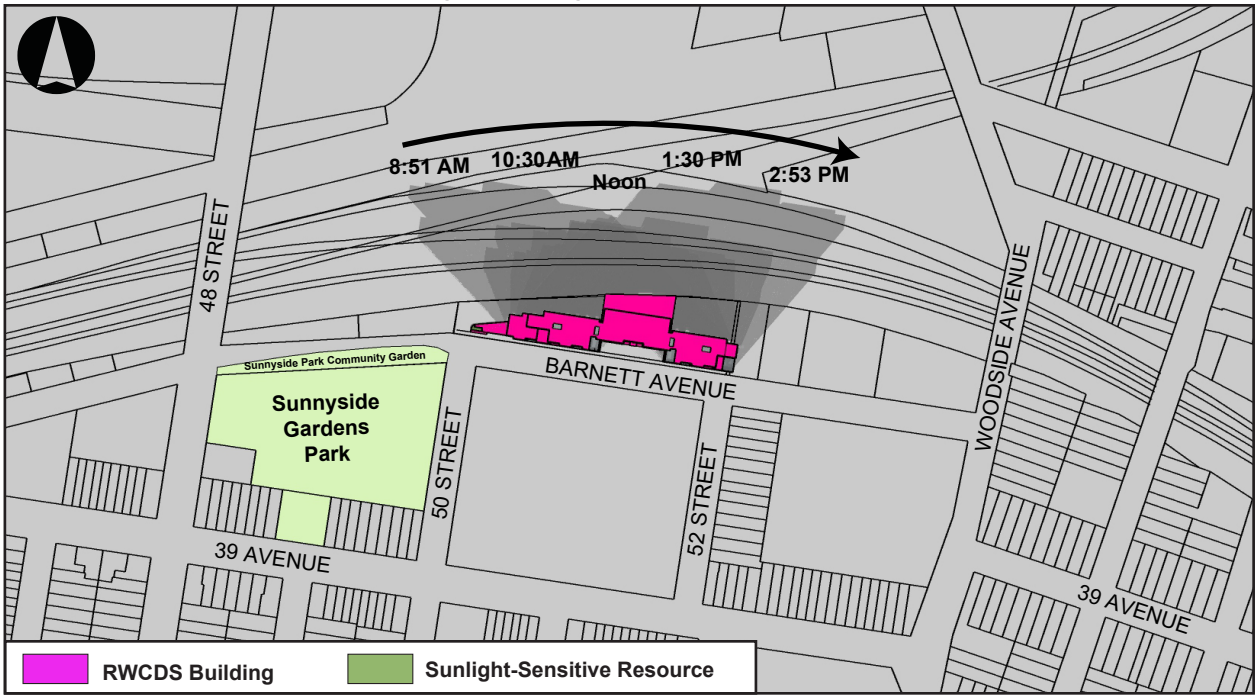
Legend

- Project Site (Primary Study Area)
- Existing Buildings
- 1 Sunlight-Sensitive Open Space Resources (refer to Table E-1)
- Tier I: Longest Shadow Radius (417')
- Tier II: Area that Cannot be Shaded
- Sunnyside Historic District

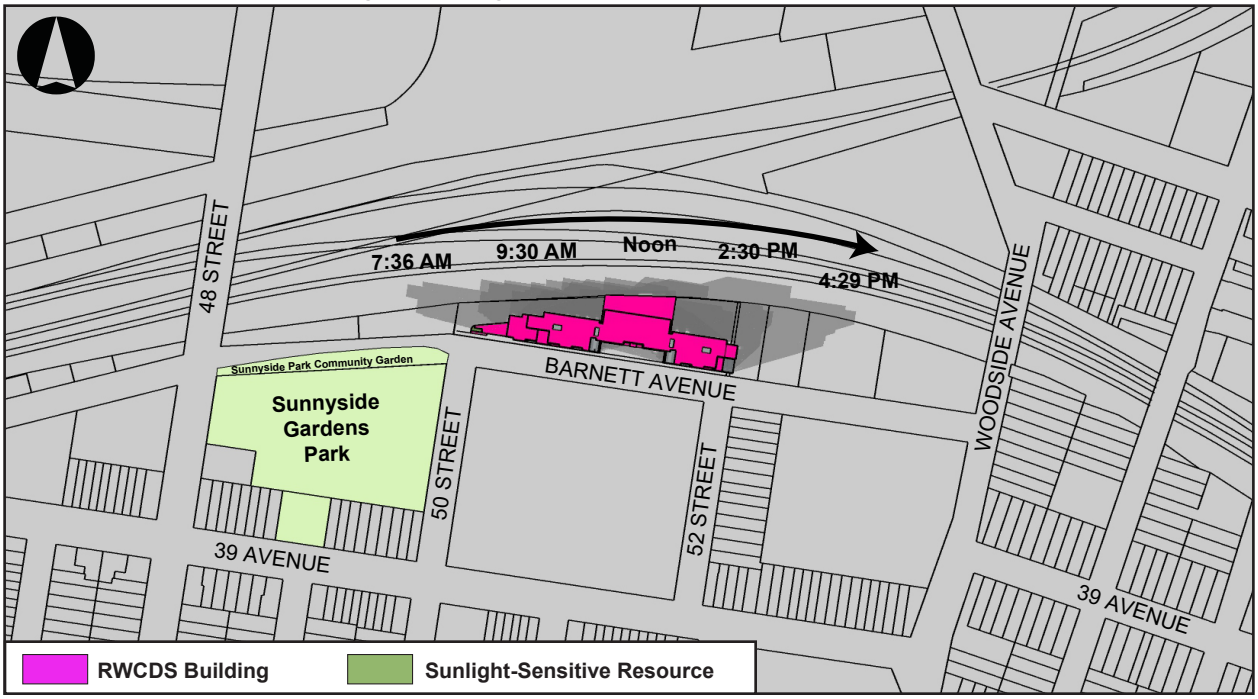
Analysis Day: June 21



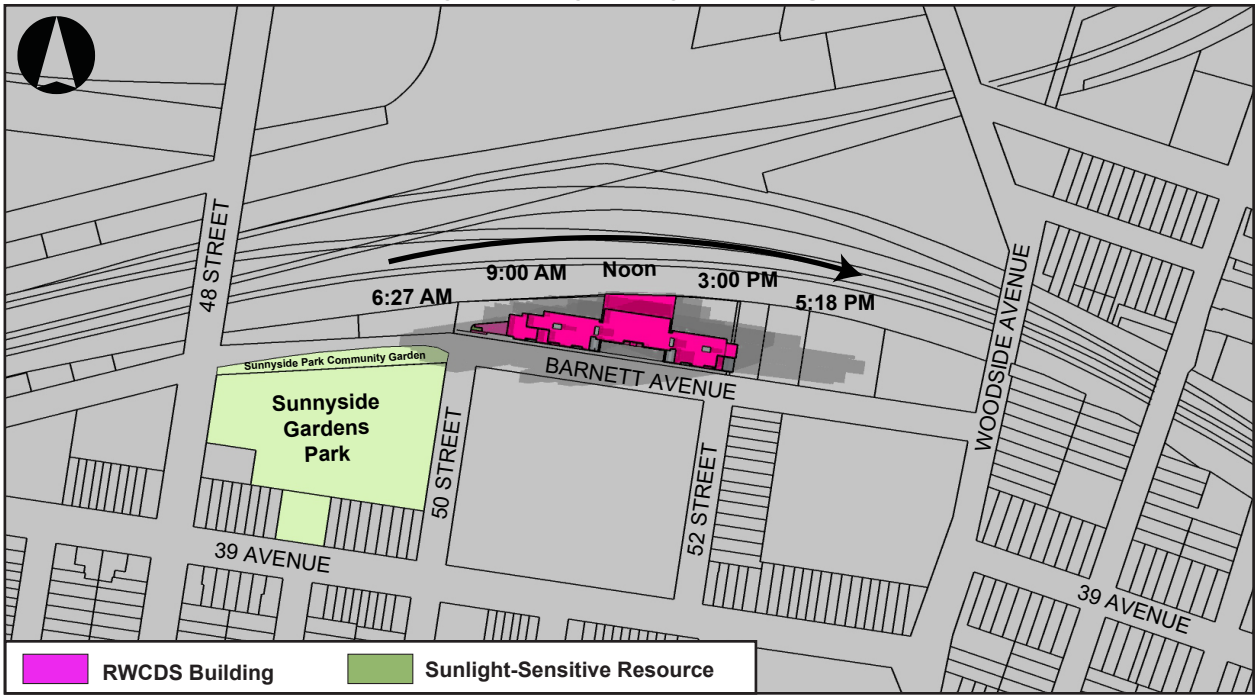
Analysis Day: December 21



Analysis Day: March 21 / September 21



Analysis Day: May 6 / August 6



Figures E-2a and E-2b illustrate the range of project-generated shadows that could occur in the absence of existing buildings on the four representative analysis days. The Tier 3 analysis shows that Sunnyside Gardens Park would receive project-generated shadows. Therefore, a detailed shadow analysis is required to determine the extent and duration of project-generated incremental shadows on this open space resource.

V. DETAILED ANALYSIS OF SHADOW IMPACTS

Resources of Concern

Sunnyside Gardens Park

As shown in Figure E-2, the RWCDS 85-foot-tall building plus 12-foot bulkhead could potentially cast incremental shadows on a small area in the northeastern portion of the Sunnyside Gardens Park. Sunnyside Gardens Park is a 3.5-acre membership-based privately-operated park created in 1926. Sunnyside Gardens Park is a contributing resource to the LPC-designated and S/NR-listed Sunnyside Gardens Historic District, and, as such, a detailed shadows analysis is warranted. The park includes a children's playground and tennis courts to the west, a basketball court and gardens in the center, and a baseball field and a grassy picnic area with tables, benches, and barbeques to the east. Sunnyside Gardens Park is open from 6 AM to 9 PM.

All park memberships are subject to approval from a membership committee, and membership is limited to residents of a "prescribed zone," which is generally coterminous with the boundaries of the Sunnyside Gardens Historic District. Residents of this zone can elect to apply for membership, with an annual membership fee of $225 for one adult. In addition, all new members are required to pay a $200 initiation fee. Sunnyside Gardens Park is not accessible to the non-fee-paying public, except for several annual community events. As Sunnyside Gardens Park is a private-access fee-charging space, it is considered a "private open space" pursuant to the *CEQR Technical Manual.*

Sunnyside Park Community Garden

Immediately to the north of Sunnyside Gardens Park is the Sunnyside Park Community Garden. The park is under the jurisdiction of the NYC Department of Transportation (DOT) as the property is not on the tax map and is technically located on a mapped street. The community garden measures approximately 11,763 sf. Sunnyside Park Community Garden has a Greenthumb License.

Shadows Analysis

Per CEQR guidance, shadows analyses were performed for the two sunlight-sensitive resources identified above, Sunnyside Gardens Park and Sunnyside Park Community Garden, on four representative days of the year: March 21/September 21, the equinoxes; May 6, the midpoint between the summer solstice and the equinox (and equivalent to August 6); June 21, the summer solstice and the longest day of the year; and December 21, the winter solstice and shortest day of the year. These four representative days indicate the range of potential shadows over the course of the year. CEQR guidance define 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. Table E-1 below summarizes the entry and exit times and total duration of project-generated incremental shadows on sunlight-sensitive resources.

Table E-1: Duration of Incremental Shadows on Sunlight Sensitive Resources

	Resource	Analysis Day	March 21/Sept. 21	May 6/August 6	June 21	December 21
			7:36 AM – 4:29 PM	**6:27 AM – 5:18 PM**	**5:57 AM – 6:01 PM**	**8:51 AM – 2:53 PM**
1	**Sunnyside Gardens Park**	Shadow Enter-Exit Time	-	6:27 AM – 6:32 AM	5:57 AM – 6:30 AM	-
		Incremental Shadow Duration	-	***5 minutes***	***33 minutes***	-
2	**Sunnyside Park Community Garden**	Shadow Enter-Exit Time	-	6:27 AM – 6:49 AM	5:57 AM – 6:48 AM	-
		Incremental Shadow Duration	-	***22 minutes***	***51 minutes***	-

Note: All times are Eastern Standard Time; Daylight Savings Time was not accounted for per *2014 CEQR Technical Manual* guidance. Table indicates the entry and exit times and total duration of incremental shadow for each sunlight-sensitive resource.

As shown in Table E-1, the RWCDS building would increase the duration of shadow coverage on Sunnyside Gardens Park and Sunnyside Park Community Garden on the May 6/August 6 and June 21 analysis days. It should be noted that, per the *2014 CEQR Technical Manual*, all times reported herein are Eastern Standard Time and do not reflect adjustments for daylight savings time that is in effect from mid-March to early November. As such, the times reported in this attachment for March 21/September 21, May 6/August 6, and June 21 need to have one hour added to reflect the Eastern Daylight Savings Time.

Figures E-3 and E-4 show the extent of project-generated incremental shadows on Sunnyside Gardens Park and Sunnyside Park Community Garden. As shadows are in constant motion, these figures illustrate the extent of incremental shadows at particular moments in time, highlighted in red.

March 21/September 21

On March 21/September 21 the time period for shadows analysis begins at 7:36 AM and continues until 4:29 PM. March is considered the beginning of the growing season in New York City, and September 21, which has the same shadow patterns as March 21, is also within the growing season. On the March 21/September 21 analysis day, incremental shadows from the RWCDS building would not reach Sunnyside Gardens Park or Sunnyside Park Community Garden.

May 6/August 6

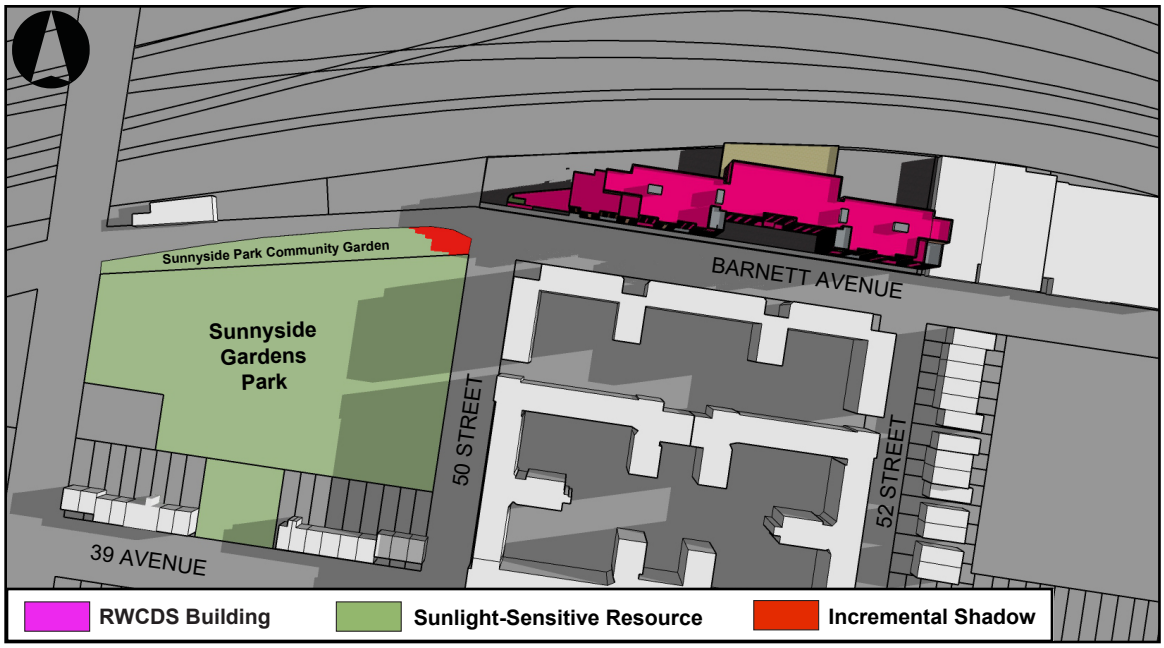
On May 6/August 6, the midpoint between the equinoxes and the solstices, the time period for shadows analysis begins at 6:27 AM and continues until 5:18 PM. May 6 and August 6 are both within the growing season in New York City. On the midpoint between the equinoxes and the solstices, the RWCDS building would cast incremental shadows on a small portion of the northeast corner of Sunnyside Gardens Park from 6:27 AM to 6:32 AM, for a duration of five minutes (refer to Figure E-3). Incremental shadows from the RWCDS building would be cast on the Sunnyside Park Community Garden from 6:27 AM to 6:49 AM for a duration of 22 minutes.

June 21

On June 21 the time period for shadows analysis begins at 5:57 AM and continues until 6:01 PM. On the summer solstice, which is the day of the year with the longest period of daylight, the sun is most directly

Figure E-3
Incremental Shadows on May 6/August 6

6:30 AM



6:40 AM

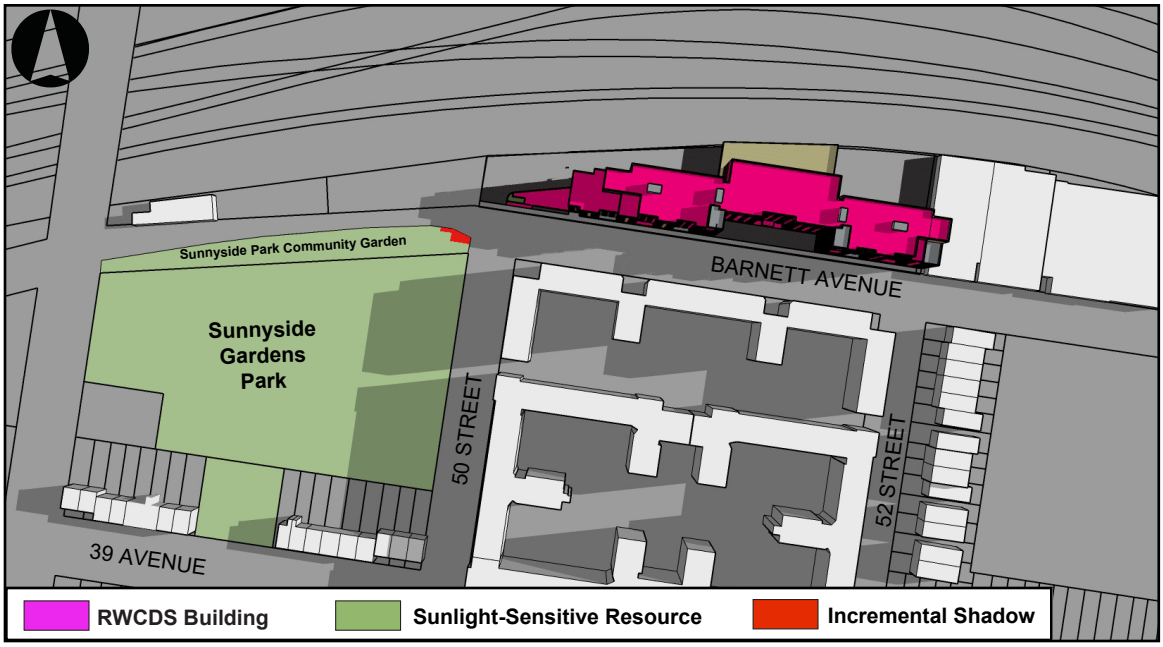
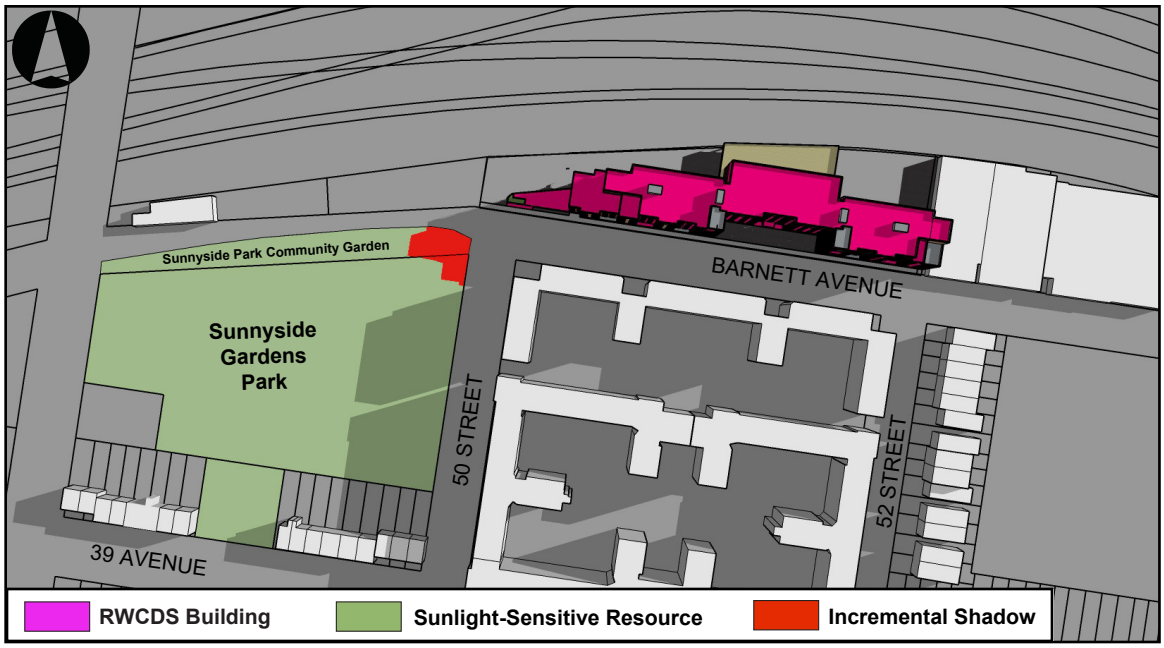
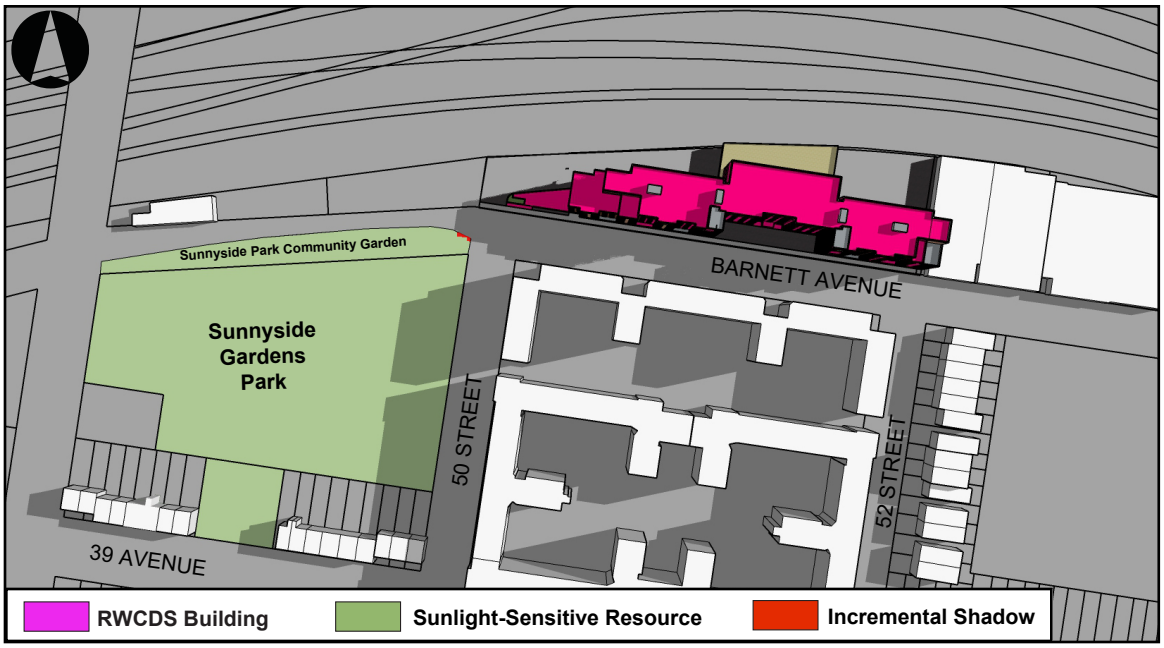


Figure E-4
Incremental Shadows on June 21

6:15 AM



6:45 AM



overhead and generally shadows are shortest and move across the widest angular range from west to east. June 21 is within the growing season in New York City. On the June 21 analysis day, the RWCDS building would cast incremental shadows on Sunnyside Gardens Park from 5:57 AM to 6:30 AM, for a duration of 33 minutes. As shown in Figure E-4, incremental shadows would be limited to northeastern portions of this open space resource. Incremental shadows from the RWCDS building would also be cast on the Sunnyside Park Community Garden from 5:57 AM to 6:48 AM for a duration of 51 minutes (refer to Figure E-4).

December 21

On the winter solstice, December 21, the day of the year with the shortest period of daylight, the sun is low in the sky and shadows are at their longest but move rapidly. December 21 is not within the growing season in New York City. On the December 21 analysis day, no incremental shadows from the RWCDS building would reach Sunnyside Gardens Park.

Assessment

A shadows impact occurs when incremental shadows from the RWCDS building plus bulkhead fall on a sunlight sensitive resource or feature and reduces direct sunlight exposure. Determining whether or not this impact is significant depends on the extent and duration of the incremental shadows and the specific context in which the impact occurs.

For open spaces, the uses and features of the space indicate its sensitivity to shadows. Shadows occurring during the cold-weather months of interest generally do not affect the growing season of outdoor vegetation; however, their effects on other uses and activities should be assessed. Therefore, this sensitivity is assessed for both (1) warm-weather-dependent features or vegetation that could be affected by a loss of sunlight during the growing season; and (2) features, such as benches, that could be affected by a loss of winter sunlight. Where lawns are actively used, the turf requires extensive sunlight. Vegetation requiring direct sunlight includes the tree canopy, flowering plants and plots in community gardens. Generally, four to six hours a day of sunlight, particularly in the growing season, is often a minimum requirement. Consequently, the assessment of an open space's sensitivity to increased shadow focuses on identifying the existing conditions of its facilities, plantings, and uses, and the sunlight requirements for each.

Sunnyside Gardens Park

The shadows analysis determined that the duration and coverage of incremental shadows on Sunnyside Gardens Park would not be significant or adverse. Incremental shadows from the RWCDS building plus bulkhead would occur during the early morning hours and would last for approximately five minutes on May 6/August 6 and 33 minutes on June 21. On both analysis days, new incremental shadows would be limited to small northeastern portions of the park which contain a grassy baseball field surrounded by trees (refer to Figures E-3 and E-4). Sunnyside Gardens Park would not receive project-generated incremental shadows after 6:30 AM on either analysis day, and as such, any project-generated shadows would be limited in duration to the first 30 minutes of the parks operating hours. Additionally, the park would continue to receive adequate sunlight during the morning, afternoon, and evening hours, and as such, the RWCDS building plus bulkhead would not have significant adverse effects on any vegetation in Sunnyside Gardens Park. Therefore, incremental shadows that would result from the RWCDS building plus bulkhead are not anticipated to adversely affect the utilization or enjoyment of Sunnyside Gardens Park, or detract from the character of Sunnyside Gardens Park.

Sunnyside Park Community Garden

Incremental shadows from the RWCDS building plus bulkhead on the Sunnyside Park Community Garden would not be significant or adverse. Similar to the findings of incremental shadows on Sunnyside Gardens Park, RWCDS incremental shadows on the community garden would be limited to the early morning hours on two of the four analysis days. Incremental shadows from the RWCDS building plus bulkhead would exit the community garden after 6:50 AM on each analysis day. Vegetation within the community garden would continue to receive the four to six hours of direct sunlight necessary for the vegetation's survival. Additionally, incremental shadows would not affect the utilization or enjoyment, or detract from the character of the community garden.

Attachment F

Historic & Cultural Resources

I. INTRODUCTION

The 2014 *City Environmental Quality Review* (CEQR) *Technical Manual* identifies historic resources as districts, buildings, structures, sites, and objects of historical, aesthetic, cultural, and archaeological importance. This includes designated New York City Landmarks (NYCL); properties calendared for consideration as landmarks by the New York City Landmarks Preservation Commission (LPC); properties listed in the State/National Registers of Historic Places (S/NR) or contained within a district listed in or formally determined eligible for S/NR listing; properties recommended by the New York State Board for listing on the S/NR; National Historic Landmarks (NHL); and properties not identified by one of the programs listed above, but that meet their eligibility requirements. An assessment of historic/archaeological resources is usually needed for projects that are located adjacent to historic or landmark structures or within historic districts, or projects that require in-ground disturbance, unless such disturbance occurs in an area that has already been excavated.

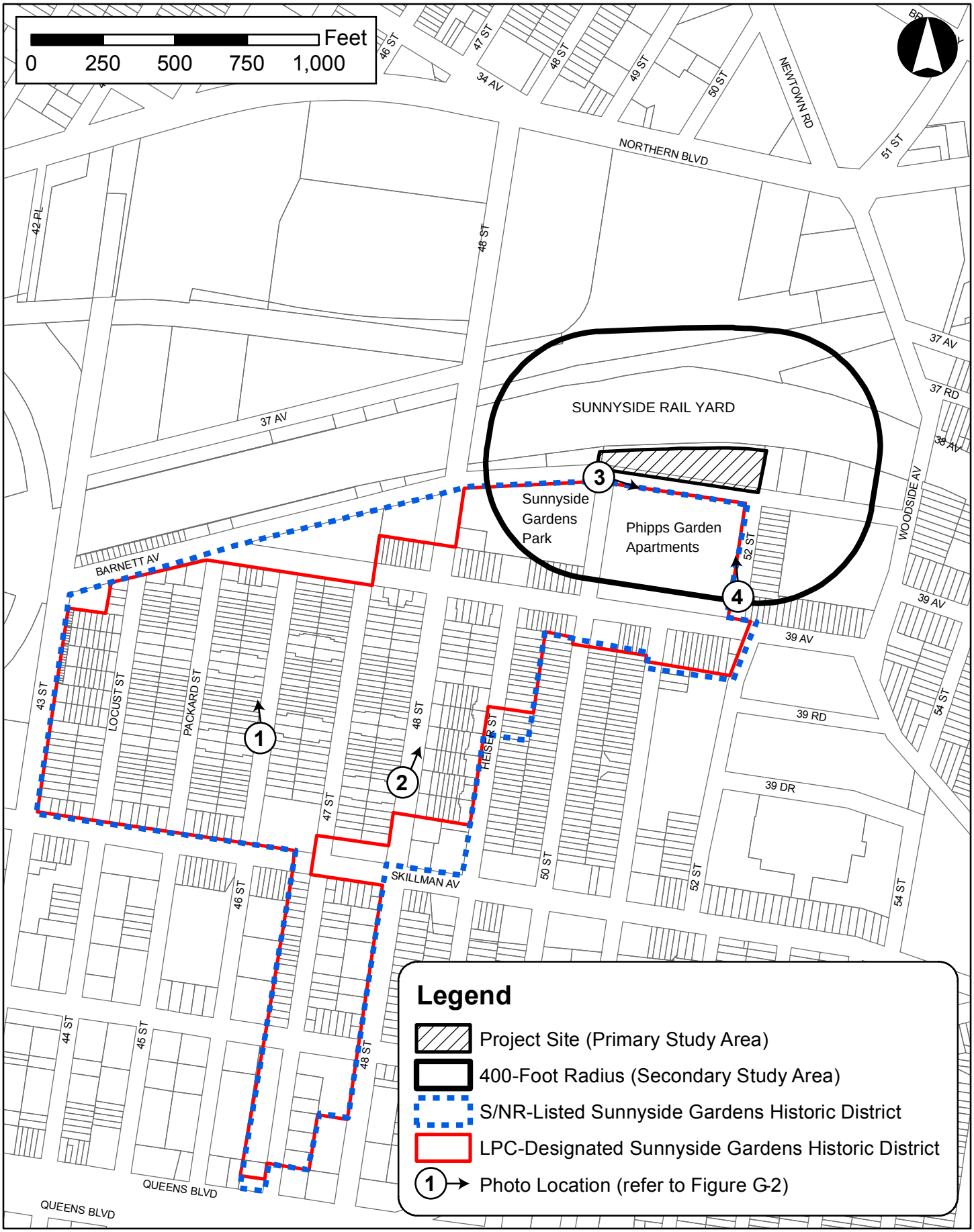
As detailed in Attachment A, "Project Description," the applicant is seeking zoning map and text amendments from the New York City Planning Commission (the "proposed actions"), to facilitate the development of a predominantly residential building on Barnett Avenue (Block 119, Lot 143) in the Sunnyside neighborhood of Queens (the "project site"). Absent the proposed actions, the project site would remain a surface parking lot, as under existing conditions.

The project site is located immediately north of the LPC-designated and S/NR-listed Sunnyside Gardens Historic District (refer to Figure F-1). Therefore, pursuant to CEQR guidelines, an assessment of the potential impacts of the proposed actions on historic architectural resources is warranted. According to CEQR, impacts on historic resources are considered on those sites impacted by the proposed actions and in the surrounding area. The historic architectural resources study area is therefore defined as the project site plus an approximate 400-foot radius around the project site (refer to Figure F-1), which is typically adequate for the assessment of historic architectural resources in terms of physical, visual, and historical relationships.

An assessment of archaeological resources is typically required for projects that involve in-ground disturbance, unless such disturbance occurs in an area that has already been excavated. On October 17, 2008, LPC determined that there are no archaeological resources associated with the project site (refer to Appendix II). As such, an archaeological analysis is not warranted for the proposed actions, and this attachment focuses exclusively on historic architectural resources.

II. PRINCIPAL CONCLUSIONS

As detailed below, the proposed actions would not result in significant adverse impacts on historic architectural resources. The proposed actions would replace an existing surface parking lot with a new building that reflects and complements the aesthetics of the adjacent LPC-designated and S/NR-listed Sunnyside Gardens Historic District. The proposed new building would have a positive visual effect in the neighborhood, allowing a long underutilized site to be redeveloped and activated with street level residential and community facility uses, extending the streetwall of Barnett Avenue in a manner that would be appropriate with the surrounding historic context. As such, the proposed actions would not result in significant adverse contextual impacts. Additionally, as discussed below, the proposed actions would not result in direct impacts or construction-related impacts to historic resources, nor would it result in significant adverse incremental shadows being cast on sunlight-sensitive features of historic resources.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500
750
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37 RD
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39 RD
39 DR
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SKILLMAN AV
QUEENS BLVD
42 PL
43 ST
44 ST
45 ST
46 ST
47 ST
48 ST
49 ST
50 ST
51 ST
52 ST
54 ST
LOCUST ST
PACKARD ST
HEISER ST
NEWTOWN RD
WOODSIDE AV
SUNNYSIDE RAIL YARD
Sunnyside Gardens Park
Phipps Garden Apartments
1
2
3
4
Legend
Project Site (Primary Study Area)
400-Foot Radius (Secondary Study Area)
S/NR-Listed Sunnyside Gardens Historic District
LPC-Designated Sunnyside Gardens Historic District
Photo Location (refer to Figure G-2)

III. DEVELOPMENT BACKGROUND

The project site is located in the northwest section of Queens, immediately south of the Long Island Railroad (LIRR) Sunnyside Rail Yards and north of the LPC-designated and S/NR-listed Sunnyside Gardens Historic District (refer to Figure F-1). In the 18th and 19th centuries, the project site and surrounding area were used as farmland by European settlers, including the Bragaw family who called their property Sunnyside Hill Farm. Although the study area is in close proximity to Manhattan, the area remained largely undeveloped throughout the 19th century due to the poor quality of the land and the lack of transit options. In 1898, the Village of Sunnyside, encompassing the project site and study area, was incorporated into the newly consolidated City of New York.

Large-scale residential development in the study area began in earnest after the construction of the Queensboro Bridge in 1909, the LIRR in 1910, and the 1918 extension of the subway provided quick access into Midtown Manhattan. The development of Sunnyside Gardens was spurred by a severe housing shortage after World War I and state and local incentives exempting new housing developments from real estate taxes. In 1924, the City Housing Corporation (CHC) was incorporated to build a garden city in Sunnyside. The CHC purchased 76.67 acres of undeveloped land from the LIRR and other smaller landowners in the area, and the construction of Sunnyside Gardens began along the pre-established street grid, as detailed below. In 1931-32 and 1935, the Phipps Garden Apartment buildings were constructed on a double-width block in the northern section of Sunnyside Gardens, immediately south of the project site.

Today, the area retains its original layout, and although alterations to the historic buildings and courtyards occurred during the mid- to late-20th century, the majority of the area's historic integrity remains intact.

IV. EXISTING CONDITIONS

Project Site

The project site is currently occupied by an approximately 223-space surface public parking lot, and there is one existing structure on the property: a small attendant building. No buildings, structures, sites, and/or objects of historical, aesthetic, cultural, or archaeological importance have been identified on the project site.

Study Area

Sunnyside Gardens Historic District

One known architectural resource was identified in the study area: the Sunnyside Gardens Historic District, listed on the S/NR in August/September 1984 and designated by the LPC in June 2007. The district encompasses over 600 buildings on 16 blocks, as shown in Figure F-1. The S/NR-listed Sunnyside Gardens Historic District and the LPC-designated Sunnyside Gardens Historic District have slightly different boundaries, but are generally surrounded by Barnett Avenue and 39th/Middleburg Avenue to the north, Skillman Avenue/Queens Boulevard to the south, 43rd Street/Laurel Hill Avenue to the west, and 52nd Street to the east (refer to Figure F-1).

Sunnyside Gardens was the creation of architects Clarence Stein and Henry Wright, along with the CHC, led by developer Alexander Bing. Constructed between 1924 and 1928, Sunnyside Gardens consists of twelve "courts" composed of rows of townhouses and small apartment buildings on 16 City blocks. The

designated area also includes the Phipps Garden Apartments, two courtyard apartment buildings (constructed in 1931-32 and 1935) and Sunnyside Gardens Park, a private open space. In addition to the structures in their original arrangements, many elements of the original landscape, including large street trees and some courtyard plantings, are still extant. This large complex is one of the most significant planned residential communities in New York City and has achieved national and international recognition for its low-rise, low-density housing arranged around landscaped open courtyards.

Generally, the houses in Sunnyside Gardens were arranged in perimeter rows close to the street, with large open areas behind them, located in the interiors of the blocks. Small private gardens were also built behind each house, but most of the space was devoted to the shared open courtyards. The individual houses were grouped in rows, with the groups separated from each other by pathways that allowed access to the common gardens and traversed the blocks from street to street.

The design of Sunnyside Gardens includes the layout of the entire community, the planning of each individual block, as well as the plan and exterior design of the individual units. Stein and Wright chose to combine different types of houses and apartments within the courts, including single-, double-, and triple-family homes with low-scale apartment buildings. By combining buildings with several types of layouts, roof outlines heights, detailing, and sizes, they created visual variety and interest (refer to Photos 1 and 2 in Figure F-2). The exterior house and apartment designs include Colonial Revival and Art Deco details, as well as simplified massing and decorative use of brick in an early modern manner, inspired by the early 20th century brick housing developments in Europe.

The Sunnyside Gardens Historic District buildings most proximate to the project site are the Phipps Garden Apartments. This five-building six-story complex encompasses an entire double-width block immediately south of the project site (refer to Photos 3 and 4 in Figure F-2). It is the largest apartment complex within the Sunnyside Gardens Historic District, largely dwarfing the other complexes in the vicinity, while remaining consistent in style, materials, and form. The plan of the complex forms a large rectangular footprint on the block, with expansive streetwalls and an entirely enclosed interior garden court. There is more visual variety on the courtyard-facing facades, which have inward projecting wings and ornate entrances. Typical alterations at both interior and exterior facades include replacement windows and doors, and some repointing with contrasting mortar. Although the replacement windows and doors are not historic, they have been appropriately replaced with aluminum windows that likely have similar or identical pane configurations to the original wood windows. The interior courtyard of the Phipps Garden Apartments is also noted for its rather grand interior landscaping designed by Marjorie L. Cautley. The interior garden court integrates private and public gardens, with the intention that every resident would have access to outdoor space. The original layout of the courtyard remains largely intact today.

V. THE FUTURE WITHOUT THE PROPOSED ACTIONS (NO-ACTION CONDITION)

In the 2023 future without the proposed actions, it is assumed that the project site would continue to be occupied by a 223-space surface public parking lot, as under existing conditions. There are no known or anticipated development projects in the 400-foot historic resources study area.

VI. THE FUTURE WITH THE PROPOSED ACTIONS (WITH-ACTION CONDITION)

As detailed in Attachment A, "Project Description," the proposed actions including zoning map and text amendments, which would facilitate an approximately 194,710 gross square foot (gsf) predominately



1. 46th Street between 39th and Skillman Avenues.



2. 48th Street between 39th and Skillman Avenues.



3. North facade of the Phipps Garden Apartments from Barnett Avenue and 50th Street.



4. East facade of the Phipps Garden Apartments from 52nd Street and 39th Avenue.

Photos taken 5/20/19

residential building (the RWCDS development) on the north side of Barnett Avenue between 50th and 52nd Streets (Block 119, Lot 143) in the Sunnyside neighborhood of Queens, immediately north of the LPC-designated and S/NR-listed Sunnyside Gardens Historic District (refer to Figure F-1). The RWCDS involves the construction of an eight-story building with up to 189 DUs, approximately 5,323 gsf of non-profit office space on the ground floor, and 170 surface parking spaces.

According to the *CEQR Technical Manual*, generally, if a proposed action would impact those characteristics that make a resource eligible for NYCL designation or S/NR listing, this could be a significant adverse impact. This section assesses the proposed actions' potential to result in significant adverse impact on the adjacent LPC-designated and S/NR-listed Sunnyside Gardens Historic District, including impacts resulting from construction of the proposed project, project-generated shadows, or other indirect impacts on existing historic resources in the study area.

The proposed actions were assessed in accordance with guidelines established in the *CEQR Technical Manual* (Chapter 9, Section 420) to determine (a) whether there would be a physical change to any designated property as a result of the proposed actions; (b) whether there would be a physical change to the setting of any designated resource, such as context or visual prominence as a result of the proposed actions; and (c) if so, whether the change is likely to diminish the qualities of the resource that make it important. Whereas this chapter focuses specifically on the proposed actions' effects on the visual context of historic resources, an assessment of the proposed actions' effect on the visual character of the study area in general is provided separately in Attachment H, "Urban Design and Visual Resources."

Direct (Physical) Impacts

Historic resources can be directly affected by physical destruction, demolition, damage, alteration, or neglect of all or part of a historic resource. For example, alterations, such as the addition of a new wing to an historic building or replacement of the resource's entrance could result in significant adverse impacts, depending on the design. Direct effects also include changes to an architectural resource that cause it to become a different visual entity, such as a new location, design, materials, or architectural features.

It should be noted that privately owned properties that are NYCLs or in New York City Historic Districts are protected under the New York City Landmarks Law, which requires LPC review and approval before any alteration or demolition can occur, regardless of whether the project is publicly or privately funded. Properties that have been calendared for consideration for designation as NYCLs are also afforded a measure of protection insofar as, due to their calendared status, permits may not be issued by the New York City Department of Buildings (DOB) for any structural alteration to the buildings for any work requiring a building permit, without at least 40 days prior notice being given to the LPC. During the 40-day period, LPC has the opportunity to consider the case and, if it so chooses, schedule a hearing and move forward with designation. Publicly owned resources are also subject to review by the LPC before the start of a project; however, the LPC's role in projects sponsored by other City or State agencies generally is advisory only.

Architectural resources that are listed on the S/NR or that have been found eligible for listing are given a measure of protection under Section 106 of the National Historic Preservation Act from the effects of projects sponsored, assisted, or approved by federal agencies. Although preservation is not mandated, federal agencies must attempt to avoid adverse effects on such resources through a notice, review, and consultation process. Properties listed on the Registers are similarly protected against effects resulting from projects sponsored, assisted, or approved by State agencies under the State Historic Preservation Act. However, private owners of properties eligible for, or even listed on, the Registers using private funds can alter or demolish their properties without such a review process.

As discussed above, the project site does not contain any designated or eligible historic resources. Additionally, the proposed actions are site-specific and would therefore not result in the alteration or demolition of any designated or eligible historic resources in the 400-foot study area surrounding the project site. As such, the proposed actions would not result in any direct impacts to historic architectural resources.

Indirect (Contextual) Impacts

Contextual impacts may occur to architectural resources under certain conditions. According to the *CEQR Technical Manual*, possible impacts to architectural resources may include isolation of the property from, or alteration of, its setting or visual relationships with the streetscape. This includes changes to a resource's visual prominence so that it no longer conforms to the streetscape in terms of height, footprint, or setback; is no longer part of an open setting; or can no longer be seen as part of a significant view corridor. Significant indirect impacts can occur if a proposed action would cause a change in the quality of a property that qualifies it for listing on the S/NR or for designation by the LPC.

The proposed actions would facilitate the construction of a predominately residential building on the project site with materials similar to the existing buildings within the adjacent Sunnyside Gardens Historic District. As shown in Figure F-1, the project site is located immediately across Barnett Avenue from the Phipps Garden Apartments, the largest apartment complex in the Sunnyside Gardens Historic District. Like the rest of the historic district, the Phipps Garden Apartments complex is clad in brick with varying heights, setbacks, and architectural detailing along its street facades (refer to Photos 3 and 4 in Figure F-2).

It is anticipated that the proposed new building on the project site would also be clad in brick and glass, creating a complementary backdrop to the predominately brick residences in the adjacent historic district (refer to Figure A-4 in Attachment A, "Project Description"). As detailed in Attachment A, the proposed actions would permit greater flexibility in building form and a more nuanced massing on the project site. The proposed streetwall would include a varied streetscape with differing setbacks and streetwall heights along Barnett Avenue. In addition, the applicant envisions that the façade would be constructed with a variety of colored bricks, to further break up the building's Barnett Avenue façade. The resultant variation in the proposed building's streetwall and heights complements the visual variety of building types, styles, and forms found throughout the Sunnyside Gardens Historic District, as intended and executed by Stein and Wright, and the adjacent Phipps Garden Apartments. Additionally, the proposed actions would result in the planting of street trees along the north side of Barnett Avenue, adding to the background of the historic district, which originally included street trees along all of the roads, many of which remain intact today. As such, the proposed new building would not detract from the adjacent Sunnyside Gardens Historic District, but rather, would complement the district's historic architecture and design.

The proposed actions would not adversely alter the setting or visual context of any historic resources in the area. The proposed actions would facilitate the development of a new, predominately residential building on the underutilized project site, replacing an existing surface parking lot. The proposed project would activate the street level with residential and community facility uses along the north side of Barnett Avenue immediately north of the Sunnyside Gardens Historic District. No public views of the Phipps Garden Apartments or any other surrounding historic resources would be obstructed as a result of the proposed actions as all streets and sidewalks in the study area would remain open in the future with the proposed actions, and there are no existing view corridors of the district form the north due to the presence of the Sunnyside Rail Yards. Although the redevelopment of the project site would create a new backdrop for the northeastern section of the Sunnyside Gardens Historic District, it would not alter the district's setting or visual relationships to the streetscape so as to affect those characteristics that make it eligible for designation by the LPC or listing on the S/NR. Additionally, no incompatible visual, audible, or atmospheric elements would be introduced by the proposed actions to any historic

resource's setting under With-Action conditions. As such, the proposed actions would not result in any significant adverse indirect or contextual impacts on historic architectural resources in the study area.

Construction-Related Impacts

Any new construction taking place within historic districts or adjacent to individual landmarks has the potential to cause damage to contributing buildings to those historic resources from ground-borne construction vibrations. As noted above, the proposed actions would facilitate the construction of a new building on the project site, which is located to the north of the LPC-designated and S/NR-listed Sunnyside Gardens Historic District (refer to Figure F-1).

The New York City Building Code provides some measures of protection for all properties against accidental damage from adjacent construction by requiring that all buildings, lots, and service facilities adjacent to foundation and earthwork areas be protected and supported. Additional protective measures apply to LPC-designated landmarks and S/NR-listed historic buildings located within 90 linear feet of a proposed construction site. For these structures, DOB's Technical Policy and Procedure Notice (TPPN) #10/88 applies. TPPN #10/88 supplements the standard building protections afforded by the Building Code by requiring, among other things, a monitoring program to reduce the likelihood of construction damage to adjacent LPC-designated or S/NR-listed resources (within 90 feet) and to detect at an early stage the beginnings of damage so that construction procedures can be changed.

Adjacent historic resources, as defined in the procedure notice, only include designated NYCLs, properties within NYCL historic districts, and listed S/NR properties that are within 90 feet of a lot under development or alteration. They do not include S/NR-eligible, NYCL-eligible, potential, or unidentified architectural resources. Construction period impacts on any designated historic resources would be minimized, and the historic structures would be protected, by ensuring that adjacent development projected as a result of the proposed project adheres to all applicable construction guidelines and follows the requirements laid out in TPPN #10/88. As the Phipps Garden Apartments are located within 90 feet of the project site and are included in the LPC-designated and S/NR-listed Sunnyside Gardens Historic District, they would be subject to DOB'S TPPN #10/88 during the proposed building's construction. Under the TPPN, a construction protection plan must be provided to the LPC for review and approval prior to any demolition and construction on the project site. The construction protection plan would take into account the guidance provided in the *CEQR Technical Manual*, Chapter 9, Section 523, "Construction Protection Plan." With the implementation of the appropriate construction protection measures mandated by TPPN #10/88, no construction-related impacts on historic resources would be anticipated as a result of the proposed actions.

Shadows

The project site is located to the north of the Sunnyside Gardens Historic, and, as a result, the proposed project would cast minimal shadows on the lots to the south. As detailed in Attachment E, "Shadows," the area of the Sunnyside Gardens Historic District that could potentially be cast in incremental shadows does not contain any historic structures, and, therefore, does not include any sunlight-sensitive design elements that are part of a recognized architectural style that depends on the contrast between light and dark (e.g., deep recesses or voids, such as open galleries, arcades, recessed balconies, deep window reveals, and prominent rustication); elaborate, highly carved ornamentation; stained glass windows; exterior building materials and color that depend on direct sunlight for visual character (e.g., the polychromy [multicolored] features found on Victorian Gothic Revival or Art Deco facades); or structural features for which the effect of direct sunlight is described as playing a significant role in the structure's importance as an historic landmark. The open area on which the proposed project could potentially cast incremental shadows, Sunnyside Gardens Park, is considered a contributing resource to the Sunnyside Gardens Historic District. However, as detailed in Attachment F, project-generated

incremental shadows cast on this resource would be limited, and would not result in significant adverse shadows impacts.

Attachment G

Urban Design & Visual Resources

I. INTRODUCTION

This attachment considers the potential effects of the proposed actions and subsequent development on urban design and visual resources. As defined in the *City Environmental Quality Review* (CEQR) *Technical Manual*, urban design is the totality of components that may affect a pedestrian's experience of public space. Elements such as streets, buildings, visual resources, open space, natural resources, wind, and sunlight play an important role in the pedestrian experience. The proposed actions would facilitate the development of a new predominantly residential building along Barnett Avenue in the Sunnyside neighborhood of Queens.

In accordance with the guidance of the *CEQR Technical Manual*, the assessment focuses on the components of the proposed actions that may have the potential to alter the arrangement, appearance, and functionality of the built environment. As described in Attachment A, "Project Description," the reasonable worst –case development scenario (RWCDS) for analysis would consist of up to 189 dwelling units (DU), approximately 5,323 gsf of non-profit (community facility) office space on the ground floor, and 170 surface parking spaces. The RWCDS under the proposed actions, is expected to be completed in 2023. In the absence of the proposed actions (the No-Action condition) it is assumed that the project site would continue to be occupied by a 223-space public parking lot, as under existing conditions.

II. PRINCIPAL CONCLUSIONS

The proposed actions and subsequent development would not have a significant adverse impact on the area's urban design and visual resources. The proposed actions would facilitate new development, including residential and community facility uses adjacent to existing residential uses. The RWCDS development would replace an existing public parking lot with a new residential building and landscaping that would enliven the streetscape. The RWCDS development would be consistent with and complement the existing building context, which includes a variety of residential building typologies, as well as other uses. While the project site is located in proximity to the LPC-designated and S/NR-listed Sunnyside Gardens Historic District, the RWCDS development would not block significant or unique views of any visual resources or obstruct important views or view corridors. It is expected that the proposed actions would have a beneficial impact on the urban design and visual resources of the primary and secondary study areas.

III. METHODOLOGY

Pursuant to the *CEQR Technical Manual*, an assessment of urban design is appropriate when a project may have effects on one or more of the elements that contribute to the pedestrian experience of public space. The assessment focuses on the components of a proposed action or project that may have the potential to alter the arrangement, appearance, and functionality of the built environment.

As described in the *CEQR Technical Manual*, a preliminary urban design analysis is appropriate when there is potential for a pedestrian to observe from the street level a physical alteration beyond that allowed by existing zoning. A preliminary analysis provides a "snapshot" of the project, comparing existing and future

conditions with and without the proposed actions. The following analysis examines each of the elements that play an important role in the pedestrian experience, including street hierarchy and streetscape (including the arrangement and orientation of streets); building scale, form and arrangement; and natural features, open space, and topography.

Per criteria of Section 230 of the *CEQR Technical Manual* a wind condition analysis is not warranted for the proposed actions. The project site is not located in a high wind location (such as along west and northwest-facing waterfronts) and the RWCDS development would not be of a "substantial size" that would have the potential to alter wind conditions.

The analysis is based on field visits, aerial views, photographs, and other graphic images of the project site and surrounding area. Zoning calculations, including floor area calculations, building heights and lot coverage information is also provided.

The following preliminary analysis also considers the effects of the RWCDS on the area's visual resources, which are generally considered to be important public view corridors, vistas, or natural or built features. Visual resources can include waterfront views, public parks, landmark structures or districts, or natural features, such as rivers or geologic formations.

Based on *CEQR Technical Manual* guidance, the study area for urban design is the area where the project may influence land use patterns and the built environment. The urban design study area consists of both a primary study area (where urban design effects of the proposed actions are direct) and a secondary study area. For the purpose of this assessment, the primary study area encompasses the project site. Consistent with the analysis of land use, zoning, and public policy, the secondary study area for urban design resources has been defined as being within approximately 400 feet of the project site (see Figure G-1).

As stated in the *CEQR Technical Manual*, for visual resources, the view corridors within the study area from which such resources are publicly viewable should be identified. While the land use study area may serve as the initial basis for analysis, in many cases where significant visual resources exist, it may be appropriate to look beyond the land use study area to encompass views outside of the area, as is often the case with waterfront sites or sites within or near historic districts. For the purpose of this analysis, prominent visual resources (both within and outside of the urban design study area) that are visible from the project site and study area were identified. The primary view sheds of these visual resources that would be affected by construction of the RWCDS were the focus of the visual resources analysis.

IV. PRELIMINARY ASSESSMENT

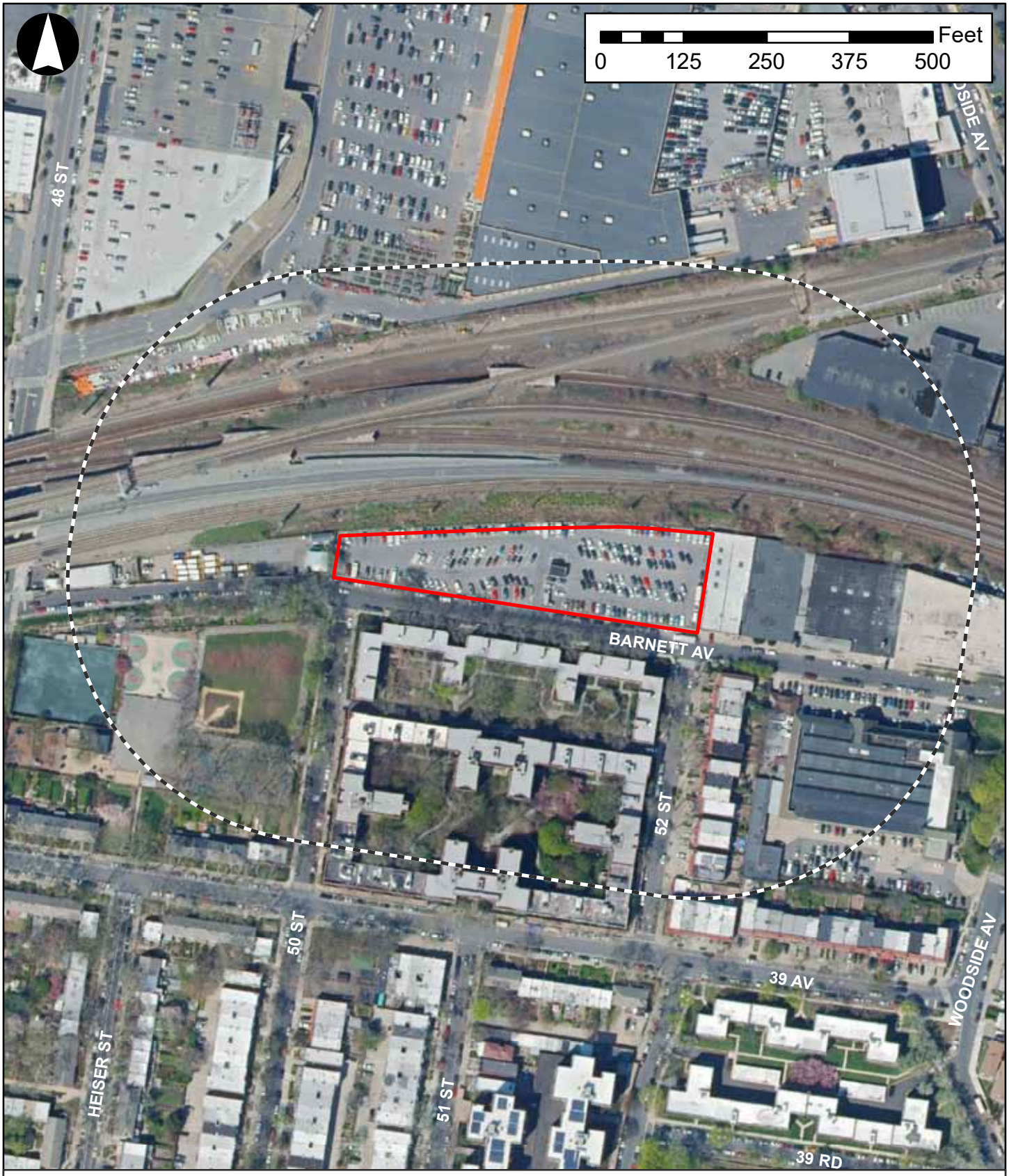
Existing Conditions

Urban Design

Primary Study Area

The 64,366-sf project site is located in the southcentral portion of a large irregularly shaped block that is bounded by Barnett Avenue/38th Avenue to the south, 48th Street to the west, Northern Boulevard to the north, and Woodside Avenue to the east. The project site has approximately 560 feet of frontage on the north side of Barnett Avenue, a 60-foot wide narrow two-way street with street parking on both sides. As shown in Figure G-2, the topography of the project site is generally flat, with the land directly north of the project site sloping steeply up to the Long Island Railroad (LIRR) tracks.

Figure G-1
Urban Design Study Area



Legend

Project Site (Primary Study Area)

400-Foot Radius (Secondary Study Area)



1. Taken from the middle of the Project Site's Barnett Avenue frontage, facing north.



2. Facing north from the western side of the Project Site.



3. Facing north from the southeast corner of the Project Site.



4. Facing northwest from the southwestern edge of the Project Site.

The project site is currently occupied by a paved 223-space public parking lot and a small, approximately 200-sf attendant's booth, which is located near the Barnett Avenue lot entrance. A chain link fence lines the majority of the project site's borders, including its Barnett Avenue frontage (see Figure G-2). There are no sidewalks along the project site's Barnett Avenue frontage, with portions of the street directly abutting the street only partially paved, or unpaved entirely. As a result, vehicles parking on the northern side of the street generally park directly adjacent to the project site, preventing pedestrian circulation. The only streetscape elements along the project site's street frontage are parking signage, standard cobrahead street lights, and wooden utility poles; one street tree is planted along the project site's Barnett Avenue frontage (see Figure G-2).

Secondary Study Area

In addition to the remainder of the block within which the project site is located, the three blocks bordering the southern side of Barnett Avenue between 48th Street and Woodside Avenue fall within the secondary study area. The block directly to the south of the project site is regularly shaped, while the two blocks to the east and west are slightly irregular, reflecting the geometry of Barnett Avenue, which angles to the south to the west of the project site, and Woodside Avenue, which angles slightly to the west south of 39th Avenue (refer to Figure G-1).

Running along the southern border of the secondary study area is 39th Avenue, a two-way east-west roadway with parking on both sides; 48th Street, a two-way north-south roadway with bike lanes and parking on both side, borders the study area's western edge; and Woodside Avenue, which borders the study area's eastern side, is a two-way north-south roadway with on-street parking along limited portions. Northern Boulevard, representing the northern edge of the secondary study area is the largest roadway in the study area, with two to three lanes of traffic in each direction (east-west). 50th and 52nd Streets both serve traffic in one direction between Barnett and 39th Avenues. As shown in Figure G-3, the urban design of the roadways south of Barnett Avenue are generally characterized by their intimate scale with mature trees lining the streets. Northern Boulevard, and the portions of Woodside Avenue and 48th Street north of Barnett Avenue, are more desolate, with fewer street trees; the LIRR tracks pass over 48th Street and Woodside Avenue between Barnett Avenue and Northern Boulevard, dominating the streetscape along these corridors.

As presented in Figures G-4 and G-5, buildings in the secondary study area range from less than 0.2 FAR to upwards of 1.5 FAR and range in height from one to six stories. In terms of FAR, the highest FAR buildings in the secondary study area are not concentrated in one area: the Phipps Garden Apartments to the south of the project site has 2.06 FAR and a 1.85 FAR commercial/office building is located at the northwest corner of Barnett and Woodside Avenues. The two lots with the highest built FAR also contain the tallest existing buildings in the secondary study area, with maximum heights of six stories. The lot with the lowest FAR within the secondary study area comprise the two structures within Sunnyside Gardens Park (a private open space located to the southwest of the project site).

Cutting through the northern portion of the secondary study area is the LIRR. In addition to dominating the streetscape along portions of Woodside Avenue and 48th Street, as noted above, the LIRR tracks are also distinguished by their elevated topography, in contrast with the relatively flat topography of the surrounding secondary study area. As described in Attachment C, "Land Use, Zoning, and Public Policy," buildings to the north of the LIRR tracks are primarily commercial, comprising several chain retail establishments developed as part of a large shopping complex with an open parking lot on-site.

The urban design character to the south of the LIRR is more consistent in character in terms of building uses and building arrangement and is also characterized by a more inviting pedestrian experience. Sidewalks in the area are typically lined with street trees and planting strips, with additional greenery associated with the study area's residential and open space uses. To the east of the project site are a series



5. Facing northwest from 52nd Street towards the Phipps Garden Apartments.



6. Facing southeast from Barnett Avenue, east of the Project Site.

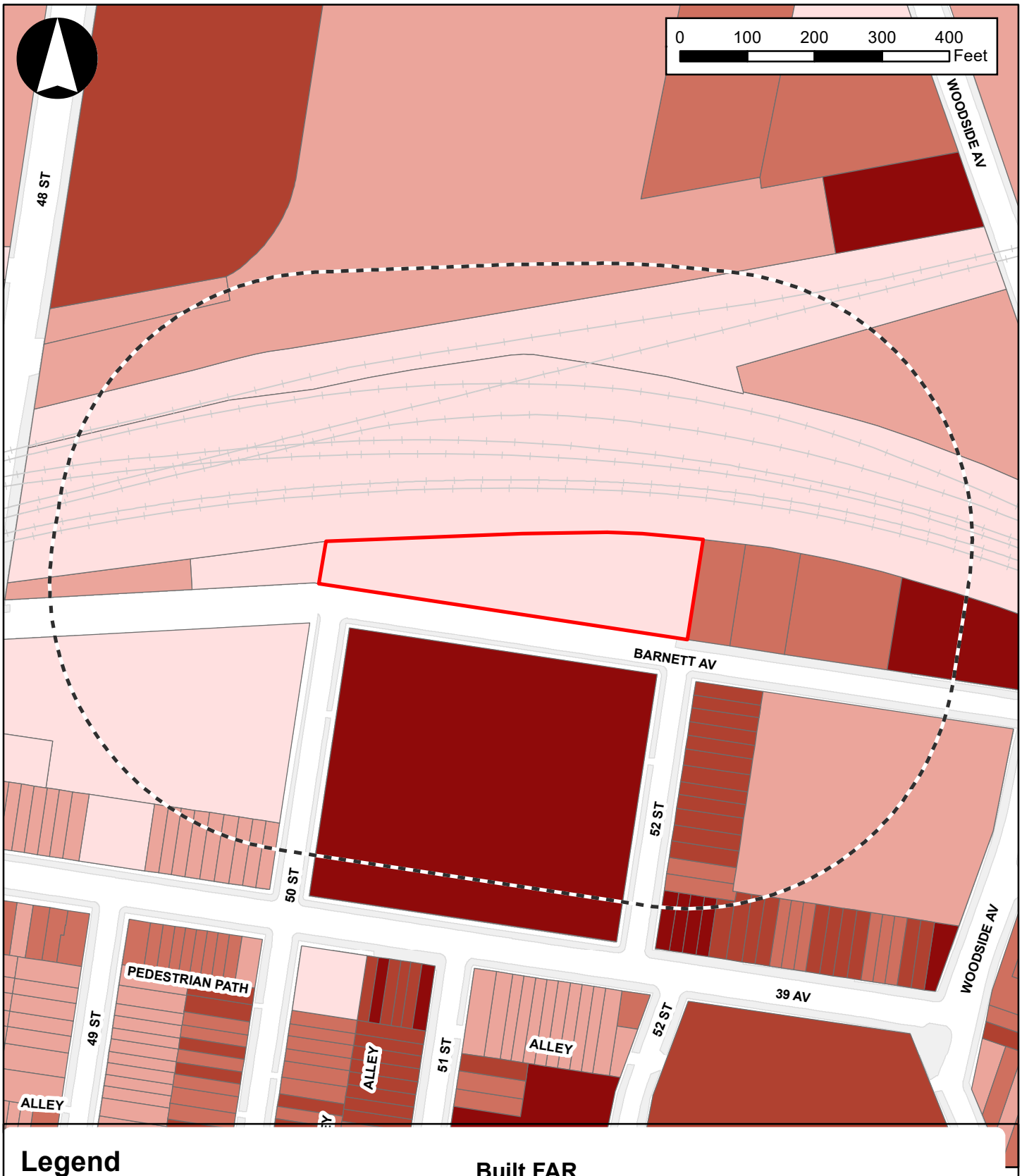


7. Facing southeast from the intersection of 52nd Street and Barnett Avenue.



8. Facing southeast towards the intersection of Barnett Avenue and 50th Street.

Figure G-4
Built FAR



Source: DoITT, DCP

Figure G-5
Building Height



Source: DoITT, DCP

of commercial and light industrial buildings, which are uniformly built to the streetline. South of Barnett Avenue, the majority of the lots are comprised of residential uses, which create consistent streetwalls. The block to the south of the project site is comprised of a series of larger residential buildings, which are built to the street wall, while the smaller residential lots in the remainder of the study area are generally characterized by small planted front yards or drives. At the southwest corner of Barnett and Woodside avenues is a larger mixed-use commercial/light industrial building that, despite its use, is consistent with the building form of adjacent residential buildings, designed in a Tudor style with decorative woodwork details and steep roofs (see Figure G-3).

Visual Resources

Primary Study Area

As noted in Attachment A, "Project Description," the project site is located to the north of the LPC-designated and S/NR-listed Sunnyside Gardens Historic District. Visible from the project site is the Phipps Garden Apartments II building (constructed in 1935), located directly south of the project site, with portions of Sunnyside Gardens Park (a private open space) visible from the westernmost portion of the project site (refer to Figure G-6). The entirety of the Phipps Garden Apartments II's northern façade is visible from the project site, with minimal views of the building's eastern and western facades visible from the easternmost and westernmost portions of the project site, respectively. The four-story brick building's street-facing façades are characterized by relatively uniform symmetrical streetwalls with no entrances (the building's entrances are from the interior courtyard located to the south of the structure). The northern façade is broken up into three main portions by two recessed niches.

The small portion of the Sunnyside Gardens Park that is visible from the project site comprises trees and plantings lining its Barnett Avenue and 50th Street frontages, with athletic fields within the interior of the private park partially visible, though obstructed by the trees along the private park's border. As shown in Figure G-6, views west of the Sunnyside Gardens Park are experienced in a broader context with the industrial uses to its north.

Secondary Study Area

Visual resources within the secondary study area include the Sunnyside Gardens Park and portions of the Sunnyside Gardens Historic District, which are both located to the south of the project site and are shown in Figure G-6 and discussed below. Due to the presence of the higher elevation LIRR tracks to the north of the project site, existing views of the secondary study area resources are limited to the portions of the secondary study area located to the south of the project site.

Sunnyside Gardens Park, created in 1926, comprises the majority of the block bounded by 39th and Barnett Avenues and 48th and 50th Streets, and is accessible via 39th Avenue. The private park is surrounded on all sides by a tall, chain-link fence set on a stone wall. As described in Attachment E, "Open Space," Sunnyside Gardens Park is an approximately 6.07-acre private park and features a ball field, picnic area, tennis courts, a children's pool, gardens, and a playground.

Also visible from the secondary study area are portions of the Sunnyside Gardens Historic District that lie to the south of 39th Avenue, which are generally consistent in style with the rowhouses of the Historic District that are located within the secondary study area (refer to Attachment G, "Historic & Cultural Resources).



9. View south of Phipps Garden Apartments II (north façade) from the southern border of the primary study area.



10. View southwest of Sunnyside Garden Park from the southwestern border of the primary study area.

The Future without the Proposed Actions (No-Action Condition)

In the future without the proposed actions, the project site would remain as under existing conditions and would continue to be occupied by a 223-space public parking lot. In addition, and as described in Attachment C, "Land Use, Zoning, and Public Policy," there are no known and anticipated developments expected to be completed by the 2023 analysis year in the secondary study area.

The Future with the Proposed Actions (With-Action Condition)

Urban Design

Primary Study Area

In the 2023 future with the proposed actions, the project site is assumed to be developed with a RWCDS approximately 194,710-gsf predominantly residential building, comprised of up to 189 affordable DU and approximately 5,323 gsf of non-profit office space on the ground floor. The RWCDS development would have an FAR of 3.04, consistent with the maximum permitted FAR in an R6A district under the proposed actions.

The RWCDS building would be oriented along Barnett Avenue and would occupy approximately 447 feet of lot frontage. The RWCDS building would rise eight-stories to a maximum height of 79 feet.

The ground floor of the RWCDS building would include a residential lobby and "maisonette" apartments with small front yards along Barnett Avenue. The westernmost portion of the ground floor would include the approximately 5,323 gsf of non-profit office space. The building's massing would make the eastern and western edges of the building approximately six-stories, while the building's upper floors would be concentrated towards the middle of the building.

There would be two curb cuts leading to driveways to the proposed 170-space parking lot, a 20-foot wide curb cut at the eastern edge of the project site (across Barnett Avenue from the intersection of 52nd Street) and a 34-foot wide curb cut at the western edge of the project site (across Barnett Avenue from the intersection of 50th Street). In addition, in accordance with zoning regulations, new street trees would be planted along every 25 feet of street frontage on the project site's Barnett Avenue frontage.

Overall, the development facilitated by the proposed actions would improve the urban design of the project site, replacing a surface parking lot with residential development, and improving the streetscape with landscaping and the planting of street trees. While the RWCDS building would substantially alter the appearance of the project site, introducing a building of eight stories, the variety in building heights and setbacks would be in keeping with the urban design of the surrounding area, and would be an improvement over existing and No-Action conditions. By focusing the taller portions of the building further form Barnett Avenue, the lower height of the building portions closest to Barnett Avenue would be more consistent with the surrounding built context. The development facilitated by the proposed actions would enhance the pedestrian environment and enliven the area with new residents.

Secondary Study Area

The proposed actions would not result in any changes in the urban design in the secondary study area, as development facilitated by the proposed actions would be limited to the project site. The RWCDS development would serve as a continuation of the residential uses to the south and would introduce a new

View facing north from 50th Street towards Barnett Avenue



No-Action



With-Action

FOR ILLUSTRATIVE PURPOSES ONLY

Figure G-8

View facing north from 52nd Street towards Barnett Avenue



No-Action



With-Action

FOR ILLUSTRATIVE PURPOSES ONLY

streetwall on the northern side of Barnett Avenue, corresponding with the streetwall of the Phipps Garden Apartments on the southern side of the roadway. While the RWCDS development would be taller than the existing structures in the secondary study area, the design of the building, with its gradual increase in height from seven and eight stories close to Barnett Avenue would not be significantly taller than existing structures in the surrounding area. In addition, the improvements to the streetscape, including landscaping and the planting of street trees, would enliven the secondary study area, creating an uninterrupted tree-lined thoroughfare.

Overall, the development facilitated by the proposed actions would contribute to the urban design character of the secondary study area. The RWCDS development would not adversely affect any urban design features of the secondary study area and would not result in significant adverse impacts to the experience of the pedestrian.

Visual Resources

Primary Study Area

As a result of the development facilitated by the proposed actions, some views of visual resources would be modified—but not obstructed. As described above, there are no visual resources on the project site. In the future with the proposed actions, views of the Sunnyside Gardens Historic District and Sunnyside Gardens Park would remain. As public views of these visual resources are currently only provided from the southern boundary of the project site, the development facilitated by the proposed actions would not block views of visual resources in the primary study area. While the RWCDS development would modify the greater context of these visual resources, the modification would represent an improvement over existing conditions, replacing a surface parking lot with a new development and landscaping. Therefore, the proposed actions would not result in significant adverse impact on visual resources in the primary study area.

Secondary Study Area

The development facilitated by the proposed actions would not block any significant views of visual resources in the secondary study area. As noted above, the visual resources located within, and visible form, the secondary study area are located to the south of the project site. Due to the presence of the higher elevation LIRR tracks to the north of the project site, existing views of the secondary study area resources are limited to the portions of the secondary study area located to the south of the project site. While the RWCDS development would be visible from certain vantage points, altering the context within which the visual resources are experienced, the change would not represent a significant adverse impact. The proposed actions would improve the context within which the secondary study area visual resources are experienced by replacing a paved parking lot with a new predominantly residential development. In addition, as described above, the RWCDS development's massing has been designed to respond to the existing context of the adjacent Sunnyside Gardens Historic District, as reflected in the building's varied heights and setbacks and ground floor "maisonettes" with gardens.

In summary, the development facilitated by the proposed actions would not change urban design features such that the context of a natural or built features is adversely altered and would not partially or fully block any significant public views to a visual resource. Therefore, the proposed actions would not result in significant adverse impacts to secondary study area visual resources.

Attachment H

Air Quality

I. INTRODUCTION

The potential for air quality impacts from the proposed actions is examined in this attachment. Air quality impacts can be either direct or indirect. Direct impacts result from emissions generated by stationary sources at a development site, such as emissions from on-site fuel combustion for heat and hot water systems, or emissions from parking garage ventilation systems. Indirect impacts are caused by off-site emissions associated with a project, such as emissions from nearby existing stationary sources (impacts on the proposed project) or by emissions from on-road vehicle trips generated by the proposed project or other changes to future traffic conditions due to a project. As the project site is located adjacent to areas zoned for manufacturing uses, potential effects of stationary source emissions from existing nearby industrial facilities on the proposed project were assessed. This analysis was conducted in accordance with *CEQR Technical Manual* methodology.

II. PRINCIPAL CONCLUSIONS

The analysis concludes that the proposed project would not result in significant adverse air quality impacts and would not be adversely affected by existing sources of air emissions in the surrounding area. The proposed actions would not exceed the screening thresholds for detailed heating/hot water, ventilation, and air conditioning (HVAC) systems, mobile source, or garage analyses, and the proposed actions are not expected to result in significant adverse impacts due to vehicle or HVAC emissions. A review of area land uses and a formal request for industrial permit information submitted to the New York City Department of Environmental Protection (DEP) identified industrial source air permits for facilities located within 400 feet of the project site, which were the focus of the air toxics analysis. The result of the air toxics emissions analysis determined that no exceedances of the New York State Department of Environmental Conservation (NYSDEC) guideline values or applicable National Ambient Air Quality Standards (NAAQS) are predicted.

III. STATIONARY AND MOBILE SOURCE AIR QUALITY SCREENING

Stationary Source Screening

Actions can result in stationary source air quality impacts when they create new stationary sources of pollutants that can affect surrounding uses (such as emission stacks from industrial plants or exhaust from boiler stack(s) used for HVAC systems of a building); or when they locate new sensitive uses (schools, hospitals, residences) near such stationary sources. To determine whether a detailed project-on-existing HVAC analysis is warranted, an air quality nomograph screening was performed using Figure 17-3 of the *CEQR Technical Manual*. The nomograph screening was performed based on an anticipated minimum distance between the proposed project's HVAC stack (approximately 72 feet high[1]) and the 39-65 52nd Street and the RWCDS development's total gross floor area (194,710 gsf). Based on the nomograph screening (presented in Figure B-2 in Attachment B, "Supplemental Screening"), it was determined that the

[1] The proposed building would be 69 feet tall. The assumption of a three-foot tall HVAC stack was used for this analysis.

proposed project's HVAC system would not result in significant adverse impacts on this sensitive receptor (the closest sensitive receptor). As such, a detailed HVAC analysis is not warranted.

Mobile Source Screening

As stated in the *CEQR Technical Manual*, a project – whether site-specific or generic- may result in significant mobile source air quality impacts when they increase or cause a redistribution of traffic, create any other mobile sources of pollutants, or add new users near mobile sources. According to the *CEQR Technical Manual* screening threshold criteria for the City, if 170 or more project-generated vehicles pass through an intersection in any given peak period a detailed analysis of carbon monoxide (CO) is required. If a project would result in a substantial number of local or regional diesel vehicle trips, there is potential for mobile air quality impacts and a detailed analysis of $PM_{2.5}$ and PM_{10} is required.

As the Proposed Actions would generate a maximum of 22 incremental vehicle trips in any peak hour (refer to Table B-4), and, as such, would not exceed the *CEQR Technical Manual* carbon monoxide (CO) mobile source air quality screening of 170 vehicles. As shown below, using the Equivalent Truck Calculator provided in the *CEQR Technical Manual* the incremental vehicles generated by the Proposed Actions would not exceed the screening threshold for $PM_{2.5}$ and $PM_{10,}$ Therefore, a detailed analysis of mobile source air quality impacts is not warranted (refer to Table B-5).

In addition, as stated in the *CEQR Technical Manual*, projects that would result in parking facilities may require a microscale air quality analysis. While the proposed project would include a 170-space surface parking lot, construction of the proposed project would entail the displacement of the existing 223-space public parking lot on the project site. As such, the proposed project would result in a net reduction of 53 parking spaces on the project site and would be expected to result in lesser mobile source emissions than under existing conditions. Therefore, a detailed mobile source parking garage analysis is not warranted, and the proposed actions would not result in a significant adverse mobile source parking garage analysis.

IV. INDUSTRIAL SOURCE AIR QUALITY ANALYSIS

Pollutants emitted from the exhaust vents of existing permitted industrial facilities were examined to identify potential adverse impacts on future residents of the proposed development sites. All industrial air pollutant emission sources within 400 feet of a project site boundary were considered for inclusion in the air quality impact analyses.

A review of the PLUTO database, together with aerial photography from Google Earth, identified the presence of industrial facilities near the project site. A request was made to DEP's Bureau of Environmental Compliance (BEC) for information regarding the release of air pollutants from these potential sources within 400 feet of the project site. Based on information provided by DEP, two permits were identified for the Steve Madden Corporation, located at 52-16 Barnett Avenue (to the southeast of the project site at the southwest corner of Barnett and Woodside Avenues, Figure H-1) and one permit for Blue Menas Construction, located at 52-25 Barnett Avenue. Based on a filed survey, the Menas Construction no longer operates or ceased its operations in the area. Therefore, this facility was removed from the further consideration. As such. Emissions from two permits for the Steve Madden Corporation were included in the industrial source analysis.

Permits and Pollutants

Permit PB4004-03K

The permit for the Steve Madden Corporation (PB4004-03K) is for several industrial-type operations involved in the making of samples of fashion shoes, including cutting, sanding, polishing, and buffing. These operations generate particulate emissions, and the facility is equipped with bag-type dust collectors that retain up to 92.4 percent of the particulate emissions. The facility operates two hours a day, 220 days a year. The permit lists only particulate matter as being emitted from the facility's operations; the identified particulate matter has a CAS Number (a unique numerical identifier of every chemical substance) of NY075-00-0. Table H-1 shows the permitted and estimated hourly and annual emission rates of particulate matter.

Table H-1: Hourly and Annual Particulate Emission Rates Under PB4004-03K

Pollutant	Permitted Emission Rates		Estimated Emission Rates (1)	
	Hourly (lb/hour)	Annual (lb/year)	Hourly (g/s)	Annual (g/s)
PM_{10}	0.0890		0.0052	--
$PM_{2.5}$	0.0890	39.29	0.0032	0.00016

1. Estimated emission rates are based on fraction $PM_{2.5}/PM_{10}$ in total particulate matter (see below)

Permit PB4003-03M

Permit PB4003-03M, for the same Steve Madden Corporation, is for the painting of samples of fashion shoes using spray cans in a spray booth. The facility consumes one can with primer and one can with color paint for a half-hour per day, with a maximum of two cans a day, 220 days a year. The permit lists eleven pollutants—particulate matter (CAS NY075-00-0) and ten volatile organic compound-based (VOC-based) solvents (acetone, propane, toluene, xylene, ethyl benzene, etc.) as being emitted from these operations. One of the solvents—butyl benzyl phthalate—is carcinogenic compound.

Because the facility uses small (12-ounce) spray cans, the amount of solvent emitted into the atmosphere is limited. In addition, the spray booth is equipped with particulate filters that retain up to 95 percent of the particulates. The permit provides all relevant source parameters, including hourly and annual emission rates of all of the pollutants in pounds per hour and pounds per year. Table H-2 shows the permitted and estimated hourly and annual emission rates of particulate matter and Table H-3 shows the permitted and estimated hourly and annual emission rates for all solvents.

Table H-2: Particulates Hourly and Annual Emission Rates Under PB4004-03M

Pollutant	Permitted Emission Rates		Estimated Emission Rates (1)	
	Hourly (lb/hour)	Annual (lb/year)	Hourly (g/s)	Annual (g/s)
PM_{10}	0.0062	--	0.0004	--
$PM_{2.5}$	0.0062	0.685	0.0002	0.000003

1. Estimated emission rates are based on fraction $PM_{2.5}/PM_{10}$ in total particulate matter (see below)

Table H-3: Estimated Hourly and Annual Solvent Emission Rates Under PB4003-03M

Pollutant	Hourly (lb/hour)	Annual (lb/year)	Hourly (g/s)	Annual (g/s)
Acetone	0.726	79.9	0.0915	0.0011
n-Butane	0.188	20.7	0.0237	0.0003
Butyl Benzene Phthalate (1)	0.03	3.3	0.0038	0.00005
Ethyl Benzene	0.045	4.95	0.0057	0.0001
Diacetone Alcohol	0.052	5.76	0.0066	0.0001
Isobutyl Alcohol	0.008	0.92	0.0011	0.00001
Propane	0.28	30.8	0.0353	0.0004
VM & Naphtha	0.028	3.08	0.0035	0.00004
Toluene	0.208	22.9	0.0262	0.0003
Xylene	0.247	27.2	0.0312	0.0004

Notes:
1. Butyl Benzyl Phthalate (BBP) is carcinogenic pollutant

Particulates Emission Rates

Particulate matter under Permit PB4003-03M is emitted from the same stack as those under Permit PB4004-03K. Following DEP guidance, particulate matter (i.e., the fraction of the solid content of the paint) emissions from spray booth facilities should be considered as $PM_{2.5}/PM_{10}$ emissions, and emission rates should be estimated based on the percentage of $PM_{2.5}/PM_{10}$ in the total particulate matter using data on cumulative particle size distribution for surface coating operations via spray booths (EPA, AP-42, Appendix B1, Page B.1-12, Particle Size Distribution Data and Sized Emission Factors for Selected Sources, Table 4.2.2.8, Automobile and Light-Duty Track Surface Coating Operations, Automobile Spray Booths). For the conservative purpose of this analysis, the same approach was used to estimate particulate emission rates under Permit PB4004-03K.

These data show that 28.6 percent of the total mass of particulate matter emitted from spray booth operations is $PM_{2.5}$ and 46.7 percent of the total mass of particulate matter is PM_{10}. Based on these data, a 28.6 percent factor was applied to the hourly and annual emissions of total particulate matter to estimate 24-hour and annual $PM_{2.5}$ emission rates, and a factor of 46.7 percent was applied to estimate 24-hour PM_{10} emission rates.

Estimated emission rates for $PM_{2.5}$ and PM_{10} for the Steve Madden Corporation under PB4003-03M and PB4004-03K are provided in Tables H-1 and H-2.

Methodology

Toxic Assessment Methodology

While no federal standards have been promulgated for toxic air pollutants, the New York state Department of Environmental Conservation (NYSDEC) has issued guidance DAR-1 that establish acceptable ambient levels for these pollutants. As per DAR-1, short-term (and annual) impacts of the toxic pollutants should be evaluated on a 1-hour and annual basis and compared to 1-hour and annual guideline values of the DAR-1 - SCGs or AGSs. The SCGs are short-term ambient guideline concentrations and the AGCs are ambient annual-average-based guideline concentrations, which are the maximum allowable concentrations below which there should be no health-related adverse effects. If no exceedances of the SGCs or AGCs are found, no adverse health effects would occur. If concentration of any pollutant exceeds its applicable guideline value (either SGC or AGC), more detailed analysis would be required.

The current (August 2016) edition of the DAR-1 no longer includes guideline values (SGC and AGC) for $PM_{2.5}$ and PM_{10} – the National Ambient Air Quality standards (NAAQS) for these pollutants are used instead. The NAAQS for $PM_{2.5}$ is 35 ug/m^3 for 24-hours and 12 ug/m^3 for an annual time period and 150 ug/m^3 for 24-hour PM_{10}. As noted in DAR-1, federal standards for $PM_{2.5}$/PM_{10} are not SGC or AGC and are only included in the DAR-1 to facilitate screening or regulatory analysis. Because the NAAQS as well as the *CEQR* significant incremental impact criteria established for $PM_{2.5}$ are based on a 24-hour (not 1-hour) or annual averaging time periods, analyses of $PM_{2.5}$ require the use of the AERMOD dispersion model that contains a special procedure for this analysis.

Of the eleven pollutants listed in Permit PB4003-03M, ten are non-carcinogens and one (butyl benzyl phthalate) is a carcinogen. Carcinogens are evaluated only on an annual basis and AGCs for the carcinogenic pollutants in the DAR-1 are based on a cancer risk of one per million.

If an increased cancer risk is estimated to be less than one in one million (1.0 E-06), the risk due to carcinogenic pollutant releases is considered to be insignificant.

CEQR Screening Procedure

For estimating the potential impacts of the toxic pollutants from industrial emission sources, the *CEQR Technical Manual* recommends using a screening procedure as a first step in an analysis. This procedure uses pre-tabulated pollutant concentration values based on a generic emission rate of one gram per second from Table 17-3, "Industrial Source Screen," of the *CEQR Technical Manual* for the applicable averaging time periods. This approach, which can be used to estimate maximum short-term and annual average concentration values at various distances (from 30 to 400 feet) from an emission source, was used to assess the potential impacts of the emissions released under Permits PB4003-03M and PB4004-03K.

The lot line of the project site (50-25 Barnett Avenue) is approximately 245 feet from the industrial facilities located at 52-16 Barnett Avenue. At this distance, based on a one gram per second emission rate (using Table 17-3), the maximum one-hour and annual concentrations were estimated to be 2,450 and 119 µg/m^3, respectively. These values were then multiplied by the emission rates of each solvent to estimate actual solvent concentrations under both PB4003-03M and PB4004-03K for comparison with the DAR-1 guideline values (see Tables H4 and H-5). It should be noted that not all of the pollutants identified in these permits have both short-term and annual guideline values in the DAR-1 database.

Table H-4: Estimated Solvents 1-hour Concentrations with Comparison to SGC under PB4003-03M

Contaminant	CAS	Hourly Emission Rate (g/s)	Max Estimated One-Hour Concentrations (µg/m^3)	DAR-1 SGC (µg/m^3)
Acetone	67-64-1	0.0915	224.1	180,000
n-Butane	106-97-8	0.0237	58.0	238,000
Ethyl Benzene	100-41-4	0.0057	13.9	-
Diacetone Alcohol	123-42-2	0.0066	16.2	-
Isobutyl Alcohol	78-83-1	0.0011	2.6	-
Propane	74-98-6	0.0353	86.4	-
VM & Naphtha	64742-94-5	0.0035	8.6	-
Toluene	108-88-3	0.0262	64.2	37,000
Xylene	1330-20-7	0.0312	76.4	22,000

Note: C_a = estimated one-hour concentration

Table H-5: Estimated Annual Solvent Concentrations with comparison to AGC under PB4003-03M

Contaminant	CAS	Annual Emission Rate (g/s)	Max Estimated Annual Conc. (µg/m^3)	DAR-1 AGC (µg/m^3)
Acetone	67-64-1	0.0011	0.137	30,000
Butane	106-97-8	0.0003	0.035	-
Ethyl Benzene	100-41-4	0.0001	0.008	1,000
Diacetone Alcohol	123-42-2	0.0001	0.010	570
Isobutyl Alcohol	78-83-1	0.00001	0.002	360
Propane	74-98-6	0.0004	0.052	43,000
VM & Naphtha	64742-94-5	0.00004	0.005	100
Toluene	108-88-3	0.0003	0.039	5,000
Xylene	1330-20-7	0.0004	0.047	100

Note: C_a = estimated annual concentration

Estimated incremental cancer risk of the butyl benzyl phthalate (BBP) under PB4003-03M is shown in Table H-6 .

Table H-6: Estimated Butyl Benzyl Phthalate Cancer Risk under PB4003-03M

Contaminant	Annual Emission Rate (g/sec)	Max Estimated Annual Concentration (µg/m^3)	AGC per million
Butyl Benzyl Phthalate	0.00005	0.006	0.420

Note: Butyl Benzyl Phthalate (CAS No.85-68-7) AGC = 0.420 µg/m^3 per million

Solvent Analysis Results

Both the short-term and annual concentrations of all solvents are less than the corresponding SGC and AGC for each solvent. In addition, the estimated cancer risk for butyl benzyl phthalate (BBP) under PB4003-03M is less than the one-in-one-million cancer risk threshold. Therefore, no significant impact of solvent emissions from existing industrial sources on proposed site would occur.

$PM_{2.5}/PM_{10}$ Analysis

Detailed modeling was conducted to estimate the cumulative 24-hour/annual $PM_{2.5}$ impacts under the combined emissions from PB4003-03M and PB4004-03K for comparison with the CEQR significant threshold value and the applicable NAAQS.

$PM_{2.5}$ CEQR Significant Impact Criteria

CEQR TM guidance includes the following criteria for evaluating significant adverse $PM_{2.5}$ incremental impacts:

> *Predicted 24-hour maximum $PM_{2.5}$ concentration increase of more than half the difference between the 24-hour $PM_{2.5}$ background concentration and the 24-hour standard.*

A 24-hour $PM_{2.5}$ background concentration of 17.7 ug/m^3 was obtained from the NYSDEC Queens College 2 monitoring station as the average of the 98th percentile for the latest 3 years of monitoring data collected by the NYSDEC for 2016-2018. As the applicable background value is 17.7 ug/m^3, half of the difference between the 24-hour $PM_{2.5}$ NAAQS and this background value is 8.7 ug/m^3. As such, a significant impact criterion of 8.7 ug/m^3 was used for determining whether the potential 24-hour $PM_{2.5}$ impacts of the proposed development are considered to be significant.

For an annual average adverse $PM_{2.5}$ incremental impact, according to *CEQR* guidance:

> *Predicted annual average $PM_{2.5}$ concentration increments greater than 0.3 ug/m^3 at any receptor location for stationary sources.*

The above 24-hour and annual significant impact criteria were used to evaluate the significance of predicted $PM_{2.5}$ impacts.

Detailed Analysis

A dispersion modeling analysis was conducted using the latest version of EPA's AERMOD dispersion model 9 (EPA version 19191). In accordance with *CEQR Technical Manual* guidance, this analysis was conducted assuming stack tip downwash, urban dispersion surface roughness length, elimination of calms, with and without downwash effect on plume dispersion. Analyses were conducted with and without the effects of wind flow around the proposed buildings (i.e., with and without downwash).

A review of aerial photographs from Google Earth shows several stacks (vents) on the roof of the building where two of the permitted facilities are located (52-16 Barnett Avenue). Although the stack parameters are similar for both permitted facilities, no emission point locations are identified in the permits. As such, it was conservatively assumed for this analysis that all emissions from both emission sources are emitted from the closest rooftop stack to the project site.

$PM_{2.5}/PM_{10}$ Analysis Results

The results of the $PM_{2.5}/PM_{10}$ detailed analysis are provided in Tables H-7 and H-8. The maximum 24-hour $PM_{2.5}$/annual impacts are estimated to be 1.2 µg/m^3 and less than 0.1 µg/m^3, respectively, which are less than the *CEQR* significant impact criteria of 8.7 µg/m^3 and 0.3 µg/m^3, respectively.

These values were added to the maximum estimated $PM_{2.5}/PM_{10}$ background values, and the total estimated concentrations were compared to the respective NAAQS. As shown, both the maximum total 24-hour $PM_{2.5}$ and annual concentrations are less than the applicable NAAQS. The maximum estimated total 24-hour PM_{10} concentration of 40.0µg/m^3 is less than the 24-hour PM_{10} NAAQS of 150 µg/m^3.

Table H-7: Estimated 24-Hour $PM_{2.5}$ and PM_{10} Total Concentrations

Pollutant	CAS No.	Emission Rate (g/sec)	Max 24-hr Impact (µg/m^3)	Background Concentration (µg/m^3) [1,2]	Total Concentration (µg/m^3)	NAAQS (µg/m^3)
$PM_{2.5}$	NY075-02-5	0.0034	1.2	17.7	18.9	35
PM_{10}	NY075-00-5	0.0056	1.97	38	40.0	150

Notes:
[1] 24-hour $PM_{2.5}$ background concentrations from New York State Monitoring Report for the Queens College 2 Station is 17.7 µg/m^3, which is the average of the 98th percentile for the last three years (2014-2018)
[2] The 24-hour PM_{10} maximum background concentration of from the same monitoring station is 38 µg/m^3

Table H-8: Estimated $PM_{2.5}$ Total Annual Concentration

Pollutant	CAS No.	Emission Rate (g/sec)	Max Annual Impact (µg/m^3)	Background Concentration (µg/m^3) [1]	Total Concentration (µg/m^3)	NAAQS (µg/m^3)
$PM_{2.5}$	NY075-02-5	0.00016	<0.1	7.0	7.0	12

Notes:
[1] The annual $PM_{2.5}$ background concentration from Queens College monitor is 7.0 µg/m^3, which is a three-year (2016-2018) average value.

V. CONCLUSION

The result of analysis of toxic air emissions that have the potential to be released from the existing industrial facilities currently operating within 400 feet from the project site is that no exceedances of the NYSDEC DAR-1 guideline values or applicable NAAQS are predicted. As such, the emissions released from the nearby existing industrial sources are not predicted to significantly impact the proposed project.

As the stationary and mobile source impacts of the proposed project were also not considered to be significant, the potential air quality impacts of the proposed project are not considered to be significant.

Attachment I

Noise

I. INTRODUCTION

This attachment assesses the potential for the proposed actions and subsequent development to result in significant adverse noise impacts. Based on CEQR transportation analysis thresholds, it was determined that the RWCDS would generate fewer than fifty peak hour vehicle trips, and therefore, a traffic analysis was not conducted and no significant adverse traffic impacts are anticipated. However, in accordance with the guidelines established in the *CEQR Technical Manual*, a noise analysis was performed to identify the potential noise impacts to the reasonable worst-case development scenario (RWCDS) development from the future With-Action noise environment (traffic, rail, and playground noise) and identify the required level of attenuation to achieve an acceptable interior noise level of 45 dBA. As the proposed actions would introduce a new proposed playground near an existing receptor and the Proposed Development, playground noise and cumulative noise analyses were conducted.

II. PRINCIPAL CONCLUSIONS

Noise from increased traffic and the proposed playground generated by the RWCDS would not cause noise level impacts at sensitive receptors along the adjacent roadway (Barnett Avenue) as the relative increases in noise levels would fall well below the impact criterion of 3.0 dBA between No-Action and With-Action conditions.

Based on the noise analysis presented herein, the maximum predicted noise levels adjacent to the project site are expected to be a L_{eq} of 76.3 dBA along the site's LIRR railroad frontage and a L_{10} of 72.8 dBA along the site's Barnett Avenue frontage in the future with the proposed actions. These noise levels were determined using FTA methodology and cumulative noise analysis to reflect the proposed playground at the Project Site. Based on these maximum predicted With-Action noise levels, 28 dBA of attenuation along the proposed project's Barnett Avenue façade, 31 dBA of attenuation along the proposed project's northern and eastern façade, and 33 dBA of attenuation along the proposed project's western facade is needed to maintain interior noise levels of 45 dBA or lower for the proposed project's residential and community facility uses. To ensure acceptable noise levels for the proposed project, noise attenuation specifications would be mandated through the assignment of an (E) designation **(E-573)** assigned to the project site that is expected to be developed as a result of the proposed actions. The requirements of the (E) designation resulting from the noise analysis, outlined in Section VIII of this attachment, state that the buildings facades of future residential/community facility uses must provide 28 dBA of composite window/wall attenuation for future buildings along Barnett Avenue, 31 dBA of composite window/wall attenuation for frontages facing the LIRR railroad and Woodside Avenue, and 33 dBA of composite window/wall attenuation for frontages facing 48th Street. With implementation of the attenuation levels required pursuant to the (E) designation, the proposed project would provide sufficient attenuation to achieve the 2014 *CEQR Technical Manual* interior noise level guidance of 45 dBA or lower for residential or community facility uses. Therefore, the proposed actions would not result in any significant adverse noise impacts related to building attenuation requirements.

III. NOISE FUNDAMENTALS

Quantitative information on the effects of airborne noise on people is well documented. If sufficiently loud, noise may adversely affect people in several ways. For example, noise may interfere with human activities such as sleep, speech communication, and tasks requiring concentration or coordination. It may also cause annoyance, hearing damage, and other physiological problems. Although it is possible to study these effects on people on an average or statistical basis, it must be remembered that all the stated effects of noise on people vary greatly with the individual. Several noise scales and rating methods are used to quantify the effects of noise on people. These scales and methods consider factors such as loudness, duration, time of occurrence, and changes in noise level with time.

"A"-Weighted Sound Levels (dBA)

Table I-1: Common Noise Levels

Sound Source	(dBA)
Air Raid Siren at 50 feet	120
Maximum Levels at Rock Concerts (Rear Seats)	110
On Platform by Passing Subway Train	100
On Sidewalk by Passing Heavy Truck or Bus	90
On Sidewalk by Typical Highway	80
On Sidewalk by Passing Automobiles with Mufflers	70
Typical Urban Area	60-70
Typical Suburban Area	50-60
Quiet Suburban Area at Night	40-50
Typical Rural Area at Night	30-40
Soft Whisper at 5 meters	30
Isolated Broadcast Studio	20
Audiometric (Hearing Testing) Booth	10
Threshold of Hearing	0

Note: A 10 dBA increase appears to double the loudness and a 10 dBA decrease appears to halve the apparent loudness.
Sources: *CEQR Technical Manual*/Cowan; James P., *Handbook of Environmental Acoustics*, Van Nostrand Reinhold, New York, 1994. Egan, M. David, *Architectural Acoustics*, McGraw-Hill Book Company, 1988.

Noise is typically measured in units called decibels (dB), which are ten times the logarithm of the ratio of the sound pressure squared to a standard reference pressure squared. Because loudness is important in the assessment of the effects of noise on people, the dependence of loudness on frequency must be taken into account in the noise scale used in environmental assessments. Frequency is the rate at which sound pressures fluctuate in a cycle over a given quantity of time and is measured in Hertz (Hz), where 1 Hz equals 1 cycle per second. Frequency defines sound in terms of pitch components. In the measurement system, one of the simplified scales that accounts for the dependence of perceived loudness on frequency is the use of a weighting network (known as A-weighting) that simulates the response of the human ear. For most noise assessments, the A-weighted sound pressure level in units of dBA is used due to its widespread recognition and its close correlation to perception. In this analysis, all measured noise levels are reported in dBA or A-weighted decibels. Common noise levels in dBA are shown in Table I-1.

Community Response to Changes in Noise Levels

Table I-2 shows the average ability of an individual to perceive changes in noise. Generally, changes in noise levels less than 3 dBA are barely perceptible to most listeners. However, as illustrated in Table I-2, 5 dBA changes are readily noticeable. 10 dBA changes are normally perceived as doublings (or halvings) of

noise levels. These guidelines permit direct estimations of an individual's probable perception of changes in noise levels.

Table I-2: Average Ability to Perceive Changes in Noise Levels

Change (dBA)	Human Perception of Sound
2-3	Barely perceptible
5	Readily noticeable
10	A doubling or halving of the loudness of sound
20	A dramatic change
40	Difference between a faintly audible sound and a very loud sound

Source: Bolt Beranek and Neuman, Inc., *Fundamentals and Abatement of Highway Traffic Noise* (Report No. PB-222-703). Prepared for the Federal Highway Administration (FHA), June 1973.

Noise Descriptors Used in Impact Assessment

Because the sound pressure level unit (dBA) describes a noise level at just one moment and very few noises are constant, other ways of describing noise over extended periods of time have been developed. One way of describing fluctuating sound is to describe the fluctuating noise heard over a specific time period as if it had been a steady, unchanging sound. For this condition, a descriptor called the "equivalent sound level" (L_{eq}) can be computed. L_{eq} is the constant sound level that, in a given situation and time period (e.g., 1 hour [denoted by $L_{eq(1)}$] or 24 hours [denoted as $L_{eq(24)}$]), conveys the same sound energy as the actual time-varying sound. Statistical sound level descriptors such as L_1, L_{10}, L_{50}, L_{90}, and L_x are sometimes used to indicate noise levels that are exceeded 1, 10, 50, 90 and x percent of the time, respectively. Discrete event peak levels are given as L_1 levels. L_{eq} is used in the prediction of future noise levels by adding the contributions from new sources of noise (i.e., increases in traffic volumes) to the existing levels and in relating annoyance to increases in noise levels.

The relationship between L_{eq} and levels of exceedance is worth noting. Because L_{eq} is defined in energy rather than straight numerical terms, it is not simply related to the levels of exceedance. If the noise fluctuates very little, L_{eq} will approximate L_{50} or the median level. If the noise fluctuates broadly, the L_{eq} will be approximately equal to the L_{10} value. If extreme fluctuations are present, the L_{eq} will exceed L_{90} or the background level by 10 or more decibels. Thus the relationship between L_{eq} and the levels of exceedance will depend on the character of the noise. In community noise measurements it has been observed that the L_{eq} is generally between L_{10} and L_{50}. The relationship between L_{eq} and exceedance levels has been used in this analysis to characterize the noise sources and to determine the nature and extent of their impact at all receptor locations.

For the purposes of this analysis, the maximum one-hour equivalent sound level ($L_{eq(1)}$) has been selected as the noise descriptor to be used in the noise impact evaluation. $L_{eq(1)}$ is the noise descriptor used in the *CEQR Technical Manual* for noise impact evaluation and is used to provide an indication of highest expected sound levels; $L_{10(1)}$ is the noise descriptor used in the *CEQR Technical Manual* for building attenuation. Hourly statistical noise levels (particularly L_{10} and L_{eq} levels) were used to characterize the relevant noise sources and their relative importance at each receptor location.

The Day-Night sound level (L_{dn}) describes a receptor's cumulative noise exposure from all events over 24 hours. It may be thought of as a noise dose totaled after increasing all nighttime L_{eq} noise levels between 10 PM and 7 AM by 10 dBA to reflect the greater intrusiveness of noise experienced during these hours. Pursuant to Federal Transit Authority (FTA) noise impact analysis methodology, the L_{dn} is adopted to assess

noise generated by trains.[1] However, because the L_{dn} descriptor tends to average out high hourly values over 24 hours, the *CEQR Technical Manual* recommends that the L_{eq} descriptor be used for purposes of impact analysis.

Applicable Noise Codes and Impact Criteria

New York City Noise Code

The New York City Noise Control Code, as amended in December 2005, contains prohibitions regarding unreasonable noise and specific noise standards, including plainly audible criteria for specific noise sources. In addition, the amended code specifies that no sound source operating in connection with any commercial or business enterprise may exceed the decibel levels in the designated octave bands at specified receiving properties.

CEQR Technical Manual Noise Standards

The New York City Department of Environmental Protection (DEP) has set external noise exposure standards. These standards are shown in Table I-3.

Noise Exposure is classified into four categories: acceptable, marginally acceptable, marginally unacceptable, and clearly unacceptable. The standards shown are based on maintaining an interior noise level for the worst-case hour L_{10} of less than or equal to 45 dBA. Attenuation requirements are shown in Table I-4.

Impact Criteria

In addition, the *CEQR Technical Manual* uses the following criteria to determine whether a proposed residential and/or community facility development would be subject to a significant adverse noise impact: (1) the impact assessments compare the projected future With-Action condition $L_{eq(1)}$ noise levels to those calculated for the No-Action condition; (2) if the No-Action levels are less than 60 dBA $L_{eq(1)}$ and the analysis period is not a nighttime period, the threshold for a significant impact would be an increase of at least 5 dBA $L_{eq(1)}$ (for the 5 dBA threshold to be valid, the resultant With-Action condition noise level would have to be equal to or less than 65 dBA); if the No-Action noise level is equal to or greater than 62 dBA $L_{eq(1)}$ or if the analysis period is a nighttime period (defined under CEQR standards as being between 10 PM and 7 AM), the incremental significant impact threshold would be 3 dBA $L_{eq(1)}$ (if the No-Action noise level is 61 dBA $L_{eq(1)}$, the maximum incremental increase would be 4 dBA, since an increase higher than this would result in a noise level higher than the 65 dBA $L_{eq(1)}$ threshold).

[1] "Transit Noise and Vibration Impact Assessment", 2006, FTA, Office of Planning and Environment.

Table I-3: Noise Exposure Guidelines for Use in City Environmental Impact Review

Receptor Type	Time Period	Acceptable General External Exposure	Airport[3] Exposure	Marginally Acceptable General External Exposure	Airport[3] Exposure	Marginally Unacceptable General External Exposure	Airport[3] Exposure	Clearly Unacceptable General External Exposure	Airport[3] Exposure
1. Outdoor area requiring serenity and quiet[2]		$L_{10} \leq 55$ dBA	---------- Ldn ≤ 60 dBA ----------		---------- 60 < Ldn ≤ 65 dBA ----------		(1) 65 < Ldn ≤ 70 dBA, (II) 70 ≤ Ldn		---------- Ldn ≤ 75 dBA ----------
2. Hospital, Nursing Home		$L_{10} \leq 55$ dBA		55 < L_{10} ≤ 65 dBA		65 < L_{10} ≤ 80 dBA		L_{10} > 80 dBA	
3. Residence, residential hotel or motel	7 AM to 10 PM	$L_{10} \leq 65$ dBA		65 < L_{10} ≤ 70 dBA		70 < L_{10} ≤ 80 dBA		L_{10} > 80 dBA	
	10 PM to 7 AM	$L_{10} \leq 55$ dBA		55 < L_{10} ≤ 70 dBA		70 < L_{10} ≤ 80 dBA		L_{10} > 80 dBA	
4. School, museum, library, court, house of worship, transient hotel or motel, public meeting room, auditorium, out-patient public health facility		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)	
5. Commercial or office		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)	
6. Industrial, public areas only[4]	Note 4	Note 4		Note 4		Note 4		Note 4	

Notes:

(i) In addition, any new activity shall not increase the ambient noise level by 3 dBA or more;

[1] Measurements and projections of noise exposures are to be made at appropriate heights above site boundaries as given by American National Standards Institute (ANSI) Standards; all values are for the worst hour in the time period.

[2] Tracts of land where serenity and quiet are extraordinarily important and serve an important public need and where the preservation of these qualities is essential for the area to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of parks or open spaces dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet. Examples are grounds for ambulatory hospital patients and patients and residents of sanitariums and old-age homes.

[3] One may use the Federal Aviation Administration- (FAA-) approved L_{dn} contours supplied by the Port Authority, or the noise contours may be computed from the federally approved Integrated Noise Model (INM) Computer Model using flight data supplied by the Port Authority of New York and New Jersey.

[4] External Noise Exposure standards for industrial areas of sounds produced by industrial operations other than operating motor vehicles or other transportation facilities are spelled out in the New York City Zoning Resolution, Sections 42-20 and 42-21. The referenced standards apply to M1, M2, and M3 manufacturing districts and to adjoining residence districts (performance standards are octave band standards).

Source: DEP (adopted policy 1983).

Table I-4: Required Attenuation Values to Achieve Acceptable Interior Noise Levels

	Marginally Unacceptable				Clearly Unacceptable
Noise level with Proposed Action	70<L_{10}≤73	73<L_{10}≤76	76<L_{10}≤78	78<L_{10}≤80	80<L_{10}
Attenuation[A]	(I) 28 dBA	(II) 31 dBA	(III) 33 dBA	(IV) 35 dBA	36 + (L_{10} - 80)[B] dBA

Notes:

[A] The above composite window-wall attenuation values are for residential dwellings. Commercial office spaces and meeting rooms would be 5 dBA less in each category. All the above categories require a closed window situation and hence an alternate means of ventilation.

[B] Required attenuation values increase by 1 dBA increments for L_{10} values greater than 80 dBA.

Sources: DEP; *CEQR Technical Manual*

IV. NOISE PREDICTION METHODOLOGY

Future noise levels resulting from traffic were calculated with a proportional modeling technique used as a screening tool to estimate changes in noise levels. The proportional modeling technique is an analysis methodology recommended for analysis purposes in the *CEQR Technical Manual.* The noise analysis examined the weekday AM, midday, and PM peak hours. Noise emissions from train operations were

analyzed pursuant to the methodology contained in the May 2006 Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment* guidance manual. A detailed description of these noise prediction methodologies is provided below.

Proportional Modeling

Proportional modeling was used to determine No-Action and With-Action noise levels along the project site's Barnett Avenue frontage, as discussed in more detail below. Proportional modeling is one of the techniques recommended in the *CEQR Technical Manual* for mobile source analysis.

Using this technique, the prediction of future noise levels (where traffic is the dominant noise source) is based on a calculation using measured existing noise levels and predicted changes in traffic volumes to determine No-Build and Build noise levels. Vehicular traffic volumes (counted during the noise recording), are converted into PCE values, for which one medium-duty truck (having a gross weight between 9,900 and 26,400 pounds) is assumed to generate the noise equivalent of thirteen cars, one heavy-duty truck (having a gross weight of more than 26,400 pounds) is assumed to generate the noise equivalent of 47 cars, and one bus (vehicles designed to carry more than nine passengers) is assumed to generate the noise equivalent of eighteen cars. Future noise levels are calculated using the following equation:

FNA NL =10 log (NA PCE/E PCE) + E NL

where:

FNA NL = Future No-Action Noise Level

NA PCE = No-Action PCEs

E PCE = Existing PCEs

E NL = Existing Noise Level

Sound levels are measured in decibels and therefore increase logarithmically with sound source strength. In this case, the sound source is traffic volumes measured in PCEs. For example, assume that traffic is the dominant noise source at a particular location. If the existing traffic volume on a street is 100 PCEs and if the future traffic volumes were increased by 50 PCEs to a total of 150 PCEs, the noise level would increase by 1.8 dBA. Similarly, if the future traffic were increased by 100 PCEs, or doubled to a total of 200 PCEs, the noise level would increase by 3.0 dBA.

To calculate the No-Action PCE values, an annual background growth rate of 0.5 percent for the 2023 Build Year was added to the PCE noise values based on counted vehicles.[2] In order to obtain the necessary future Build noise PCE values to calculate the Build noise levels, the travel demand forecast presented in Table B-4 of Attachment B, "Supplemental Screening," was utilized. As indicated in this table, the total incremental vehicles generated per hour were estimated at 20 (18 cars and two trucks) in the AM peak hour; 12 (10 cars and two trucks) in the midday peak hour; and 20 incremental vehicles (all automobiles) during the PM peak hour. As the project site only has frontage on Barnett Avenue, all incremental vehicles were assigned to this roadway.

Train Noise Modeling

Pursuant to the guidelines of the *CEQR Technical Manual* Section 332.3, "Train Noise," noise from train operations along the eight LIRR/Amtrak tracks located to the north of the project site were calculated using

[2] Calculations according to Table 16-4 of the *CEQR Technical Manual.*

the detailed noise analysis methodology contained in the May 2006 FTA *Transit Noise and Vibration Impact Assessment* guidance manual. Using this methodology, L_{eq} values may be calculated as a function of a number of factors, including the distance between the track and the receptor, number of trains, average number of cars per train, train speed, track conditions, and whether the track is on grade or on structure. Values calculated using the FTE methodology may either be used directly, or, based upon measured, adjusted based on adjustment factors developed to account for site-specific differences between measured and model-predicted values.

The FTA analysis starts with predicting the source noise levels, expressed in terms of Sound Exposure Level (SEL) at a reference distance and a reference speed. These are given in Table 5-1 of the FTA guidance manual and are reproduced in Table I-5, below.

Table I-5: Reference SELs at 50 Feet from Track and 50 mph

Source/Type		Reference Conditions	Reference SEL (SEL_{ref}), dBA
Commuter Rail, At-Grade	Locomotives	Diesel-electric, 3000hp, throttle 5	92
		Electric	90
	Diesel Multiple Unit (DMU)	Diesel-powered, 1200hp	85
	Horns	Within ¼-mile of grade crossing	110
	Cars	Ballast, welded rail	82
Rail Transit		At-grade, ballast, welded rail	82
Transit Whistles/Warning Devices		Within 1/8-mile of grade crossing	93
AGT	Steel Wheel	Aerial, concrete, welded rail	80
	Rubber Tire	Aerial, concrete guideway	78
Monorail		Aerial straddle beam	82
Maglev		Aerial, open guideway	72

Source: FTA *Transit Noise and Vibration Impact Assessment* guidance manual, Table 5-1 (May 2006).

After determining the reference levels for each of the noise sources, the next step is to determine the noise exposure at 50 feet expressed in terms of $L_{eq(h}$. The additional data needed include: number of train passbys during the day (defined as 7 AM to 10 PM) and night (defined as 10 PM to 7 AM); peak hour train volume; number of vehicles per train; maximum speed; guideway configuration; noise barrier location; and location of highway and street grade crossings, if any. These data are used to obtain adjustment factors to calculate $L_{eq(h)}$ at 50 feet. Once the $L_{eq(h)}$ at 50 feet from each of the eight tracks .located to the north of the project site were determined, the values were adjusted based on the distance between each track and the project site using the noise exposure vs. distance formulas presented in Section 6.3.1 of the FTA guidance manual. The applicable distance corrections for the tracks, based on their locations between 65 and 320 feet from the project site's northern facade ranged from 1.9 dBA (for the track located closest to the project site) to 12.3 dBA (for the track located furthest from the site). Lastly, the resultant $L_{eq(h)}$ for each of the eight tracks were added logarithmically to the monitored background value to determine the combined $L_{eq(h)}$ along the project site's northern facade.

The frequency of Long Island Railroad trains, number of locomotives, cars per train, and speed of the train was determined based on consultation from the Long Island Railroad (LIRR). Amtrak (the tracks furthest from the Project Site approximately ~270-320 ft.), was unable to provide guidance for this analysis. Therefore, for conservative analysis purposes, and at the guidance of the Lead Agency, this analysis assumes that each Amtrak train would include two electric locomotives[3] traveling at a speed of 45 miles per hour.

[3] Based on the Siemens ACS-64 electric locomotives utilized on the Acela Express and Northeast Corridor (NEC) Amtrak lines.

V. EXISTING NOISE LEVELS

Selection of Noise Receptor Locations

The project site fronts Barnett Avenue (to the south); a vacant lot borders the project site to the west; a light industrial building borders the project site to the east; and the LIRR railroad borders the project site to the north. As vehicle and train emissions both contribute to existing noise levels in the surrounding area, noise monitoring was conducted at two locations: the approximate mid-point of the project site's northern border adjacent to the LIRR railroad (receptor location 1) and along the project site's southern border along Barnett Avenue (receptor location 2). The noise monitoring locations are presented in Figure I-1.

Noise Monitoring

Noise monitoring at receptor location 1 was carried out on Tuesday April 16th, 2019. The weather on April 16th was sunny with a high temperature off 66° F. Noise monitoring at receptor location 2 was conducted on Wednesday April 17th, 2019. The weather was partly cloudy with a high temperature of 63° F. One-hour spot measurements of existing noise levels were performed at receptor location 1 and twenty-minute measurements were performed at receptor location 2 for three noise analysis time periods: (1) weekday AM peak hour (8 AM to 9 AM); (2) weekday midday peak hour (12 PM to 1 PM); and (3) weekday PM peak hour (5 PM to 6 PM) to establish existing noise levels. For the purpose of this analysis, during the receptor location 2 noise recording, vehicles were counted and classified.

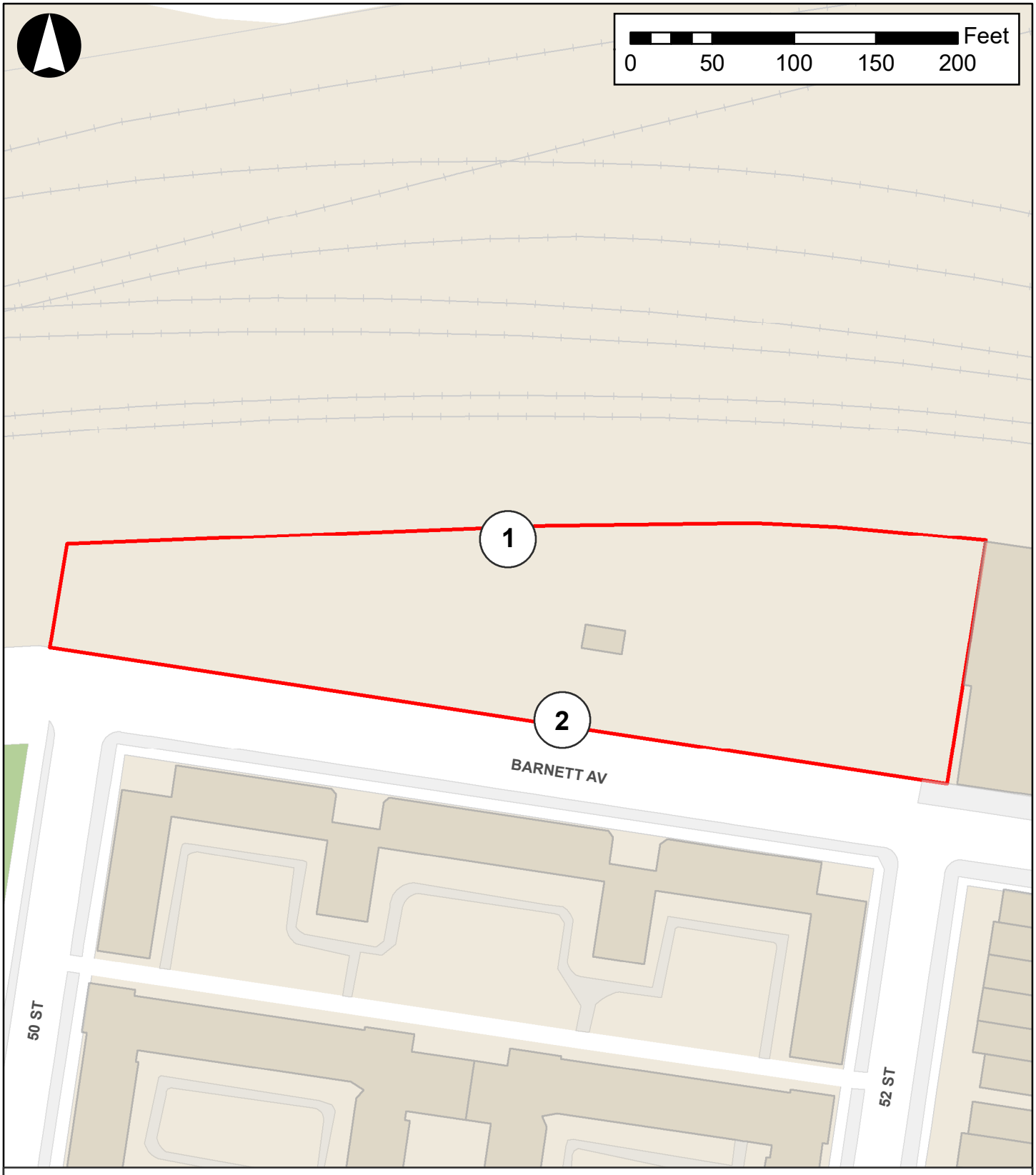
Equipment Used During Noise Monitoring

The instrumentation used for the measurements was a Brüel & Kjær Type 4189 ½-inch microphone connected to a Brüel & Kjær Model 2250 Type 1 (as defined by ANSI) sound level meter. This assembly was mounted at a height of five feet above the ground surface on a tripod and at least six feet away from any sound-reflecting surfaces to avoid major interference with source sound level that was being measured. The meter was calibrated before and after readings with a Brüel & Kjær Type 4231 sound-level calibrator using the appropriate adaptor. The data were digitally recorded by the sound level meter and displayed at the end of the measurement period in units of dBA. Measured quantities included L_{eq}, L_1, L_{10}, L_{50}, and L_{90}. A windscreen was used during all sound measurements except for calibration. Only traffic-related noise was measured; noise from other sources (e.g., emergency sirens, aircraft flyovers, etc.) was excluded from the measured noise levels. Weather conditions were noted to ensure a true reading as follows: wind speed under 12 mph; relative humidity under 90 percent; and temperature above 14°F and below 122°F (pursuant to ANSI Standard S1.13-2005).

Existing Noise Levels at Noise Monitoring Locations

Noise monitoring results for two receptor locations are shown in Table I-6. As indicated in the table, existing L_{eq} noise levels at receptor location 1 range from 68.6 to 72.6 in the three weekday peak hours, with the highest monitored noise levels during the AM peak hour. In terms of CEQR Noise Exposure Categories, existing noise levels at receptor location 1 are "Marginally Acceptable." Existing L_{eq} noise levels at receptor location 2 range from 65.2 to 68.9 in the three weekday peak hours, with the highest monitored noise levels during the AM peak hour. In terms of CEQR Noise Exposure Categories, existing noise levels at receptor location 2 are "Marginally Unacceptable (I)."

Figure I-1
Noise Monitoring Locations



Legend

Project Site

1 Noise Monitoring Locations

Table I-6: Existing Noise Levels at Monitoring Location (in dBA)

Receptor	Measurement Location	Time	L_{eq}	L_{max}	L_{min}	L_1	L_{10}	L_{50}	L_{90}	CEQR Noise Exposure Category
1	Northern border of project site	AM	72.3	91.1	46.3	85.6	**70.0**	53.8	50.1	Marginally Acceptable
		MD	68.6	89.4	43.2	85.1	56.2	49.4	46.6	
		PM	72.6	89.6	40.5	86.6	69.7	50.7	44.8	
2	Barnett Ave. btwn. 50th & 52nd Sts.	AM	68.9	92.0	49.4	80.2	**71.6**	59.8	53.4	Marginally Unacceptable (I)
		MD	65.2	84.8	44.5	78.5	66.8	55.6	49.1	
		PM	65.3	82.3	43.0	76.1	70.0	57.5	50.0	

Notes: Highest L_{10} value at each receptor location indicated in **bold.**

As noted above, in addition to the noise monitoring outlined above, noise from existing LIRR and Amtrak train operations was calculated using the detailed noise analysis methodology contained in the FTA guidance manual, *Transit Noise and Vibration Impact Assessment* (May 2006). Based on the analysis, it was determined that the peak existing combined L_{10} noise level from the LIRR and Amtrak trains would be 71.8 dBA at receptor location 1 and the peak L_{eq} level from the trains would be 74.5 dBA at receptor location 1.

VI. THE FUTURE WITHOUT THE PROPOSED ACTIONS (NO-ACTION)

As outlined in Attachment A, "Project Description," in the 2023 No-Action condition, it is expected that the project site would remain as under existing conditions and would continue to be occupied by a surface parking lot. Future No-Build noise levels at the two receptor locations were calculated using the noise prediction methodology described above in Section V. Table I-7 compares the future No-Action and existing noise levels at the receptors.

Table I-7: Future No-Action Noise Levels at Receptor Locations (in dBA)

Receptor	Measurement Location	Time	Existing L_{eq}	No-Action L_{eq}	Change in L_{eq} from Existing Conditions	No-Action L_{10}	CEQR Noise Exposure Category
1	Northern border of project site	AM	72.3	72.3	0.0	**70.0**	Marginally Acceptable
		MD	68.6	68.6	0.0	56.2	
		PM	72.6	72.6	0.0	69.7	
2	Barnett Ave. btwn. 50th & 52nd Sts.	AM	68.9	69.0	0.09	**71.7**	Marginally Unacceptable (I)
		MD	65.2	65.3	0.09	66.9	
		PM	65.3	65.4	0.09	70.0	

Notes: Highest L_{10} value at each receptor location indicated in **bold.**

As indicated in Table I-7, noise levels at receptor location 2 are expected to increase by no more than 0.1 dBA in the 2023 No-Action condition as a result of general background growth in the area, and, therefore, future No-Action noise levels would remain in the "Marginally Unacceptable (I)" CEQR noise exposure category. Noise levels at receptor location 1, which is not immediately adjacent to an existing or future roadway, are assumed to remain the same as under existing conditions.

In addition, based on the FTA noise prediction methodology, as no significant changes in train operations are anticipated in the 2023 No-Action condition, the maximum predicted L_{eq} noise level would be 74.5 dBA at receptor location 1, the same as under existing conditions.

VII. THE FUTURE WITH THE PROPOSED ACTIONS (WITH-ACTION)

In the future with the proposed actions, the project site is assumed to be developed with a RWCDS predominantly residential building comprising up to 189 dwelling units (DU) and approximately 5,323-gsf of non-profit office space (community facility), along with 59 accessory parking spaces and 111 public parking spaces. Future With-Action noise levels at the receptors were calculated using the trip generation and noise prediction methodology described above in Section III. Table I-8 presents the calculated noise levels under 2023 Build conditions.

Table I-8: Future With-Action Noise Levels at Receptor Locations (in dBA)

Receptor	Measurement Location	Time	No-Action L_{eq}	With-Action L_{eq}	Change in L_{eq} from No-Action Conditions	With-Action L_{10}	CEQR Noise Exposure Category
1	Northern border of project site	AM	72.3	72.3	0.00	**70.0**	Marginally Acceptable
		MD	68.6	68.6	0.00	56.2	
		PM	72.6	72.6	0.00	69.7	
2	Barnett Ave. btwn. 50th & 52nd Sts.	AM	69.0	69.4	0.46	**72.2**	Marginally Unacceptable (I)
		MD	65.3	66.1	0.80	67.7	
		PM	65.4	66.1	0.71	70.8	

Notes: Highest L_{10} value at each receptor location indicated in **bold.**

As shown in Table I-8, in the future with the proposed actions the maximum projected L_{10} noise level at receptor location 2 would be 72.2 dBA and, therefore, would fall in the "Marginally Unacceptable (I)" CEQR noise exposure category. Comparing future With-Action noise levels with future No-Action noise levels, the maximum increase in the L_{eq} noise levels would be 0.8 dBA. In the With-Action condition, noise levels at receptor location 1, which is not immediately adjacent to an existing or future roadway and therefore would not experience project-generated incremental traffic, are assumed to remain the same as under existing and No-Action conditions. As such, the maximum projected L_{10} noise level at receptor location 1 would remain at 70.0 dBA, as under existing and No-Action conditions. As noise levels at both receptor locations would increase by less than three dBA in all peak hours, increases of this magnitude would not be perceptible, and, in accordance with *CEQR Technical Manual* criteria, the proposed actions would not result in significant adverse mobile source noise impacts.

In addition, based on the conservative FTA noise prediction methodology, as no significant changes in train operations are anticipated in the 2023 With-Action condition, predicted noise level at Monitoring Location 1 would be the same as under existing and No-Action conditions. The Leq noise level at receptor location 1 would continue to be 74.5 dBA.. As the result of the FTA noise prediction methodology would be lower than the proportional modeling results for receptor location 2, building attenuation requirements for receptor location 2 will be based on the proportional modeling results. The proportional modeling results for receptor location 2, shown in Table I-8, indicate that the L_{10} levels under With-Action conditions at receptor location 2 would be 72.2 dBA, a 0.5 dBA increase over No-Action conditions.

Play Area Noise

While people are not usually thought of as stationary noise, children in playgrounds or spectators at outdoor sporting events or concerts can introduce additional sources of noise within communities. According to the *CEQR Technical Manual*, noise generated by children in playgrounds or people using parks is considered a stationary source of noise. A playground is proposed on the western side of the project site.

According to *"Development of Noise Assessment Method for School Playground Noise,"* prepared by AKRF Inc., the maximum L_{eq} noise level at the boundary of a playground at an Early Childhood Center would be 71.5 dBA[3]. Geometric spreading and the consequent dissipation of sound energy with increased distance

from the playground decreases noise levels at varying distances from the playground boundary. Based upon measurements and acoustical principles, hourly noise levels at 20 feet from the boundary would be 66.7 dBA, and 61 dBA at 50 feet,

The proposed project and existing residences closest to the proposed playground would have the greatest potential for noise level impacts due to playground noise. Specifically, the western façade of the proposed project and the northern façade of the existing residential building at 50-01 39th Avenue (Block 117, Lot 1; the Phipps Sunnyside Garden Apartments) would be the most likely to experience noticeable noise level increases during certain limited periods due to the proposed playground, as they would have a direct line of sight to the playground.

Table I-9 shows the results of the playground noise analysis at these receptors. As indicated in the table, accounting for noise generated by the proposed playground, the maximum predicted L_{10} noise levels along the northern façade of the existing residences at the Phipps Sunnyside Garden Apartments would be 72.8 dBA, which is approximately 1.0 dBA more than the No-Action L_{10} AM noise level at receptor location 2.

Table I-9: Midday Noise Levels due to the Potential Playground (dBA)

Analysis Location	No-Action Midday Background Noise Levels (L_{eq})	With-Action Midday Background Noise Levels (L_{eq})	Approximate Distance (feet) to the Potential Playground	Playground L_{eq} at Receptor	Combined L_{eq}	Predicted L_{10}	Incremental Noise Level Increase Over the No-Action Condition
Western Façade of Proposed Project	74.5[1]	74.5[1]	0	71.5	76.3	73.7[3]	N/A[4]
Northern Façade of Phipps Sunnyside Garden Apartments	69.0[2]	69.4[2]	60	61.0	70.0	72.8	1.0

Notes:
[1] Reflects background noise levels at receptor location 1.
[2] Reflects background noise levels at receptor location 2.
[3] Per DCP guidance, in instances where a monitoring results in an L_{10} that is lower than its corresponding L_{eq}, the L_{eq} should be used to determine the attenuation requirements.
[4] There are no sensitive receptors at this location under existing or No-Action conditions.

The introduction of the playground along the western façade would result in a 1.0 dBA increase over the With-Action L_{10} level estimated using the proportional modeling methodology detailed above. The proposed playground would place the southern façade of the proposed project in the "Marginally Unacceptable (I)" noise exposure category. Any potential noise level increase that would result from the proposed playground would only occur when the playground is in use, which would be limited to intermittent times of the day and year. For reasons stated above, no significant adverse noise impacts on this nearby sensitive receptor are anticipated.

As also presented in Table I-9, the maximum predicted L_{eq}[4] value along the proposed project's western facade would be 76.3 dBA, which falls within the Marginally Unacceptable (III) noise exposure category.

Based on the cumulative noise calculation conducted above, attenuation is required for the proposed project is discussed below.

VIII. BUILDING ATTENUATION REQUIREMENTS

As shown earlier in Table I-4, the *CEQR Technical Manual* has set noise attenuation requirements for buildings based on exterior L_{10} noise levels[3]. Recommended noise attenuation values for buildings are designed to maintain a maximum interior noise level of 45 dBA or lower for residential and community facility uses and 50 dBA or lower for commercial uses.

As described above and presented in Table I-9, based on the cumulative noise calculation, the maximum L_{10} noise level along the project site's Barnett Avenue frontage is expected to be 72.8 dBA (at receptor location 2). Based on the FTA noise prediction methodology, which estimated noise emissions for the eight tracks located to the north of the project site, it was determined that the peak L_{10} noise levels from the LIRR and Amtrak trains would be 71.8 dBA along the project site's northern facade. The FTA noise prediction methodology also determined the L_{eq} levels along the Project Site's northern façade facing the LIRR railroad would be 74.5 dBA[3]. The cumulative noise calculation found that along the western façade of the Project Site, cumulative noise from traffic, the railroad, and proposed playground would result in a peak L_{10} level of 76.3 dBA.

Based on these maximum predicted With-Action noise levels, 28 dBA of attenuation along the project site's Barnett Avenue façade is needed to maintain interior noise levels of 45 dBA or lower for the proposed project's residential and community facility uses. Using the higher FTA noise methodology predicted L_{eq} value of 74.5 dBA, 31 dBA of attenuation is needed along the northern and eastern facades. Finally, 33 dBA of attenuation would be required along the western façade facing the proposed playground and LIRR railroad.

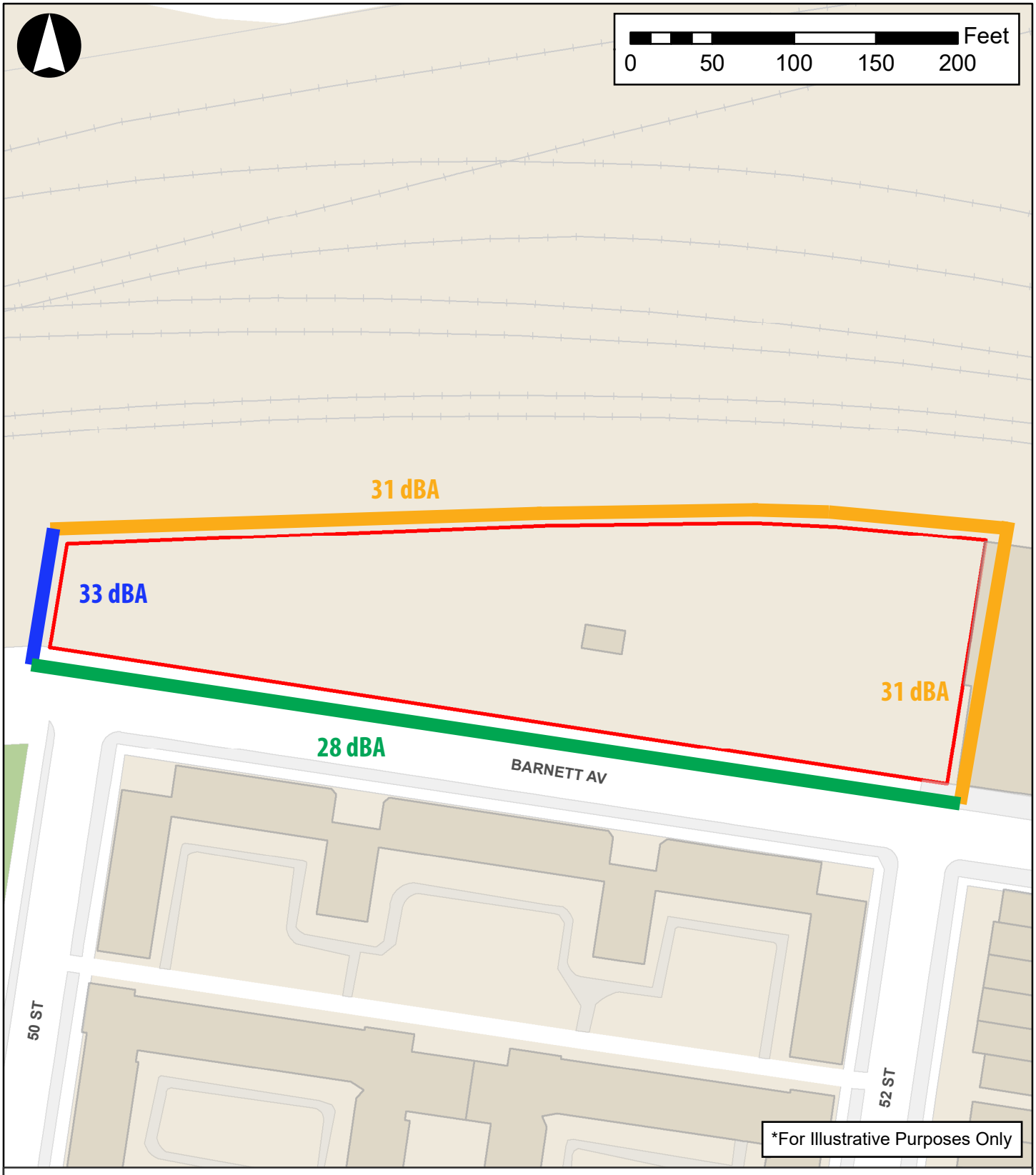
(E) Designation

A (E) designation for noise provides a notice of the presence of an environmental requirement pertaining to high ambient noise levels on a particular tax lot. If an area is proposed to be rezoned, and the accompanying environmental analysis indicates that development on a property may be adversely affected by noise, then an (E) designation for window/wall attenuation and alternate means of ventilation may be placed on the property by the lead agency in order to address such issues in conjunction with any new development or new use of the property. For new developments, enlargements of existing buildings, or changes in use, the NYC Department of Buildings will not issue a building permit until the environmental requirements of the (E) designation are satisfied. The Office of Environmental Remediation (OER) administers the (E) Designation Environmental Review Program

To avoid any potential impacts associated with noise on the project site (Block 119, Lot 143), as part of the proposed action, an (E) designation for noise would be recorded against the property. The text for the (E) designation **E-573** will be as follows:

[4] Per DCP guidance, in instances where a monitoring results in an L_{10} that is lower than its corresponding L_{eq}, the L_{eq} should be used to determine the attenuation requirements.

Noise Attenuation Requirements



Block: 119; Lot: 143
To ensure an acceptable interior noise environment, future residential/community facility uses must provide a closed-window condition with a minimum of 33 dBA window/wall attenuation on the facades facing 48th Street, 31 dBA of attenuation on the facades facing LIRR railroad and the facades facing Woodside Avenue, and 28 dBA of attenuation on the facades facing Barnett Avenue to maintain an interior noise level not greater than 45 dBA for residential and community facility uses. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Per the (E) designation requirements, in order to receive a Certificate of Occupancy from the NYC Department of Buildings (DOB) the proposed action must comply with these required composite window/wall attenuation values in order to maintain proper interior noise levels. With this institutional control in place, the proposed project would not result in any significant adverse noise impacts related to building attenuation and no further analysis is necessary.

IX. OTHER NOISE CONCERNS

Mechanical Equipment

No detailed designs of the building's mechanical systems (i.e., heating, ventilation, and air conditioning systems) are available at this time. However, those systems will be designed to meet all applicable noise regulations and requirements and would be designed to produce noise levels that would not result in any significant increase in ambient noise levels. In addition, the building mechanical systems would be designed with enclosures where necessary to meet all applicable noise regulations (i.e., Subchapter 5 §24-227 of the New York City Noise Control Code and the NYC DOB Building Code) and to avoid producing levels that would result in any significant increase in ambient noise levels.

Aircraft Noise

An initial aircraft noise impact screening analysis would be warranted if the new receptor would be located within one mile of an existing flight path, or cause aircraft to fly through existing or new flight paths over or within one mile of a receptor. Since the project site is not within one mile of an existing flight path, no initial aircraft noise impact screening analysis is warranted

Appendix I

Agency Correspondence

NYC Environmental Protection

Emily Lloyd
Commissioner

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

59-17 Junction Boulevard
Flushing, NY 11373
T: (718) 595-4398
F: (718) 595-4479

October 20, 2015

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: Barnett Avenue Rezoning
Block 1581, Lot 23
CEQR # 77DCP224Q
Queens, New York 11104.

Dear Mr. Dobruskin:

The New York City Department of Environmental Protection, Bureau of Sustainability (DEP) has reviewed the July 2007 Phase I Environmental Site Assessment (Phase I) prepared by Merritt Engineering Consultants, P.C., and the May 2015 Phase II Subsurface Investigation Report (Phase II) prepared by AKRF on behalf of The Phipps Houses (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 (DCP) to rezone Block 1581 Lot 23 from a M1-1 district to a R7D district. The proposed action would facilitate a proposal by the applicant to construct a new residential apartment building, containing approximately 180 dwelling units, at 50-25 Barnett Avenue between 50th and 52nd Streets in the Sunnyside neighborhood of Queens, Community District 2. The property is currently occupied by a paved parking lot for approximately 200 cars and two small structures for a parking attendant and storage.

The July 2007 Phase I report revealed that historical on-site and surrounding area land-uses consists of commercial and residential uses including residential buildings, a parking lot, a filling station, an auto repair shop, Cleaners Products Supply company, as well as Amtrak Railway. Regulatory databases such as the New York State Department of Environmental Conservation (NYSDEC) SPILLS, Leaking Underground Storage Tank (LUST), Resource Conservation and Recovery Act, and Generator and Petroleum Bulk Storage identified several sites in close proximity to the property. The NYSDEC LTANKS database reported 53 LTANKS within a 1/2-mile radius of the property while the NYSDEC SPILLS database reported 18 SPILLS incidents within a 1/8-mile radius of the site.

During the March/April 2015 fieldwork activities, AKRF advanced six soil borings (SB-1 through SB-6) to either the proposed project excavation depth (approximately 5 to 10 feet below grade, depending on location) or the groundwater interface and collected twelve soil samples (two samples per boring). Three

groundwater samples were also collected from three temporary wells installed at borings SB-1, SB-2 and SB-3. Soil and groundwater samples were collected and analyzed for volatile organic compounds (VOCs) via United States Environmental Agency (EPA) Method 8260, semi-volatile organic compounds (SVOCs) via EPA Method 8270, Polychlorinated Biphenyls (PCBs) via EPA Method 8082, Pesticides via EPA Method 8081 and Target Analyte List (TAL) metals. Three soil vapor samples were also collected via vapor probes (SV-1 through SV-3) and analyzed for VOCs via EPA Method TO-15.

The soil analytical results revealed VOC, SVOC, PCBs and Pesticides were either non-detect or below New York State Department of Environmental Conservation (NYSDEC) 6 NYCRR Part 375 Unrestricted and/or Restricted Residential Use Soil Cleanup Objectives (SCOs). Two metals (lead and mercury) were detected above NYSDEC Unrestricted but below Restricted Residential SCOs. The groundwater analytical results revealed SVOCs, Pesticides, and PCBs were either non-detect or below NYSDEC Division of Water Technical Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations for Class GA. One VOC (tetrachloroethene) and several metals including iron, lead, manganese, magnesium, chromium and sodium were detected above NYSDEC Division of Water TOGS 1.1.1 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations for Class GA. The soil vapor analytical results revealed three VOCs (tetrachloroethene, carbon tetrachloride and trichchloroethene) were detected above the New York State Department of Health (NYSDOH) indoor Air Guideline Values.

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

- DCP should instruct the applicant to develop and submit a Redial Action Plan (RAP) for the proposed project for review and approval. The RAP should delineate the requirements for items such as: disposal and transportation of contaminated soils; soil stockpiling; dust control; de-watering if necessary, the removal/closure of Underground Storage Tanks (USTs) and/or Above ground Storage Tanks (ASTs) if encountered; capping of disturbed soils with concrete and/or clean soil, as well as the installation of other permanent engineering controls (i.e. vapor barrier and/or sub-slab depressurization system).

- DCP should instruct the applicant to submit a site-specific Construction Health and Safety Plan (CHASP) on the basis of possible exposure of workers and/or community to contaminants from the proposed project. The CHASP should delineate the requirements for items such as: Health and Safety personnel; personal protective equipment, dust control, air monitoring, as well as emergency response procedures.

- DCP should also instruct the applicant that the RAP and CHASP should be submitted to DEP for review and approval **prior** to the start of any fieldwork.

Future correspondence and submittal related to this project should include the following CEQR number **77DCP224Q**. If you have any questions, you may contact Ms. Cassandra Scantlebury at (718) 595-6756.

Sincerely,

Maurice S. Winter
Deputy Director, Site Assessment

cc: E. Mahoney
M. Winter
T. Estesen
Y. Robinson (DCP)
W. Yu
M. Wimbish
File

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ROSE HARVEY
Commissioner

January 11, 2016

Ms. Norabelle Greenberger
Philip Habib & Associates
102 Madison Avenue, 11th Floor
New York, NY 10016

Re: HDC
The Barnett
50-25 Barnett Ave, Queens, NY 11104
15PR07425

Dear Ms. Greenberger:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the submitted materials in accordance with the New York State Historic Preservation Act of 1980 (section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6NYCRR Part 617).

We note that the project site contains resources that are not eligible for listing in the State and National Registers of Historic Places, and we also note that the project site is located within 90 feet of the National Register-listed Sunnyside Gardens Historic District. We have reviewed the project description and Environmental Assessment Statement (EAS) that were submitted to our office on December 17th, 2015. Based upon our review, we have no archeological concerns in the project area and we concur with your determination that the project will have No Adverse Impact upon historic resources provided a construction protection plan is put in place for all historic resources within 90 feet of the proposed construction. The construction protection plan should be developed in accordance with the New York City Buildings Department Technical Procedure Policy Notice (TPPN) #10/88, and with the National Park Service Tech Notes #3, "Protecting a Historic Structure During Adjacent Construction", available online at: http://www.nps.gov/tps/how-to-preserve/tech-notes/Tech-Notes-Protection03.pdf.

If substantial changes are proposed, consultation with our office should resume. If you have questions, I can be reached at (518)268-2182.

Sincerely,

Olivia Brazee
Historic Preservation Technical Specialist

olivia.brazee@parks.ny.gov via e-mail only

Landmarks Preservation Commission

1 Centre Street
9th Floor North
New York, NY 10007

Voice (212)-669-7700
Fax (212)-669-7960
http://nyc.gov/landmarks

ENVIRONMENTAL REVIEW

Project number: DEPARTMENT OF CITY PLANNING / 16DCP060Q
Project: BARNETT AVE REZONING
Address: 50-25 BARNETT AVENUE, **BBL:** 4001190143
Date Received: 2/18/2016

LPC is in receipt of the supplemental Shadows screening dated 2/5/16. Comments are as follows.

The Sunnyside Gardens Park is considered a contributing resource to the historic district as per both the National Register nomination and the LPC designation report.

The park lies mostly within the "no-shadow" zone as defined in the CEQR Technical Manual Shadows chapter. However, the analysis shows one small sliver of what appears to be incremental shadow on the park.

In order to complete the historic resource analysis, please provide the shadow calculations according to section 325 of the Shadows chapter for LPC review and comment. The calculations should show the difference between the future no-action and action conditions, plus the time and location of the incremental shadow, if it exists.

Gina Santucci 2/19/2016

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 25104_FSO_GS_02192016.doc

Landmarks Preservation Commission

1 Centre Street
9th Floor North
New York, NY 10007

Voice (212)-669-7700
Fax (212)-669-7960
http://nyc.gov/landmarks

ENVIRONMENTAL REVIEW

Project number: DEPARTMENT OF CITY PLANNING / 16DCP060Q
Project: BARNETT AVE REZONING
Address: 50-25 BARNETT AVENUE, **BBL:** 4001190143
Date Received: 2/24/2016

Comments:

The LPC is in receipt of the revised Historic and Shadows Chapters dated 2/23/16. Both chapters are acceptable for historic and cultural resources with the following change to the Shadows chapter.

p. F-5, First paragraph. After the 2nd sentence "Sunnyside Gardens…created in 1926", move the last sentence to read as follows: "Sunnyside Gardens Park is a contributing resource…is warranted."

Gina Santucci 2/26/2016

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 25104_FSO_GS_02262016.doc

Landmarks Preservation Commission

1 Centre Street
9th Floor North
New York, NY 10007

Voice (212)-669-7700
Fax (212)-669-7960
http://nyc.gov/landmarks

ENVIRONMENTAL REVIEW

Project number: DEPARTMENT OF CITY PLANNING / 77DCP224Q
Project: BARNETT AVE REZONING
Address: 50-25 BARNETT AVENUE, **BBL:** 4001190143
Date Received: 9/21/2015

---

[x] Site No architectural significance

[X**] No archaeological significance**

[x]in radius Designated New York City Landmark or Within Designated Historic District

[x] in radius 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:

The LPC is in receipt of the EAS of 8/27/15. The text is acceptable for historic and cultural resources.

Gina Santucci 9/28/2015

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 25104_FSO_GS_09282015.doc

Subject: FW: AIR PERMIT SEARCHES FOR DIANNE O'BRIEN OF PHILIP HABIB & ASSOCIATES
From: "Narvaez, Angel" <AngelN@dep.nyc.gov>
Date: 7/16/2015 12:14 PM
To: "'dobrien@phaeng.com'" <dobrien@phaeng.com>

Search was done today 7/16/15 - Request from Ms O'Brien dated 7/14/15

BLOCK	LOT	Column1	ADDRESS	INDUSTRIAL INSTALLATION NUMBERS	ADDRESS(ES) DEP HAVE ON FILE FOR THIS BLOCK AND LOT
QUEENS PROPERTIES					
116	21		38-04 BARNETT AVENUE	PB400403; PB400303	52-16 BARNETT AVENUE - AKA 38-30 WOODSIDE AVENUE
119	26		52-25 BARNETT AVENUE	NO RECORD	
119	85		37-20 WOODSIDE AVENUE	NO RECORD	
119	134		52-07 BARNETT AVENUE	NO RECORD	
119	140		50-45 BARNETT AVENUE	NO RECORD	
119	158		37-31 BARNETT AVENUE	NO RECORD	
120	28		50-30 NORTHERN BOULEVARD	NO RECORD	
120	75		33-24 WOODSIDE AVENUE	NO RECORD	
120	84		50-92 NORTHERN BOULEVARD	PB004812; PB004712	
120	99		33-16 WOODSIDE AVENUE	NO RECORD	

NYC Environmental Protection

Carter H. Strickland Jr.
Commissioner

THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Environmental Compliance
59-17 Junction Boulevard, 9th Floor, Flushing, New York 11373
Records Control (718)595-3855

Rev. 04/12

Michael Gilsenan
Assistant Commissioner
Environmental Compliance

CERTIFICATE OF OPERATION

DISPLAY CERTIFICATE ON PREMISES NEAR EQUIPMENT

PB0286-13X	10/03/13	10/07/13	**10/03/16**	2,3,4,5	C
Application PB#	*Date Inspected*	*Date Issued*	*Expiration Date*	*E.P. #*	*E.R.*

Professional Engineer:

STANLEY WALD, P.E.
2316 EAST 64th STREET
BROOKLYN, N.Y. 11234

Owner:

BLUE MENAS CONSTRUCTION
52-25 BARNETT AVENUE
WOODSIDE, N.Y. 11377

Application for Renewal of this Certificate of Operation must be filed at the Department of Environmental Protection
NO later than ninety (90) days prior to its Expiration Date

Premise Information:

52-25 BARNETT AVENUE (Street Address)						
					Name of Premise (if any)	
1st		Queens	11377		119	126
Floor	Room No.	Borough	Zip Code	BIN	Block	Lot

Description of Installation: WOODWORKING.	Used: Hours / Day: 8	Days / Year: 200

Description of Equipment: EP #2: (1) JOINTER & (1) PLANER; EP#3 & #4 : (2) TABLE SAWS; EP #5: GENERAL VENTILATION of WORKING AREA.

Exhaust Equipment: EP#2: (1)"JET "DUST COLLECTOR WITH 1.5 HP MOTOR, 400 CFM.EP#3:(1) "SECO"DUST COLLECTOR WITH 3 HP MOTOR, 600 CFM; EP #4:(1) "JET"DUST COLLECTOR WITH 1.5 HP MOTOR, 400 CFM.

Control Equipment: EP#5: (1)24" DIAM. FAN WITH 1/2 HP MOTOR, 3,500 CFM. TOTAL DELIVERING 4,900 CFM @ 70F.

Any purported or attempted transfer of an Operating Certificate from one location to another of from one piece of equipment to another automatically revokes the certificate. Sec. 24-135 New York City Air Pollution Control Code.

Should significant scientific evidence from a recognized institution should result in a decision by NYSDEC that lower ambient guideline concentrations must be established, it may be necessary to reduce emissions from this source(s) prior to the expiration of this Triennial Certificate of Operation.

Special Conditions / Remarks:

Installer

LEGALIZATION.

R. Radhakrishnan, P.E.
Director of Engineering / For the Commissioner

FOR GENERAL INFORMATION, QUESTIONS, AND INQUIRIES: Please visit our website at www.nyc.gov/dep or call 311

A.G. / E 047

NYC Environmental Protection

Carter H. Strickland Jr.
Commissioner

THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Environmental Compliance
59-17 Junction Boulevard, 9th Floor, Flushing, New York 11373-5107
Records Control (718) 595-3855

Form AR 354 Rev 04/12

Michael Gilsenan
Assistant Commissioner
Environmental Compliance

CERTIFICATE OF OPERATION
SPRAY BOOTH – AR354

DISPLAY CERTIFICATE ON PREMISES NEAR EQUIPMENT

Application#	Date Inspected:	Date Issued:	Expiration Date:	EP#:	ER:
PB0284-13J	10/03/2013	10/07/2013	**10/03/2016**	1	B

Professional Engineer:

STANLEY WALD, P.E.
2316 EAST 64th STREET
BROOKLYN, N.Y. 11234

Owner:

BLUE MENAS CONSTRUCTION
52-25 BARNETT AVENUE
QUEENS, N.Y. 11377

Premise Information:

52-25 BARNETT AVENUE (Street Address) — (Name of Premise (if any))

Floor	Room No.	Borough	Zip Code	BIN	Block	Lot
1st		Queens	11377		119	126

The holder of this Certificate is responsible for the use of the equipment in accordance with all applicable requirements and provisions of the New York City Air Pollution Control Code. The Commissioner may suspend or revoke this Certificate for willful or continued violation of the Code. Any purported or attempted transfer of a Certificate of Operation from one location to another or from one piece of equipment to another automatically revokes the Certificate. Section 24-135 NYC Air Pollution Code.

Description of Installation:

Spray Booth(s):	Quantity:	Hours / Day:	Days / Year:
ONE	(1)	8	200

USED

Manufacturer:	Model:
CUSTOM	#20 GA. GALVA METAL BOOTH (floor type)

Frontal Opening Height:	Frontal Opening Width:
8'-0"	10'-0"

Check Appropriate Items:

- ☒ **Filters**
- ☐ **Air Less**
- ☒ **Air Atomizing**
- ☐ **Water Wash**
- ☐ **Automatic**
- ☐ **Electrostatic**
- ☒ **Handgun**
- ☐ **Single Baffle**
- ☐ **Triple Baffle**

Coating Material (i.e. Paint, etc.): PAINT				
Maximum Gallons Per Hour: 1/2			Maximum Gallons Per 8 Hours: 4.0	
Fan Manufacturer: AEROVENT				
Size & Model: 24" DIAM.				
Operating Conditions:	CFM: 8,000	@ Temp. F: 70	H.P.: 2.0	RPM: 1,750

Should significant new scientific evidence from a recognized institution should result in a decision by NYSDEC that lower ambient guideline concentrations must be established, it may be necessary to reduce emissions from this source(s) prior to the expiration of this Certificate of Operation. **Application for Renewal of this Certificate of Operation must be filed at the Department of Environmental Protection NO later than ninety (90) days prior to its Expiration Date.**

Installer

LEGALIZATION

Special Conditions: **FILTER MUST BE REPLACED WHEN CLOGGED.**

R. Radhakrishnan

R. Radhakrishnan, P.E.
Director of Engineering / For the Commissioner

FOR GENERAL INFORMATION, QUESTIONS, AND INQUIRIES: Please visit our website at www.nyc.gov/dep or call 311

A.G. /E 047

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

OP | LOCATION | FACILITY | EMISSION POINT

A ADD
C CHANGE
D DELETE

READ INSTRUCTIONS CONTAINED IN FORM 76-11-12 BEFORE ANSWERING ANY QUESTION

PROCESS, EXHAUST OR VENTILATION SYSTEM

ORIGINAL KEEP !

APPLICATION FOR PERMIT TO CONSTRUCT OR CERTIFICATE TO OPERATE

SECTION A

1. NAME OF OWNER / FIRM	9. NAME OF AUTHORIZED AGENT	10. TELEPHONE	19. FACILITY NAME
Blue Menas Construction	Stanley Wald, P.E.	718-763-2596	
2. NUMBER AND STREET ADDRESS	**11. NUMBER AND STREET ADDRESS**		**20. FACILITY LOCATI**
52-25 Barnett Avenue	2316 East 64th Street		**21. CITY - TOWN - VI**
3. CITY - TOWN - VILLAGE / **4. STATE** / **5. ZIP**	**12. CITY - TOWN - VILLAGE** / **13. STATE** / **14. ZIP**		**23. BUILDING NAME**
Woodside / NY / 11377	Brooklyn / NY / 11234		
6. OWNER CLASSIFICATON	**15. NAME OF P.E. OR ARCHITECT PREPARING APPLICATION** / **16. N.Y.S. P.E. OR ARCHITECT LICENSE NO.** / **17. TELEPHONE**		**25. START UP DATE**
E. ☐ STATE H. ☐ HOSPITAL A. ☐ COMMERCIAL C. ☐ UTILITY F. ☐ MUNICIPAL I. ☐ RESIDENTIAL B. ☒ INDUSTRIAL D. ☐ FEDERAL G. ☐ EDUC. INST. J. ☐ OTHER	Stanley Wald, P.E. / 36068 / 718-763-2596		6 / 201 MO / YR
7. NAME & TITLE OF OWNERS REPRESENTATIVE / **8. TELEPHONE**	**18. SIGNATURE OF OWNERS REPRESENTATIVE OR AGENT WHEN APPLYING FOR A PERMIT TO CONSTRUCT**		**27. PERMIT TO CONS**
Sebastiox Brasil, Pres. / 917-407-3421			A. ☐ NEW SOURCE B. ☐ MODIFICATION

SEC. B

28. EMISSION POINT ID.	30. GROUND ELEVATION (FT.)	31. HEIGHT ABOVE STRUCTURES (FT.)	32. STACK HEIGHT (FT.)	33. INSIDE DIMENSIONS (IN.)	34. EXIT TEMP.(°F)	35. EXIT VELOCITY (FT./SEC.)	36. EXIT FLOW RATE (ACFM)	37. SOURCE CODE	38. HR
I0001	25	6	21	24	70	42	8000	1306	

SEC. C

41. DESCRIBE PROCESS OR UNIT

1. Paint Spray Booth (10'x8')
2.
3. (Mfg. Wood Cabinets)
4.
5.
6.
7. SHEET 1 OF 2
8.

SEC. D

EMISSION CONTROL EQUIPMENT I.D.	CONTROL TYPE	MANUFACTURER'S NAME AND MODEL NUMBER	DISPOSAL METHOD	DATE INSTALLED MONTH / YEAR	USEFUL LIFE
42. 02	43. 99	44. 24" Aerovent Fan 2HP	45.	46. /	47.
48. 01	49. 98	50. Replaceable Paint Filters	51. 9	52. 6 / 13	53. 1

SECTION

CALCULATIONS

½ gal. sprayed /hr.

E

SECTION F

CONTAMINANT NAME	CAS NUMBER	INPUT OR PRODUCTION	UNIT	ENV. RATING	EMISSIONS ACTUAL	EMISSIONS UNIT	EMISSIONS HOW DET.	EMISSIONS PERMISSIBLE	% CONTROL EFFIC'CY	HOURLY EMISSIONS (LBS/HR) ERP	HOURLY EMISSIONS (LBS/HR) ACTUAL	ANNUAL EMISSIONS (LBS/YR) ACTUAL	ANNUAL EMISSIONS (LBS/YR) 10^x	ANNUAL EMISSIONS (LBS/YR) PERMISSIBLE
54. Pigment	55. NY 075 -00 0	56. .7	57. 32	58. C	59. 3.5	60. 9	61. 6	62.	63. 95	64. .43	65. .02	66. 32	67. 0	68.
69. Normal Butyl Acetate	70. 00 123 -86 4	71. .15	72. 32	73. C	74. .55	75. 9	76. 6	77.	78. 0	79. .27	80. .27	81. 432	82. 0	83.
84. Butyl Cellosolve	85. 00 111 -76 2	86. .045	87. 32	88. B	89. .18	90. 9	91. 6	92.	93. 0	94. .09	95. .09	96. 144	97. 0	98.
99. MEK	100. 00 078 -93 3	101. .335	102. 32	103. B	104. 1.18	105. 9	106. 6	107.	108. 0	109. .59	110. .59	111. 944	112. 0	113.
114. MIBK	115. 00 108 -10 1	116. .365	117. 32	118. C	119. 1.29	120. 9	121. 6	122.	123. 0	124. .64	125. .64	126. 1024	127. 0	128.
129. Xylene	130. 01330 -20 5	131. .06	132. 32	133. B	134. .44	135. 9	136. 6	137.	138. 0	139. .22	140. .22	141. 352	142. 0	143.

SEC. G

SOLID FUEL TYPE	SOLID FUEL TONS / YR	SOLID FUEL % S	LIQUID FUEL TYPE	LIQUID FUEL THOUSANDS OF GALLONS/YR	LIQUID FUEL % S	GAS TYPE	GAS THOUSANDS OF CF/YR	GAS BTU/CF
144.	145.	146.	147.	148.	149.	150.	151.	152.

APPLICABLE RULE	APPLICABLE RULE
153. 212	154. 228

Upon completion of construction sign the statement listed below and forward to the appropriate field representative

THE PROCESS, EXHAUST OR VENTILATION SYSTEM HAS BEEN CONSTRUCTED AND WILL BE OPERATED IN ACCORDANCE WITH STATED SPECIFICATIONS AND IN CONFORMANCE WITH ALL PROVISIONS OF EXISTING REGULATIONS.

155. SIGNATURE OF AUTHORIZED REPRESENTATIVE OR AGENT

DATE 6/5/13

AGENCY USE ONLY

156. LOCATION CODE	157. FACILITY ID. NO.	158. U.T.M. (E)	159. U.T.M. (N)	160. SIC NUMBER	161. DATE APPL. RECEIVED	162. DATE APPL. REVIEWED	163. REVIEWED BY:
				2431	/ /	06/27/13	A. G.

PERMIT TO CONSTRUCT

164. DATE ISSUED	165. EXPIRATION DATE	166. SIGNATURE OF APPROVAL	167. FEE
/ /	/ /		

168.
1. DEVIATION FROM APPROVED APPLICATION SHALL VOID THIS PERMIT
2. THIS IS NOT A CERTIFICATE TO OPERATE
3. TESTS AND/OR ADDITIONAL EMISSION CONTROL EQUIPMENT MAY BE REQUIRED PRIOR TO THE ISSUANCE OF A CERTIFICATE TO OPERATE

CERTIFICATE TO OPERATE

169. DATE ISSUED	170. EXPIRATION DATE	171. SIGNATURE OF APPROVAL	172. FEE
/ /	/ /		

173.
1. ☐ INSPECTED BY _____ DATE _____
2. ☐ INSPECTION DISCLOSED DIFFERENCES AS BUILT VS. PERMIT, CHANGES INDICATED ON FORM
3. ☐ ISSUE CERTIFICATE TO OPERATE FOR SOURCE AS BUILT
4. ☐ APPLICATION FOR C.O. DENIED _____ DATE _____ INITIALED

174. SPECIAL CONDITIONS:

1. PB 0284-13 J	2.
3.	4.
5.	6.
7.	8.

AGENCY USE ONLY

E

SECTION F

CONTAMINANT NAME	CAS NUMBER	INPUT OR PRODUCTION	UNIT	ENV. RATING	EMISSIONS ACTUAL	EMISSIONS UNIT	EMISSIONS HOW DET.	EMISSIONS PERMISSIBLE	% CONTROL EFFIC'CY	HOURLY EMISSIONS (LBS/HR) ERP	HOURLY EMISSIONS (LBS/HR) ACTUAL	ANNUAL EMISSIONS (LBS/YR) ACTUAL	ANNUAL EMISSIONS (LBS/YR) 10[x]	ANNUAL EMISSIONS (LBS/YR) PERMISSIBLE
54. Acetone	55. 00 067 - 64 1	56. .255	57. 32	58. C	59. .91	60. 9	61. 6	62.	63. 0	64. .45	65. .45	66. 720	67. 0	68.
69. Isopropanol	70. 00 067 - 63 0	71. .10	72. 32	73. B	74. .37	75. 9	76. 6	77.	78. 0	79. .18	80. .18	81. 228	82. 0	83.
84. Methanol	85. 00 067 - 56 1	86. .005	87. 32	88. C	89. .06	90. 9	91. 6	92.	93. 0	94. .03	95. .03	96. 48	97. 0	98.
99. DI-2-Ethylphthalate	100. 00 117 - 81 7	101. .07	102. 32	103. B	104. .27	105. 9	106. 6	107.	108. 0	109. .13	110. .13	111. 208	112. 0	113.
114.	115. - -	116.	117.	118.	119.	120.	121.	122.	123.	124	125.	126.	127.	128.
129.	130. - -	131.	132.	133.	134.	135.	136.	137.	138.	139.	140.	141.	142.	143.

SECTION G

SOLID FUEL TYPE	SOLID FUEL TONS / YR	SOLID FUEL % S	LIQUID FUEL TYPE	LIQUID FUEL THOUSANDS OF GALLONS/YR	LIQUID FUEL % S	GAS TYPE	GAS THOUSANDS OF CF/YR	GAS BTU/CF
144.	145.	146.	147.	148.	149.	150.	151.	152.

APPLICABLE RULE	APPLICABLE RULE
153. 212	154. 228

Upon completion of construction sign the statement listed below and forward to the appropriate field representative

THE PROCESS, EXHAUST OR VENTILATION SYSTEM HAS BEEN CONSTRUCTED AND WILL BE OPERATED IN ACCORDANCE WITH STATED SPECIFICATIONS AND IN CONFORMANCE WITH ALL PROVISIONS OF EXISTING REGULATIONS.

155. SIGNATURE OF AUTHORIZED REPRESENTATIVE OR AGENT

DATE: 6/4/13

AGENCY USE ONLY

156. LOCATION CODE	157. FACILITY ID. NO.	158. U.T.M. (E)	159. U.T.M. (N)	160. SIC NUMBER	161. DATE APPL. RECEIVED	162. DATE APPL. REVIEWED	163. REVIEWED BY:
				2431	/ /	06/27/13	a. g.

PERMIT TO CONSTRUCT

164. DATE ISSUED	165. EXPIRATION DATE	166. SIGNATURE OF APPROVAL	167. FEE
/ /	/ /		

168.
1. DEVIATION FROM APPROVED APPLICATION SHALL VOID THIS PERMIT
2. THIS IS NOT A CERTIFICATE TO OPERATE
3. TESTS AND/OR ADDITIONAL EMISSION CONTROL EQUIPMENT MAY BE REQUIRED PRIOR TO THE ISSUANCE OF A CERTIFICATE TO OPERATE

CERTIFICATE TO OPERATE

169. DATE ISSUED	170. EXPIRATION DATE	171. SIGNATURE OF APPROVAL	172. FEE
/ /	/ /		

173.
1. ☐ INSPECTED BY _____ DATE _____
2. ☐ INSPECTION DISCLOSED DIFFERENCES AS BUILT VS. PERMIT, CHANGES INDICATED ON FORM
3. ☐ ISSUE CERTIFICATE TO OPERATE FOR SOURCE AS BUILT
4. ☐ APPLICATION FOR C.O. DENIED _____ DATE _____ INITIALED

174. SPECIAL CONDITIONS:

1. PB 0284-13 J	2.
3.	4.
5.	6.
7.	8.

AGENCY USE ONLY

THE CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION

Bureau of Environmental Compliance
59-17 Junction Boulevard, 9th Floor, Corona, New York 11368-5107
Records Control (718) 595 - 3855

Christopher O. Ward
Commissioner

Robert C. Avaltroni
Deputy Commissioner

DISPLAY CERTIFICATE ON PREMISES NEAR EQUIPMENT
"NOT VALID WITHOUT OFFICIAL SEAL"

Application P/#:	PB 4004-031K
Date Inspected:	05/28/04
Date Issued:	05/28/04
Expiration Date:	05/28/07

E.P.#	1 a, b, c, d, e
E.R.:	C

P.E.
Vincent J. Lichta, P.E.
P.O. Box 2346
Astoria, N.Y. 11102

OWNER
Steve Madden CORP
52-16 Barnett Ave
Lic, N.Y. 11104

DEP Premise Address 52-16 Barnett Ave. Flr.# 1st Boro: Queens

CERTIFICATE OF OPERATION

DESCRIPTION OF INSTALLATION Sanding & Polishing of Leather

USED: 2 HRS/DAY 220 DAYS/YEAR

DESCRIPTION OF EQUIPMENT: (5) Exist bag type dust collectors discharging inside area used for Cutting, Sanding, Polishing and Buffing equipments with interchangeable discs (except Band saw) to make sample Fashion shoes using Leather, Wood and neclite.

EXHAUST EQUIPMENT Fans with TOTAL OF 5475 CFM @ 76° F.

CONTROL DEVICE: Balfab MOD. JJ20B Dust Collectors.

ANY PURPORTED OR ATTEMPTED TRANSFER OF...AN OPERATING CERTIFICATE ...FROM ONE LOCATION TO ANOTHER OR FROM ONE PIECE OF EQUIPMENT TO ANOTHER AUTOMATICALLY REVOKES...THE CERTIFICATE. SEC. 24-135 NEW YORK CITY AIR POLLUTION CONTROL CODE.

R.A. Hodge, P.E.
Deputy Director

Installer
Legalization

APPLICATION FOR RENEWAL OF THIS CERTIFICATE OF OPERATION MUST BE FILED AT THE DEPARTMENT OF ENVIRONMENTAL PROTECTION NO LATER THAN NINETY (90) DAYS PRIOR TO ITS EXPIRATION DATE.

SHOULD SIGNIFICANT NEW SCIENTIFIC EVIDENCE FROM A RECOGNIZED INSTITUTION RESULT IN A DECISION BY DEC THAT LOWER AMBIENT GUIDELINE CONCENTRATIONS MUST BE ESTABLISHED, IT MAY BE NECESSARY TO REDUCE EMISSIONS FROM THIS SOURCE PRIOR TO THE EXPIRATION OF THIS CERTIFICATE TO OPERATE.

APC 136A (REV. 9/02)

M.T.-E09
05/28/04

THE CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Environmental Compliance
59-17 Junction Boulevard, 9th Floor, Corona, New York 11368-5107
Records Control (718) 595 - 3855

Christopher O. Ward
Commissioner

Robert C. Avaltroni
Deputy Commissioner

DISPLAY CERTIFICATE ON PREMISES NEAR EQUIPMENT
"NOT VALID WITHOUT OFFICIAL SEAL"

Application ~~PAF~~	DB4663-93M
Date Inspected:	5/28/04
Date Issued:	5/28/04
Expiration Date	05/28/07

E.P.#:	2
E.R.:	B

P.E.

Vincent J. Liotta, P.E.
P.O. Box 23410
Astoria N.Y. 11102

OWNER

Steve Madden Corp.
52-16 Barnett Ave
Lic, N.Y. 11104

DEP Premise Address: 52-16 Barnett Ave Flr.#: 1 Boro: Queens

CERTIFICATE OF OPERATION
(Spray Booth)

The holder of this Certificate is responsible for the use of the equipment in accordance with all applicable requirements and provisions of the New York City Air Pollution Control Code. The Commissioner may suspend or revoke this Certificate for willful or continued violation of the Code. Any purported or attempted transfer of...a Certificate of Operation ....from one location to another or from one piece of equipment to another automatically revokes the Certificate. Sec. 24-135 NYC Air Pollution Code.

Description of installation:

Spray Booth(s) Used: 1 Hrs/Day 220 Days/Year

Mfr. Custom Model: Bench

Frontal Opening Height: 48" Width: 66"

Check Appropriate Items: Filters: ✓ Water Wash: Handgun: Air Less:
Automatic: Single Baffle: Air Atomizing: Electrostatic:
Triple Baffle:

Coating Material (Paint etc..): Paint (Can Type)

Maximum Gallons Per Hour: 1 can / ½ hr Maximum Gallons Per Hours: 2 Cans

1. a) Fan Manufacturer: Unknown.
Size & Model: 18" diam.

2. b) Operating Conditions: CFM 2,350 @ Temp. F: 74° H.P. 1/3 RMP 1375

SPECIAL CONDITION: FILTER TO BE REPLACED WHEN CLOGGED.

Raphael A. Rouse, P.E.,
Director of Engineering

Application for Renewal of this Certificate of Operation must be filed at the Department of Environmental Protection no later than ninety (90) days prior to its Expiration Date.

SHOULD SIGNIFICANT NEW SCIENTIFIC EVIDENCE FROM A RECOGNIZED INSTITUTION RESULT IN A DECISION BY DEC THAT LOWER AMBIENT GUIDELINE CONCENTRATION MUST BE ESTABLISHED, IT MAY BE NECESSARY TO REDUCE EMISSIONS FROM THIS SOURCE PRIOR TO THE EXPIRATION OF THIS CERTIFICATE OF OPERATION

AR 354 - (REV. 9/02)

M.T. - E093
05/28/04

Environmental Protection
Carter H. Strickland Jr.
Commissioner

THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Environmental Compliance
59-17 Junction Boulevard, 9th Floor, Flushing, New York 11373
Records Control (718) 595-3855

PC 137 Rev 10/11

Notice of Application Plans Approval
REVISED **Work Permit**

Michael Gilsenan
Assistant Commissioner
Environmental Compliance

DISPLAY CERTIFICATE ON PREMISES NEAR EQUIPMENT
This Certificate is **NOT** Valid Without Official Seal

Application PB#	Date Mailed	Date Issued	Expiration Date	E.P. #	E.R.
PB 0047-12X	03/09/12	03/06/12	08/27/12	15022	A

Professional Engineer:

KIT LIANG, P.E.
44 SOUTH BROADWAY, 15th FLOOR
WHITE PLAINS, N.Y. 10601
(914)641-2670

Owner:

EAST RIVER PETROLEUM REALTY
50-92 NORTHERN BOULEVARD
QUEENS, N.Y.11101

Premise Address: 50-92 NORTHERN BOULEVARD, MOBILE SERVICE STATION #17-F90 — Floor — Queens (Borough)

11101 (Zip Code) | 120 (Block) | 84 (Lot)

☐ We are pleased to advise you that your application for **legalization of the existing installation has been approved**. One set of the approved plans is returned herewith to the filer of the record. Note bottom paragraph.

☒ We are pleased to advise you that your application for **work permit for the new installation / alteration has been approved**. One set of the approved plans is returned herewith to the filer of the record. Note bottom paragraph.

Description of Installation:	Used: Hours / Day:	Days / Year:
SOIL REMIDIATION AIR EMISSIONS CONTROL UNIT - CATALYTIC OXIDIZER "FALCO 300".	24	365

Description of Equipment: AIR SPARGING is BEING APPLIED AT THIS SITE. AMBIENT AIR IS PUMPED UNDER THE SOIL SLAB INTO THE CONTAMINATED SOIL & ACTS AS AN EXTRACTOR AND TRANSPORTER FOR CONTAMINANTS UNDER THE SLAB. A BLOWER IS USED TO EXTRACT THE SATURATED AIR/VAPOR FROM WELLS & PULL IT THROUGH A MOISTURE SEPARATOR BEFORE BLOWING IT INTO THE CATALYTIC OXIDIZER.

Exhaust Equipment: THE STACK IS 4" INSIDE DIAMETER; 20' ABOVE GRADE ELEVATION & CONNECTED to the 5' high CATALYTIC OXIDIZER UNIT ("FALCO" 300); EXIT FLOW RATE of CATOX:398.5 acfm at 140F.

Control Equipment: CATALYTIC OXIDIZER "FALCO 300".

This permit is issued pursuant to a Certification by the professional engineer of record, acting as designated agent for the equipment owner, that all documents submitted in connection with this application are completed and fully comply with all applicable laws, codes, rules, regulations, and directives of the Department of Environmental Protection of the City of New York in effect at the time filed.

No person shall cause or permit the use or operation of equipment or apparatus for which an installation or alteration permit is required, without first obtaining an Operating Certificate. Any purported or attempted transfer of this permit automatically revokes the permit, pursuant to the New York City Air Pollution Control Code.

To obtain a Certificate of Operation, a written request for an inspection must be made to this Division on Form # AR365. This must be done within thirty (30) days after completion of a new or altered installation.

Special Conditions / Remarks

Installer:

TO BE NAMED

R. Radhakrishnan, P.E.
Director of Engineering / For the Commissioner

FOR GENERAL INFORMATION, QUESTIONS, AND INQUIRIES: Please visit our website at www.nyc.gov/dep or call 311

A.G. / E047

Appendix II

Phase I Executive Summary

PHASE I ENVIRONMENTAL SITE ASSESSMENT (ESA)



50-25 BARNETT AVENUE
QUEENS, NEW YORK 11104

PREPARED FOR

THE PHIPPS HOUSES GROUP

MEC PROJECT: E23384

MERRITT ENGINEERING CONSULTANTS, P.C.
Environmental Engineering – Asbestos – Lead

28-08 Bayside Lane, Bayside, NY 11358
(718) 767-7997 Fax (718) 767-7796

ASTM E1527-05

ALL APPROPRIATE INQUIRY (AAI)
PHASE I ENVIRONMENTAL SITE ASSESSMENT (ESA)

Site Address	50-25 Barnett Avenue Queens, New York 11104
Prepared for	The Phipps Houses Group 902 Broadway, 13th Street New York, New York 10010 Attn: Ms. Eliza Datta
Prepared By	Merritt Engineering Consultants, P.C. 28-08 Bayside Lane Bayside, New York 11358 (718) 767-7997 (718) 767-7796 Fax
MEC Project No	Project E23384
Inspection Date	June 4, 2007
Summary Date	June 20, 2007
Final Report Date	July 31, 2007

4.1 EXECUTIVE SUMMARY

Merritt Engineering Consultants, P.C., was retained by The Phipps Houses Group to conduct a Phase I Environmental Site Assessment (ESA) at 50-25 Barnett Avenue, Queens, New York 11104.

The on site investigation was conducted on June 4, 2007.

Based on our site reconnaissance, database review and historical investigation, the following Recognized Environmental Conditions (RECs) were noted at the time of our inspection.

A Recognized Environmental Condition 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 a release of any hazardous substance or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under compliance with laws.

	ITEM	APPROXIMATE COST	PAGE
1A	City Directories for the years 1962-1967 and Sanborn Maps for the years 1970-1992 show the site was a filling station (Garden Parking & Service Station). It is recommended that the owner provide documentation indicating the proper removal any gasoline tanks that were utilized on site.	Cost not determined	14
1B	Should no documentation be available, it is recommended that a Phase II investigation, including soil borings and a ground penetrating radar (GPR) scan be conducted to determine if any buried tanks or sub-surface contamination is present.	$7,000-$10,000	14

Any rezoning of the site may require additional environmental investigation to satisfy the requirements of the department issuing a rezoning approval.

In addition, no de minimis conditions were noted.

A de minimis condition is one that generally does not present a material risk of harm to public health or the environment and that generally would not be subject of an enforcement action if brought to the attention of appropriate governmental agencies (excluding local asbestos & lead situations).

No Historical Recognized Environmental Conditions (HRECs) were reported. In addition no evidence of HRECs were observed during our on-site inspection/ identified in our database search/historical review.

In addition, we have been provided with a Phase I report conducted by Lender Consulting Services (LCS) in August of 2003 that was conducted at the residential building located south of the subject site (51-01 39th Avenue, 38-19 50th Street and 38-20 52nd Street). Based on the findings of the report, as a result of petroleum contamination in 1990, remedial work was completed at the adjacent property in cooperation with the New York State Department of Environmental Conservation (NYSDEC).

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4.2) INTRODUCTION

4.2.1 PURPOSE

The report was prepared by Merritt Engineering Consultants, P.C.(MEC), whose purpose is to provide comprehensive Phase I Environmental Site Assessments (ESA) in accordance with American Society of Testing Materials (ASTM E 1527-05) standards for a Phase I Environmental Site Assessment. The survey personnel are trained in the field of Environmental Site inspections as Certified Environmental Specialist (CES) by the Environmental Assessment Association as well as asbestos investigators by the Federal Environmental Protection Agency and NY State.

4.2.2 DETAILED SCOPE OF SERVICES

For the Phase I Environmental Site Assessment (ESA), Merritt Engineering Consultants (MEC) performed the following primary tasks:

1. *Physical site inspection by Merritt Engineering Consultants Certified Environmental Specialists (CES) who traversed the interior and exterior areas of the site by foot, in addition to conducting a review of adjacent areas and their exteriors.*
2. *Investigations of historical usage of site based upon:*
   a. *Interview of persons knowledgeable about the sites current and past usage.*
   b. *Review of Sanborn Fire Insurance Maps and/or a review of Local Building Department records and/or Aerial Photographs.*
3. *Review of USGS geologic and 7.5 Minute Topographical Maps.*
4. *Review of the federal and state environmental databases as per ASTM E1527-05 guidelines, as well as a review of pertinent information provided by local government records.*
5. *Limited survey of site for the presence of electrical transformers that may contain Poly-chlorinated biphenyl (PCBs).*
6. *Limited survey for the presence of friable asbestos containing material (ACM).*
7. *Limited survey of site for the presence of lead based paint surfaces within common areas.*
8. *Inspection of water supply, gas supply, garbage disposal practices, groundwater flow, storm and sanitary discharge methods.*
9. *Review of Radon averages.*
10. *Inspection for petroleum storage tanks, above and below grade, stored on site.*
11. *Review of report by a senior certified environmental specialist (CES).*
12. *Unless provided with Bank Scope of Work (SOW) prior to inspection, no other items have been included.*

The following services are not included as part of this Phase I Assessment:

- Lead Based Paint Testing
- Soil Borings
- Testing of Water Main
- Wetlands Evaluation
- ACP-5 Asbestos Report
- High Voltage Power Lines
- Indoor Air Quality
- Radon Testing
- Non-friable Asbestos Testing
- Evaluation of Fluorescent light fixtures that may contain PCBs
- Endangered Species
- Ecological Resources
- Health & Safety
- Industrial Hygiene
- Cultural & Historical Risk
- Regulatory Compliance
- Testing for Mold Spores

4.2.3 SIGNIFICANT ASSUMPTIONS

Information and records provided by the client and outside vendors retained by Merritt Engineering Consultants are assumed to be correct and complete.

4.2.4 LIMITATIONS AND EXCEPTIONS

The contents of this report are correct to our knowledge and belief. This report and conclusions stated herein are, however, limited to actual knowledge based upon a visual inspection of the Property, the examination of readily available public records concerning the current and prior use of the Property, and interviews with individuals knowledgeable about present and past property uses.

Merritt Engineering Consultants, P.C., has performed this Phase I Environmental Site Assessment (ESA) of the Property in accordance with the detailed scope of work in section 2.2.

Merritt Engineering Consultants, P.C., cannot guarantee that the Property is completely free of hazardous substances or other materials or conditions that could subject the Client to potential liability. The presence or absence of any such condition can only be confirmed through the collection and analysis of soil and groundwater samples, as well as through testing building materials that may contain asbestos or lead paint. This is beyond the scope of the investigation.

Merritt Engineering Consultants, P.C., has no interest other than professional in this Assessment and neither its performance, nor compensation for same, is contingent upon the findings and recommendations that are represented herein.

4.2.5 SPECIAL TERMS AND CONDITIONS

There are no special terms or conditions to the content of the report that are in addition to the scope outlined in Section 2.2.

4.2.6 RELIANCE

This Phase I Assessment was performed at the client's request utilizing methods and procedures that are consistent with acceptable professional standards ASTM-E1527-05.

The report has been prepared for the sole use of MEC's client. No other party may use the report without the written authority of MEC.

4.3) SITE DESCRIPTION

4.3.1 LOCATION AND LEGAL DESCRIPTION

The property address is 50-25 Barnett Avenue. The legal site address is Block 119, Lot 143. The site is located in the Woodside section of Queens, New York.

4.3.2 SITE AND VICINITY GENERAL CHARACTERISTICS

The current site is situated on a plot size 83,588 square feet.

The weather conditions during our on site inspection consisted of rainy skies. The temperature was approximately 70°.

4.3.3 CURRENT USE OF THE PROPERTY

The current use of the site consists of a commercial parking lot housing a 1-story structure.

None of the current tenants or their on site operations appear to pose an adverse environmental impact to the property or neighboring sites.

4.3.4 DESCRIPTIONS OF STRUCTURES, ROADS AND OTHER IMPROVEMENTS

A. The current site consists of a commercial parking lot and with a 1-story structure. The site is located on a plot size approximately 83,588 square feet (building size is approximately 200 square feet). There are no basements or subbasements at the subject site.

B. The site is located on the north side of Barnett Avenue between the corners of 50th Street and 52nd Street.

C. There are no heating systems installed on site.

D. ***STORM AND SANITARY DISCHARGE***

There are no cesspools or septic tanks located on the property. The sanitary system for the storage building consists of a combination storm and sanitary drainage system, which empties by gravity into the New York City sewer system located under Barnett Avenue.

E. *WATER SUPPLY*

The U.S. Environmental Protection Agency estimates that drinking water can comprise 20% or more of a person's total exposure to lead. Although lead in drinking water is rarely the single cause of lead poisoning, it can significantly increase a person's total lead exposure. Infants who are fed baby formula or drinks mixed with hot water from the tap are the most vulnerable to lead in drinking water. Lead solder can leach into the water supply. Standing water in the piping system can aid in the leaching process.

The EPA action level for lead in drinking water is 15 parts per billion, (PPB).

A sample with lead levels that equal or exceed 15 PPB is considered to have elevated levels of lead, and it is recommended that response action be taken. This response action may include additional testing, replacement of plumbing components, or an operations and maintenance program.

FINDINGS

The site currently has no water service.

F. *GARBAGE DISPOSAL*

There are no active incinerators located on the property.

The commercial property has its garbage picked up by private sanitation.

4.3.5 CURRENT USES OF THE ADJOINING PROPERTIES

North	Amtrak Railway
South	4-story residential building /Barnett Avenue
East	1-story commercial building (Cleaners Product Supply)
West	Commercial Yard

The adjacent property east (Cleaners Product Supply) has drums on the exterior of the building, adjacent to our site. Our database review indicated that this site is a bulk storage facility housing large quantities of chemicals on site.

In addition, we have been provided with a Phase I report conducted by Lender Consulting Services (LCS) in August of 2003 that was conducted at the residential building located south of the subject site (51-01 39th Avenue, 38-19 50th Street and 38-20 52nd Street). Based on the findings of the report, as a result of petroleum contamination in 1990, remedial work was completed at the adjacent property in cooperation with the New York State Department of Environmental Conservation (NYSDEC).

4.4) USER PROVIDED INFORMATION

4.4.1 TITLE RECORDS

A title report has been included in Appendix A.

4.4.2 ENVIRONMENTAL LIENS

Merritt Engineering Consultants (MEC) has retained All American Abstract to conduct an Environmental Lien Search on the site. No environmental liens were noted (See Appendix A).

4.4.3 SPECIALIZED KNOWLEDGE

No information regarding specialized knowledge was provided.

4.4.4 COMMONLY KNOWN OR REASONABLY ASCERTAINABLE INFORMATION

Merritt Engineering Consultants (MEC) has used the following New York State websites to research information on the subject property:

- NYC Housing and Preservation
- NYC Department of Finance
- NYC Department of Buildings
- PropertyShark.com

4.4.5 VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES

No information regarding the valuation reduction for environmental issues was provided by the owner.

4.4.6 OWNER, PROPERTY MANAGER AND OCCUPANT INFORMATION

The current owner of the site is Phipps Houses /Serv.

The current property manager is Mr. Todd Salley.

The current occupants are commercial

4.4.7 REASON FOR PERFORMING PHASE I

Merritt Engineering Consultants (MEC) was retained to perform a Phase I Environmental Site Assessment (ESA) as an agent representing property owner (The Phipps Houses Group).

4.4.8 OTHER/ADDITIONAL INFORMATION PROVIDED

The following additional information was provided:

- A prior Phase I Report was conducted by Lender Consulting Services (LCS) in August of 2003 at the residential building located south of the subject site (51-01 39th Avenue, 38-19 50th Street and 38-20 52nd Street)

4.5) RECORDS REVIEW

4.5.1 STANDARD ENVIRONMENTAL RECORD SOURCES

The federal government and New York State have compiled database lists of contaminated, potentially hazardous and regulated sites that may impact the subject property. Environmental Data Resources (EDR) has provided this information to Merritt Engineering Consultants.

4.5.2 DATABASE SEARCHES

The following Federal and State databases were reviewed by Merritt Engineering Consultants on June 11, 2007, with the corresponding distance.

FINDINGS

The closest 43 sites have been included in Appendix A.

Due to the density of the area, several of the site printouts have been omitted from the report.

FEDERAL

Database	**Radius Searched**
1. Federal National Priority List	1 Mile
2. Federal CERCLIS list	½ Mile
3. Federal RCRA TSD facilities list	½ Mile
4. Federal RCRA generators list	Site & Adjacent Properties
5. Federal ERNS list	Site

National Priorities List (NPL) - list compiled by EPA pursuant to CERCLA 42 USC 9605(a)(8)(B) of properties with the highest priority for cleanup pursuant to EPA's Hazard Ranking System.

Findings: No sites located within a 1-mile radius.

Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) - the list of sites compiled by EPA that EPA has investigated or is currently investigating for potential hazardous substance contamination for possible inclusion on the National Priorities List.

Findings: No sites located within a ½-mile radius.

Resource Conservation Recovery Act (RCRA) Treatment Storage Disposal (TSD) facilities - those facilities on which treatment, storage, and/or disposal of hazardous wastes takes place, as defined and regulated by RCRA. Inclusion on the RCRA TSD list does not imply contamination has occurred at the site.

Findings: No sites located within a ½-mile radius.

Resource Conservation Recovery Act (RCRA) generators list - list kept by EPA of those persons or entities that generate hazardous wastes as defined and regulated by RCRA. Inclusion on the RCRA list does not imply contamination has occurred at the site.

Findings: No generators listed at property.
20 generators listed within a ¼-mile radius.

Emergency Response Notification System (ERNS) list - list of reported CERCLA hazardous substance releases or spills in quantities greater than the reportable quantity, as maintained at the National Response Center. Notification requirements for such releases or spills are codified in 40 CFR Parts 302 & 355.

Findings: Site not listed.

STATE AND LOCAL RECORDS

Database	**Radius Searched**
1. State lists of Haz. Waste Sites	1 Mile
2. State landfill/solid waste site lists	½ Mile
3. State leaking tank lists (LTANKS)	½ Mile
4. State registered tanks	Site & Adjacent Properties

Department of Environmental Conservation (DEC) lists the contaminated sites throughout the State and classifies the degree of contamination. Number 1 being highly contaminated; number 5 being the least hazardous to the public.

code:

1. Causing or presenting an imminent danger of causing irreversible or irreparable damage to the public health or environment - immediate action required;

2. Significant threat to the public health or environment - action required;

2a. Temporary classification assigned to sites that have inadequate and/or insufficient data for inclusion in any of the other classifications;

3. Does not present a significant threat to the public health or the environment - action may be deferred;

4. Site is properly closed - requires continued management;

5. Site is properly closed, no evidence of present or potential adverse impact - no further action is required.

Findings: 3 sites located within a 1-mile radius.

Solid Waste Disposal Site - any place, location, tract of land, area, or premises used for the disposal of solid wastes as defined by state solid waste regulations. The term is synonymous with the term landfill and is also known as a garbage dump, trash dump or by similar terms.

Findings: No sites located within a ½-mile radius.

Spill Logs/LTANKS list – New York State Department of Environmental Conservation (NYSDEC) has a computerized list of spills that have occurred as of 1986, including the present status of the sites. In addition, the leaking tank (LTANKS) database was also reviewed for reported incidents in the area.

Findings: 53 LTANKS located within a ½-mile radius.

18 NY Spills located within a 1/8-mile radius.

State registered tanks - state lists of storage tanks required to be registered under Subtitle I. Section 9002 of RCRA.

Findings: No registered tanks located on site.
36 registered tank sites located within a 1/8-mile radius.

4.5.2 ADDITIONAL RECORDS SEARCHED

Database	Radius Searched
1. Indian Reservation	1 Mile
2. Indian LUST	½ Mile
3. Indian UST	¼ Mile

The subject site is not listed in any of the additional database searches provided by Environmental Data Resources (EDR). No other environmental records were researched.

4.5.2A ORPHAN SITES

Our database review indicated several sites that cannot be positively plotted (orphan sites). A total of 29 sites were classified as orphans.

The subject site does not appear on the orphan list.

4.5.3 PHYSICAL SETTING SOURCES

A. BODIES OF WATER

The nearest body of water to the subject site is the East River, which is approximately 2 miles west of the site.

B. GROUND WATER FLOW

Through information provided by EDR, hydrological data involving ground water flow has been obtained. Based on our findings, the hydrological groundwater flows in a westerly direction eventually emptying into the East River.

Groundwater in this area is at a depth of approximately 58 feet.

Drinking water for the five boroughs has been supplied by the New York reservoir system for many years (See Map in Appendix A). Groundwater is not a primary source of drinking water for Queens. The property is not within a public potable well field protection area and is, therefore, not subject to land use restrictions for such areas.

C. ECOLOGICAL SENSITIVE AREA

Based on information provided by Environmental Data Resources (EDR), no designated wetlands or flood plains are located in the immediate vicinity of the property.

SITE GEOLOGY AND TOPOGRAPHY

Information pertaining to the hydrogeologic setting in the vicinity of the subject property was obtained from a review of selected published documents and maps. United States Geological Survey (USGS) 7.5-minute Topographic Maps were used to characterize surface topography, water table elevation and drainage. Subsurface characteristics were obtained from USGS Surficial and Bedrock Geology Maps from the lower Hudson Sheet.

4.5.4 HISTORICAL USE INFORMATION ON THE PROPERTY

A. Sanborn Fire Insurance maps of the site and immediate area were available for the years 1898, 1915, 1936, 1947, 1950, 1970, 1977, 1979, 1980, 1985, 1986, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995 and 1996. The maps indicate the following information:

1898-1915 Vacant Lot
1936 Office /Lockers
1947-1950 Shed /Office /Lockers
1970-1992 Filling Station /Auto Service
1993-1996 Auto Repair

B. Aerial Photographs of the site and immediate area were available for the years 1966, 1975, 1984 and 1994. The photos indicate the following information:

This section of Queens has been developed with residential and commercial buildings from 1966 through the latest aerial photo available (1994).

C. City Directories

City Directories were ordered for the site (See Appendix A). The search indicated the following:

1922-1950 Address Not Listed in Research Source
1962-1967 Garden Parking & Service Station
1970-1976 Address Not Listed in Research Source
1983-1991 Queens Boro Parking Corp.
1996 Address Not Listed in Research Source
2000 G Ltd /Queens Boro Parking Corp.

D. Topographic Maps

A topographic map (topo) is a color coded line-and-symbol representation of natural and selected artificial features plotted to a scale. Topos show the shape, elevation, and development of the terrain in precise detail by using contour lines and color coded symbols. The colors of the lines usually indicate similar classes of information. For example, topographic contours (brown); lakes, streams, irrigation ditches, etc. (blue); land grids and important roads (red); secondary roads and trails, railroads, boundaries, etc. (black).

Historical topographic maps are a valuable historical resource for documenting the prior use of a property and its surrounding area.

Topographic Maps of the site and immediate area were available for the years 1897, 1900, 1947, 1956, 1966, 1967, 1979 and 1995.

City Directories for the years 1962-1967 and Sanborn Maps for the years 1970-1992 show the site was a filling station (Garden Parking & Service Station). It is recommended that the owner provide documentation indicating the proper removal any gasoline tanks that were utilized on site.

Should no documentation be available, it is recommended that a Phase II investigation, including soil borings and a ground penetrating radar (GPR) scan be conducted to determine if any buried tanks or sub-surface contamination is present.

Any rezoning of the site may require additional environmental investigation to satisfy the requirements of the department issuing a rezoning approval.

4.5.4A DATA GAPS

No significant data gaps were noted within the historical research conducted by Merritt Engineering Consultants (MEC).

4.5.5 HISTORICAL USE INFORMATION ON ADJOINING PROPERTIES

The above historical sources were reviewed by Merritt Engineering Consultants for the adjoining properties on the north, south, east & west.

The adjacent property east (Cleaners Product Supply) has drums on the exterior of the building, adjacent to our site. Our database review indicated that this site is a bulk storage facility housing large quantities of chemicals on site.

In addition, we have been provided with a Phase I report conducted by Lender Consulting Services (LCS) in August of 2003 that was conducted at the residential building located south of the subject site (51-01 39th Avenue, 38-19 50th Street and 38-20 52nd Street). Based on the findings of the report, as a result of petroleum contamination in 1990, remedial work was completed at the adjacent property in cooperation with the New York State Department of Environmental Conservation (NYSDEC).

4.6) SITE RECONNAISSANCE

4.6.1 METHODOLOGY AND LIMITING CONDITIONS

At the time of our inspection, the following areas were accessed by Mr. James Merritt, of our staff: storage garage and all accessible exterior areas of the site.

4.6.2 GENERAL SITE SETTING

North side of Barnett Avenue
Topography is flat

4.6.3 EXTERIOR OBSERVATIONS

No potential environmental conditions such as, dead vegetation, gas/chemical spills or storage drums were observed throughout the exterior areas at the time of our inspection.

4.6.4 INTERIOR OBSERVATIONS

Since the site is a parking lot the interior inspection consisted of the storage garage. No evidence of any on-site spillage or disposal of chemicals or other hazardous materials.

4.6.5 UNDERGROUND STORAGE TANKS (UST) AND DRUMS

Each year, thousands of petroleum leaks and spills are reported to the Department of Environmental Conservation (DEC) / Department of Environmental Protection (DEP). Thousands of others may go unreported mainly because they have not yet been discovered. These leaks can enter the ground, seep into an aquifer and contaminate a water supply. In some places, water wells have been closed down and people have had to vacate their homes. Even small amounts of petroleum in soil or groundwater can be tasted or smelled and can subsequently affect health.

Leaking petroleum storage tanks are a major source of groundwater contamination. The DEC/DEP estimates that there may be as many as 185,000 tanks storing petroleum, which are subject to state regulations. Many of these tanks are bare steel and were installed underground in the 1950's and 1960's. These tanks have weakened by rust and have a fifty percent chance of developing leaks.

FINDINGS

A visual inspection and physical walkover of the property indicated that there are no signs of underground storage tanks (UST's) located on the property.

City Directories for the years 1962-1967 and Sanborn Maps for the years 1970-1992 show the site was a filling station (Garden Parking & Service Station). It is recommended that the owner provide documentation indicating the proper removal any gasoline tanks that were utilized on site.

Should no documentation be available, it is recommended that a Phase II investigation, including soil borings and a ground penetrating radar (GPR) scan be conducted to determine if any buried tanks or sub-surface contamination is present.

Any rezoning of the site may require additional environmental investigation to satisfy the requirements of the department issuing a rezoning approval.

4.6.6 ABOVEGROUND STORAGE TANKS (AST)

No above ground storage tanks (AST's) or storage drums were observed in any of the accessible areas at the time of our inspection.

4.6.7 ELECTRICAL TRANSFORMERS (PCBs)

Transformers often contain Poly-chlorinated biphenyl (PCB) Askarel coolant liquid and are generally used in hazardous locations where flammability is of concern. PCB transformers are no longer produced because of EPA's ban on the manufacture of new equipment containing PCB's. However, older equipment does remain in certain areas and may contain PCB's.

FINDINGS

No electrical transformers were observed on the property. Therefore, the release of toxic P.C.B. chemicals is not a concern.

Per to toxic substance contract act (TSCA) the transformer owner, i.e. Utility Company, is responsible for all transformers maintenance and all spills of PCB's from their transformers.

Fluorescent light fixtures were not inspected for PCB content under the scope of this assessment.

4.6.8 NATURAL GAS

The building does not utilize natural gas at this time.

4.6.9 RADON

Radon first gained national attention in early 1984, when extremely high levels of indoor radon were found in areas of Connecticut, Pennsylvania, New Jersey, and New York. Radon is a colorless, odorless radioactive gas. Nearly one out of every 15 homes in the U.S. is estimated to have elevated annual average levels of indoor radon. EPA established a Radon Program in 1985 to assist States and homeowners in reducing their risk of lung cancer from indoor radon.

FINDINGS

The New York State Department of Health indicates the average radon level for this area of Queens to be 1.4 pico curies per liter (pCi/L), which is below the EPA action level of 4 pCi/L.

A radon canister was not initiated at the time of our inspection since this is beyond the scope of this assessment.

4.6.10 NON-SCOPE ASTM CONSIDERATIONS

A. ASBESTOS

The EPA has identified over 3,000 products used in buildings containing asbestos fibers. Our inspection of the premises is to determine the presence of **friable asbestos**, as defined by the Federal Environmental Protection Agency as any material, which may be pulverized with hand pressure. This material has the potential to release asbestos fibers into the atmosphere and in turn may be hazardous to the building occupants' health.

We have not inspected for or included in our report any building materials, which may contain non-friable asbestos such as vinyl asbestos floor tiles, exterior asbestos shingles, asbestos roofing felts, etc. Many of these materials are still manufactured today and not considered hazardous unless the material is cut, sawed, or grounded in a manner that might release asbestos fibers into the atmosphere.

We have used the 4-category system as defined by Asbestos Hazardous Emergency Response Act (AHERA) to designate the different conditions of asbestos noted throughout the areas of the site. This report is not designed to meet the AHERA protocols.

1. *Good Condition*
   Material with no visible damage or deterioration to very limited damage or deterioration.

2. *Fair Condition*
   Material with one or more of the following characteristics:
   - *A few water stains or less than one tenth of insulation with missing jackets.*
   - *Crushed insulation or water stains, gouges, puncture or mars on up to one tenth of the insulation if the damage is evenly distributed (or up to one quarter if the damage is localized).*

3. *Poor Condition*
   Material with one or more of the following characteristics:
   - *Missing jackets on at least one tenth of the piping equipment.*
   - *Crushed or heavily gouged or punctured insulation on at least one tenth of pipe runs/risers, boiler, tank duct, etc., if the damage is evenly distributed (one quarter if the damage is localized).*

4. *Significantly Damaged*
   Thermal systems insulation on pipes, boilers, tanks, ducts, and other thermal system insulation equipment which the insulation has lost its structural integrity, or its covering, in whole or in part, is crushed, water-stained, gouged, punctured, missing, or not intact such that is not able to contain fibers. Damage may be further illustrated by occasional puncture, gouges, or other signs of physical injury to ACM; occasional water damage on the protective coverings/jackets; or exposed ACM ends or joints. Asbestos debris, originating from the ACM in question may also indicate damage.

ASBESTOS FINDINGS

No friable asbestos containing material was observed in any of the accessible areas of the building/site.

B. LEAD BASED PAINT

Lead-based paint (LBP) was used extensively in buildings and structures that were constructed prior to 1978 and can be hazardous when damaged (i.e., chipped, broken, crumbling, pulverized); lead is toxic to humans particularly to children, if ingested, inhaled, or otherwise absorbed. Exposure to lead can cause health problems in children ranging from damage to the brain and nervous system, behavioral and learning problems (such as hyperactivity), slowed growth, hearing problems and headaches. In adults the health problems can range from difficulties during pregnancy, other reproductive problems, high blood pressure, digestive problems, nerve disorders, memory and concentration problems and muscle and joint pain.

Our research indicates the building was constructed **prior to 1978**, and lead based paint is assumed to be present throughout the building.

FINDINGS

The painted surface in the storage garage inspected by Merritt Engineering Consultant's staff did not demonstrate signs of peeling or cracking. No samples of the paint were analyzed since this is beyond the scope of a Phase I Environmental Assessment.

In addition, the site is not used for residential purposes.

A lead based paint survey in accordance with The Housing & Urban Development (HUD) guidelines was not conducted under the scope of this assessment.

C. MOLD

Our on-site inspection did not reveal any visible evidence of mold or mold spores in any of the accessible areas inspected.

D. VAPOR INTRUSION

No Vapor Intrusion assessment was conducted as a part of this assessment.

4.7) INTERVIEWS

4.7.1 INTERVIEW WITH OWNER

The owner was not present during our inspection.

4.7.2 INTERVIEW WITH SITE MANAGER

During our on-site visit, we interviewed Mr. Todd Salley, who is the property and associated with the site for 5 years.

Copies of the above records of communications are included in Appendices, Section 10.6.

4.7.3 INTERVIEWS WITH OCCUPANTS (TENANTS)

No other individuals were interviewed regarding the facility.

4.7.4 LOCAL AGENCY REVIEW

We have researched the New York City Health & Fire Department records for any information of hazardous operations including, past spills, leaks or violations. The information we received from the Fire Department indicated no violations (See Appendix A).

The Health Department information has not yet been provided. We will forward any information that appears to impact the scope of this assessment.

4.7.5 INTERVIEWS WITH OTHERS

No additional interviews were conducted as part of this assessment.

A questionnaire was forwarded to Eliza Datta. The completed questionnaire has been included in Appendix A.

4.8) REPORT FINDINGS

Based on our site reconnaissance, database review and historical investigation, the following Recognized Environmental Conditions (RECs) were noted at the time of our inspection.

A Recognized Environmental Condition 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 a release of any hazardous substance or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under compliance with laws.

	ITEM	APPROXIMATE COST	PAGE
1A	City Directories for the years 1962-1967 and Sanborn Maps for the years 1970-1992 show the site was a filling station (Garden Parking & Service Station). It is recommended that the owner provide documentation indicating the proper removal any gasoline tanks that were utilized on site.	Cost not determined	14
1B	Should no documentation be available, it is recommended that a Phase II investigation, including soil borings and a ground penetrating radar (GPR) scan be conducted to determine if any buried tanks or sub-surface contamination is present.	$7,000-$10,000	14

Any rezoning of the site may require additional environmental investigation to satisfy the requirements of the department issuing a rezoning approval.

In addition, no de minimis conditions were noted.

A de minimis condition is one that generally does not present a material risk of harm to public health or the environment and that generally would not be subject of an enforcement action if brought to the attention of appropriate governmental agencies (excluding local asbestos & lead situations).

No Historical Recognized Environmental Conditions (HRECs) were reported. In addition no evidence of HRECs were observed during our on-site inspection/ identified in our database search/historical review.

4.9 OPINIONS

Based on our site reconnaissance, database review, historical review and interviews with persons familiar with the subject site and adjacent properties, the above Recognized Environmental Conditions (RECs) were identified under the scope of services outlined in Section 2.2. Further investigation is recommended.

Based on our site reconnaissance, database review, historical review and interviews with persons familiar with the subject site and adjacent properties, de minimis conditions were identified under the scope of services outlined in Section 2.2.

No Historical Recognized Environmental Conditions were indicated or discovered during our on site inspection / database review / Historical Research.

4.10 CONCLUSION

Merritt Engineering Consultants has performed a Phase I Environmental Site Assessment (ESA) in conformance with the scope and limitations of ASTM Practice E1527 of 50-25 Barnett Avenue, Queens, New York 11104, the property. Any exceptions to, or deletions from, this practice are described in Section [2.2] of this report.

4.11 DEVIATIONS

The assessment was performed in accordance with the ASTM 1527-05 Standards as well as the detailed scope of services outlined in section 2.2 of this report.

4.12 ADDITIONAL SERVICES

No additional services were performed beyond the detailed scope of services in section 2.2.

4.13 REFERENCES

All references relied upon are located in Appendix A.

4.14 SIGNATURE OF ENVIRONMENTAL PROFESSIONAL

We thank you for allowing Merritt Engineering Consultants, P.C., to serve as your Environmental Consultant for this project. We declare that, to the best our professional knowledge and belief, we meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312, and

We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the "All Appropriate Inquiries" in conformance with the standards and practices set forth in 40 CFR Part 312.

Should you have any questions regarding the contents of this report, please feel free to contact us to discuss the report in further detail.

Site Inspector:

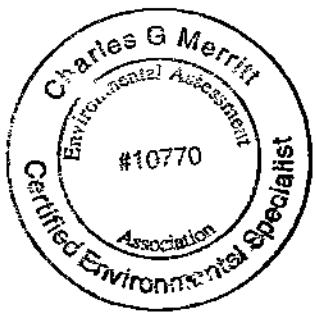
James Merritt
Certified Environmental Specialist

Reviewed by:

Charles G. Merritt
Certified Environmental Specialist

4.15 QUALIFICATIONS

See Appendix A



Appendix III

Phase II Executive Summary

50-25 Barnett Avenue
Tax Block 119, Lot 143

SUNNYSIDE, NEW YORK

Subsurface (Phase II) Investigation

AKRF Project Number: 12053

Prepared for:

Phipps Houses
902 Broadway, 13th Floor
New York, NY 10010

Prepared by:

AKRF

440 Park Avenue South
New York, NY 10016
212-696-0670

MAY 2015

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Table 3 - Soil Analytical Results of Metals
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Table 9 - Soil Vapor and Ambient Air Analytical Results of VOCs

FIGURES

Figure 1 – Site Location
Figure 2 – Sample Locations

APPENDICES

Appendix A – Soil Boring Logs
Appendix B – Soil Vapor/Ambient Air Sampling Logs
Appendix C – Laboratory Analytical Data Sheets

1.0 INTRODUCTION

AKRF, Inc. (AKRF) conducted a Subsurface (Phase II) Investigation at 50-25 Barnett Avenue in Sunnyside, NY (the Site). The legal definition of the Site is Tax Block 119, Lot 143. The Site is an approximately 80,000-square foot area consisting of a paved parking lot for approximately 200 cars, with two small structures for a parking attendant and storage. The Site location is shown on Figure 1.

The purpose of the investigation was to determine whether former, on-site and/or off-site activities had adversely affected the Site's subsurface. The scope of this investigation was based on Merritt Engineering Consultants, P.C.'s July 2007 *Phase I Environmental Site Assessment* (ESA) and AKRF's October 2014 *Sampling Protocol* and associated *Health and Safety Plan* (HASP), submitted to and approved by Phipps Houses.

Field activities were performed from March 31 to April 1, 2015 and included: the advancement of 6 borings with the collection of 12 soil samples, the installation of 3 temporary well points in the soil borings and collection of a groundwater sample from each, the installation of 3 soil vapor points with the collection of a soil vapor sample from each, and the collection of 1 ambient air sample. This report describes the methods and results of the investigation.

2.0 PREVIOUS ENVIRONMENTAL INVESTIGATIONS

Phase I Environmental Site Assessment (ESA), 50-25 Barnett Avenue, Queens, NY, Merritt Engineering Consultants, P.C., July 2007

Merritt Engineering Consultants, P.C. (Merritt) performed a Phase I Environmental Site Assessment (ESA) in July 2007 in accordance with ASTM Standard E1527-05, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Practice*, which was the standard at the time. Assessment findings included:

- City Directories from 1962 to 1967 and Historical Sanborn maps from 1970 to 1992 indicated that a gasoline filling station and service center operated on the center of the southern portion of the Site. Sanborn maps from 1993 to 1996 indicated that an auto repair facility operated on the central southern portion of the Site.
- The property east-adjacent to the Site, Cleaners Products Supply, Inc. (Cleaners) located at 50-45 Barnett Avenue, was an active chemical bulk storage facility.

According to the New York State Department of Environmental Conservation's (NYSDEC) Environmental Site Remediation Database, Cleaners operated a dry cleaning supply business from 1952 to 2007. During a subsurface investigation, tetrachloroethylene (PCE) was detected in soil 10 to 14 feet below grade at concentrations ranging from 32 to 71 parts per million (ppm) and in groundwater at concentrations ranging from 530 to 3,800 parts per billion (ppb). PCE was detected at 13,000 micrograms per cubic meter ($\mu g/m^3$) in one sub-slab soil vapor sample collected near the former chemical storage area. PCE concentrations in off-site soil ranged from non-detect to 9,000 ppb. No further information was included in the database. It should be noted that Cleaners vacated the property in 2007 and the property is currently occupied by the Capital Glass and Sash Co.

Ground Penetrating Radar (GPR) Report, 50-25 Barnett Avenue, Environmental Resources Management, April 2008

Enviroprobe performed a Ground Penetrating Radar (GPR) survey to locate potential underground structures associated with former on-site operations. Findings included:

- Two suspect underground storage tanks (USTs) were identified on the central southern portion of the Site, adjacent to the Site entrance.
- A possible septic tank was identified in the center of the Site, north of the parking attendant building.

3.0 PHYSICAL SETTING AND PROPOSED DEVELOPMENT

Surface topography is generally level. Based on reports compiled by the U.S. Geological Survey (Central Park Quadrangle), the Site lies at an elevation of approximately 50 feet above the National Geodetic Vertical Datum of 1988 (an approximation of sea level).

Groundwater was encountered from approximately 23 to 26 feet below grade at the Site. Groundwater is assumed to flow in an approximately westerly direction toward the East River. However, actual groundwater flow at the Site can be affected by many factors including bedrock geology, past filling activities, underground utilities, and other subsurface openings or obstructions such as basements, nearby rail tunnels, and other factors. Groundwater in this part of Queens is not used as a source of potable water.

The proposed project includes the excavation of soil for construction of a 10-story mixed-use building with a partial cellar.

4.0 FIELD ACTIVITIES

On-site sampling and drilling activities were conducted on March 31 and April 1, 2015 by AKRF personnel and Eastern Environmental Solutions, Inc. of Manorville, NY. Field activities included the advancement of 6 borings with the collection and laboratory analysis of 12 soil samples and 3 groundwater samples (from temporary well points installed in soil borings) and the installation of 3 soil vapor points with the collection of a soil vapor sample from each and the collection of 1 ambient air sample. Sampling locations are shown on Figure 2.

4.1 Soil and Groundwater Sampling and Analysis

Soil Sampling

Six borings were advanced at the Site (denoted as SB-1 through SB-6) using a Geoprobe® Direct Push Probe (DPP) drill rig. Borings were advanced to either the proposed project excavation depth (approximately 5 to 10 feet below grade, depending on location) or the groundwater interface. Soil cores were collected from the Geoprobe® borings in five-foot long, two-inch diameter, stainless steel macro-core samplers fitted with an internal acetate liner. Soil was field-screened using a photoionization detector (PID), which measures relative concentrations of volatile organic compounds (VOCs). At each boring location, AKRF field personnel recorded and documented subsurface conditions. Two soil samples were collected from each boring for laboratory analysis. Soil boring logs are provided in Appendix A.

Samples slated for laboratory analysis were placed in laboratory-supplied containers in accordance with EPA protocols and were analyzed by Alpha Analytical Laboratories of Westboro, Massachusetts, a New York State Department of Health (NYSDOH) ELAP-certified laboratory. The samples were analyzed for the following:

- VOCs by EPA Method 8260;
- Semivolatile Organic Compounds (SVOCs) by EPA Method 8270;
- Target Analyte List (TAL) metals;
- Polychlorinated Biphenyls (PCBs) by EPA Method 8082; and
- Pesticides by EPA Method 8081.

Groundwater Sampling

Groundwater samples were collected from three temporary wells (denoted as MW-1 through MW-3) installed in borings SB-1, SB-2, and SB-3, respectively. Prior to sampling, water level measurements were taken to determine the groundwater depth. A check valve with dedicated tubing was used to purge three well volumes prior to sampling. Samples were collected directly into laboratory-supplied containers in accordance with EPA protocols and were analyzed for the same parameters as the soil samples, with the addition that analyses for metals was conducted on both filtered and unfiltered samples. Filtering occurred in the field using inline filters. All samples were shipped to the laboratory with appropriate chain-of-custody documentation. All non-dedicated sampling equipment was decontaminated prior to and following sample collection in accordance with the procedures outlined in the Sampling Protocol.

4.2 Soil Vapor Sampling

Three soil vapor probes were installed at the Site (denoted as SV-1 through SV-3) using the Geoprobe® drilling system. One ambient air sample (AA-1) was collected concurrently with the soil vapor samples for quality assurance/quality control (QA/QC) purposes. Two-inch screen implants (probes) with dedicated Teflon tubing and threaded fittings were installed at the proposed foundation depth (approximately 5 or 10 feet below grade, depending on the location). The tubing was retracted approximately six inches to create a void space. The probes were backfilled with clean silica sand to a depth of two feet below the surface and hydrated bentonite was used to fill the remaining void around the sampling tubing to grade to prevent short-circuiting of ambient air into the soil gas sampling point.

Prior to sampling, the soil vapor points were purged of approximately three sample volumes using a peristaltic pump. During purging, an inverted bucket was placed over the sampling point and helium gas was introduced through a small hole in the bucket to saturate the atmosphere around the sample port with helium gas. The purged vapors were collected into a Tedlar bag and monitored using a Dielectric Technologies Model MGD-2002 portable helium detector to check for short-circuiting of ambient air into the vapor sampling point and verify the adequacy of the bentonite seal. Helium concentrations of less than the NYSDOH threshold value of 10 percent were considered sufficient to verify a tight seal. All soil vapor points passed the seal integrity tests with helium readings of not detected (ND). Purged vapors were also field-screened for VOCs using a PID calibrated with 100 parts per million (ppm) isobutylene standard gas. No VOCs were detected at soil vapor sample points SV-1, SV-2, and SV-3.

Soil vapor probes were connected via Teflon tubing to laboratory-supplied, batch-certified clean six-liter Summa® canisters equipped with two-hour flow regulators. Vacuum readings were

collected at the start and end of the sampling period. Immediately after opening the Summa® canister, the initial vacuum (inches of mercury) was noted. After approximately two hours, the final vacuum reading (inches of mercury) was noted and the Summa® canister was closed. The soil vapor and ambient air canisters were labeled and shipped to Alpha Analytical Laboratory of Mansfield, Massachusetts using standard chain-of-custody procedures and were analyzed for VOCs by EPA Method TO-15. Soil vapor and ambient air sampling logs are provided as Appendix B.

4.3 Field Observations

Soil Sampling

Subsurface materials consisted of sand and silt, with varying amounts of gravel. Bedrock was not encountered. No elevated PID readings, staining, or odors were noted in any of the soil borings advanced during the investigation. Results of the field screening data are provided in the soil boring logs included in Appendix A.

Groundwater Sampling

Groundwater was encountered between approximately 23 and 26 feet below grade. No odor, sheen, or floating product was observed in any purge water or sample.

Soil Vapor Sampling

PID readings did not detect VOCs in the purged vapor from the soil vapor points SV-1, SV-2, and SV-3. Helium levels detected in the Tedlar bag were well within the required NYSDOH guidance, verifying an adequate surface seal. Field logs of the soil vapor sampling are included in Appendix B.

5.0 FINDINGS

5.1 Soil Analysis Results

Soil laboratory analyses results are summarized in Tables 1 to 4. The complete laboratory analytical data sheets are included as Appendix C.

Results were compared to NYSDEC 6 NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives (USCOs) and Part 375 Soil Cleanup Objectives for Restricted – Residential Use (RRSCOs).

VOCs

Four VOCs [acetone (a common laboratory contaminant), 2-butanone, toluene, and tetrachloroethylene (PCE)] were detected in at least one of the soil samples below their respective USCOs (and RRSCOs). Soil analytical results for VOCs are presented in Table 1.

SVOCs

Fourteen SVOCs were detected in soil samples SB-2 (0-2), SB-4 (0-2), SB-5 (0-2) and SB-6 (0-2) at low concentrations below their respective USCOs (and RRSCOs). Soil analytical results for SVOCs are presented in Table 2.

Metals

Metals were detected in each of the soil samples analyzed during the investigation. Mercury was detected in soil samples SB-5 (0-2) and SB-6 (8-10) and lead was detected in soil sample SB-6 (0-2) at concentrations exceeding their respective USCOs, but below their respective RRSCOs. No other metals were detected in exceedance of their respective USCOs or RRSCOs. Soil analytical results for metals are presented in Table 3.

Pesticides and PCBs

Six pesticides (4,4'-DDE, 4,4'-DDT, trans-chlordane, cis-chlordane, chlordane, and heptachlor) were detected in three soil samples at concentrations below their respective USCOs and RRSCOs. No PCBs were detected above laboratory reporting limits in any of the soil samples analyzed. Soil analytical results for pesticides and PCBs are presented in Table 4.

5.2 Groundwater Analysis Results

Analytical results from the three samples were compared to the Class GA Ambient Water Quality Values (AWQVs), as listed in NYSDEC Division of Water Technical Operational and Guidance Series (TOGS) 1.1.1. It should be noted that this is a very conservative comparison as the AWQVs are drinking water standards and guidelines, whereas Site groundwater is not used as a drinking water source. A complete laboratory analytical report is included in Appendix C.

VOCs

Acetone (a common laboratory contaminant) and PCE were the only VOCs detected in the groundwater samples. Acetone was detected in MW-1 and MW-2 below its respective AWQV. PCE was detected in MW-3 at a concentration of 45 micrograms per liter (µg/l), above its respective AWQV of 5 µg/l. Based on the close proximity of MW-3 to the east-adjacent Site, former Cleaners, the PCE detection is likely related to the contamination present at the former Cleaners and not to an on-site spill or release. Groundwater analytical results for VOCs are presented in Table 5.

SVOCs

Bis(2-ethylhexyl)phthalate and benzoic acid were the only SVOCs detected in the groundwater samples. Bis(2-ethylhexyl)phthalate was detected in groundwater sample MW-2 at a concentration of 6.6 µg/l, slightly above its respective AWQV of 5 µg/l. This compound is a plasticizer and likely is associated with sampling equipment. Benzoic acid was also detected in MW-2, but below its respective AWQV. Groundwater analytical results for SVOCs are presented in Table 6.

Metals

Total and dissolved metals were detected in the groundwater samples, with concentrations of 12 metals (barium, beryllium, chromium, copper, iron, lead, magnesium, manganese, nickel, selenium, sodium, and thallium) exceeding their respective AWQVs in one or more samples. Concentrations in the dissolved/filtered samples were significantly lower (with the exception of sodium), with manganese and sodium exceeding their respective AWQVs in at least two samples. These metals are likely naturally occurring or reflective of regional groundwater quality and do not indicate the likelihood of a Site release. Groundwater analytical results for metals are presented in Table 7.

Pesticides and PCBs

No pesticides or PCBs were identified in any sample above laboratory detection limits. Groundwater analytical results for pesticides and PCBs are presented in Table 8.

5.3 Soil Vapor and Ambient Air Analysis Results

There are no directly applicable guidance values for VOCs in soil vapor; however, the results of the soil vapor samples were compared to the NYSDOH Air Guideline Values (AGVs) and Section 3.4 Matrices 1 and 2. Since these values reflect indoor air background, the comparison assumes that any soil vapor detected would completely penetrate into the building, a condition that would not be expected to actually occur.

A review of the soil vapor analytical results indicates that up to 16 VOCs were detected in soil vapor samples SV-1, SV-2, and SV-3. The NYSDOH has established AGVs or Matrices for five of the VOCs analyzed [1,1,1-trichloroethane, carbon tetrachloride, methylene chloride, PCE, and trichloroethylene (TCE)]. PCE was detected at a concentration 6,010 µg/m^3 in soil vapor sample SV-3, which is above its AGV of 30 µg/m^3. Based on the close proximity of SV-3 to the east-adjacent Site, former Cleaners, the PCE detection is likely related to the contamination present at the former Cleaners and not to an on-site spill or release. 1,1,1-trichloroethane was detected in soil vapor sample SV-1, but at a concentrations well below its Matrix value. Carbon tetrachloride, methylene chloride, and TCE were not detected in the soil vapor samples, and none of the targeted compounds were detected in the ambient air sample above laboratory reporting limits. VOCs associated with petroleum (including ethanol, ethylbenzene, heptane, n-hexane, xylenes, and toluene) were detected at concentrations up to 20.2 µg/m^3 and solvent-related VOCs [including 1,1,1-trichloroethane, 2-butanone (methyl ethyl ketone), chloroform, ethyl acetate, isopropanol, and tetrachloroethene] were detected at concentrations up to 6,010 µg/m^3; however, there are no established AGVs for these compounds.

A review of ambient air analytical results indicates that up to seven VOCs were detected in ambient air sample AA-1, generally at concentrations below soil vapor concentrations. Three VOCs, benzene, chloromethane, and trichlorofluoromethane, were detected in the ambient air sample (at a maximum concentration of 1.14 µg/m^3) but were not detected in soil vapor samples. None of the VOCs with AGVs or in the NYSDOH matrices were detected above laboratory reporting limits in the ambient air sample.

Soil vapor and ambient air analysis results are summarized in Table 9. The complete laboratory analytical data sheets are located in Appendix C.

6.0 CONCLUSIONS AND RECOMMENDATIONS

AKRF, Inc. (AKRF) conducted a subsurface (Phase II) investigation at 50-25 Barnett Avenue in Sunnyside, New York. The investigation was conducted to determine whether former on-site or off-site activities have adversely affected the subsurface, and included: the advancement of 6 borings with the collection of 12 soil samples, the installation of 3 temporary well points in the soil borings and collection of a groundwater sample from each, the installation of 3 soil vapor points with the collection of a soil vapor sample from each, and the collection of 1 ambient air sample.

Subsurface materials consisted of sand and silt, and gravel with varying amounts of gravel to depths between 5 and 37 feet below grade. Bedrock was not encountered. No elevated PID readings, staining, or odors were noted in the borings advanced during the investigation. Groundwater was encountered

between approximately 23 and 26 feet below grade. No odor, sheen, or floating product was observed in any purge water or samples.

Soil samples were collected from both the upper 2 feet of soil and from the lower 2 feet of the boring (the 3 to 5-foot below grade interval or 8 to 10-foot below grade interval, depending on location). The soil samples were analyzed for VOCs by EPA Method 8260, SVOCs by EPA Method 8270, TAL Metals, pesticides by EPA Method 8081 and PCBs by EPA Method 8082. Soil sample analytical results were compared to NYSDEC 6 NYCRR Part 375 Soil Cleanup Objectives for Unrestricted Use Soil Cleanup Objectives (USCOs) and Part 375 Soil Cleanup Objectives for Restricted – Residential Use (RRSCOs).

Groundwater samples were collected from temporary monitoring wells installed in soil borings, and were analyzed for the same parameters as the soil samples (with the addition that analyses for metals was conducted on both filtered and unfiltered samples). Groundwater sample analytical results were compared to NYSDEC Division of Water TOGS 1.1.1 Class GA Ambient Water Quality Values (AWQVs). This is a conservative comparison, as the AWQVs are drinking water standards and guidelines, whereas Site groundwater is not used as a potable water source. The soil vapor samples and the associated ambient air sample were analyzed for VOCs by EPA Method TO-15. There are currently no directly applicable guidance values for VOCs in soil vapor; however, soil vapor analytical results were compared to criteria published in the 2006 *NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York,* specifically the NYSDOH Air Guideline Values (AGVs) and Section 3.4 Matrices 1 and 2.

A summary of the investigation results is as follows:

- No VOCs, SVOCs, pesticides, or PCBs were detected in the soil samples at concentrations exceeding their respective USCOs or RRSCOs. Mercury and lead were detected at concentrations exceeding their respective USCOs in three soil samples, but below their respective RRSCOs. These exceedances are typical of urban soil quality and are not likely related to a spill or release.
- Tetrachloroethene (PCE) was detected above its respective NYSDEC AWQV in groundwater sample MW-3. Based on the close proximity of MW-3 to the former Cleaners east-adjacent to the Site, the PCE detection is likely related to the contamination present at the former Cleaners and not to an on-site spill or release. One SVOC [bis(2-ethylhexyl)phthalate] was detected slightly above its respective AWQV in sample MW-2. Metals were detected in both the unfiltered and filtered groundwater samples, with 12 metals (barium, beryllium, chromium, copper, iron, lead, magnesium, manganese, nickel, selenium, sodium, and thallium) exceeding their respective AWQVs in one or more unfiltered samples. Concentrations in the filtered samples were significantly lower (with the exception of sodium), with manganese and sodium exceeding their respective AWQVs in at least two samples. These metals are likely naturally occurring or reflective of regional groundwater quality and do not indicate the likelihood of an on-site release.
- Up to 16 VOCs were detected in the soil vapor samples and 7 VOCs were detected in ambient air. PCE was detected in sample SV-3 at a concentration of 6,010 $\mu g/m^3$, which is above its AGV of 30 $\mu g/m^3$. Based on the close proximity of SV-3 to the former cleaners east-adjacent to the Site, former Cleaners, the PCE detection is likely related to the contamination present at the former Cleaners and not to an on-site spill or release. None of the remaining VOCs with established AGVs or Matrices were detected above their respective guidelines. VOCs associated with petroleum were detected in soil vapor samples at a maximum concentration of 20.2 $\mu g/m^3$.

6.1 Recommendations

The proposed project includes the excavation of soil for construction of a ten-story mixed-use building with a partial cellar. The investigation identified soil containing slightly elevated concentrations of

mercury and lead, and detections of SVOCs and metals in groundwater not indicative of an on-site release. PCE was detected above its AWQV in one groundwater sample (MW-3) and above its AGV in one soil vapor sample (SV-3), both on the eastern portion of the Site. Based on the close proximity of MW-3 and SV-3 to the former Cleaners east-adjacent to the Site, the PCE detections are likely related to the contamination present at the former Cleaners and not to an on-site spill or release. The detected levels do not present a significant concern for the proposed future use, assuming implementation of the following:

- NYSDEC should be notified of the concentrations of PCE detected in the eastern soil vapor and groundwater samples believed to be associated with the east-adjacent property.
- To address the potential for encountering known or unexpected contamination during redevelopment, and to reduce the potential for vapor intrusion following the redevelopment, a Remedial Action Plan (RAP) and associated Construction Health and Safety Plan (CHASP) should be prepared for implementation during proposed construction and submitted to the New York City Department of Environmental Protection (NYCDEP) for review and approval. The RAP should address requirements for items such as: soil stockpiling, soil disposal and transportation; dust control; contingency measures if additional petroleum storage tanks or other contamination should be unexpectedly encountered; a minimum two foot clean fill buffer in any landscaped or uncapped areas; and the need for vapor control measures such as a sub-slab depressurization system (SSDS) and/or vapor barrier. The CHASP should include measures for worker and community protection, including personal protective equipment, dust control, air monitoring, and emergency response procedures.
- Soil and fill materials excavated as part of Site development activities should be properly handled and managed in accordance with applicable regulations and the RAP/CHASP. Transportation of material leaving the Site for off-site disposal must be in accordance with federal, state and local regulatory requirements covering licensing of haulers and trucks, placarding, truck routes, manifesting, etc.
- During Site redevelopment, the known and any unexpectedly encountered USTs should be properly closed and removed, along with any contaminated soil. The closure should be performed in accordance with the applicable regulations, including NYSDEC tank registration and spill reporting regulations.

7.0 LIMITATIONS

The findings set forth in this report are strictly limited in scope and time to the date of the evaluation described herein. The conclusions and recommendations presented in the report are based solely on the services and any limitations described in this report.

This report may contain conclusions that are based on the analysis of data collected at the time and locations noted in the report through intrusive or non-intrusive sampling. However, further investigation might reveal additional data or variations of the current data, which may differ from our understanding of the conditions presented in this report and require the enclosed recommendations to be reevaluated or modified.

Chemical analyses may have been performed for specific parameters during the course of this investigation, as summarized in the text and tables. It should be noted that additional chemical constituents, not searched for during this investigation, may be present at the site. Due to the nature of the investigation and the limited data available, no warranty, expressed or implied, shall be construed with respect to undiscovered liabilities. The presence of biological hazards, radioactive materials, lead-based paint and asbestos-containing materials was not investigated, unless specified in the report.

Interpretations of the data, including comparison to regulatory standards, guidelines or background values, are not opinions that these comparisons are legally applicable. Furthermore, any conclusions or recommendations should not be construed as legal advice. For such advice, the client is recommended to seek appropriate legal counsel. Disturbance, handling, transportation, storage and disposal of known or potentially contaminated materials is subject to all applicable laws, which may or may not be fully described as part of this report.

The analytical data, conclusions, and/or recommendations provided in this report should not be construed in any way as a classification of waste that may be generated during future disturbance of the project site. Waste(s) generated at the site including excess fill may be considered regulated solid waste and potentially hazardous waste. Requirements for intended disposal facilities should be determined beforehand as the data provided in this report may be insufficient and could vary following additional sampling.

This report may be based solely or partially on data collected, conducted, and provided by, AKRF and/or others. No warranty is expressed or implied by usage of such data. Such data may be included in other investigation reports or documentation. In addition, these reports may have been based upon available previous reports, historical records, documentation from federal, state and local government agencies, personal interviews, and geological mapping. This report is subject, at a minimum, to the limitations of the previous reports, historical documents, availability and accuracy of collected documentation, and personal recollection of those persons interviewed. In certain instances, AKRF has been required to assume that the information provided is accurate with limited or no corroboratory evidence.

This report is intended for the use solely by Phipps Houses. Reliance by third parties on the information and opinions contained herein is strictly prohibited and requires the written consent of AKRF. AKRF accepts no responsibility for damages incurred by third parties for any decisions or actions taken based on this report. This report must be used, interpreted, and presented in its entirety.

8.0 SOIL DISPOSAL ISSUES

In addition to the discussions in the Conclusions, Recommendations, and Limitations Sections (Sections 6.0 and 7.0), the issue of appropriate management of off-site disposal of soil warrants careful consideration. Any material being disposed of off-site is a regulated waste, and disposal must be in accordance with:

- Requirements of the specific receiving facility;
- Requirements of any agencies overseeing the cleanup/excavation; and
- Federal and state requirements (sometimes in both the state where the soil is generated and where disposal will occur).

For hazardous wastes and petroleum-contaminated soil (and other 'clearly contaminated' materials), the requirements are usually fairly well defined. It is in the situation where contamination is not readily apparent (e.g., so called "historic or urban fill" or "construction and demolition debris" or material that may have been formerly identified as "clean fill") that present the greatest potential for problems and cost overruns. Even on sites where no contamination requiring remediation is identified, it is common that most of the excavated material is considered "contaminated" for purposes of waste disposal. Concentrations of the various contaminants in historic fill can be highly variable, and upon further testing, the material could contain higher contaminant concentrations than outlined in this investigation. Portions of this material could be classified as hazardous waste.

It is important that the intended disposal facility (or facilities) be identified in advance of off-site disposal. Agency approval is sometimes required for disposal, and the facility will frequently require additional testing prior to (and sometimes at the time of) accepting material. Material must conform to a lengthy list of requirements based on both chemical composition and sometimes numerous other parameters (related to size, percentage of liquids, presence of odors, etc.) for acceptance at the facility. Assuming (or allowing a contractor to assume) that all, or even most, of the soil from a site can be disposed of at minimal cost may result in unanticipated and expensive change orders.

For these reasons, we recommend that professional advice be sought prior to preparing bid documents and contracts incorporating soil disposal.

9.0 REFERENCES

1. U.S. Geological Survey, *Central Park, New York - New Jersey Quadrangle*, 7.5 minute Series (Topographic), Scale 1:24,000, 2011.

2. Phase I Environmental Site Assessment (ESA), 50-25 Barnett Avenue, Queens, NY, Merritt Engineering Consultants, P.C., July 2007.

3. NYSDEC, 6 NYCRR Section 375-6: *Remedial Program Soil Cleanup Objectives (SCOs)*, December 14, 2006.

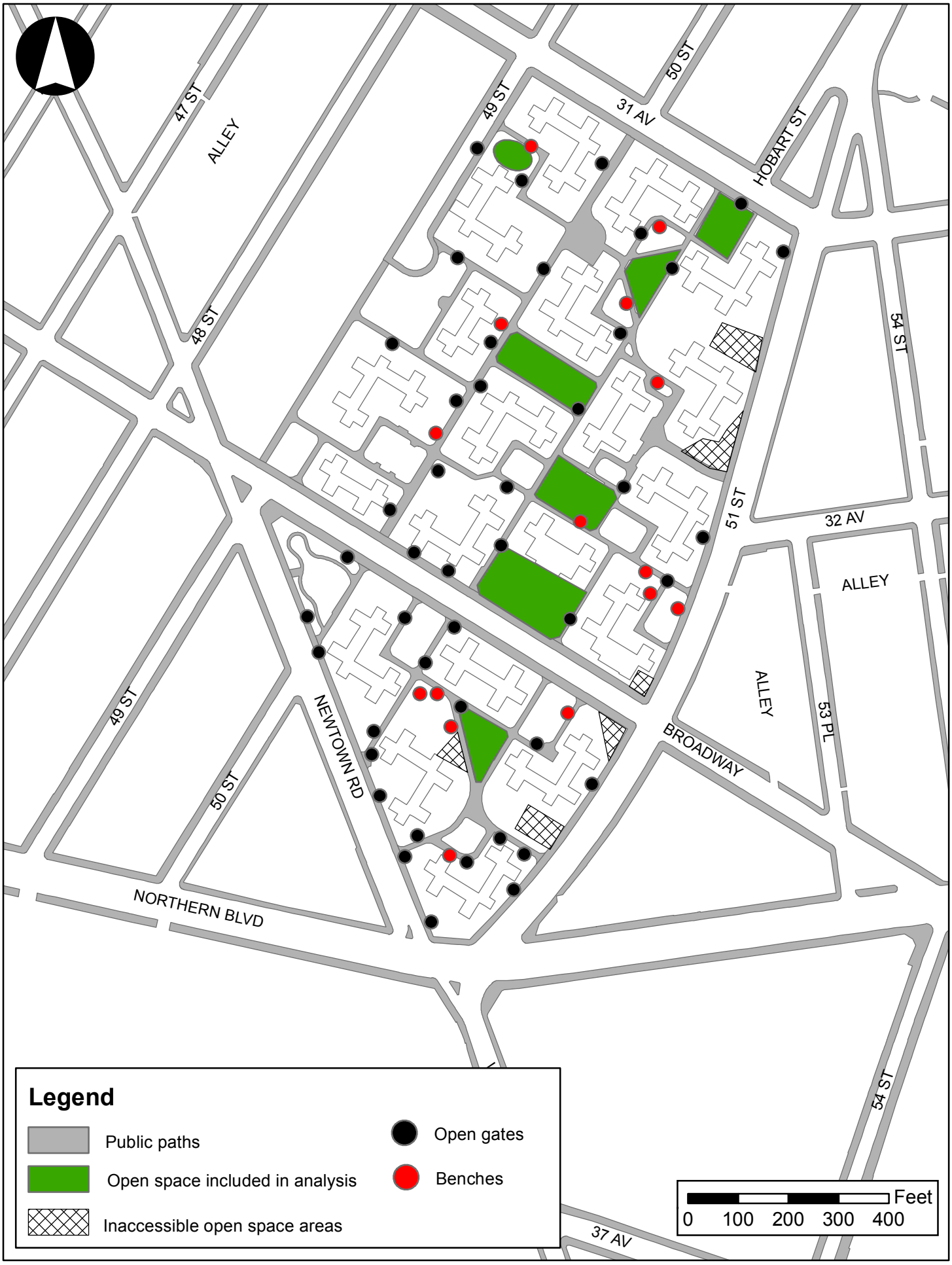
4. NYSDEC, Technical and Operation Guidance Series (1.1.1): Class GA Ambient Water Quality Standards, 1998.

5. NYSDOH, Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006.

6. Sampling Protocol and Health and Safety Plan, 50-25 Barnett Avenue, Long Island City, New York, AKRF, Inc., October 2014.

Appendix IV

Open Space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Inaccessible open space areas
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Benches
Feet
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