50-02 Queens Boulevard Rezoning

Environmental Assessment Statement

PREPARED FOR

5002 Woodside Development LLC
333 Eagle Ovington Boulevard
Uniondale, NY 11533
516-584-3177

PREPARED BY

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CEQR#: 25DCP021Q
ULURP#: 240316ZMQ; N240317ZRQ

May 28, 2026

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* 50-02 Queens Boulevard Rezoning

3. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency) 25DCP021Q	BSA REFERENCE NUMBER (if applicable)
ULURP REFERENCE NUMBER (if applicable) 240316ZMQ; N240317ZRQ	OTHER REFERENCE NUMBER(S) (if applicable) (*e.g.*, legislative intro, CAPA)

4a. *Lead Agency Information*			**4b. *Applicant Information***		
NAME OF LEAD AGENCY NYC Department of City Planning			NAME OF APPLICANT Stuart Sipoos		
NAME OF LEAD AGENCY CONTACT PERSON Stephanie Shellooe, AICP, Director			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON Sipos Realty LLC		
ADDRESS 120 Broadway, 31st Floor			ADDRESS 2035 Ocean Boulevard		
CITY New York	STATE NY	ZIP 10271	CITY Atlantic Beach	STATE NY	ZIP 11509
TELEPHONE 212-720-3328	EMAIL sshellooe@planning.nyc.gov		TELEPHONE 516-728-1211	EMAIL stuartsipos@yahoo.com	

5. *Project Description*

The Applicant, 50-02 Woodside Development LLC, is seeking discretionary actions that include a zoning map amendment and a zoning text amendment (collectively, the "Proposed Actions") before the City Planning Commission (CPC) to facilitate a mixed-used development (the "Proposed Project") of approximately 305,362 gross square feet (gsf) at 50-02 Queens Boulevard in the Woodside neighborhood of Queens Community District 2 (Queens Block 2283, Lots 1, 12, 22, and 36; the "Development Site" or "Projected Development Site 1").The Proposed Project would include approximately 265,474 gsf of residential space (or 257 units), 16,653 gsf of commercial space, 4,762 gsf of community facility (daycare) space, and 25 accessory parking spaces. The Proposed Project would meet the requirements of the Mandatory Inclusionary Housing program and have a height of 125 feet (excluding the bulkhead).

In addition to the Applicant-owned Projected Development Site 1, the Proposed Actions would also affect the non-Applicant-owned property at Lot 43 ("Projected Development Site 2"). With approval of the Proposed Actions, Projected Development Site 2 would be redeveloped with a 14-story (145-foot-tall) mixed-use building of approximately 74,944 gsf, containing approximately 63,089 gsf of residential space (63 DUs; of which 16 to 19 would be affordable pursuant to MIH), 3,228 gsf of commercial space, and 24 accessory parking spaces.

Combined, the projected development sites would introduce approximately 328,563 gsf of residential uses (320 DUs; of which approximately 64 to 96 units would be affordable pursuant to MIH), 19,881 gsf of commercial uses, 4,762 gsf of community facility (daycare) uses, and 49 accessory parking spaces (27,100 gsf), for a total development of 380,306 gsf.

Project Location

BOROUGH Queens	COMMUNITY DISTRICT(S) 2	STREET ADDRESS 50-02 Queens Boulevard
TAX BLOCK(S) AND LOT(S) Block 2283, Lots 1, 12, 22, 36, 43		ZIP CODE 11377
DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS Bounded by Queens Boulevard to the north, 50th Street to the west, 51st Street to the east, and 47th Avenue to the south.		
EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY M1-1		ZONING SECTIONAL MAP NUMBER 9B

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 Zoning map 9b and 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 ☐ Cogeneration Facility ☐ Title V Permit

Other City Approvals Subject to CEQR (check all that apply)
☐ LEGISLATION ☐ FUNDING OF CONSTRUCTION, specify:
☐ 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.): 70,095 Waterbody area (sq. ft) and type: 0
Roads, buildings, and other paved surfaces (sq. ft.): 70,095 Other, describe (sq. ft.): 0

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): 345,385 gsf
NUMBER OF BUILDINGS: 2
GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): Projected Development Site 1: 305,362 gsf; Projected Development Site 2: 74,944 gsf
HEIGHT OF EACH BUILDING (ft.): Projected Development Site 1: 145' (including a 20-foot-tall bulkhead); Projected Development Site 2: 165'(including a 20-foot-tall bulkhead
NUMBER OF STORIES OF EACH BUILDING: Projected Development Site 1: 12 stories; Projected Development Site 2: 14 stories

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: 57,874 sf
The total square feet not owned or controlled by the applicant: 12,221 sf

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: 70,095 sq. ft. (width x length) VOLUME OF DISTURBANCE: 700,950 cubic ft. (width x length x depth)
AREA OF PERMANENT DISTURBANCE: 70,950 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.)	328,563	19,881	4,762	0
Type (*e.g.,* retail, office, school)	320 units	P.C. Richard & Son; local retail	Daycare	N/A

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

If "yes," please specify: NUMBER OF ADDITIONAL RESIDENTS: 771 NUMBER OF ADDITIONAL WORKERS: -68

Provide a brief explanation of how these numbers were determined: The number of additional residents assumed an average household size of 2.41 people per Queens Community District 2 (2020 Census). The number of additional workers assumes 3 workers per 1,000 gsf of retail space, 3 workers per 1,000 gsf of community facility space, and 1 worker per 25 residential units.

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): 2029

ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: 34 months

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

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE: See Section 12, "Construction" of the EAS.

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

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

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 and/or zoning different from the surrounding area?	☒	☐
(b) Is there the potential to affect an applicable public policy?	☐	☒
(c) If "yes," to (a) and/or (b), complete a preliminary assessment and attach. Please see attached.		
(d) Is the project a large, publicly sponsored project?	☐	☒
o If "yes," complete a OneNYC assessment and attach.		
(e) 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 250 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 Create a retail concentration?	☐	☒
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 **Early Childhood Programs:** 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 **Public Schools:** Would the project result in 100 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 **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 **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 project change or eliminate existing open space?	☐	☒
(b) Would the project generate a net increase of more than 175 residential units in an existing R1-R4 district or 250 units in an existing R5 or above, C, or M district?	☒	
(c) Would the project generate more than 500 additional employees?	☐	☒
5. *SHADOWS*: CEQR Technical Manual Chapter 8		
(a) Would the proposed project result in with-action structures of 250 feet or more?	☐	☒
(b) Would the proposed project result in in with-action structures between 50-250 feet and be located adjacent to, within, or across the street from a sunlight-sensitive resource?	☒	☐

	YES	NO
(c) Would the proposed project result in greater than 50 feet of incremental height change or substantial changes in bulk?	☒	☐
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. Please see attached.		
7. *URBAN DESIGN AND VISUAL RESOURCES*: CEQR Technical Manual Chapter 10		
(a) Would the proposed project result in a building over 250 feet tall, have a project area greater than 1.5 acres or be classified as a general large-scale development?	☒	☐
(b) Does the project require a special permit to allow the modification of bulk and yard requirements or special uses?	☐	☒
(c) Does the proposed project introduce new, or change the location of, streets or public open spaces?	☐	☒
(d) 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 Protection Plan Project Tracking 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) Would the proposed project introduce new activities or processes using hazardous materials and increase the risk of human or environmental exposure?	☐	☒
(c) 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?	☐	☒
(d) 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 the Hazardous Materials Appendix (including nonconforming uses)?	☒	☐
(e) 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?	☒	☐
(f) 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)?	☒	☐
(g) 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?	☐	☒
(h) 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?	☐	☒
(i) Has a Phase I Environmental Site Assessment been performed for the site?	☒	☐
o If "yes," were Recognized Environmental Conditions (RECs) identified? Briefly identify: Refer to Attachment 8, "Hazardous Materials" for more info	☒	☐
(j) Based on the Phase I Assessment, is a Phase II Investigation needed? Refer to Attachment 8, "Hazardous Materials" for more info	☒	☐
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?	☐	☒

	YES	NO
(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?	☐	☒
(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): 11,060		
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): 116,082,494		
(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, bus trips, or 50 Citywide Ferry Service ferry 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), 200 subway/rail trips per station or line, or 25 or more Citywide Ferry Service ferry trips on a single route (in one direction), or 50 or more passengers at a Citywide Ferry Service landing?	☐	☒
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, or Citywide Ferry Service landing?	☒	☐
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)	☐	☐
(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 114 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?	☒	☐

	YES	NO
(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		
(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.		
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.		
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 Section 12, "Construction" for detailed analysis		

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
Jason Diaz, AICP	5/28/2026

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. Does the project have the potential to disproportionately affect disadvantaged communities, or cause or increase a disproportionate pollution burden on a disadvantaged community. ☐ YES ☒ NO

3. 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.

4. 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.

5. ***LEAD AGENCY'S CERTIFICATION***

TITLE	LEAD AGENCY
Deputy Director, Environmental Assessment and Review	NYC City Planning on behalf of City Planning Commission
NAME	DATE
Evren Ulker-Kacar, AICP	05/28/2026

SIGNATURE Evren Ulker Kacar

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 Applicant, 50-02 Woodside Development LLC, is seeking a zoning map amendment from M1-1 district to an R7X/C2-4 and R7A/C2-4 districts and zoning text amendment to Appendix F of the Zoning Resolution (ZR) to establish a Mandatory Inclusionary Housing (MIH) area (the "Proposed Actions"), affecting Block 2283, Lots 1, 12, 22, 36, and 43 (the "Project Area") in the Sunnyside neighborhood of Community District 2, Queens. The Proposed Actions would facilitate the development of the Applicant's property located at 50-02 Queens Boulevard (Projected Development Site 1, Block 2283, Lots 1, 12, 22, and 36) with a new approximately 305,362 gross square foot (gsf) mixed-use development. The Proposed Actions would facilitate approximately 265,474 gsf of residential space (or 257 units, of which 51 to 77 would be income restricted pursuant to MIH requirements), 16,653 gsf of commercial space, 4,762 gsf of community facility (daycare) space, and 25 accessory parking spaces (the "Proposed Project"). The Proposed Project would meet the requirements of the Mandatory Inclusionary Housing program and have a height of 125 feet (excluding the bulkhead). In addition to the Applicant-owned Projected Development Site 1, the Proposed Actions would also affect the non-Applicant-owned property at Lot 43 ("Projected Development Site 2"). With approval of the Proposed Actions, Projected Development Site 2 is assumed to be redeveloped with a 14-story (145-foot-tall) mixed-use building of approximately 74,944 gsf, containing approximately 63,089 gsf of residential space (63 DUs; of which 16 to 19 would be income restricted pursuant to MIH), 3,228 gsf of commercial space, and 24 accessory parking spaces. Combined, the projected development sites would introduce approximately 328,563 gsf of residential uses (320 DUs; of which approximately 64 to 96 units would be affordable pursuant to MIH), 19,881 gsf of commercial uses, 4,762 gsf of community facility (daycare) uses, and 49 accessory parking spaces (27,100 gsf), for a total development of 380,306 gsf.

The Proposed Actions would result in a change in land use and zoning, facilitating the redevelopment of the Project Area with mixed-use buildings including residential, commercial and community facility uses in a commercial area The Proposed Actions would be consistent with existing land uses in the study area which are predominantly characterized by mixed-use, residential and commercial uses as well as some institutional and open space uses. In addition, the proposed change in zoning designation would be compatible and integrate well with recent rezonings in the area that facilitated the development of mixed use residential and commercial uses surrounding the Project Area Overall, the Proposed Actions would facilitate the development of new housing opportunities while preserving existing commercial uses that are compatible with uses found within the study area. In addition, the Proposed Project would be consistent with public policies such as PlaNYC, and the Housing Blueprint. Therefore, the Proposed Actions would not result in any significant adverse impacts to land use, zoning or public policy.

Community Facilities and Services

A detailed analysis related to community facilities and services is included in this EAS. The Proposed Actions would result in the development of 320 dwelling units, which would introduce approximately 97 primary students and 35 intermediate school students to Community School District 24, Sub-district 2. In the with action condition, primary schools in CSD 24, Subdistrict 2 would continue to operate within capacity at 74.8 percent capacity with a surplus of 956 seats. The collective utilization rate of primary schools in the With-Action condition would increase by 2.6 percent from the No-Action condition. Under the With-Action condition, the subdistrict intermediate schools would operate at approximately 72.5 percent capacity with 1,507 available seats, a 0.6 percent increase in utilization over the No-Action condition. As both primary and intermediate schools would be operating under capacity, a significant adverse impact to public schools would not occur. Therefore, the Proposed Actions would not result in any significant adverse impact related to community facilities and services.

Open Space

A detailed analysis related to open space is included in this EAS. Under the With-Action condition, the total open space ratio (OSR) for the residential population would decrease by 1.16 percent compared to the No-Action condition open space ratio, from 0.376 to 0.372 acres per 1,000 residents. The study area would continue to have OSRs below the City guideline of 2.50 acres per 1,000 residents and below the Citywide median of 1.50 acres per 1,000 residents. The passive and active open space ratios would also decrease by 1.8 percent and 1.14 percent respectively. The study area is well below the median open space ratio, and for total and active open space ratios, it has the potential to exceed the percent change that signifies a possible adverse open space impact. However, there are multiple open spaces within a half-mile of the Project Area that are not included in the quantitative analysis including Torsney Playground, Big Bush Park, Nathan Weidenbaum Park, and Woodside Memorial Plaza, Sunnyside Gardens, and the 104-acre New Calvary Cemetery that provides walking paths and is a draw to residents of the surrounding neighborhoods given its size. The Proposed Actions would also provide on-site residential amenity spaces with a mix of active and passive recreational uses, which would help meet project-generated demand on-site. Additionally, the Proposed Project is located in an area where the existing open space resources are in good or excellent condition. In addition, the Proposed Project includes the provision of 0.42 acres of on-site open space resources that would serve residents introduced by the Proposed Project and children attending the proposed daycare. These spaces would reduce the burden on open spaces in the study area. Given the proximity of these resources to the study area, as well as the inclusion of private open space on the development site, the Proposed Actions would not result in any significant adverse impact related to open space resources.

Transportation

A detailed analysis related to transportation is included in this EAS. The transportation screening analysis concluded that the number of vehicle, ferry, bus, and rail trips generated by the Proposed Actions would not exceed CEQR Technical Manual Level 1 screening thresholds. While the Level 1 screening threshold for subway trips would be exceeded, an assessment of the distribution of subway trips determined that no station is expected to exceed the Level 2 screening threshold. As a result, no detailed subway station analysis is warranted and the potential for significant adverse subway impacts as a result of the Proposed Actions is not expected. The number of pedestrian

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CEQR # 25DCP021Q
SEQRA Classification: Unlisted

trips generated by the Proposed Actions would exceed Level 1 trip generation and Level 2 trip assignment thresholds at the southeast corner at the intersection of Queens Boulevard and 50th Street. A detailed level of service analysis of this pedestrian element was conducted for the weekday AM and PM peak hours. The pedestrian analysis demonstrates that the southeast corner would operate at LOS A under existing conditions and would continue to operate at LOS A under No-Action and With-Action conditions. Therefore, the Proposed Actions would not result in any significant adverse impact related to transportation.

Construction

A detailed analysis related to Construction is included in the EAS. Construction activities associated with the Proposed Actions would adhere to the applicable laws, regulations, and building codes that govern construction in New York City. As detailed in the construction assessment in the EAS, the Proposed Actions would not result in significant adverse construction impacts in the key technical areas of historic and cultural resources, hazardous materials, transportation, air quality, and noise. The applicant will enter a Restrictive Declaration requiring the implementation of project components related to the environment (PCREs) that would preclude any potential impacts to air quality or noise related to construction activities, including emission control measures and a construction noise barrier. With these measures in place, the Proposed Actions would not result in construction-period significant adverse impacts and no further analysis is warranted.

Disadvantaged Communities Assessment

The Proposed Actions are located within a disadvantaged community identified as having comparatively lower burdens and vulnerabilities according to the New York State Department of Environmental Conservation Disadvantaged Community Assessment Tool (DACAT) and an assessment of the Proposed Actions' potential effects on disadvantaged communities is included in the EAS. The Proposed Actions would not result in significant adverse impacts to the following technical areas analyzed in the EAS: land use, zoning, and public policy; socioeconomic; open space; shadows; historic and cultural resources; urban design and visual resources; hazardous materials; air quality; noise; neighborhood character; or construction. As such, the Proposed Actions would not disproportionately affect any disadvantaged communities, nor would it cause or increase a disproportionate pollution burden.

Hazardous Materials, Air Quality, and Noise

An (E) designation (E-914) related to hazardous materials, air quality, 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, air quality, 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, air quality, 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 Louise Cafiero at lcafiero@planning.nyc.gov.

TITLE	LEAD AGENCY
Deputy 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 Evren Ulker-Kacar, AICP	DATE 5/28/2026
SIGNATURE Evren Ulker Kacar	
TITLE Chair, City Planning Commission	
NAME Sideya Sherman	DATE 6/1/2026
SIGNATURE	

Project Name: 50-02 Queens Blvd Rezoning
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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 2283, Lots 1, 12, 22, 36
Projected Development Site 2	Queens	Block 2283, Lot 43

(E) Designation Requirements

To ensure that the proposed actions would not result in significant adverse impacts related to hazardous materials, air quality, and noise an (E) designation (**E-914**) would be established as part of approval of the proposed actions on **Projected Development Sites 1 and 2** as described below:

Development Site	Hazardous Materials	Air Quality	Noise
Projected Development Site 1	X	X	X
Projected Development Site 2	X	X	X

Hazardous Materials

The (E) designation requirements applicable to **Projected Development Site 1 and 2** 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.

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Air Quality

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

> ***Projected Development Site 1:*** *Any new residential, community facility, and/or commercial development must exclusively use natural gas for HVAC systems and hot water equipment, and ensure that the heating and hot water system stack(s) is located at the highest tier and at least 138 feet above grade, and at least 177 feet away from the eastern lot line facing 51st Street to avoid any potential significant adverse air quality impacts.*
>
> ***Projected Development Site 2:*** *Any new residential and/or commercial development on the above-referenced property must ensure the HVAC system and hot water equipment stack is located at the highest tier and at least 148 feet above grade to avoid any potential significant adverse air quality impact.*

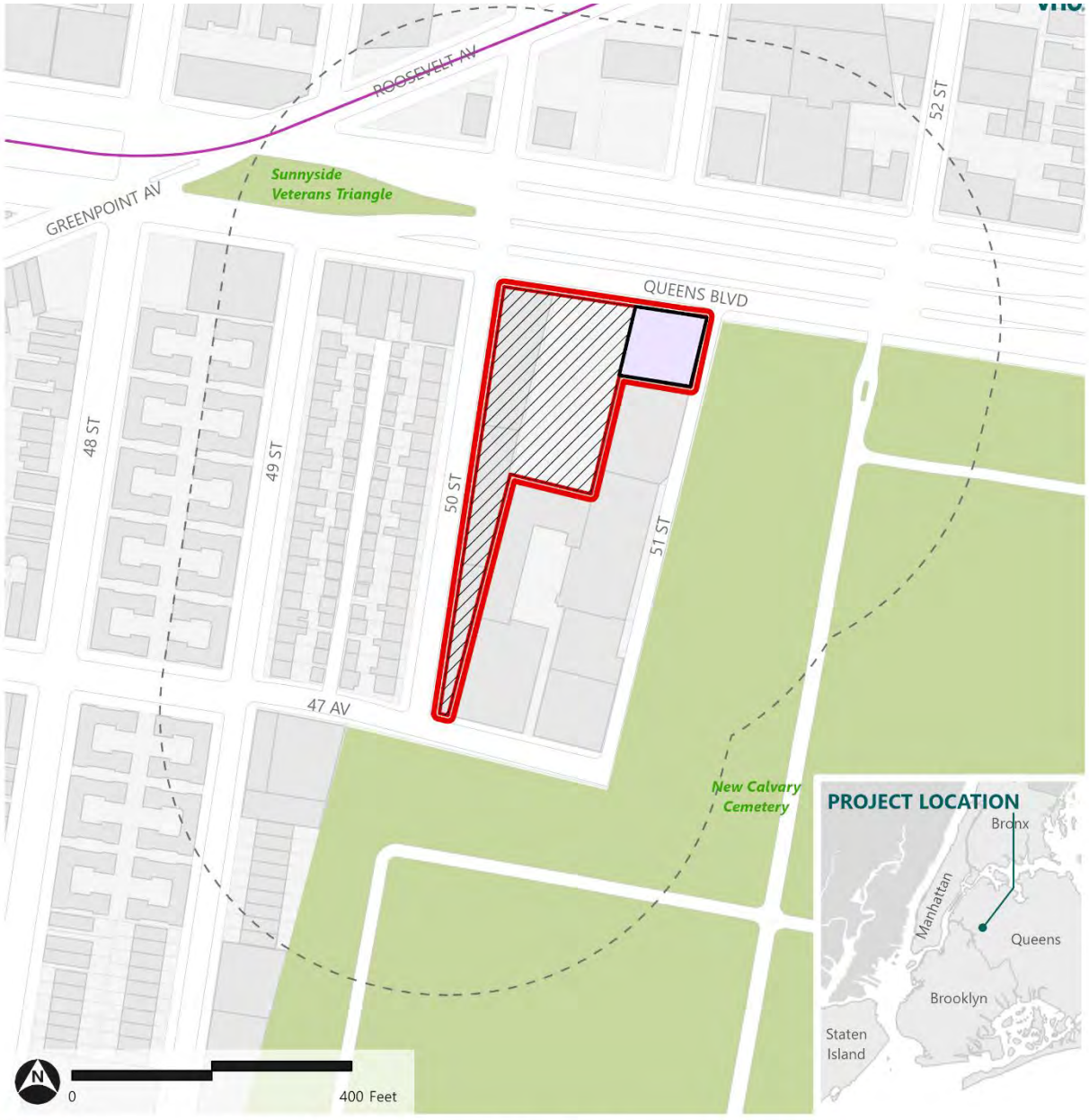
Noise

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 35 dBA window/wall attenuation on the northern facade facing Queens Boulevard and on the western façade facing 50th Street to maintain an interior noise level (Ldn) not greater than 40 dBA for residential and community facility uses; future residential/community facility uses must provide a closed-window condition with a minimum of 31 dBA window/wall attenuation on the southern facade facing 47th Avenue to maintain an interior noise level (L10) not greater than 45 dBA for residential and community facility uses. For future commercial office uses, the required window/wall attenuation along each respective facade would be 5 dBA lower in order to maintain an interior noise level (L10) not greater than 50 dBA or Ldn not greater than 45 dBA. 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, well-sealed air conditioners, package-terminal air conditioners, or central air conditioning.*
>
> ***Projected Development Site 2:*** *In order to ensure an acceptable interior noise environment, future residential uses must provide a closed-window condition with a minimum of 35 dBA window/wall attenuation on the northern facade facing Queens Boulevard to maintain an interior noise level (Ldn) not greater than 40 dBA for residential uses. For future commercial office uses, the required window/wall attenuation along the northern façade facing Queens Boulevard would be 5 dBA lower in order to maintain an interior noise level (L10) not greater than 50 dBA or Ldn not greater than 45 dBA. 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, well-sealed air conditioners, package-terminal air conditioners, or central air conditioning.*

EAS Figures

Figure 1 Development Site Map



Source: DCP Map PLUTO

Figure 2 Tax Map



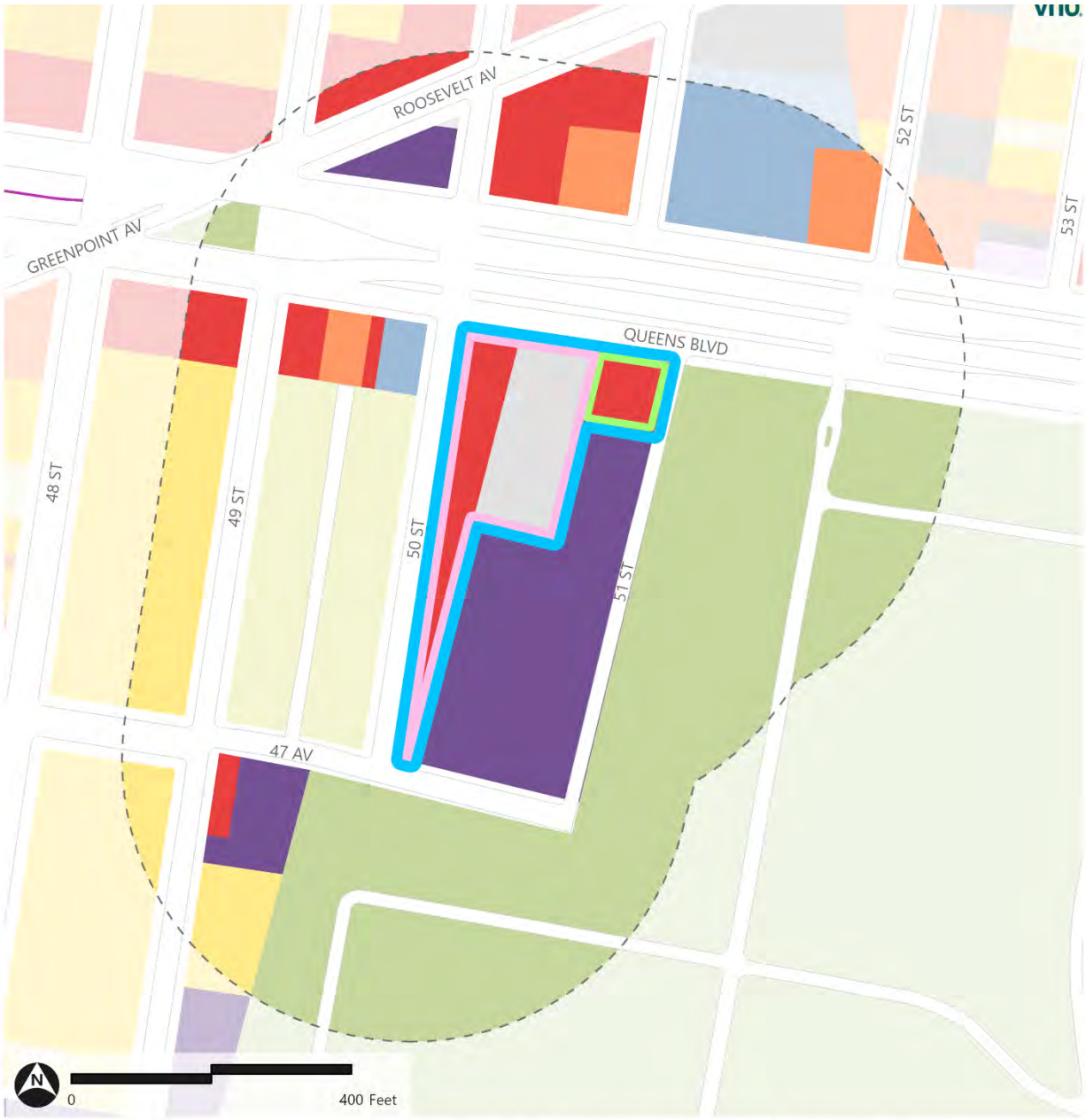
Source: DCP Map PLUTO

Figure 3 Existing Zoning Map



Source: DCP Map PLUTO

Figure 4 Land Use Map

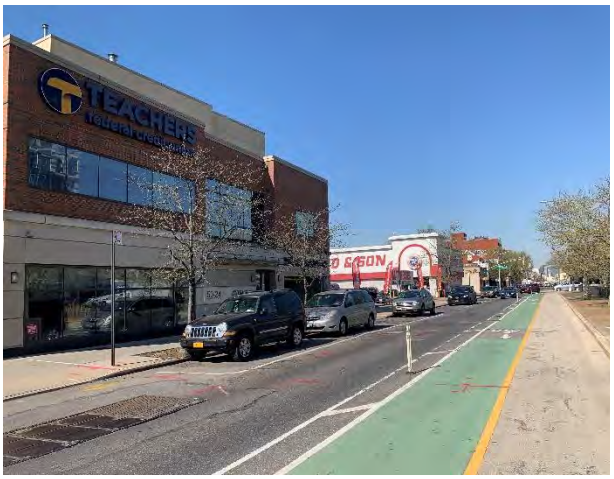


Source: DCP Map PLUTO

Figure 5 Photo Key Map

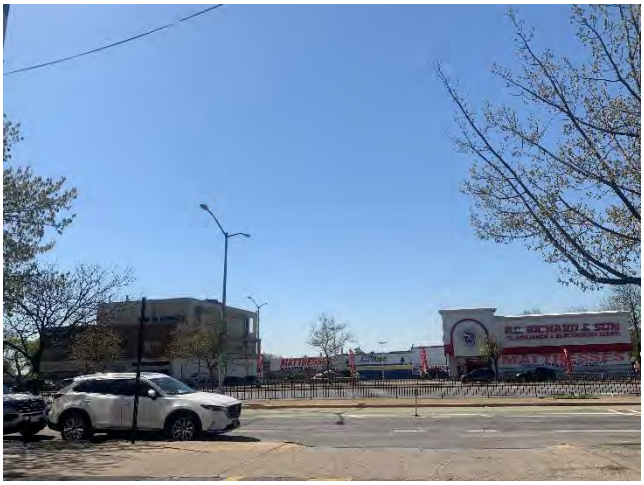


Photo 1 Development Site, View 1



51st Street and Queens Boulevard, Looking Southwest

Photo 2 Development Site, View 2



Queens Boulevard, Looking South

Photo 3 Queens Boulevard, View 3



52nd Street and Queens Boulevard, Looking Southwest

Photo 4 Development Site, View 4



47th Ave and 50th Street, Looking Northeast

Photo 5 50th Street and Queens Boulevard, View 5



50th Street and Queens Boulevard, Looking Southeast

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Photo 7-10 New Calvary Cemetery 7-9

Part I: Project Description

This section provides descriptive information about the requested discretionary land use action(s) and the development project that could be facilitated by the requested actions. The purpose of this section is to convey project information relevant to the environmental review.

Introduction

The Applicant, 50-02 Woodside Development, LLC, is seeking a zoning map amendment and a zoning text amendment (collectively, the Proposed Actions) affecting Queens Block 2283, Lots 1, 12, 22, 36, and 43 (the Project Area). The Proposed Actions would facilitate the development of a mixed-use building of approximately 305,362 gross square feet (gsf) (the Proposed Project) on Applicant-owned Lots 1, 12, 22, and 36 (the Development Site, or Projected Development Site 1) at 50-02 Queens Boulevard in the Woodside neighborhood of Queens Community District 2. The Proposed Actions include a zoning map amendment to rezone the Project Area from M1-1 and R4[1] to R7X/C2-4 and R6A as well as a zoning text amendment to map a Mandatory Inclusionary Housing (MIH) area coterminous with the Project Area.

The Proposed Project would be 125-foot-tall (excluding the bulkhead) and include approximately 265,474 gsf (240,123 zoning square feet [zsf]) of residential space (or 257 units), 16,653 gsf (16,653 zsf) of commercial space, 4,762 gsf (4,762 zsf) of community facility (daycare) space, and 25 accessory parking spaces.

In addition to the Applicant-owned Projected Development Site 1, the Proposed Actions would also affect the non-Applicant-owned property at Lot 43 (Projected Development Site 2). In the future with the Proposed Actions, Projected Development Site 2 is expected to be redeveloped with a 14-story (145-foot-tall, excluding bulkhead) mixed-use building of approximately 74,944 gsf (63,783 zsf), containing approximately 63,089 gsf (60,555 zsf) of residential space (63 units), 3,228 gsf (3,228 zsf) of commercial space, and 24 accessory parking spaces.

Combined, the two projected development sites would introduce approximately 328,563 gsf of residential space (320 units, 64 to 96 of which would be affordable pursuant to MIH), 19,881 gsf of commercial space, 4,762 gsf of community facility (daycare) uses, and 49 accessory parking spaces (27,100 gsf), totaling 380,306 gsf of development.

[1] While Lot 43 is zoned M1-1/R4, the R4 portion of the lot is mapped with an easement that is currently occupied by a segment of 51st Street and the continuation of the adjacent Calvary Cemetery.

Project Area

The Project Area encompasses Queens Block 2283, Lots 1, 12, 22, 36, and a portion of 43 in the Woodside neighborhood of Queens Community District 2. As described above, the Project Area includes all of Applicant-owned Projected Development Site 1 (i.e., Blocks 1, 12, 22, and 36) and a portion of non-Applicant-owned Lot 43. The Project Area is bounded by Queens Boulevard to the north, 51st Street to the east, 50th Street to the west, and 47th Avenue to the south and has a total lot area of approximately 70,095 square feet (sf) (see **Figure I-1**).

Lots 1, 12, and 22 are currently occupied with a one-story P.C. Richard & Son appliance and electronics store totaling approximately 24,908 gsf. Specifically, Lot 1 contains approximately 4,708 gsf; Lot 12 contains approximately 8,200 gsf; and Lot 22 contains approximately 12,000 gsf. An accessory surface parking lot for the P.C. Richard & Son store is located on Lot 36. It has an area of approximately 32,696 sf and accommodates approximately 90 parking spaces. Lot 43 is currently used by a taxi fleet management company for custom services; the three-story commercial building is approximately 16,703 gsf and has 10 accessory parking spaces.

Figure I-1 Site Location Map



Source: DCP Map PLUTO

Proposed Actions

The Applicant is seeking a zoning map amendment to rezone the Project Area from M1-1 and R4[2] to R7X/C2-4 (to a depth of 125 feet from Queens Boulevard and from the mid-line of 50th Street to the easternmost boundary of Lot 43, encompassing the full mapped width of 51st Street) and R6A (for the balance of the Project Area); and a zoning text amendment that would map the proposed R7X/C2-4 and R6A districts as an MIH Area by creating a new map for Queens Community District 2 in Appendix F of the New York City Zoning Resolution (ZR).

Proposed Project and With-Action Condition

The Applicant is seeking approval of the Proposed Actions to facilitate development of the Proposed Project. In the With-Action condition, Projected Development Site 1 would be redeveloped with an 12-story, 125-foot-tall (excluding bulkhead), mixed-use building of approximately 305,362 gsf (261,102 zsf). The Proposed Project would contain approximately 265,474 gsf (240,123 zsf) of residential space, 16,653 gsf (16,653 zsf) of commercial space, 4,762 gsf (4,762 zsf) of community facility (daycare) space, and 25 accessory parking spaces. The ground floor commercial space would be occupied by the existing retail tenant at Projected Development Site 1 (P.C. Richard & Son). The ground floor community facility space would be occupied by a daycare, with additional space in the cellar and a landscaped outdoor play area on the southernmost portion of the site. Stories two through twelve would be occupied by 257 rental apartments, of which 51 to 77 would be affordable under MIH. Accessory parking will be provided within the cellar and will be accessed via a new curb cut on 50th Street.

Project Purpose and Need

The Development Site has remained M1-1 while all neighboring areas have seen rezonings to encourage and facilitate the development of new commercial and community facility uses and affordable housing. Similar to the neighboring properties that have been rezoned to allow mixed-use development, the Development Site has strong access to transit; it is roughly equidistant to the 46th Street and 52nd Street stops on the 7 train. The Development Site also fronts on Queens Boulevard, a wide street that serves a major corridor within the borough.

The proposed R7X district is consistent with the R7X established by the Maspeth-Woodside rezoning along Queens Boulevard east of the subject block and is appropriate in light of the width of Queens Boulevard and its proximity to the 365-acre Calvary Cemetery and the 7 train. The proposed R6A district is consistent with the R6A-equivalent districts created by the Sunnyside-Woodside rezoning west and northwest of the subject block. The lower-density R6A district is also more in line with the low-rise zoning (R5B) and built character of the block directly west of the subject block, where two-story, one- and two- family dwellings predominate.

The Proposed Actions would also map a Mandatory Inclusionary Housing (MIH) area coterminous with the proposed rezoning area, thereby requiring that a share of new housing constructed on Projected Development Site 1 be permanently affordable pursuant to MIH options selected during

[2] While Lot 43 is zoned M1-1/R4, the R4 portion of the lot is mapped with an easement that is currently occupied by a segment of 51st Street and the continuation of the adjacent Calvary Cemetery.

the Uniform Land Use Review Procedure (ULURP). The provision of affordable housing would help advance a City-wide initiative to create and preserve affordable housing, as detailed in the *Housing Our Neighbors: A Blueprint for Housing and Homelessness*.

Analysis Framework and Reasonable Worst-Case Development Scenario

For the purpose of the environmental analyses, the No-Action condition represents the future absent the Proposed Actions and serves as the baseline by which the Proposed Actions (or With-Action condition) are compared to determine the potential for significant environmental impacts. The difference between the No-Action and With-Action conditions represents the increment to be analyzed in the CEQR process.

Future No-Action Condition

No development is expected to occur on the Development Site absent the Proposed Actions and existing conditions would remain unchanged in the future No-Action condition. Within the Development Site, Lots 1, 12, and 22 are currently occupied with a one-story P.C. Richard & Son appliance and electronics store of approximately 24,908 gsf in total. Specifically, Lot 1 contains approximately 4,708 gsf; Lot 12 contains approximately 8,200 gsf; and Lot 22 contains approximately 12,000 gsf. An accessory surface parking lot for the P.C. Richard & Son store is located on Lot 36. It has an area of approximately 32,696 sf and accommodates approximately 90 parking spaces. Lot 43 is currently used by a taxi fleet management company for custom services; the three-story commercial building is approximately 16,703 gsf and has 10 accessory parking spaces.

Future With-Action Condition

As stated previously, in the future With-Action condition the Applicant is seeking a Zoning Map Amendment to rezone the Project Area from M1-1 and R4 to R7X/C2-4 and R6A and a Zoning Text Amendment to apply MIH to facilitate the Proposed Project.

The Proposed Project would consist of a 12-story, 145-foot-tall (including 20-foot-tall bulkhead), approximately 305,362 gsf (261,102 zsf) mixed-use building with residential, commercial, and community facility uses. As described above, the Proposed Project would contain approximately 265,474gsf (240,123 zsf) of residential space, 16,653 gsf (16,653 zsf) of commercial space, 4,762 gsf (4,762 zsf) of community facility (daycare) space, and 25 accessory parking spaces. The ground floor commercial space would be occupied by the existing retail tenant on the Development Site (P.C. Richard & Son). The ground floor community facility space would be occupied by a daycare, with additional space in the cellar and a landscaped outdoor play area on the southernmost portion of Projected Development Site 1. Stories two through twelve would be occupied by 257 rental apartments—of which 51 to 77 would be permanently income-restricted, with an income requirement at an average of 40 to 80 percent of area median income (AMI), pursuant to MIH Options 1, 2, and 3. Accessory parking will be provided at the ground floor and within the cellar and will be accessed via two new curb cuts on 50th Street. No loading berths are required per zoning, and loading for the future P.C. Richard & Son would take place along Projected Development Site 1's 50th Street frontage via a side entrance door.

In addition, as described above, it is expected that Projected Development Site 2 would be redeveloped with a 14-story, 145-foot-tall, mixed-use building of approximately 74,944 gsf (63,783 zsf). It would contain approximately 63,089 gsf (60,555 zsf) of residential space, 3,228 gsf (3,228 zsf) of commercial space, and 24 accessory parking spaces. The ground floor commercial space at Projected Development Site 2 would be occupied by a local retail tenant. Stories two through 14 would be occupied by 63 rental apartments—of which 13 to 19 units would be permanently income-restricted, with an income requirement at an average of 40 to 80 percent of area median income (AMI), pursuant to MIH Options 1, 2, and 3. Accessory parking will be provided at the ground floor and within the cellar and will be accessed via an existing curb cut along Queens Boulevard. Consistent with the Proposed Project, the residential uses at Projected Development Site 2 assume an average dwelling unit size of approximately 1,000 gsf.

Combined, both projected development sites would introduce approximately 328,563 gsf of residential uses (320 DUs, of which approximately 64 to 96 units would be affordable pursuant to MIH), 19,881 gsf of commercial uses, 4,762 gsf of community facility (daycare) uses, and 49 accessory parking spaces (27,100 gsf), for a total development of 380,306 gsf on the two Projected Development Sites.

Increment for Analysis

Increment Table can be found in **Table I-1**.

Table I-1 Future No-Action and With-Action Comparison in GSF

	Existing Conditions	No-Action Condition	With-Action Condition	Increment
Commercial	41,611	41,611	19,881	-21,730
Community Facility	0	0	4,762	+4,762
Residential	0	0	328,563	+328,563
Units (Total)	0	0	320	+320
Units (Affordable)	0	0	64 - 96	+64 - 96
Parking	0	0	27,100	+27,100
Spaces	100	100	49	-51
Total GSF	41,611	41,611	380,306	+ 338,695

Analysis (Build) Year

It is anticipated that the application review period and the Uniform Land Use Review Procedure (ULURP) will conclude in the first quarter of 2026; the Proposed Project would receive construction approvals in the third quarter of 2026; and the Proposed Project would conclude construction and become operational in the fourth quarter of 2028 (the total duration of construction for Projected Development Site 1 would be approximately 26 months). For Projected Development Site 2, after approximately 18 months to design the building, construction approvals would be received by fourth quarter of 2027, and construction would conclude in the second quarter of 2029 (the total duration of construction for Projected Development Site 2 would be approximately 17 months). With an approximately nine-month period overlapping construction activity for both sites, total construction within the Project Area would occur over a 34-month period.

Public Review Process

The Proposed Actions described above is subject to public review under the Uniform Land Use Review Procedure (ULURP), Section 200 of the City Charter, as well as City Environmental Quality Review (CEQR) procedures.

The New York City Charter (the Charter) requires certain actions that are reviewed by the City Planning Commission (CPC) to comply with ULURP. ULURP is a standardized procedure whereby applications affecting the land use of the city would be publicly reviewed. The Charter also established mandated time frames within which application review must take place. Key participants in the ULURP process are the Department of City Planning (DCP) and the CPC, the local community board, the Queens Borough President, the City Council and the Mayor. DCP will serve as the lead agency for the purposes of environmental review.

Part II: Supplemental Analyses

Additional Technical Information for EAS Full Form

An analysis framework has been established to assess the potential for the Proposed Actions to result in significant adverse environmental impacts.

The EAS examines the potential for significant adverse impacts to result from the Proposed Actions. As described in **Part I: Project Description**, the Applicant is requesting a zoning map amendment and a zoning text amendment (the Proposed Actions) affecting Queens Block 2283, Lots 1, 12, 22, 36, and 43 (the Project Area). The Proposed Actions would facilitate the development of a mixed-use building of approximately 305,362 gross square feet (gsf) (the Proposed Project) on Applicant-owned Lots 1, 12, 22, and 36 (the Development Site, or Projected Development Site 1) at 50-02 Queens Boulevard in the Woodside neighborhood of Queens Community District 2.

The Proposed Project would include approximately 265,474 gsf (240,123 zoning square feet [zsf]) of residential space (or 257 units), 16,653 gsf (16,653 zsf) of commercial space, 4,762 gsf (4,762 zsf) of community facility (daycare) space, and 25 accessory parking spaces. The Proposed Project would meet the requirements of the MIH program and have a height of 125 feet (excluding the bulkhead).

In addition to the Applicant-owned Projected Development Site 1, the Proposed Actions would also affect the non-Applicant-owned property at Lot 43 (Projected Development Site 2). In the future with the Proposed Actions, Projected Development Site 2 is expected to be redeveloped with a 14-story (145-foot-tall, excluding bulkhead) mixed-use building of approximately 74,944 gsf (63,783 zsf), containing approximately 63,089 gsf (60,555 zsf) of residential space (63 units), 3,228 gsf (3,228 zsf) of commercial space, and 24 accessory parking spaces.

Combined, the two projected development sites would introduce approximately 328,563 gsf of residential space (320 units, 64 to 96 of which would be affordable pursuant to MIH), 19,881 gsf of commercial space, 4,762 gsf of community facility (daycare) uses, and 49 accessory parking spaces (27,100 gsf), totaling 380,306 gsf of development on the two Projected Development Sites.

Provided below are preliminary screening analyses, conducted based on guidelines presented in the *2025 CEQR Technical Manual* in order to determine whether further analysis of a given technical area is necessary to determine the potential for significant adverse impacts to the environment in that area.

Land Use, Zoning, and Public Policy

According to the *CEQR Technical Manual,* a land use analysis is warranted for projects that would affect land use or change zoning on a site. Because the Proposed Actions would include a zoning map amendment and a zoning text amendment, a land use, zoning, and public policy analysis is warranted. See **Section 2, Land Use, Zoning, and Public Policy**.

Socioeconomic Conditions

The socioeconomic character of an area includes its population, housing, and economic activity. Socioeconomic changes may occur when a project directly or indirectly changes any of these elements. Although socioeconomic changes may not result in impacts under CEQR, they are disclosed if they would affect land use patterns, low-income populations, the availability of goods and services, or economic investment in a way that changes the socioeconomic character of the area.

The following screening assessment considers threshold circumstances identified in the *CEQR Technical Manual* and enumerated below that can lead to socioeconomic changes warranting further assessment.

- **Direct Residential Displacement:** *Would the project directly displace existing residential population to the extent that the socioeconomic character of the neighborhood would be substantially altered? Displacement of fewer than 500 existing residents would not typically be expected to alter the socioeconomic character of a neighborhood.*

  The Project Area does not contain any residential uses or population. Therefore, no analysis of direct residential displacement is warranted.

- **Direct Business Displacement:** *Would the project directly displace more than 100 existing employees, or would the project directly displace a business whose products or services are uniquely dependent on its location, are the subject of policies or plans aimed at its preservation or serve a population uniquely dependent on its services in its present location? If so, assessments of direct business displacement and indirect business displacement are appropriate.*

  The Project Area contains a P.C Richard & Son and a Teachers Federal Credit Union, both of which would be demolished and redeveloped under the Proposed Project. However, the P.C. Richard & Son would return to the Development Site and occupy the commercial space within the Proposed Project. The Proposed Project would also include new community facility space, which would be occupied by a daycare. The Proposed Actions would not directly displace more than 100 existing employees and further assessment of direct business displacement is not warranted.

- **Indirect Displacement due to Increased Rents:** *Would the project result in substantial new development that is markedly different from existing uses, development, and activities within the neighborhood? Residential development of 250 units or less or commercial development of 200,000 square feet (sf) or less would typically not result in significant socioeconomic impacts. For projects exceeding these thresholds, assessments of indirect residential displacement and indirect business displacement are appropriate.*

  The Proposed Actions would result in the introduction of more than 250 residential units; therefore, an assessment of potential indirect residential displacement is warranted.

  The Proposed Actions would not result in the addition of more than 200,000 sf of commercial space. Therefore, there is no potential for indirect business displacement, and further assessment is not warranted.

- **Indirect Business Displacement due to Retail Market Saturation:** *Would the project result in a total of 200,000 sf or more of retail on a single development site or 200,000 sf or more of region-serving retail across multiple sites?*

The Proposed Actions would not result in the addition of more than 200,000 sf of retail. Therefore an assessment of potential indirect business displacement due to retail market saturation is not warranted.

› **Adverse Effects on Specific Industries:** *Is the project expected to affect conditions within a specific industry? For example, a citywide regulatory change that would adversely affect the economic and operational conditions of certain types of businesses or processes may affect socioeconomic conditions in a neighborhood: (1) if a substantial number of residents or workers depend on the goods or services provided by the affected businesses; or (2) if it would result in the loss or substantial diminishment of a particularly important product or service within the city.*

The Proposed Actions would not be expected to affect conditions within a specific industry, affect a substantial number of workers or residents who depend on the goods or services provided by affected businesses, or result in the loss or substantial diminishment of a particularly important product or service within the City. Therefore, an assessment of adverse effects on specific industries is not warranted.

Based on the screening assessment presented above, the Proposed Actions warrant an analysis of indirect residential displacement (see **Section 3, Socioeconomic Conditions**) but do not warrant additional analysis for the potential for direct residential displacement, direct business displacement, indirect business displacement due to retail market saturation, or adverse effects on specific industries.

Community Facilities and Services

The *CEQR Technical Manual* states that a community facilities assessment is appropriate if a project would have a direct effect on a community facility (e.g., schools, childcare facilities, libraries, health care facilities, police, and fire protection services) or if it would have an indirect effect by introducing new populations that would overburden existing facilities. The *CEQR Technical Manual* further states that for public schools, libraries, and childcare centers, potential impacts depend on the size, income characteristics, and age distribution of the new population.

The Proposed Actions would not directly eliminate, displace, or alter public or publicly funded community facilities such as health care facilities, police stations, or fire stations. Therefore, the Proposed Actions do not warrant an analysis of direct effects on these community facilities.

The Proposed Actions do not have the potential to indirectly impact libraries, early childhood programs, health care facilities, or police and fire protection services. Analysis of police and fire protection services and health care facilities would be warranted if a project introduces a sizeable new neighborhood, which the Proposed Actions would not. Similarly, analysis of libraries would be warranted if a project in Queens introduces more than 663 total units, which the Proposed Actions would not.

Analysis of existing childcare centers would be warranted if a project in Queens introduced 139 units affordable to residents earning no more than 80 percent of the area median income (AMI) in Queens and therefore had the potential to introduce 20 or more eligible children under age six. Because the Proposed Actions are anticipated to introduce a maximum of 96 affordable units under MIH, further analysis of childcare centers is not warranted.

The Proposed Actions would introduce 97 elementary students, 35 intermediate school students, and 47 high school students. Because the Proposed Actions would introduce more than 100 elementary and intermediate school students, an assessment of elementary and intermediate public schools is warranted. See **Section 4, Community Facilities and Services**.

Open Space

Introduction

The *CEQR Technical Manual* recommends performing an open space assessment if a project would result in either a direct or indirect effect on open space.

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 results in increased noise or air pollutant emissions, odor, or shadows that would affect the usefulness of a public open space, whether on a permanent or temporary basis. A proposed project can also directly affect an open space by enhancing its design or increasing its accessibility to the public.

Indirect effects may occur when the population generated by a project overtaxes the capacity of existing open spaces so that their service to the future population of the affected area would be substantially or noticeably diminished. The *CEQR Technical Manual* threshold for the preliminary assessment of indirect effects is whether the proposed actions would introduce more than 175 incremental units for proposed projects in existing R1-R4 districts or 250 incremental units for proposed projects in existing R5-R12, C, or M districts or 500 employees.

Direct Effects

The Proposed Actions would not result in a physical loss of public open space, affect the use of an open space so that it no longer serves the same user population, limit public access to an open space, cause increased noise or air pollutant emissions, odors, or shadows on public open space that would affect its usefulness, or involves the alienation or conversion of public parkland. Therefore, no analysis of direct effects to open space is warranted.

Indirect Effects

Because the Proposed Actions would introduce 771 residents in an M1-1 and R4 district, which is above the 250-unit threshold, an analysis of potential indirect effects on residential open space is warranted. See **Section 5, Open Space.** The Proposed Actions would not exceed the threshold to warrant an assessment of indirect effects on non-residential open space ratios.

Shadows

The *CEQR Technical Manual* indicates that a shadows assessment is warranted for projects that would result in new shadows long enough to reach a sunlight-sensitive resource. Specifically, a shadows assessment is required for proposed actions that would: (a) result in with-action structures of 250

feet or more in height; or (b) result in with-action structures between 50 and 250 feet in height that are located adjacent to, within, or across the street from a sunlight-sensitive resource; and (c) result in an incremental height increase of more than 50 feet or substantial changes in bulk relative to the no-action condition. The Proposed Actions would allow the development of a 145-foot-tall (including 20-foot-tall bulkhead) building on Development Site 1 and a 165-foot-tall (including a 20-foot bulkhead) building on the non-Applicant-owned Projected Development Site 2. However, the Project Area would be located adjacent to a sunlight-sensitive resource. Therefore, a shadows assessment is warranted. See **Section 6, Shadows**.

Historic and Cultural Resources

According to the *CEQR Technical Manual,* a historic and cultural resources assessment is warranted if there is the potential to affect either archaeological or architectural resources. The manual further recommends that a historic resources assessment be prepared if an action would result in any of the following: in-ground disturbance; new construction, demolition, or significant physical alteration of any building, structure, or object; the change in scale, visual prominence, or visual context of any building, structure, or object or landscape feature; or the screening or elimination of publicly accessible views, even if no known historic resources are located nearby.

Archaeological resources are physical remains, usually subsurface, of the prehistoric, Native American, and historic periods—such as burials, foundations, artifacts, wells, and privies. Archaeological resources are considered only in those areas where new in-ground disturbance is likely to occur. The Proposed Actions involve demolition of existing buildings and new ground disturbance. The Project Area is not within an Area of Archaeological Sensitivity as defined by the New York State Office of Parks, Recreation and Historic Preservation (OPRHP). In a February 2000, a Memorandum: Preliminary Assessment/Disturbance Record was issued for Queens Block 2283, Lots 1, 12, 22, and 36 in connection with a school siting proposal and concluded that further archaeological study or testing is not recommended (see **Appendix A**). Therefore, an assessment of archaeological resources is not warranted.

Architectural resources generally include historically important buildings, structures, objects, sites, and districts. Historic and cultural resources include designated New York City Landmarks (NYCLs) and Historic Districts; properties calendared for consideration as NYCLs by the New York City Landmarks Preservation Commission (LPC) or determined eligible for NYCL designation (NYCL-eligible); properties listed on the State and National Register of Historic Places (S/NR) or formally determined eligible for S/NR listing (S/NR-eligible), or properties contained within a S/NR listed or eligible district; properties recommended by the New York State Board for listing on the S/NR; National Historic Landmarks (NHLs); and potential historic resources (i.e., properties not identified by one of the programs listed above, but that appear to meet their eligibility requirements). The Project Area is not located within 400 feet of existing historic and cultural resources (see **Figure II-1**). Therefore, an assessment of architectural resources is not warranted.

Figure II-1 Historic Resources Map



Source: DCP Map PLUTO

Urban Design and Visual Resources

According to the methodologies of the *CEQR Technical Manual,* if a proposed action would result in physical changes to a project site beyond those allowable by existing zoning and which could be observed by a pedestrian from street level, a preliminary assessment of urban design and visual resources should be prepared.

Because the Proposed Actions would result in physical changes to the Project Area beyond those allowable by existing zoning and which could be observed by a pedestrian from street level, a preliminary assessment of urban design and visual resources is warranted. See **Section 7, Urban Design and Visual Resources**.

Hazardous Materials

According to the *CEQR Technical Manual,* a hazardous materials assessment is conducted when elevated levels of hazardous materials exist on a site; when an action would increase pathways to their exposure, either human or environmental; or when an action would introduce new activities or processes using hazardous materials, thereby increasing the risk of human or environmental exposure. Because the Proposed Actions would result in new in-ground disturbance, an assessment of hazardous materials is warranted. See **Section 8, Hazardous Materials**.

Transportation

According to the *CEQR Technical Manual,* detailed transportation analyses may be warranted if a proposed project results in 50 or more vehicle trips and/or 200 or more transit/pedestrian trips during a given peak hour. A screening analysis determined that the volume of peak hour pedestrian trips in the future with the Proposed Actions would exceed the Level 1 and Level 2 screening thresholds in one or more peak hours analyzed. Therefore, further analysis of pedestrians is warranted. See **Section 9, Transportation**.

Air Quality

Ambient air quality, or the quality of the surrounding air, may be affected by air pollutants produced by motor vehicles, referred to as "mobile sources"; by fixed facilities, usually referenced as "stationary sources"; or by a combination of both. Per the *CEQR Technical Manual*, an air quality assessment determines a project's effects on ambient air quality and the effects of ambient air quality on the project. A proposed project may potentially result in the following types of air quality impacts:

- Potential impacts from mobile sources introduced by a project
- Potential impacts from potential air pollutant sources introduced by a project, such as:
  - Emissions from a project's heating, ventilation, and air conditioning (HVAC) system
  - Emissions from a project's enclosed parking garage
  - Potential impacts on the proposed project from either manufacturing/processing facilities or large/major sources that are located near the project site

Because the Proposed Actions would introduce new mobile sources and new parking garage, the air quality assessment includes a screening analysis for mobile sources and the parking garage. The air quality assessment also considers potential impacts on Projected Development Sites 1 and 2 from manufacturing/processing facilities or large/major sources that are located near the Project Area. See **Section 10, Air Quality.**

Noise

As discussed in the *CEQR Technical Manual*, a noise analysis is appropriate if a proposed action would generate mobile or stationary sources of noise or would introduce noise-sensitive receptors in an area with high ambient noise levels. Mobile sources include vehicular traffic and stationary sources include rooftop equipment such as emergency generators, cooling towers, and other mechanical equipment.

The Proposed Actions are not anticipated to introduce any substantial stationary source noise generators, such as unenclosed cooling or ventilation equipment, loudspeaker systems, stationary diesel engines, or other similar types of uses. The design and specifications for mechanical equipment—such as heating, ventilation, and air conditioning (HVAC) systems—would incorporate sufficient noise reduction to comply with applicable noise regulations and standards, including the standards contained in the revised New York City Noise Control Code. This will ensure that mechanical equipment does not result in any significant increases in noise levels, either by itself or cumulatively with other project noise sources.

As the Proposed Actions would introduce new noise-sensitive land uses, a noise analysis is warranted. See **Section 11, Noise.**

Construction

Construction impacts, although temporary, can include disruptive and noticeable effects resulting from an action. Determination of their significance and need for mitigation is generally based on the duration and magnitude of the impacts. Construction impacts are considered when construction activity could affect traffic conditions, archaeological resources, the integrity of historic resources, community noise levels, and area air quality conditions. In addition, because soils may be disturbed during construction, any action proposed for a site that has been found to have the potential to contain hazardous materials should also consider the potential construction impacts that could result from contamination. The total duration of construction for Development Site 1 would be approximately 26 months and the construction of Development Site 2 would occur over an approximately 17-month period (with approximately nine months of construction overlap between the two sites). Since the total construction within the Project Area would exceed a 24-month period, an assessment of construction is warranted. See **Section 12, Construction**.

1

Introduction

As discussed in **Part II: Supplemental Analysis** of this Environmental Assessment Statement (EAS), several technical areas were identified for further analysis:

- Land Use, Zoning, and Public Policy
- Socioeconomic Conditions
- Community Facilities
- Open Space
- Shadows
- Urban Design and Visual Resources
- Hazardous Materials
- Transportation
- Air Quality
- Noise
- Construction
- Effects on Disadvantaged Communities

Analysis of these areas follow in **Section 2** through **Section 13**.

2

Land Use, Zoning, and Public Policy

This section considers the potential for the Proposed Actions to result in significant adverse impacts to land use, zoning, and public policy. Per the *2025 CEQR Technical Manual*, this analysis evaluates the uses in the area that may be affected by the Proposed Actions and determines whether the Proposed Actions are compatible with land use, zoning, and public policy conditions, or may otherwise affect them. The analysis also considers the Proposed Actions compatibility with zoning regulations and other public policies applicable to the area.

Introduction

As described in **Part I: Project Description**, the Applicant is seeking a zoning map amendment and a zoning text amendment (the Proposed Actions) affecting Queens Block 2283, Lots 1, 12, 22, 36, and 43 (the Project Area). The Proposed Actions would facilitate the development of a 12-story mixed-use building of approximately 305,362 gross square feet (gsf) (the Proposed Project) on Lots 1, 12, 22, and 36 (the Development Site, or Projected Development Site 1) at 50-02 Queens Boulevard in the Woodside neighborhood of Queens Community District 2. The Proposed Project would include approximately 265,474 gsf of residential space (257 units), 16,653 gsf of commercial space, 4,762 gsf of community facility (daycare) space, and 25 accessory parking spaces. The Proposed Project would be subject to Mandatory Inclusionary Housing (MIH) program requirements.

In addition to the Applicant-owned Projected Development Site 1, the Proposed Actions would also affect the non-Applicant-owned property at Lot 43 (Projected Development Site 2). In the future with the Proposed Actions, Projected Development Site 2 is expected to be redeveloped with a 14-story mixed-use building of approximately 74,944 gsf, containing approximately 63,089 gsf of residential space (63 units), 3,228 gsf of commercial space, and 24 accessory parking spaces. Collectively, the

Proposed Project and the anticipated development on Development Site 2 are the With-Action developments.

In total, the Proposed Actions would introduce approximately 328,563 gsf of residential space (320 units, of which 64 to 96 would be affordable pursuant to MIH), 19,881 gsf of commercial space, 4,762 gsf of community facility (daycare) space, and 49 accessory parking spaces, totaling 380,306 gsf of development on the two Projected Development Sites.

According to the *CEQR Technical Manual*, an analysis of land use, zoning, and public policy is warranted for projects that would affect land use or zoning on a site. Since the Proposed Actions include a zoning map amendment and a zoning text amendment, an analysis of land use, zoning, and public policy is warranted.

Methodology

This analysis of land use, zoning, and public policy follows the guidelines set forth in the *CEQR Technical Manual* for a preliminary assessment (Section 320). According to the *CEQR Technical Manual*, a preliminary land use and zoning assessment:

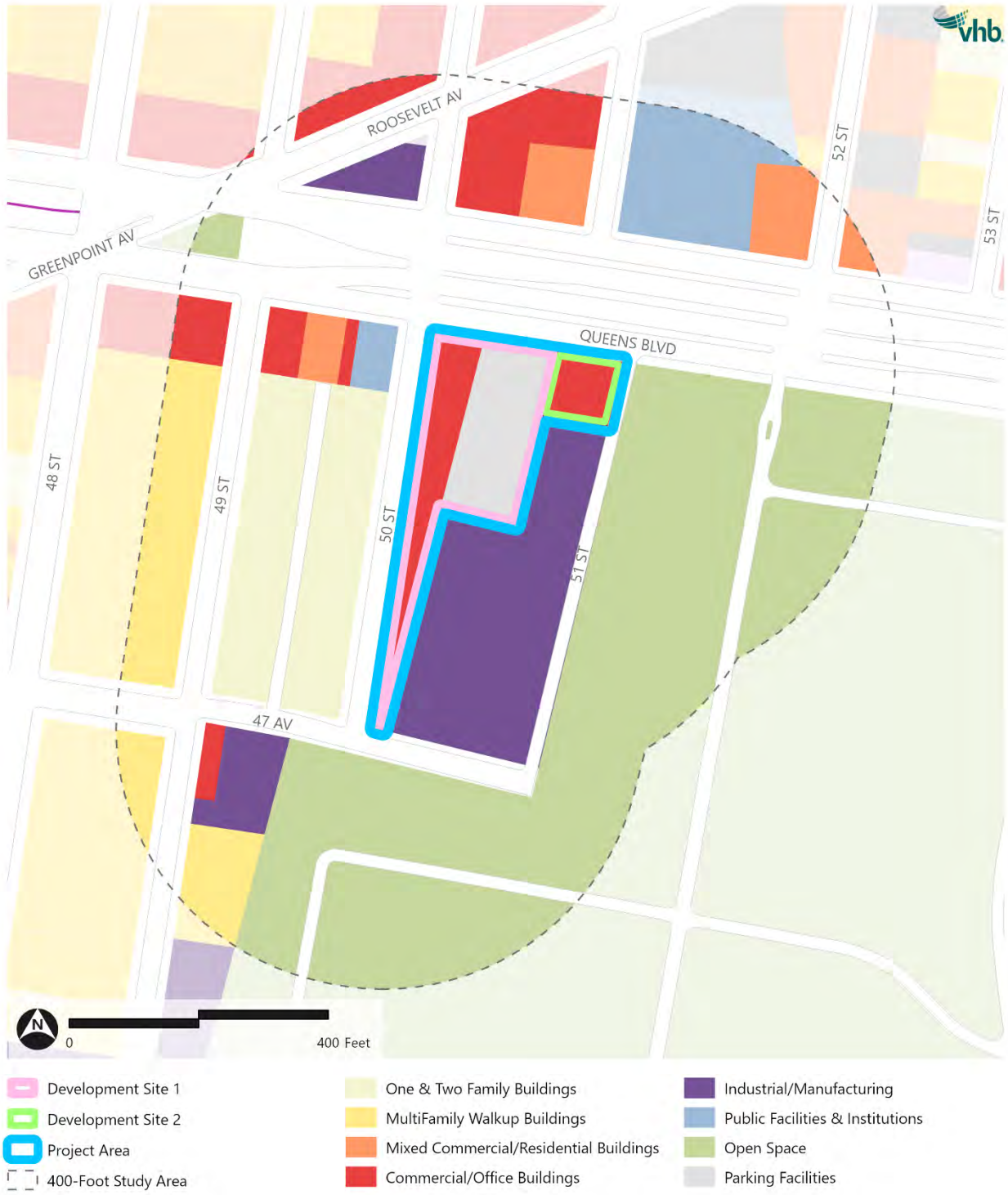
- Describes existing and future land uses and zoning information, and describes any changes in zoning that could cause changes in land use;
- Characterizes the land use development trends in the area surrounding the project site that might be affected by the proposed action; and
- Determines whether the Proposed Actions are compatible with those trends or may alter them.

The following assessment method was used to determine the potential for the Proposed Actions to result in significant adverse impacts on land use, zoning, and public policy:

1. Establish a "study area," a geographic area surrounding the Development Site to determine how the Proposed Actions may affect the immediate surrounding area. For this assessment, a study area of 400 feet surrounding the Development Site was used.
2. Identify data sources, including any public policies (formal plans, published reports) to be used to describe the existing and No-Action conditions related to land use, zoning, and/or public policy.
3. Assess the Proposed Actions potential effects on land use, zoning and public policy to determine whether the Proposed Actions are consistent with or conflict with area land uses, zoning, or the identified policies.
    - If the Proposed Actions could conflict with the identified policies, a detailed assessment would be conducted; or
    - If the Proposed Actions are found to not conflict with the identified policies, no further assessment is needed.

The study area for this analysis is the area within 400-feet of the Development Site, which is generally bounded by Queens Boulevard and Roosevelt Avenue to the north, New Calvery Cathedral Cemetery to the east and the south, and 49th Street to the east (see **Figure 2-1**). This is the area in which the Proposed Actions would most likely have effects in terms of land use, zoning, and public policy.

Figure 2-1 Land Use Map



Source: DCP Map PLUTO

Assessment

Existing Conditions

Land Use

Project Area

The Project Area comprises approximately 70,095 sf and encompasses Queens Block 2283, Lots 1, 12, 22, 36, and 43. Lots 1, 12, and 22 are located on the western portion of the Project Area and are currently occupied with a one-story commercial building (P.C. Richard & Son) totaling approximately 24,908 gsf. An accessory surface parking lot for the P.C. Richard & Son is located on Lot 36 fronting Queens Boulevard. It has an area of approximately 32,696 sf and contains approximately 90 spaces. Lot 43, located at the corner of Queens Boulevard and 51st Street, is currently occupied with a three-story commercial office building (used by a taxi fleet management company) of approximately 16,703 gsf.

Study Area

The Project Area is located within the Woodside neighborhood of Queens Community Board 2. The study area for this analysis is the area within 400-feet of the Project Area, which is generally bounded by Queens Boulevard and Roosevelt Avenue to the north, New Calvery Cathedral Cemetery to the east and the south, and 49th Street to the east. As shown in **Table 2-1**, the study area is characterized by predominately mixed-use, residential, commercial, and industrial uses in addition to some institution and open space uses.

Queens Boulevard, a major thoroughfare, provides east-west access through, and generally splits land uses in, the study area, with mixed-use and commercial to the north and residential to the south. More specifically, the portion of the study area located north of Queens Boulevard contains two large mixed-use buildings, with ground floor commercial space and residential units above, as well as a gas station, a large church (the Korean Presbyterian Church of Southern NY), and low-rise commercial buildings. The northwest corner of the study is traversed by Roosevelt Avenue, which is characterized by the elevated IRT Flushing Line, and also contains a portion of Sunnyside Veterans Triangle (Joe Sabba Park).

The portion of the study area located west of Project Area is predominately residential in use, except for the block frontages along Queens Boulevard, which contain a mix of mixed-use, commercial, and institution uses. The block directly adjacent to the Project Area, between 49th and 50th Streets, contains one- and two-family homes, whereas the blocks between 48th and 49th Streets contain multi-family residential buildings. The southwest corner of the study area, near the intersection of 47th Avenue and 49th Street contains commercial space, including a property management office, a dance studio, and industrial space.

The block on which the Project Area is located also contains industrial space, such as a construction equipment rental company. Directly to the east and south of the Project Area is New Calvary Cemetery, which is owned by the Roman Catholic Archdiocese of New York.

Table 2-1 Study Area Generalized Land Uses

Land Use	Number of Tax Lots[2]	Percentage of Total Lots (%)	Lot Area (sf)	Percentage of Total Lot Area (%)
One & Two Family Residential	40	45%	100,811	1.90%
Multifamily Walkup Residential	12	13%	173,124	3.26%
Mixed Commercial/Residential	7	8%	43,117	0.81%
Commercial and Office	14	16%	132,756	2.50%
Industrial/Manufacturing	9	10%	132,180	2.49%
Public Facilities and Institutions	3	3%	54,469	1.03%
Open Space	2	2%	4,635,729	87.38%
Parking Facilities	1	1%	32,696	0.62%
Vacant Land	1	1%	304	0.01%
Total	**89**	**100%[1]**	**5,305,186**	**100%[1]**

Source: Map PLUTO 25v1

[1] Numbers may not add up to 100% due to rounding

[2] All Lots intersecting the 400-foot-radius study area were included in analysis

Zoning

Project Area

The Project Area is mapped with M1-1 and R4 zoning districts (see **Figure 2-2**) and all of the Project Area and study area are within a Transit Zone. M1 districts typically include light industrial uses, such as woodworking shops, repair shops, and wholesale service and storage facilities. Offices, hotels, and most retail uses are also permitted. The maximum manufacturing floor area ratio (FAR) for an M1-1 district is 1.0. M1-1 districts are also subject to parking requirements, generally one accessory parking space per 300 square feet.

R4 districts allow all types of housing at a floor area ratio (FAR) of 0.75. This zoning district usually produces buildings with three stories. One off-street parking space is required for each dwelling unit, however, parking requirements are lower for income-restricted housing units (IRHU) and are further modified within the Transit Zone.

Transit Zones are designated areas generally located within half a mile of a subway station, where car ownership rates are low. The intent behind these zones is to reduce the burden of parking requirements, thereby lowering the cost of affordable housing development and promoting the use of public transit. The Project Area is an approximately 0.2 mile walk from the 7 train at both the 46th St-Bliss Street station and the 52nd Street station.

Study Area

As shown in **Figure 2-2**, the study area contains a mix of residential, commercial, and manufacturing zoning districts. The portion of the study area with frontages on the north side of Queens Boulevard is zoned R7X with a C2-3 overlay. The remainder of the blocks to the north and northwest of the Project Area are zoned R6 with a C2-3 overlay. The northwestern portion of the study area is zoned C4-4A and C8-1, and the area to the west of the Project Area is zoned R5B and R6A. The southwestern portion of the study area and balance of the block on which the Project Area is located are zoned M1-1, and the area east of the Project Area is zoned R4 (described above).

R5B is a primarily three-story rowhouse district, but also permits detached and semi-detached buildings. The traditional quality of R5B districts is reflected in the district's height and setback as well as front yard and curb cut regulations that maintain the character of the neighborhood. The FAR in R5B districts is 1.35.

R6A is a contextual district where Quality Housing bulk regulations are mandatory and produce high lot coverage, six- to eight-story apartment buildings set at or near the street line. The FAR in R6A districts is 3.0, or 3.6 with inclusionary housing. Off-street parking is generally required for 50 percent of a building's dwelling units.

R6 districts are widely mapped in built-up, medium-density areas in Brooklyn, Queens, and the Bronx. The FAR ranges from 0.78 (for a single-story building) to 2.43 at a typical height of 13 stories. The open space ratio (OSR) ranges from 27.5 to 37.5, with taller buildings having more open space. Off-street parking is generally required for 70 percent of a building's dwelling units.

R7X districts are governed by contextual Quality Housing bulk regulations. The flexibility of the R7X regulations is exemplified by the 12- to 14-story apartment buildings in the R7X districts. The floor area ratio (FAR) in R7X districts is 5.0. Off-street parking is generally required for 50 percent of a building's dwelling units, but requirements are lower for income-restricted housing units (IRHU) and are further modified in certain areas, such as within the Transit Zone and the Manhattan Core, or for lots 10,000 square feet or less.

A C2-3 overlay allows for a slightly wider range of retail uses and service shops that serve the immediate needs of surrounding residential communities. In these districts, residential bulk is governed by the residence district within which the overlay is mapped. A commercial floor area ratio (FAR) of 1.0 is permitted in C2-3 districts and overlaid in R1 to R5 residential districts while a FAR of 2.0 is permitted in C2-3 districts that are overlaid in R6 to R10 districts.

C4 districts are areas that permit larger commercial uses such as department stores and theaters. These retail uses serve larger regions outside of central business districts and generate more traffic than neighborhood shopping areas. C4-4A contextual commercial districts allow for a maximum floor area ratio (FAR) of 4.00 and residential uses are governed by the residential district equivalent R7A.

C8 districts, bridging commercial and manufacturing uses, provide for automotive and other heavy commercial services that often require large amounts of land. Typical uses are automobile showrooms and repair shops, warehouses, gas stations and car washes—although all commercial uses (except large, open amusements) as well as certain community facilities are permitted in C8 districts. The floor area ratio (FAR) in C8-1 districts is 1.0. One accessory parking space is required per 300 square feet.

Figure 2-2 Zoning Map



Source: DCP Map PLUTO

Public Policy

Housing Our Neighbors: A Blueprint for Housing and Homelessness

In 2022, the City released *Housing Hour Neighbors: A Blueprint for Housing and Homelessness* (Housing Blueprint). The Housing Blueprint is a broad strategy to provide access to affordable, high-quality housing for all New Yorkers, including households experiencing homelessness, New York City Housing Authority (NYCHA) residents, families, single New Yorkers, renters, and homeowners alike. Housing Blueprint aims to harness all the benefits that housing can provide to bolster access to opportunity, promote economic stability and mobility, improve health and safety, and increase racial equity.

The five key housing pillars outlined in the Blueprint are:

- Transform NYCHA
- Address Homelessness and Housing Instability
- Create and Preserve Affordable Housing
- Improve the Health and Safety of New Yorkers
- Reduce Administrative Burden

The plan details the specific actions that agencies and stakeholders should undertake to address these goals. Similar to the previous administration's *Housing New York* plan, *Housing Our Neighbors* emphasizes the importance of building new housing and expanding the availability of different housing types including affordable housing and senior housing. In addition, the plan emphasizes cooperation between numerous City agencies.

OneNYC 2050

In April 2015, the Mayor's Office of Sustainability and the Mayor's Office of Recovery and Resiliency released OneNYC, a comprehensive plan for a sustainable and resilient city. OneNYC represents a reworking of the sustainability plan for the City, known as PlaNYC: A Greener, Greater New York, discussed above. Like PlaNYC, growth, sustainability, and resiliency remain at the core of OneNYC, but promoting economic equity is a guiding principle throughout the plan. OneNYC has since been updated to OneNYC 2050, which was released in 2019 and consists of eight goals and thirty initiatives.

The goals of the plan are:

- A Vibrant Democracy through empowering participation, welcoming immigrants, promoting justice and equal rights, and promoting democracy and civic innovation;
- An Inclusive Economy through good paying jobs and job training, economic security through fair wages and benefits, and expanded decision-making power of workers and communities;
- Thriving Neighborhoods through affordable housing, access to neighborhood open spaces and cultural resources, community safety, and place-based community planning;
- Healthy Lives through high quality, accessible health care, addressing health and mental health needs of communities, making healthy lifestyles easier, and designing a healthy physical environment;
- Equity and Excellence in Education through early childhood education, equity in K-12 opportunity, and increasing integration, diversity, and inclusion in NYC schools;

- A Livable Climate through carbon neutrality and clean electricity, resilience, economic opportunities through climate action, and climate accountability and justice;
- Efficient Mobility through modern mass transit, safe and accessible streets, reduced congestion and emissions, and regional and global connections;
- Modern Infrastructure through investments in core physical infrastructure and hazard mitigation, digital infrastructure improvement, and best practices for asset maintenance and capital project delivery.

No-Action Condition

No development is expected to occur within the Project Area absent the Proposed Actions, and the existing conditions would remain unchanged in the future No-Action condition. Projected Development Site 1 is currently improved with a one-story P.C. Richard & Son appliance and electronics store of approximately 24,908 gsf and an accessory surface parking lot of approximately 32,696 sf with approximately 90 parking spaces. Projected Development Site 2 is currently improved with a three-story building used by a taxi fleet management company for custom services. The building is approximately 16,703 gsf with 10 accessory parking spaces.

Land Use

In the future No-Action condition, existing uses within the Project Area and study area would be expected to remain unchanged. However, there is one new development anticipated by the 2029 build year. This development is located at 49-06 Queens Boulevard and will feature 2,560 gsf of commercial space.

Zoning

There are no anticipated zoning changes within the study area under the No-Action condition. The Project Area and study area would continue to be governed by the existing zoning regulations in the area, as described in the existing conditions section above.

Public Policy

In the future No-Action condition, there are no known public policy changes that are anticipated to affect the Project Area or study area.

With-Action Condition

The Proposed Actions, as detailed in **Part I: Project Description**, would facilitate the development of two projected development sites. Applicant-owned Projected Development Site 1 would be redeveloped with an 12-story, 125-foot-tall (excluding bulkhead), mixed-use building of approximately 305,362-gsf (261,102 zsf). The Proposed Project would contain approximately 265,474 gsf (240,123 zsf) of residential space, 16,653 gsf (16,653 zsf) of commercial space, 4,762 gsf (4,762 zsf) of community facility (daycare) space, and 25 accessory parking spaces. Additionally, it is expected that non-Applicant-owned Projected Development Site 2 would be redeveloped with a 14-story, 145-foot-tall, mixed-use building of approximately 74,944 gsf. It would contain approximately 63,089 gsf of residential space, 3,228 gsf of commercial space, and 24 accessory parking spaces.

Combined, both projected development sites would introduce approximately 328,563 gsf of residential uses (320 DUs, of which approximately 64 to 96 units would be affordable pursuant to MIH), 19,881 gsf of commercial uses, 4,762 gsf of community facility (daycare) uses, and 49 accessory parking spaces (27,100 gsf), for a total development of 380,306 gsf on the two Projected Development Sites.

Land Use

In the With-Action condition, development is assumed on both Projected Development Sites 1 and 2. The Applicant would redevelop Projected Development Site 1 with a new mixed-use building with residential, commercial, and community facility uses. Projected Development Site 1 would retain and expand the existing P.C. Richard & Son store in the ground floor commercial space. A ground floor community facility space would be introduced and occupied by a daycare, with additional space in the cellar and a landscaped outdoor play area on the southernmost portion of Projected Development Site 1. Projected Development Site 2 would also contain residential and ground floor retail uses. The Proposed Actions would introduce approximately 320 residential dwelling units in total between Projected Development Sites 1 and 2, 64 to 96 of which would be affordable pursuant to MIH. The Proposed Actions would be consistent with existing land uses in the study area, which is predominantly characterized by mixed-use, residential, and commercial uses as well as some institutional and open space uses. As such, the Proposed Actions would not result in significant adverse impacts to land use.

Zoning

As detailed in **Part I: Project Description**, the Applicant is seeking a zoning map amendment and a zoning text amendment. The zoning map amendment would rezone the Project Area from M1-1 and R4 to R7X/C2-4 to a depth of 125 feet from Queens Boulevard, and from the mid-line of 50th Street to the easternmost boundary of Lot 43, encompassing the full mapped width of 51st Street. The zoning map amendment would rezone the balance of the Project Area to R6A. The zoning text amendment would apply MIH to the Project Area. The Proposed Actions would allow for the introduction of new residential and community facility uses within the Project Area and would ensure that residential development within the Project Area provides affordable housing in perpetuity.

The Proposed Actions would change the zoning designation of the Project Area from M-1 and R4 to R7X/C2-4 and R6A, which is more consistent with recent rezonings in neighboring areas to encourage and facilitate the development of new commercial and community facility uses and affordable housing. The proposed R7X zoning district is consistent with the R7X established by the Maspeth-Woodside rezoning along Queens Boulevard north of the Project Area and is appropriate in light of the width of Queens Boulevard and its proximity to both the New Calvary Cemetery and the F train. Additionally, the proposed R6A district is consistent with the R6A-equivalent districts created by the Sunnyside-Woodside rezoning west and northwest of the Project Area and integrate well with the portions of the R6A district on the westernmost portion of the study area. The lower-density R6A district is also more in line with the low-rise zoning (R5B) and built character of the block directly west of the subject block, where two-story, one- and two- family dwellings predominate. Therefore, the Proposed Actions would not have a significant adverse impact on zoning.

Public Policy

Housing Our Neighbors: A Blueprint for Housing and Homelessness

The Proposed Actions include the mapping of an MIH area coterminous with the Project Area. The proposed MIH area would ensure the provision of permanently affordable units for any residential development within the Project Area. Compared to the No-Action conditions, the With-Action condition would provide 320 residential units—of which 64 to 96 would be permanently income-restricted, with an income requirement at an average of 40 to 80 percent of area median income (AMI), pursuant to MIH Options 1, 2 and 3. The Proposed Actions would support the goals in the Housing Blueprint by expanding housing opportunities and create affordable housing at a location in close proximity to public open space, public transportation and commercial activities. Therefore, the Proposed Actions would be consistent with the goals outlined in *Housing Our Neighbors*, such as bolstering access to opportunity, promoting economic stability and mobility through housing developments; as such, no significant adverse impacts to this policy are anticipated.

OneNYC 2050

The Proposed Actions would also support some of the initiatives outlined in OneNYC 2050, as detailed below.

Goal 3: Thriving Neighborhoods

Initiative 9: Ensure all New Yorkers have access to safe, secure, and affordable housing

This goal is focused on fostering communities that have safe and affordable housing and are well-served by parks, cultural resources, and shared spaces. As noted, the Proposed Actions would create 320 new residential units, of which 64 to 96 units are anticipated to be affordable pursuant to MIH, in the Woodside neighborhood of Queens. As such, the Proposed Actions would support this initiative by expanding the City's affordable housing stock in a mixed-use neighborhood within a Walk-to-a-Park service area.

Conclusion

As described above, the Proposed Actions would facilitate the redevelopment of the Project Area with mixed-use buildings containing residential, commercial, and community facility uses. The Proposed Actions would be consistent with the land uses within the study area and with past rezonings in neighboring areas. In addition, the Proposed Actions would facilitate the expansion of an existing commercial use, while creating new residential space that includes permanently affordable housing units and new community facility space. By providing permanently affordable housing, the Proposed Actions would support the City's related goals and initiatives. Based on the foregoing, the Proposed Actions would not result in any significant adverse impacts to land use, zoning, or public policy.

3

Socioeconomic Conditions

This section considers the potential for the Proposed Actions to result in significant adverse impacts to the socioeconomic character of the surrounding area, which includes its population, housing, and economic activity.

Introduction

According to the *2025 CEQR Technical Manual*, an analysis of socioeconomic conditions may be necessary when a project would directly or indirectly change an area's socioeconomic character (population, housing, and economic activity); the assessment usually considers the socioeconomic conditions of area residents separately from those of area businesses, although projects may affect both in similar ways. An assessment of socioeconomic conditions is warranted when a project would result in:

- Direct displacement of residential population on a development site;
- Direct displacement of existing businesses or institutions on a development site;
- Indirect displacement of residential population in a study area;
- Indirect displacement of businesses or institutions in a study area;
- Indirect displacement of businesses due to retail market saturation; and
- Adverse effects on specific industries.

As described in **Part I: Project Description**, the Applicant is seeking a zoning map amendment and a zoning text amendment (the Proposed Actions) affecting Queens Block 2283, Lots 1, 12, 22, 36, and 43 (the Project Area). The Proposed Actions would facilitate the development of a mixed-use building of approximately 305,362 gross square feet (gsf) (the Proposed Project) on Lots 1, 12, 22, and 36 (the Development Site, or Projected Development Site 1) at 50-02 Queens Boulevard in the Woodside neighborhood of Queens Community District 2. The Proposed Project would include approximately

265,474 gsf of residential space (257 units), 16,653 gsf of commercial space, 4,762 gsf of community facility (daycare) space, and 25 accessory parking spaces. The Proposed Project would be subject to Mandatory Inclusionary Housing (MIH) program requirements.

In addition to the Applicant-owned Projected Development Site 1, the Proposed Actions would also affect the non-Applicant-owned property at Lot 43 (Projected Development Site 2). In the future with the Proposed Actions, Projected Development Site 2 is expected to be redeveloped with a mixed-use building of approximately 74,944 gsf, containing approximately 63,089 gsf of residential space (63 units), 3,228 gsf of commercial space, and 24 accessory parking spaces. Collectively, the Proposed Project and the anticipated development on Development Site 2 are the With-Action developments.

In total, the Proposed Actions would introduce approximately 328,563 gsf of residential space (320 units, of which 64 to 96 would be affordable pursuant to MIH), 19,881 gsf of commercial space, 4,762 gsf of community facility (daycare) space, and 49 accessory parking spaces (27,100 gsf), totaling 380,306 gsf of development on the two Projected Development Sites.

For the Proposed Actions, a preliminary analysis of indirect residential displacement is warranted. As described in **Part II: Supplemental Analyses**, analyses of direct residential displacement, direct and indirect business displacement, and adverse effects on specific industries are not warranted.

Methodology

Under CEQR, the socioeconomic character of an area is defined by its population, housing and economic activities. The assessment of socioeconomic conditions usually distinguishes between the socioeconomic conditions of an area's residents and businesses. However, proposed action(s) may affect either or both segments in the same ways; they may directly displace residents or businesses, or they may alter one or more of the underlying forces that shape socioeconomic conditions in an area and thus may cause indirect displacement of residents or businesses.

Direct displacement is defined as the involuntary displacement of residents, businesses or institutions from the actual site of (or sites directly affected by) a proposed project. Indirect or secondary displacement is defined as the involuntary displacement of residents, businesses or employees in an area adjacent or close to a development site that results from changes in socioeconomic conditions created by a proposed project. Examples include rising rents in an area that result from a new concentration of higher-income housing introduced by a project, which ultimately could make existing housing unaffordable to lower income residents.

The objective of the analysis is to disclose whether any potential changes created by the Proposed Actions would have a significant adverse impact compared with what would happen in the future without the proposed actions (i.e., the No-Action condition).

Analysis Format

Following *CEQR Technical Manual* guidelines, the analysis begins with an initial screen that considers threshold circumstances identified in the *CEQR Technical Manual* that can lead to socioeconomic changes warranting further assessment. If the initial screen determines that further assessment is warranted, a preliminary assessment is then undertaken. The purpose of the preliminary assessment is to learn enough about the effects of the proposed actions to either rule out the possibility of significant adverse impacts or determine that a more detailed analysis is required to resolve the issue.

The analysis of the Proposed Actions is based on the reasonable worst-case development scenario (RWCDS) analysis that includes the Proposed Project on the Development Site (Projected Development Site 1), plus development on non-Applicant-owned Lot 43 (Projected Development Site 2), collectively the With-Action condition. The build year for the full build-out of the With-Action condition is 2029, which was examined to assess the potential impacts of the Proposed Actions. As discussed in **Part I: Project Description**, in the With-Action condition, Projected Development Sites 1 and 2 would introduce approximately 328,563 gsf of residential uses (320 DUs, of which approximately 64 to 96 would be affordable pursuant to MIH), 19,881 gsf of commercial uses, 4,762 gsf of community facility (daycare) uses, and 49 accessory parking spaces, for a total development of 380, gsf.

Indirect Residential Displacement Methodology

Per *CEQR Technical Manual* guidelines, a preliminary assessment of a project's potential to cause indirect residential displacement is necessary to determine whether the proposed project may either introduce a trend or accelerate a trend of changing socioeconomic conditions that may potentially displace a vulnerable population to the extent that the socioeconomic character of a neighborhood would change.

The first step of the preliminary analysis is to determine if the estimated increase in population due to the Proposed Actions is significant enough related to the current population to affect real estate market conditions in the study area. This preliminary assessment follows the step-by-step preliminary assessment guidelines described in Section 322.1 of the *CEQR Technical Manual*.

Data Sources

Information used in the socioeconomic analysis includes data from the U.S. Census Bureau's 2010 and 2020 Decennial Census, as well as 2006-2010 American Community Survey (ACS) and 2019-2023 ACS, compiled through the NYC Population FactFinder. The 2019-2023 data reflects five-year averages of income distribution, mean income and median rent for the trailing 12 months in 2023 inflation-adjusted dollars. The mean income and median gross rent of each census tract were compiled by the NYC Population FactFinder.

Real estate property listing data was obtained from www.streeteasy.com. Area Median Income (AMI) for the New York City region was obtained from the U.S. Department of Housing and Urban Development (HUD).

Study Area Definition

The *CEQR Technical Manual* states that a quarter-mile socioeconomic study area is appropriate unless the project could increase the population by more than five percent as compared with the population expected to reside in a quarter-mile study area in the future No-Action condition.

The Project Area is located within Queens Census Tract 235.02. A quarter-mile study area would also contain Queens Census Tracts 253.01 and 253.02.[1] Combined, these census tracts had a population of 10,896 at the time of the 2020 US Census.[2] Development since the 2020 US Census has introduced

[1] Census tracts that contain at least 50% of their area within the quarter-mile radius were included in the study area analysis.

[2] 2020 Census compiled through NYC Population FactFinder.

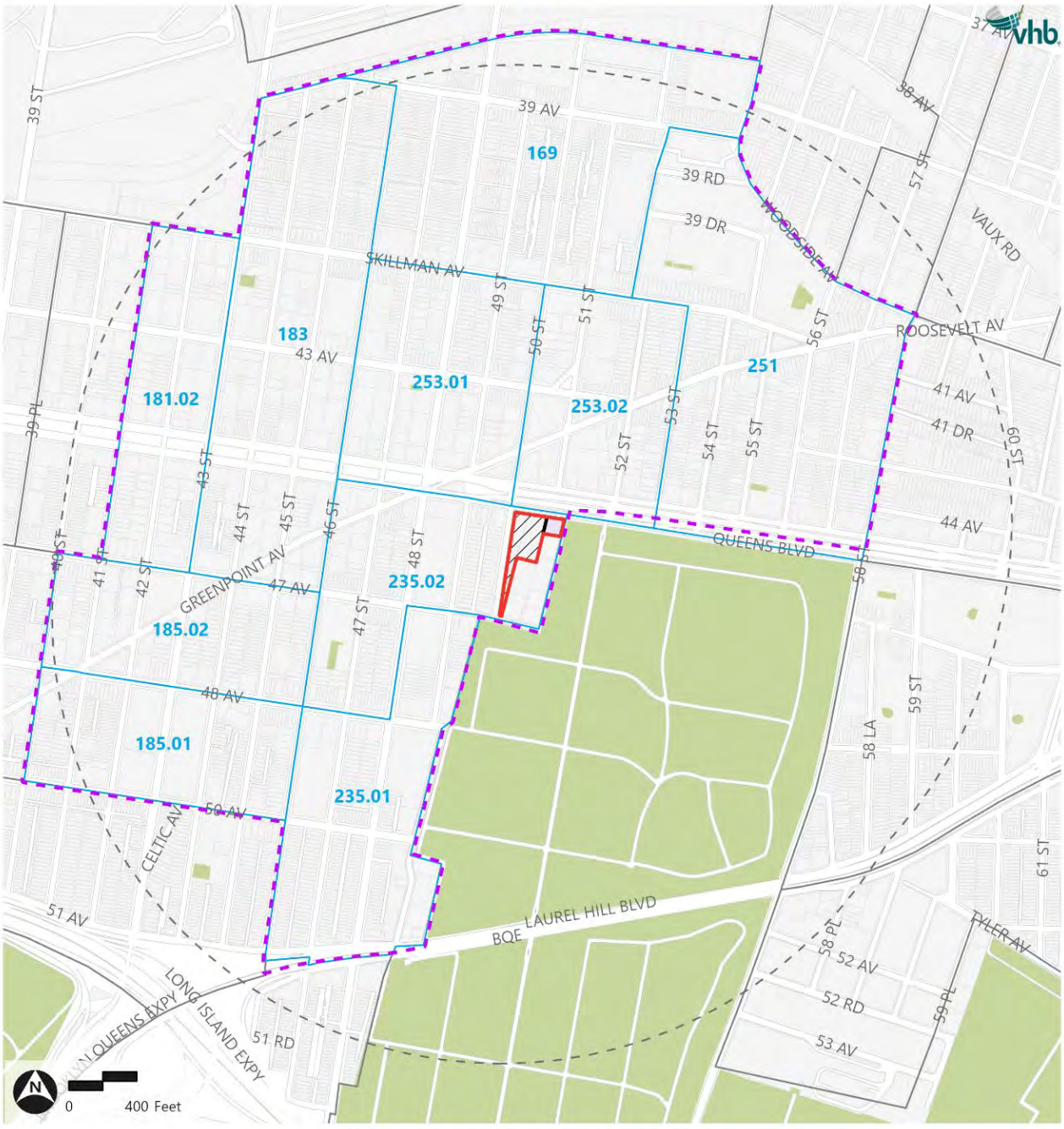
approximately 595 people to the quarter-mile study area, for a total existing population of 11,491 people.[3]

Seven new residential development projects are anticipated in the quarter-mile study area under the future No-Action condition, resulting in the construction of 332 new residential units. Using an average household size of 2.41 people per household, the new residential units would generate approximately 800 residents, for a total quarter-mile study area population of 12,291 in the No-Action condition. The Proposed Actions would increase the quarter-mile area population by an estimated 771 residents, resulting in a residential population increase of 6.3 percent.

Per the *CEQR Technical Manual*, a project that would result in a relatively large increase in population may be expected to affect a larger study area; a half-mile study area is appropriate for projects that would increase population by five percent over the expected population in the No-Action condition. Therefore, a half-mile study area is appropriate for this analysis. The half-mile study area contains Queens Census Tracts 169, 181.02, 183, 185.01, 185.02, 235.01, 235.02, 251, 253.01, and 253.02. These census tracts had a population of 43,493 at the time of the 2020 US Census. Development since the 2020 US Census has introduced approximately 723 people to the half-mile study area, for a total existing population of 44,216 people. A total of 26 residential developments in the half-mile study area are anticipated to include 577 net residential units, which would introduce approximately 1,391 people, for a total No-Action population of 45,607 (see **Figure 3-1**).

[3] Estimate of new development completed since the 2020 US Census is based on NYC Department of City Planning (DCP) Housing Database (25Q1). Population introduced by new development is based on the Average Household Size for Queens Community District 2 of 2.41 (2020 Census).

Figure 3-1 Socioeconomic Study Area



Preliminary Assessment

Existing Conditions

The population of the half-mile study area slightly decreased from 44,207 to 43,393 between 2010 and 2020 (see **Table 3-1**). The 2020 Census population of Queens was 2.2 million, representing an increase of 7.8 percent since 2010. The 2020 Census population of New York City was 8.8 million, an increase of 7.7% compared to 2010.

Table 3-1 Area Population

Area	Population 2010	Population 2020	% Change
Study Area	44,207	43,493	-1.6%
Queens	2,230,722	2,405,464	7.8%
New York City	8,175,133	8,804,190	7.7%

Source: 2010 Census and 2020 Census

The number of households and housing units in the study area in 2020 were 18,349 and 19,257, respectively, representing slight increases from 2010 by 1.9 percent and 0.8 percent, respectively (see **Table 3-2**). Queens and New York City showed 8.6 percent and 8.4 percent increases in the number of households, respectively, and both geographies showed a 7.3 percent increase in the number of housing units.

Table 3-2 Household and Housing Data

Area	2010 Households	2020 Households	% Change	2010 Housing Units	2020 Housing Units	% Change
Study Area	18,007	18,349	1.9%	19,107	19,257	0.8%
Queens	780,117	847,210	8.6%	835,127	896,333	7.3%
New York City	3,109,784	3,370,448	8.4%	3,371,062	3,618,635	7.3%

Source: 2010 Census and 2020 Census

In the 2020 Census, the majority of occupied housing units in the study area were rental units (77.5 percent) rather than owned units (22.5 percent), see **Table 3-3**. The percentage of occupied rental units is less in Queens (59.8 percent) and New York City as a whole (69.0 percent).

Table 3-3 Housing Tenure

Area	% Vacant	% Renter Occupied Units	% Owner Occupied Units
Study Area	4.7%	77.5%	22.5%
Queens	9.2%	59.8%	40.2%
New York City	9.5%	69.0%	31.0%

Notes: % Vacant, as defined by the U.S. Census, includes vacant housing units for rent or sale, units that are occupied by persons who have a usual residence elsewhere, and vacant units held off the market

Source: 2020 Census

Based on 2019-2023 ACS five-year estimates, median gross rent for the study area is $1,901, an increase from 2010 ($1,642), see **Table 3-4**. Median gross rent in Queens is similarly $1,915, a 15.4 percent increase from 2010. Median gross rent for New York City is $1,779, an 18.2 percent increase from 2010. A review of current rental listings on www.streeteasy.com shows average rents of $2,400 for studios, $2,800 for one-bedroom units, and $3,900 for two-bedroom units.[4] There are no public housing developments in the study area.[5]

Table 3-4 Median Gross Rent

Area	Years 2006-2010	Years 2019-2023	Change	Percent Change
Study Area	$1,642	$1,901	Increase[1]	Increase[1]
Queens	$1,659	$1,915	$256	15.4%
New York City	$1,505	$1,779	$274	18.2%

Source: 2006-2010 American Community Survey (ACS) 5-year Estimate and 2019-2023 American Community Survey (ACS) 5-year Estimate

[1] The Margin of Error (MOE) of the difference between 2006-2010 ACS 5-year Estimates and 2019-2023 ACS 5-year Estimates is greater than one-third of the estimated difference but less than the difference itself; therefore, a direction of change, rather than a percentage of change, can be estimated with confidence.

The average household income in the study area is $105,697, which is lower than the average incomes of Queens ($113,673) and New York City ($127,894), see **Table 3-5**. Average household income increased over all three geographies from 2010. Median household income in the study area was $75,073 in 2010 and is currently $80,975. The median household income of the study area is lower than the median income of Queens ($84,961) but higher than that of New York City ($79,713). That average household income is lower in the study area than the comparison geographies while median income is higher in New York City as a whole is partly explained in **Table 3-6**, which shows household income distribution. The highest category of incomes in the study area and in Queens is households earning $50,000 to $99,999 while the highest category of incomes in New York City is $150,000 and over.

Table 3-5 Average and Median Household Income

Area	2006-2010 Average Household Income	2019-2023 Average Household Income	Average Household Income Percent Change	2006-2010 Median Household Income	2019-2023 Median Household Income	Median Household Income Percent Change
Study Area	$87,507	$105,697	Increase[1]	$75,073	$80,975	-[2]
Queens	$98,653	$113,673	15.2%	$77,678	$84,961	9.40%
New York City	$109,437	$127,894	16.9%	$70,645	$79,713	12.80%

Source: 2006-2010 American Community Survey (ACS) 5-year Estimate and 2019-2023 American Community Survey (ACS) 5-year Estimate.

Notes: Average, or mean household income, is defined as the aggregate household income divided by total households. Median Household income is calculated through linear interpolation by NYC Population FactFinder.

[1] The Margin of Error (MOE) of the difference between 2006-2010 ACS 5-year Estimates and 2019-2023 ACS 5-year Estimates is greater than one-third of the estimated difference but less than the difference itself; therefore, a direction of change, rather than a percentage of change, can be estimated with confidence.

[2] The Margin of Error (MOE) of the difference between 2006-2010 ACS 5-year Estimates and 2019-2023 ACS 5-year Estimates is greater than one-third of the estimated difference; therefore, change, cannot be estimated with confidence.

[4] www.streeteasy.com, accessed June 25, 2025. There were too few 3-bedroom units available in the study area to determine their average asking rent.

[5] https://www.nyc.gov/assets/nycha/downloads/pdf/nychamap.pdf, accessed June 25, 2025

Table 3-6 Household Income Distribution

Area	<$25,000	$25,000-$49,999	$50,000-$99,999	$100,000-$149,999	$150,000+
Study Area	13.6%	14.4%	33.4%	15.9%	22.7%
Queens	14.4%	15.4%	27.3%	18.2%	24.7%
New York City	19.4%	15.2%	24.1%	15.3%	26.1%

Source: 2019-2023 American Community Survey (ACS) 5-year Estimate

No-Action Condition

Under the No-Action condition, the Project Area would remain as under existing conditions, with commercial and parking uses. However, new residential development in the half-mile study area would result in an additional 577 residential units, which is estimated to increase the residential population by 1,391 for a total population of 45,607 persons in 2029 (see **Table 3-7**).

Table 3-7 No-Action Condition: No-Build Developments Estimated Population

Location	Net Residential Units	Additional Population[1]
49-06 Queens Boulevard	1	2
46-11 Queens Boulevard	19	46
51-22 Roosevelt Avenue	90	217
43-12 50 Street	55	133
43-25 52 Street	60	145
43-09 52 Street	33	80
41-50 47 Street	-1	-2
43-23 51 Street	75	181
41-34 45 Street	25	60
41-56 55 Street	3	7
41-58 55 Street	3	7
43-21 54 Street	2	5
43-19 54 Street	2	5
56-12 Roosevelt Avenue	-1	-2
55-02 Roosevelt Avenue	10	24
39-38 45 Street	-1	-2
43-42 43 Street	99	239
56-12 Roosevelt Avenue	9	22
54-21 Roosevelt Avenue	4	10
39-84 46 Street	-1	-2
45-07 45 Street	63	152
40-28 44 Street	-1	-2
39-28 46 Street	-1	-2
39-26 47 Street	-2	-5
43-31 44 Street	3	7
41-22 44 Street	29	70
Total	**577**	**1,391**

Source: NYC DCP, Housing Database (25Q1)

Notes:

[1] Based on the Average Household Size for Queens Community District 3 of 3.16 (2020 Census)

With-Action Condition

In the With-Action condition, Projected Development Site 1 and Projected Development Site 2 would be redeveloped with new buildings containing a total of 320 residential units, along with commercial space, community facility space, and parking. Of the 320 residential units, 64 to 96 units would be affordable pursuant to MIH, depending on which MIH option is selected.Step 1 of the Indirect Residential Displacement Preliminary Analysis, per the *CEQR Technical Manual*, is to determine if the project's increase in population is large enough to affect real estate market conditions in the study area. The Proposed Actions would increase the population of the study area from 45,607 to 46,378, a

1.7-percent increase. According to the *CEQR Technical Manual*, if the population increase is less than five percent within the study area, these conditions would not be expected to affect real estate market conditions and no further analysis is warranted. Therefore, no further analysis of the Proposed Actions' potential to cause indirect displacement is warranted, and no significant adverse impacts would occur.

Conclusion

This preliminary analysis finds that the Proposed Actions would not result in significant adverse impacts to the socioeconomic conditions of the study area. As detailed in **Part II: Supplemental Analyses**, the Proposed Actions would not result in the direct displacement of any residents or businesses or in adverse effects on specific industries or indirect business displacement.

With respect to potential indirect residential displacement, the Proposed Actions would spur development of both affordable and market-rate housing units. The estimated new population would represent an increase of approximately 1.7 percent which would not be expected to introduce or accelerate a trend that would potentially lead to the displacement of vulnerable populations or create a significant indirect residential displacement adverse impact. Therefore, no further analysis is warranted.

4

Community Facilities and Services

This section assesses the potential impacts of the Proposed Actions on community facilities and services. *The 2025 City Environmental Quality Review (CEQR) Technical Manual* defines community facilities as public or publicly funded facilities, including schools, libraries, childcare centers, health care facilities, and fire and police protection services.

Introduction

According to the *CEQR Technical Manual*, a community facilities assessment should be conducted if a project would directly or indirectly affect existing community facilities, including schools, libraries, publicly supported early childhood programs, health care facilities, and fire and police protection services. A project can affect community services when it physically displaces or alters a community facility. A project can also affect community services by causing a change in population that may affect the services delivered by a community facility, as might happen if an existing facility is already over-utilized or if a project is large enough to create a demand that could not be met by an existing facility.

As described in **Part I: Project Description**, the Applicant is requesting several actions (the Proposed Actions) to facilitate development of a mixed-use building of approximately 305,362 gross square feet (gsf) (the Proposed Project) at 50-02 Queens Boulevard in the Woodside neighborhood of Queens Community District 2 (Queens Block 2283, Lots 1, 12, 22, and 36, the Development Site or Projected Development Site 1). The Proposed Project would include approximately 265,474 gsf of residential space (or 257 units), 16,653 gsf of commercial space, and 4,762 gsf of community facility space.

In addition to the Applicant-owned Projected Development Site 1, the Proposed Actions would also affect the non-Applicant-owned property at Lot 43 (Projected Development Site 2). With approval of the Proposed Actions, Projected Development Site 2 is expected to be redeveloped with a 14-story (145-foot-tall, excluding bulkhead) mixed-use building of approximately 74,944 gsf, containing approximately 63,089 gsf of residential space, 3,228 gsf of commercial space, and 24 accessory parking spaces. Collectively, the anticipated developments on Projected Development Sites 1 and 2 make up the With-Action condition.

Combined, the Proposed Actions would introduce approximately 328,563 gsf of residential uses (320 units), 19,881 gsf of commercial uses, 4,762 gsf of community facility (daycare) uses, and 49 accessory parking spaces (27,100 gsf), for a total development of 380,306 gsf of development on the two Projected Development Sites.

Methodology

The *CEQR Technical Manual* provides thresholds to make an initial determination of whether detailed studies are necessary to determine potential indirect impacts on public schools, libraries, childcare centers, health care facilities, and fire and police protection services. CEQR App, an analysis tool developed by the New York City Department of City Planning (DCP), was also used to assess the need for detailed analysis. As stated previously, the Proposed Project would introduce 320 dwelling units, of which 64 to 96 are anticipated to be affordable pursuant to MIH.

As described in **Part II: Supplemental Analysis**, the Proposed Project would not directly displace a community facility, nor place a physical barrier to service delivery. Therefore, an analysis of direct effects is not warranted.

The Proposed Project does not have the potential to indirectly impact libraries, early childhood programs, health care facilities, or police and fire protection services. Analysis of police and fire protection services and health care facilities are triggered if a project introduces a sizeable new neighborhood, which the Proposed Project does not. Similarly, analysis of libraries is triggered if a project in Queens introduces more than 663 total units, which the Proposed Project does not.

Analysis of existing childcare centers would be warranted if a project in Queens introduced 139 units affordable to residents earning not more than 80 percent of the area median income (AMI) in Queens and therefore had the potential to introduce 20 or more eligible children under age six. Because the Proposed Project is anticipated to introduce a maximum of 96 affordable units under MIH, further analysis of childcare centers is not warranted.

As shown in **Table 4-1** below, the Proposed Project would introduce 97 primary students, 35 middle school students, and 47 high school students. Because the Proposed Actions would introduce more than 100 primary and middle school students, an assessment of primary and intermediate public schools is warranted.

Table 4-1 Residential Increment for Analysis

Land Use	Unit	Existing Condition	No-Action Condition	With-Action Condition	Increment
Residential	Dwelling Units	0	0	320	+320
	Affordable Units	0	0	64 - 96	+64 - 96
	Total Residential gsf	0	0	328,563	+328,563
Residents[1]		0	0	771	+771
Primary Students[2]		0	0	97	+97
Intermediate Students[2]		0	0	35	+35
High School Students[2]		0	0	47	+47

Notes:
[1] The number of residents is based on an average household size of 2.39 for the Sunnyside Neighborhood Tabulation Area (NTA) (2017-2021 ACS Survey).
[2] The number of students generated is based on the 2024 School Multipliers provided by the SCA for Queens District 24. The multipliers assume 0.30 primary students per unit, 0.11 intermediate students per unit, and .15 high school students per unit.

Public Schools

In conformance with *CEQR Technical Manual* guidance, the public-school analysis uses the most recent New York City Department of Education (DOE) data on school capacity, enrollment, and utilization rates for primary and intermediate schools in the sub-district study area and the New York City School Construction Authority (SCA) projections of future enrollment to determine indirect effects on public schools (the 2023-2024 SCA Enrollment, Capacity, and Utilization Blue Book). Then the existing conditions of the public schools within the study area are examined by assessing their enrollment, target capacity, and available seats to understand the percent utilization for the study area. Consistent with CEQR methodology, the analysis focuses only on potential impacts on public schools operated by the DOE; private and parochial education facilities as well as charter schools are excluded from the analysis.

Projected enrollment was determined for the future 2029 No-Action condition using SCA's *Enrollment Projections for the New York City Public Schools, 2025-2034*, which references DOE's projected New Housing Starts, as well as Panel for Educational Policy (PEP) proposals for changes in school utilization.[1] The future utilization rate for school facilities is calculated by adding the estimated enrollment from proposed residential developments in the schools' study area to DOE's projected enrollment and then comparing that number with projected school capacity. DOE does not include charter school enrollment in its projections. DOE's enrollment projections for years 2025 through 2034, the most recent data currently available, is posted on the SCA.[2] The latest available enrollment projections to 2029 have been used in this analysis, and the allocation of students to Community School District (CSD) 24, Subdistrict 2 was done through data provided by DCP in December 2024. These enrollment projections are based on broad demographic trends and do not explicitly account for discrete new residential development projects expected to be completed within the study area. Therefore, the estimated student population from other new development projects expected to be completed within the study area have been obtained from the SCA Capital Planning Division and are added to the projected enrollment to ensure a more conservative prediction of future enrollment and utilization. In addition, any new school projects identified in the DOE Five-Year Capital Plan are included if construction has begun, or if deemed appropriate to include in the analysis by the lead agency and the SCA. This data together provides the analysis of the No-Action condition analysis.

The number of students that would be generated by a proposed project is estimated by Projected Public-School Ratios (i.e., the number of primary, intermediate, and high school students that would be generated by each residential unit) and assessed under the With-Action condition. The With-Action condition is assessed against the No-Action condition by calculating the change in utilization rates.

Study Area

According to the guidelines presented in the *CEQR Technical Manual*, the study area for the analysis of public primary and intermediate schools is the "subdistrict" (also known as "regions" or "school planning zones") in which the Proposed Project is located. The Project Area is in Community School District (CSD) 24, Subdistrict 2.

[1] SCA Enrollment Projections for the New York City Public Schools, 2025 – 2034.

[2] Consistent with CEQR methodology, the analysis focuses only on potential impacts on public schools operated by the DOE; private and parochial education facilities as well as charter schools are excluded from the analysis.

Data Sources

As discussed above, this analysis presents the most recent DOE data on school capacity, enrollment, and utilization rates for primary and intermediate schools and the SCA projections of future enrollment in the study area, as provided and guided by DCP and the CEQR App. The existing conditions analysis uses data provided in the DOE's *Utilization Profiles: Enrollment/Capacity/ Utilization, 2024- 2025 Edition*. Future conditions are predicted based on SCA enrollment and capacity projections for current schools and schools under construction as provided by the CEQR App. DOE's enrollment projections for years 2023-2032, the most recent data currently available, were provided by DCP through the CEQR App.

Impact Criteria

The effect of new students introduced by the Proposed Project on the capacity of schools within the study area is then evaluated. According to the *CEQR Technical Manual*, a significant adverse impact may occur if the Proposed Project would result in:

- A collective utilization rate that is equal to or greater than 100 percent in the future With-Action condition;
- 100 or more new primary or intermediate school students generated from the Proposed Project past the 100 percent utilization rate; and
- An increase of five percentage points or more in the utilization rate for high schools between the No-Action and With-Action conditions.

Preliminary Assessment

Existing Conditions

The Proposed Project is located in Community School District (CSD) 24, Subdistrict 2 in Queens. **Figure 4-1** shows the district boundaries and the corresponding public schools. As shown in **Table 4-3**, the subdistrict contains five primary schools with a total enrollment of 3,436 students and a shortfall of 97 seats, leading to a utilization rate of 102.9 percent. The subdistrict also contains six intermediate schools with a total enrollment of 4,356 students and a current surplus of 1,126 seats, leading to a utilization rate of 89.5 percent.

Figure 4-1 Community School District 24, Subdistrict 2

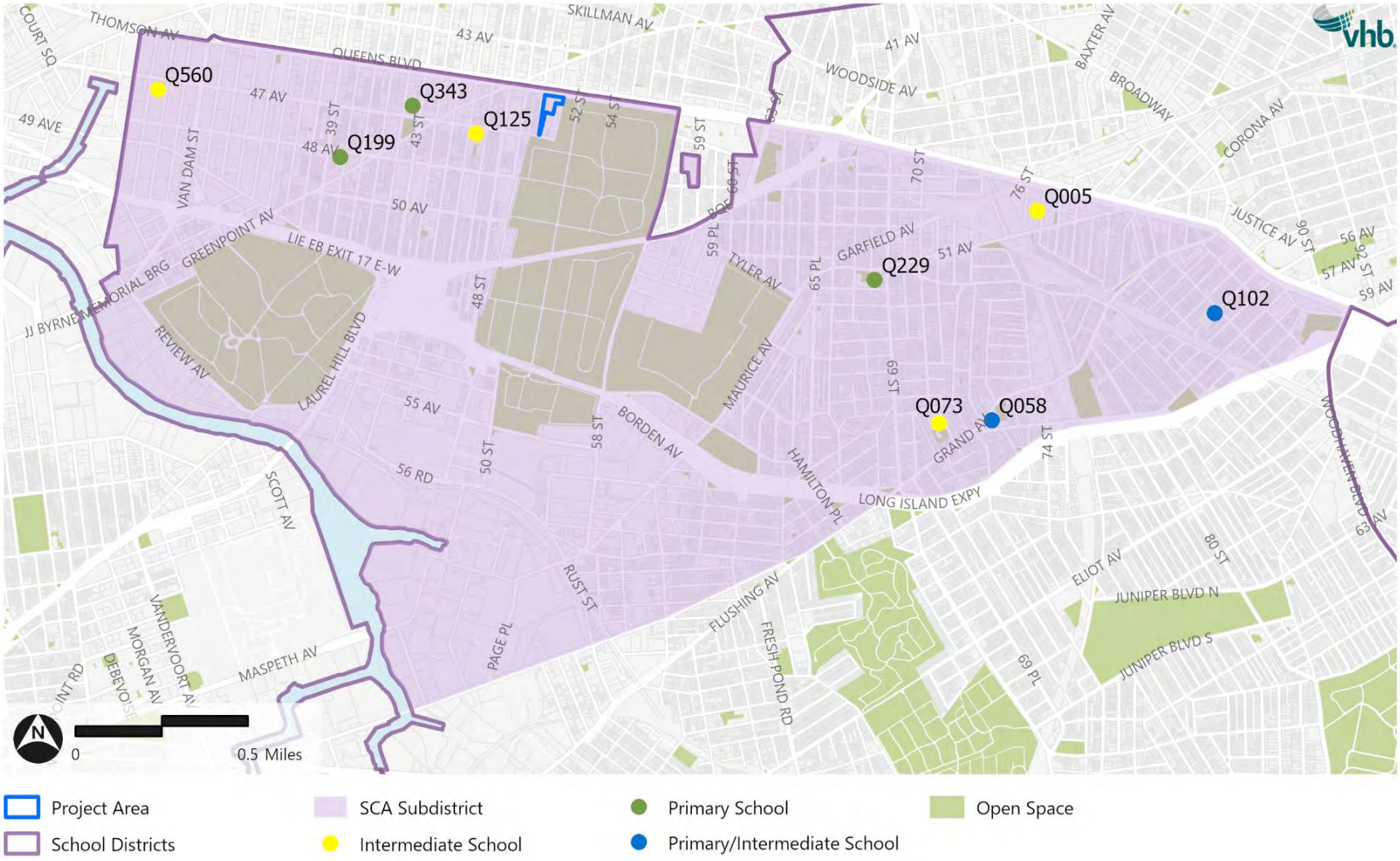


Table 4-2 Public School Enrollment, Capacity, and Utilization for Existing Conditions, Community School District 24, Subdistrict 2

Org. ID	Bldg. ID	School Name	Address	Enrollment[1]	Target Capacity	Available Seats	Utilization
Primary Schools							
Q058	**Q058**	P.S. 58 - The School of Heroes	72-24 Grand Avenue	667	668	1	100%
Q102	**Q102**	P.S. 102 Bayview	55-24 Van Horn Street	740	666	-74	111%
Q199	**Q199**	P.S. 199 Maurice A. Fitzgerald	39-20 48 Avenue	500	536	36	93%
Q229	**Q229**	P.S. 229 Emanuel Kaplan	67-25 51 Road	1,068	1,056	-12	101%
Q343	**Q313**	The Children's Lab School	45-45 42nd Street	461	413	-48	112%
			Study Area Total:	**3,436**	**3,339**	**-97**	**102.9%**
Intermediate Schools							
Q005	**Q005**	I.S. 5 - The Walter Crowley Intermediate School	50-40 Jacobus Street	1,201	1,504	303	80%
Q058	**Q058**	P.S. 58 - The School of Heroes	72-24 Grand Avenue	85	85	0	100%
Q073	**Q073**	I.S. 73 - The Frank Sansivieri Intermediate School	70-02 54 Avenue	1,187	1,495	308	79%
Q102	**Q102**	P.S. 102 Bayview	55-24 Van Horn Street	375	337	-38	111%
Q125	**Q125**	I.S. 125 Thom J. McCann Woodside	46-02 47 Avenue	1,330	1,872	542	71%
Q560	**Q891**	Robert F. Wagner, Jr. Secondary School for Arts and Technology	47-07 30th Place	178	189	11	94%
			Study Area Total	**4,356**	**5,482**	**1,126**	**79.5%**

Sources: LCGMS 2025, 2024-2025 Blue Book
Note:
[1] Only Enrollment and capacity data for relevant grades were included for each primary and intermediate school. Charter, citywide gifted and talented, D75 special education, and D79 alternative high school equivalency schools are not included in the analysis.

Future No-Action Condition

Enrollment Projections

Projected enrollment was determined for the future 2029 No-Action condition using SCA's *Enrollment Projections for the New York City Public Schools, 2024-25 to 2033-34*, which references DOE's projected New Housing Starts, as well as Panel for Educational Policy (PEP) proposals for changes in school utilization. SCA enrollment projections are available at the school district level; they focus on the

natural growth of New York City's student population (through births and grade retention) and do not base projections on individual future residential developments planned for the subdistrict study area (No-Action development projects). DCP provided a proportion of this projection that would be allocated to each of the subdistricts. These proportions equate to approximately 2,594 primary students and 3,888 intermediate students that would be enrolled in the subdistrict in the future No-Action condition. These enrollment projections form the baseline projected enrollment in the future No-Action condition as "Projected 2029 Enrollment."

Additional increases in enrollment derived from the SCA's Projected New Housing Starts data are shown under "Students Introduced by No-Action Residential Development" in **Table 4-3**. With the addition of students expected from SCA's Projected New Housing Starts, No-Action enrollment would total 2,736 primary students and 3,939 intermediate students.

Projected Capacity Changes

There is one projected capacity change to existing schools in the study area expected under the future No-Action condition. Within Subdistrict 2, a new primary school located at 46-10 70th Street, with a capacity of 451 seats, is anticipated to be completed in June 2026.

No-Action Utilization

As shown in **Table 4-3**, under the No-Action condition, primary schools in CSD 24, Subdistrict 2 would operate within capacity, with a 68.2 percent utilization rate and a surplus of 1,277 seats. Intermediate schools would operate within capacity, with a 65.4 percent utilization rate and a surplus of 2,088 seats.

Table 4-3 Projected Public School Enrollment, Capacity, and Utilization, No-Action Condition by 2029, School District 24, Subdistrict 2

Projected 2029 Enrollment	Students Introduced in No-Action Residential Development	Total No-Action Enrollment	Capacity	Available Seats	Utilization (%)
Primary Schools					
2,594	143	2,736	3,790	1,053	72.2%
Intermediate Schools					
3888	51	3,939	5,482	1,542	71.9%

Source: SCA's Enrollment Projections for the New York City Public Schools, 2024-25 – 2033-34;

Future With-Action Condition

As detailed above, the Proposed Actions are anticipated to result in the development of 320 dwelling units, which would introduce approximately 97 primary students and 35 intermediate school students to the subdistrict.

As shown in **Table 4-45**, primary schools in CSD 24, Subdistrict 2 would continue to operate within capacity in the With-Action condition. The subdistrict primary schools would operate at 74.8 percent capacity with a surplus of 956 seats. The collective utilization rate of primary schools in the With-Action condition would increase by 2.6 percent from the No-Action condition. Because primary

schools would operate below 100 percent utilization under With-Action conditions, the Proposed Actions would not result in significant adverse impacts to primary schools.

Intermediate schools would continue to operate within capacity. Under the With-Action condition, the subdistrict intermediate schools would operate at approximately 72.5 percent capacity with 1,507 available seats, a 0.6 percent increase in utilization over the No-Action condition. Secondary schools would operate below 100 percent utilization in the With-Action condition and, therefore, would not result in significant adverse impacts as a result of the Proposed Actions.

Table 4-4 Projected Public School Enrollment, Capacity, and Utilization for With-Action Condition, School District 24, Subdistrict 2

Total No-Action Enrollment	Students Generated by Project	Total With-Action Enrollment	Projected Capacity	Available Seats	Utilization (%) with Project	Change in Utilization (%) from No-Action
Primary Schools						
2,736	97	2,833	3,790	956	74.8%	2.6%
Intermediate Schools						
3,939	35	3,974	5,482	1,507	72.5%	0.6%

Source: SCA Enrollment Projections for New York City Public Schools by the Statistical Forecasting, 2024-25 – 2033-34;

5

Open Space

This section assesses the potential impacts of the Proposed Actions on open space. The *2025 City Environmental Quality Review (CEQR) Technical Manual* defines open space as publicly or privately-owned land that is publicly accessible and available for leisure, play, or sport, or is set aside for the protection and/or enhancement of the natural environment.

Introduction

This section assesses the potential effects on open space that could result from the Proposed Actions. Open space is defined as publicly or privately owned land that is publicly accessible and operates, functions, or is available for leisure, play, or sport, or set aside for the protection and/or enhancement of the natural environment. Open space that is used for sports, exercise, or active play is classified as active, while open space that is used for relaxation, such as sitting or strolling, is classified as passive. According to the *CEQR Technical Manual*, an analysis of open space is conducted to determine whether a proposed action would have a direct impact resulting from the elimination or alteration of open space and/or an indirect impact resulting from overtaxing available open space.

As described in **Part I: Project Description**, the Applicant is seeking a zoning map amendment and a zoning text amendment (the Proposed Actions) affecting Queens Block 2283, Lots 1, 12, 22, 36, and 43 (the Project Area). The Proposed Actions would facilitate the development of a nine-story mixed-use building of approximately 305,362 gross square feet (gsf) (the Proposed Project) on Lots 1, 12, 22, and 36 (the Development Site, or Projected Development Site 1) at 50-02 Queens Boulevard in the Woodside neighborhood of Queens Community District 2. The Proposed Project would include approximately 265,474 gsf of residential space (257 units), 16,653 gsf of commercial space, 4,762 gsf of community facility (daycare) space, and 25 accessory parking spaces. The Proposed Project would be subject to Mandatory Inclusionary Housing (MIH) program requirements.

In addition to the Applicant-owned Projected Development Site 1, the Proposed Actions would also affect the non-Applicant-owned property at Lot 43 (Projected Development Site 2). In the future with

the Proposed Actions, Projected Development Site 2 is expected to be redeveloped with a 14-story mixed-use building of approximately 74,944 gsf, containing approximately 63,089 gsf of residential space (63 units), 3,228 gsf of commercial space, and 24 accessory parking spaces. Collectively, the Proposed Project and the anticipated development on Development Site 2 are the With-Action developments.

In total, the Proposed Actions would introduce approximately 328,563 gsf of residential space (320 units, 64 to 96 of which would be affordable pursuant to MIH), 19,881 gsf of commercial space, 4,762 gsf of community facility (daycare) space, and 49 accessory parking spaces, totaling 380,306 gsf of development on the two Projected Development Sites.

Compared to the No-Action condition, the With-Action condition would result in a net increase in the number of residents greater than CEQR thresholds. Therefore, in accordance with CEQR guidelines, this open space analysis of the Proposed Actions evaluates the change in residential population relative to the total amount of open space in the study area. The anticipated number of net new workers would not trigger a non-residential analysis.

Methodology

Per guidance in the *CEQR Technical Manual*, an open space analysis is generally conducted if a proposed project would introduce more than 200 new residents or 500 new employees to an area. The Proposed Project would introduce a new residential population of 815 residents, and thus a residential open space analysis is warranted. The anticipated number of workers introduced by the Proposed Project would not exceed 500. Therefore, a non-residential open space analysis is not required.

Direct Effects Analysis

Consistent with the *CEQR Technical Manual*, a direct effects analysis should be performed if a proposed project would directly affect open space conditions by causing the loss of public open space; changing the use of an open space so that it no longer serves the same user population; limiting public access to an open space; or increasing noise or air pollutant emissions, odor, or shadows that would temporarily or permanently affect the usefulness of a public open space. A proposed project can also directly affect an open space by enhancing its design or increasing its accessibility to the public.

The Proposed Actions would not result in a physical loss of public open space, affect the use of an open space so that it no longer serves the same user population, limit public access to an open space, nor cause increased noise or air pollutant emissions, odors, or shadows on public open space that would affect its usefulness. Therefore, no analysis of direct effects to open space is warranted.

Indirect Effects Analysis

An indirect effects analysis is performed where a proposed project could add sufficient population, either residents or non-residents, such that capacity of the open space to serve the population would be noticeably diminished. The threshold for such an analysis is whether a proposed project would introduce more than 175 incremental units in existing R1-R4 districts or 250 incremental units in existing R5-R12, C, or M districts or 500 nonresidents (workers or visitors) to the area.

Compared to the future No-Action condition, the Proposed Actions would result in a net increase of 320 units and a net reduction of 68 workers. Therefore, following *CEQR Technical Manual* guidance, an indirect residential open space analysis is required, with a study area encompassing an approximately half-mile radius around the Project Area. The purpose of the indirect effects analysis is to quantitatively assess the adequacy of open space in the study area for existing and potential future users based on an inventory of open space resources and the effect of the residential population increase anticipated with the Proposed Actions as well as any population increase in the No-Action condition due to other planned or proposed developments.

Specifically, an indirect effects analysis includes:

- Identification of the open space user groups: residents. To determine the number of residents to be included in the analysis, population data from the 2019-2023 American Community Survey (ACS) 5-Year Estimates were compiled for census tracts within the study area.
- An inventory of all publicly accessible open spaces in the study area, using secondary sources supplemented with field surveys.
- A quantitative assessment of the open space ratio (OSR) in the study area—calculated as the ratio of open space acreage to user population—compared to benchmarks established in the *CEQR Technical Manual*. These include the optimal ratio for resident populations, which is 2.0 acres of active open space per 1,000 residents and 0.5 acres of passive open space per 1,000 residents.
- An evaluation of qualitative factors affecting open space resources.

According to the *CEQR Technical Manual*, projects that may result in significant quantitative impacts on open space resources are typically further assessed in a qualitative assessment to determine the overall significance of the impact. Factors such as close proximity to substantial open space resources just outside of the study area and park condition and utilization are considered in the qualitative assessment.

Walk-to-a-Park Initiative

New York City, as part of the OneNYC 2050 Building a Strong and Fair City plan, has set a goal that 85 percent of New York City residents live within a walking distance of a park by 2030. To help the City reach this goal, the NYC Department of Parks and Recreation (NYC DPR) has a Walk-to-a-Park initiative that focuses on increasing access to parks and open space in areas of the city where residents live further than walking distance of a park. According to Walk-to-a-Park service area geographic data provided by the City, the Project Area does not overlap with any known walk gap areas (see **Figure 5-1**).

Open Space Study Area

According to the *CEQR Technical Manual*, the first step in an open space analysis is to define and map a study area for the open space inventory as well as the population using those open spaces within a specified distance of a project. The size of the study area is based on the distance a person may be reasonably assumed to walk to reach a local open space. Workers typically use passive open spaces within a quarter mile of their workplace, while residents use both passive and active open spaces and are more likely to travel farther—up to a half-mile from their places of residence—to reach open spaces. Because the Proposed Actions would not generate a net increase in workers above the 500-employee threshold compared to the future No-Action condition, only a residential study area was defined. The residential study area comprises the area within a half-mile distance from the Project Area.

Figure 5-1 "Walk to a Park" Service Area



Pursuant to the *CEQR Technical Manual*, the study area comprises all census tracts that have at least 50 percent of their area located within a half-mile radius of the Project Area. Ten census tracts in Queens County have at least 50 percent of their area located within a ahlf-mile of the study area: Tracts 169, 181.02, 183, 185.01, 185.02, 235.01, 235.02, 251, 253.01, and 253.02. See **Table 5-2** for the open space study area and census tracts. New Calvary Cemetery is located directly southeast of the Development Site, of which almost nine acres are within the half-mile radius. The Cemetery is open to the public from 9 AM to 4:30 PM daily and includes passive walking paths and benches. Given the cemetery's close proximity to the Development Site, the portion of this resource that occurs north of the Brooklyn Queens Expressway was included in the quantitative assessment.

Next, open spaces within this study area are included in an open space inventory. Open space that is accessible to the public on a constant and regular basis for active and passive recreation, including for designated daily periods, is defined as "public" and analyzed under CEQR. Public open space may be under government or private jurisdiction and may include neighborhood and regional parks, public plazas, outdoor schoolyards, promenades, greenways, landscaped malls, housing complex grounds, nature preserves, gardens, church yards, cemeteries, and waterfront piers—given that they have recreational amenities and are available for use by the general public on a constant and regular basis.

Impact Assessment

The adequacy of open space in the study area is based on ratios of usable open space acreage to the study area populations (the OSR). The *CEQR Technical Manual* outlines the following guidelines for residential assessments:

- The City attempts to achieve a ratio of 2.50 acres per 1,000 residents for large-scale proposals. Ideally, this would consist of 0.50 acres of passive open space and 2.00 acres of active open space per 1,000 residents. However, these goals are often not feasible for many areas of the City and they do not constitute an impact threshold. Rather, it is a benchmark that represents how well an area is served by its open space.
- A ratio that meets the Citywide Community District median ratio of 1.50 acres of open space per 1,000 residents is also recommended.

The determination of significant adverse impacts is based on how a project would change the OSR in a study area, as well as qualitative factors not reflected in the quantitative assessment. According to the *CEQR Technical Manual*, if a project would reduce an OSR and consequently result in overburdening existing facilities, or if it would substantially exacerbate an existing deficiency in open space, it may result in a significant impact on open space resources. A proposed project may result in a significant adverse impact under the following circumstances:

- There would be a direct displacement/alteration of existing open space within the study area that has a significant adverse effect on existing users, unless the proposed project would provide a comparable replacement (size, usability, and quality) within the study area (i.e., there is a net loss of publicly accessible open space).
- The project would reduce an OSR by more than the general guidelines for the open space percentage change guided in the *CEQR Technical Manual* and consequently result in overburdening existing facilities, or if it would substantially exacerbate an existing deficiency in open space. In areas that have been determined to be extremely lacking in open space, a reduction as small as one percent may be considered significant, warranting further analysis. See **Table 5-1** for the relevant impact thresholds for analysis.

Table 5-1 Percent Change Guidance to Determine Possible Open Space Impact

Total OSR Range	Active OSR Range	Passive OSR Range	Percentage Change in OSR[1]
2.01 to 2.50[2] or greater	1.61 to 2.0 or greater	0.41 to 0.50 or greater	5%
1.51 to 2.00	1.21 to 1.60	0.31 to 0.40	4%
1.01 to 1.50	0.81 to 1.20	0.21 to 0.30	3%
0.51 to 1.00	0.41 to 0.80	0.11 to 0.20	2%
0.50 or less	0.01 to 0.40	0.01 to 0.10	1%

Notes:
[1] Signifying a Possible Adverse Open Space Impact
[2] 2.5 OSR is the planning goal in NYC, with optimal distribution goal of 2.0 Active OSR and 0.5 Passive OSR

Detailed Assessment

Existing Conditions

Study Area Population

As shown in **Table 5-2**, based on the 2019-2023 5-year ACS data, the 10 census tracts in the open space study area contain a total residential population of 40,844. Residents aged between 20 and 64 make up the largest age cohort (approximately 66.7 percent) of the residential population in the half-mile residential study area. The next highest cohort is residents aged 65 years and over (approximately 14.3 percent). There is a higher percentage of residents aged between 20 and 64 in the study area as compared to Queens County (61.1 percent) and New York City (61.4 percent) as a whole. The higher percentage of residents aged between 20 and 64 in the study area is also evident when comparing the median age of the study area to that of Queens County. The study area's median age is 39.3 compared with 40.4 in Queens County. The study area median ages by census tract ranges from a low of 31.9 in Census Tract 235.01 and to a high of 41.9 in Census Tract 253.01. This demographic data for the residential open space study area suggests a need for facilities geared towards the recreational needs of adults, as the study area exhibits a high percentage of residents aged between 20 and 64. Therefore, there may be more demand for publicly accessible active open space in the residential study area because of a higher-than-average median age and percentage of adults as a portion of the population total. However, this is offset by the second-highest percentage of senior residents aged 65 years and older, who require access to passive recreational uses.

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 aged 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 aged ten through 14 use playground equipment, court spaces, and sports 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, which require bike paths, promenades, and roadways. Adults also gather with families for picnicking, ad hoc active sports, 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 5-2 Existing Population Age Distribution within the Study Area

Census Tract	Total Res Population	Age Distribution												Median Age
		Under 5		5 to 9		10 to 14		15 to 19		20 to 64		65 and over		
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
169	5,387	298	5.5%	262	4.9%	411	7.6%	33	0.6%	3,641	67.6%	742	13.8%	41.7
181.02	3,679	101	2.7%	264	7.2%	168	4.6%	191	5.2%	2,573	69.9%	382	10.4%	40.6
183	5,459	515	9.4%	145	2.7%	317	5.8%	220	4.0%	3,407	62.4%	855	15.7%	39.3
185.01	3,714	125	3.4%	97	2.6%	159	4.3%	211	5.7%	2,554	68.8%	568	15.3%	40.5
185.02	2,981	165	5.5%	85	2.9%	162	5.4%	67	2.2%	2,148	72.1%	354	11.9%	36.9
235.01	3,936	200	5.1%	245	6.2%	329	8.4%	192	4.9%	2,458	62.4%	512	13.0%	31.9
235.02	2,673	54	2.0%	93	3.5%	91	3.4%	118	4.4%	1,981	74.1%	336	12.6%	37.2
251	6,018	372	6.2%	327	5.4%	235	3.9%	144	2.4%	3,898	64.8%	1,042	17.3%	41.8
253.01	3,813	114	3.0%	184	4.8%	76	2.0%	205	5.4%	2,556	67.0%	678	17.8%	41.9
253.02	3,184	270	8.5%	120	3.8%	193	6.1%	229	7.2%	2,012	63.2%	360	11.3%	35.3
Total	40,844	2,214	5.4%	1,822	4.5%	2,141	5.2%	1,610	3.9%	27,228	66.7%	5,829	14.3%	39.3
Queens County Total	2,330,124	130,458	5.6%	121,676	5.2%	133,685	5.7%	120,101	5.2%	1,424,424	61.1%	399,780	17.2%	40.4
NYC Total	8,516,202	498.233	5.9%	462,195	5.4%	500,037	5.9%	458,379	5.4%	5,231,563	61.4%	1,365,795	16.0%	38

Source: 2019-2023 ACS 5-year Estimates
Note:
Percentages may not add up to 100 due to rounding

Study Area Open Space Resources

Open space that is accessible to the public on a constant and regular basis, including for designated daily periods, is defined as publicly accessible and is analyzed as such per *CEQR Technical Manual* guidelines. Publicly accessible open space may be under government or private jurisdiction and includes open space designated through regulatory approvals, such as public plazas. Private open space—that which is not publicly-accessible or is available only to limited users and is not available to the public on a constant and regular basis—is not included in CEQR-compliant quantitative open space analyses.

In addition to the distinction between public and private open spaces, individual spaces may also be classified as either active or passive, according to the types of activities for which the space is primarily used. Open space that is used for sports, exercise, or active play is classified as active and consists mainly of recreational facilities, while open space that is used for relaxation, such as a plaza, is classified as passive. Some types of open space facilities, such as esplanades, may be devoted to both active and passive uses.

In conducting the open space analysis for the Proposed Actions, publicly accessible open spaces within the study area were inventoried. The open space resources were identified by their location, owner, features, total acreage, and acreage of passive and active areas. The secondary sources for this analysis included land use and geographic PLUTO data at the tax lot level and additional data provided by NYC DPR. According to the *CEQR Technical Manual*, public open space does not include Greenstreets, malls without seating, or sidewalks. The condition of each open space resource was categorized as "Excellent," "Good," "Fair," or "Poor." A resource was considered in excellent condition if the space was clean and attractive, and all equipment was present and in a state of good repair. A good resource had minor problems such as litter or older but operative equipment. A fair or poor resource 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 to potential users. Determinations were made subjectively, based on a visual assessment of the open space resources.

All of the publicly accessible open space resources that include passive and active open space within the study area are shown in **Figure 5-2** and listed in **Table 5-3**. The study area contains eight open space resources. These eight resources are a mix of neighborhood parks, playgrounds, plazas, and comprise 15.66 total acres of open space, of which approximately 2.04 is active and 13.64 is passive. Although located outside of the residential study area census tracts, New Calvary Cemetery is located directly southeast of the Project Area and almost nine acres are within the study area. The Cemetery is open to the public from 9 AM to 4:30 PM daily and includes passive walking paths and benches. Given the cemetery's close proximity to the Project Area, the portion of this resource that occurs north of the Brooklyn Queens Expressway was included in the quantitative assessment. Most of the open spaces within the study area are in either good or excellent condition. Four have moderate utilization and four have high utilization.

It is important to consider that there are multiple open spaces within a half-mile of the Project Area that new residents generated by the Proposed Actions may visit but are excluded from the quantitative analysis because these resources are located outside of the open space study area. Torsney Playground is located within a half-mile of the Project Area, has dog- friendly areas, playgrounds, handball courts, and spray showers. Furthermore, there are smaller neighborhood parks to the east of the Project Area that would be accessible for use by residents. These resources are not considered in the quantitative open space analysis but are considered qualitatively due to their proximity to the Project Area.

Figure 5-2 Residential Open Space Study Area Map

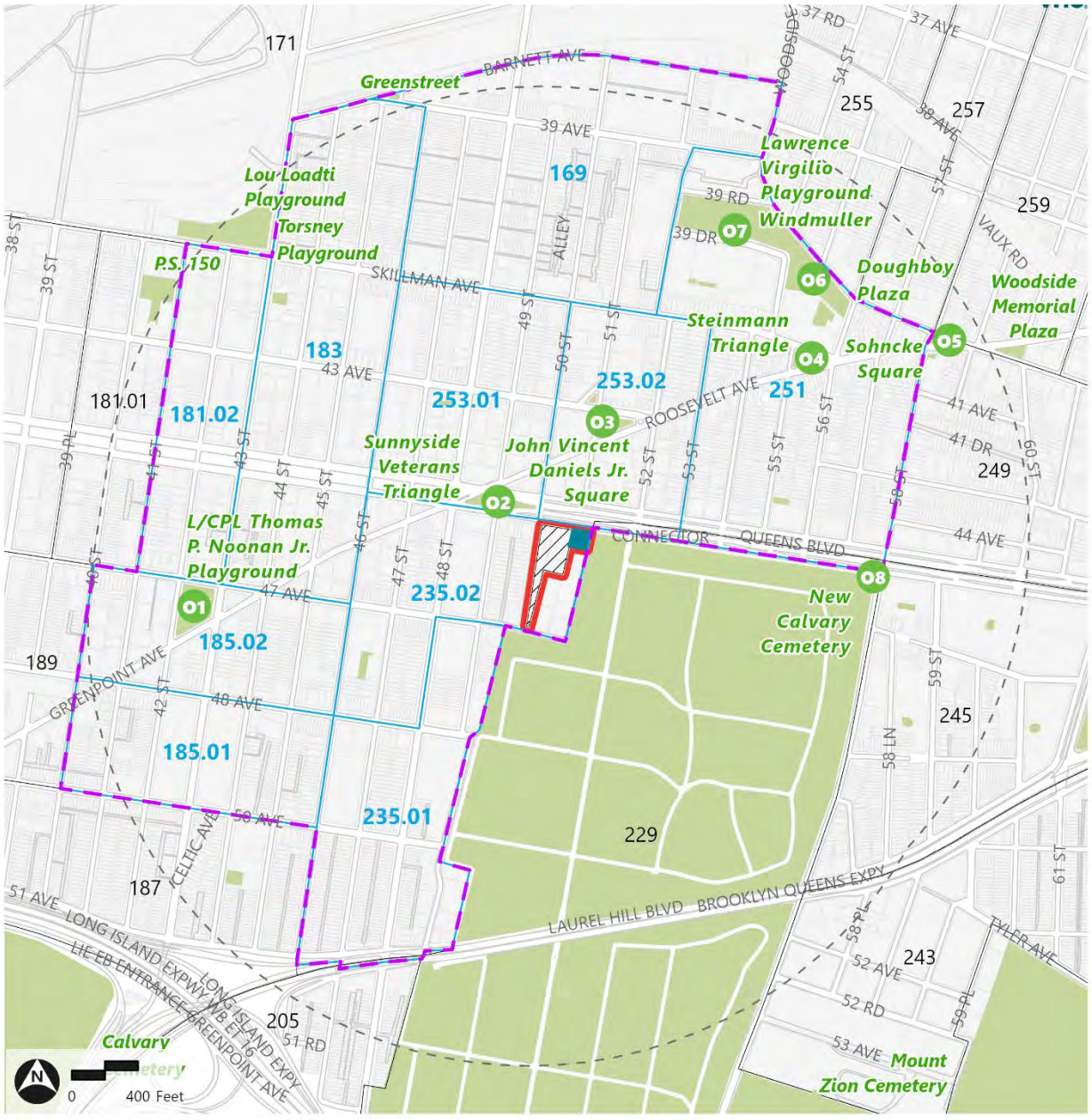


Table 5-4 Existing Study Area Open Spaces

Map No.	Name	Owner/ Agency	Features and Amenities	Total Acres	Active (Acres)	Passive (Acres)	Condition/Utilization
O1	L/CPL Thomas P. Noonan Jr. Playground	NYC Parks	Handball courts, playgrounds, spray showers	1.05	0.53	0.53	Good/Moderate
O2	Sunnyside Veterans Triangle (Joe Sabba Park)	NYC Parks	Benches, trees, plantings	0.47	0	0.47	Excellent/Moderate
O3	John Vincent Daniels Jr. Square	NYC Parks	Benches, trees, plantings, walkways	0.25	0	0.25	Excellent/High
O4	Steinmann Triangle	NYC Parks	Benches, trees, plantings, walkways	0.21	0	0.21	Good/Moderate
O5	Sohncke Square	NYC Parks	Benches, trees, plantings	0.04	0	0.04	Good/High
O6	Doughboy Plaza	NYC Parks	Benches, trees, plantings, walkways, dog-friendly areas	1.71	0	1.71	Excellent/Moderate
O7	Windmuller Park/Lawrence Virgilio Playground	NYC Parks	Basketball courts, handball courts, fitness equipment, outdoor pools, dog-friendly areas, running tracks, spray showers, play equipment, seating	3.01	1.51	1.51	Good/High
O8	New Calvary Cemetery	The Archdiocese of New York	Walking paths, seating, trees	8.92	0	8.92	Good/High
			Total	**15.66**	**2.04**[1]	**13.64**[1]	

Source: NYC Department of Parks and Recreation
[1] Numbers may not add up to the hundredths due to rounding

Adequacy of Open Spaces

The open space analysis focuses on open space that may be used by residential populations. Using *CEQR Technical Manual* guidelines, the adequacy of open space was first analyzed quantitatively by comparing the ratio of existing active and passive open space acreage in the study area per 1,000 residents with the CEQR benchmark of 2.0 acres of active open space and 0.5 acres of passive open space per 1,000 residents.

The existing residential population of the study area was estimated at 40,844 people. The residential study area currently has an overall open space ratio of 0.383 acres per 1,000 residents, which is well below the City's goal of 2.5 acres per 1,000 residents and average of 1.5 acres per 1,000 residents (see **Table 5-5**). The study area's residential active open space ratio is 0.050 acres per 1,000 residents, which is also below the City's guideline of 2.0 acres per 1,000 residents, and the residential passive open space ratio is 0.334 acres per 1,000 residents, which is below the City's guideline of 0.5 acres per 1,000 residents. Thus, based on the quantitative analysis, there is an existing deficiency in open space serving the residential population of the study area.

Table 5-5 Existing Conditions – Adequacy of Open Space Resources in Residential Half-Mile Study Area

Population	Open Space Acreage		Ratios*	DCP Guidelines
40,844	Active	2.04	0.050	2.00
	Passive	13.64	0.334	0.50
	Total	**15.66**	**0.383**	**2.50**

* Acres per 1,000 residents

No-Action Condition

As described in the **Methodology** section above, the No-Action condition accounts for population growth and changes expected to the inventory of open space resources.

Study Area Population

New development in the residential study area would result in an additional 577 residential units, which is estimated to increase the residential population by 1,391 for a total residential population of 42,235 persons in 2029. It is anticipated that the new population introduced to the study area would have an age distribution similar to that of existing conditions in the study area.

Table 5-6 No-Action Condition: No-Build Developments Estimated Population

Location	Net Residential Units	Additional Population[1]
49-06 Queens Boulevard	1	2
46-11 Queens Boulevard	19	46
51-22 Roosevelt Avenue	90	217
43-12 50 Street	55	133
43-25 52 Street	60	145
43-09 52 Street	33	80
41-50 47 Street	-1	-2
43-23 51 Street	75	181
41-34 45 Street	25	60
41-56 55 Street	3	7
41-58 55 Street	3	7
43-21 54 Street	2	5
43-19 54 Street	2	5
56-12 Roosevelt Avenue	-1	-2
55-02 Roosevelt Avenue	10	24
39-38 45 Street	-1	-2
43-42 43 Street	99	239
56-12 Roosevelt Avenue	9	22
54-21 Roosevelt Avenue	4	10
39-84 46 Street	-1	-2
45-07 45 Street	63	152
40-28 44 Street	-1	-2
39-28 46 Street	-1	-2
39-26 47 Street	-2	-5
43-31 44 Street	3	7
41-22 44 Street	29	70
Total	**577**	**1,391**

Source: NYC DCP, Housing Database (25Q1)
Notes:
[1] Based on the Average Household Size for Queens Community District 2 of 2.41 (2020 Census)

Study Area Open Spaces

In the No-Action condition, there is one new confirmed open space planned within the study area, Lt. Michael R. Davidson Playground, that is expected to be constructed by the 2029 analysis year. The new playground would feature approximately 0.23 acres of open space consisting of walkways, seating, and play areas (see **Figure 5-3**). It would bring the total open space acreage within the study area to 15.89 acres, with 2.16 acres of active open space and 13.76 acres of passive open space.

Figure 5-3 Proposed No-Build Open Space



Source: NYC DPR

Adequacy of Open Spaces

In the No-Action condition, the open space ratios in the residential study area would remain below the City's guidelines. The total open space ratio would decrease to 0.376 acres per 1,000 residents. The active open space ratio would increase slightly while the passive open space ratio would decrease, as shown in **Table 5-7**. As in existing conditions, the active and passive open space ratios would remain well below the guidelines of 2.0 acres of active open space and 0.5 acres of passive open space per 1,000 residents (see **Table 5-7**).

Table 5-7 No-Action Condition – Adequacy of Open Space Resources in Residential Half-Mile Study Area

Population	Open Space Acreage		Ratios*	DCP Guidelines
42,235	Active	2.16	0. 051	2.00
	Passive	13.76	0.326	0.50
	Total	**15.89**	**0.376**	**2.50**

*Acres per 1,000 residents

With-Action Condition

Study Area Population

In the With-Action condition, 320 units would be introduced to the Project Area, which is estimated to introduce approximately 771 residents and result in a total residential population of 43,006 in the

half-mile study area. Given the proposed mix of residential unit sizes, the Proposed Actions would introduce residents in the form of families and non-families. Therefore, the residents introduced by the Proposed Actions would be expected to mirror the existing age distribution.

Adequacy of Open Spaces

Quantitative Assessment

Under the With-Action condition, the open space ratio for the residential population would decrease slightly from the No-Action condition open space ratio (see **Table 5-8**). The total open space ratio would be reduced to 0.369 acres per 1,000 residents in the With-Action condition. This is a 1.79 percent decrease in the overall open space ratio (and absolute decrease of 0.007 acres per 1,000 residents). The passive and active open space ratios would also be reduced slightly: to 0.320 and 0.050 acres per 1,000 residents, respectively. This would represent a 1.8 percent decrease for the passive open space ratio and a 1.78 percent decrease for the active open space ratio (and an absolute decrease of 0.006 and 0.001 acres per 1,000 residents, respectively).

Table 5-8 With-Action Condition – Adequacy of Open Space Resources in Residential Half-Mile Study Area

Population	Open Space Acreage		Ratios*	DCP Guidelines	Percent Change	Absolute Ratio Change[1]
43,006	Active	2.16	0.050	2.00	-1.78	-0.001
	Passive	13.76	0.320	0.50	-1.8	-0.006
	Total	**15.89[2]**	**0.369**	**2.50**	**-1.79**	**-0.007**

Notes:
[1] Acres per 1,000 people
[2] Numbers may not add up to rounding
*Cells highlighted in orange exceed the percentage change in Open Space Ratio signifying a possible adverse open space impact per the CEQR Technical Manual and Table 5-1

Given this project's open space ratios, the thresholds for a possible indirect open space impact are shown in **Table 5-1** and are as follows:

- Total OSR of 0.50 or less: a change in 1 percent
- Active OSR of 0.01 to 0.40: a change in 1 percent
- Passive OSR of 0.31 to 0.40: a change in 4 percent

This area is well below the median open space ratio, and for total and active open space ratios, it has the potential to exceed the percent change that signifies a possible adverse open space impact. However, it is important to note that the Proposed Actions would have minimal effects on the open space ratio for residents in the study area, with an absolute change in the ratio of 0.006 acres per 1,000 residents overall.

Qualitative Assessment

The Proposed Project would include a 5,379-square-foot playground and garden associated with the proposed daycare facility as well as a 12,823-square-foot terrace on the 10th floor. In addition to the terrace, the Proposed Project is also anticipated to provide a minimum of 7,205 square feet of private residential amenity space per zoning requirements which would be accessible to building residents

and would feature a mix of active (such as an indoor gym) and passive recreational uses in shared common areas. Additionally, per zoning Projected Development Site 1 would also be anticipated to provide a minimum of 1,820 square feet of private residential amenity space which may also feature a mix of active and/or passive recreational uses. These residential amenities coupled with dedicated playground and garden space for children attending the proposed daycare would help to absorb a portion of the incremental demand on active and passive open space resources introduced by the Proposed Actions and lessen the increase in utilization of surrounding open spaces.

As shown in the existing conditions assessment, all of the open spaces located within the residential study area are in good or excellent condition, and half have moderate utilization. This suggests that the open spaces located within the residential study area have capacity to serve new residents generated by the Proposed Actions. In addition, a new open space would be created in the No-Action condition. As mentioned previously, given the proposed mix of residential units, the Proposed Project would introduce residents in the form of families and non-families. Therefore, new residents generated by the Proposed Project would be expected to mirror the existing age distribution and utilize the existing and proposed open spaces in a similar manner to existing conditions.

In addition, there are additional open space resources that are located within a half mile of the Project Area but are outside of the residential study area's selected census tracts. Considering the close proximity, future residents generated by the Proposed Actions and existing residents of the surrounding neighborhood would be reasonably expected to utilize these spaces. Nearby open space resources located outside of the open space study area include Torsney Playground, Big Bush Park, Nathan Weidenbaum Park, and Woodside Memorial Plaza as well as Sunnyside Gardens. Torsney Playground is approximately 1.24 acres in size and is located approximately 0.4 miles northwest of the Project Area. The playground provides a range of active and passive recreational amenities, including basketball courts, handball courts, spray showers, playground equipment, bench seating, shade trees, and paved areas suitable for informal gathering and rest. Big Bush Park encompasses approximately 1.77 acres and is located approximately 0.6 acres east of the Project Area. The park features active recreational spaces including basketball courts and playground equipment, as well as passive amenities including open lawn areas, bench seating, walking paths, and shade trees. Nathan Weidenbaum Park is approximately 0.34 acres in size and located approximately 0.6 miles southeast of the Project Area. The park features playground equipment, bench seating, and landscaped areas. Woodside Memorial Plaza is a small, 0.10-acre plaza located at the intersection of Woodside and Roosevelt avenues, approximately 0.5 acres northeast of the Project Area, featuring passive open space amenities including bench seating, memorial features, landscaping, and paved areas. Sunnyside Gardens is an approximately 2.79-acre open space located approximately 0.6 acres north of the Project Area and features diverse recreational opportunities for the surrounding community, including tennis courts, basketball courts, a baseball field, playground equipment, spray showers, lawn areas, walking paths, bench seating, mature shade trees, and landscaped garden areas. Furthermore, the 104-acre New Calvary Cemetery is a larger open space resource that provides walking paths beyond the Brooklyn Queens Expressway and is a draw to residents of the surrounding neighborhoods given its size. All of these resources are not considered in the quantitative open space analysis (except for the portion of New Calvary Cemetery that occurs north of the Brooklyn Queens Expressway, which was included in the quantitative assessment) but are considered qualitatively due to their proximity to the Project Area and the likelihood that residents in the area utilize these spaces for their active and passive recreational needs.

Conclusion

Under the With-Action condition, the total open space ratio for the residential population would decrease by 1.16 percent compared to the No-Action condition open space ratio: 0.376 to 0.369 acres per 1,000 residents. The study area would continue to have open space ratios below the City guideline of 2.50 acres per 1,000 residents and below the Citywide median of 1.50 acres per 1,000 residents. The passive and active open space ratios would also decrease by 1.8 percent and 1.78 percent respectively (see **Table 5-8**).

The study area is well below the median open space ratio, and for total and active open space ratios, it has the potential to exceed the percent change that signifies a possible adverse open space impact. However, it is important to note, as described under existing conditions and the qualitative assessment, that there are multiple open spaces within a half-mile of the Project Area that are not included in the quantitative analysis, including Torsney Playground, Big Bush Park, Nathan Weidenbaum Park, and Woodside Memorial Plaza, Sunnyside Gardens, and the 104-acre New Calvary Cemetery that provides walking paths and is a draw to residents of the surrounding neighborhoods given its size. The Proposed Actions would also provide on-site residential amenity spaces with a mix of active and passive recreational uses, which would help meet project-generated demand on-site.

Additionally, the Proposed Project is located in an area where the existing open space resources are in good or excellent condition. In addition, the Proposed Project includes the provision of 0.42 acres of on-site open space resources that would serve residents introduced by the Proposed Project and children attending the proposed daycare. These spaces would reduce the burden on open spaces in the study area. Based on the foregoing, significant adverse impacts on open space resources will not result.

6

Shadows

A shadow is defined in the *2025 CEQR Technical Manual* as the condition that results when a building or other built structure blocks the sunlight that would otherwise directly reach a certain area, space, or feature. The purpose of this section is to assess whether new structures may cast shadows on sunlight sensitive publicly accessible resources or other resources of concern such as natural resources, and to assess the significance of their impact.

Introduction

According to the *CEQR Technical Manual*, a shadows assessment is warranted if a project would result in:

1. With-Action structures of 250 feet or more; or
2. With-Action structures of between 50 and 250 feet and be located adjacent to, within, or across the street from a sunlight-sensitive resource; and
3. Greater than 50 feet of incremental height change or substantial changes in bulk.

Sunlight-sensitive resources include publicly accessible open spaces, important sunlight-sensitive natural features, or historic resources with sun-sensitive features. As detailed in **Part I: Project Description**, the Proposed Actions are expected to facilitate the construction of one 145-foot-tall (including 20-foot-tall bulkhead) building and one 165-foot-tall building located adjacent to and across the street from sunlight-sensitive resources. As the Proposed Actions would result in over 50 feet of incremental height, a shadows assessment is warranted and provided below.

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. In accordance with the *CEQR*

Technical Manual, a preliminary screening assessment is conducted to ascertain whether shadows resulting from a project could reach any sunlight-sensitive resource at any time of year; if the preliminary assessment indicates that, in the absence of intervening buildings, shadows from a project could reach sunlight-sensitive resources on any of the representative analysis days, a detailed analysis is typically warranted. The representative analysis days are December 21 (winter solstice), June 21 (summer solstice), March 21/September 21 (vernal/autumnal equinox), and May 6/August 6 (halfway between summer solstice and the equinoxes).

Sunlight-Sensitive Resources

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:[1]

- Public open space (e.g., parks, beaches, playgrounds, plazas, schoolyards, greenways, and landscaped medians with seating). Planted areas within unused portions of roadbeds that are part of the Greenstreets program are also considered sunlight-sensitive resources. The uses and vegetation in an open space establish its sensitivity to shadows. This sensitivity is assessed for both (1) warm-weather-dependent features like wading pools and sand boxes, or vegetation that could be affected by 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 uses, such as sitting or sunning; active uses, 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 for most vegetation.
- 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 façades); 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 an 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.

Preliminary Assessment

The preliminary screening assessment consists of three tiers of analysis:

[1] According to the *2025 CEQR Technical Manual*, City streets, sidewalks, and private open spaces (such as private residential front and back yards, stoops, and vacant lots) are not considered to be sunlight-sensitive resources.

- **Tier 1 Screening:** The first tier determines a simple radius around the proposed building representing the longest shadow that could be cast. If there are sunlight-sensitive resources within the radius, the analysis proceeds to the second tier;
- **Tier 2 Screening:** The second-tier analysis 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. According to the *CEQR Technical Manual*, shadows cannot be cast within New York City within 108 degrees from True North. Topographic lines are included to demonstrate the terrain of the area;
- **Tier 3 Screening:** 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. For the Tier 3 screening, three-dimensional modeling software with the capacity to model shadows is used, and the maximum building envelope that could be achieved as a result of the proposed project is modeled and geo-located within the program. Terrain, which has been included in the Tier 1 and Tier 2 Screenings, is also incorporated into the model to account for how changes in elevation throughout the study area can influence shadows that could be cast by a proposed project. The representative days are December 21 (winter solstice), June 21 (summer solstice), March 21/September 21 (vernal/autumnal equinox), and May 6/August 6 (halfway between summer solstice and the equinoxes). The modeling software is also used to approximate times that shadows cast from the proposed project could enter and exit a resource.

Detailed Assessment

If the Tier 3 screening indicates that, in the absence of intervening buildings, shadows from a proposed project would reach a sunlight sensitive resource on any of the representative analysis days, a detailed shadow analysis would be warranted. Because existing buildings (or No-Action buildings) may already cast shadows on a sun-sensitive resource, a proposed project may not result in additional (incremental) shadows upon that resource. The detailed shadow analysis models a baseline condition (future No-Action) that is compared to the future condition resulting from the proposed project (future With-Action) to illustrate the shadows cast by the No-Action development and distinguish the additional (incremental) shadow cast by the project.

For the Proposed Project, a preliminary assessment (Tiers 1 through 3) was undertaken.

Determination of Significance

As described in the *CEQR Technical Manual*, an incremental shadow is generally not considered significant when its duration is no longer than 10 minutes at any time of year and the resource continues to receive substantial direct sunlight. A significant shadow impact can occur when an incremental shadow of 10 minutes or longer falls on a sunlight-sensitive resource and results in one of the following:

- Vegetation: a substantial reduction in sunlight available to a sunlight-sensitive feature of the resource to less than the minimum time necessary for its survival (when there was 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, with consideration given to anticipated new users and the open space's utilization rates throughout the affected time periods as well as to the inventory of available open space resources in the study area.
- 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 shadow impact occurs when the incremental shadow added by a proposed project falls on a sunlight-sensitive resource and substantially reduces or completely eliminates direct sunlight exposure, thereby significantly altering the public's use of the resource or threatening the viability of vegetation or other resources.

Preliminary Assessment

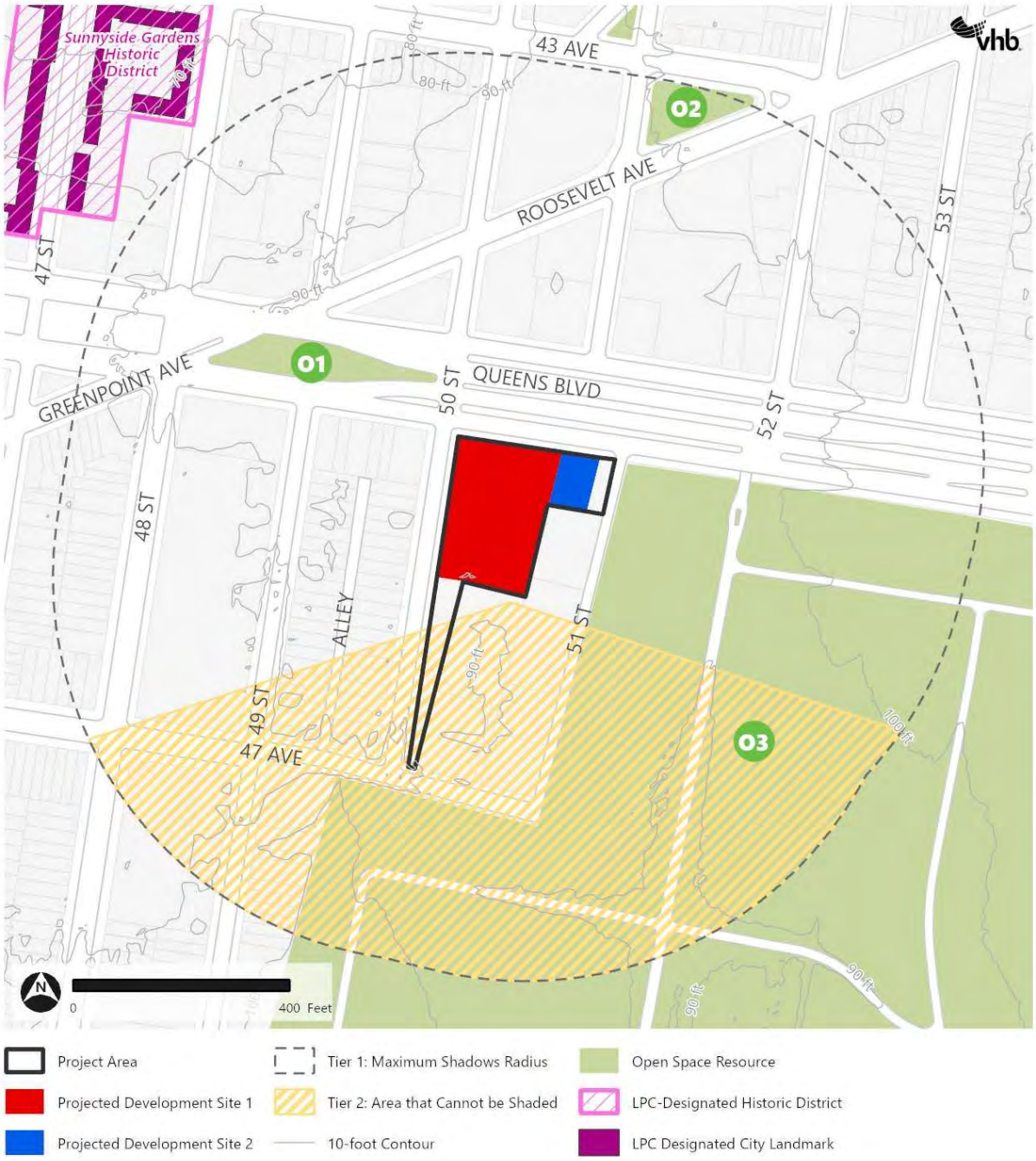
Tier 1 and 2 Screening

As discussed in **Part I: Project Description**, the Proposed Actions would allow the development of two new mixed-use buildings within the Project Area: a 12-story, approximately 145-foot-tall (including a 20-foot bulkhead) building on the Applicant-owned Projected Development Site 1 (Queens Block 2283, Lots 1, 12, 22, and 36), and a 14-story, approximately 165-foot-tall (including a 20-foot bulkhead) building on the non-Applicant-owned Projected Development Site 2 (Queens Block 2283, Lot 43).

The Project Area is located along the south side of Queens Boulevard in the Sunnyside neighborhood. The Tier 1 radius, i.e. the maximum area in which shadows could be cast by development on Projected Development Site 1 and Projected Development Site 2, is 709.5 feet from the Development Sites. The area that cannot be shaded by the Proposed Project was drawn from the southernmost point that could be shaded by a building on Development Site 1. **Table 6-1** and **Figure 6-1** shows the potential sunlight-sensitive resources identified in the Tier 1 and Tier 2 screening assessment. The figure also shows the current topographic elevation of the Development Site and surrounding area, which ranges from approximately 80 feet to 100 feet.

Three sunlight-sensitive open space resources are wholly or partially within an area that can be shadowed by the Proposed Project. These include: O1, Sunnyside Veterans Triangle; O2, John Vincent Daniels Jr. Square; and O3, New Calvary Cemetery.

Figure 6-1 Tier 1 and Tier 2 Screening



Source: NYC DCP (2024); NYC Parks (2024); NYC LPC (2024); NYS OPRHP (2024)

Table 6-1 Sunlight-Sensitive Resources in the Study Area

Map ID	Resource Name	Potential Resource Summary	Sunlight-Sensitive Elements
Open Space			
O1	Sunnyside Veterans Triangle (Joe Sabba Park)	Benches, trees, plantings	Vegetation
O2	John Vincent Daniels Jr. Square	Benches, trees, plantings, walkways	Active recreation and vegetation
O3	New Calvary Cemetery	Privately-owned cemetery featuring public-accessible walking paths	Vegetation

Source: New York City Department of Parks and Recreation open space database, NYC Capital Planning Platform POPS map, New York Cultural Resource Information System, New York City Landmarks Preservation Commission map

Tier 3 Screening Assessment

In accordance with the *CEQR Technical Manual*, a Tier 3 screening assessment was performed because the Tier 1 and Tier 2 assessments identified several sunlight-sensitive resources within ±108 degrees of True North and within the area of the longest shadow that would be cast by development on the Projected Development Sites.

The Tier 3 screening assessment was performed for the four representative days of the year set forth in the *CEQR Technical Manual*: December 21, the winter solstice and shortest day of the year; March 21/September 21, the equinoxes; May 6/August 6, the midpoints between the summer solstice and the equinoxes; and June 21, the summer solstice and the longest day of the year.

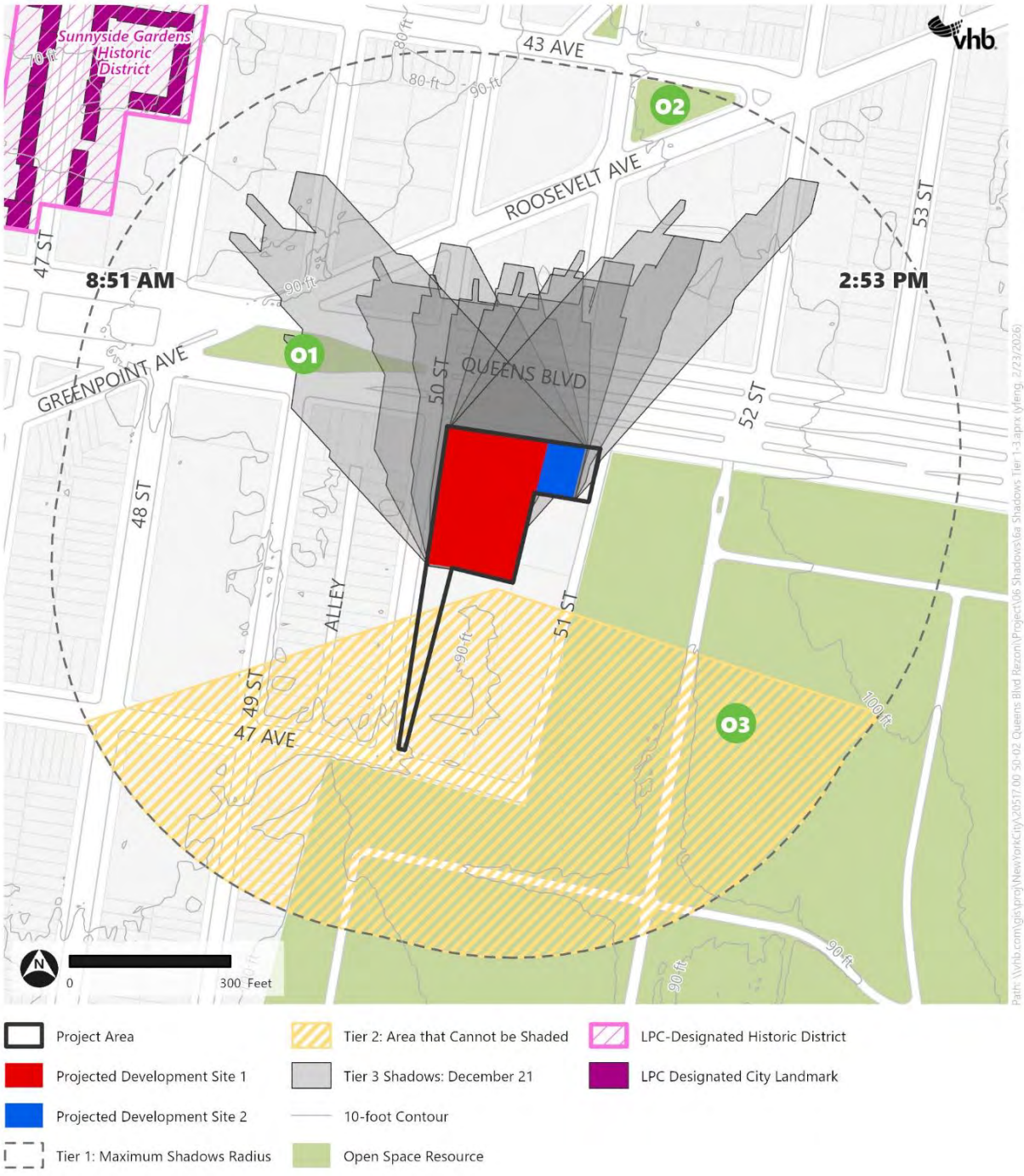
In accordance with the *CEQR Technical Manual*, a model of the buildings in the With-Action condition was developed in a three-dimensional computer program (Rhino). The model was geolocated, and the surrounding terrain was imported into the model to account for differences in topography. As noted above, the Tier 3 shadow screening shows the shadows that would be cast as a result of the Proposed Actions but does not account for existing buildings which may already cast shadows on the identified resources. See **Figure 6-2** through **Figure 6-5** below.

The Tier 3 screening indicates that in the absence of intervening structures, new buildings on the Projected Development Sites would cast shadows on the Sunnyside Veterans Triangle (Joe Sabba Park) (O1) and New Calvary Cemetery (O3). No incremental shadows would reach John Vincent Daniels Jr. Square (O2) during any of the representative analysis days.

Sunnyside Veterans Triangle (Joe Sabba Park) (O1) would experience project-generated shadows on the December 21st analysis day in the morning hours from approximately 8:51 AM to 11:00 AM. Although a significant portion of this open space resource would receive shading during this time, December is not considered the growing season per *CEQR Technical Manual* guidance and the viability of vegetation would not be threatened. Additionally, the shadows from the Projected Development Sites would not completely eliminate direct sunlight on this resource or significantly alter the public's use or enjoyment of the resource during the December analysis period. Further, this open space resource would not experience any project-generated incremental shadows during any other representative analysis period within the growing season. Therefore, significant adverse impacts are not anticipated, and a detailed analysis of this open space resource is not warranted.

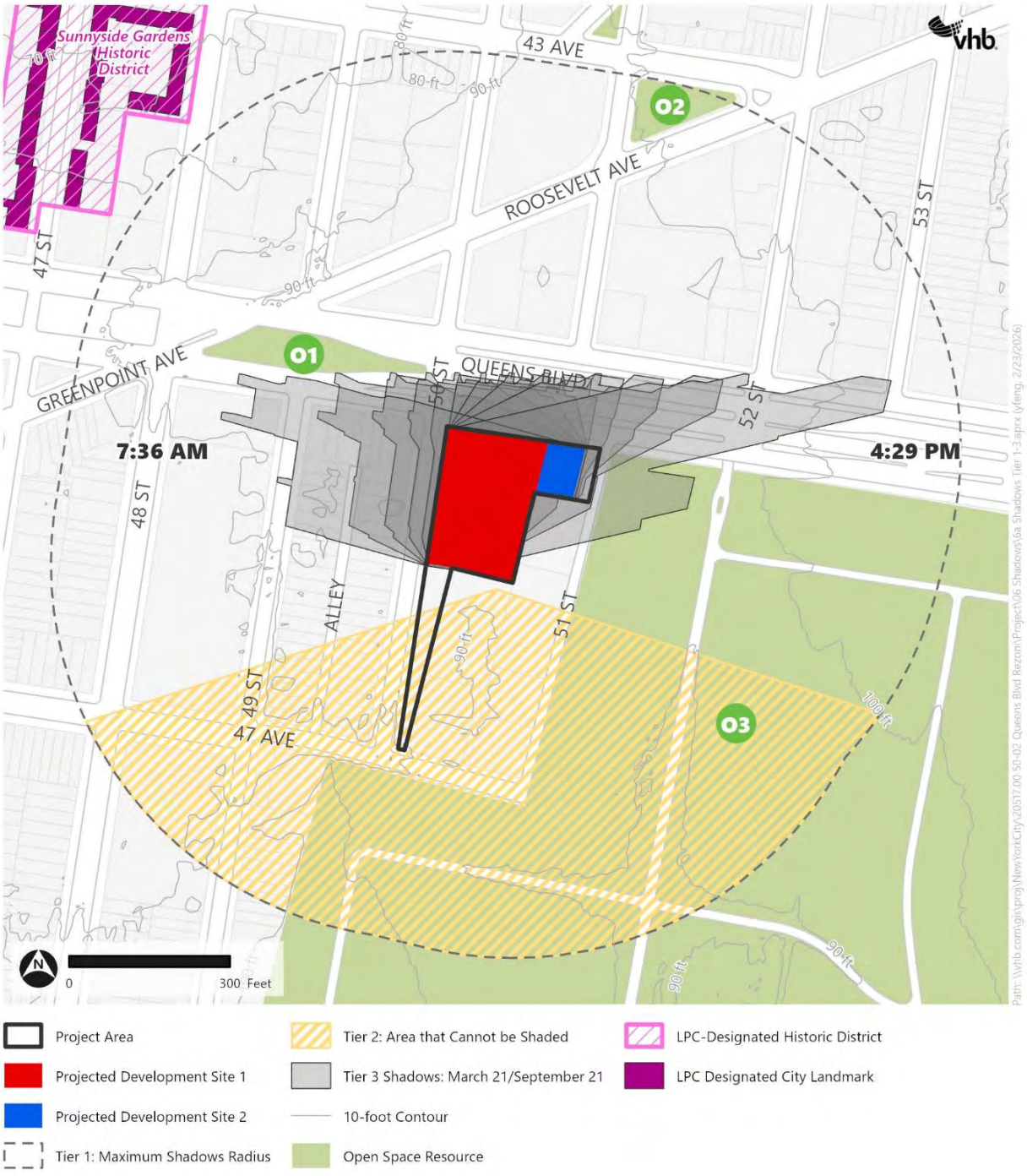
New Calvary Cemetery (O3) would experience project-generated shadows on the March 21st/September 21st, May 6th/August 6th, and June 21st analysis days. Based on **Section 5, Open Space**, the New Calvary Cemetery is a privately-owned open space with publicly accessible walking paths. Community members do not recreate in the vegetated areas of this resource but rather walk along paved paths. The shadows from the Projected Development Sites would fall on a paved walking path on the May 6th/August 6th and June 21st analysis days only (approximately one hour on the May 6th /August 6th Analysis Day; approximately one and half hour on June 21st analysis day), which would be of short duration and occur in the late afternoon. The viability of vegetation would not be threatened, sunlight would not be completely eliminated, and the public's use and enjoyment of the resource would not be significantly altered. Therefore, significant adverse impacts are not anticipated, and a detailed analysis of this open space resource is not warranted.

Figure 6-2 Tier 3 Screening December 21 Analysis Day



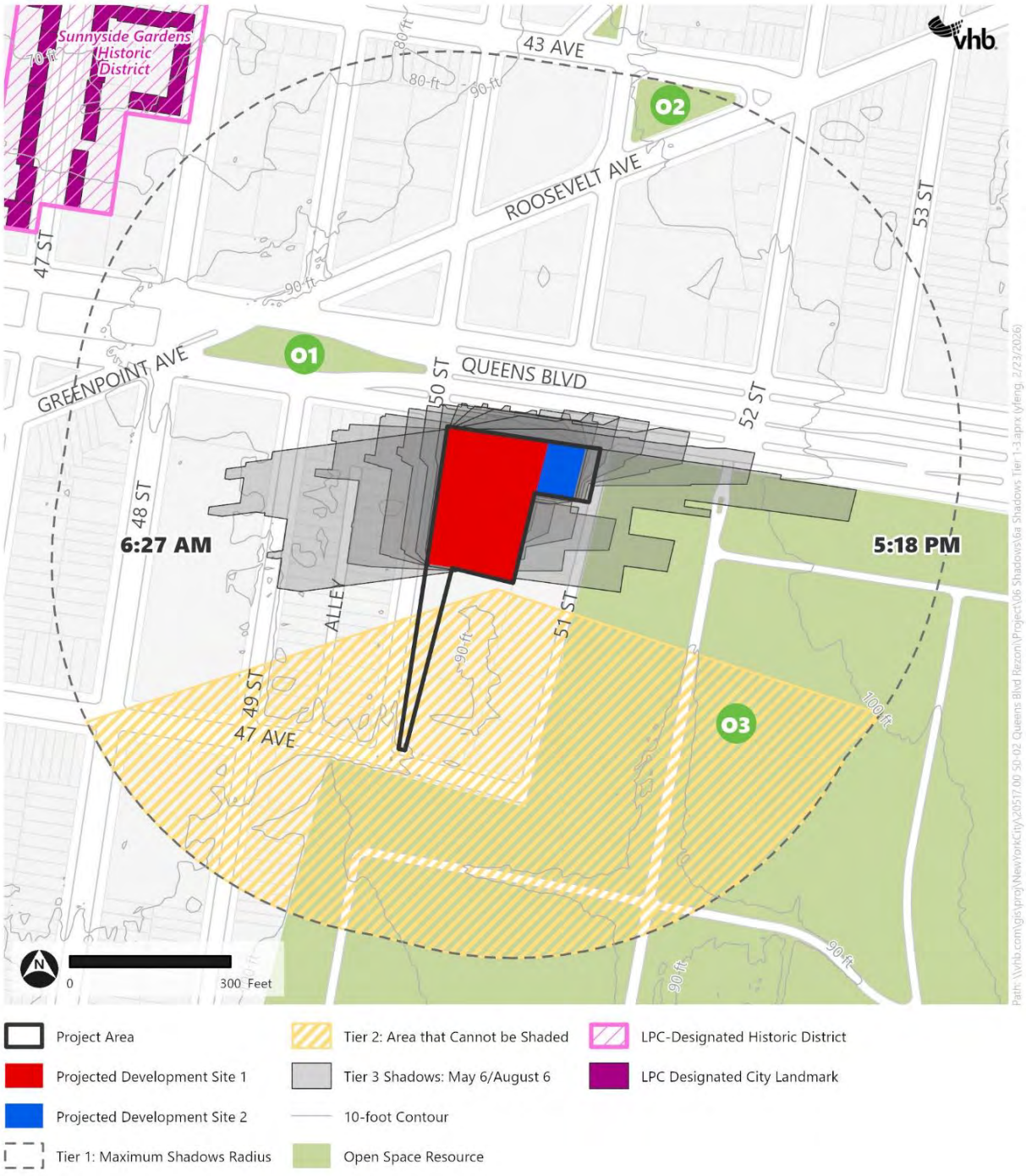
Source: NYC DCP (2025); NYC Parks (2025); NYC LPC (2025); NYS OPRHP (2025)

Figure 6-3 Tier 3 Screening March 21 / September 21 Analysis Day



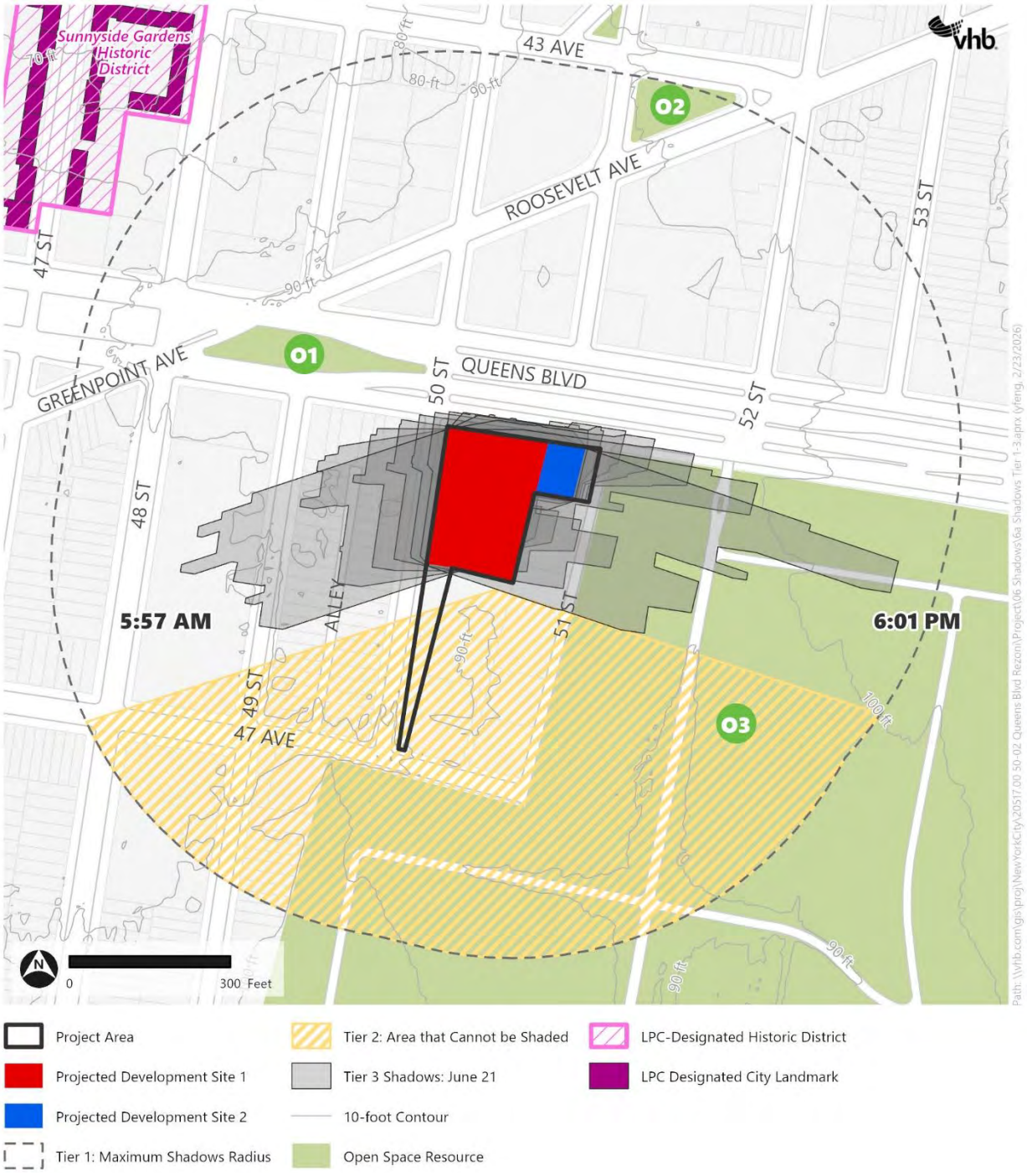
Source: NYC DCP (2025); NYC Parks (2025); NYC LPC (2025); NYS OPRHP (2025)

Figure 6-4 Tier 3 Screening May 6 / August 6 Analysis Day



Source: NYC DCP (2025); NYC Parks (2025); NYC LPC (2025); NYS OPRHP (2025)

Figure 6-5 Tier 3 Screening June 21 Analysis Day



Source: NYC DCP (2025); NYC Parks (2025); NYC LPC (2025); NYS OPRHP (2025)

7

Urban Design and Visual Resources

An urban design assessment under CEQR considers whether and how a project may change the experience of a pedestrian in the study area. The assessment focuses on the components of a proposed project that may have the potential to alter the arrangement, appearance, and functionality of the built environment.

Introduction

Urban design is the totality of components that may affect a pedestrian's experience of public space. To determine if a proposed action has the potential to change the pedestrian experience, an urban design assessment under CEQR guidelines focuses on the components of a proposed action that may alter the arrangement, appearance, and functionality of the built environment from the pedestrian's perspective. In accordance with the *2025 CEQR Technical Manual*, a preliminary assessment of urban design is appropriate when there is the potential for a pedestrian to observe, from the street level, a physical alteration beyond that allowed by existing zoning regulations.

A visual resource is the connection from the public realm to significant natural or built features, including views of the waterfront, public parks, landmark structures or districts, otherwise distinct buildings or groups of buildings, or natural resources.

As described in **Part I: Project Description**, the Applicant is seeking a zoning map amendment and a zoning text amendment (the Proposed Actions) affecting Queens Block 2283, Lots 1, 12, 22, 36, and 43 (the Project Area). The Proposed Actions would facilitate the development of a mixed-use building of approximately 270,441 gross square feet (gsf) (the Proposed Project) on Lots 1, 12, 22, and 36 (the Development Site, or Projected Development Site 1) at 50-02 Queens Boulevard in the Woodside neighborhood of Queens Community District 2. The Proposed Project would include approximately 265,474 gsf of residential space (257 units, of which 51 to 77 would be affordable under Mandatory Inclusionary Housing [MIH]), 16,653 gsf of commercial space, and 4,762 gsf of community facility

(daycare) space. The Proposed Project would meet the requirements of the MIH program and have a maximum height of 95 feet (excluding bulkhead).

In addition to the Applicant-owned Projected Development Site 1, the Proposed Actions would also affect the non-Applicant-owned property at Lot 43 (Projected Development Site 2). In the future with the Proposed Actions, Projected Development Site 2 is expected to be redeveloped with a 14-story (145-foot-tall, excluding bulkhead) mixed-use building of approximately 74,944 gsf, containing approximately 63,089 gsf of residential space (63 units) and 3,228 gsf of commercial space.

Combined, the projected development sites would be redeveloped with approximately 328,563 gsf of residential space (320 units, of which 64 to 96 would be affordable pursuant to MIH), 19,881 gsf of commercial space, 4,762 gsf of community facility (daycare) space, and 27,100 gsf of parking, totaling 380,306 gsf of development.

Because the Proposed Actions would result in physical changes to the Project Area beyond those allowable by existing zoning and which could be observed by a pedestrian from street level, a preliminary assessment of urban design and visual resources is warranted.

Methodology

In accordance with the *CEQR Technical Manual* guidelines, the following preliminary urban design and visual resources assessment considers a 400-foot radius study area where the Proposed Actions would be most likely to influence the built environment. As stipulated in the *CEQR Technical Manual*, because the purpose of the preliminary assessment is to determine whether any physical changes facilitated by the Proposed Actions would significantly impact elements of urban design and visual resources, the following information, if known, is included in a preliminary assessment:

- a concise narrative of the existing study area, and conditions under the future No-Action and With-Action conditions;
- an aerial photograph of the study area and ground-level photographs of the project site with immediate context;
- zoning and floor area calculations of the existing and future No-Action and With-Action conditions;
- building massing and building heights; and
- a three-dimensional representation of the future With-Action and No-Action condition streetscape.

If the preliminary assessment determines that a change to the pedestrian experience is minimal and unlikely to disturb the vitality, walkability or visual character of the study area, then no further assessment is necessary. However, if it shows that changes to the pedestrian environment and/or visual resources are significant enough to require greater explanation and further study, then a detailed analysis may be appropriate.

The following preliminary urban design and visual resources assessment follows these guidelines and provides a characterization of existing conditions, a description of urban design and visual resources under the future No-Action and With-Action conditions, and an analysis determining the extent to which physical changes resulting from the Proposed Actions would alter the pedestrian experience.

Study Area

The urban design and visual resources study area is typically defined as the area within 400 feet of the Project Area which, for the Proposed Actions, is generally bounded by Queens Boulevard and Roosevelt Avenue to the north, New Calvary Cemetery to the east and south, and 49th Street to the west. This is the area in which the Proposed Actions would be most likely to have effects in terms of urban design and visual resources. A field survey was conducted on April 13, 2023, to document existing conditions in the study area. Representative photographs of the study area are included in the discussion below; **Figure 7-1** provides a key map depicting the location and viewing direction from which each photograph was captured.

Figure 7-1 Study Area Photograph Location Map



Preliminary Assessment

Existing Conditions

Project Area

The Project Area is comprised of Lots 1, 12, 22, 36, and 43 on Queens Block 2283. The project block is bounded by Queens Boulevard to the north, 51st Street to the east, 50th Street to the west, and 47th Avenue to the south. The Project Area has a total area of approximately 70,095 square feet and 264 feet of frontage on Queens Boulevard, which is a major east-west thoroughfare in Queens connecting from the Queensboro Bridge to the Jamaica neighborhood. See **Figure 7-1** for photos of the Project Area and study area.

Within Projected Development Site 1, Lots 1, 12, and 22 are currently occupied with a one-story P.C. Richard & Son commercial building that is approximately 19 feet in height. This building fronts Queens Boulevard and extends the length of 50th Street to 47th Avenue, creating an inactive street wall along 50th Street. An accessory surface parking lot for the P.C. Richard & Son is located directly east of the store, on Lot 36. It fronts Queens Boulevard and contains approximately 90 parking spaces.

Projected Development Site 2 is currently occupied by a three-story brick office building that is in use by a taxi dispatcher, Big Apple Taxi. The building is approximately 40 feet in height and is located at the corner of Queens Boulevard and 51st Street. The third floor of the building is set back from Queens Boulevard. The building contains rows of windows fronting Queens Boulevard and along 51st Street.

Study Area

As described above, the study area is generally bounded by Queens Boulevard and Roosevelt Avenue to the north, New Calvary Cemetery to the east and south, and 49th Street to the west.

Urban Design

The study area is generally characterized by regularly shaped blocks organized along a typical street grid. The one exception is Roosevelt Avenue, a southeast-northwest street that runs diagonally across the northwest portion of the study area, forming triangular blocks and lots to the north and west of the Project Area. Along Roosevelt Avenue is also the elevated IRT Flushing Line (see **Photo 7-1**).

Queens Boulevard, a major thoroughfare, provides east-west access through the study area and generally splits land uses in the study area, with mixed-use and commercial to the north and residential to the south. Street widths within the study area vary. Queens Boulevard is 200 feet wide while the local roadways range from 50 feet to 80 feet wide (i.e., 50th Street and Roosevelt Avenue). Generally, either side of the roadways within the study area are lined with concrete sidewalks interspersed with street trees and limited grassed areas. Parking is generally permitted on both sides of the secondary streets in the study area as well as along Queens Boulevard and, as such, parked cars typically line these roadways (see **Photo 7-2** through **Photo 7-4**)

Buildings within the study area exhibit a diverse assortment of shapes and forms, which closely correlate to land use. As discussed in **Section 2, Land Use, Zoning, and Public Policy,** land use within the study area primarily includes mixed-use, residential, commercial, and industrial uses, as well as some institution and open space uses.

Residential uses are predominately located in the western portion of the study area, south of Queens Boulevard. Residential buildings vary between five-story, multi-family walk-ups and attached one- and two-family residences. The façade treatment for both types of residences is predominately brick. Attached houses typically consist of a row of houses along a block with setbacks for small front yards that are improved with patio areas or minimal lawn or landscaped areas. Fencing, typically metal or chain-link, often line the boundaries of the front yards (see **Photo 7-5** and **Photo 7-6**). Multi-family buildings are separated by narrow pathways that are closed off to the public. These buildings are similarly setback from the street with fencing and small landscaped areas in the front (see **Photo 7-7**).

Within the study area, commercial uses are generally found along Queens Boulevard and Roosevelt Avenue. Commercial buildings along these roadways are typically one- and two-story mixed-use or strictly commercial structures. Generally, these buildings have flat roofs and contain awnings, signage, and advertisements associated with the commercial uses on the ground floor. Ground floors also typically contain large windows and commercial displays (see **Photo 7-8**).

Within the study area on the northernmost side of Queens Boulevard are larger mixed-use commercial and residential buildings, including a nine-story mixed-use building was constructed in 2019 and faces the Project Area. Adjacent to this is the Korean Presbyterian Church of Southern New York, which is approximately 45 feet in height. To the east of the church are two mixed-use commercial and residential buildings, one of which was constructed in 2009 and is eight stories, and the other of which was constructed in 2015 and is seven stories (see **Photo 7-9**).

Industrial buildings are interspersed throughout the study area. Generally, industrial lots contain one- and two-story industrial warehouse and manufacturing buildings. These are primarily flat-roof brick and concrete buildings.

A large portion of the study area is the New Calvary Cemetery, located to the east and south of the Project Area. The perimeter of the cemetery is lined with stone walling and metal fencing. It is open to the public and has walking/running paths for active recreation, as well as benches and sitting areas used for passive recreation.

Visual Resources

As discussed above, a visual resource is the connection from the public realm to significant natural or built features, including views of the waterfront, public parks, landmark structures or districts, otherwise distinct buildings or groups of buildings, or natural resources.

As discussed in **Section 7, Historic and Cultural Resources**, the study area does not contain any designated historic resources. Similarly, the study area does not contain any views of the waterfront, public parks, landmark structures, or historic districts. Based on the above, the study area does not contain any visual resources of note, and further analysis of visual resources is not warranted.

No-Action Condition

As described in **Part I: Project Description**, absent the Proposed Actions (the future No-Action condition), no physical changes to the Project Area would be anticipated, and the Project Area would continue to operate under the existing conditions, as a P.C. Richard & Son, a surface parking lot, and a taxi dispatcher, Big Apple Taxi.

As discussed in **Section 2, Land Use, Zoning and Public Policy**, there are no anticipated developments within the study area expected to be completed by the 2029 analysis year.

Photo 7-1 7 Train at Roosevelt Ave, Looking West



Photo 7-2 Queens Boulevard, Looking Southwest

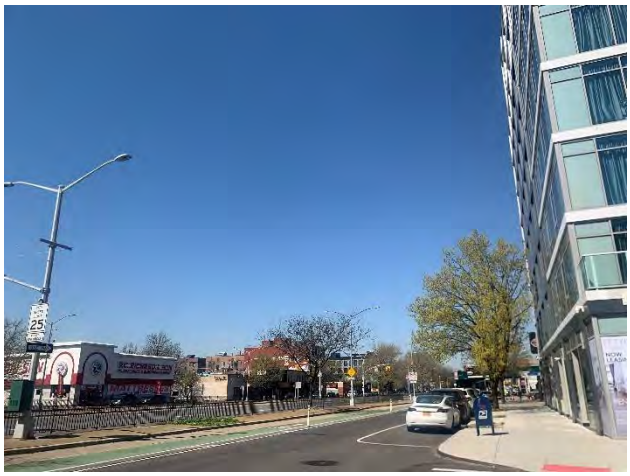


Photo 7-3 49th Street, Looking South



Photo 7-4 50th Street at Queens Boulevard, Looking South



Photo 7-5 One- and Two-Family Attached Residential Buildings along 50th Street, Looking Southwest



Photo 7-6 One- and Two-Family Attached Residential Buildings along 49th Street, Looking Southeast



Photo 7-7 Multi-Family Elevator Buildings along 49th Street, Looking Northwest



Photo 7-8 Mixed-Use Commercial and Residential Buildings on Queens Boulevard, Looking Southwest



Photo 7-9 New Development on Queens Boulevard, Looking Northeast



Photo 7-10 New Calvary Cemetery, Adjacent to Queens Boulevard Looking West



With-Action Condition

As described in **Part I: Project Description**, in the future With-Action condition, Projected Development Site 1 would be redeveloped with a 305,362-gsf mixed-use building with 265,474 gsf of residential space, 16,653 gsf of commercial space, and 4,762 gsf of community facility (daycare) space. The proposed building on Projected Development Site 1 would be 9 stories tall. The ground-floor commercial space would be occupied by the existing retail tenant at Projected Development Site 1 (P.C. Richard & Son). The ground floor community facility space would be occupied by a daycare, with additional space in the cellar and a landscaped outdoor play area on the southernmost portion of site. Stories two through 9 would be occupied by 257 rental apartments, of which 51 to 77 would be affordable under MIH. Accessory parking will be provided within the cellar and will be accessed via a new curb cut along the 50th Street, approximately 100 feet west of Queens Boulevard. The western portion of Projected Development Site 1 located in Lots 12 and 36 will have a maximum base height of 65 feet with a 7th floor setback of 15 feet along its 50th street frontage, before rising two additional floors and reaching a proposed height of 85 feet. The eastern portion of Projected Development Site 1 in Lot 22 will not include any setbacks, including 9 stories reaching a proposed building height of 95 feet. **Figure 7-2** through **Figure 7-4** provide comparative visualizations of the future With-Action condition.

It is expected that Projected Development Site 2 would be redeveloped into a mixed-use building standing 14 stories tall and reaching 145 feet (roof height), with a total area of approximately 74,944 gsf. This space would be divided into approximately 63,089 gsf for residential use, and 3,228 gsf for commercial use. The ground-floor commercial tenancy would be occupied by a local retail tenant. The second through fourteenth floors would be dedicated to 63 rental apartments, of which 16 to 19

units are anticipated to be affordable under MIH. The accessory parking would be located on the ground floor and in the cellar, accessible via an existing curb cut along Queens Boulevard. The residential units at Projected Development Site 2 are assumed to have an average size of approximately 1,000 gross square feet each, in line with the Proposed Project. After the 11th Floor, the building would have a 15-foot setback along 51st Street and a 10-foot setback along Queens Boulevard.

Together, both projected development sites are set to introduce approximately 328,563 gsf of residential space (comprising 320 dwelling units, with about 64 to 96 affordable under MIH), 19,881 gsf for commercial purposes, and 4,762 gsf of community facility space intended for daycare, for a total development area of 380,306 gsf.

Figure 7-2 Building Massings: View From Queens Boulevard, Looking Southwest

No-Action **With-Action**



Source: Urban Cartographics

Figure 7-3 Building Massings: View From Queens Boulevard, Looking Southeast

No-Action



With-Action



R6A Permitted Base Height (65')
R7X Permitted Base Height (105')
Proposed Base Height
R6A Permitted Building Height (95')
R7X Permitted Building Height (145')
Proposed Building Height
R6A Permitted Bulkhead Height (120')
R7X Permitted Bulkhead Height (170')
Proposed Bulkhead Height

Source: Urban Cartographics

Figure 7-4 Building Massings: View From 50th Street, Looking Northeast

No-Action



With-Action



R6A Permitted Base Height (65')
R7X Permitted Base Height (105')
Proposed Base Height
R6A Permitted Building Height (95')
R7X Permitted Building Height (145')
Proposed Building Height
R6A Permitted Bulkhead Height (120')
R7X Permitted Bulkhead Height (170')
Proposed Bulkhead Height

Source: Urban Cartographics

Urban Design

The With-Action condition would introduce two new multi-story, mixed-use buildings to the study area, facilitating a change in the visual character of the Project Area, with increased height and bulk. As detailed above, the Project Area is adjacent to the New Calvary Cemetery to the east, residential neighborhoods to the south and west, and is along a major thoroughfare to the north.

Although the Proposed Actions would introduce two buildings that are greater in height and bulk than surrounding buildings, as shown in **Figure 7-2** through **Figure 7-4**, it would also introduce elements that would enhance the pedestrian experience within the study area. Projected Development Site 1 would integrate ground floor retail along the Queens Boulevard frontage, replacing the existing surface parking lot. Similarly, Projected Development Site 2 would also include ground floor retail along Queens Boulevard, activating the streetscape. Together, these changes create a consistent retail presence along the full Queens Boulevard frontage, resulting in an active and cohesive street wall. Additionally, the With-Action condition for Projected Development Site 1 would introduce a landscaped outdoor play area on 50th Street, in place of a portion of the existing P.C. Richard & Son. Overall, these additions would enhance the pedestrian experience on the block.

The With-Action condition for both Projected Development Site 1 and 2 would build along the lot line, consistent with existing mixed-use and commercial development along Queens Boulevard. The Proposed Actions would facilitate the development of new buildings greater in height than neighboring buildings, at approximately nine and 14 stories compared to the existing buildings that generally vary from one- to three-stories. However, a nine-story, mixed-use commercial and residential development was recently constructed directly across the street from the Project Area, fronting Queens Boulevard (50-17 Queens Boulevard). Additional mixed-use buildings of eight- and seven-stories are located northeast of the Project Area, fronting Queens Boulevard.

Conclusion

Overall, the With-Action condition would be compatible with the urban design features of the study area and would be consistent with surrounding and emerging building forms and streetscape. The Proposed Actions would provide infill development on an existing surface parking lot, providing a more contiguous street wall, and a landscaped outdoor play area along 50th Street, providing a more vibrant streetscape for pedestrians. Therefore, the Proposed Actions would not result in a significant adverse impact on urban design and visual resources, and no further analysis is necessary.

8

Hazardous Materials

This section assesses whether the Proposed Project may increase the exposure of people or the environment to hazardous materials, and, if so, whether this increased exposure would result in potential significant public health or environmental impacts.

Introduction

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 (PCBs), and hazardous wastes (defined as substances that are chemically reactive, ignitable, corrosive, or toxic).

According to the *2025 CEQR Technical Manual*, the potential for significant impacts from hazardous materials can occur when:

- hazardous materials exist on a site;
- an action would increase pathways to their exposure; or
- an action would introduce new activities or processes using hazardous materials.

As indicated in the *CEQR Technical Manual*, the hazardous materials (E)-Designation is an institutional control that may be placed on a site to establish a hazardous materials review and approval framework. It provides a mechanism to ensure that testing for and remediation of hazardous materials, if necessary, are completed prior to future development of an affected site, thereby eliminating the potential for a hazardous materials impact. (E)-designated parcels are administered under the authority of the New York City Mayor's Office of Environmental Remediation (OER).

This section presents the findings of the hazardous materials assessment and identifies potential issues of concern with respect to workers, the community, and/or the environment during construction and after implementation of the Proposed Project.

Methodology

The potential for hazardous materials was evaluated based on the following documents:

› Phase I Environmental Site Assessment (ESA), dated June 6, 2023, prepared by VHB Engineering, Surveying, Landscape Architecture and Geology, P.C. (VHB).

A Phase I ESA was prepared on June 6, 2023, in accordance with ASTM Practice E1527-21, inclusive of the "All Appropriate Inquiry" requirement amended in the Federal Register on February 13, 2023. The United States Environmental Protection Agency (EPA) "All Appropriate Inquiry" requirement establishes specific regulatory requirements for conducting appropriate inquiries into the previous ownership, uses, and environmental conditions of a property for the purposes of qualifying for certain landowner liability protections under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

The goal of a Phase I ESA process is to identify "Recognized Environmental Conditions" (RECs), which means the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. As stated in Practice E1527-21, there may be environmental issues or conditions at the site, which may be requested by the user to be addressed as part of the Phase I ESA, which are not covered within the Practice. These additional environmental issues (or non-scope considerations) could evaluate for the potential presence of radon, lead-based paint (LBP), asbestos-containing materials (ACM), wetlands, and mold and water damage. Additional environmental issues, or non-scope considerations, are typically characterized in a Phase I ESA as Business Environmental Risks (BERs), which are risks that can have a material environmental or environmentally driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated.

Per the ASTM Standard, a Phase I ESA reviews a variety of information sources, including current and historic Sanborn Fire Insurance Maps and aerial photographs; state and federal environmental regulatory databases identifying listed sites; and local environmental records.

As described in **Part I: Project Description**, the Applicant is requesting several actions (the Proposed Actions) to facilitate development of a mixed-use building of approximately 230,553 gross square feet (gsf) (the Proposed Project) at 50-02 Queens Boulevard in the Woodside neighborhood of Queens Community District 2 (Queens Block 2283, Lots 1, 12, 22, and 36, the Development Site, or Projected Development Site 1). In addition to the Applicant-owned Projected Development Site 1, the Proposed Actions would also affect the non-Applicant-owned property at Lot 43 (Projected Development Site 2). Combined, the two Projected Development Sites would introduce approximately 293,642 gsf of residential space (290 units), 19,881 gsf of commercial space, 4,762 gsf of community facility space, and 49 accessory parking spaces.

The analysis provided below was performed for the Project Area to determine the potential for significant adverse impacts related to hazardous materials as a result of the Proposed Actions.

Preliminary Assessment

Existing Conditions

Phase I Environmental Site Assessment

The Phase I ESA dated June 6, 2023, was completed for the Project Area and included analyses as specified in the ASTM Method E1527-21. The goal of the Phase I ESA process is to identify Recognized Environmental Conditions (RECs), which means the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property.

Per the current ASTM Standard, the Phase I ESA reviewed a variety of information sources, including current and historic Sanborn Fire Insurance Maps and aerial photographs; state and federal environmental regulatory databases identifying listed sites; and local environmental records. Based upon the findings of the Phase I ESA, the following RECs were identified for the Project Area:

- REC#1 – On-Site Spill of Petroleum Constituents (Spill #9805297). A portion of the Project Area (Lot 43, Projected Development Site 2) was historically operated as a gasoline filling station and automotive service station dating back to the 1960s. In May 1993, an unknown amount of gasoline, methyl-tert-butyl ether (MtBE), and benzene, toluene, ethylbenzene and xylene (BTEX) impacted groundwater at the subject property and was reported to the New York State Department of Environmental Conservation (NYSDEC). The release was assigned Spill #9805297. The spill is currently being remediated using a groundwater extraction and treatment system being managed by the former operator at 50-24 Queens Boulevard, Equilon Enterprises LLC d/b/a Shell Oil Products US. Notes in the Spill case records indicate possible off-site impacts due to a groundwater contaminant plume as well as on-site impacts to groundwater. The open spill case associated with the subject property represents a REC.
- REC#2 – On-Site Bulk Petroleum Storage and Closed-in-Place Underground Storage Tank (UST). Based on a review of environmental databases, as many as 22 tanks were formerly located at Projected Development Site 2 prior to their removal in the 2000s. Tank removal documentation was not obtained. Steven's Woodside Inc. was the retailer that occupied the building currently used by P.C. Richard & Son. Reportedly, a 2,000-gallon, #2 fuel oil underground storage tank (UST) was closed in place on October 1, 1999, at this portion of Projected Development Site 1. No spill files were identified in connection to this tank. However, there were no records of tank tightness or integrity testing or environmental data to suggest that the UST was in good condition prior to closure. Therefore, it is unknown whether a release of petroleum occurred from the former UST, which is considered a REC.
- REC#3 – Nearby History of Spills and Resource Conservation and Recovery Act (RCRA) Violations. Based on a review of environmental records, two listings located within 500 feet of the Project Area were identified that have the potential to impact the Projected Development Sites' environmental conditions as follows:
- The property that now operates as Sana Tech Printing at 45-14 51st Street is listed as the location of a NYSDEC Spill case. Spill case 1002811 was closed August 6, 2010, after a NYC government HazMat team responded to the already vacant location. Due to the lack of

information provided regarding this spill, the presumably upgradient spill is considered a concern in relation to the Project Area. Furthermore, RCRA violations were associated with Beyond Signs Inc., which generated ignitable waste, corrosive waste, lead, mercury, methyl ethyl ketone and spent nonhalogenated solvents as part of its operation.

- The property that now operates as SkyTrac at 50-05 47th Avenue is listed as the location of two NYSDEC Spill cases and RCRA violations. Handy Button Machine Co., which was involved in metal stamping, electroplating, plating, polishing, anodizing, and coloring was listed as a large and small quantity generator of hazardous waste in the past. It is unknown what types of hazardous waste were utilized, but the Environmental Protection Agency (EPA) also included this site in their per- and polyfluoroalkyl substances (PFAS) Enforcement and Compliance History Online (ECHO) list, as the company may have been handling PFAS in the metal coating industry.
- The corner of Queens Boulevard and 51st Street is listed as the location of a closed Spill case (#0305938) associated with the release of motor oil in the roadway. The case was closed September 26, 2003, however spill closure documentation regarding its remediation was unavailable for review during this Phase I ESA.
- The commercial property at 50-11 Queens Boulevard is listed as the location of closed Spill case (#1602145) that is associated with the release of an unknown amount of gasoline that affected soil and groundwater on the property. The case was closed on December 10, 2020, however spill closure documentation regarding its remediation was unavailable for review during this Phase I ESA.
- A Roy Rogers Restaurant formerly operated at an 50-01 Queens Boulevard. This address has a closed spill case (#9516592) associated with the release of an unknown amount of gasoline that affected soil on the property. The case was closed September 12, 2008, however spill closure documentation regarding its remediation was unavailable for review during this Phase I ESA.

Based on the findings noted as RECs #1, #2 and #3, there is the potential that volatile Chemical(s) of Concern could impact environmental conditions at the Proposed Development Sites. Based upon the findings of the Phase I ESA, the following Business Environmental Risk was identified for the Proposed Development Sites:

- Historical Fill. Based upon the soil classification and historical demolition of buildings on a portion of the Project Area, urban historical fill may be present beneath the subject property. Urban historical fill is commonly found throughout the New York City metropolitan area and can contain contaminants such as hazardous building materials (e.g., asbestos-containing materials), heavy metals and semi-volatile organic compounds. If required to be removed from the subject property, urban fill should be appropriately characterized prior to following appropriate transportation and disposal/recycling procedures.

Future No-Action Condition

In the future No-Action condition, no development is expected to occur on the Projected Development Sites and existing conditions would remain unchanged.

Notwithstanding the above, under the No-Action condition, regulatory requirements pertaining to the disturbance and handling of any LBP, ACM, and PCB-containing building materials, if any, would be followed as part of standard demolition and site redevelopment practices for the Projected Development Sites. Furthermore, regulatory requirements relating to any USTs, if encountered, would be followed including following proper registration and removal protocols in accordance NYSDEC

and New York City Fire Department (FDNY) procedures. However, an (E)-Designation would not be applied to the Projected Development Sites and regulatory oversight by OER would not be provided for the investigation and mitigation of potential subsurface contamination from on- and off-site sources.

Future With-Action Condition

The future With-Action condition would result in the construction of a 11-story, 115-foot-tall, mixed-use building with residential, commercial, and community facility uses. The ground floor commercial space would be occupied by the existing retail tenant on the Development Site (P.C. Richard & Son). The ground floor community facility space would be occupied by a daycare, with additional space in the cellar and a landscaped outdoor play area on the southernmost portion of Projected Development Site 1. In addition, it is expected that Projected Development Site 2 would be redeveloped with a 14-story, 145-foot-tall, mixed-use building.

Based upon a review of environmental documentation, potential on- and/or off-site sources of contamination were identified for the Projected Development Sites. To address these conditions during proposed future site redevelopment, the Proposed Actions would include an (E)-Designation for hazardous materials (E-914), which would be applied to the Development Site (Queens Block 2283, Lots 1, 12, 22, 36) and Projected Development Site 2 (Lot 43). Applying an (E)-Designation provides a mechanism for regulatory oversight for future remedial action as a pre-construction requirement that would reduce or eliminate the potential for future risk or exposure as it relates to hazardous materials to the maximum extent practicable. Compliance in association with the hazardous materials (E)-Designation on the Projected Development Sites would be conducted under the administration of OER.

The (E)-Designation process generally begins with the evaluation of RECs and/or areas of concern (AOCs) that may require additional investigation based upon the results of a Phase I ESA. Any potential RECs or AOCs identified would follow the (E)-Designation protocol for additional investigation and potential remedial action. (E)-Designation compliance will utilize information from the existing Phase I ESA for the Projected Development Sites to the maximum extent practicable.

The applicable text for the (E)-Designation (E-914) to be applied to Queens Block 2283, Lots 1, 12, 22, 36, and 43 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 be submitted to OER after completion of the testing phase and laboratory analysis for review and approval. After receiving such results, a determination is made by OER if the results indicate that remediation is necessary. If OER determines that no remediation is necessary, written notice shall be given by OER.

If remediation is indicated from the test results, a proposed Remedial Action Work Plan (RAWP) must be submitted to OER for review and approval. The applicant must complete such remediation as determined necessary by OER in accordance with the approved RAWP. The applicant should then provide proper documentation that remedial action has been satisfactorily completed.

An OER-approved construction-related Health and Safety Plan (CHASP) would be implemented during evacuation and construction and activities to protect workers and the community from potentially significant adverse impacts associated with contaminated soil and/or groundwater. This plan would be submitted to OER for review and approval prior to implementation.

In addition to the above, regulatory requirements relating to ACM, LBP and PCB-containing building materials would be followed as part of standard demolition and site redevelopment practices.

Conclusion

Based upon a review of environmental documentation, potential on- and/or off-site sources of subsurface contamination was identified for the Projected Development Sites. The Development Site and Projected Development Site 2 currently contain two commercial buildings. To address these conditions for any future redevelopment of the Projected Development Sites, the Proposed Actions would include an (E)-Designation for hazardous materials (E-914) which would be applied to the Project Area (Block 2283, Lots 1, 12, 22, 36, and 43). Applying an (E)-Designation provides a mechanism for regulatory oversight by OER as a pre-construction requirement that would reduce or eliminate the potential for future risk or exposure as it relates to hazardous materials to the maximum extent practicable. The implementation of the preventative and remedial measures required under the (E)-Designation would avoid the potential for significant adverse hazardous materials impacts to the subsurface due to the Proposed Actions through the development and implementation of an OER-approved RAWP and CHASP for the Site.

In addition, regulatory requirements pertaining to the disturbance and handling of any LBP, ACM, and PCB-containing building materials, if any, would be followed as part of standard demolition and site redevelopment practices on the Projected Development Sites. As such, implementation of the Proposed Actions would not result in significant adverse impacts related to hazardous materials.

9

Transportation

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

Introduction

The Applicant, 50-02 Woodside Development, LLC, is seeking a zoning map amendment and a zoning text amendment (collectively, the Proposed Actions) affecting Queens Block 2283, Lots 1, 12, 22, 36, and 43 (the Project Area). The Proposed Actions would facilitate the development of a mixed-use building of approximately 305,362 gross square feet (gsf) (the Proposed Project) on Applicant-owned Lots 1, 12, 22, and 36 (the Development Site, or Projected Development Site 1) at 50-02 Queens Boulevard in the Woodside neighborhood of Queens Community District 2. In addition to the Applicant-owned Projected Development Site 1, the Proposed Actions would also affect the non-Applicant-owned property at Lot 43 (Projected Development Site 2). In the future with the Proposed Actions, Projected Development Site 2 is expected to be redeveloped with a mixed-use building of approximately 74,944 gsf. The Project Area and the Projected Development Sites are shown in **Figure 9-1**. The Project Area currently consists of a P.C. Richard & Son appliance and electronics store of approximately 24,908 gsf (on Projected Development Site 1) and a taxi fleet management company for custom service (on Projected Development Sie 2). The ground floor commercial space in the new development at Projected Development Site 1 would be occupied by the existing P.C. Richard & Son. The build year for the Proposed Project would be 2029.

Table 9-1 provides a comparison table of the proposed change in uses between existing, No-Action, and With-Action conditions. Overall, the Proposed Actions would result in a decrease of office space of 16,703 gsf, an increase in local retail space of 3,228 gsf, a decrease in destination retail space of 8,255 gsf, an increase of 4,762 gsf of community facility space (a daycare); and an increase of 328,563 gsf of residential space, or approximately 320 dwelling units. On-site accessory parking would decrease by 51 parking spaces from the existing 100 parking spaces.

Table 9-1 Development Increment for Analysis (in GSF)

Land Use	Existing	No-Action	With-Action	Increment
Projected Development Site 1				
Commercial - Office	---	---	---	---
Commercial - Destination Retail	*24,908*	*24,908*	16,653	*-8,255*
Commercial – Local Retail	---	---	---	---
Community Facility	---	---	4,762	+4,762
Residential	--- *(0 units)*	--- *(0 units)*	265,474 *(257 units)*	+265,474 *(+257 units)*
Parking	32,696 *(90 spaces)*	32,696 *(90 spaces)*	18,473 *(25 spaces)*	-14,223 *(-65 spaces)*
Total GSF	24,908	24,908	305,362	+280,454
Projected Development Site 2				
Commercial - Office	16,703	16,703	---	-16,703
Commercial - Destination Retail	---	---	---	---
Commercial – Local Retail	---	---	3,228	+3,228
Community Facility	---	---	---	---
Residential	--- *(0 units)*	--- *(0 units)*	63,089 *(63 units)*	+63,089 *(+63 units)*
Parking Spaces	0[1] *(10 spaces)*	0 *(10 spaces)*	8,627 *(24 spaces)*	+8,627 *(+14 spaces)*
Total GSF	16,703	16,703	74,944	+58,241
Total Development				
Commercial - Office	16,703	16,703	---	-16,703
Commercial - Destination Retail	*24,908*	*24,908*	16,653	*-8,255*
Commercial – Local Retail	---		3,228	+3,228
Community Facility	---	---	4,762	+4,762
Residential	--- *(0 units)*	--- *(0 units)*	328,563 *(320 units)*	328,563 *(320 units)*
Parking Spaces	32,696 *(100 spaces)*	32,696 *(100 spaces)*	27,100 *(49 spaces)*	-5,596 *(-51 spaces)*
Total GSF	41,611	41,611	380,306	+338,695

Note:
[1] Parking spaces at Projected Development Site 2 currently include unenclosed surface parking.

Figure 9-1 Site Location Map



Source: DCP MapPLUTO

Methodology and Analytical Framework

According to the *2025 CEQR Technical Manual* procedures for transportation analysis, a two-tiered screening process is to be undertaken to determine whether quantitative analysis is necessary. The first step, the Level 1 (Trip Generation) screening, determines whether the volume of peak hour person and vehicle trips generated by a proposed action would remain below the minimum thresholds for further study. These thresholds are:

- 50 peak hour vehicle trip ends;
- 200 peak hour subway, rail or bus transit riders;
- 50 peak hour Citywide Ferry Service (CWFS) ferry trips; and
- 200 peak hour pedestrian trips.

If a proposed action results in increments that would exceed any of these thresholds, a Level 2 (Trip Assignment) screening assessment is usually performed. Under this assessment, project-generated trips that exceed Level 1 thresholds are assigned to and from the Proposed Project's site through their respective networks (streets, bus and subway lines, sidewalks, etc.) based on expected origin-destination patterns and travel routes. This determines the volume of peak hour vehicle traffic that would be added per intersection, the volume of riders that would be added per subway line, bus route or CWFS route, and the walk trips that would be added per individual pedestrian network element (crosswalk, corner reservoir area, etc.). If the Level 2 screening assessment determines that any specific traffic location, transit line, station element, CWFS route or pedestrian network element would experience an increase of trips beyond the above thresholds for any peak hour, then a detailed analysis is typically warranted for that period.

Level 1 (Trip Generation) Screening Assessment

The travel demand factors used to calculate the projected number of trips were obtained primarily from the *CEQR Technical Manual*, American Community Survey Census (ACS) journey-to-work (JTW) data, American Association of State Highway and Transportation Officials (AASHTO) Census Transportation Planning Products (CTPP) reverse journey-to-work (RJTW) data, previously approved environmental assessment and impact statements, and local retail survey data provided by New York City Department of Transportation (NYCDOT). **Table 9-2** provides the travel demand assumptions used for the weekday AM, midday, PM, and Saturday peak hours.

Table 9-2 Travel Demand Characteristics

Rates	Residential	Local Retail	Daycare (Staff)	Daycare (Children)	Daycare (Parents)	Destination Retail	Office
Person Trip Rate (Weekday/Saturday)	8.18/9.08[1] per Dwelling Unit	329.0/358.0[1] per 1,000 sf	6.0/---[1] per 1,000 sf	22.0/---[1] per 1,000 sf	44.0/---[1] per 1,000 sf	78.2/92.5[1] per 1,000 sf	18.0/3.9[1] per 1,000 sf
Linked Trip Credit	---	5% (all periods)	---	---	---	---	---
Temporal Distribution							
Weekday AM	9.3%[1]	4.8%[1]	25.0%[1]	25.0%[1]	25.0%[1]	3.0%[1]	12.4%[1]
Weekday Midday	5.6%[1]	8.0%[1]	2.5%[1]	0.0%[1]	0.0%[1]	9.0%[1]	11.0%[1]
Weekday PM	8.5%[1]	10.9%[1]	25.0%[1]	25.0%[1]	25.0%[1]	9.0%[1]	10.5%[1]
Saturday Peak	8.4%[1]	11.7%[1]	---[1]	---[1]	---[1]	11.0%[1]	14.1%[1]
Modal Split (All Periods)							
Auto	20.6%[2]	11.0%[1]	57.0%[5]	20.6%[2]	---%[8]	57.0%[4,5]	57.0%[5]
Taxi	0.8%[2]	0.0%[1]	1.2%[5]	0.8%[2]	---%[8]	1.2%[4,5]	1.2%[5]
Bus	4.4%[2]	3.0%[1]	6.6%[5]	4.4%[2]	4.4%[8]	6.6%[4,5]	6.6%[5]
Subway	67.0%[2]	4.0%[1]	26.0%[5]	67.0%[2]	67.0%[8]	26.0%[4,5]	26.0%[5]
Bicycle	1.9%[2]	---[1]	1.8%[5]	1.9%[2]	1.9%[8]	1.8%[4,5]	1.8%[5]
Walk	5.3%[2]	82.0%[1]	7.4%[5]	5.3%[2]	5.3%[8]	7.4%[4,5]	7.4%[5]
Vehicle Occupancy (Weekday/Saturday)							
Auto	1.12/1.12[2]	1.40/1.40[4]	1.11/1.11[5]	1.00/1.00[7]	---	2.05/2.49[3]	1.11/1.11[5]
Taxi	1.39/1.39[3]	1.40/1.40[4]	1.11/1.11[5]	1.00/1.00[7]	---	2.05/2.49[3]	1.11/1.11[5]
Directional Split (In/Out)							
Weekday AM	22%/78%[1]	52%/48%[1]	100%/0%[1]	100%/0%[1]	50%/50%[1]	63%/37%[1]	86%/14%[1]
Weekday Midday	50%/50%[1]	50%/50%[1]	50%/50%[1]	---[1]	---[1]	53%/47%[1]	52%/48%[1]
Weekday PM	62%/38%[1]	50%/50%[1]	0%/100%[1]	0%/100%[1]	50%/50%[1]	49%/51%[1]	16%/84%[1]
Saturday Peak	55%/45%[1]	50%/50%[1]	---[1]	---[1]	---[1]	52%/48%[1]	48%/52%[1]
Delivery Trip Rate (Weekday/Saturday)	0.06/0.02[1] per Dwelling Unit	0.35/0.04[1] per 1,000 sf	---	0.07/0.00[6] per 1,000 sf	---	0.35/0.04[4] per 1,000 sf	0.32/0.01[1] per 1,000 sf
Delivery Temporal Distribution							
Weekday AM	12%[1]	8%[1]	---	9.6%[6]	---	8%[4]	10%[1]
Weekday Midday	9%[1]	11%[1]	---	11%[6]	---	11%[4]	11%[1]
Weekday PM	2%[1]	2%[1]	---	1%[6]	---	2%[4]	2%[1]
Saturday Peak	9%[1]	11%[1]	---	0%[6]	---	11%[4]	11%[1]
Directional Split (In/Out) - 50%/50%							

[1] *2025 CEQR Technical Manual*
[2] ACS JTW 5-year (2015-2019) data for Queens Census Tracts 169, 183, 185.01, 185.02, 187, 205, 235, 251, 253.01 and 253.02
[3] 2019 *Kissena Center Rezoning EAS*
[4] NYCDOT local retail survey data
[5] AASHTO CTPP RJTW 5-year (2012-2016) data for Queens Census Tracts 169, 183, 185.01, 185.02, 187, 205, 235, 251, 253.01 and 253.02
[6] 2016 East New York Rezoning FEIS
[7] Assumes one child per chaperoning parent
[8] Reflects non-vehicle traveling parents chaperoning their child. Auto and taxi pick-up and drop-off are accounted for in the daycare children vehicle trip projections.

Residential

For the residential use, trip generation rates and temporal and directional distributions were based on data from the *CEQR Technical Manual*. The trip generation rates used were 8.18 daily person trips per DU for weekday and 9.08 daily person trips per DU for Saturday. Temporal distributions of 9.3 percent, 5.6 percent, 8.5 percent, and 8.4 percent were used for the weekday AM, midday, PM, and Saturday peak hours, respectively. For the directional distributions, the following were assumed: 22 percent "in" for the weekday AM peak hour, 50 percent "in" for the weekday midday peak hour, 62 percent "in" for the weekday PM peak hour, and 55 percent "in" for the Saturday peak hour. Modal splits of 20.6 percent by auto, 0.8 percent by taxi, 4.4 percent by bus, 67.0 percent by subway, 1.9 percent by bicycle, and 5.3 percent by walk for all peak hours were used based on 2015-2019 ACS JTW data. For all peak hours, the auto occupancy rate of 1.12, based on the ACS JTW data, and a taxi occupancy rate of 1.39, based on the *Kissena Center Rezoning EAS*, were used.

For delivery trips, trip generation rates of 0.06 and 0.02 daily delivery trips per DU for weekday and Saturday, respectively, and temporal distributions of 12 percent, 9 percent, 2 percent, and 9 percent for the weekday AM, midday and PM, and Saturday peak hours, respectively, were obtained from the *CEQR Technical Manual*.

Local Retail

For the local retail use, trip generation rates and temporal and directional distributions were based on data from the *CEQR Technical Manual*. The trip generation rates used were 329.0 daily person trips per 1,000 sf for weekday and 358.0 daily person trips per 1,000 sf for Saturday; a 5 percent linked trip credit was applied to account for internal site trip linkages and pass-by trips. For the temporal distributions, 4.8 percent, 8.0 percent, 10.9 percent, and 11.7 percent were used for the weekday AM, midday, PM, and Saturday peak hours, respectively. For the directional distributions, 52 percent "in" for the weekday AM peak hour, and 50 percent "in" for the weekday midday, weekday PM, and Saturday peak hours were used. Modal splits of 11 percent by auto, 3 percent by bus, 4 percent by subway, and 82 percent by walk for all peak hours were assumed based on *CEQR Technical Manual*'s survey of local retail use in Queens transit zones. For all peak hours, the auto vehicle and taxi occupancy rates of 1.40 were used based on NYCDOT local retail survey data.

For delivery trips, trip generation rates of 0.35 and 0.04 daily delivery trips per 1,000 sf for weekday and Saturday, respectively, and temporal distributions of 8 percent, 11 percent, 2 percent, and 11 percent for the weekday AM, midday and PM, and Saturday peak hours, respectively, were obtained from the *CEQR Technical Manual*.

Daycare

The travel demand forecast for daycare use is broken out between staff members, attending children, and parents traveling with their children. The following summarizes the assumptions applied to each group; the daycare use is not expected to generate trips on Saturdays.

Staff

For daycare staff, trip generation rates, and temporal and directional distributions, were based on data from the *CEQR Technical Manual***.** The trip generation rates used were 6 daily person trips per 1,000 sf for weekday. For the temporal distributions, 25.0 percent was used for the weekday AM and PM peak hours, and 2.5 percent for the weekday midday peak hour. For directional distributions, 100 percent

"in" for the weekday AM peak hour, 50 percent "in" for the weekday midday, and zero percent "in" for the weekday PM were used. Modal splits of 57.0 percent by auto, 1.2 by taxi, 6.6 percent by bus, 26.0 percent by subway, 1.8 percent by bicycle, and 7.4 percent by walk for all peak hours were assumed and based on 2012-2016 AASHTO CTPP RJTW data. An auto vehicle and taxi occupancy rate of 1.11 was applied based on the RJTW data.

Children

For daycare trips made by children, trip generation rates, and temporal and directional distributions, were based on data from the *CEQR Technical Manual***.** The trip generation rate used was 22 daily person trips per 1,000 sf for weekday. For the temporal distributions, 25 percent was used for the weekday AM and PM peak hours, and zero percent for the weekday midday peak hour. For the directional distributions, 100 percent "in" for the weekday AM peak hour and zero percent "in" for the weekday PM was used. Modal splits of 20.6 percent by auto, 0.8 by taxi, 4.4 percent by bus, 67.0 percent by subway, 1.9 percent by bicycle, and 5.3 percent by walk for all peak hours were based on the 2015-2019 ACS JTW data. Auto vehicle and taxi occupancy rates of 1.0 were used for all peak hours as it was conservatively assumed that such trips by children do not involve carpooling (i.e., assumes one child per chaperoning parent).

For delivery trips, trip generation rate of 0.07 daily delivery trips per 1,000 sf for weekday, and temporal distributions of 9.6 percent, 11 percent, and 1 percent for the weekday AM, midday and PM peak hours, respectively, were assumed and obtained from the *2016 East New York Rezoning FEIS*. No delivery trips were assumed on Saturdays.

Parents

The travel demand forecast for daycare also reflects parents picking up and dropping off their child but not by car or taxi. The trip generation rates; and temporal and directional distributions, were based on data from the *CEQR Technical Manual*. The trip generation rates used were 44 daily person trips per 1,000 sf for weekday; approximately 21.4 percent of these trips would be auto or taxi pick-up/drop-off trips and were accounted for in the daycare children trip projections. For the temporal distributions, 25 percent was used for the weekday AM and PM; and zero percent for the weekday midday peak hour. For the directional distributions, 50 percent "in" was used for the weekday AM and PM peak hours. Modal splits of 4.4 percent by bus, 67.0 percent by subway, 1.9 percent by bicycle, and 5.3 percent by walk for all peak hours were based on the 2015-2019 ACS JTW data and reflect the non-auto and non-taxi chaperone trips.

Destination Retail

For the destination retail use, trip generation rates and temporal and directional distributions were based on data from the *CEQR Technical Manual*. The trip generation rates used were 78.2 daily person trips per 1,000 sf for weekday and 92.5 daily person trips per 1,000 sf for Saturday. For the temporal distributions, 3 percent, 9 percent, 9 percent, and 11 percent were used for the weekday AM, midday and PM, and Saturday peak hours, respectively. For the directional distributions, 63 percent "in" for the weekday AM peak hour, and 53 percent "in" for the weekday midday, 49 percent "in" for the weekday PM peak hour, and 52 percent "in" for the Saturday peak hour were used. Similar to the *Kissena Center Rezoning EAS*, modal split assumptions were based on the 2012-2016 AASHTO CTPP RJTW data; modal splits used were 57.0 percent by auto, 1.2 by taxi, 6.6 percent by bus, 26.0 percent by subway, 1.8 percent by bicycle, and 7.4 percent by walk for all peak hours analyzed. Vehicle occupancy rates

were based on the *Kissena Center Rezoning EAS*. For the weekday periods (AM, midday and PM peak hours), a vehicle occupancy rate of 2.05 was used for autos and taxis. For the Saturday peak hour, a rate of 2.49 was used for both autos and taxis.

For delivery trips, trip generation rates of 0.35 and 0.04 daily delivery trips per 1,000 sf for weekday and Saturday, respectively, were obtained from the *CEQR Technical Manual*. The temporal distributions used were 8 percent, 11 percent, 2 percent, and 11 percent for the weekday AM, midday, PM, and Saturday peak hours, respectively and were based on the *Kissena Center Rezoning EAS*.

Office

For the office use, trip generation rates and temporal and directional distributions were based on data from the *CEQR Technical Manual*. The trip generation rates used were 18 daily person trips per 1,000 sf for weekday and 3.9 daily person trips per 1,000 sf for Saturday. For the temporal distributions, 12.4 percent, 11.0 percent, 10.5 percent, and 14.1 percent were used for the weekday AM, midday and PM, and Saturday peak hours, respectively. For the directional distributions, 86 percent "in" for the weekday AM peak hour, and 52 percent "in" for the weekday midday, 16 percent "in" for the weekday PM peak hour, and 48 percent "in" for the Saturday peak hour were used. Modal splits of 57.0 percent by auto, 1.2 by taxi, 6.6 percent by bus, 26.0 percent by subway, 1.8 percent by bicycle, and 7.4 percent by walk for all peak hours were assumed and based on 2012-2016 AASHTO CTPP RJTW data. An auto vehicle and taxi occupancy rate of 1.11 was applied based on the RJTW data.

For delivery trips, trip generation rates of 0.32 and 0.01 daily delivery trips per 1,000 sf for weekday and Saturday, respectively, and temporal distributions of 10 percent, 11 percent, 2 percent, and 11 percent for the weekday AM, midday and PM, and Saturday peak hours, respectively, were obtained from the *CEQR Technical Manual*.

Level 1 Screening Results

The number of person trips projected under the No-Action (future without the Proposed Actions) and With-Action (future with the Proposed Actions) conditions are provided in **Table 9-3**. The overall net increment (With-Action minus No-Action) generated as a result of the Proposed Actions is also presented in **Table 9-3**.

Table 9-3 Trip Generation Summary – Person Trips

	AM Peak Hour			Midday Peak Hour			PM Peak Hour			Saturday Peak Hour		
Mode	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
No-Action												
Auto	39	15	54	63	56	119	52	66	118	78	72	150
Taxi	0	0	0	1	1	2	1	1	2	2	1	3
Bus	4	1	5	7	6	13	6	8	14	9	8	17
Subway	18	7	25	28	25	53	23	30	53	35	33	68
Bicycle	2	0	2	2	1	3	2	2	4	2	2	4
Walk	5	2	7	8	7	15	6	9	15	10	9	19
Total	**68**	**25**	**93**	**109**	**96**	**205**	**90**	**116**	**206**	**136**	**125**	**261**
With-Action												
Auto	37	50	87	54	50	104	68	66	134	84	75	159
Taxi	0	1	1	1	1	2	2	2	4	2	2	4
Bus	7	12	19	9	9	18	13	12	25	14	12	26
Subway	81	150	231	67	65	132	127	112	239	116	97	213
Bicycle	1	4	5	2	2	4	4	2	6	5	3	8
Walk	29	31	60	42	41	83	57	57	114	67	65	132
Total	**155**	**248**	**403**	**175**	**168**	**343**	**271**	**251**	**522**	**288**	**254**	**542**
Net Increment												
Auto	-2	35	33	-9	-6	-15	16	0	16	6	3	9
Taxi	0	1	1	0	0	0	1	1	2	0	1	1
Bus	3	11	14	2	3	5	7	4	11	5	4	9
Subway	63	143	206	39	40	79	104	82	186	81	64	145
Bicycle	-1	4	3	0	1	1	2	0	2	3	1	4
Walk	24	29	53	34	34	68	51	48	99	57	56	113
Total	**87**	**223**	**310**	**66**	**72**	**138**	**181**	**135**	**316**	**152**	**129**	**281**

Transit and Pedestrians

As shown in **Table 9-3**, the Proposed Actions are projected to generate the following number of peak hour transit and pedestrian trips (net increments):

- During the weekday AM peak hour, the Proposed Actions would generate an increase of 14 bus trips, 206 subway trips, and 273 pedestrian trips (an increase of 53 walk-only trips plus an increase of 220 transit trips [bus and subway]).
- During the weekday midday peak hour, the Proposed Actions would generate an increase of 5 bus trips, an increase of 79 subway trips, and an increase of 152 pedestrian trips (an increase of 68 walk-only trips plus an increase of 84 transit trips).

- During the weekday PM peak hour, the Proposed Actions would generate an increase of 11 bus trips, an increase of 186 subway trips, and an increase of 296 pedestrian trips (an increase of 99 walk-only trips plus an increase of 197 transit trips).
- During the Saturday peak hour, the Proposed Actions would generate an increase of 9 bus trips, an increase of 145 subway trips, and an increase of 267 pedestrian trips (an increase of 113 walk-only plus an increase of 154 transit trips).

The Proposed Actions would not be expected to generate ferry trips. As the number of peak hour bus trips are not expected to exceed the *CEQR Technical Manual* Level 1 screening thresholds of 50 bus trips, a Level 2 trip assignment is not needed for this mode. However, the Proposed Actions would generate subway and pedestrian trips exceeding the 200-subway trip threshold in the weekday AM peak hour and the 200-pedestrian trip threshold in the weekday AM, weekday PM, and Saturday peak hours, therefore a Level 2 trip assignment is needed for these periods to determine if further quantitative analysis is warranted for subway or pedestrians.

Traffic and Parking

Table 9-4 presents the No-Action and With-Action volumes and the net incremental peak hour vehicular volumes ("ins" plus "outs") projected to be generated by the Proposed Actions. These volumes include trips via autos, taxis (balanced assuming no overlap between inbound and outbound trips for this area per *CEQR Technical Manual* guidelines), and commercial delivery vehicles. The hourly vehicle trips generated by the Proposed Actions (the increment) would be 43 vehicles per hour (vph) during the weekday AM peak hour, 2 vph in the weekday midday peak hour, 35 vph in the weekday PM peak hour, and 30 vph in the Saturday peak hour. The volume of vehicle trips projected to be generated by the Proposed Actions would not meet or exceed the Level 1 50-vehicle-trip threshold for any peak hour. Therefore, a Level 2 trip assignment is not necessary and further traffic and parking analysis is not warranted per *CEQR Technical Manual* guidelines.

Table 9-4 Trip Generation Summary – Vehicle Trips

	AM Peak Hour			Midday Peak Hour			PM Peak Hour			Saturday Peak Hour		
Mode	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
No-Action												
Auto	26	9	35	35	31	66	27	39	66	33	31	64
Taxi	0	0	0	0	0	0	0	0	0	1	1	2
Delivery	0	0	0	0	0	0	0	0	0	0	0	0
Total	**26**	**9**	**35**	**35**	**31**	**66**	**27**	**39**	**66**	**34**	**32**	**66**
With-Action												
Auto	28	46	74	34	32	66	51	46	97	49	43	92
Taxi	1	1	2	0	0	0	2	2	4	2	2	4
Delivery	1	1	2	1	1	2	0	0	0	0	0	0
Total	**30**	**48**	**78**	**35**	**33**	**68**	**53**	**48**	**101**	**51**	**45**	**96**
Net Increment												
Auto	2	37	39	-1	1	0	24	7	31	16	12	28
Taxi	1	1	2	0	0	0	2	2	4	1	1	2
Delivery	1	1	2	1	1	2	0	0	0	0	0	0
Total	**4**	**39**	**43**	**0**	**2**	**2**	**26**	**9**	**35**	**17**	**13**	**30**

Level 2 Screening Assessment

As shown above in the **Level 1 Screening Results** section, a Level 2 screening assessment is not needed for vehicular traffic, bus, nor ferry, as the Proposed Actions would generate no ferry trips, and a maximum of 43 vehicle and 14 bus trips, respectively. These volumes are below the Level 1 screening thresholds of 50 vehicles, 50 ferry riders, and 50 bus riders.

However, the net increase in the number of new subway trips during the weekday AM peak hour and new pedestrian trips during the weekday AM, weekday PM and Saturday peak hours would exceed the Level 1 screening thresholds. The discussion below describes how subway rider trips and pedestrian trips are expected to access transit facilities and traverse the street network.

Subway

The Project Area is located approximately equidistant to two stations served by the 7 Subway Line: the 46th Street-Bliss Street Station on Queens Boulevard is west of the Project Area and the 52nd Street Station is to the east on Roosevelt Avenue (see **Figure 9-1**). Both stations are located approximately three blocks from the Project Area. Therefore, it is likely that pedestrian trips destined to the subway would be evenly distributed to each station.

As discussed in the Level 1 Screening Results section, project-generated increases in subway trips would peak at 206 trips ("in" plus "out") during the weekday AM peak hour. The Level 1 screening threshold would be modestly exceeded by 6 trips. However, as it can be expected that subway trips

would be distributed between the two stations, it is unlikely there would be a concentration of subway trips that would exceed the 200-subway-trip threshold at a particular subway station. Therefore, as exceedance of the Level 2 screening threshold is not expected, detailed subway analyses are not warranted and there would be no potential for significant adverse subway impacts.

Pedestrians

The Project Area is served by the B24 bus line along 47th Avenue, the Q32 bus line along Roosevelt Avenue, Q39 along 48th Avenue, the Q60 bus line along Queens Boulevard, and Q104 bus line which primarily runs along 40th Street. As the areas served by the Q32 and Q60 are also served by the 7 Subway Line to the west and other connecting subway lines to the east, it is assumed that bus riders would utilize the other bus routes. Based on New York City Transit (NYCT) ridership data, for the weekday peak hours, approximately 23 percent of bus trips were assigned to the B24, 53 percent to the Q39, and the remaining 24 percent to the Q104 bus line. For the Saturday peak hour, approximately 31 percent of bus trips were assigned to the B24, 37 percent to the Q39, and the remaining 32 percent to the Q104 bus line.

Walk-only pedestrian trips were distributed to the north, east, west, and south of the Project Area and then assigned throughout the network.

Level 2 Screening Results

Due to the Project Area's location relative to the nearby subway stations, there will be a concentration of subway trips at the southeast corner of Queens Boulevard and 50th Street. This concentration of subway trips, combined with the walk-only and bus trips on this element, would result in an exceedance of the Level 2 200-trip screening threshold during the weekday AM and PM peak hours. Therefore, a detailed analysis is warranted at this pedestrian element during those peak hours - there would be fewer than 200-person trips on this corner during the Saturday peak hour.

Detailed Analysis Methodology

This section describes the methodology used for the detailed pedestrian analysis.

Pedestrians

Pedestrian level-of-service standards are determined on the basis of walking speed, pedestrian spacing, and probabilities of pedestrian and vehicular conflict, and are assessed based on the methodologies presented in the *2010 Highway Capacity Manual* and the *CEQR Technical Manual*. These standards are primarily based on the space needs of people involved in various activities and are widely used for planning and design of facilities for pedestrians. Analysis of the southeast street corner at the intersection of Queens Boulevard and 50th Street near the Development Site will be performed to assess the adequacy of the pedestrian element.

Street corners must provide sufficient space for a mix of standing pedestrians (queued to cross a street) and circulating pedestrians (crossing the other street or passing around the corner). The analysis applies a measure of time and space availability based on the area of the corner reservoir, pedestrian crossing time available, and the estimated time used by circulating pedestrians.

The level-of-service standards for pedestrian elements are based on the time and space available per pedestrian during the analysis period. Level of service grades from A to F are assigned, with LOS A representative of free flow conditions without pedestrian conflicts and LOS F depicting significant capacity limitations and inconvenience. **Table 9-5** defines the level-of-service criteria for crosswalks, corner area, and sidewalk conditions, as per the *2010 HCM*. The *CEQR Technical Manual* identifies acceptable levels of service in non-Central Business District (CBD) areas (such as the area in this study) as LOS C or better, and mid-LOS D or better for CBD areas. The Project Area is located in a non-CBD area.

Table 9-5 Level-of-Service Criteria for Pedestrian Elements

LOS	Sidewalks (Platoon Flow)	Corner Reservoirs and Crosswalks
A	> 530 sf/p	> 60 sf/p
B	> 90 and ≤ 530 sf/p	> 40 and ≤ 60 sf/p
C	> 40 and ≤ 90 sf/p	> 24 and ≤ 40 sf/p
D	> 23 and ≤ 40 sf/p	> 15 and ≤ 24 sf/p
E	> 11 and ≤ 23 sf/p	> 8 and ≤ 15 sf/p
F	≤ 11 sf/p	≤ 8 sf/p

Significant Impact Criteria

The identification of significant pedestrian impacts is dependent on the area type (CBD or non-CBD) and is determined by the decrease of time and space available for pedestrians between the No-Action and With-Action conditions. The Project Area and surrounding analysis locations are located in a non-CBD area. The *CEQR Technical Manual* identifies significant impacts for the pedestrian sidewalk, crosswalk, and corner elements on a sliding scale detailed below. With-Action pedestrian level of service that is considered acceptable (LOS C or better in non-CBD areas, and mid-LOS D or better in CBD areas) would not have a potential for significant impacts.

For corners, the assessment of potential significant impacts is based on a sliding-scale formula provided in the *CEQR Technical Manual*. The formula used to determine the decrease in pedestrian space from the No-Action to With-Action condition that would trigger a significant impact is $Y \geq (X / 9.0) - 0.31$, where Y is the decrease in pedestrian space (sf/p) to be considered a potential significant impact and X is the No-Action pedestrian space (sf/p). If the decrease in pedestrian space is greater than Y and the With-Action level of service is considered to be unacceptable, the corner is considered to be significantly impacted. **Table 9-6** provides a summary of the sliding-scale guidelines provided in the *CEQR Technical Manual*.

Table 9-6 Significant Impact Criteria for Corners and Crosswalks - (non-CBD Areas)

No-Action Ped Space (sf/p)	With-Action Ped Space Reduction (sf/p)	No-Action Ped Space (sf/p)	With-Action Ped Space Reduction (sf/p)
≥26.6	With-Action Condition ≤24.0	15.0 to 15.8	≥ 1.4
25.8 to 26.6	≥ 2.6	14.1 to 14.9	≥ 1.3
24.9 to 25.7	≥ 2.5	13.2 to 14.0	≥ 1.2
24.0 to 24.8	≥ 2.4	12.3 to 13.1	≥ 1.1
23.1 to 23.9	≥ 2.3	11.4 to 12.2	≥ 1.0
22.2 to 23.0	≥ 2.2	10.5 to 11.3	≥ 0.9
21.3 to 22.1	≥ 2.1	9.6 to 10.4	≥ 0.8
20.4 to 21.2	≥ 2.0	8.7 to 9.5	≥ 0.7
19.5 to 20.3	≥ 1.9	7.8 to 8.6	≥ 0.6
18.6 to 19.4	≥ 1.8	6.9 to 7.7	≥ 0.5
17.7 to 18.5	≥ 1.7	6.0 to 6.8	≥ 0.4
16.8 to 17.6	≥ 1.6	5.1 to 5.9	≥ 0.3
15.9 to 16.7	≥ 1.5	≤ 5.0	≥ .2

Source: *2025 CEQR Technical Manual*

Pedestrian Analysis

Existing Conditions

Pedestrian counts were conducted in June 2025 at the southeast corner of Queens Blvd and 50th St for the weekday AM and PM peak periods. The pedestrian weekday peak hours of 7:45 AM to 8:45 AM, and 5:00 PM to 6:00 PM were selected for analysis of the weekday AM and PM peak hours, respectively.

The peak hour volumes and levels of service for the pedestrian element analyzed are presented in **Table 9-7**. As shown in the table, the southeast corner area operates at acceptable LOS A during both peak hours.

Table 9-7 Existing Pedestrian Levels of Service – Corners

		Weekday AM Peak Hour			Weekday PM Peak Hour		
Intersection	**Corner**	**Volume, ped/hr**	**Avg Ped Space, SF/P**	**LOS**	**Volume, ped/hr**	**Avg Ped Space, SF/P**	**LOS**
Queens Boulevard at 50th Street	***Southeast***	83	1,230.0	A	109	1,143.9	A

No-Action Conditions

The 2029 No-Action pedestrian volumes were developed by increasing existing volumes to reflect expected growth in overall travel through and within the study area. Consistent with *CEQR Technical Manual* guidelines, a background growth rate was applied to reflect growth in traffic from small developments. No nearby projects of moderate to large size are expected to be completed and operating by the Proposed Project's build year.

The No-Action pedestrian levels of service were determined for the location analyzed in the existing conditions. During both the weekday AM and weekday PM peak hours analyzed, the southeast corner is expected to operate at an acceptable level of service, the same as in existing conditions. The pedestrian volumes and levels of service are provided in **Table 9-8**.

Table 9-8 No-Action Pedestrian Levels of Service – Corners

		Weekday AM Peak Hour			Weekday PM Peak Hour		
Intersection	**Corner**	**Volume, ped/hr**	**Avg Ped Space, SF/P**	**LOS**	**Volume, ped/hr**	**Avg Ped Space, SF/P**	**LOS**
Queens Boulevard at 50th Street	***Southeast***	84	1,219.3	A	111	1,120.0	A

With-Action Conditions

The project-generated pedestrian volumes were distributed through the pedestrian network and added to the 2029 No-Action volumes to develop the 2029 With-Action pedestrian volumes. Pedestrian analyses were performed based on these volumes and the With-Action pedestrian levels of service were determined for the analysis location.

Pedestrian volumes and levels of service are provided in **Table 9-9**. As shown in the table, the southeast corner for both peak hours would be expected to operate at acceptable levels of service in the With-Action condition, the same as in the No-Action and existing conditions. As a result, the Proposed Project would result in no significant adverse impacts at the pedestrian element analyzed during the weekday AM and weekday PM peak hours.

Table 9-9 With-Action Pedestrian Levels of Service – Corners

		Weekday AM Peak Hour			Weekday PM Peak Hour		
Intersection	**Corner**	**Volume, ped/hr**	**Avg Ped Space, SF/P**	**LOS**	**Volume, ped/hr**	**Avg Ped Space, SF/P**	**LOS**
Queens Boulevard at 50th Street	***Southeast***	312	291.3	A	345	349.9	A

Conclusion

The transportation screening analysis concluded that the number of vehicle, ferry, bus, and rail trips generated by the Proposed Actions would not exceed *CEQR Technical Manual* Level 1 screening thresholds. While the Level 1 screening threshold for subway trips would be exceeded, an assessment of the distribution of subway trips determined that no station is expected to exceed the Level 2 screening threshold. As a result, no detailed subway station analysis is warranted and the potential for significant adverse subway impacts as a result of the Proposed Actions is not expected. The number of pedestrian trips generated by the Proposed Actions would exceed Level 1 trip generation and Level 2 trip assignment thresholds at the southeast corner at the intersection of Queens Boulevard and 50th Street. A detailed level of service analysis of this pedestrian element was conducted for the weekday AM and PM peak hours. The pedestrian analysis demonstrates that the southeast corner would operate at LOS A under existing conditions and would continue to operate at LOS A under No-Action and With-Action conditions. Therefore, no significant adverse transportation impacts are expected as a result of the Proposed Actions.

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Air Quality

Ambient air quality, or the quality of the surrounding air, may be affected by air pollutants produced by motor vehicles, referred to as "mobile sources"; by fixed facilities, usually referenced as "stationary sources"; or by a combination of both. Under CEQR, an air quality assessment determines both a proposed project's effects on ambient air quality as well as the effects of ambient air quality on the project.

Introduction

The Proposed Actions would facilitate construction of Projected Development Site 1, which would include a 12-story, 135-foot-tall (assuming a 10-foot-tall bulkhead above the 125-foot-tall roof) building containing residential, commercial, and community facility uses. The With-Action development on Projected Development Site 1 would contain approximately 305,362 gsf of mixed residential, commercial, and community facility uses, including 25 accessory parking spaces. The ground floor commercial space would be occupied by the existing retail tenant at Projected Development Site 1 (P.C. Richard & Son). The ground floor community facility space would be occupied by a daycare, with a landscaped outdoor play area on the southernmost portion of Projected Development Site 1.

In addition to the Applicant-owned Projected Development Site 1, the Proposed Actions would also affect the non-Applicant-owned property at Lot 43 (Projected Development Site 2). In the future with the Proposed Actions, Projected Development Site 2 is expected to be redeveloped with a 14-story (145-foot-tall, excluding bulkhead) mixed-use building of approximately 74,944 gsf, containing approximately 63,089 gsf of residential space (63 units), 3,228 gsf of commercial space, and 24 accessory parking spaces.

The air quality analysis for this project will analyze potential impacts from Projected Development Sites 1 and 2 and impacts of the surrounding existing sources on Projected Development Sites 1 and 2. The key issues are whether there are the potential impacts for:

- Emissions from the project-generated vehicular travel to significantly impact air quality near affected intersections;
- Emissions from the parking garage to significantly affect air quality on sidewalks near the parking entrance;
- Emissions from the HVAC and hot water systems of the Proposed Project to significantly impact existing sensitive receptors, as well as the adjacent Projected Development Site 2;
- Emissions from the large/major sources to impact Projected Development Sites 1 and 2;
- Emissions from industrial and manufacturing facilities to impact Projected Development Sites 1 and 2.

Air Quality Standards

Ambient air quality is affected by air pollutants produced by both motor vehicles and stationary sources. Emissions from motor vehicles are referred to as mobile source emissions, while emissions from fixed facilities are referred to as stationary source emissions. Ambient concentrations of CO are predominantly influenced by mobile source emissions. Particulate matter (PM), volatile organic compounds (VOCs), and nitrogen oxides (nitric oxide (NO) and nitrogen dioxide (NO_2), collectively referred to as NO_x) are emitted from both mobile and stationary sources. Fine PM is also formed when emissions of NO_x, sulfur oxides (SO_x), ammonia, organic compounds, and other gases react or condense in the atmosphere. Emissions of sulfur dioxide (SO_2) are associated mainly with stationary sources, and some sources utilizing non-road diesel such as large international marine engines. On-road diesel vehicles currently contribute very little to SO_2 emissions since the sulfur content of on-road diesel fuel, which is federally regulated, is extremely low. Ozone is formed in the atmosphere by complex photochemical processes that include NO_x and VOCs.

In accordance with the requirements of the Clean Air Act (CAA), as amended 1990, the U.S. Environmental Protection Agency (EPA) has promulgated National Ambient Air Quality Standards (NAAQS) (40 CFR part 50) for pollutants considered harmful to public health and the environment. The Clean Air Act established two types of national air quality standards. Primary standards set limits to protect public health, including the health of sensitive populations such as sick, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

The EPA Office of Air Quality Planning and Standards (OAQPS) has set NAAQS for six principal pollutants, which are called "criteria" pollutants. These six pollutants are ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide (SO_2), particulate matter less than 10 microns in aerodynamic diameter (PM_{10}) and less than 2.5 microns in aerodynamic diameter ($PM_{2.5}$), and lead (Pb). These standards are reviewed from time to time and may be revised.

The State of New York has adopted similar standards as those set by the EPA, with the exception of sulfur dioxide, particulates, fluorides, and hydrogen sulfide. The NAAQS are presented in **Table 10-1**.

Table 10-1 National Ambient Air Quality Standards

Pollutant	Primary/ Secondary	Averaging Level	Level	Form
Carbon Monoxide (CO)	Primary	8 hours	9 ppm	Not to be exceeded more than once per year
		1 hour	35 ppm	
Lead (Pb)	Primary and secondary	Rolling 3-month average	0.15 µg/m^3 (1)	Maximum arithmetic mean of 3 consecutive monthly means in a 3-year period
Nitrogen Dioxide (NO_2)	Primary	1 hour	100 ppb	Annual 98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Primary and secondary	1 year	53 ppb (2)	Annual mean
Ozone (O_3)	Primary and secondary	8 hours	0.070 ppm (3)	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
Particulate Matter ($PM_{2.5}$)	Primary	1 year	9.0 µg/m^3	Annual mean, averaged over 3 years
	Secondary	1 year	15.0 µg/m^3	Annual mean, averaged over 3 years
	Primary and secondary	24 hours	35 µg/m^3	98th percentile, averaged over 3 years
Particulate Matter (PM_{10})	Primary and secondary	24 hours	150 µg/m^3	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide (SO_2)	Primary	1 hour	75 ppb(4)	Annual 99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Secondary	1 year	10 ppb(5)	Annual mean, averaged over 3 years

Source: EPA NAAQS Table, https://www.epa.gov/criteria-air-pollutants/naaqs-table, Last updated on November 4, 2025
Notes:

1 In areas designated nonattainment for the Pb standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 µg/m3 as a calendar quarter average) also remain in effect.

2 The level of the annual NO_2 standard is 0.053 ppm. It is shown here in terms of ppb for the purposes of clearer comparison to the 1-hour standard level.

3 Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) O3 standards additionally remain in effect in some areas. Revocation of the previous (2008) O3 standards and transitioning to the current (2015) standards will be addressed in the implementation rule for the current standards.

4 The previous SO_2 standards (0.14 ppm 24-hour and 0.03 ppm annual) will additionally remain in effect in certain areas: (1) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2)any area for which an implementation plan providing for attainment of the current (2010) standard has not been submitted and approved and which is designated nonattainment under the previous SO2 standards or is not meeting the requirements of a SIP call under the previous SO2 standards (40 CFR 50.4(3)). A SIP call is a USEPA action requiring a state to resubmit all or part of its State Implementation Plan to demonstrate attainment of the required NAAQS.

5 The 2024 rulemaking added a new annual secondary NAAQS in 40 CFR Part 50 without altering the 1971 secondary 3-hour SO_2 NAAQS. Note that some areas may have certain continuing implementation obligations.

In addition to criteria pollutants, there are other toxic air pollutants not included by the EPA in the list of principal pollutants. Non-criteria pollutants are emitted by a wide range of man-made and naturally occurring sources. These pollutants are sometimes referred to as hazardous air pollutants (HAP) and, when emitted from mobile sources, as Mobile Source Air Toxics (MSATs). No federal

ambient air quality standards have been promulgated for toxic air pollutants. However, the New York State Department of Environmental Conservation (NYSDEC) has issued guidelines that establish acceptable ambient levels for these pollutants based on human exposure.

Regulatory Context

The 1990 CAA with Amendments resulted in states being divided into attainment and non-attainment areas, with classifications based upon the severity of their air quality problems. Air quality control regions are classified and divided into one of three categories: attainment, unclassified, or non-attainment depending upon air quality data and ambient concentrations of pollutants. Attainment areas are regions where ambient concentrations of a pollutant are below the respective NAAQS; non-attainment areas are those where concentrations exceed the NAAQS. Maintenance areas are former non-attainment that achieved attainment. An unclassified area is a region where data are insufficient to make a determination and is generally considered as an attainment area for administrative purposes. A single area can be in attainment of the standards for some pollutants while being in non-attainment for others. When an area is designated as non-attainment by EPA, the state is required to submit a State Implementation Plan (SIP) which outlines the plan to achieve conformity with the NAAQS and the following plan for maintaining the attainment status.

Queens County is designated as a severe non-attainment area for the 2008 8-hour ozone standard and a serious non-attainment area for the 2015 8-hour ozone standard. Both designations are part of a larger New York-Northern New Jersey-Long Island, NY-NJ-CT non-attainment areas. The county has been designated as a CO maintenance area on May 20, 2002, and as a $PM_{2.5}$ maintenance area for the 2006 24-hour $PM_{2.5}$ standard on April 18, 2014. Queens County is in attainment for all other criteria pollutants (PM_{10}, Pb, NO_2, and SO_2).

Pollutants of Concern

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

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

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

Non-criteria pollutants may be of concern in addition to the criteria pollutants discussed above. Non-criteria pollutants are emitted by a wide range of man-made and naturally occurring sources.

Emissions of non-criteria pollutants from industrial sources are regulated by the United States Environmental Protection Agency (EPA), however, there are no NAAQS for the air toxics.

New York State Department of Environmental Conservation (NYSDEC) has issued standards for certain non-criteria compounds, including beryllium, gaseous fluorides, and hydrogen sulfide. NYSDEC has also developed guidance document DAR-1 (February 2021), which contains a compilation of annual and short term (1-hour) guideline concentration thresholds for these compounds. The NYSDEC's DAR-1 guidance thresholds represent ambient levels that are considered safe for public exposure. EPA has also developed guidelines for assessing exposure to non-criteria pollutants. These exposure guidelines are used in health risk assessments to determine the potential effects to the public.

Impact Criteria

The predicted concentrations of pollutants of concern associated with a proposed project are compared with either the National Ambient Air Quality Standards (NAAQS) for criteria air pollutants or ambient guideline concentrations for non-criteria pollutants. In general, if a project would cause the standards for any pollutant to be exceeded, it would likely result in a significant adverse air quality impact. In addition, the City's *de minimis* criteria are also used to determine significance of impacts for CO and $PM_{2.5}$.

The NYSDEC DAR-1 guidance document presents guideline concentrations in micrograms per cubic meter ($\mu g/m^3$) for the one-hour (SGC) and annual average time (AGC) periods for various air toxic compounds.[1] In order to evaluate residual risk of non-carcinogenic toxic air emissions, hazard index is calculated based on annual exposure limits. If the combined ratio of pollutant concentration divided by its annual exposure threshold for each of the toxic pollutants is found to be less than 2.0, according to DAR-1, the residual risk is deemed acceptable. In addition, the potential cancer risk associated with each carcinogenic pollutant, as well as the total cancer risk of the releases of all the carcinogenic toxic pollutants combined, can be estimated. If the total incremental cancer risk of all the carcinogenic toxic pollutants combined is less than ten-in-one million, the residual risk is deemed acceptable.

$PM_{2.5}$ *de Minimis* Criteria

New York City uses *de minimis* criteria to determine a project's potential to result in a significant adverse $PM_{2.5}$ impact under CEQR. The *de minimis* criteria are as follows:

- Predicted increase of more than half the difference between the background concentration and the 24-hour standard;
- Annual average $PM_{2.5}$ concentration increments which are predicted to be greater than 0.1 $\mu g/m^3$ at ground level on a neighborhood scale (i.e., the annual increase in concentration representing the average over an area of approximately 1 square kilometer, centered on the location where the maximum ground-level impact is predicted for stationary sources; or at a distance from a roadway corridor similar to the minimum distance defined for locating neighborhood scale monitoring stations); or
- Annual average $PM_{2.5}$ concentration increments which are predicted to be greater than 0.3 $\mu g/m^3$ at a discrete receptor location (elevated or ground level).

[1] NYSDEC DAR-1 - Guidelines for the Evaluation and Control of Ambient Air Contaminants Under 6NYCRR Part 212 http://www.dec.ny.gov/docs/air_pdf/dar1.pdf. Last updated February 2021.

Background Concentrations

Background concentrations are ambient pollution levels associated with existing stationary, mobile, and other area emission sources. Three years of monitoring data (2020 to 2022) from the representative monitoring stations were used to develop background concentrations for all pollutants, as presented in **Table 10-2**. All concentrations were collected at the Queens College monitoring station located at 65-30 Kissena Boulevard. These concentrations were estimated using the form of the NAAQS (see the "Form" column in **Table 10-1** for more information).

Table 10-2 Background Concentrations

Pollutant	Averaging Time	Monitoring Location	Background Concentration
Carbon Monoxide	1-Hour	Queens College	2.1 ppm
	8-Hour		1.6 ppm
Nitrogen Dioxide	1-Hour	Queens College	51 ppb
	Annual		13.7 ppb
Particulate Matter (PM_{10})	24-Hour	Queens College	37 µg/m^3
Particulate Matter ($PM_{2.5}$)	24-Hour	Queens College	20.0 µg/m^3
	Annual		7.9 µg/m^3
Sulfur Dioxide	1-Hour	Queens College	6 ppb

The CEQR *de minimis* 24-hour threshold based on the Queens College $PM_{2.5}$ observations was estimated to be 7.5 µg/m^3.

Methodology

Mobile Sources

Mobile Source Screening Analysis

A screening analysis of mobile source emissions of Carbon Monoxide (CO) and Particulate Matter (PM) on ambient pollutant levels in the study area was conducted per the *2025 CEQR Technical Manual* guidance. For the project's study area, as described in Chapter 17, Sections 210 and 311 of the *CEQR Technical Manual*, the threshold for conducting an analysis of CO emissions corresponds to 170 project-generated vehicles at a given intersection in the peak hour. The need for conducting an analysis of PM emissions is based on road type and the number of project-generated peak hour heavy-duty diesel vehicles (or its equivalency in vehicular $PM_{2.5}$ emissions) as determined using the worksheet provided on page 17-12 of the *CEQR Technical Manual* (autos are assumed to be LDGT1).

Parking Facilities Analysis

The incremental parking spaces between No-Action and With-Action conditions is a net reduction of 65 spaces at Projected Development Site 1 and a net increase of 14 spaces at Projected Development Site 2. Both are below the CEQR threshold of 85 spaces. As such, a detailed parking garage impact analysis is not required.

Stationary Sources

Industrial Source Analysis

As described in Section 220 and Section 322 in Chapter 17 of the *CEQR Technical* Manual, an air quality assessment is required to evaluate the potential impacts of air toxics emissions from ventilation exhaust systems of manufacturing or processing facilities within a 400-foot radius of a project site when a project would result in new sensitive uses (particularly residences, schools, hospitals, or parks). If any sources are identified, a screening analysis is performed based on Table 17-3 in Chapter 17 of the *CEQR Technical Manual*. The screening table provides the maximum 1-hour, 8-hour, 24-hour and annual average modeled values based on a generic emission rate of 1 gram per second of a pollutant from a 20-foot-tall point source for the distances between 30 feet and 400 feet from the receptor of same height. Potential impacts predicted from the industrial source of concern based on the screen table are compared with the short-term guideline concentrations (SGCs) and annual guideline concentration (AGCs) recommended in NYSDEC's DAR-1 AGC/SGC Tables. If a proposed project fails the above screening analysis, or the screening analysis methodology is not applicable to the project, further refined analysis using EPA's AERSCREEN and/or AERMOD model is warranted to determine any potential for significant adverse impacts.

Large or Major Source Analysis

As described in Section 220 and Section 322 in Chapter 17 of the *CEQR Technical Manual*, an air quality assessment is required to evaluate the potential impacts of emissions from a large or major emission source within a 1,000-foot radius of a project site. Major sources are identified as those sources located at Title V facilities that require Prevention of Significant Deterioration permits. Large sources are identified as sources located at facilities that require a State Facility Permit. A detailed analysis is usually performed for such sources, if any are identified, to determine any potential for significant adverse impact.

No large or major sources were identified within a 1,000 feet radius of the Development Site. Therefore, no analysis for such sources is needed.

Individual Heat and Hot Water Systems Analysis

The following stepped analysis procedure is used to determine the potential for emissions from the HVAC systems of individual development sites to result in stationary source pollutants that would significantly impact existing land uses (project-on-existing impacts) and other development sites (project-on-project impacts):

- Impacts would be initially analyzed using the HVAC nomograph screening procedures described in the *CEQR Technical Manual* assuming the use of No. 2 fuel oil.
- If the nomograph screening result fails with the use of No. 2 fuel oil, HVAC screening procedures will be used assuming a cleaner burning fuel (natural gas), and an air quality (E)-designation would be proposed for the site, providing the fuel type restriction that would be required to avoid a significant adverse air quality impact.
- If the *CEQR Technical Manual* nomograph screening result fails with natural gas, a more detailed analysis will be conducted utilizing the USEPA's AERMOD dispersion model.

› If the detailed AERMOD analysis result fails with the use of natural gas, additional refined analysis and further stack restrictions (i.e., stack setback) would be required to avoid a significant adverse air quality impact. An air quality (E)-designation would be proposed for the site in this Environmental Assessment Statement (EAS), providing the fuel type stack set back distance.

Nomograph Screening Analysis

The *CEQR Technical Manual* HVAC nomograph screening analysis determines development size threshold below which an action would not result in a significant adverse impact. To evaluate potential for significant adverse impacts, the screening analysis considers fuel type, the maximum development size, and the HVAC systems exhaust stack height. Based on the distance from the development site to the nearest building of similar or greater height, if the maximum development size is greater than the threshold size determined by screening, there is the potential for significant air quality impacts, and a refined dispersion modeling analysis would be required. Otherwise, the source passes the screening analysis, and no further analysis is required.

It is assumed that No. 2 fuel oil or natural gas would be used in Projected Development Site 1's HVAC systems, and that exhaust stacks would be located three feet above roof height (as per the *CEQR Technical Manual*). Projected Development Site 1 did not pass the screening analysis for No.2 fuel oil or natural gas because it did not meet the screening distance required to the nearest receptor building (Projected Development Site 2). Therefore, a refined modeling analysis was performed. For refined modeling analysis assuming natural gas, the primary pollutants of concern are NO_2 and $PM_{2.5}$.

Refined Dispersion Analysis

Projected Development Site 1 was further analyzed using a refined dispersion model, the USEPA AERMOD dispersion model. AERMOD is a state-of-the-art dispersion model, applicable to rural and urban areas, flat and complex terrain, surface and elevated releases, and multiple sources (including point, area, and volume sources). AERMOD is a steady-state plume model that incorporates current concepts about flow and dispersion in complex terrain, including updated treatments of the boundary layer theory, understanding of turbulence and dispersion, and includes handling of terrain interactions. The AERMOD model calculates pollutant concentrations from one or more points (e.g., exhaust stacks), based on hourly meteorological data, and has the capability to calculate pollutant concentrations at locations where the plume from the exhaust stack is affected by the aerodynamic wakes and eddies (downwash) produced by nearby structures. The analyses of potential impacts from exhaust stacks were made assuming stack tip downwash, urban dispersion and surface roughness length, and elimination of calms. AERMOD can be run with and without building downwash (the downwash option accounts for the effects on plume dispersion created by the structure the stack is located on, and other nearby structures).

For the refined analysis, the exhaust stacks for the heat and hot water systems were assumed to be located at the edge of the development massing closest to the receptor, unless the source and receptor were immediately adjacent to each other. In these cases, the stack was assumed to be located at an initial distance of ten feet from the nearest receptor.

A refined dispersion modeling analysis was performed for $PM_{2.5}$ and NO_2. The analysis was performed using calculated emission rates for natural gas. If a source could not meet the NAAQS or $PM_{2.5}$ *de minimis* criteria using the initial heating and hot water system stack assumptions, further restrictive measures were considered—including increasing the minimum stack setback distance until the source met the respective criteria.

Receptor Placement

Discrete receptors (i.e., locations at which concentrations are calculated) were modeled along Projected Development Site 2's building façades to represent potentially sensitive locations such as operable windows and intake vents. Receptors were placed at elevated locations on all façades of the building, and horizontally spaced 20 feet apart.

Emission Estimates and Stack Parameters

Emission rates were calculated based on procedures outlined in the *CEQR Technical Manual* and fuel consumption data, the proposed building size, and emission factor data. The U.S. Energy Information Administration (USEIA) has building energy consumption factors that can be used to estimate annual fuel consumption based on a development site's total floor area and use. Residential fuel consumption factors were used for the mixed-use development as they are more conservative. The development sites' total floor area was based on the RWCDS assumptions. NO_2 and $PM_{2.5}$ emission factors were obtained from the natural gas combustion sections of the USEPA's AP–42.[2]

One-hour average NO_2 concentrations associated with Projected Development Site 1's HVAC and hot water systems were estimated using AERMOD model's Ambient Ratio Method 2 (ARM2) module to analyze chemical transformation of NO_X to NO_2 within the model. The national default minimum and maximum ambient NO_x-to NO_2 ratios of 0.5 and 0.9, respectively, were used.

The methodology used to determine compliance with the 1-hour NO_2 NAAQS was based on adding the monitored background to modeled concentrations from the proposed sources as follows: hourly modeled concentrations from proposed sources were first added to the seasonal hourly background monitored concentrations; then the highest combined daily one-hour NO_2 concentration was determined at each receptor location, and the 98th percentile daily one-hour maximum concentration for each modeled year was calculated within the AERMOD model; finally, the 98th percentile concentrations were averaged over the latest five years. This methodology is referenced in the USEPA modeling guidance[3] and is recognized by the city.

Background Concentrations

To estimate the maximum expected pollutant concentration at a given location (receptor), the predicted impacts must be added to a background value that accounts for existing pollutant concentrations from other sources that are not directly accounted for in the model (see **Table 10-2**). To develop background levels, concentrations measured at the most representative NYSDEC ambient monitoring station over the available three-year period (2020–2022) were used for annual NO_2 background concentrations.

$PM_{2.5}$ annual average impacts are assessed on an incremental basis and compared with the $PM_{2.5}$ *de minimis* criteria, without considering the annual background. The $PM_{2.5}$ 24-hour average background concentration of 20.0 µg/m^3 (based on the 2020 to 2022 average of 98th percentile concentrations measured at the Queens College monitoring station) was used to establish the *de minimis* value for the 24-hour increment, consistent with the guidance provided in the *CEQR Technical Manual*.

[2] https://www.epa.gov/sites/production/files/2020-09/documents/1.4_natural_gas_combustion.pdf

[3] Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-Hour NO2 National Ambient Air Quality Standard, USEPA, March 1, 2011.

Assessment

Mobile Sources

Mobile Source Screening Analysis

A mobile source intersection screening analysis was conducted consistent with *CEQR Technical Manual* guidance. A travel demand forecast was conducted for the weekday AM, midday, PM, and Saturday midday peak hours (see **Transportation, Section 9**). This forecast determined that the weekday PM peak hour would generate the highest level of incremental traffic and as a result, an assessment of the distribution of incremental vehicle trips was conducted for that period. This trip assignment assessment determined that incremental traffic would be most concentrated at the intersection of Queens Boulevard and 50th Street. Queens Boulevard consists of principal arterial and local roads and 50th Street is a local roadway as classified on the New York State Department of Transportation Functional Class Viewer. During the weekday PM peak hour, it is expected that this intersection would be utilized by 31 vehicles, all of which would be autos or taxis. The autos and taxis were conservatively assumed to be vehicle type LDGT1 for the equivalent truck calculation. Using the worksheet provided on page 17-12 of the *CEQR Technical Manual*, the Proposed Actions would result in approximately 13.19 equivalent heavy-duty diesel vehicles (HDDV)—13.02 equivalent trucks on the local road and 0.18 equivalent trucks on the arterial road.

Based on the percentage of incremental trips at Queens Boulevard and 50th Street and their respective screen values (23 and 12 equivalent HDDVs for arterial and local roads, respectively, as per the CEQR guidance), the weighted screen value for the intersection of Queens Boulevard and 50th Street would be approximately 13.42 HDDV equivalent trips. The Proposed Actions would result in 13.19 HDDV equivalent trips, and thus, the intersection passes the screening for $PM_{2.5.}$ Therefore, a detailed mobile source intersection analysis for $PM_{2.5}$ and PM_{10} is not warranted. Furthermore, because the Proposed Actions would generate far less than 170 peak hour trips, a detailed mobile source intersection analysis for CO is not warranted. Therefore, the Proposed Actions would not result in significant adverse air quality impacts from mobile sources.

Stationary Sources

Industrial Source Analysis

To assess potential air quality impacts on Projected Development Sites 1 and 2 from existing industrial sources that emit toxic air contaminants, an investigation of existing land uses within a 400-foot radius of the Development Site was conducted to identify potential sources and determine if there are active permits associated with those sources.

As a first step, land use maps were reviewed to identify surrounding land uses that could have NYCDEP-issued industrial permits (i.e., sites classified as Industrial/Manufacturing, Transportation/Utility, or Public Facilities/Institutions). Identified permits included those for industrial sites that have been registered with the NYC DEP have been either cancelled or expired. The facilities with the expired permits—Samito Furniture Finishing and Handy Button Machine Co.—do not exist, while other facilities have expired boiler registrations. One facility that has the potential to emit air toxics was identified: **Table 10-3** presents the facility located on Queens Block 2283, Lot 54, which is a precious-metal refinery that has several registrations.

Table 10-3 Industrial Sources within 400 Feet of the Project Block

Address	Block	Lot	Land Use[1]	Lot Owner Name	DEP CATS
45-40 51st St	2283	54	Industrial/ Manufacturing	So Accurate Group	PB002007; PB002207; PW003420; PB032501; PB032601; PB082003; PB082903

Source: NYCDEP's Clean Air Tracking System (NYCDEP CATS). https://a826-web01.nyc.gov/DEP.BoilerInformationExt/

The facility located on Queens Block 2283, Lot 54 has seven registrations, most of them for the hoods for the refinery processes. The air toxic screening analysis follows the *CEQR Technical Manual* guidance. The list of contaminants and their corresponding hourly and annual emission rates from the permit records were used for the analysis. The air toxic concentrations for all pollutants except for 1-hour NO_2 were estimated using Table 17-3 of the *CEQR Technical Manual* and the distance of 130 feet between the source to the closest edge of the proposed building residential floors. The AERMOD refined dispersion model was used to estimate NO_2 1-hour impacts from the source to the proposed buildings. As shown in **Table 10-4**, the maximum predicted short-term and annual concentrations for each air toxic compound is less than the respective SGCs and AGCs.

Table 10-4 Results of Industrial Source Analysis

Chemical Name	CAS	Total Short-term Concentration ($\mu g/m^3$)	SGC/ NAAQS ($\mu g/m^3$)	Total Annual Concentration ($\mu g/m^3$)	AGC/ NAAQS ($\mu g/m^3$)
Hydrochloric Acid	07647-01-0	1.88	2,100	0.017	20
Nitric Acid	07697-37-2	1.83	86	0.017	12.3
Caustic Mist (Sodium Hydroxide)	01310-73-2	9.09	200	0.08	-
Urea	00057-13-8	9.09	-	0.08	-
Sodium Bisulfate	10034-88-5	9.09	-	0.08	-
Sodium Thisulfate	07772-98-7	9.09	-	0.08	-
Silver Chloride	07783-90-6	9.09	-	0.08	-
Organic Acids	NY998-00-0	1.36	-	0.01	-
Lead	07439-92-1	2.73	-	0.025	0.038
Lead Oxide	1309-60-0	0.91	-	0.008	0.044
Particulates ($PM_{2.5}$)	NY075-00-0	26.51	35	7.91	9
NO_x	NY210-00-0	155.51	188	29.18	100

Note:
The NAAQS for lead was converted into the AGC following the procedure described in 2021 DAR-1 guidance.

Because pollutants exhausted from the refinery process are not carcinogenic, no cancer risk assessment was conducted. As shown in **Table 10-5,** the hazard index estimated for Projected Development Sites 1 and 2 was below 2, which is the acceptable hazard index for non-criteria non-carcinogenic air contaminants. As such, no significant adverse air quality impacts or health risk are anticipated from the existing industrial source located at Queens Block 2283, Lot 54, and therefore no further analysis is warranted.

Table 10-5 Hazard Index Assessment

Chemical Name	CAS	DAR1 Classification	Hazard Quotient
Hydrochloric Acid	07647-01-0	Medium toxicity	0.001
Nitric Acid	07697-37-2	Medium toxicity	0.001
Caustic Mist (Sodium Hydroxide)	01310-73-2	-	-
Urea	00057-13-8	-	-
Sodium Bisulfate	10034-88-5	-	-
Sodium Thisulfate	07772-98-7	-	-
Silver Chloride	07783-90-6	-	-
Organic Acids	NY998-00-0	-	-
Lead	07439-92-1	High toxicity	0.658
Lead Oxide	1309-60-0	High toxicity	0.189
Hazard Index			**0.850**

Individual Heat and Hot Water Systems Analysis

Refined Dispersion Analysis

As indicated above, Projected Development Site 1 required a refined modeling analysis to determine the potential for significant air quality impacts on Projected Development Site 2. The results of the refined modeling analysis determined the following:

› If the fuel type is restricted to natural gas only, and the heating and hot water system stack is set back from the building edge to address $PM_{2.5}$ and NO_2 emissions, no significant adverse impacts are predicted at Projected Development Site 1.

Table 10-6 presents the maximum predicted concentration from the heating and hot water systems of Projected Development Site 1. As shown in the table, all predicted pollutant concentrations are less than the applicable impact criteria. Therefore, there would be no potential for significant adverse air quality impacts from the proposed developments' heating and hot water system.

Table 10-6 Maximum Modeled Pollutant Concentrations Project-on-Project (µg/m³)

Pollutant	Averaging Period	Maximum Modeled Impact (µg/m³)	Background (µg/m³)	Total Concentration (µg/m³)	NAAQS/CEQR (µg/m³)
NO2	1-hour	[1]	-	187.9	188[2]
	Annual	3.8	25.7	29.5	100[2]
PM2.5	24-hour	1.8	20.0	21.8	35[2]/7.5[3]
	Annual	0.28	7.9	8.18	9.0[2]/0.3[3]

Notes:
[1] The 1-hour NO_2 concentration presented represents the maximum of the total 98th percentile 1-hour NO_2 concentration predicted at any receptor using seasonal-hourly background concentrations.
[2] NAAQS
[3] $PM_{2.5}$ *de minimis* criteria—24-hour average, not to exceed more than half the difference between the background concentration and the 24-hour standard of 35 µg/m³.

To preclude the potential for significant adverse air quality impacts on Projected Development Site 1 from heat and hot water emissions, an (E)-Designation (E-914) would be mapped as part of the Proposed Actions for Projected Development Site 1. The designation (detailed further below) would specify the various restrictions, such as type of fuel to be used, and the distance that the exhaust stack on the building roof must be from its lot line.

Conclusion

The mobile source screening analysis indicated that the increment of project-generated vehicle trips would be below the CEQR CO and PM impact thresholds. Thus, there would be no potential for adverse air quality impacts from mobile sources at intersections. The parking garages at Projected Development Sites 1 and 2 do not have the potential to adversely impact air quality levels, nor are the HVAC and hot water systems from Projected Development Sites 1 and 2 expected to create any local air quality impacts.

The industrial source analysis indicated that there would be no potential for significant adverse impacts or health risks from surrounding industrial sources on Projected Development Sites 1 and 2. Lastly, no large or major sources were identified within a 1,000-foot radius of the Project Area, and thus there would be no potential for significant adverse impacts from large or major sources on Projected Development Sites 1 and 2. As a result, the Proposed Actions would not result in any significant adverse air quality impacts.

(E)-Designation Requirements

Heating And Hot Water System (E)-Designations

As detailed above, a refined analysis was performed utilizing the AERMOD dispersion model for Projected Development Site 1. To preclude the potential for significant adverse air quality impacts from Projected Development Site 1's heating and hot water system emissions, an (E)-Designation would be incorporated into Projected Development Site 1. The descriptions and requirements of the proposed (E)-Designations for the site with respect to heating and hot water systems are as presented in **Table 10-7,** below.

Table 10-7 Heating and Hot Water System Restrictions

Development Site	Block	Lot	Proposed (E)-Designation
1	2283	1, 12, 22, 36	Any new residential, community facility, and/or commercial development must exclusively use natural gas for HVAC systems and hot water equipment, and ensure that the heating and hot water system stack(s) is located at the highest tier and at least 138 feet above grade, and at least 177 feet away from the eastern lot line facing 51st Street to avoid any potential significant adverse air quality impacts.
2	2283	43	Any new residential and/or commercial development on the above-referenced property must ensure the HVAC system and hot water equipment stack is located at the highest tier and at least 148 feet above grade to avoid any potential significant adverse air quality impact.

11

Noise

The goal of this section is to determine whether the Proposed Actions would increase noise exposure at existing sensitive receptors and whether new receptors would be introduced into an acceptable ambient noise environment.

Introduction

As described in **Part I: Project Description**, the Applicant is seeking a zoning map amendment and a zoning text amendment (the Proposed Actions) affecting Queens Block 2283, Lots 1, 12, 22, 36, and 43 (the Project Area). The Proposed Actions would facilitate the development of a nine-story mixed-use building of approximately 305,362 gross square feet (gsf) (the Proposed Project) on Lots 1, 12, 22, and 36 (the Development Site, or Projected Development Site 1) at 50-02 Queens Boulevard in the Woodside neighborhood of Queens Community District 2. The Proposed Project would include approximately 265,474 gsf of residential space (257 units), 16,653 gsf of commercial space, 4,762 gsf of community facility (daycare) space, and 25 accessory parking spaces. The Proposed Project would be subject to the Mandatory Inclusionary Housing (MIH) program requirements.

In addition to the Applicant-owned Projected Development Site 1, the Proposed Actions would also affect the non-Applicant-owned property at Lot 43 (Projected Development Site 2). In the future with the Proposed Actions, Projected Development Site 2 is expected to be redeveloped with a 14-story (145-foot-tall, excluding bulkhead) mixed-use building of approximately 74,944 gsf, containing approximately 63,089 gsf of residential space (63 units), 3,228 gsf of commercial space, and 24 accessory parking spaces.

Combined, under With-Action conditions, the Projected Development Sites would introduce approximately 308,306 gsf of residential space (320 units, of which 64 to 96 would be affordable pursuant to MIH), 19,881 gsf of commercial space, 4,762 gsf of community facility (daycare) space, and 49 accessory parking spaces, totaling 380,306 gsf of development on the two Projected Development Sites.

Because the Proposed Actions would introduce new noise-sensitive receptors to the Project Area, a noise assessment is required under CEQR to determine if:

- The Proposed Actions would significantly increase sound levels from mobile and stationary sources at existing noise receptors adjacent to the Project Area, including residential, commercial, and institutional land uses; and,
- New noise receptors introduced within the Project Area would be in an acceptable ambient sound level environment.

Mobile sources include vehicular traffic; stationary sources include rooftop equipment such as emergency generators, cooling towers, and other mechanical equipment. The noise assessment includes the following:

- Background on metrics used to describe noise;
- The methodology and criteria used to assess potential impacts;
- An assessment of the potential for the Proposed Actions to significantly affect existing receptors due to the introduction of new mobile or stationary sources; and
- An evaluation of the ambient sound levels at new receptor locations.

Noise Background

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

- **Level:** Sound level is based on the amplitude of sound pressure fluctuations and is often equated to perceived loudness.
- **Frequency:** Sounds are comprised of acoustic energy distributed over a variety of frequencies. Acoustic frequencies, commonly referred to as tone or pitch, are typically measured in Hertz (Hz). Pure tones have energy concentrated in a narrow frequency range and can be more audible to humans than broadband sounds. Sound levels are most often measured on a logarithmic scale of decibels (dB). The decibel scale compresses the audible acoustic pressure levels which can vary from the threshold of hearing (0 dB) to the threshold of pain (120 dB). Because sound levels are measured in dB, the addition of two sound levels is not linear. Adding two equal sound levels results in a 3 dB increase in the overall level. Research indicates the following general relationships between sound level and human perception:
  - A 3-dB increase is a doubling of acoustic energy and is the threshold of perceptibility to the average person.
  - A 10-dB increase is a tenfold increase in acoustic energy and is perceived as a doubling in loudness to the average person.

Audible sound is composed of acoustic energy over a range of frequencies typically from 20 to 20,000 Hz. The human ear does not perceive sound levels at each frequency as equally loud. To compensate for this phenomenon in perception, a frequency filter known as A-weighting (dBA) is used to evaluate environmental noise levels. **Table 11-1** presents a list of common outdoor and indoor sound levels.

Table 11-1 Common Indoor and Outdoor Sound Levels

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

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

Because sound levels change over time, a variety of sound level metrics can be used to describe environmental noise. The following is a list of sound level descriptors that are used in the noise analysis:

- L_{10} is the sound level that is exceeded for 10 percent of a given time period. Therefore, it represents the higher end of the range of sound levels. The unit is commonly used in the *2021 CEQR Technical Manual* to evaluate acceptable thresholds for noise exposure for new receptors that would be introduced by a proposed development.
- L_{eq} is the continuous equivalent A-weighted sound level. The L_{eq} is a single value that contains the same sound energy as the actual fluctuating sound levels over a given period of time. Therefore, the L_{eq} considers how loud noise events are during the period, how long they last, and how many times they occur. L_{eq} is commonly used to describe environmental noise and relates well to human annoyance. In accordance with the *CEQR Technical Manual*, the L_{eq} sound level is

used to assess the potential for significant increases in noise due to a proposed development at existing receptors in the study area.

› L_{dn} is the day-night average A-weighted sound level. Similar to L_{eq}, L_{dn} accounts for how loud noise events are and how long they last. The L_{dn} accounts for how many noise events occur over a 24-hour period and applies a 10-decibel penalty to events occurring from 10:00 PM to 7:00 AM due to the greater sensitivity to noise occurring at night.

Assessment Methodology

This noise analysis considers two receptor types when evaluating noise for a proposed development: existing and new receptor(s). Since the Proposed Actions would introduce new community facility and residential uses, these are considered "new receptors."

The analysis also considers "existing receptors" which are the current noise-sensitive uses, such as residential and commercial properties surrounding the Project Area. The following describes the results of the noise assessment for these two types of receptors.

Noise Assessment for Existing Receptors

Noise impact at existing nearby sensitive receptors is assessed according to the relative increase between No-Action and With-Action sound levels, expressed in terms of the L_{eq} sound level, in accordance with the *CEQR Technical Manual*. If mobile or stationary sources associated with the Proposed Actions would increase L_{eq} sound levels by 3 dB or more and absolute levels would exceed 65 dBA L_{eq}, the Proposed Actions would cause a significant adverse impact. Additionally, if No-Action condition noise levels are 60 dBA L_{eq} or less, a 5-dB increase would be considered a significant adverse noise impact.

Mobile Sources

The dominant noise source in the area is the elevated 7 train approximately 350 feet northwest of the project site. Since the subway schedule and frequency are not expected to change significantly, the noise level from the subway is anticipated to remain the same. Therefore, the Proposed Actions would not cause a significant adverse mobile source noise impact.

Stationary Sources

The Proposed Actions are not anticipated to introduce any substantial stationary source noise generators, such as unenclosed cooling or ventilation equipment, loudspeaker systems, stationary diesel engines, car washes, or other similar types of uses. The project heating, ventilation, and air conditioning equipment would incorporate sufficient noise reduction to comply with applicable noise regulations and standards, including the standards contained in the revised New York City Noise Control Code. This would ensure that mechanical equipment does not result in any significant increases in noise levels by itself or cumulatively with other project noise sources.

Since an outdoor play area is proposed on the southernmost portion of Projected Development Site 1, a playground noise analysis was conducted to assess the noise impact from the proposed play area to the existing residential use across the street, the proposed residential use at Projected Development Site 1, and the projected residential uses on Projected Development Site 2. According to the

Appendix: Noise of the *CEQR Technical Manual*, the recommended playground boundary noise level for a childhood center is 71.5 dBA (L_{eq}), and the noise levels can be expected to decrease by the following values at the specified distances from the playground: 4.8 dBA at 20 feet, 6.8 dBA at 30 feet, and 9.1 dBA at 40 feet. The general rule of a 6 dBA drop-off per doubling of distance from the playground boundary for all distances between 40 and 300 feet. The measured distance from the proposed play area to the existing residential use is approximately 55 feet, therefore the noise level from the proposed play area at the existing residential use would be 59.6 dBA.

Noise Assessment for New Receptors

With-Action noise conditions at new sensitive receptors that would be introduced by the Proposed Actions are evaluated according to absolute exterior sound level. The noise exposure guidelines for acceptable ambient conditions depend on the type of land use; for residential buildings, the goal is to maintain interior noise levels of 45 dBA or lower. With-Action exterior sound levels are evaluated to determine if receptors would be in an acceptable ambient sound level environment. It is generally assumed that without specific information on a building's window and wall construction, the outdoor-to-indoor noise reduction of the building is 25 decibels. Therefore, exterior ambient sound levels exceeding 70 dBA at residential receptors (which would equate to an interior noise level of 45 dBA) are considered to be Marginally Unacceptable and the need to provide window/wall sound attenuation that is sufficient to reduce interior sound levels to acceptable levels must be considered.

Since the Proposed Actions would introduce residential uses to the Project Area, the highest L_{10} sound level is used to evaluate the acceptability of the proposed on-site use with the noise environment.

Noise Exposure Guidelines

The *CEQR Technical Manual* provides noise exposure guidelines for assessing ambient noise conditions at new residential and community facility receptors, as shown in **Table 11-2**.

Existing Sound Levels

Noise monitoring was conducted around the perimeter of the Project Area at four locations from March 16 to March 17, 2023, in accordance with the *CEQR Technical Manual*. The locations of the three short-term measurement sites and one long-term measurement site are shown in **Figure 11-1**. Noise monitors were placed with a minimum of five feet between the microphone and nearby reflecting surfaces. With the existing train approximately 350 feet northwest of the Project Area, subway noise dominates the overall noise environment in this area. Therefore, a sound meter was placed on the rooftop of the P.C. Richard & Son for more than 24 hours to conduct a long-term noise measurement, per *CEQR Technical Manual* guidance. Additionally, 20-minute noise measurements were conducted during morning peak periods (7:00 – 9:00 AM), midday period (12:00 – 2:00 PM), and evening peak period (4:00 – 6:00 PM). Measurements were conducted using Type I sound level meters, which were calibrated by a laboratory following procedures traceable to the National Institute of Standards and Technology, and field-calibrated at the start and end of each measurement.

As shown in **Table 11-3**, measured L_{10} levels ranged from 61.2 dBA to 71.5 dBA, and the existing L_{dn} level at the rooftop of P.C. Richard & Son is 73.7 dBA. Hourly noise levels were shown in **Figure 11-2.**

Figure 11-1 Ambient Noise Measurement Locations

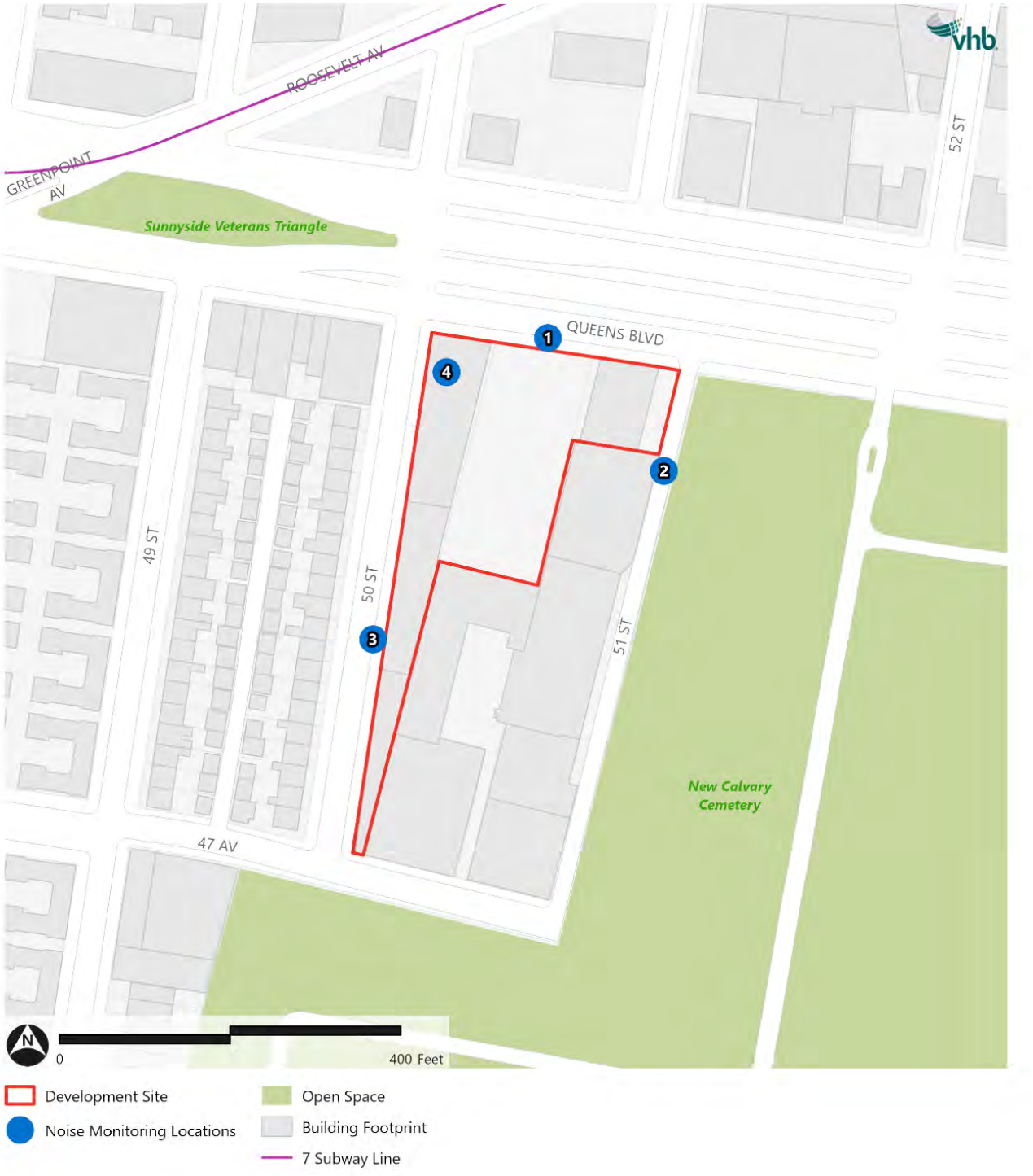


Table 11-2 Noise Exposure Guidelines for Use in City Environmental Impact Review*

Receptor Type[1]	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	Airport[3] Exposure
1.Outdoor area requiring serenity and quiet[2]		L10 ≤ 55 dBA	Ldn ≤ 60 dBA		60 dBA < Ldn ≤ 65 dBA		65 dBA < Ldn ≤ 75 dBA		75 dBA ≤ Ldn
2. Hospital, Nursing Home		L10 ≤ 55 dBA		55 <L10≤ 65 dBA		65<L10≤80 dBA		L10>80dBA	
3. Residence, residential hotel or motel	7 am to 10 pm	L10 ≤ 65dBA		65 <L10≤ 70 dBA		70<L10≤80 dBA		L10>80dBA	
	10 pm to 7 am	L10 ≤ 55dBA		55 <L10≤ 70 dBA		70<L10≤80 dBA		L10>80dBA	
4. School, museum, library, courthouse 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	

Source: Table 19-2, 2025 CEQR Technical Manual.

* In addition, any new activity shall comply with Impact Thresholds detailed in Section 410.

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

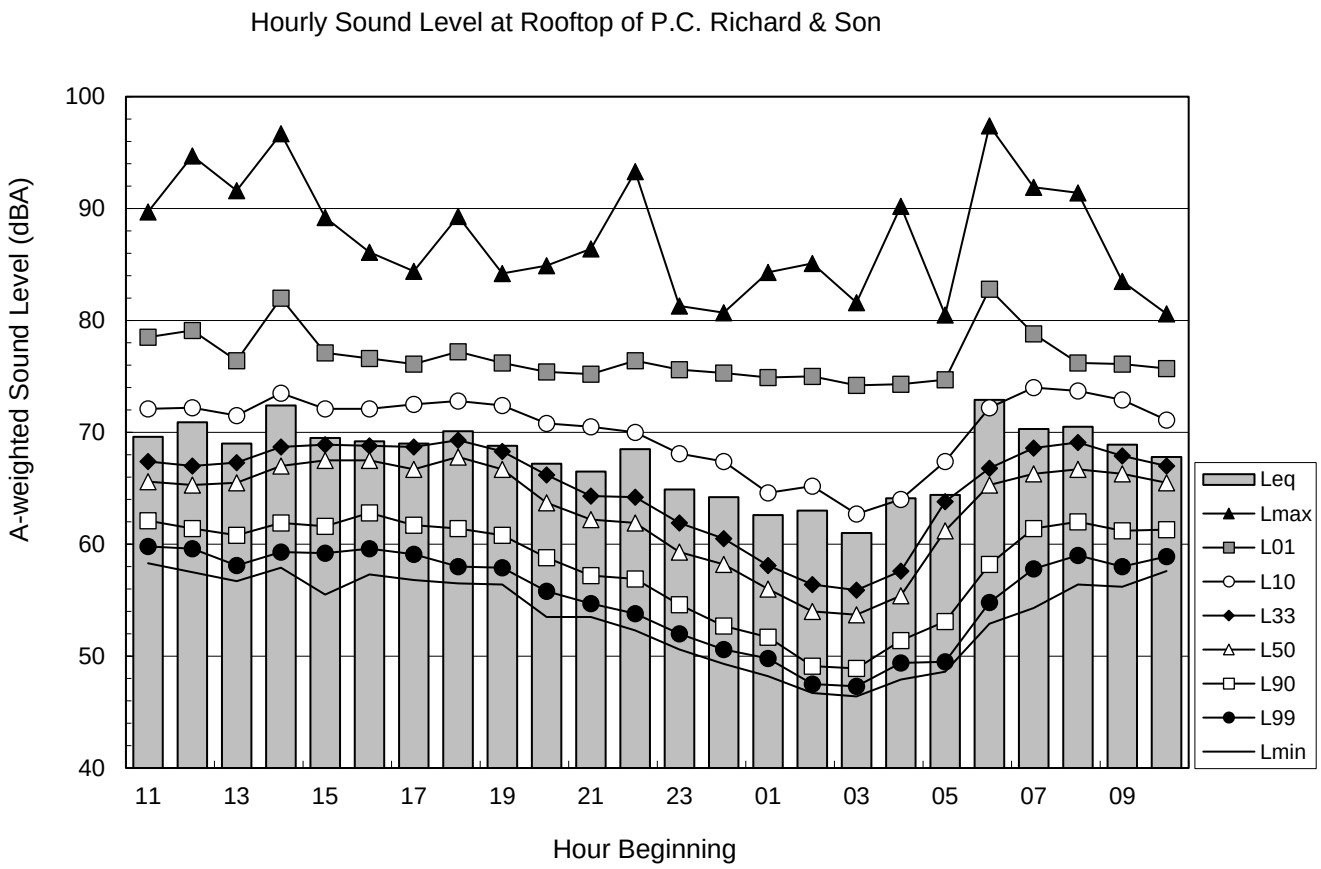
3 One may use the FAA-approved DNL contours supplied by the Port Authority of New York and New Jersey (PANYNJ), or the noise contours may be computed from the federally approved Aviation Environmental Design Tool (AEDT) Computer Model using flight data supplied by the PANYNJ.

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 listed by octave bands). Sources: New York City Department of Environmental Protection (adopted policy 1983).

Table 11-3 Existing Ambient Sound Level Measurements

#	Monitoring Location	Period	Duration	L_{eq}	L_{min}	L_{max}	L_{10}	L_{50}	L_{90}
1	Queens Blvd between 50th St and 51st St	Morning	20 mins	68.7	57.5	82.6	71.5	66.4	60.1
		Midday	20 mins	69.1	56.1	91.5	70.8	63.9	59.2
		Evening	20 mins	67.3	57.5	80.8	70.9	65.0	61.0
2	51st Street	Morning	20 mins	60.1	52.4	75.6	61.7	57.3	54.8
		Midday	20 mins	61.4	49.8	79.8	61.9	55.5	52.1
		Evening	20 mins	58.8	48.3	73.4	61.2	55.6	52.3
3	45-28 50th Street	Morning	20 mins	62.2	50.7	77.4	66.3	57.9	53.3
		Midday	20 mins	65.9	49.1	90.3	66.9	57.9	52.8
		Evening	20 mins	62.5	49.9	76.4	65.8	59.0	52.7
4	Rooftop of P.C. Richard & Son	Ldn	24-hr				**73.7**		

Figure 11-2 Hourly Sound Levels at Rooftop of P.C. Richard & Son



Acceptability Assessment

The *CEQR Technical Manual* provides noise exposure guidelines for assessing ambient sound levels, as shown in **Table 11-4**. Based on these noise exposure guidelines, noise impact has been assessed to determine the level of acceptability for new sensitive receptors at the Project Area.

According to the noise exposure guidelines in the *CEQR Technical Manual*, existing L_{dn} sound levels at Location 4 (Rooftop of P.C. Richard & Son) is 73.7 dBA and are Marginally Unacceptable. The existing L10 sound levels at Location 2 (51st Street) are below 70 dBA and are Acceptable. The existing L10 sound levels at Location 3 (45-28 50th Street) are also below 70 dBA and are Acceptable.

As shown in **Figure 11-3**, a play area is proposed at east side of 50th Street. As calculated above in the Stationary Source Section, the noise level from the play area at the closest existing residential use would be 48.0 dBA. The highest existing L_{eq} measured at L3 (45-28 50th Street) is 67.8 dBA. The future with-action noise levels at the existing residential use would be 66.0 dBA. Therefore, there would be no impact from the proposed play area on the existing residential use. However, the noise level (L_{10}) at the residential use of the Proposed Project (at Projected Development Site 1) would be 73.6 dBA.

Based on the finding of Marginally Unacceptable sound levels, sufficient outdoor-to-indoor sound attenuation of the window/wall must be specified to provide acceptable sound attenuation for interior spaces at the Project Area.

Table 11-4 Required Attenuation Values to Achieve Acceptable Interior Noise Levels

	Marginally Unacceptable				Clearly Unacceptable
Vehicular Traffic	$70<L_{10}\leq73$	$73<L_{10}\leq76$	$76<L_{10}\leq78$	$78<L_{10}\leq80$	$80<L_{10}$
Train	$65<L_{dn}\leq68$	$68<L_{dn}\leq71$	$71<L_{dn}\leq73$	$73<L_{dn}\leq75$	$75<L_{10}$
Attenuation	(I) 28 dBA	(II) 31 dBA	(III) 33 dBA	(IV) 35 dBA	See note [B]

Notes:

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

[B] The required attenuation value is the difference between L_{build} and $L_{interior}$, using the appropriate noise descriptor
Where: L_{build} is the projected noise level under the build condition rounded up to the whole number
$L_{interior}$ is the designed interior noise level (45 dB(A) for vehicular noise, 40 dB(A) for aircraft and train noise)

The composite outdoor-to-indoor transmission classification (OITC) value of the window-wall structure is used to determine the necessary sound attenuation. Sound attenuation measures would be achieved through construction materials and techniques with sufficient OITC-rated windows and walls. Since the measured L_{dn} sound level is between 73 and 75 dBA, the minimum composite window/wall attenuation required is 35 dBA. This requirement would apply to the northern and western facades of the building. Due to the noise generated by the proposed daycare facility, the sound level (L_{10}) at south façade would be 73.6 dBA, which is between 73 and 76 dBA, the minimum composite window/wall attenuation required is 31 dBA. This requirement would apply to the southern facades of the building. As the eastern façade of the proposed building would not have a direct line of sight to the subway, and the measured sound level (L_{10}) is below 70 dBA, there is no requirements for enhanced window/wall attenuation for the eastern façade.

To implement this attenuation requirement, an (E)-Designation (E-914) for noise would be applied to the projected development sites specifying the appropriate amount of window/wall attenuation and

the need for alternate means of ventilation. The text for the (E)-Designation (E-914) would be as follows:

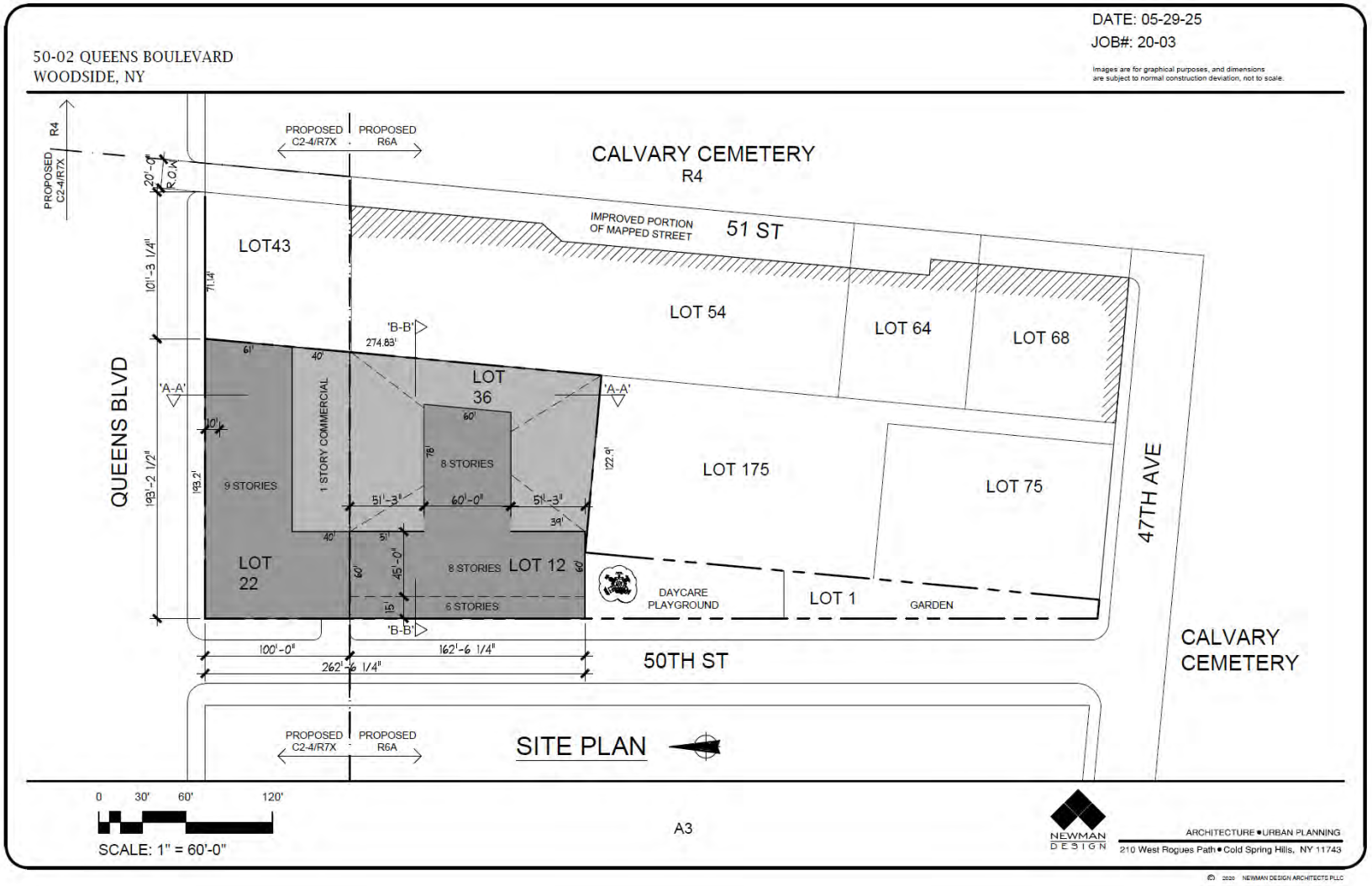
Projected Development Site 1 (Block 2283, Lot 1, 12, 22, 36)

In order to ensure an acceptable interior noise environment, future residential/community facility uses must provide a closed-window condition with a minimum of 35 dBA window/wall attenuation on the northern facade facing Queens Boulevard and on the western façade facing 50th Street to maintain an interior noise level (L_{dn}) not greater than 40 dBA for residential and community facility uses; future residential/community facility uses must provide a closed-window condition with a minimum of 31 dBA window/wall attenuation on the southern facade facing 47th Avenue to maintain an interior noise level (L_{10}) not greater than 45 dBA for residential and community facility uses. For future commercial office uses, the required window/wall attenuation along each respective facade would be 5 dBA lower in order to maintain an interior noise level (L_{10}) not greater than 50 dBA or L_{dn} not greater than 45 dBA. 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, well-sealed air conditioners, package-terminal air conditioners, or central air conditioning.

Projected Development Site 2 (Block 2283, Lot 43)

In order to ensure an acceptable interior noise environment, future residential uses must provide a closed-window condition with a minimum of 35 dBA window/wall attenuation on the northern facade facing Queens Boulevard to maintain an interior noise level (L_{dn}) not greater than 40 dBA for residential uses. For future commercial office uses, the required window/wall attenuation along the northern façade facing Queens Boulevard would be 5 dBA lower in order to maintain an interior noise level (L_{10}) not greater than 50 dBA or L_{dn} not greater than 45 dBA. 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, well-sealed air conditioners, package-terminal air conditioners, or central air conditioning.

Figure 11-3 Site Plan



Conclusion

A noise assessment was conducted to determine whether the Proposed Actions would significantly increase sound levels from mobile and stationary sources at existing noise receptors on the Project Area, and if new noise receptors that would be introduced by the Proposed Actions would be in an acceptable ambient sound level environment.

The dominant noise source in the area is the elevated 7 train approximately 350 feet northwest of the Project Area. Since the subway schedule is not expected to change significantly, the noise level from the subway is anticipated to remain the same. Therefore, the Proposed Actions would not result in a significant adverse mobile source noise impact, and the existing noise measurement results are representative of the With-Action mobile source noise conditions.

The Proposed Actions are not anticipated to include any substantial stationary source noise generators. The design and specifications for the building's mechanical equipment would incorporate sufficient noise reduction devices that would comply with applicable noise regulations and standards, including the standards contained in the revised New York City Noise Control Code.

Noise monitoring was conducted at four locations in accordance with the *CEQR Technical Manual*. Based on measured L_{dn} sound levels of 73.7 dBA at Location 4, a composite outdoor-to-indoor window/wall sound attenuation of 35 dBA or more is required for the facades of Projected Development Sites 1 and 2 that would face Queens Blvd and/or 50th Street to obtain acceptable interior noise conditions for residential and community facility uses. Based on the calculated L_{10} sound level of 73.6 dBA at Location 3 with the development of a play area designated to the daycare, a composite outdoor-to-indoor window/wall sound attenuation of 31 dBA or more is required for Projected Development Site 1's facades facing 47th Avenue to obtain acceptable interior noise conditions for residential and community facility uses, as illustrated in **Figure 11-4**. Additionally, alternate means of ventilation, such as well-sealed air conditioners, package-terminal air conditioners, or central air conditioning, is required.

Figure 11-4 Recommended (E)-Designation



12

Construction

Construction activities, although temporary in nature, can sometimes result in significant adverse impacts. A project's construction activities may affect a number of technical areas analyzed for the operational period, such as air quality, noise, and traffic. This chapter assesses the potential for the Proposed Actions to result in significant adverse impacts during construction.

Introduction

This chapter provides an assessment of the potential for construction of the projected development sites to result in significant adverse impacts during the construction period. As detailed in **Section 1: Project Description**, the Proposed Actions would facilitate the development of a nine-story mixed-use building of approximately 305,362 gross square feet (gsf) (the Proposed Project) on Lots 1, 12, 22, and 36 (the Development Site, or Projected Development Site 1) at 50-02 Queens Boulevard in the Woodside neighborhood of Queens Community District 2. The Proposed Project would include approximately 265,474 gsf of residential space (or 257 units), 16,653 gsf of commercial space, 4,762 gsf of community facility (daycare) space, and 25 accessory parking spaces.

In addition, the Proposed Actions would facilitate development on the non-Applicant-owned property at Lot 43 (Projected Development Site 2). Projected Development Site 2 is expected to be redeveloped with a 14-story mixed-use building of approximately 74,944 gsf, containing approximately 63,089 gsf of residential space (63 units), 3,228 gsf of commercial space, and 24 accessory parking spaces.

Combined, under With-Action conditions, the Projected Development Sites would introduce approximately 328,563 gsf of residential space (320 units, 64 to 96 of which would be affordable pursuant to Mandatory Inclusionary Housing [MIH] program requirements), 19,881 gsf of commercial space, 4,762 gsf of community facility (daycare) space, and 49 accessory parking spaces, totaling 380,306 gsf of development on the two Projected Development Sites.

Construction Regulations and General Practices

Governmental Oversight

Governmental oversight of construction in New York City is extensive and involves a number of City, State, and Federal agencies, each with specific areas of responsibility, as follows.

- The DOB has primary oversight of construction. DOB oversees compliance with the New York City Building Code to ensure that buildings are structurally, electrically, and mechanically safe. In addition, DOB enforces safety regulations to protect both workers and the general public during construction. Areas of oversight include installation and operation of equipment such as cranes and lifts, sidewalk sheds, safety netting, and scaffolding.
- The New York City Department of Environmental Protection (DEP) enforces the New York City Noise Code, and reviews and approves certain Remedial Action Plans (RAPs) and associated Construction Health and Safety Plans (CHASPs) as well as the removal of fuel tanks and abatement of hazardous materials. DEP also regulates water disposal into the sewer system and reviews and approves any rerouting of wastewater flow. A Community Air Monitoring Program (CMP) may be established in conjunction with other remedial and regulatory programs.
- The New York City Fire Department has primary oversight of compliance with the New York City Fire Code and the installation of tanks containing flammable materials.
- The New York City Department of Transportation Office of Construction Mitigation and Coordination (DOT OCMC) reviews and approves any traffic lane and sidewalk closures.
- The New York City Landmarks Preservation Commission approves studies and testing to prevent loss of archaeological resources and to prevent damage to architectural resources.
- The New York State Department of Environmental Conservation (NYSDEC) regulates disposal of hazardous materials, and construction, operation, and removal of bulk petroleum and chemical storage tanks. NYSDEC also regulates discharge of water into rivers and streams.
- The New York State Department of Labor licenses asbestos workers.
- The New York State Department of Transportation (NYSDOT) reviews and approves any traffic lane closures on its roadways, should any be necessary. NYSDOT also reviews any modifications of pedestrian and vehicular crossings over active rail lines.
- The U.S. Environmental Protection Agency has wide-ranging authority over environmental matters, including air emissions, noise, hazardous materials, and the use of poisons, however, much of its responsibility is delegated to the state level.
- The Occupational Safety and Health Administration (OSHA) sets standards for work site safety and construction equipment.
- Under the City Charter, the New York City Department of Small Business Services have jurisdiction over waterfront properties. For some projects led by private developers, the agency works in conjunction with DOB and New York City Economic Development Corporation to oversee activities.

OSHA sets standards for work site safety and construction equipment.

Construction Oversight

New York City regulates the hours of construction work through the New York City Noise Control Code, as amended in December 2005 and effective July 1, 2007. Construction is limited to weekdays between the hours of 7:00 AM and 6:00 PM, and noise limits are set for certain specific pieces of construction equipment. The City may permit work outside of these hours to accommodate: emergency conditions; public safety; construction projects by or on behalf of City agencies; construction activities with minimal noise impacts; and undue hardship resulting from unique site characteristics, unforeseen conditions, scheduling conflicts, and/or financial considerations. The DOB issues these work permits, and in some instances, approval of a noise mitigation plan from the DEP under the City's Noise Code is also required.

In New York City, construction work typically occurs on weekdays and begins at 7:00 AM, with most workers arriving between 6:00 AM and 7:00 AM. Work typically ends at 4:00 PM, with some exceptions when certain critical tasks (e.g., finishing a concrete pour for a floor deck, completing the drilling of piles, or completing the bolting of a steel frame erected that day) require that the workday be extended beyond normal work hours. Any extended workdays generally last until approximately 5:30 PM or 6:00 PM and do not include all construction workers on-site, but only those involved in the specific task requiring additional work time. For work outside of normal construction hours, work permits are obtained from DOB prior to such work commencing. The numbers of workers and pieces of equipment in operation for work outside normal hours is generally limited to those needed to complete the particular authorized task. Overall, the level of activity for any work outside of normal construction hours is less than a normal workday.

Construction Hours

New York City regulates the hours of construction work through the New York City Noise Control Code, as amended in December 2005 and effective July 1, 2007. Construction is limited to weekdays between the hours of 7:00 AM and 6:00 PM, and noise limits are set for certain specific pieces of construction equipment. The City may permit work outside of these hours to accommodate emergency conditions; public safety; construction projects by or on behalf of City agencies; construction activities with minimal noise impacts; and undue hardship resulting from unique site characteristics, unforeseen conditions, scheduling conflicts, and/or financial considerations. The DOB issues these work permits, and in some instances, approval of a noise mitigation plan from the DEP under the City's Noise Code is also required.

In New York City, construction work typically occurs on weekdays and begins at 7:00 AM, with most workers arriving between 6:00 AM and 7:00 AM. Work typically ends at 3:30 PM, with some exceptions when certain critical tasks (e.g., finishing a concrete pour for a floor deck, completing the drilling of piles, or completing the bolting of a steel frame erected that day) require that the workday be extended beyond normal work hours. Any extended workdays generally last until approximately 5:30 PM or 6:00 PM and do not include all construction workers on-site, but only those involved in the specific task requiring additional work time. For work outside of normal construction hours, work permits are obtained from DOB prior to such work commencing. The numbers of workers and pieces of equipment in operation for work outside normal hours is generally limited to those needed to complete the particular authorized task. Overall, activity for any work outside of normal construction hours involves fewer workers, less often, and for shorter durations.

Construction Practices

Access, Deliveries, and Staging Areas

Access to construction sites is controlled. Work areas are fenced off, and limited access points for workers and construction-related trucks are provided. Typically, worker vehicles are not allowed into the construction area, and workers or trucks without a need to be on the site are not allowed entry. After work hours, the gates are closed and locked. Security guards may patrol the construction site after work hours and over weekends to prevent unauthorized access.

Material deliveries to the site are controlled and scheduled. To aid in adhering to the delivery schedules, as is normal for building construction in New York City, flaggers are employed at each of the construction site's access points. Flaggers are typically supplied by either the subcontractor on-site at the time or by the construction manager. The flaggers control trucks entering and exiting the project site so that they would not interfere with one another. In addition, they provide an additional traffic aid as trucks enter and exit the on-street traffic streams. Flaggers would be posted on all of the access point roadways.

For the construction at the projected development sites, trucks would deliver materials on either Projected Development Site 1's Queens Boulevard and 50th Street frontages or Projected Development Site 2's Queens Boulevard and 51st Street frontages. Construction activities would be staged within the projected development sites and are also anticipated to occur on portions of the sidewalk and street on the all of the frontages immediately adjacent to the sites. These temporary closures are discussed in the following section.

Material deliveries to the site would be controlled and scheduled as discussed above.

Lane and Walkway Closures

Temporary curb-lane and sidewalk closures are typical for construction projects in New York City. To manage such closures, a Maintenance and Protection of Traffic (MPT) plan is developed consistent with DOT requirements. DOT OCMC reviews and approves MPT plans, and the implementation of the closures is also coordinated with DOT OCMC. In general, construction managers for major projects on adjacent sites also coordinate their activities to avoid delays and inefficiencies.

For construction on the site, it is possible that temporary closures of the sidewalk and curb lanes along 50th and 51st Street immediately adjacent to the Project Area. Any sidewalk closure would be limited to the superstructure phase of the project only; during other phases of construction, a full sidewalk shed, including masonry scaffolding, would be installed thereby allowing pedestrian passage past the construction sites. During the period that the sidewalk is closed, signs informing pedestrians of the sidewalk closures would be posted at the corners of the block on which the Project Area is located (i.e., at the intersections of Queens Boulevard and 50th Street, Queens Boulevard and 51st Street, 47th Avenue and 50th Street, and/or 47th Avenue and 51st Street.). Curb and travel lane closures are not expected.

An MPT plan would be developed for review and approval by DOT OCMC for these temporary sidewalk and lane closures.

Public Safety

A variety of measures are employed to ensure public safety during construction at sites within New York City. Examples include the use of sidewalk bridges to provide overhead protection for pedestrians passing by the construction site and the employment of flaggers to control trucks entering and exiting the construction site, to provide guidance to pedestrians, and/or to alert or slow down the traffic. Other safety measures include following DOB requirements during the installation and operation of tower cranes to ensure safe operation of the equipment and the installation of safety nettings on the sides of the project as the superstructure advances upward to prevent debris from falling to the ground.

As noted above, flaggers would be posted at the site, and a full sidewalk shed would be installed during most phases of construction to ensure pedestrian safety. In addition, as at other New York City construction site, the 312 Coney Island Avenue project would follow all DOB safety requirements to ensure that construction of the project is conducted with care so as to minimize the disruption to the community.

Rodent Control

Construction projects in New York City typically include provisions for a rodent (i.e., mouse and rat) control program with provisions for this formalized in construction contracts for the development. Rodent control programs are typically carried out throughout construction, beginning with surveying and baiting appropriate areas prior to construction and providing for proper site sanitation and maintenance during construction. Signage would be posted, and coordination would be conducted with appropriate public agencies. Only EPA- and NYSDEC-registered rodenticides would be permitted, and the contractor would be required to implement the rodent control program in a manner that is not hazardous to the general public, domestic animals, and non-target wildlife.

Construction Schedule

A conceptual construction schedule and construction staging sequencing for Projected Development Sites 1 and 2 is presented in **Table 12-1**, below. Construction is anticipated to begin August 2026 and end in May 2029. Per the *2025 CEQR Technical Manual*, construction is considered long-term as the total duration of construction is anticipated to exceed 24 months.

As noted in the schedule, construction of Projected Development Site 1 would begin with a demolition and excavation stage of approximately 4 months. Following this initial stage, foundation, superstructure, and exterior work would occur over an approximately 12-month period. Interior buildout would then follow and occur over an approximately 10-month period. The total duration of construction for Projected Development Site 1 would be approximately 26 months.

Construction work for Projected Development Site 2 is expected to begin shortly after the start of interior buildout of Development Site 1. Construction of Projected Development Site 2 would occur over an approximately 17-month period—two months for demolition and excavation, five months for foundation, superstructure, and exterior work, and ten months for interior buildout. With an approximately nine-month period of overlapping construction activity for both sites, total construction within the Project Area would occur over a 34-month period.

Table 12-1 Conceptual Construction Schedule

	2026					2027											2028											2029				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
Projected Development Site 1																																		
Demolition/Excavation																																		
Foundation/Superstructure/Exterior Enclosure																																		
Interior Buildout																																		
Projected Development Site 2																																		
Demolition/Excavation																																		
Foundation/Superstructure/Exterior Enclosure																																		
Interior Buildout																																		

Source: VHB

For conservative analysis purposes, it is assumed that no construction would occur on-site in absence of the Proposed Actions.

Construction of the projected development sites would be subject to government regulations and oversight detailed above and would employ the general construction practices described above.

Demolition

During each phase, the first step would be disconnection of existing utilities and demolition of the existing buildings to clear the sites. Asbestos abatement would be the first part of demolition. These specialty tasks are strictly regulated in New York City to protect the health and safety of the construction workers and the public, including nearby residents and workers. Depending on the extent of the asbestos, either the whole building or portions of the building would be closed off by containment barriers made of either plastic or wood to prevent asbestos from leaving the containment area. Specially trained workers in protective clothing use hand tools to remove the asbestos. These asbestos containing materials are sealed in bags and taken to licensed landfills for disposal. While the asbestos is being abated, air monitoring is performed by a licensed third-party inspector. After abatement is complete, an independent third-party inspector would certify that the building is asbestos free, and general demolition would begin. Depending on the amount of asbestos to be removed, about one or two closed or tarped truckloads of bagged materials could be removed per day. This phase can typically last about one month per building.

The next step in general demolition is to remove any economically salvageable materials. Much of the reclaiming of salvageable materials is done onsite, and the materials are transported to recycling centers. Typical demolition requires solid temporary walls and overhead protection around the building to prevent accidental dispersal of building materials into areas accessible to the general public. In addition, dust suppression measures, such as wetting of materials, are used. An exposure assessment would be performed to determine appropriate dust control measures to manage any lead-based paint. After the structure is demolished, excavators or front-end loaders are used to load the debris into dump trucks. The demolition debris is taken to landfills for disposal. Depending on the size of the building demolished, about two to four truckloads of debris could be removed per hour. The general demolition is expected to last between one and three months per building.

Excavation and Foundation

Excavation and Foundation is the next phase of construction. Regarding excavation activities, where necessary, sheeting is installed to stabilize soil around the excavation area and excavators are then used to excavate soil. The soil is loaded onto dump trucks with front-end loaders for transport to a licensed disposal facility or for reuse on any portion of the Project Area that needs fill.

Water from rain and snow collected in the excavation area during construction would be removed as necessary using a dewatering pump. If dewatering is required, testing would be performed to ensure compliance with NYCDEP sewer discharge permit/approval requirements and, if necessary, pretreatment would be conducted prior to discharge to the sewer.

Alongside excavation, construction of the new building's foundation and below-grade elements begins. Foundation work for the larger buildings, such as those developed in Phases C and F, would involve the installation of shallow footings and concrete walls, which would be built to the grade level. As part of the foundation construction, concrete would be poured starting in select areas.

Superstructure and Exterior Construction (Core and Shell)

The Proposed Project would be constructed using a core and shell design. Construction of the core and shell involves construction of the building's framework, core, and exterior. The building's superstructure includes beams, columns and floor decks. Construction of the core, or interior structure, includes construction of the building's elevator shafts; vertical risers for mechanical, electrical, and plumbing systems; electrical and mechanical equipment rooms; core stairs; slabs, beams, and lateral bracing systems, and shallow foundations. Construction of the exterior involves the installation of the façade (exterior walls, windows, and cladding and the roof).

During this stage, concrete plank and block would be installed or concrete would be poured for the core and the superstructure. For residential buildings, the superstructure would likely be concrete-framed whereas the superstructure of the proposed public school is anticipated to be steel-framed with a concrete podium. An electric hoist(s) and loading area would be installed and operated to facilitate these activities, including the delivery of various materials to the site. Sidewalk sheds would be installed along the curb edge around the sites.

Equipment used during this stage typically includes air compressors, generators, delivery and concrete trucks, concrete pumps, concrete trowels, welding equipment, and a variety of handheld tools. Mobile cranes would also be brought into the site, and temporary construction elevators (hoists) would be constructed for the delivery of materials and vertical movement of workers when necessary. Two to three mobile cranes are expected to be needed in each construction phase for superstructure activities.

The proposed two-story residences would involve timber frame construction with a concrete foundation. Typically, these structures require less intensive construction activities as they do not require the use of mobile cranes for installation activities or delivery of materials.

Interiors and Finishing

Interior fit-out activities include the construction of interior partitions, installation of lighting fixtures and interior finishes (i.e., flooring, painting, etc.); mechanical and electrical work; and finishes. In addition, final cleanup and touchup of the proposed building and final building systems (i.e., electrical system, fire alarm, plumbing, etc.) testing and inspections are part of this stage of construction.

Equipment used during interior construction typically includes exterior hoists, compressors, delivery trucks, and a variety of small hand-held tools. This stage of construction is typically the quietest and does not generate fugitive dust since this work occurs within the building with the façades substantially complete.

This stage of construction is also when the construction protection measures (fencing, sidewalk enclosures, bridges, temporary sidewalks, remaining scaffolding, etc.) around the construction site would be removed. This stage of construction would also include punch list completion activities, which are typically small tasks that were not completely finished, and project commissioning to ensure compliance with contract requirements.

Number of Construction Workers and Material Deliveries

Construction is labor intensive, and the number of workers varies with the general construction task and/or building size. Likewise, material deliveries and removals generate truck trips, and the number

also varies depending on the task and/or the building size. **Table 12-2** shows the estimated number of daily workers and trucks to the Project Area per quarter (i.e., three-month period) of each calendar year for the duration of construction activities. These represent the average number of daily workers and trucks within each quarter. During construction, the average number of workers would be approximately 90 workers per day, with a quarterly peak of 129 workers per day occurring in the first, second and third quarters of 2027 (Q1-Q3). The average number of daily trucks would be 13 trucks per day, with the maximum daily rate of 17 trucks per day anticipated during the first and third quarter of 2028.

Table 12-2 Average Number of Daily Construction Workers and Trucks by Quarter

	2026				2027				2028				2029			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Workers	--	--	51	94	129	129	129	117	112	124	120	24	24	24	--	--
Trucks	--	--	10	15	15	15	15	13	17	15	17	8	8	8	--	--

Assessment of Project Construction

In accordance with the *CEQR Technical Manual* guidelines, this preliminary assessment evaluates the effects associated with the Proposed Actions' construction related activities on sensitive receptors located near the area of construction.

Land Use and Neighborhood Character

While construction of the new buildings under the Proposed Actions would cause temporary disruption, particularly related to traffic and noise, it is expected that such effects in any given area would be relatively short in duration, even under the worst-case construction sequencing and, therefore, would not create a neighborhood character impact. Therefore, no significant adverse construction impacts to land use and neighborhood character are expected.

Socioeconomic Conditions

Construction could, in some instances, temporarily affect pedestrian and vehicular access on street frontages immediately adjacent to the Projected Development Sites; however, long-term lane and/or sidewalk closures are not expected during construction and therefore, would not restrict access to any existing or planned retail businesses. Utility service would also be maintained to all businesses, although there may be very short-term interruptions. Overall, construction of the projected development sites is not expected to result in any significant adverse impacts on surrounding businesses.

Community Facilities

The construction site would be surrounded by construction fencing and barriers that would limit the potential for impacts of construction on nearby community facilities. Construction of the proposed buildings would not block or restrict access to facilities in the area and would not affect emergency response times of the New York City Police Department and New York City Fire Department, given the geographic distribution of the police and fire facilities and their respective coverage areas. Therefore, no construction impacts would be expected to community facilities as a result of the Proposed Actions.

Open Space

As described in **Chapter 4, Open Space** there are no existing publicly accessible open spaces on the Projected Development Sites. While New Calvary Cemetery is located directly southeast of the Development Site, access to this publicly accessible open space would not be impeded during construction. In addition, measures would be implemented to control air emissions, dust, noise, and vibration on the construction site.

Historic and Cultural Resources

As discussed in **Part II, Technical Analyses**, the Project Area has no archaeological significance is not located within 400 feet of existing historic and cultural resources. Therefore, construction would not affect any archaeological or architectural resources.

Hazardous Materials

As discussed in greater detail in **Chapter 8, Hazardous Materials**, the potential for significant adverse impacts related to hazardous materials resulting from the Proposed Actions would be precluded through the development and implementation of a RAP and CHASP during redevelopment. These measures would be memorialized through the assignment of an (E)-Designation on the Projected Development Sites to ensure investigation, mitigation, and remediation of any hazardous materials would be completed in a safe, and comprehensive manner.

Water and Sewer Infrastructure

The Project Area is not adjacent or nearby to any water resources. Additionally, construction of the projected development sites would incorporate low flow plumbing fixtures to reduce sanitary flow in accordance with the New York City Plumbing Code, and that stormwater best management practices would be required in accordance with the NYC DEP Unified Stormwater Rule (USWR) guidelines, which includes requirements for bringing the development sites into compliance with the allowable stormwater release rate. The incorporation of the appropriate sanitary flow and stormwater source control storm management practices would reduce the overall volume of sanitary sewer discharge and stormwater runoff as well as the peak stormwater runoff rate from the development sites. As such, construction of the projected development sites is not expected to result in a significant adverse impact on water quality of the City's water and sewer infrastructure.

Transportation

Construction activities associated with the Proposed Actions would generate construction worker and truck trips during the anticipated 34-month duration of construction. An evaluation of construction sequencing and worker and truck projections was conducted as the duration of construction exceeds the *CEQR Technical Manual* screening threshold of 24 months.

Daily Workforce and Material Deliveries

Construction is labor intensive, and the number of workers varies with the general construction task and/or building size. Likewise, material deliveries and removals generate truck trips, and the number also varies depending on the task and/or the building size. **Table 12-3** shows the estimated number

of daily workers and trucks to the Project Area per quarter (i.e., three-month period) of each calendar year for the duration of construction activities. These represent the average number of daily workers and trucks within each quarter. During construction, the average number of workers would be approximately 90 workers per day, with a quarterly peak of 129 workers per day occurring in the first, second and third quarters of 2027 (Q1-Q3). The average number of daily trucks would be 13 trucks per day, with the maximum daily rate of 17 trucks per day anticipated during the first and third quarters of 2028.

Table 12-3 Average Number of Daily Construction Workers and Trucks by Quarter

	2026				2027				2028				2029			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Workers	--	--	51	94	129	129	129	117	112	124	120	24	24	24	--	--
Trucks	--	--	10	15	15	15	15	13	17	15	17	8	8	8	--	--

Construction Worker Modal Splits

The average number of construction vehicles per day were determined for each quarter of construction based on 2000 Census data for the construction industry for Queens Community District 2. It is assumed that approximately 58.0 percent of construction workers would travel to the Project Area via auto, 38.7 percent via public transportation (6.0 percent via bus, 28.1 percent via subway, and 4.6 percent via rail), 1.0 percent by taxi, and 2.3 percent by walk; an average vehicle occupancy of 1.19 workers per vehicle was assumed.

Traffic

Based on the above mode share and vehicle occupancy assumptions, the peak quarter for new daily construction traffic was identified. As shown in **Table 12-4**, the construction vehicle trips in passenger-car equivalents (PCEs)[1] would peak during Q1-Q3 2027. The estimated number of daily construction-related vehicle trips during these quarters would be 160 vehicle trips (190 PCEs trips).

Table 12-4 Average Number of Daily Construction Vehicle and PCE Trips by Quarter

	2026				2027				2028				2029			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Autos	--	--	50	92	**126**	**126**	**126**	114	110	120	116	24	24	24	--	--
Taxis	--	--	0	4	**4**	**4**	**4**	4	4	4	4	0	0	0	--	--
Trucks	--	--	20	30	**30**	**30**	**30**	26	34	30	34	16	16	16	--	--
Vehicles	--	--	70	126	**160**	**160**	**160**	144	148	154	154	40	40	40	--	--
PCEs	--	--	90	156	**190**	**190**	**190**	170	182	184	188	56	56	56	--	--

Peak Hour Construction Worker Vehicle and Truck Trips

Construction activities would be expected to occur on weekdays beginning at 7:00 AM and ending at 3:00 PM or 3:30 PM. Auto and taxi trips by construction workers would typically occur during the

[1] As larger vehicles such as trucks typically make up a significant portion of construction traffic, a passenger car equivalent factor is applied to these vehicles to account for their size difference. Per the *2025 CEQR Technical Manual*, it is assumed that one truck is equivalent to two passenger cars.

hours before and after the daily work shift for such workers. Construction truck trips would typically be distributed throughout the day depending upon the specific types of construction activities taking place; most trucks would remain in the area for short durations. For analysis purposes, each worker vehicle was assumed to arrive in the morning and depart in the afternoon, and each taxi rider and truck delivery was assumed to result in one "in" trip and one "out" trip during the same hour.

The estimated daily vehicle trips for the peak quarter of incremental construction traffic were distributed throughout the workday based on projected arrival/departure patterns of construction workers, and the projected pattern of truck deliveries based on the types of construction activities that would occur during the peak quarters for the Development Sites. For construction workers, it is assumed that most arrivals (approximately 90 percent) occur during the 6:00 AM to 7:00 AM hour (the hour before the beginning of a regular day shift) and the same percentage of departure trips occurs during the end of the shift (the 3:00 PM to 4:00 PM hour). For trucks, deliveries are usually spread throughout the day, but the peak activity (approximately 25 percent) is anticipated to occur during the 6:00 AM to 7:00 AM hour.

The hourly construction vehicle trip projections for the peak construction quarters are summarized in **Table 12-5**. The estimated number of peak hour vehicle trips generated by construction activities during Q1-Q3 2027 would be approximately 65 vehicle trips (71 PCEs) during the AM construction peak hour and 61 vehicle trips (63 PCEs) during the PM construction peak hour. As the AM and PM construction peak hour increments exceed the *CEQR Technical Manual* Level 1 threshold of 50 vehicle trips, a Level 2 screening assessment is needed to determine if a detailed traffic analysis is warranted for those periods per the *CEQR Technical Manual* guidelines.

Table 12-5 Construction Vehicle Trips by Hour (Q1-Q3 2027)

	Auto Trips		Taxi Trips		Truck Trips		Total Vehicle Trips			Total PCE Trips		
Hour	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
6 AM – 7 AM	**57**	**0**	**1**	**1**	**3**	**3**	**61**	**4**	**65**	**64**	**7**	**71**
7 AM – 8 AM	6	0	0	0	2	2	8	2	10	10	4	14
8 AM – 9 AM	0	0	0	0	2	2	2	2	4	4	4	8
9 AM – 10 AM	0	0	0	0	2	2	2	2	4	4	4	8
10 AM – 11 AM	0	0	0	0	1	1	1	1	2	2	2	4
11 AM – 12 PM	0	0	0	0	1	1	1	1	2	2	2	4
12 PM – 1 PM	0	0	0	0	1	1	1	1	2	2	2	4
1 PM – 2 PM	0	0	0	0	1	1	1	1	2	2	2	4
2 PM – 3 PM	0	2	0	0	1	1	1	3	4	2	4	6
3 PM – 4 PM	**0**	**57**	**1**	**1**	**1**	**1**	**2**	**59**	**61**	**3**	**60**	**63**
4 PM – 5 PM	0	4	0	0	0	0	0	4	4	0	4	4
5 PM – 6 PM	0	0	0	0	0	0	0	0	0	0	0	0
6 PM – 7 PM	0	0	0	0	0	0	0	0	0	0	0	0

Construction Trip Assignments Screening Assessment

As summarized above, the number of peak quarter construction vehicle trips generated by the Proposed Actions would exceed the *CEQR Technical Manual* Level 1 screening thresholds for vehicle

trips during the AM and PM construction peak hours. Construction-related vehicle trips were assigned through the surrounding street network based on expected routes to and from the Project Area.

Construction worker auto/taxi trips were assigned through the surrounding street network based on anticipated trip origins, the configuration of the street network, expected routes to the Project Area, and on-street parking spaces potentially available near the Project Area. Delivery trips were assigned along local truck routes - Queens Boulevard and Greenpoint Avenue.

Per *CEQR Technical Manual* guidelines, a detailed traffic level of service analysis is warranted at intersections that would be expected to experience an increase in vehicle trips that exceed the Level 2 threshold of 50 or more project-generated vehicle trips during analysis peak hours. **Figure 12-1** and **Figure 12-2** present the construction vehicle trips (in PCEs) assigned to the street network in the vicinity of the Project Area during the AM and PM construction peak hours, respectively. As shown in the figures, the Level 2 screening threshold is not expected to be exceeded at any intersection within the study area during either period. Therefore, no further detailed analysis of traffic is warranted, and construction activity associated with the Proposed Actions would not be expected to result in significant adverse traffic impacts.

Figure 12-1 Peak Construction Vehicle Trips – Construction AM Peak Hour



Figure 12-2 Peak Construction Vehicle Trips – Construction PM Peak Hour



Transit and Pedestrians

It is anticipated that 38.7 percent of construction workers would travel to the Project Area via public transportation (6.0 percent via bus, 28.1 percent via subway, and 4.6 percent via rail). During the peak construction period (Q1 to Q3 2027) 129 daily construction workers would be expected to work on-site. Based on the modal split assumption above, 51 of these workers would be expected to travel to the construction site by transit—more specifically, eight via bus, 37 via subway, and six via rail. It is expected that most construction workers (90 percent) would arrive during the AM construction peak hour and depart during the PM construction peak hour—there would be seven worker bus trips, 32 worker subway trips, and five worker rail trips during both the AM and PM construction peak hours. As these construction-related peak hour transit trips would be lower than the *CEQR Technical Manual* Level 1 screening thresholds of 50 bus riders, 200 subway riders, and 200 rail riders, detailed transit analyses are not warranted, and therefore, the Proposed Actions is not likely to result in significant adverse transit impacts during construction.

During the peak construction period, construction activities would generate 115 pedestrian trips (three walk-only trips plus 44 transit trips and 68 walk trips to and from the construction area and on-street parking spaces) during the AM and PM construction peak hours. As this quantity is below the *CEQR Technical Manual* Level 1 screening threshold of 200 or more pedestrian trips, detailed pedestrian analysis is not warranted, and therefore, the Proposed Actions is not likely to result in significant pedestrian impacts during construction.

Air Quality

Construction impacts on air quality may occur because of emissions from construction equipment and construction trucks throughout all phases of construction, and fugitive dust created by the demolition and excavation/foundation phases of construction. As described in the *CEQR Technical Manual*, the determination of whether it is sufficient to conduct a qualitative analysis of these emissions or whether a quantitative analysis is required should be made using factors such as the location of the project in relation to existing residential uses or other sensitive receptors, the intensity of the construction activity, and the extent to which a project incorporates commitments to appropriate emission control measures. These factors are analyzed for the projected development sites' construction below.

On-Site Construction-Related Emissions

For stationary source emissions, the most intense construction activities in terms of air pollutant emissions are typically the demolition and excavation/foundation stages since it is during these stages that the largest number of large non-road diesel engines would be employed, resulting in the highest levels of air emissions. The other stages of construction, which include superstructure/exterior and interior development, typically result in much lower air emissions since they require fewer pieces of heavy-duty diesel equipment. Equipment used in the latter stages of construction generally have small engines and are dispersed vertically throughout the building, resulting in very low concentration increments in adjacent areas. Additionally, the latter stages of construction do not involve demolition or soil disturbance activities and therefore would result in significantly lower dust emissions. Interior buildout activities are better shielded from nearby sensitive receptors by the proposed structures themselves.

For the projected development sites, the overall construction period would be 34 months; however, the most intense construction activities in terms of air pollutant emissions (demolition and excavation/foundation) are anticipated to occur over the course of approximately 6 months:

- Demolition, excavation, and foundations of Projected Development Site 1 would be completed in months 1 through 4, while Projected Development Site 2 would be completed in months 18 and 19.

Following the completion of demolition and excavation/foundation work, overall air emissions from the later stages of construction would generally be lower, for the reasons described above. Finally, both projected development sites would adhere to existing applicable laws, regulations, and building codes that focus on clean fuel, dust suppression measures, and idling restrictions for on-road vehicles.

Emission Intensity Analysis Methodology

Because the anticipated construction period for the projected development sites would last longer than 24 months and as the Project Area is located next to sensitive receptors (i.e., residences, commercial use), a construction emission intensity analysis was warranted. This analysis consists of estimating construction particulate matter (PM) emissions—specifically $PM_{2.5}$ —which are the emissions of primary concern from construction. $PM_{2.5}$ emissions are estimated for the full duration of construction.

The approach to assess emissions includes a determination of the peak emission period. The peak daily emissions and peak annual emissions (based on a 12-month rolling average) for construction of the projected development sites are determined based on the monthly construction schedule activities, which include the operation of on-site construction equipment, material being demolished and excavated, and trucks arriving, working, and leaving the projected development sites. The assessment considers the following phases of construction: demolition/excavation/foundation, superstructure/exterior, and interior fit out.

This analysis also provides a comparison of the projected development sites' peak daily and annual $PM_{2.5}$ emissions and proximity to nearby sensitive receptors to those of comparable projects that conducted a dispersion analysis and demonstrated no significant adverse air quality impacts.

The specific construction information used to calculate emissions generated from the construction process includes, but is not limited to, the following:

- The number of units and fuel-type of construction equipment to be used
- Rated horsepower and load factors for each piece of equipment
- Usage rates for equipment
- Hours of operation on-site
- Quantity of material removed from demolition and excavation
- Average distance to approach and enter the site and idling time of the different trucks traveling to the construction site

Emission Reduction Measures

As noted above, construction-period air emissions could adversely affect air quality because of on-site emissions from construction equipment and dust-generating activities. To address potential

emissions during construction, the projected development sites would adhere to existing applicable laws, regulations, and building codes that focus on clean fuel, dust control, vehicle idling and diesel-powered equipment, as described below.

- **Clean Fuel**: Ultra-low sulfur diesel would be used for diesel engines throughout the construction site.[2]
- **Dust Control**: Fugitive dust control plans would be required as part of contract specifications. For example, stabilized truck exit areas would be established for washing off the wheels of all trucks that exit the construction site. Truck routes within the site would be watered as needed to avoid the re-suspension of dust. All trucks hauling loose material would be equipped with tight fitting tailgates and their loads securely covered prior to leaving the site. All measures required by the portion of the New York City Air Pollution Control Code regulating construction-related dust emissions would be implemented.
- **Restrictions on Vehicle Idling**: In addition to adhering to the local law restricting unnecessary idling on roadways, on-site vehicle idle time would be restricted to three minutes for all equipment and vehicles that are not using their engines to operate a loading, unloading, or processing device (e.g., concrete mixing trucks) or are otherwise required for the proper operation of the engine.

In addition, the following measures would be implemented, as in the project components related to the environmental (PCRE), beyond New York City regulations to further reduce air pollutant emissions during construction:

- **Diesel Equipment Reduction**: Construction of the Proposed Project could minimize the use of diesel engines and use electric engines to the extent practical. This would reduce the need for on-site generators and require the use of electric engines in lieu of diesel where practical. Equipment meeting Tier 4 standards for diesel engines (model years 2011/2012 and beyond) would be expected to be in wide use and compose the majority of contractors' fleets. Tier 4 would achieve diesel particulate matter reductions of approximately 90 percent when compared to older, uncontrolled engines. This construction air quality control measure would be implemented as a PCRE to reduce air pollutant emissions and avoid the potential for significant adverse air quality impacts during construction.

Overall, these control measures would be expected to significantly reduce particulate matter emissions, and as recommended in the *CEQR Technical Manual*, all the necessary measures would be implemented to ensure that the New York City Air Pollution Control Code regulating construction-related dust emissions is followed.

Emissions Intensity Assessment

Sources of pollutant emissions from construction include on-site equipment, trucks, and fugitive dust suspension from material transfer operations and road dust. Emission factors for construction equipment were estimated using the MOVES4 NONROAD model for each piece of equipment for Queens County as a weighted average between the model years 2008 and 2027 and assuming Tier 4 diesel, gas and propane equipment. Emission factors for trucks were also estimated using MOVES4 for Queens County. Idling was limited to NYC restrictions for heavy trucks with the exception of

[2] The Environmental Protection Agency (EPA) required a major reduction in the sulfur content of diesel fuel intended for use in locomotive, marine, and non-road engines and equipment, including construction equipment. As of 2015, the diesel fuel produced by all large refiners, small refiners, and importers must be ULSD fuel. Sulfur levels in non-road diesel fuel are limited to a maximum of 15 parts per million.

concrete trucks, for which one hour of idling was assumed. Emissions from material transfer operations for loading debris during demolition and excavation were estimated using equations from AP-42, Section 13.2.4.[3] Paved road dust emissions were estimated using EPA AP-42, Section 13.2.1 equations.[4] Unpaved road dust emissions were estimated using EPA AP-42, Section 13.2.2 equations.[5]

Emissions from all sources were calculated for the full duration of construction as daily emissions for short-term $PM_{2.5}$ and average annual emissions for annual $PM_{2.5}$ to determine the construction phase that constitutes the peak $PM_{2.5}$ emissions. Based on the results of the $PM_{2.5}$ emissions analysis for the entire construction period, August through November 2026 was identified as having the highest daily (i.e., short-term) $PM_{2.5}$ emissions. **Figure 12-3** presents the projected daily $PM_{2.5}$ emissions during construction of the Proposed Project. The figure shows that the peak daily emission of construction would occur from August to November 2026, which is during the demolition/excavation/foundation phase of Projected Development Site 1. **Figure 12-4** shows the projected rolling average annual emissions of the Proposed Project. The highest annual emissions were identified for the period of construction between August 2026 and July 2027, which is the timeframe for the demolition/ excavation/foundation phase followed by the superstructure/exterior phase of Projected Development Site 1.

[3] AP-42: Compilation of Air Emission Factors: https://www.epa.gov/sites/production/files/2020-10/documents/13.2.4_aggregate_handling_and_storage_piles.pdf
[4] AP-42: Compilation of Air Emission Factors: https://www.epa.gov/sites/default/files/2020-10/documents/13.2.1_paved_roads.pdf
[5] AP-42: Compilation of Air Emission Factors: https://www.epa.gov/sites/default/files/2020-10/documents/13.2.2_unpaved_roads.pdf

Figure 12-3 Projected Daily $PM_{2.5}$ Construction Emissions Profile

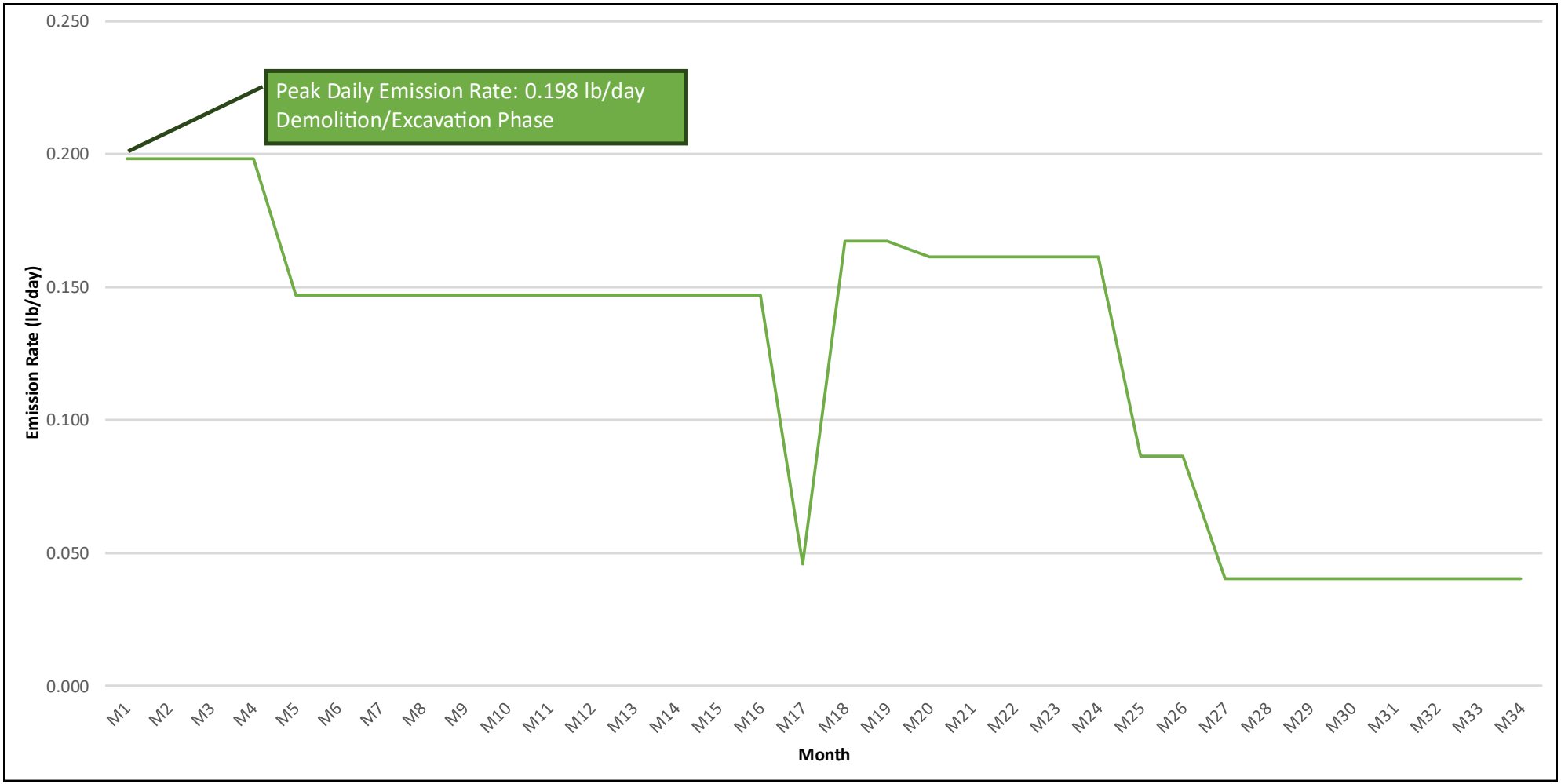
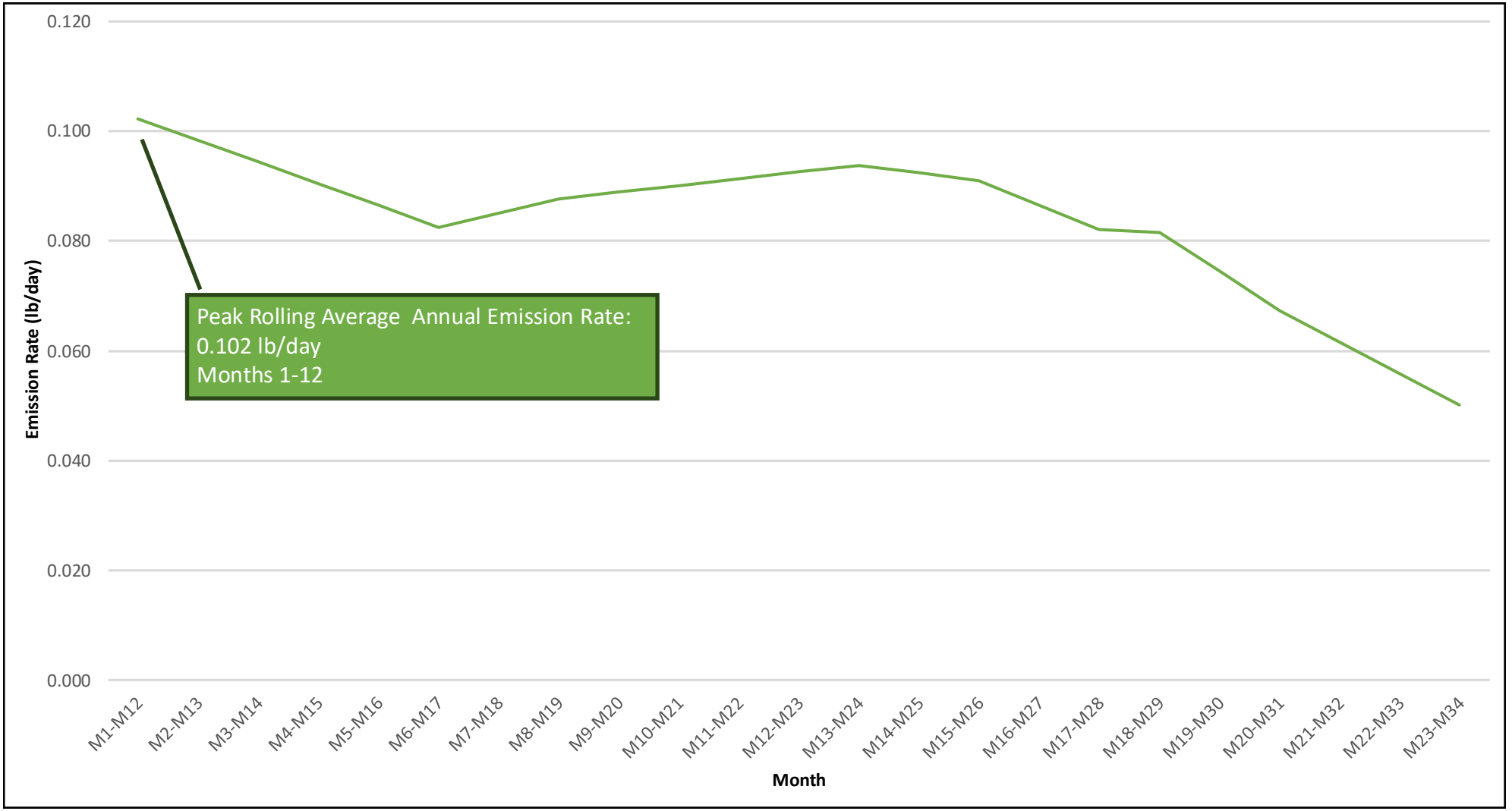


Figure 12-4 Projected Rolling Average Annual $PM_{2.5}$ Construction Emissions Profile



To determine whether there is potential for construction emissions from the Proposed Project to adversely impact the air quality levels in the neighborhood, the peak daily emissions estimated for the Proposed Project were compared to the peak daily emissions from other projects, which conducted dispersion analyses and demonstrated no significant adverse air quality impacts from construction. **Table 12-6** presents the results of this comparison. As shown in this table, peak daily $PM_{2.5}$ emissions from the Proposed Project are approximately 36 to 39 percent of the 175 Park Avenue and Greater East Midtown and projects' peak daily $PM_{2.5}$ emissions from construction, respectively. Peak annual emissions from the Proposed Project are lower than those of all comparison projects.

Nearby Sensitive Receptors

The Project Area is located in the Woodside neighborhood of Queens. The Project Area is bounded by commercial/industrial uses to the south and east, Queens Boulevard/Route 25 to the north, and small residential buildings to the west. The nearest receptor to the construction site was assumed to be the commercial use (previously known as the Teachers Federal Credit Union) that will be redeveloped into Projected Development Site 2. During the peak of construction (demolition/excavation/foundations of Projected Development Site 1), the commercial building would still exist and thus would be the closest receptor. It is estimated that the commercial building would be approximately 10 feet (3 meters) from the nearest construction equipment.

The distance between construction sources and the nearest affected receptors of comparison projects are also shown in **Table 12-6**. Source-to-receptor distances for the projects ranged from 1.2 meters to 2 meters. The Proposed Project's source-to-receptor distance is greater than that of the comparison projects. With the Proposed Project's peak construction emissions being less than those of the comparison projects and its distance to nearest receptors being greater than that of the comparison projects, the intensity of the Proposed Project's emissions is expected to be less than that of the comparison projects. Therefore, adverse impacts are not expected from peak on-site construction emissions.

Table 12-6 Peak $PM_{2.5}$ Construction Emissions: Proposed Project Versus Other Projects

Project Name	Proposed Building Size (gsf)	Construction Duration (months)	Peak Daily $PM_{2.5}$ Emissions (lb/day)	Peak Annual $PM_{2.5}$ Emissions (lb/day)	Distance to Nearest Receptor (m)
Greater East Midtown Rezoning, Sites 4 & 5	1,000,000	62	0.505	0.352	2.0
175 Park Avenue	2,992,161	110	0.545	0.532	1.2
50-02 Queens Blvd	**345,385**	**34**	**0.198**	**0.102**	**3.0**

Off-site Construction Related Emissions

In addition to on-site construction emissions, construction activities would result in emissions through truck and worker trips generated at the project-affected intersections. A mobile source intersection screening analysis of CO and $PM_{2.5}$ was conducted using the *CEQR Technical Manual* guidance. The highest construction vehicle trip generation would be in the superstructure/exterior phase of construction (between quarter 1 and 3 of 2027 as presented in the **Transportation** section) at the following intersection:

› 31 auto trips at the 47th Ave and 48th Street intersection in the AM peak hour

The total vehicle trips at the intersection is below the CO threshold of 170 trips per hour for the project area in Queens. Therefore, further analysis of CO was not required.

The $PM_{2.5}$ analysis was conducted using roadway and vehicle classification data and the $PM_{2.5}$ equivalent truck worksheet from the *CEQR Technical Manual*. According to the NYSDOT Functional Class Maps, 48th Street is an arterial road, 47th Avenue east of 48th Street is a local paved road, and 47th Avenue west of 48th Street is a collector road. Autos were assumed to be vehicle type LDGT1.

Based on the percentage of trips generated at the roadways of the intersection and the CEQR screen values for each roadway (12 equivalent HDDVs for local paved roads, 19 equivalent HDDVs for collector roads and 23 equivalent HDDVs for arterial roads), the intersection equivalent Truck percentage of CEQR screening value would be 0.821, which is less than 1. As such, the intersection passed the screening for $PM_{2.5,}$ and, a detailed analysis of $PM_{2.5}$ and PM_{10} was not warranted.

Overall, a detailed assessment of construction-related mobile sources is not needed, and no significant adverse mobile source air quality impacts from construction are expected.

Conclusion

Based on the location of nearby sensitive receptors relative to the sources of construction air quality emissions, a comparison of emissions, and the use of emission control measures, the Proposed Actions would not result in any significant adverse construction air quality impacts. Therefore, no further analysis is required.

Noise

Construction activities have the potential to affect the noise conditions of existing receptors near the Project Area and new receptors that would be introduced during the phased development. Construction noise can vary widely depending on the phase of construction (e.g., demolition, land clearing and excavations, foundation, steel and concrete erection, mechanical and interior fit out) and the specific task equipment and methods being used. The most significant construction noise sources at a construction site are generally the movement of trucks to and from a project site, back-up alarms and equipment such as excavators, hoe rams, drill rigs, pile driving rigs, and cranes. The noisiest phase of construction is typically during demolition, excavation. and foundation work. Interior finishes typically result in lower noise emissions since they require fewer pieces of heavy-duty diesel equipment and since interior finishes activities are better shielded from nearby sensitive receptors by the proposed structures themselves.

Pursuant to Section 310 of the Construction chapter of the *CEQR Technical Manual*:

"For stationary sources, construction noise, generated by pile driving, truck traffic, blasting, demolition, etc., is generally analyzed in detail only when it affects a sensitive receptor over a long period of time. The determination whether it is sufficient to conduct a qualitative analysis or whether a quantitative analysis is required cannot be made based solely on the duration of the construction period and should take into account such factors as the location of the project site in relation to existing residential uses or other sensitive receptors, the intensity of the construction activity, and the extent to which the project incorporates commitments to appropriate noise control measures."

The determining factors identified in Section 310 are assessed below.

For the Proposed Project, the overall construction period would be approximately 34 months; including the demolition, excavation/foundation, superstructure, superstructure/interior fit-out overlapping, superstructure/façade/interior fit-out overlapping, façade/interior fit-out overlapping, and interior fit-out phases. In addition, these relatively intense construction activities would be sequenced to minimize the impact, meaning the noisiest activities would be spread across the Project Area at different times during the total construction period.

Construction Analysis Fundamentals

Construction activities increase noise levels as a result of the operation of construction equipment on site and the movement of construction-related vehicles (i.e., worker trips, and material and equipment trips) on the roadways to and from the construction site. The combined effect of each of these noise sources was evaluated.

Noise from the on-site operation of construction equipment at a specific receptor location near a construction site is generally calculated by computing the sum of the noise produced by all pieces of equipment operating at the construction site. For each piece of equipment, the noise level at a receptor location is a function of the following:

- The noise emission level of the equipment;
- A usage factor, which accounts for the percentage of time the equipment is operating at full power;
- The distance between the piece of equipment and the receptor;
- Topography and ground effects; and
- Shielding.

Similarly, noise levels due to construction-related traffic are a function of the following:

- The noise emission levels of the type of vehicle (e.g., auto, light-duty truck, heavy-duty truck, bus, etc.);
- Volume of vehicular traffic on each roadway segment;
- Vehicular speed;
- The distance between the roadway and the receptor;
- Topography and ground effects; and
- Shielding.

Noise Reduction Measures

Noise from construction activities and some construction equipment is regulated by the New York City Noise Control Code and by the EPA. The New York City Noise Control Code limits construction activities to weekdays between the hours of 7:00 AM and 6:00 PM, sets noise limits for specific pieces of construction equipment, and requires the implementation of a Construction Noise Mitigation Plan. The Construction Noise Mitigation Plan outlines project-specific noise control measures and identifies applicable noise source and noise path controls. Source noise controls are designed to mitigate noises at their origin, while path noise controls focus on the available route(s) between a noise source and any receptors.

As noted above, the determination whether it is sufficient to conduct a qualitative analysis of construction-period noise should consider the extent to which the project incorporates commitments to appropriate noise control measures. In terms of source controls (i.e., reducing noise levels at the source or during the most sensitive time periods), the following source controls included under New York regulations would be implemented:

- The contractor would self-certify that all construction tools and equipment have been maintained to not generate excessive or unnecessary noise and that the noise emissions would not exceed the levels specified in Subchapter 5 of the NYC Noise Control Code and Table 22-1 of the *CEQR Technical Manual*. **Table 12-9** shows the noise levels for typical construction equipment.
- All construction equipment would be equipped with necessary noise reduction equipment, including mufflers. All equipment with internal combustion engines would include noise-insulating materials and would be operated with the doors closed and at the lowest engine speed allowable.
- Where feasible, practical, and safe, the use of back-up alarms would be minimized and/or quieter back-up alarms would be installed in accordance with OSHA standards.
- Vehicles would not be allowed to idle more than three minutes, in accordance with New York City Administrative Code §24-163.
- The contractor would implement a training program to inform workers on methods that can minimize construction noise.

In terms of path controls (e.g., placement of equipment, implementation of barriers or enclosures between equipment and sensitive receptors), the following path controls included under New York regulations would be implemented:

- When the DOB regulations require a perimeter barrier or "construction fence" and the site is within 200 feet of a receptor, the barrier shall be constructed in a specific manner (as described in the New York City Noise Code) to provide sufficient sound attenuation. Section 3307.7 of the New York City Building Code requires that a solid 8-foot-tall wall made of wood or other suitable material is installed where a new building is being constructed, or a building is being demolished to grade. The project would include an 8-foot-tall perimeter wall surrounding the Development Site.
- Where logistics allow, noisy equipment, such as cranes, concrete pumps, concrete trucks, and delivery trucks, would be located away from and shielded from sensitive receptor locations.
- Should noise complaints occur during construction, the contractor would use path noise control measures such as temporary noise barriers, jersey barriers and/or portable noise enclosures for small equipment.

In addition, the path control listed below would be implemented as a Project Component Related to the Environment (PCRE) beyond NYC regulations for the construction of the Proposed Project:

- A 23-foot tall sound barrier with a total length of 110 feet is proposed along the property boundary between Projected Development Sites 1 and 2 during the Demolition/Excavation and Foundation/Superstructure/Exterior Enclosure Phase of Projected Development Site 1 to avoid the construction impact from Projected Development Site 1 onto Projected Development Site 2.
- If it is confirmed that the west facing windows at Projected Development Site 2 between the two Projected Development Sites are illegal, then a 23-foot tall sound barrier with the total length of

30 feet (from 20 feet north of the southwestern corner of Block 2282 Lot 43 to10 feet south of the southwestern corner of Block 2282, Lot 43) is proposed along the property boundary during the Demolition/Excavation and Foundation/Superstructure/Exterior Enclosure Phase of Projected Development Site 1 to avoid the construction impact from Projected Development Site 1 onto the south facing windows of Projected Development Site 2.

Construction Noise Impact Criteria

The construction noise analysis methodology involves identifying noise-sensitive receptors, including residential, commercial office spaces, and community facilities near the Development Site assessing the potential for construction noise impacts due to mobile sources (i.e., construction trucks and construction worker vehicles), and assessing potential stationary construction noise impacts by evaluating the noise emissions during each month of construction, identifying the loudest periods for each phase (i.e., demolition, excavation/foundation, superstructure, facade and interior fit-out), predicting construction noise levels at each receptor location, assessing potential impacts according to applicable construction noise impact criteria, and evaluating whether noise mitigation is warranted, feasible, and effective.

The noise impact criteria described in Chapter 19, Section 410 of the *CEQR Technical Manual* serve as a screening-level threshold for potential construction noise impacts. As described in Chapter 19 (Noise), Section 410, there would be a significant noise increase from long-term operational conditions if ambient sound levels increase by 3 dBA (L_{eq}) or more and absolute levels would exceed 65 dBA L_{eq}, or, if existing ambient sound levels are 60 dBA L_{eq} or less, and noise levels would increase by 5 dBA (L_{eq}) or more. The significance of construction noise effects depends on the intensity and duration of construction activities. If construction of a proposed project would not result in any exceedances of these criteria at a given receptor, then that receptor would not have the potential to experience a construction noise impact. However, if construction would result in exceedances of these noise impact criteria, then further consideration of the intensity and duration of construction noise is warranted at that receptor to determine significant adverse construction noise impact.

The detailed construction noise analysis evaluates the specific activities, types of equipment, duration of activities, and locations of nearby sensitive receptors. Based on the results of the detailed analysis, there would be a significant adverse noise impact if construction noise due to the Proposed Actions would exceed the following:

- Exterior construction noise levels exceed ambient levels by 15 dBA or more for 12 continuous months or more, or exceed ambient levels by 20 dBA or more for 3 continuous months or more; and
- For receptors that represent interior spaces, interior noise levels (L_{10}) would exceed 45 dBA for residential and community facility spaces and 50 dBA for commercial office spaces as a result of above significant noise increases (15 dBA and 20 dBA or above) for a prolonged period of time, thus considered significant.

Construction Noise Receptors

The Project Area is near existing residential and commercial land uses. Based on the proximity of these noise-sensitive land uses, there is the potential for construction noise levels to exceed the screening criteria. As shown in **Figure 12-5** and **Table 12-7**, the study area for construction noise includes 33 buildings (or building façades) with residential, commercial office, or community facility

uses. Receptors were included on the closest location of each building, or building façade, to the Development Site and on each floor of the buildings. Multiple receptors were included for the buildings immediately adjacent to the west of the development site where there is the greatest potential for construction noise impacts.

The outdoor-to-indoor noise reduction of the receptor buildings has been estimated based on a visual survey of the buildings' facades. Buildings with certain windows and AC conditions were assessed using the following window/wall reduction assumptions:

- 25 dBA of attenuation for any window/wall condition;
- 28 dBA of attenuation for any insulated glass window without AC unit or with through-window AC unit;
- 30 dBA of attenuation for insulated window with through-wall AC unit;
- 32 dBA of attenuation for insulated window with central AC.

Figure 12-5 Construction Noise Receptor Locations



Source: VHB, 2025

Table 12-7 Receptors and Land Uses

Receptors	Address	Block	Lot	Land Use
R01	50-24 Queens Blvd	2283	43	Commercial Office
R02	Cavalry Cemetery	2311	250	Open Space
R03	45-50 50 St	2282	56	Residential
R04	45-48 50 St	2282	54	Residential
R05	45-46 50 St	2282	53	Residential
R06	45-44 50 St	2282	52	Residential
R07	45-42 50 St	2282	51	Residential
R08	45-40 50 St	2282	50	Residential
R09	45-38 50 St	2282	49	Residential
R10	45-36 50 St	2282	48	Residential
R11	45-34 50 St	2282	47	Residential
R12	45-32 50 St	2282	46	Residential
R13	45-30 50 St	2282	45	Residential
R14	45-28 50 St	2282	43	Residential
R15	45-26 50 St	2282	42	Residential
R16	45-24 50 St	2282	40	Residential
R17	45-22 50 St	2282	39	Residential
R18	45-20 50 St	2282	38	Residential
R19	45-18 50 St	2282	37	Residential
R20	45-16 50 St	2282	35	Residential
R21	45-14 50 St	2282	34	Residential
R22	45-12 50 St	2282	33	Residential
R23	49-18 Queens Blvd	2282	30	Public Facilities & Institutions
R24	49-14 Queens Blvd	2282	29	Commercial
R25	49-12 Queens Blvd	2282	28	Residential/Commercial
R26	49-08 Queens Blvd	2282	26	Residential/Commercial
R27	Sabba Park	2281	75	Open Space
R28	49-15 Queens Blvd	1318	1	Transportation & Utility/Commercial
R29	50-17 Queens Blvd	1319	21	Residential/Commercial
R30	51-05 Queens Blvd	1320	1	Public Facilities & Institutions
R31	51-23 Queens Blvd	1320	51	Residential/Commercial
R32	51-27 Queens Blvd	1320	7501	Residential/Commercial
R33	43-41 52 St	1321	1	Residential/Commercial
R34	50-02 Queens Blvd	2283	22	Residential

Construction Noise Assessment Methodology

The detailed construction noise analysis includes both mobile and stationary construction noise sources. Stationary sources are based on typical equipment used during all phases of construction including demolition, excavation/foundation, superstructure, exterior construction, and interior fit-out. There would be overlapping construction activities during excavation/foundation and superstructure activities as well as during exterior construction, and interior fit-out activities.

Construction mobile sources include worker vehicles and trucks. Construction noise has been evaluated for the construction mobile source peak period from 6:00 AM to 7:00 AM. During this period, there would be no construction noise from stationary sources.

Construction Mobile Source Noise Assessment

The construction mobile source noise assessment evaluated at one section facing Queens Blvd during the 6:00 to 7:00 AM period. Traffic data was collected along with the noise measurement.

The potential for construction mobile sources to increase ambient sound conditions has been determined based on proportional modeling of noise PCEs. If construction mobile sources would result in a doubling or more of PCEs, it would result in a 3 dBA or greater increase in noise levels. If PCEs would not double during construction, there would not be a significant adverse vehicular noise impact, and no further mobile source noise analysis is warranted. The *CEQR Technical Manual* describes the process to determine PCEs. Vehicle classes are defined to have the following PCEs based on typical vehicles speeds:

- Each automobile or light truck: 1 noise PCE
- Each medium truck: 13 noise PCEs
- Each bus: 18 noise PCEs
- Each heavy truck: 47 noise PCEs

Increases in noise due to construction mobile sources are calculated using the following equation:

$$Sound\ Level\ Increase\ (Leq) = 10 * \log\left(\frac{Existing\ and\ Construction\ PCEs}{Existing\ PCEs}\right)$$

As described in the **Construction Transprtation** section, the peak construction vehicle trips during the peak construction quarter (Q1-Q3 of 2027) would include 59 automobiles and 6 delivery trips in the 6:00 AM to 7:00 AM period. These vehicle trips would be all distributed along Queens Blvd to enter the construction site.

As shown in **Table 12-8,** noise from construction mobile sources between 6:00 AM and 7:00 AM would increase up to 0.2 dBA compared to the existing condition. As the construction mobile source noise levels would not increase by 3 dBA or more, there would be no significant adverse noise impact.

Table 12-8 Construction Mobile Source Analysis

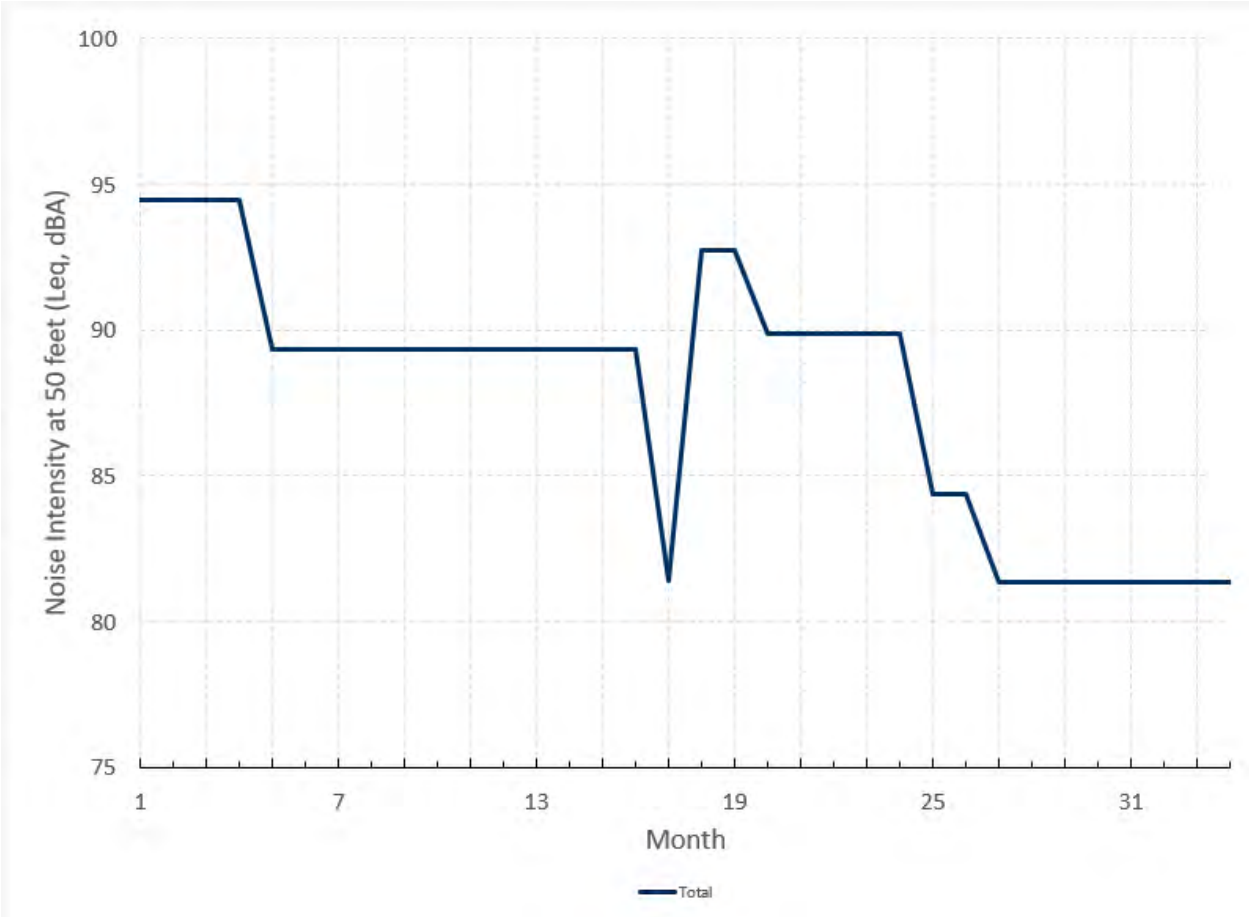
	Intersection	Existing PCEs (6:00 to 7:00 AM)	Existing with Construction PCEs	Construction Mobile Source Sound Increase (dBA)
1	Queens Blvd between 50th Street and 51st Street	13,068	13,674	0.2

Source: VHB, 2025.

Construction Stationary Source Noise Modeling

Construction schedule was assessed based on the anticipated construction equipment. **Figure 12-6** presents the cumulative sound emissions from stationary construction equipment during the peak noise month of each phase for the With-Action condition. The cumulative sound emissions represent the total energy-average (L_{eq}) level of all equipment operating at a distance of 50 feet. This sound emission is not the actual sound level that would exist on the Development Site since actual equipment is distributed throughout the site, but the cumulative emissions level indicates which periods of construction are expected to be the loudest and which months should be used for analysis.

Figure 12-6 Cumulative Sound Emissions from Stationary Equipment during Each Month



Source: VHB, 2025

Construction noise from stationary sources has been evaluated for six different phases of construction. For both projected development sites (i.e., Projected Development Site 1 and Projected Development Site 2) there would be demolition/excavation, foundation/superstructure/exterior enclosure, and interior finish phases of construction for each building. Construction noise from stationary sources has been evaluated for the following phases:

- **Phase A**: The demolition/excavation phase of Projected Development Site 1 would take four months and shows a peak noise intensity in the mid-90's dBA. Demolition/excavation noise has been evaluated during month 4.
- **Phase B**: The foundation/superstructure/exterior enclosure phase of Projected Development Site 1 would take 12 months and shows a peak noise intensity in the high-80's dBA. Foundation/ superstructure/exterior noise has been evaluated for month 10.
- **Phase C**: The interior finish phase of Projected Development Site 1 would take 10 months starting from Month 17, while the demolition/excavation phase of Projected Development Site 2 would start on Month 18 and last for two months, which shows a peak noise intensity in the low-90's dBA, and the noise has been evaluated for month 18.
- **Phase D**: While the interior finish phase of Projected Development Site 1 still going on, the foundation /superstructure /exterior enclosure phase of Projected Development Site 2 would start on Month 20 and last for five months, Noise analysis shows a peak noise intensity in the low-90's dBA, and the noise has been evaluated for month 24.
- **Phase E**: With the interior finish phase of Projected Development Site 2 still ongoing, the construction of Projected Development Site 1 would be completed by month 27. The noise has been evaluated for month 26.
- **Phase F:** Starting from Month 27 to the completion of construction for Projected Development Site 2, which is expected to be completed at month 34, Projected Development Site 1 would become receptors for the duration of eight months. Noise analysis shows a peak noise intensity in the low-80's dBA, and the noise has been evaluated for month 30.

Table 12-9 presents the type of equipment, the maximum sound level at 50 feet, the utilization factors (percentage of time the equipment is operating at full power), and the number of each piece of equipment that is used during the loudest month of each phase of construction based on the *CEQR Technical Manual*. These equipment assumptions are based on conceptual site plans and construction schedules. Therefore, these represent a worst-case condition regarding the number of pieces of construction equipment and the duration of construction activities. This table does not include trucks at the Development Site such as box trucks, pickup trucks, tractor trailers, packer trucks, container trucks, and dump trucks since they are not allowed to idle more than three minutes in accordance with New York City Administrative Code §24-163.

Table 12-9 Sound Levels and Maximum Numbers of the Construction Equipment

Equipment[1]	Maximum Sound Level at 50 feet (dBA, L_{max})	Utilization Factor (%)	Number of Construction Pieces of Equipment					
			Phase A (Month 4)	Phase B (Month 10)	Phase C (Month 18)	Phase D (Month 24)	Phase E (Month 26)	Phase F (Month 30)
Concrete Mixer Truck	85	0.4	3	3	3	3	0	0
Concrete Pump Truck	82	0.2	1	1	1	1	0	0
Excavator	85	0.4	2	0	1	0	0	0
Jackhammer	85	0.2	2	0	2	0	0	0
Compressor	80	0.4	2	0	1	0	0	0
Bar Bender	80	0.2	2	2	2	2	0	0
Welder / Torch	73	0.4	2	2	2	2	0	0
Generator	82	0.5	2	1	1	1	0	0
Impact Pile Driver	95	0.2	2	0	1	0	0	0
Pumps	77	0.5	2	0	1	0	0	0
Dozer	85	0.4	2	0	1	0	0	0
Front End Loader	80	0.4	2	0	1	0	0	0
Concrete Trowel	70	0.5	0	6	0	6	0	0
Concrete Vibrator	76	0.5	0	6	0	6	0	0
Vibratory Concrete Mixer	80	0.2	0	2	0	2	0	0
Scissor Lift	64	0.2	0	0	4	4	7	3
Forklift	64	0.4	0	0	4	4	7	3
Table Saw	76[2]	0.2	0	0	8	8	16	8
Crane	85	0.16	1	2	2	2	2	1
Hoist	75	0.5	0	1	1	2	2	1

Source: VHB, 2025

Notes:

[1] Since dump trucks and pickup trucks are not allowed to idle more than three minutes in accordance with New York City Administrative Code §24-163, they have been excluded from the construction noise predictions.

[2] Federal Transit Administration Transit Noise and Vibration Assessment Manual, 2018.

Existing Ambient Sound Levels

The measured sound levels are validated using CadnaA with the on-site traffic counts during the morning peak period, since the differences between the measured versus modeled noise levels are within +/- 3 dB(A). Measurements were conducted during the morning (8:00 AM to 9:00 AM) at two locations adjacent to the Development Site.

The existing ambient sound levels at all receptor locations have been determined based on measurements conducted in the study area and Cadna-A modeling of the traffic noise conditions for the 8:00 AM to 9:00 AM hour. See **Table 12-13** for a range of existing ambient noise levels at each receptor building.

Construction Noise Impact Assessment

Construction Noise has been modeled using the Cadna-A sound prediction model at 35 noise sensitive receptors (buildings or building façades) for the six phases of construction. The Cadna-A model implements the International Standards Organization standard 9613-2 "Outdoor Sound Propagation" which accounts for ground type, intervening objects such as buildings, sound reflections, and atmospheric conditions. The construction noise model assumes that the ground is acoustically hard (ground absorption coefficient of 0), that buildings have a brick façade with minimal acoustic absorption (0.07 or lower), and three orders of sound reflections.

Table 12-10 shows the estimated worst-case hourly noise levels at the nearby receptors of concern during each construction stage, while **Table 12-11** shows the increase in noise levels during construction by stage. **Table 12-12** shows the projected worst-case interior noise levels during each stage of construction at each nearby receptor.

Construction of the projected development sites would not involve any unusual or exceptional construction activities or practices for high-rise type buildings in New York City. As noted above, demolition, foundation/excavation, superstructure, facade, and interior fit-out work would occur over 34 months, beginning in August of 2026. With the adherence to existing construction noise regulations and the implementation of Construction Noise Mitigation Plan as required by the NYC Noise Code, as well as additional noise path control measures of 23-foot tall sound barriers required by the PCRE beyond the minimum required by code, no significant impacts are anticipated as a result of the Proposed Actions.

Table 12-10 Background Noise Level (dBA, L_{eq})

Receptors	Address	Block	Lot	Land Use	Background Noise Level (dBA, L_{eq})[1]
R01	50-24 Queens Blvd	2283	43	Commercial	53.1 - 65.3
R02	Calvary Cemetery	2311	250	Cemetery	53.1 - 53.1
R03	45-50 50th Street	2282	56	Residential	56.2 - 56.9
R04	45-48 50th Street	2282	54	Residential	56.6 - 57.4
R05	45-46 50th Street	2282	53	Residential	56.8 - 57.6
R06	45-44 50th Street	2282	52	Residential	56.8 - 57.7
R07	45-42 50th Street	2282	51	Residential	56.9 - 57.7
R08	45-40 50th Street	2282	50	Residential	56.9 - 57.8
R09	45-38 50th Street	2282	49	Residential	57.0 - 57.8
R10	45-36 50th Street	2282	48	Residential	57.0 - 57.8
R11	45-34 50th Street	2282	47	Residential	57.0 - 57.9
R12	45-32 50th Street	2282	46	Residential	57.0 - 57.9
R13	45-30 50th Street	2282	45	Residential	57.0 - 57.9
R14	45-28 50th Street	2282	43	Residential	57.0 - 57.9
R15	45-26 50th Street	2282	42	Residential	57.0 - 57.9
R16	45-24 50th Street	2282	40	Residential	57.0 - 57.9
R17	45-22 50th Street	2282	39	Residential	57.0 - 57.9
R18	45-20 50th Street	2282	38	Residential	57.0 - 57.9
R19	45-18 50th Street	2282	37	Residential	57.0 - 57.9
R20	45-16 50th Street	2282	35	Residential	57.1 - 57.9
R21	45-14 50th Street	2282	34	Residential	57.1 - 57.9
R22	45-12 50th Street	2282	33	Commercial	56.9 - 57.6
R23	49-18 Queens Blvd	2282	30	Commercial	60.1 - 60.1
R24	49-14 Queens Blvd	2282	29	Commercial	70.1 - 70.1
R25	49-12 Queens Blvd	2282	28	Commercial	70.2 - 70.2
R26	49-08 Queens Blvd	2282	26	Commercial	70.4 - 70.4
R27	Sabba Park	2281	75	Open Space	64.9 - 64.9
R28	49-15 Queens Blvd	1318	1	Commercial	73.7 - 73.7
R29	50-17 Queens Blvd	1319	21	Residential	66.5 - 72.7
R30	51-05 Queens Blvd	1320	1	Church	71.8 - 71.8
R31	51-23 Queens Blvd	1320	51	Residential	66.9 – 70.0
R32	51-27 Queens Blvd	1320	7501	Residential	67.0 - 71.4
R33	43-41 52th Street	1321	1	Residential	66.4 - 70.7
R34	50-02 Queens Blvd	2283	22	Residential	64.4 - 68.3

Note:
[1] The background noise level ranges represent the range from ground level to the highest building floors modeled for each façade of each receptor building.

Table 12-11 Worst-Case Construction Noise Levels by Phase (dBA, L_{eq})

Receptors	Address	Block	Lot	Background Noise Level (dBA, Leq)[1]	Phase A (Month 4)	Phase B (Month 10)	Phase C (Month 18)	Phase D (Month 24)	Phase E (Month 26)	Phase E (Month 30)
R01	50-24 Queens Blvd	2283	43	53.1 - 65.3	76.8 - 86.7	70.5 - 79.9	N/A	N/A	N/A	N/A
R01*	50-24 Queens Blvd	2283	43	53.1 - 65.3	68.0 - 78.1	63.1 - 74.8	N/A	N/A	N/A	N/A
R01**	50-24 Queens Blvd	2283	43	53.1 - 65.3	69.9 - 77.9	64.2 – 69.7	N/A	N/A	N/A	N/A
R02	Calvary Cemetery	2311	250	53.1 - 53.1	54.8 - 63.5	53.5 - 56.9	53.7 - 78.4	53.7 - 79.6	53.1 - 67.9	53.1 - 67.8
R03	45-50 50th Street	2282	56	56.2 - 56.9	65.5 - 67.9	59.5 - 60.9	57.3 - 59.4	57.4 - 59.4	56.4 - 57.3	56.2 - 56.9
R04	45-48 50th Street	2282	54	56.6 - 57.4	66.7 - 69.2	60.1 - 61.6	57.8 - 60.2	58.0 - 60.2	56.8 - 57.8	56.6 - 57.4
R05	45-46 50th Street	2282	53	56.8 - 57.6	68.2 - 69.5	60.5 – 62.0	58.2 - 60.7	58.2 - 60.6	57.0 - 58.1	56.8 - 57.6
R06	45-44 50th Street	2282	52	56.8 - 57.7	69.0 - 70.4	60.8 - 62.4	58.3 - 61.5	58.3 - 61.4	57.1 - 58.4	56.8 - 57.7
R07	45-42 50th Street	2282	51	56.9 - 57.7	69.6 - 71.4	61.2 – 63.0	58.7 - 62.5	58.7 - 62.4	57.3 - 58.3	56.9 - 57.7
R08	45-40 50th Street	2282	50	56.9 - 57.8	70.1 - 72.4	61.9 - 63.6	59.6 - 63.5	59.6 - 63.7	57.4 - 58.6	56.9 - 57.8
R09	45-38 50th Street	2282	49	57.0 - 57.8	70.9 - 72.5	62.5 - 63.8	60.7 - 65.3	60.9 - 65.3	57.6 - 58.9	57.0 - 57.8
R10	45-36 50th Street	2282	48	57.0 - 57.8	71.4 - 72.5	63.0 - 64.4	64.5 - 65.6	63.3 - 65.8	57.9 - 59.3	57.0 - 57.8
R11	45-34 50th Street	2282	47	57.0 - 57.9	71.7 – 73.0	63.7 – 65.0	65.3 - 66.7	64.5 - 66.5	58.2 - 60.4	57.0 - 57.8
R12	45-32 50th Street	2282	46	57.0 - 57.9	72.0 - 73.9	64.2 - 65.5	65.6 - 67.3	65.0 - 67.2	58.6 - 60.1	57.0 - 57.8
R13	45-30 50th Street	2282	45	57.0 - 57.9	72.7 - 74.5	64.8 - 66.3	66.2 - 67.6	65.5 – 68.0	58.8 - 61.2	57.0 - 57.8
R14	45-28 50th Street	2282	43	57.0 - 57.9	73.1 - 74.8	65.6 - 66.9	66.4 - 68.7	65.8 - 69.1	59.1 - 63.4	57.0 - 57.8
R15	45-26 50th Street	2282	42	57.0 - 57.9	73.4 - 74.9	66.1 - 67.6	67.3 - 69.2	66.8 – 70.0	61.6 - 64.2	57.0 - 57.8
R16	45-24 50th Street	2282	40	57.0 - 57.9	73.5 - 75.1	66.5 - 68.1	67.8 - 69.8	67.6 - 69.8	61.9 - 64.4	57.0 - 57.8
R17	45-22 50th Street	2282	39	57.0 - 57.9	73.6 - 75.3	67.0 - 68.8	68.1 - 70.3	68.0 - 70.4	62.0 - 64.6	57.0 - 57.8
R18	45-20 50th Street	2282	38	57.0 - 57.9	73.7 - 75.5	67.4 - 69.2	68.4 - 70.4	68.2 - 70.7	62.0 - 64.6	57.0 - 57.8
R19	45-18 50th Street	2282	37	57.0 - 57.9	73.7 - 75.6	67.7 - 69.7	68.6 - 70.6	68.5 - 71.1	62.0 - 64.4	57.0 - 57.8
R20	45-16 50th Street	2282	35	57.1 - 57.9	73.7 - 75.6	68.0 - 70.2	68.8 – 71.0	68.7 - 71.3	61.9 - 64.2	57.1 - 57.9
R21	45-14 50th Street	2282	34	57.1 - 57.9	73.7 - 75.6	68.2 - 70.6	69.1 - 71.2	68.9 - 71.5	61.8 - 64.1	57.1 - 57.9
R22	45-12 50th Street	2282	33	56.9 - 57.6	73.6 - 75.6	68.5 - 71.1	69.2 - 71.3	69.1 - 71.7	61.6 - 63.9	56.9 - 57.6
R23	49-18 Queens Blvd	2282	30	60.1 - 60.1	73.7 - 73.7	69.8 - 69.8	69.7 - 69.7	69.6 - 69.6	62.8 - 62.8	60.1 - 60.1

Table 12-11 Worst-Case Construction Noise Levels by Phase (dBA, L_{eq})

Receptors	Address	Block	Lot	Background Noise Level (dBA, Leq)[1]	Phase A (Month 4)	Phase B (Month 10)	Phase C (Month 18)	Phase D (Month 24)	Phase E (Month 26)	Phase E (Month 30)
R24	49-14 Queens Blvd	2282	29	70.1 - 70.1	75.2 - 75.2	75.0 – 75.0	72.8 - 72.8	73.0 – 73.0	70.3 - 70.3	70.1 - 70.1
R25	49-12 Queens Blvd	2282	28	70.2 - 70.2	74.6 - 74.6	74.5 - 74.5	72.7 - 72.7	72.7 - 72.7	70.3 - 70.3	70.2 - 70.2
R26	49-08 Queens Blvd	2282	26	70.4 - 70.4	74.1 - 74.1	73.9 - 73.9	72.4 - 72.4	72.4 - 72.4	70.5 - 70.5	70.4 - 70.4
R27	Sabba Park	2281	75	64.9 - 64.9	75.0 – 75.0	73.8 - 73.8	71.6 - 71.6	71.5 - 71.5	65.5 - 65.5	65.1 - 65.1
R28	49-15 Queens Blvd	1318	1	73.7 - 73.7	76.4 - 76.4	75.8 - 75.8	75.3 - 75.3	75.2 - 75.2	73.8 - 73.8	73.7 - 73.7
R29	50-17 Queens Blvd	1319	21	66.5 - 72.7	76.8 - 77.6	74.7 - 76.5	76.7 - 77.4	76.8 - 77.5	68.3 - 72.9	67.8 - 72.9
R30	51-05 Queens Blvd	1320	1	71.8 - 71.8	74.9 - 74.9	74.6 - 74.6	76.6 - 76.6	76.8 - 76.8	72.1 - 72.1	72.0 – 72.0
R31	51-23 Queens Blvd	1320	51	66.9 – 70.0	70.7 - 72.2	70.3 - 72.2	73.8 - 74.4	74.0 - 74.6	67.9 - 70.2	67.6 - 70.2
R32	51-27 Queens Blvd	1320	7501	67.0 - 71.4	70.2 - 72.9	70.0 - 72.9	73.6 – 74.0	73.8 - 74.2	67.8 - 71.5	67.6 - 71.5
R33	43-41 52th Street	1321	1	66.4 - 70.7	69.0 - 71.9	68.7 - 71.9	71.7 - 72.7	71.8 - 72.7	67.0 - 70.8	66.8 - 70.8
R34	50-02 Queens Blvd	2283	22	64.4 - 68.3	N/A	N/A	N/A	N/A	N/A	67.7- 73.5

[1] The background noise level ranges represent the range from ground level to the highest building floors modeled for each façade of each receptor building.
* Mitigation Condition 1: 110-foot barrier assumed between Development Site 1 and 2
** Mitigation Condition 2: 30-foot barrier assumed between Development Site 1 and 2

Table 12-12 Worst-Case Construction Noise Levels, Increase by Phase (dBA)

Receptors	Address	Block	Lot	Background Noise Level (dBA, Leq)[1]	Phase A (Month 4)	Phase B (Month 10)	Phase C (Month 18)	Phase D (Month 24)	Phase E (Month 26)	Phase F (Month 30)
R01	50-24 Queens Blvd	2283	43	53.1 - 65.3	33.6	26.8	N/A	N/A	N/A	N/A
R01*	50-24 Queens Blvd	2283	43	53.1 - 65.3	25.0	21.8	N/A	N/A	N/A	N/A
R01**	50-24 Queens Blvd	2283	43	53.1 - 65.3	24.8	16.6	N/A	N/A	N/A	N/A
R02	Calvary Cemetery	2311	250	53.1 - 53.1	10.4	3.8	25.3	26.5	0.1	14.7
R03	45-50 50th Street	2282	56	56.2 - 56.9	11.0	4.0	2.5	2.5	0.2	0.0
R04	45-48 50th Street	2282	54	56.6 - 57.4	11.8	4.2	2.8	2.8	0.2	0.0
R05	45-46 50th Street	2282	53	56.8 - 57.6	11.9	4.4	3.1	3.0	0.2	0.0
R06	45-44 50th Street	2282	52	56.8 - 57.7	12.7	4.7	3.8	3.7	0.3	0.0
R07	45-42 50th Street	2282	51	56.9 - 57.7	13.7	5.3	4.8	4.7	0.4	0.0
R08	45-40 50th Street	2282	50	56.9 - 57.8	14.6	5.8	5.7	5.9	0.5	0.0
R09	45-38 50th Street	2282	49	57.0 - 57.8	14.7	6.0	7.5	7.5	0.6	0.0
R10	45-36 50th Street	2282	48	57.0 - 57.8	14.7	6.6	7.8	8.0	0.9	0.0
R11	45-34 50th Street	2282	47	57.0 - 57.9	15.1	7.1	8.8	8.6	1.2	0.0
R12	45-32 50th Street	2282	46	57.0 - 57.9	16.0	7.6	9.4	9.3	1.6	0.0
R13	45-30 50th Street	2282	45	57.0 - 57.9	16.6	8.4	9.7	10.1	1.8	0.0
R14	45-28 50th Street	2282	43	57.0 - 57.9	16.9	9.0	10.8	11.2	2.1	0.0
R15	45-26 50th Street	2282	42	57.0 - 57.9	17.0	9.7	11.3	12.1	4.6	0.0
R16	45-24 50th Street	2282	40	57.0 - 57.9	17.2	10.2	11.9	11.9	4.9	0.0
R17	45-22 50th Street	2282	39	57.0 - 57.9	17.4	10.9	12.4	12.5	5.0	0.0
R18	45-20 50th Street	2282	38	57.0 - 57.9	17.6	11.3	12.5	12.8	5.0	0.0
R19	45-18 50th Street	2282	37	57.0 - 57.9	17.7	11.8	12.7	13.2	5.0	0.0
R20	45-16 50th Street	2282	35	57.1 - 57.9	17.7	12.3	13.1	13.4	4.8	0.0
R21	45-14 50th Street	2282	34	57.1 - 57.9	17.7	12.7	13.3	13.6	4.7	0.0
R22	45-12 50th Street	2282	33	56.9 - 57.6	18.0	13.5	13.7	14.1	4.7	0.0
R23	49-18 Queens Blvd	2282	30	60.1 - 60.1	13.6	9.7	9.6	9.5	2.7	0.0

Table 12-12 Worst-Case Construction Noise Levels, Increase by Phase (dBA)

Receptors	Address	Block	Lot	Background Noise Level (dBA, Leq)[1]	Phase A (Month 4)	Phase B (Month 10)	Phase C (Month 18)	Phase D (Month 24)	Phase E (Month 26)	Phase F (Month 30)
R24	49-14 Queens Blvd	2282	29	70.1 - 70.1	5.1	4.9	2.7	2.9	0.2	0.0
R25	49-12 Queens Blvd	2282	28	70.2 - 70.2	4.4	4.3	2.5	2.5	0.1	0.0
R26	49-08 Queens Blvd	2282	26	70.4 - 70.4	3.7	3.5	2.0	2.0	0.1	0.0
R27	Sabba Park	2281	75	64.9 - 64.9	10.1	8.9	6.7	6.6	0.6	0.2
R28	49-15 Queens Blvd	1318	1	73.7 - 73.7	2.7	2.1	1.6	1.5	0.1	0.0
R29	50-17 Queens Blvd	1319	21	66.5 - 72.7	10.3	8.2	10.2	10.3	0.2	1.3
R30	51-05 Queens Blvd	1320	1	71.8 - 71.8	3.1	2.8	4.8	5.0	0.3	0.2
R31	51-23 Queens Blvd	1320	51	66.9 – 70.0	3.8	3.4	7.3	7.5	0.2	0.7
R32	51-27 Queens Blvd	1320	7501	67.0 - 71.4	3.2	3.0	6.6	6.8	0.1	0.6
R33	43-41 52th Street	1321	1	66.4 - 70.7	2.6	2.3	5.3	5.4	0.1	0.4
R34	50-02 Queens Blvd	2283	22	64.4 - 68.3	N/A	N/A	N/A	N/A	N/A	6.0

Note:
[1] The background noise level ranges represent the range from ground level to the highest building floors modeled for each façade of each receptor building.
* Mitigation Condition 1: 110-foot barrier assumed between Development Site 1 and 2.
** Mitigation Condition 2: 30-foot barrier assumed between Development Site 1 and 2.

Table 12-13 Worst-Case Construction Interior Noise Levels by Phase (dBA, L_{10})

Receptors	Address	Block	Lot	Background Noise Level (dBA, Leq)[1]	Phase A (Month 4)	Phase B (Month 10)	Phase C (Month 18)	Phase D (Month 24)	Phase E (Month 26)	Phase F (Month 30)
R01	50-24 Queens Blvd	2283	43	53.1 - 65.3	47.8 - 57.7	41.5 – 50.9	N/A	N/A	N/A	N/A
R01*	50-24 Queens Blvd	2283	43	53.1 - 65.3	39.0 - 49.1	34.1 - 45.8	N/A	N/A	N/A	N/A
R01**	50-24 Queens Blvd	2283	43	53.1 - 65.3	40.9 - 48.9	35.2 - 40.7	N/A	N/A	N/A	N/A
R02	Calvary Cemetery	2311	250	53.1 - 53.1	N/A	N/A	N/A	N/A	N/A	N/A
R03	45-50 50th Street	2282	56	56.2 - 56.9	43.5 - 45.9	37.5 - 38.9	35.3 - 37.4	35.4 - 37.4	34.4 - 35.3	34.2 - 34.9
R04	45-48 50th Street	2282	54	56.6 - 57.4	44.7 - 47.2	38.1 - 39.6	35.8 - 38.2	36.0 - 38.2	34.8 - 35.8	34.6 - 35.4
R05	45-46 50th Street	2282	53	56.8 - 57.6	46.2 - 47.5	38.5 – 40.0	36.2 - 38.7	36.2 - 38.6	35.0 - 36.1	34.8 - 35.6
R06	45-44 50th Street	2282	52	56.8 - 57.7	47.0 - 48.4	38.8 - 40.4	36.3 - 39.5	36.3 - 39.4	35.1 - 36.4	34.8 - 35.7
R07	45-42 50th Street	2282	51	56.9 - 57.7	47.6 - 49.4	39.2 – 41.0	36.7 - 40.5	36.7 - 40.4	35.3 - 36.3	34.9 - 35.7
R08	45-40 50th Street	2282	50	56.9 - 57.8	48.1 - 50.4	39.9 - 41.6	37.6 - 41.5	37.6 - 41.7	35.4 - 36.6	34.9 - 35.8
R09	45-38 50th Street	2282	49	57.0 - 57.8	48.9 - 50.5	40.5 - 41.8	38.7 - 43.3	38.9 - 43.3	35.6 - 36.9	35.0 - 35.8
R10	45-36 50th Street	2282	48	57.0 - 57.8	49.4 - 50.5	41.0 - 42.4	42.5 - 43.6	41.3 - 43.8	35.9 - 37.3	35.0 - 35.8
R11	45-34 50th Street	2282	47	57.0 - 57.9	49.7 – 51.0	41.7 – 43.0	43.3 - 44.7	42.5 - 44.5	36.2 - 38.4	35.0 - 35.9
R12	45-32 50th Street	2282	46	57.0 - 57.9	50.0 - 51.9	42.2 - 43.5	43.6 - 45.3	43.0 - 45.2	36.6 - 38.1	35.0 - 35.9
R13	45-30 50th Street	2282	45	57.0 - 57.9	50.7 - 52.5	42.8 - 44.3	44.2 - 45.6	43.5 – 46.0	36.8 - 39.2	35.0 - 35.9
R14	45-28 50th Street	2282	43	57.0 - 57.9	51.1 - 52.8	43.6 - 44.9	44.4 - 46.7	43.8 - 47.1	37.1 - 41.4	35.0 - 35.9
R15	45-26 50th Street	2282	42	57.0 - 57.9	51.4 - 52.9	44.1 - 45.6	45.3 - 47.2	44.8 – 48.0	39.6 - 42.2	35.0 - 35.9
R16	45-24 50th Street	2282	40	57.0 - 57.9	51.5 - 53.1	44.5 - 46.1	45.8 - 47.8	45.6 - 47.8	39.9 - 42.4	35.0 - 35.9
R17	45-22 50th Street	2282	39	57.0 - 57.9	51.6 - 53.3	45.0 - 46.8	46.1 - 48.3	46.0 - 48.4	40.0 - 42.6	35.0 - 35.9
R18	45-20 50th Street	2282	38	57.0 - 57.9	51.7 - 53.5	45.4 - 47.2	46.4 - 48.4	46.2 - 48.7	40.0 - 42.6	35.0 - 35.9
R19	45-18 50th Street	2282	37	57.0 - 57.9	51.7 - 53.6	45.7 - 47.7	46.6 - 48.6	46.5 - 49.1	40.0 - 42.4	35.0 - 35.9
R20	45-16 50th Street	2282	35	57.1 - 57.9	51.7 - 53.6	46.0 - 48.2	46.8 – 49.0	46.7 - 49.3	39.9 - 42.2	35.1 - 35.9
R21	45-14 50th Street	2282	34	57.1 - 57.9	51.7 - 53.6	46.2 - 48.6	47.1 - 49.2	46.9 - 49.5	39.8 - 42.1	35.1 - 35.9
R22	45-12 50th Street	2282	33	56.9 - 57.6	51.6 - 53.6	46.5 - 49.1	47.2 - 49.3	47.1 - 49.7	39.6 - 41.9	34.9 - 35.6
R23	49-18 Queens Blvd	2282	30	60.1 - 60.1	51.7 - 51.7	47.8 - 47.8	47.7 - 47.7	47.6 - 47.6	40.8 - 40.8	38.1 - 38.1

Table 12-13 Worst-Case Construction Interior Noise Levels by Phase (dBA, L_{10})

Receptors	Address	Block	Lot	Background Noise Level (dBA, Leq)[1]	Phase A (Month 4)	Phase B (Month 10)	Phase C (Month 18)	Phase D (Month 24)	Phase E (Month 26)	Phase F (Month 30)
R24	49-14 Queens Blvd	2282	29	70.1 - 70.1	53.2 - 53.2	53.0 – 53.0	50.8 - 50.8	51.0 – 51.0	48.3 - 48.3	48.1 - 48.1
R25	49-12 Queens Blvd	2282	28	70.2 - 70.2	52.6 - 52.6	52.5 - 52.5	50.7 - 50.7	50.7 - 50.7	48.3 - 48.3	48.2 - 48.2
R26	49-08 Queens Blvd	2282	26	70.4 - 70.4	52.1 - 52.1	51.9 - 51.9	50.4 - 50.4	50.4 - 50.4	48.5 - 48.5	48.4 - 48.4
R27	Sabba Park	2281	75	64.9 - 64.9	N/A	N/A	N/A	N/A	N/A	N/A
R28	49-15 Queens Blvd	1318	1	73.7 - 73.7	54.4 - 54.4	53.8 - 53.8	53.3 - 53.3	53.2 - 53.2	51.8 - 51.8	51.7 - 51.7
R29	50-17 Queens Blvd	1319	21	66.5 - 72.7	49.8 - 50.6	47.7 - 49.5	49.7 - 50.4	49.8 - 50.5	41.3 - 45.9	40.8 - 45.9
R30	51-05 Queens Blvd	1320	1	71.8 - 71.8	47.9 - 47.9	47.6 - 47.6	49.6 - 49.6	49.8 - 49.8	45.1 - 45.1	45.0 – 45.0
R31	51-23 Queens Blvd	1320	51	66.9 – 70.0	43.7 - 45.2	43.3 - 45.2	46.8 - 47.4	47.0 - 47.6	40.9 - 43.2	40.6 - 43.2
R32	51-27 Queens Blvd	1320	7501	67.0 - 71.4	43.2 - 45.9	43.0 - 45.9	46.6 – 47.0	46.8 - 47.2	40.8 - 44.5	40.6 - 44.5
R33	43-41 52th Street	1321	1	66.4 - 70.7	42.0 - 44.9	41.7 - 44.9	44.7 - 45.7	44.8 - 45.7	40.0 - 43.8	39.8 - 43.8
R34	50-02 Queens Blvd	2283	22	64.4 - 68.3	N/A	N/A	N/A	N/A	N/A	38.7 - 44.5

Note:
[1] The background noise level ranges represent the range from ground level to the highest building floors modeled for each façade of each receptor building.
* Mitigation Condition 1: 110-foot barrier assumed between Development Site 1 and 2
** Mitigation Condition 2: 30-foot barrier assumed between Development Site 1 and 2

Building by Building Conclusions

- **R01**: This three-story commercial office building located east of Projected Development Site 1. The west façade was assessed for potential noise impacts during the demolition and superstructure construction phase of Projected Development Site 1. In order to avoid a significant adverse noise impact during construction, the PCRE consists of an acoustic barrier wall along the property boundary between the two sites, rising to a height of 23 feet. The required length of this barrier depends on the legal status of the adjacent building's western-facing windows. If the western-facing windows are legal windows, the barrier must extend 110 feet from the north end of the property line to protect sensitive uses on the 2nd and 3rd floors of the adjacent building. However, if the western-facing windows are illegal lot line windows, the barrier would be limited to a 30-foot-wide section positioned at the southwestern corner of Projected Development Site 2, extending 20 feet north and 10 feet south from that corner. Without the PCRE, future noise levels (L_{eq}) would range from 70.5 to 86.7 dBA, which would be an increase up to 33.6 dBA. Based on street-level field observations, this building has insulated glass windows and central air-conditioning, which would be expected to provide 32 dBA window/wall attenuation. Interior noise levels during construction would be up to 57.7 (L_{10}) dBA. Increases in exterior noise of 20 dBA would occur for 16 months at R01. Therefore, based on the predicted magnitude and duration of noise increases, construction noise associated with the Proposed Actions at R01 would result in significant adverse construction noise impact. With the 110-foot barrier in place, future noise levels (L_{eq}) would reach up to 78.1 dBA, with exterior noise increases of 25 dBA lasting no more than four months and noise increase over 20 dBA for approximately 16 consecutive months months. Interior noise level would reach up to 49.1 dBA (L_{10}), which is below the interior nose goal of 50 dBA (L_{10}) for commercial office use, and significant adverse impacts would be avoided. With the 30-foot barrier in place, future noise levels (L_{eq}) would reach up to 77.9 dBA and the exterior noise increases of 25 dBA at the south-facing windows lasting no more than four months. However, interior noise levels would reach up to 48.9 dBA (L_{10}), which is below the interior nose goal of 50 dBA (L_{10}) for commercial office use, and significant adverse impacts would be avoided.
- **R02**: These are receptors represent the open spaces in the Calvary Cemetery. Due to its location, it would be quiet before construction. The future noise levels (L_{eq}) would range up to 79.6 dBA for up to eight months of the demolition/excavation phase and foundation/superstructure/ exterior enclosure phase of Projected Development Site 2. There would not be significant adverse construction noise impact because cemetery is not considered as noise sensitive uses.
- **R03-R22**: These receptors represent the two-story residential buildings located along 50th Street. The future noise levels (L_{eq}) would range from 56.2 to 75.6 dBA, which would be an increase up to 18.0 dBA, only occurring during the 4-month long Phase A. Therefore, construction noise associated with the Proposed Actions at R3-R22 would not result in significant adverse construction noise impact.
- **R23**: This is a community facility building located on the corner of Queens Blvd and 50th Street. The future noise levels (L_{eq}) would range from 60.1 to 73.7 dBA, which would be an increase up to 13.6 dBA. Therefore, construction noise associated with The Proposed Actions at R23 would not result in significant adverse construction noise impact.
- **R24-R26**: These are the three properties along Queens Blvd that have residential units on the second floor and commercial retail use at the ground level. The future noise levels (L_{eq}) would range from 70.1 to 75.2 dBA, which would be an increase up to 5.1 dBA. Therefore, construction

noise associated with the proposed actions at R24 to R26 would not result in significant adverse construction noise impact.

- **R27:** This receptor represents the open space of Sabba Park which locates in the middle of the two directions of Queens Blvd. Due to its location, the background noise level at this receptor is relatively high. The future noise levels (L_{eq}) would range from 65.1 to 75.0 dBA, which would be an increase up to 10.1 dBA. This level of noise is similar to multiple parks and open space in New York City and noise increase would not be high enough to constitute significant adverse construction noise impact. Therefore, construction noise associated with the proposed actions at R27 would not result in significant adverse construction noise impact.
- **R28:** This receptor represents the commercial property located at 49-15 Queens Blvd. The future noise levels (L_{eq}) would range from 73.7 to 76.4 dBA, which would be an increase up to 2.7 dBA. Therefore, construction noise associated with the Proposed Actions at R28 would not result in significant adverse construction noise impact.
- **R29-R33:** These receptors represent the residential and community facility buildings located across the street, at the north side of Queens Blvd. The future noise levels (L_{eq}) would range from 66.8 to 77.6 dBA, which would be an increase up to 10.3 dBA. Since the noise increases are less than 15 dBA, construction noise associated with the Proposed Actions at R29-R33 would not result in significant adverse construction noise impact.
- **R34:** These receptors represent the future new receptors at Projected Development Site 1 that would be brought by the Proposed Action. Due to the construction schedule, these receptors will only be impacted during the interior phase of Projected Development Site 2. The future noise levels (L_{eq}) are expected to be 73.5 dBA, with an increase of 6 dBA for no more than eight months. Therefore, construction noise associated with the Proposed Actions at R34 would not result in significant adverse construction noise impact.

Conclusion

The construction noise analysis evaluated 34 receptor locations surrounding the proposed development sites. No significant adverse construction noise impacts were identified at any receptor location. At R01, impacts may be avoided by installing an acoustic barrier wall between the two Projected Development Sites, rise to a height of 23 feet, which would be considered a PCRE. The required length of this barrier wall depends on the legal status of the adjacent building's western-facing windows. If the western-facing windows are legal windows, the barrier must extend 110 feet from the north end of the property line to protect sensitive uses on the 2nd and 3rd floors of the adjacent building. However, if the western-facing windows are illegal lot line windows, the barrier would be limited to a 30-foot-wide section positioned at the southwestern corner of Projected Development Site 2, extending 20 feet north and 10 feet south from that corner. With the appropriate PCREs in place, construction noise levels would not exceed the thresholds for exterior increase in noise or interior noise level, and thus it would not result in significant adverse construction noise impacts.

Vibration

Construction activities have the potential to generate ground-borne vibration that can potentially cause structural or architectural damage or annoy people in nearby vibration-sensitive spaces, such as residences. The most substantial sources of construction vibration are equipment associated with the excavation and foundation phase, such as drill rigs and excavators. Vehicles such as trucks

typically do not exceed the thresholds for potential structural damage even for the most fragile structures susceptible to vibration.

Table 12-14 presents the reference vibration levels from typical equipment at a distance of 25 feet and the distance to potential structural damage for buildings with a criterion of 0.5 inches per second and 0.6 inches per second. This table shows that structural damage may occur from drilling within eight feet, or jackhammer within five feet. Since there are no landmarks or any other sensitive uses within these distances, there is no potential for significant adverse construction vibration impact.

In terms of construction vibration causing potential annoyance, the threshold for potential annoyance is 65 VdB inside buildings. Assuming a 10 VdB outdoor to indoor vibration attenuation for the building, there is potential for human annoyance within 65 feet of most other equipment, such as drilling. However, these construction activities would only occur for limited periods of time at any particular locations. Therefore, there would be no significant adverse impacts because of construction vibration.

Table 12-14 Vibration Levels and Distances to Potential Effects

Equipment	Vibration Level at 25 feet (PPV, in/s)	Distance to Potential Structural Damage (feet)	
		(0.5 in/s) Criterion	(0.6 in/s) Criterion
Drilling	0.089	8	7
Large Bulldozer	0.089	8	7
Jackhammer	0.035	5	4

Source: VHB 2025, Federal Transit Administration, 2018

13

Effects on Disadvantaged Communities

This chapter assesses the potential for the Proposed Actions to cause or increase a disproportionate pollution burden on disadvantaged communities.

Introduction

According to the *CEQR Technical Manual,* the purpose of a disadvantaged community assessment is to evaluate whether an action may cause or increase a disproportionate pollution burden on a disadvantaged community. A disadvantaged community (DAC) is defined under the 2019 New York State Climate Leadership and Community Protection Act (CLCPA) as a community that bears burdens of negative public health effects, environmental pollution, impacts of climate change, and possesses certain socioeconomic criteria, or comprises high-concentrations of low- and moderate- income households. This assessment of effects on disadvantaged communities considers the impacts identified using the *CEQR Technical Manual* and uses the framework of draft State Environmental Quality Review (SEQR) guidance issued by NYSDEC, as described in detail below.

As described in **Part I: Project Description**, the Applicant is seeking a zoning map amendment and a zoning text amendment (the Proposed Actions) affecting Queens Block 2283, Lots 1, 12, 22, 36, and 43 (the Project Area). The Proposed Actions would facilitate the development of a nine-story mixed-use building of approximately 305,362 gross square feet (gsf) (the Proposed Project) on Lots 1, 12, 22, and 36 (the Development Site, or Projected Development Site 1) at 50-02 Queens Boulevard in the Woodside neighborhood of Queens Community District 2. The Proposed Project would include approximately 265,474 gsf of residential space (257 units), 16,653 gsf of commercial space, 4,762 gsf of community facility (daycare) space, and 25 accessory parking spaces. The Proposed Project would be subject to Mandatory Inclusionary Housing (MIH) program requirements.

In addition to the Applicant-owned Projected Development Site 1, the Proposed Actions would also affect the non-Applicant-owned property at Lot 43 (Projected Development Site 2). In the future with the Proposed Actions, Projected Development Site 2 is expected to be redeveloped with a 14-story

mixed-use building of approximately 74,944 gsf, containing approximately 63,089 gsf of residential space (63 units), 3,228 gsf of commercial space, and 24 accessory parking spaces. Collectively, the Proposed Project and the anticipated development on Projected Development Site 2 are the With-Action developments.

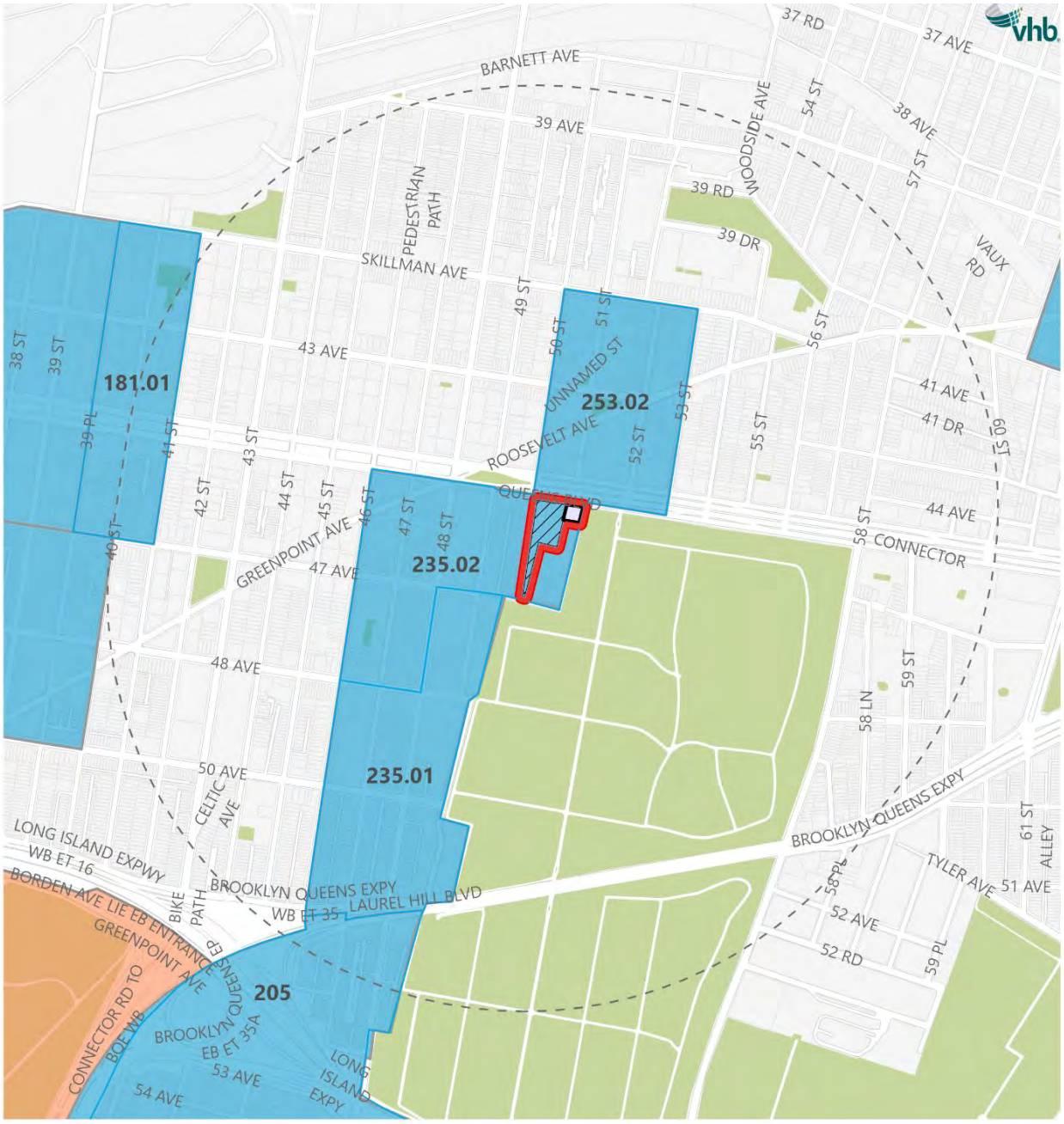
In total, the Proposed Actions would introduce approximately 328,563 gsf of residential space (320 units, 64 to 96 of which would be affordable pursuant to MIH), 19,881 gsf of commercial space, 4,762 gsf of community facility (daycare) space, and 49 accessory parking spaces, totaling 380,306 gsf of development on the two Projected Development Sites.

The Project Area is located within a DAC, Census Tract 235.02, therefore further assessment is warranted.

Methodology

The *CEQR Technical Manual* predated changes to the Environmental Conservation Law § 8-0109 and does not provide guidance regarding the scope of this analysis. NYSDEC proposed a rule in January 2025 that provides additional considerations regarding this new statutory provision. Draft NYSDEC regulations and guidance were consulted to develop this assessment. The assessment in this chapter incorporates that draft guidance and discusses the impact categories outlined in the *CEQR Technical Manual*. Based on guidance in the Appendix C of New York State Environmental Quality Review Act Environmental Justice Siting Law Amendments Draft SEQR Guidance, an evaluation of a proposed action's potential effects on DACs is warranted if a project is located in or within a half-mile of an identified disadvantaged community—or if its impacts could otherwise affect a disadvantaged community. The next step is to identify direct or indirect impacts and the scale of which related to pollution (e.g., wastewater discharges, air emissions, noise, odor, solid or hazardous waste generation, transportation, or disposal) that could occur as a result of a proposed action. The final step is to determine whether a proposed action would cause or increase a pollution burden within a DAC.

Figure 13-1 Disadvantaged Communities Study Area



Study Area

DACs in New York State were identified based on criteria adopted in 2023 by the Climate Justice Working Group (CJWG), a group composed of representatives from state agencies and environmental justice groups across the State. The CJWG used 45 indicators to identify 35 percent of Census Tracts within New York State as DACs. The criteria include multiple indicators that represent the environmental burdens or climate change risks within a community, or population characteristics and health vulnerabilities that can contribute to more severe adverse effects of climate change. A half-mile radius from the Project Area is used to account for areas that could experience impacts on DACs from the Proposed Actions. As shown in **Figure 13-1**, the Project Area is located within a DACs identified as having comparatively lower burdens and vulnerabilities. . In addition, three other DACs within the half-mile radius are also identified as having comparatively lower burdens and vulnerabilities (see **Table 13-1**).

Table 13-1 Disadvantaged Communities within Half-Mile Radius

Census Tract	DAC Burdens and Vulnerabilities
181.01	comparatively lower
235.01	comparatively lower
235.02	Comparatively lower
205	comparatively lower

Disadvantaged Communities Assessment

Impact Summary

The foregoing sections of the EAS found that the Proposed Actions would not result in significant adverse impacts in any of the CEQR technical areas. Descriptions of the Proposed Actions' potential effects with respect to pollution, including new noise sources or expansions/modification of existing noise sources; emissions of air pollutants including mobile emissions; wastewater discharges; generation of odors; light pollution; new or modified radiation sources; and new or modified sources of solid waste generation, management, or disposal are provided below. This assessment also considers the potential for any combination of moderate effects that would, together, result in an impact.

Hazardous Materials

As discussed in **Section 8, Hazardous Materials**, the Proposed Actions would include the placement of an (E)-Designation for hazardous materials (E-914) on Manhattan Block 2283, Lots 1, 12, 22, 36, and 43). Applying an (E)-Designation provides a mechanism for regulatory oversight by OER as a pre-construction requirement that would reduce or eliminate the potential for future risk or exposure as it relates to hazardous materials to the maximum extent practicable. The implementation of the preventative and remedial measures required under the (E)-Designation would avoid the potential for significant adverse hazardous materials impacts to the subsurface due to the Proposed Actions through the development and implementation of an OER-approved RAWP and CHASP for the Site.

In addition, regulatory requirements pertaining to the disturbance and handling of any LBP, ACM, and PCB-containing building materials, if any, would be followed as part of standard demolition and

site redevelopment practices on the Projected Development Sites. As such, implementation of the Proposed Actions would not result in significant adverse impacts related to hazardous materials. Therefore, the Proposed Actions would not cause a pollution burden related to hazardous materials.

Transportation

As discussed in **Section 9, Transportation**, the Proposed Project would not exceed the CEQR Level 1 screening threshold for vehicle, ferry, and bus trips. While the Level 1 screening threshold for subway trips would be exceeded, an assessment of the distribution of subway trips determined that no station is expected to exceed the Level 2 screening threshold. A pedestrian analysis was performed for one corner element at a key intersection for the weekday AM, midday, PM, and Saturday peak hours. Significant pedestrian impacts are not expected during the weekday AM, midday, PM, and Saturday peak hours. Therefore, the Proposed Actions would not cause a pollution burden related to increased traffic (including with respect to mobile-source noise or air quality). As discussed in **Section 12, Construction,** while the Proposed Actions would exceed the Level 1 screening threshold for vehicle trips during the AM and PM construction peak hours, the Level 2 screening threshold is not expected to be exceeded at any intersection within the study area during either period. Therefore, no further detailed analysis of traffic is warranted, and construction activity associated with the Proposed Actions would not be expected to result in significant adverse traffic impacts. Therefore, the Proposed Project would not exceed the CEQR Level 1 screening threshold for bus, subway, rail, and pedestrian trips and the Proposed Actions would not cause a pollution burden related to transportation.

Noise

As discussed in **Section 11, Noise**, a noise assessment evaluated the potential impact of the Proposed Project on sound levels from both mobile and stationary sources affecting existing and new noise receptors. The main noise source in the area is the elevated 7 train, which would continue to operate at current noise levels, suggesting no significant mobile source noise impacts from the Proposed Project. The Proposed Project would not include significant stationary noise sources, and building mechanical equipment would have noise reduction measures to meet New York City noise standards. Noise monitoring at four locations, per the *CEQR Technical Manual*, found that sound attenuation is necessary for certain facades to ensure acceptable interior noise conditions. Specifically, facades facing Queens Blvd and 50th Street need 35 dBA attenuation, while those facing 47th Avenue require 31 dBA attenuation, necessitating alternative ventilation solutions like air conditioning. The design and specifications for mechanical equipment—such as heating, ventilation, and air conditioning (HVAC) systems—would incorporate sufficient noise reduction to comply with applicable noise regulations and standards, including the standards contained in the revised New York City Noise Control Code. This will ensure that mechanical equipment does not result in any significant increases in noise levels, either by itself or cumulatively with other project noise sources.

As discussed in **Section 12, Construction**, the construction noise analysis evaluated 34 receptor locations surrounding the proposed development sites. No significant adverse construction noise impacts were identified at any receptor location. At R01, impacts may be avoided by installing an acoustic barrier wall between the two Projected Development Sites, rise to a height of 23 feet, which would be considered a project component related to the environment (PCRE). The required length of this barrier wall depends on the legal status of the adjacent building's western-facing windows. If the western-facing windows are legal windows, the barrier must extend 110 feet from the north end of the property line to protect sensitive uses on the 2nd and 3rd floors of the adjacent building.

However, if the western-facing windows are illegal lot line windows, the barrier would be limited to a 30-foot-wide section positioned at the southwestern corner of Projected Development Site 2, extending 20 feet north and 10 feet south from that corner. With the appropriate PCRE in place, construction noise levels would not exceed the thresholds for exterior increase in noise or interior noise level, and thus it would not result in significant adverse construction noise impacts. Therefore, these impacts would not cause or increase a disproportionate pollution burden on a DAC, either alone or in conjunction with other technical areas.

Air Quality

As discussed in **Section 10, Air Quality**, the mobile source screening analysis indicated that the increment of project-generated vehicle trips would be below the CEQR CO and PM impact thresholds. Thus, there would be no potential for adverse air quality impacts from mobile sources at intersections. The parking garages at Projected Development Sites 1 and 2 do not have the potential to adversely impact air quality levels, nor are the HVAC and hot water systems from Projected Development Sites 1 and 2 expected to create any local air quality impacts.

The industrial source analysis indicated that there would be no potential for significant adverse impacts or health risks from surrounding industrial sources on Projected Development Sites 1 and 2. Lastly, no large or major sources were identified within a 1,000-foot radius of the Project Area, and thus there would be no potential for significant adverse impacts from large or major sources on Projected Development Sites 1 and 2. As a result, the Proposed Actions would not result in any significant adverse air quality impacts.

To preclude the potential for significant adverse air quality impacts from Projected Development Site 1's heating and hot water system emissions, an (E)-Designation would be incorporated into Projected Development Site 1. Therefore, these impacts would not cause or increase a disproportionate pollution burden on a DAC, either alone or in conjunction with other technical areas.

As discussed in **Section 12, Construction,** based on the location of nearby sensitive receptors relative to the sources of construction air quality emissions, a comparison of emissions, and the use of emission control measures, the Proposed Actions would not result in any significant adverse construction air quality impacts. A list of the proposed air quality control measures is provided in **Section 12, Construction**. Therefore, the Proposed Actions would not cause a pollution burden related to air quality.

Water and Sewer Infrastructure *Water Supply*

As discussed in **Part II: Technical Analyses**, the Proposed Project would not meet the relevant development thresholds indicating that analysis of water and sewer infrastructure would be warranted, per the *CEQR Technical Manual,* and it is anticipated that the City sewer system would have ample capacity to handle any additional wastewater generated by the Proposed Project. The Project Area is currently developed with buildings, pavement, and concrete, and stormwater flows into the existing combined sewer system. The Proposed Project would not introduce new impervious surfaces. Therefore, the Proposed Actions would not cause a pollution burden related to wastewater.

Solid Waste and Sanitation

As discussed in **Part II: Technical Analyses**, the Proposed Project would not meet the relevant development thresholds indicating that analysis of solid waste and sanitation services would be

warranted, per the *CEQR Technical Manual,* and it is anticipated that existing City sanitation services would have ample capacity to handle any additional solid waste generated by the Proposed Project.

Conclusion

The Proposed Actions would not result in significant adverse impacts in any of the technical areas analyzed in this EAS. Furthermore, the Proposed Actions do not have the potential to cause any combination of moderate effects which would together result in an impact. As such, the Proposed Actions would not cause a disproportionate pollution burden on DACs with respect to any of these technical areas, including cumulative effects from multiple technical areas.

Appendix A: Preliminary Assessment/ Disturbance Record

AR - NY SHPO Archaeological Report

DIGITAL ARCHIVE DOCUMENTATION

NY SHPO SHELVING REFERENCE

ID #	County	Report Number
405	QUEENS	56

PR Number	ELECTRONIC VERSION	STATUS	Page Count
00PR0672	☐	Scan Off-Site	

Report Title

MEMORANDUM: PRELIMINARY ASSESSMENT/DISTURBANCE RECORD, INTERMEDIATE SCHOOL 1000, SUNNYSIDE, QUEENS, BLOCK 2283, LOTS 1, 12, 22 AND 36

Report Type 1A **Author** HISTORICAL PERSPECTIVES

Month	Year	Date	Survey Sponsor
2	2000	2/1/2000	NYC SCA (FED/STATE/SEQRA/CEQRA/CLG SUBGRANT/OTHE

Survey Acreage (IB ONLY) | Survey Square Footage | Underwater Survey Area - Acres

Stripped Area - SqFt (II and III ONLY) | Surface Exam Area(Acres)

MULTIPLE COUNTIES CROSS REFERENCE:

County 1		Report 1		County 3		Report 3	
County 2		Report 2		County 4		Report 4	

MINOR CIVIL DIVISION

County	Town 1	Town 2	Town 3	Town 4
QUEENS	QUEENS			

REVIEW

Number of Archaeological Sites Identified

Number of Architectural Sites Identified

Log Month	Log Year	Log Date	Date Reviewed

UNIQUE SITE NUMBER(S) REPORTED : IA, IB, II AND III SURVEY

Site 1 #	Site Type 1	Quad 1	Site 8 #	Site Type 8	Quad 8
Site 2 #	Site Type 2	Quad 2	Site 9 #	Site Type 9	Quad 9
Site 3 #	Site Type 3	Quad 3	Site 10 #	Site Type 10	Quad 10
Site 4 #	Site Type 4	Quad 4	Site 11 #	Site Type 11	Quad 11
Site 5 #	Site Type 5	Quad 5	Site 12 #	Site Type 12	Quad 12
Site 6 #	Site Type 6	Quad 6	Site 13 #	Site Type 13	Quad 13
Site 7 #	Site Type 7	Quad 7	Site 14 #	Site Type 14	Quad 14

DIGITAL FILE NAME | BOX | LOCATION | BAR CODE

HISTORICAL PERSPECTIVES INC.

#56 ID 405

Feb. 2000

MEMORANDUM: Preliminary Assessment/Disturbance Record
Intermediate School 1000, Sunnyside, Queens
Block 2283 Lots 1, 12, 22 and 36

INTRODUCTION

The following memo provides a summary of preliminary historical and archaeological research on the proposed I.S. 1000 site, conducted by Historical Perspectives, Inc.

The proposed school site is in the Sunnyside section of the Borough of Queens, near the northeast corner of New Calvary Cemetery (55 feet south and 120 feet east of the project lots). The irregular, P-shaped site is on the western half of Block 2283, and includes Lot 1, at the northeast corner of 47th Avenue and 50th Street; Lot 12, along the east side of 50th Street; Lot 22, at the southeast corner of 50th Street and Queens Boulevard; and Lot 36 along the south side of Queens Boulevard. (Figure 2)

Historical Perspectives, Inc. has undertaken this Preliminary Assessment of the proposed I.S. 1000 site in order to: 1) identify archaeological resources; 2) examine the construction history of the project site in order to estimate the probability that any potential resources might have survived and remain on the site undisturbed; and 3) determine whether additional research, in the form of a Phase 1A study, is necessary.

ENVIRONMENTAL SETTING

Prior to 19th- and 20th-century development, historical maps show the project vicinity as part of an extensive elevated area of hills and ridges interspersed with small valleys or hollows, which later became the present neighborhoods of Sunnyside, Woodside, and the sites of the Sunnyside Railroad Yards, Calvary and New Calvary Cemeteries. This area is practically isolated from adjoining sections of Queens and Kings by tidal salt marshes drained by the Newtown Creek estuary and its tributaries, Dutch Kills and Maspeth Creek (Taylor and Skinner 1781). Although the elevated area was surrounded by marsh and creek, the project lots themselves were somewhat remote from these water sources. The distance from the project lots to the nearest marsh and water course is approximately 4,000-5,000 feet to the southwest, the location of a tributary of Newtown Creek, which flowed southward from the former Laurel Hill neighborhood, now buried beneath the southern part of the Brooklyn Queens Expressway and the Harry S. Truman Expressway interchange (USCGS 1874; Conner 1852). A segment of Maspeth Creek ran as close as a mile south southeast of the project site, in the vicinity of present 55th Drive and Maurice Avenue (Beers 1873:52; Sidney 1849).

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The project site lay along the northwestern slope of a large hill which presently reaches an elevation of over 130 feet, about 2,300 feet east of the project site. (Figure. 1) A 1911 topographic map shows the project lots between two arms of the hill. Elevations on the lots were between 80 and 90 feet above sea level, with an area above 90 feet at the extreme southern tip of Lot 1, at the intersection of 50th Street and 47th Avenue. Elevations increase to the north, south and east of the project lots (Queens 1911:3).

Current Conditions

On the present USGS topographic map (Figure 1), the project site lies between the 90- and 100-foot contour lines. Comparing this with the 1911 contour map, this suggests the addition of between zero and about 10 feet of fill on the project lots, with the thickness of the fill overmantle generally increasing as one proceeds northward to Queens Boulevard (Queens 1911:3).

Soil borings[1] conducted on Queens Boulevard, along the north side of the project site, support this scenario, recording between 5 and 10 feet of fill (B8, B9 and B10) in the present Queens Boulevard roadbed between 49th and 51st Streets. The fill layer disappears east of 51st Street, where the 1911 elevations rise to above 100 feet, equalling the current elevations (Queens 1911:3). (Figure 1)

The presence of a retaining wall along the north side of New Calvary Cemetery, on the south side of 47th Street opposite Lot 1 (Photo 4), also supports the hypothesis that the amount of fill decreases or disappears completely on the southern part of Lot 1. The wall supports the higher elevations in the cemetery, which would have sloped downward gradually northward across 47th Avenue and onto the project site. Subsequent to 1911, the hill slopes were cut down to form a flat roadbed for the future 47th Avenue, requiring the erection of the retaining wall to protect the pre-existing cemetery plots.

A site inspection was conducted and photographic record made on 1/27/00. (Photos 1-6) Except for Lot 36, which is used as a parking lot for the project site buildings, project lots 1, 12 and 22 are completely covered by the 1-story Stevens appliance store and warehouse. Little topographical variation is visible, except in the paved parking lot, which slopes faintly downward from Queens Boulevard toward the south, and is slightly elevated along the center north/south axis, along which the two free-standing parking lot lamps are located.

PREHISTORIC PERIOD

Nineteenth- and 20th-century archaeological research and excavation has identified six prehistoric archaeological sites, more than one and up to two miles from the project lots. These are inventoried in the site files of the New York State Museum (NYSM) and the New York State Office of Parks, Recreation and Historic Preservation (OPRHP). In an attempt to describe more accurately the generalized locations provided by the NYSM, the information is supplemented by other archaeological and historical sources, and the sites are listed in order of increasing distance from the project site (Bolton 1972; 1922; 1920; Parker 1920; Grumet 1981).

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[1]Soil Borings for Capital Project No. S.E. 76, Combined Sewer in Queens Boulevard, 1967. File no. 0647. City of New York Department of Public Works, Division of Engineering Services, Subsurface Exploration Section.

NYSM#4536 (ACP Quns 13): Archaeologists Arthur C. Parker and Reginald P. Bolton both suggest the present Maspeth neighborhood, along present Maspeth Creek, approximately 1.25 miles south of the study area, as the location of a village. Several incidents between the Dutch and Native Americans occurred here during the Governor Kieft War (1643-1645), and a wigwam was recorded at Maspeth Kills in 1669 (Grumet 1981). According to historian James Riker, writing in c.1852, the Indians' "rude implements," chiefly "stone axes and arrowheads, and arrows of reed" were still to be found (Riker 1852).

NYSM#4538, ACP Quns no # refers to a village site in Long Island City, Queens. The location provided by the NYSM is centered on the intersection of 40th Avenue and 28th Street. Parker's published map appears to show the village somewhat farther north, approximately centered on 35th Avenue and Crescent Street (Parker 1920), which would place it 1.4 miles northwest of the project lots.

NYSM#4537, ACP Quns 14 identifies a burial site in Long Island City, Queens. Parker places this burial on Crescent Street, but does not provide the cross street. His map seems to put it northeast of the village site (NYSM#4538 from the previous paragraph) on or northeast of Broadway, which would mean that it was at least 1.4 miles northeast of the project lots (Parker 1920). Bolton reports human burials (note the plural), "near Crescent Street," although his map siting is the same as Parker's (Bolton 1972). The locations and comments provided by the NYSM suggest two or more burials, centered on Crescent Street and 34th Avenue.

NYSM #3613, ACP Kings no # is a site in Greenpoint, Kings County, at the mouth of Newtown Creek. Archaeologist Arthur C. Parker reported "traces of occupation" there (Parker 1920). It lies approximately 1.5 miles west southwest of the study area, on the Kings County shore of Newtown Creek.

OPRHP #A081-01-0100 "Sunwick" was described by Bolton, who reported that Sunwick (also Sunwicks or Sunswicks) was a "native station" which yielded shell deposits and a few artifacts. Sunwick was in Ravenswood Park, and although the original Ravenswood Park lay roughly between 38th and 43rd Avenues from 11th to 21st Streets, roughly 1.5 miles west of the project site (Whitney 1876), the site description better conforms to the location pinpointed by the New York State Museum at present Rainey Park, along the East River Shore, about 2 miles northwest of the study parcel (Bolton 1922; Grumet 1981).

Recorded place names, or toponyms, can also be an indication of a Native American presence or absence in an area. The nearest is Canapaukah, the Indian name for Dutch Kills, which formerly flowed within about a mile to the northwest of the project lots (Grumet 1981:4-5,71). As discussed in the environmental overview, the project site was part of a much larger area isolated by surrounding marsh and creek systems. No Native American trails are recorded nearby. The nearest known trail approximated present Flushing Avenue, about 1.5 miles southwest of the project site. Separated from the project lots not only by distance, but by Maspeth Creek and marshes, the trail was not used to access the project site vicinity, but to skirt the swamps and link other areas of northern Queens with Kings County.

Indian settlement patterns show a marked preference for sheltered, elevated sites close to wetland features, a source of fresh water and a major waterway. The importance of the proximity to these resources is evident from the locations of the inventoried prehistoric sites, which are clustered in the elevated areas near the extensive marshes along Newtown and Maspeth Creeks and Dutch Kills. In contrast, there are no inventoried sites in the vicinity of the project lots. As described in the environmental overview, the nearest of the attractive natural resources was more than 4,000 feet south of the project site. Although the project site was in a well-drained, elevated location, it was ***too*** well drained – fresh water was not readily available. In 1879, the sinking of an artesian well in New Calvary Cemetery, adjacent to the project site on the east, necessitated drilling to a depth of 606 feet, an operation beyond prehistoric technology (Munsell 1882:379).

HISTORICAL PERIOD

The present Sunnyside neighborhood, including the project lots, is a remnant of the larger Sunnyside village, a scattered settlement of farmhouses, most of which were purchased and levelled by the Pennsylvania Railroad to build its Sunnyside Railroad Yard (about 0.5 miles northwest of the project site), which opened in 1910. The project lots lie about 120 feet west and 55 feet north of New Calvary Cemetery, chartered in 1853, an extension of the Roman Catholic Calvary Cemetery (about 3,400 feet to the southwest), whose presence apparently encouraged the development of transportation to, and businesses in the area, catering to cemetery visitors and patrons (Munsell 1882:379). Residential and business development was greatly spurred by the opening of the Queensboro Bridge in 1909, connected to the rest of the borough by Queens Boulevard, which runs along the northern side of the project lots (Jackson 1995:1143)

Building History

As late as 1903, the project lots contained no structures, and 47th Avenue and 50th Street had not yet been laid out (Wolverton 1891:30; Hyde 1903).

Lot 1 (corner of 47th Avenue and 50th Street)

The southern side of this trapezoidal lot has a 13-foot frontage on 47th Avenue, widening to 33 feet on its north side along Lot 12. There is a 216-foot frontage on 50th Street on the west and 219 feet to the east. (Figure 2) Historical maps and building files show no structures on Lot 1 prior to 1924, when the block and lot index records a new building permit. Unfortunately, the permit itself is missing (New Building 2411/1924; Hyde 1915:10). Later permits and the 1929 atlas show a 1-story brick garage, storage and office covering the entire lot. No cellar is recorded, therefore this building must be assumed to have foundations no deeper than a standard four feet (Alteration 2073/1945; Hyde 1929:1). This building is still present on Lot 1. (Photo 6)

Lot 12

This trapezoidal lot (formerly part of Lot 1) lies directly north of present Lot 1, with a 200-frontage on 50th Street. Historical maps show no structures on Lot 12 until 1929 (Hyde 1915:10; 1929:1). No

building records from this lot were available, and the block and lot index card lists no permits prior to 1932. The 1929 map shows a 1-story brick building covering the entire lot, which appears to be the same structure present today, although now described as concrete block. (Figure 2; Photo 5) No cellar is recorded, therefore this building must be assumed to have foundations no deeper than a standard four feet.

Lot 22

The first structure on Lot 22 (formerly Lot 32) was a three-story, woodframe hotel, built at the corner of Queens Boulevard and 50th Street in 1913. The hotel, owned by Ida Clare, had a store on the first floor, and ten bedrooms, as well as indoor toilets and bathtubs. An underground sewer pipe exited the rear (south side) of the building, connecting to a private sewer line along 50th (Fitting) Street. Foundations of the 20' by 65' building extended 8 feet below street level, and the lot dimensions were 40' by 100', smaller than at present, with a 40-foot frontage on Queens Boulevard and the 100-foot frontage on 50th Street (New Building 279/1913). (Figure 3)

In 1914, a 1-story, L-shaped shed and garage were added to the east and south sides of the hotel. These additions had foundations extending 6 feet below the then current surface. With the original hotel, the enlarged structure occupied an area of 96 feet by 40 feet at the northeast corner of the present lot (Alteration 6/1914). (Figure 3)

By 1929, the hotel and sheds had been removed, and a 1-story brick building had been built on the entire current Lot 22 – an area with a 70-foot frontage on Queens Boulevard, and a 200-foot frontage on 50th Street (Hyde 1929:1). The block-and-lot permit index records a new building permit in 1924, which probably refers to this structure. The permit was not available (NB 2411/1924). A later permit describes the structure as a brick "showroom and garage" (Alt 1401/1943). No cellar is recorded, therefore this building must be assumed to have foundations no deeper than a standard four feet. The current real estate atlas records a concrete block building of the same configuration. (Figure 2; Photos 2 and 3)

Lot 36

Lot 36 formerly ran the entire north/south length of Block 2283, with 123-foot frontages on both Queens Boulevard and 47th Avenue. At present only the northern 265 feet are part of the lot.

The larger lot was "Louis Ruhe's Animal Park," which was established after 1903 (Hyde 1903). (Figure 3) Building permits date as early as 1905. According to a 1930 permit, the establishment raised animals and birds "for zoological gardens and circuses etc." (NB 3386/1930).

The earliest recorded buildings on the lot were two barns built in 1905, which from their configurations and dimensions were both south of present Lot 36, and therefore outside the project site. One barn was 27' by 100' (NB60/1905) and the other, 2-story, 46' by 34' (NB1900/1905). (Figure 3) These buildings were oriented to a private road which ran along the eastern lot line of the larger Lot 36, from Queens Boulevard south to the not-yet-built 47th Avenue.

The 1915 atlas shows three structures in the present Lot 36, two small 1-story buildings at the northeast corner of the lot, along Queens Boulevard, and a larger barn, approximately 45' by 25', near the present southern lot line. (Figure 3). By 1929, only one of the smaller buildings along Queens Boulevard was still extant. Another small frame building had been erected at the southwestern corner of the lot, between 1915 and 1929 (Hyde 1929:1). Building files record two other structures built in 1930, an addition to the bird house, south of the project lots (Alt. 2811/1930), and a showroom for the sale of the animals, 36' by 12', with 4-foot foundations. That building is not specifically located on the larger lot (NB 3386/1930).

Present Lot 36 has been paved and is used as a parking lot, with a pair of electric lights/light poles along the center of the lot's north/south axis. From observations made during the site inspection, the parking lot does not appear to have any sort of drainage/storm sewer system. (Photos 1 and 2)

CONCLUSIONS

Disturbance

Subsurface disturbance from historical period construction is recorded on all the project lots. Building files indicate disturbance of at least 4 feet below the present ground surface on all parts of Lots 1, 12 and 22. Lot 36, now used as a parking lot, has experienced scattered disturbance, whose depth and/or exact location is difficult to pinpoint, but in no case does it seem to penetrate more than 4 feet below the present ground surface. Deeper or more severe disturbance is recorded in the northwestern part of Lot 22, on the site of the former hotel, which had foundations 8 feet deep, and its surrounding garage and shed with 6-foot foundations.

Prior to the abovementioned disturbances, as indicated by soil borings on Queens Boulevard and a comparison of the 1911 and current USGS topographic maps, a layer of fill ranging in thickness from zero to 10 feet, was deposited on the project block. The filling probably preceded building construction and was related to the final construction and regulation of the surrounding streets, particularly Queens Boulevard. The fill overmantle could have protected shallowly-buried (less than 4 feet below the predevelopment ground surface) potential archaeological resources from construction disturbance, particularly on Lots 12 and 36, northern Lot 1, and the shallowly-disturbed sections of Lot 22, the areas in which the fill overmantle would have been thickest.

Prehistoric Sensitivity

Because prehistoric sites are generally only shallowly-buried, i.e., within 3 to 4 feet of the predevelopment surface, they are often adversely impacted by subsequent construction. As was noted above, the project site has experienced disturbance of at least four feet below the ***present*** ground surface in all areas of Lots 1, 12 and 22, and only scattered disturbance on Lot 36, which also can not be pinpointed. However, these parts of the project site there is no recorded historical disturbance which would have penetrated the protective fill layer believed to overlay the ***predevelopment*** ground surface .

In two locations, potential prehistoric sensitivity would have been destroyed or seriously impacted by construction episodes. These areas are: the northwestern corner of Lot 22, where building foundations extended from 6 to 8 feet below the surface; and the southern part of Lot 1, where although recorded foundations extend only 4 feet below the present ground surface, there would also have been little or no fill to protect any potential prehistoric archaeological remains present.

From what is known of prehistoric settlement patterns on Long Island, most archaeological sites are found in sheltered, elevated locations close to wetland features, sources of fresh water, and particularly in coastal environments. Based on these criteria, the project site is unlikely to be a location exploited by prehistoric man for a village, campsite or raw material processing center. Part of a large region isolated from the rest of Queens and Kings Counties by the extensive Newtown Creek and marsh system, the topography of the study parcel was well-drained and elevated, but there was no source of fresh water, and the nearest marsh/creek resources were at least 4,000 feet away, over a challenging terrain of hills and valleys.

The lack of inventoried prehistoric archaeological sites, native toponyms and trails in this isolated region, and their presence adjacent to marshes outside the project area vicinity, suggests that although prehistoric man may have been familiar with the vicinity of the project area, far more favorable locations existed for settlement and other types of occupation. Although Indians may have crossed and recrossed the site in the course of seasonal migration or hunting and gathering expeditions, it is unlikely that such use would provide the archaeologist with anything more than a few stray, out-of-context artifacts. Therefore, due to the low prehistoric potential, further research and study concerning prehistoric archaeological resources is NOT RECOMMENDED.

Historical Sensitivity - Hotel

Documented residential occupation on the project lots is confined to Lot 22, where a hotel was built in 1913. Privy and well shafts, which are often filled with contemporary refuse related to the dwellings and their occupants, can provide important stratified cultural deposits for the archaeologist and frequently provide the best remains recovered on sites.

However, as discussed above in the "Building History" section, an examination of building records and permits shows that the hotel was constructed with indoor running water and toilets, making the excavation of shaft features unnecessary. Given the presence of indoor plumbing on Lot 22 it is unlikely that privies, wells or cisterns would have been present.

Although the foundations or sections of the foundations of the hotel may still exist beneath the Stevens appliance store on Lot 22, because of the late period of occupation, post-1913, and the lack of related shaft features on the project site, their archaeological significance is highly questionable. Therefore, further archaeological study or testing is NOT RECOMMENDED.

Historical Sensitivity – Animal Park

As described in the Building History section, Lot 36 was part of the much larger Ruhe animal park property, where animals were raised commercially for zoos and circuses, beginning between 1903 and

1905. According to maps and building records, the vast majority of the structures were in the southern portion of the property, outside the project site. Only four sheds can be assigned to present Lot 36

Expected remains from the project site would consist of non-diagnostic early-20th-century artifacts, as well as potential animal bone deposits. Nothing of significance would be learned from further archaeological study of Lot 36 which could not be determined through written records. Also, the potential remains on the project site represent only about one third of the property of the Ruhe establishment, and none of its major buildings. Even if the Ruhe remains were of archaeological significance, Lot 36 would be a poor source of data for studying the animal park, since it would be completely lacking in archaeological information concerning the rest of the complex.

Due to the late period of the occupation and the lack of archaeological significance of the Ruhe animal park remains which would be expected on Lot 36, further archaeological study or testing is NOT RECOMMENDED. However, it is recommended that as a function of a construction management policy, the building contractor/excavation crew be made aware of the potential presence of animal bone on the site, as well as its lack of archaeological significance.

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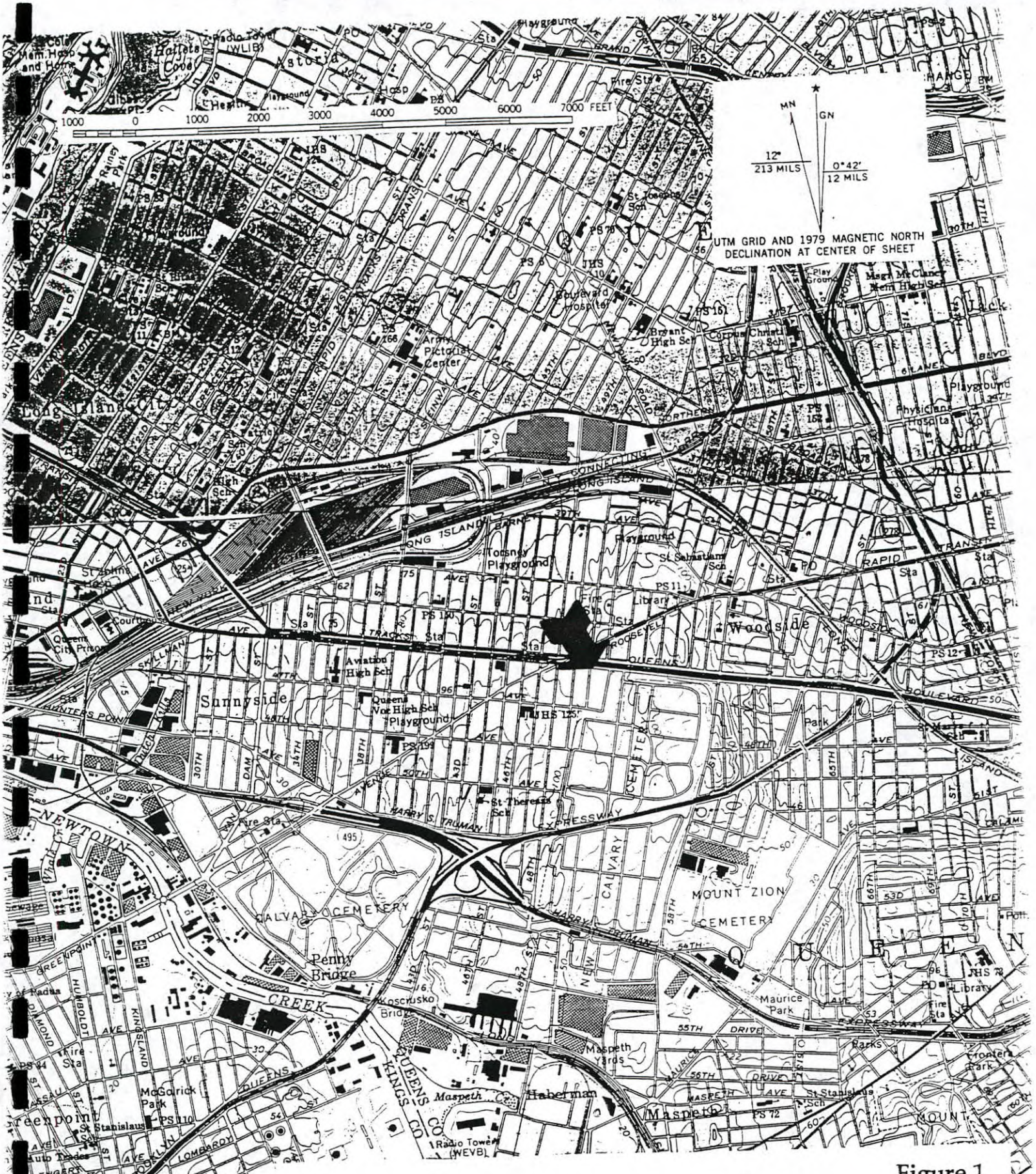


Figure 1

Project Site Location – Current U.S.G.S. Topographic Map

Central Park and Brooklyn Quads

Arrow indicates project site

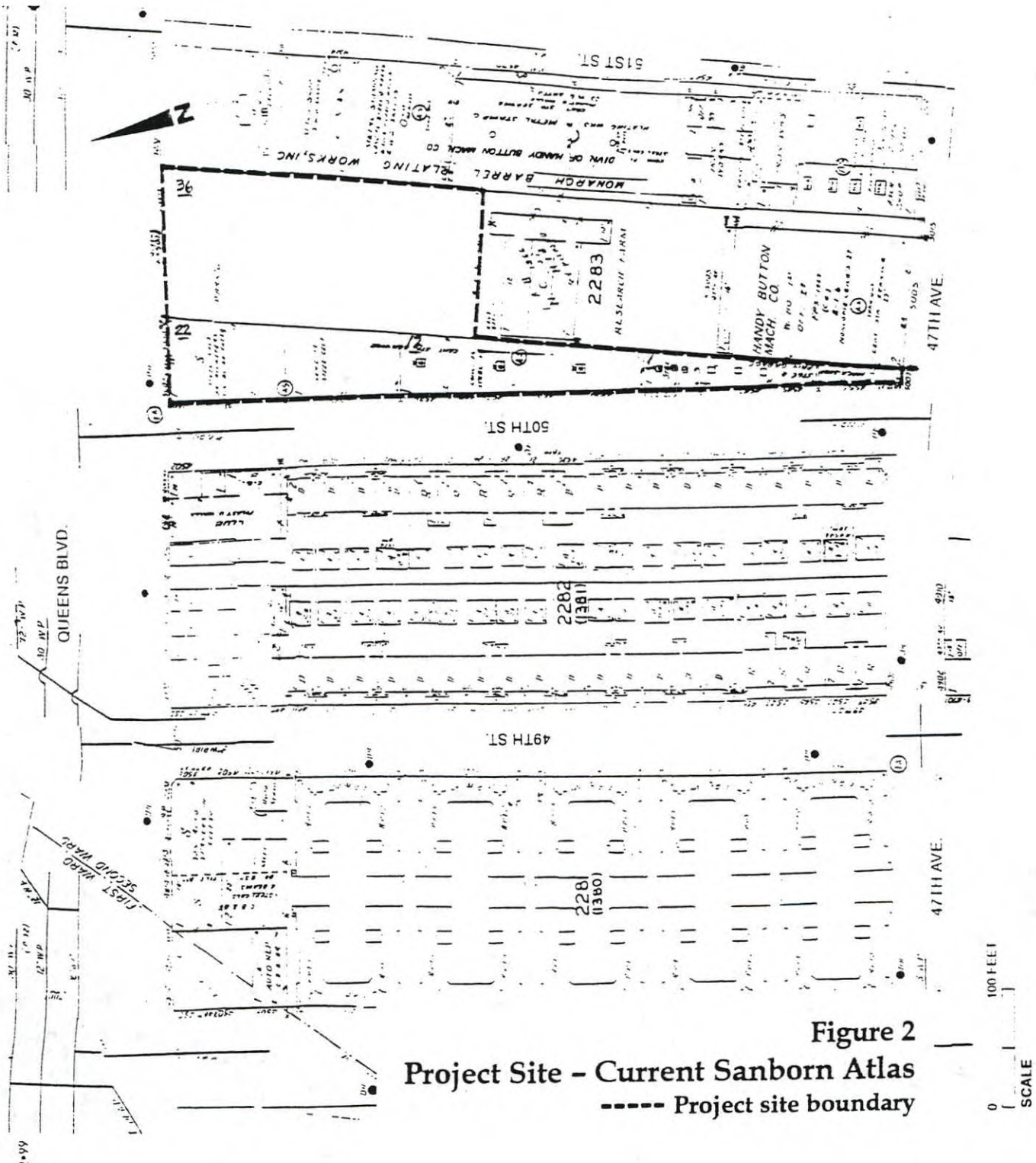


Figure 2

Project Site – Current Sanborn Atlas

----- Project site boundary

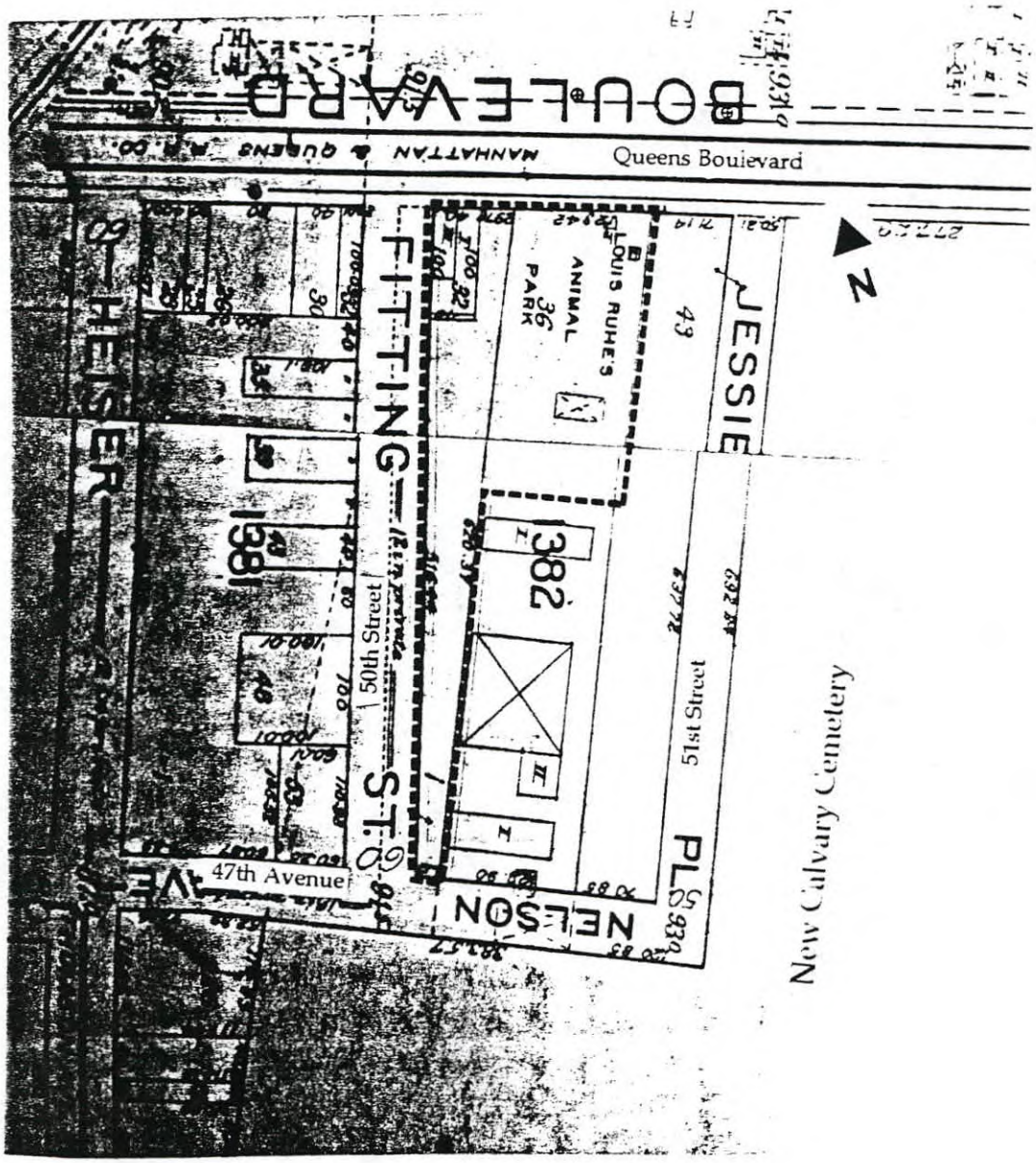


Figure 3
Hyde, *Atlas of the Borough of Queens*, 1915
---- Project site boundary



Photo 1: View north from the southern edge of the project site on Lot 36, looking toward Queens Boulevard. Lot 22 of the project site with the Stevens appliance store is at the left. The mound at the center foreground is snow.

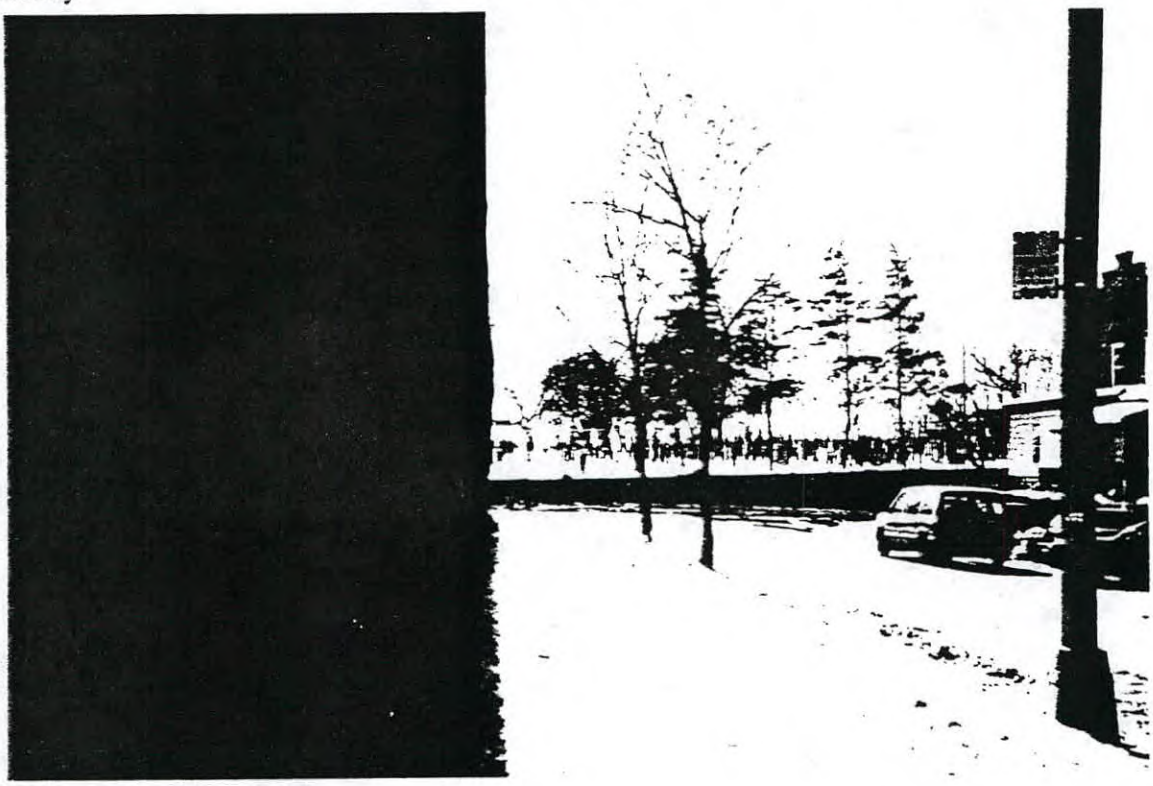
Photo 2: Looking toward the east from the center of the Queens Boulevard and 50th Street intersection. Queens Boulevard is at the left. Stevens appliance store on Lot 22, and the parking lot on Lot 36 are part of the project site. Shell gas station is outside project lots. New Calvary Cemetery is visible in the distance.





Photo 3: View to the southeast of the northwest corner of Queens Boulevard (left) and 50th Street (right). Stevens appliance store is on Lot 22.

Photo 4: Looking south along the east side of 50th Street, midway between Queens Boulevard and 47th Avenue. Project site Lot 12 is at left (east), and New Calvary Cemetery is in the distance, along the south side of 47th Avenue. Note the retaining wall along the cemetery/avenue boundary.



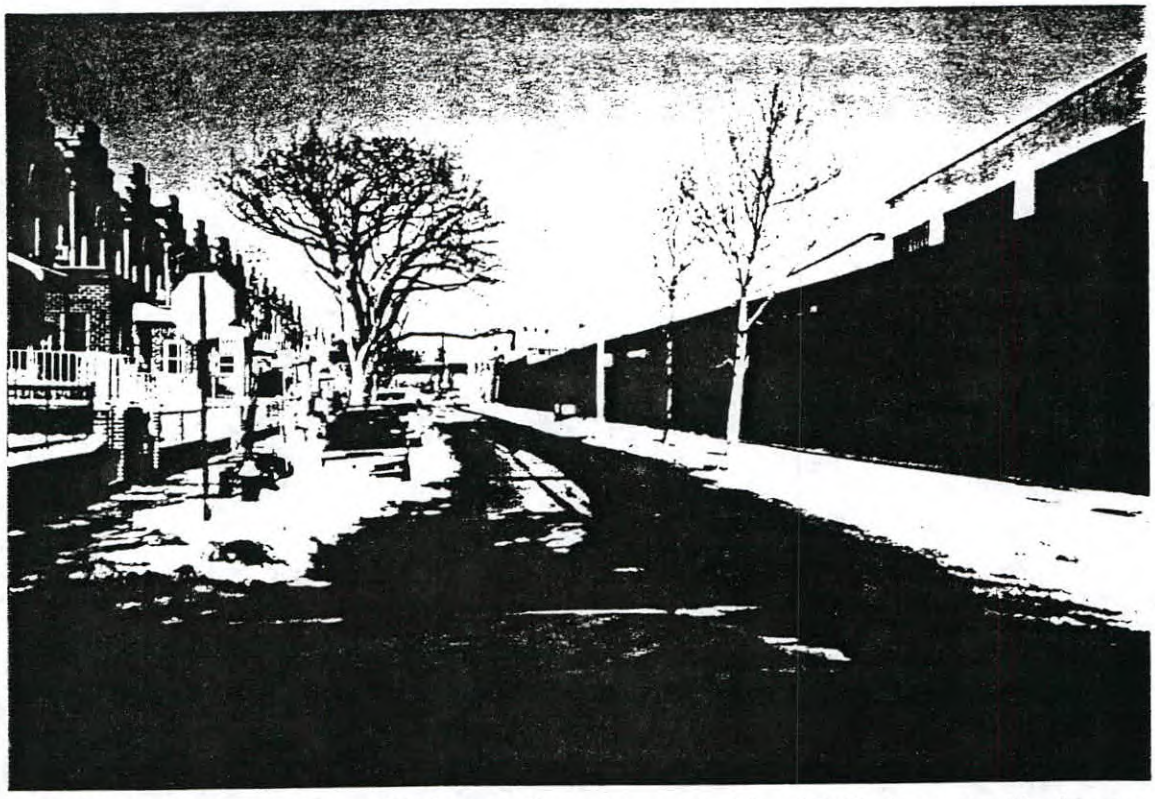
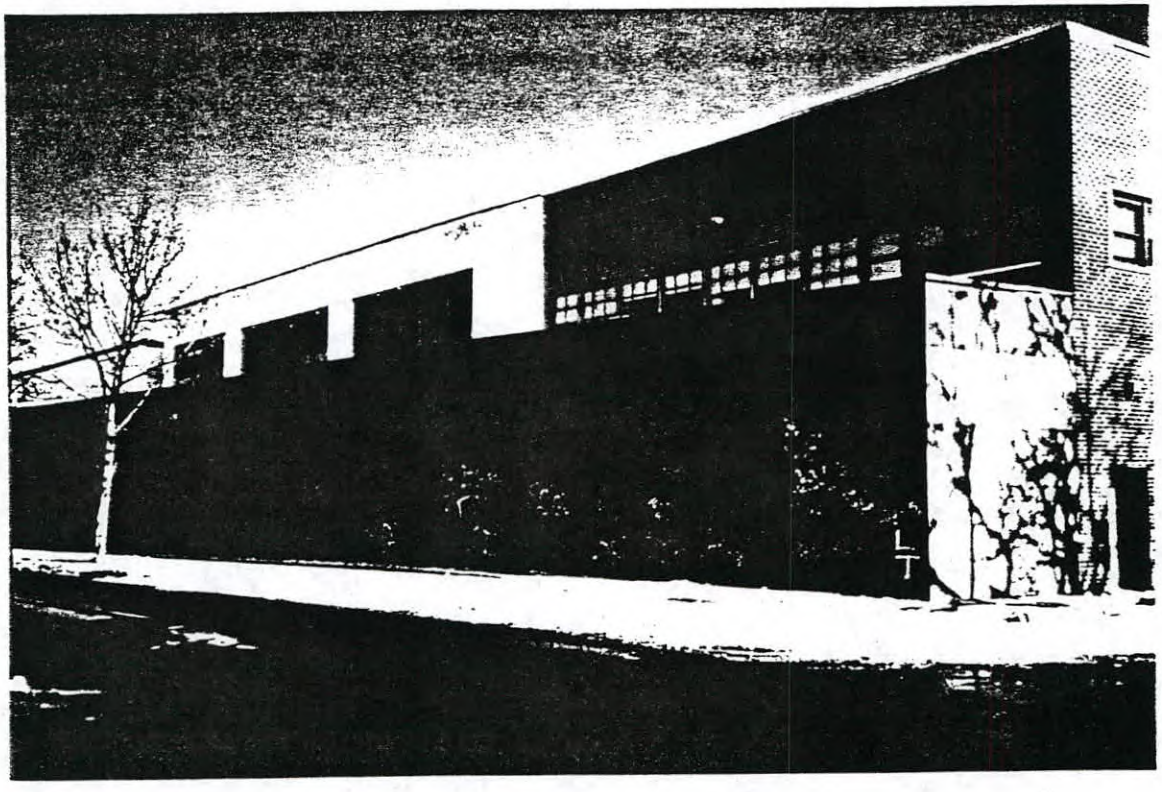


Photo 5: View northward along 50th Street, from the south side of 47th Avenue. Single-story, dark grey building with the red stripe at right (east) occupies project Lots 1, 12 and 22. Queens Boulevard is in the distance.

Photo 6: Looking northeast from the intersection of 47th Avenue (right) and 50th Street (left). Project Lot 1 is occupied by the windowless, single-story building. The two-story structures are outside project site.



A. INTRODUCTION

DRAFT

This chapter assesses the potential of the project to affect significant archaeological and historic resources on the project site and historic resources within the land use study area (the area bounded by Queens Boulevard to the north, New Calvary Cemetery to the east, 48th Avenue to the south, and 47th Street to the west). Within the study area, historic resources considered comprise officially recognized historic resources—properties listed on the State or National Registers of Historic Places (S/NR), or determined eligible for such listing; New York City Landmarks (NYCLs) and Historic Districts, and properties determined to be eligible for landmark status. A photographic inventory of the project site and its environs is included in Chapter 4, "Urban Design and Visual Resources."

B. BACKGROUND HISTORY

The neighborhood of Sunnyside, located just east of Long Island City in northwestern Queens, is named for a roadhouse built on Jackson Avenue for visitors to the Fashion Race Course in Corona during the 1850's and 1860's. The first recorded mention of "Sunnyside" is in reference to a station on the Long Island and Flushing Rail Road line in 1875. A small hamlet was built on several subdivided farms between Northern and Queens Boulevards in the 1880's and 1890's.

The original village was evicted for the construction of the Pennsylvania Railroad's (PRR) Sunnyside Yard from 1908 to 1910. Having recently bought the Long Island Rail Road, built Hudson River and East River tunnels, and electrified its trains, the PRR needed a service yard for its new Pennsylvania Station on Manhattan and its Long Island operations. Today's Sunnyside neighborhood lies entirely south of this expansive rail facility and is bounded to the east by Calvary Cemetery and 51st Street, to the south by the Long Island Expressway, and to the west by Van Dam Street.

The railroad's tunnels opened under the East River in 1910. This brought most of Queens within commuting distance of Manhattan. The opening of the Queensboro Bridge in 1909 also provided access to Queens by car and trolley. To accommodate the increasing traffic, a new road system was built, and Queens Boulevard was designed to be the main highway. In 1915 all street names in Queens were changed to a uniform numbering system.

Interborough Rapid Transit (IRT) extended elevated lines to Corona (now the No. 7 train) along Queens Boulevard in 1917, further stimulating development in Long Island City and along the Queens Boulevard corridor. Factories and warehouses gradually located in nearby Long Island City and in the area south of Sunnyside Yards, particularly during World War I and immediately afterward during the strong economy of the 1920's. The new plants attracted great numbers of workers into the area that previously had been nearly void of settlement.

Sunnyside is notable for its Sunnyside Gardens development, a 77-acre enclave that lies to the north of Queens Boulevard and is bounded by 39th Avenue to the north, 51st Street to the east,

and 43rd Street to the west. This development of 1,400 attached single and multi-family dwellings was the first planned "garden city" community in the United States and is still considered an outstanding example of urban planning.

Today, the nearby area remains concentrated with manufacturing and industrial uses, while Sunnyside itself boasts a large and stable residential building fabric anchored by the No. 7 train, which neatly bisects the area. Sunnyside's predominant character is defined by its brick apartment buildings built mainly from the 1920's through the 1940's.

C. EXISTING CONDITIONS

ARCHAEOLOGICAL RESOURCES

A preliminary assessment/disturbance record of the project site was conducted by Historical Perspectives in January 2000. The report documents the site's potential to yield significant archaeological resources. The conclusions of the report are summarized below.

Prehistoric Potential and Sensitivity

Settlement pattern data of the prehistoric culture periods show a strong correlation between habitation/processing sites and a freshwater source, the confluence of two water courses, proximity to a major waterway, a marsh resource, and/or well-drained elevated land. A review of documents and historic maps shows that potential prehistoric resources would have been destroyed or seriously affected by previous construction activity in two locations: the northwestern corner of Lot 22 (at the intersection of Queens Boulevard and 50th Street) and the southern part of Lot 1 (47th Avenue and 50th Street). The remainder of the site is believed to retain a layer of fill that was laid at the turn of the century, before any construction on the project site had commenced. While this layer of fill, ranging in thickness from zero to 10 feet, would have protected any on-site prehistoric resources, it is unlikely that the project site would have been a location exploited by prehistoric man for village or camp sites. The lack of nearby inventoried prehistoric archaeological sites, trails, or water sources suggests that the site was at best a place to pass through rather than a location for settlement or other types of occupation, and is thus considered to have a low prehistoric archaeological potential.

Historic Potential and Sensitivity

Dwellings, including associated outbuildings and yards, have the potential to contain resources that may furnish information about past ways of life, settlement patterns, socioeconomic status, ethnicity and consumer choice issues. The archaeological resources preserved in privies, cisterns or wells frequently provide the best domestic remains recovered on urban sites. Documented residential occupation on the project site is confined to a hotel built in 1913 on the northwest corner of Lot 22. An examination of building records and permits shows that the 3-story woodframe hotel was constructed with indoor running water and toilets, therefore making excavation of shaft features unnecessary. In 1914, a 1-story, L-shaped shed and garage were added to the east and south sides of the hotel; both would not have required the construction of household facilities. The existing 1-story structure was built on all of Lots 22, 12, and 1 by 1929.

Lot 36 was part of the much larger Louis Ruhe's Animal Park property, where animals were raised commercially for zoos and circuses beginning between 1903 and 1905. The vast majority of animal park structures were located in the southern portion of the block, outside of the project

site. Only four sheds were located on present Lot 36. Expected remains from the project site would consist of non-diagnostic early-20th-century artifacts and potential animal bone deposits. These artifacts would be a poor source of archaeological data for studying the Animal Park since it would be completely lacking in archaeological information concerning the larger part of the complex to the south.

Although the foundations or sections of the foundations of the hotel may still exist beneath the present 1-story commercial building on Lot 22, because of the late period of occupation and the lack of related shaft features on the project site, their archaeological significance is low. Likewise, the late period of occupation of Ruhe's Animal Park on Lot 36 and the limited remains likely to be found also makes their archaeological significance low. The project site as a whole is thus considered to have a low historic archaeological potential.

Disturbance

Subsurface disturbance from historical period construction, as noted above, is recorded on all the project lots. Lots 1, 12, and 22 have been disturbed at least 4 feet below the present ground surface. Lot 36 (now the parking lot) has experienced scattered disturbance that in no case is likely to have penetrated more than 4 feet below the present ground surface. Deeper disturbance is recorded in the northwestern part of Lot 22 as the former hotel had foundations 8 feet deep, and its surrounding garage and shed had 6-foot foundations. The predevelopment ground surface was augmented in the first decade of the 20th century by a layer of fill ranging in thickness from zero to 10 feet, with the thickest layer of overmantle closest to Queens Boulevard. This fill could have protected shallowly buried potential archaeological resources from construction disturbance, particularly on Lots 12 and 36, northern Lot 1, and the shallowly disturbed areas of Lot 22.

HISTORIC RESOURCES

PROJECT SITE

The project site contains no historic resources. The site is occupied by a vacant, single-story appliance store and a parking lot. The existing structure is a 1970's remodeling of a circa 1924 brick commercial structure and retains no exterior historical features. The existing building occupies the western wedge-shaped section of the project site, and the parking lot occupies the eastern section adjacent to Queens Boulevard.

STUDY AREA

There are no known NYCL's or S/NR listings in the study area. Directly to the west of the project site, across 50th Street, is a row of 2-story 1920's Dutch Revival rowhouses. Identical rowhouses are found on the east side of 49th Street to the east. The remainder of the study area south and west of the project site is marked by residential and commercial buildings constructed from the 1920's to the 1940's. None of these have been designated or found eligible as historic resources. To the east of the project site is New Calvary Cemetery, one of several large cemeteries in western Queens.

Immediately to the north of the project site, extending along Queens Boulevard to the east and Roosevelt Avenue to the northwest, runs the elevated No. 7 subway train. Built privately by IRT in 1917 and since 1953 incorporated into the New York State MTA, the line was designated as one of sixteen National Millennium Trails in June 1999 because of its central role in the growth

and connection of immigrant neighborhoods in Queens. The Millennium Trails initiative is part of the White House Millennium Council's efforts to stimulate national and local activities that honor the past. Designation as a National Millennium Trail is an exclusively honorary action and has no implications for federal, state, municipal, or private actions involving the subway line or any nearby property. Neither the No. 7 subway train nor its nearby 46th Street (Bliss Street) station are New York City Landmarks, and neither have been found eligible for S/NR listing.

The nearest historic resource to the site is the Sunnyside Gardens housing development, a suburban garden city enclave completed in 1928 by Clarence Stein and Henry Wright of the City Housing Corporation, a private suburban housing developer. The neighborhood is roughly bounded by Queens Boulevard, 43rd and 52nd Streets, and Barnett and Skillman Avenues. Generally considered the first deployment of the suburban "garden" apartment concept, Sunnyside Gardens was the prototype for similar developments in other sections of Queens and across the country. Sunnyside Gardens is on the State and National Registers of Historic Places but is not a NYCL.

Since all designated historic resources are outside of the historic resources study area, no further discussion of historic resources is warranted.

D. THE FUTURE WITHOUT THE PROPOSED PROJECT

ARCHAEOLOGICAL RESOURCES

In the future without the proposed project, there are no other projects planned that could be expected to disturb archaeological resources that may exist on the site. The existing building and parking lot would remain extant and any existing resources would remain undisturbed.

E. PROBABLE IMPACTS OF THE PROPOSED PROJECT

Because the project site has a low potential for yielding buried prehistoric or historic cultural materials, it is unlikely that potentially valuable archaeological resources could be disturbed or destroyed if the project were constructed. The above analysis of the site's potential to yield significant archaeological resources would be submitted to the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) for review by the State Historic Preservation Officer (SHPO) under the State Historic Preservation Act. Should they be required, measures to ensure that no significant archaeological resources are adversely affected by the proposed project would be established in coordination with SHPO. However, it is likely that SHPO would not require any further work regarding archaeological resources. ❖

DRAFT

A. INTRODUCTION

This chapter describes the existing urban design and visual characteristics of the study area, including building types, heights, and materials. It also assesses the visual compatibility of the proposed project within this context. Figure 4-1 contains a key to the locations of the photographs, and Figures 4-2 through 4-9 present views of the site and the study area.

B. EXISTING CONDITIONS

PROJECT SITE

The project site contains a vacant retail/appliance store building known as Stevens Audio Video Appliances and an asphalt paved parking lot with frontage on Queens Boulevard to the north and 50th Street to the west (see Figure 4-1). As shown in Figure 4-2, the 1-story steel and masonry building is a 1920's building of painted grey and red concrete. The Queens Boulevard facade retains some of the original aluminum trim (see Photograph 3 of Figure 4-3). A paved parking lot with access from Queens Boulevard is located on the east side of the building and is surrounded by a chain link fence (see Photograph 4 of Figure 4-3). Wide sidewalks in need of repair surround the building on its north and west sides. As illustrated in Figure 4-4, the building features a long, unbroken facade on the 50th Street side, and a very short facade on the south side facing 47th Avenue.

STUDY AREA

Immediately surrounding the project site, the area comprises a variety of uses, including industrial/auto-related, residential, open space, and commercial. Directly east and south of the project site on the same block are 1- to 2-story industrial buildings and warehouses with loading facilities facing 51st Street and 47th Avenue. The manufacturing and automotive businesses include the 2-story, concrete and glass Edmar Janitorial supplies, a 1-story brick building containing T & T Van Lines, and a 1-story Shell filling station facing Queens Boulevard. 51st Street serves as a parking and loading lane, and ends in a dead end at Queens Boulevard. The east side of 51st Street borders Calvary Cemetery, a large open space surrounded by chain-link and black rod-iron fencing (see Figure 4-5). On 47th Avenue across the street from the industrial buildings, the cemetery grounds rise steeply from east to west. A stone wall runs along this avenue from 50th Street until the ground meets the roof line of the commercial and industrial buildings facing 49th Street.

Figure 4-6, Photograph 9 shows the 2-story brick rowhouses on the west side of 50th Street, facing the project site. An alley separates them from a set of identical rowhouses on the east side of 49th Street. The pre-war residences have small front lawns surrounded by chain-link fencing. Other features of the houses and the block include parapated gable roof lines, wide sidewalks, and street trees. To the west of these rowhouses and between 48th and 49th Streets, are the study

area's bulkiest buildings—5-story pre-war brick buildings featuring streetwalls and low archways that lead to courtyards that connect the buildings (see Photograph 10 of Figure 4-6). These quiet inner courtyard spaces contain trees, grassy areas, and statuary. The block north of 47th Avenue features five of these buildings, and the block south of 47th Avenue contains three of the same buildings.

South of the project site, the study area contains primarily low-rise, light industrial uses, most of which are concentrated along the borders of New Calvary Cemetery. The industrial buildings, found south of 47th Avenue on 49th Street and along 48th Avenue, are 1- to 2-story structures made of brick or concrete (see Photograph 11 of Figure 4-7). Interspersed with the industrial uses on the east side of 49th Street are a set of 3-story brick row houses of more recent construction than those across from the project site (see Photograph 12 of Figure 4-7). These residences have single-car garages on the ground floor, driveways, and chain link fences in front. A similar set of row houses is found on the west side of 49th Street closer to 48th Avenue, and another around the corner, on 48th Street just north of 48th Avenue.

West of the industrial uses and row houses that border New Calvary Cemetery is dominated by low- to medium-rise residential and commercial uses (see Figure 4-8). North of 48th Avenue on 48th Street, the block is lined with brick row houses and 3- to 5-story apartment buildings, sidewalks, and street trees. Most of these buildings have no setbacks, and instead have small side yards enclosed with rod-iron or chain-link fencing. The blocks between 47th and 49th Streets and north of 47th Avenue toward Queens Boulevard are lined with brick apartment buildings and low-rise brick commercial buildings. The residential buildings are simple and similar in design and vary in height from 2 to 5 stories.

Low-rise commercial areas are concentrated along 47th Avenue in the center of the study area and along Greenpoint Avenue and Queens Boulevard in the northern part of the study area (see Photograph 15 on Figure 4-9). Several low-scale auto-related businesses exist in the study area and are concentrated primarily along Queens Boulevard (see Photograph 16, Figure 4-9). With the exception of businesses on Queens Boulevard, the retail stores cater to neighborhood needs in size and scale, and are primarily located on the ground floors of 2- to 5-story apartment buildings. The diagonally-running Greenpoint Avenue interrupts the street grid in the northwest section of the study area. A busy pedestrian, traffic, and retail center exists where Greenpoint Avenue, Queens Boulevard, and 47th Street intersect.

Throughout the study area, most of the streets allow on-street parking on one or both sides. These on-street parking spaces in the area are heavily used as there is relatively little off-street parking for the heavily residential neighborhood.

C. THE FUTURE WITHOUT THE PROJECT

In the future without the project, it is assumed that the buildings on the project site would remain in their current condition and no additions or new structures would be built. No changes in the immediately surrounding area or the study area are expected that would affect the urban design character of the community.

D. PROBABLE IMPACTS OF THE PROPOSED PROJECT

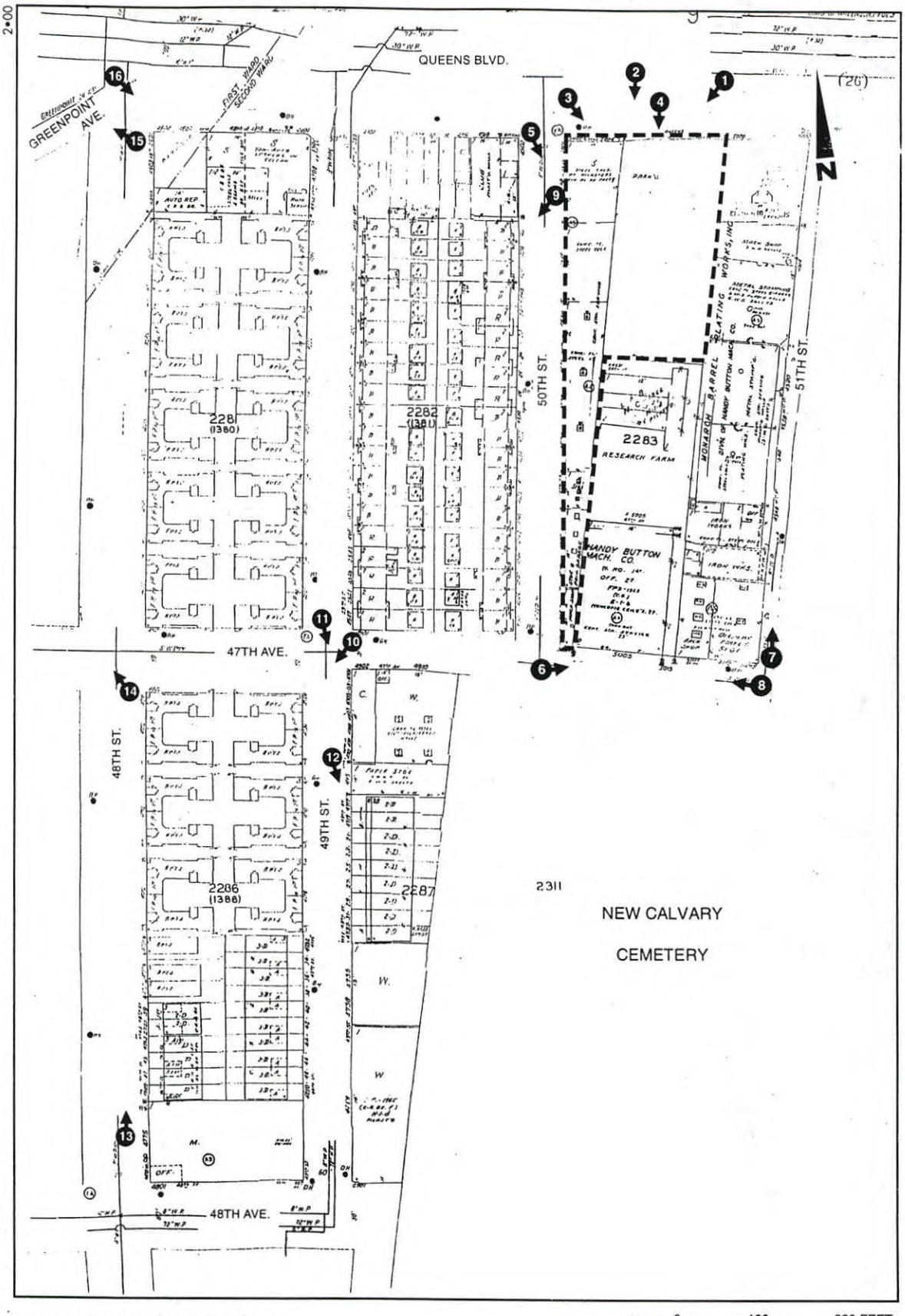
PROJECT SITE

In the future with the project, it is expected that the existing Stevens retail building on the site would be demolished and replaced with a new school building. Although design plans have not been finalized, it is assumed that the school would consist of a C-shaped building that would contain a playground area in a courtyard facing 50th Street. It is assumed that a pick-up and drop-off point would also be located on Queens Boulevard. The project would visually modify the project site by constructing a new school building, increasing activity, and eliminating some existing underutilized land. Landscaping would be planted around the entrances to the school.

The new building would have approximately 250 feet of frontage along 50th Street and approximately 140 feet along Queens Boulevard. The building would contain approximately 138,700 gross square feet (gsf) of area and would be 4 stories tall. The building entrance would be on Queens Boulevard. The entire site would be secured with fencing.

STUDY AREA

The new school building would be a different yet compatible use with the surrounding residential and industrial neighborhood. The building would be visible from surrounding local streets. However, it is expected to visually improve the visual character of the site by replacing a vacant building and surface parking lot with the construction of a new intermediate school. The creation of a new school on the site would not dominate the urban design character of the neighborhood because of the existing larger commercial and light manufacturing buildings along Queens Boulevard. In addition, the activity of the school and the change from strictly private uses of the site to one that serves the surrounding neighborhood would have a positive effect through the creation of an attractive and functional community facility. Therefore, no significant impacts to urban design and visual resources in the area are anticipated as a result of the proposed project. ❖



Project Site Boundary

Photograph Reference Number and View Direction

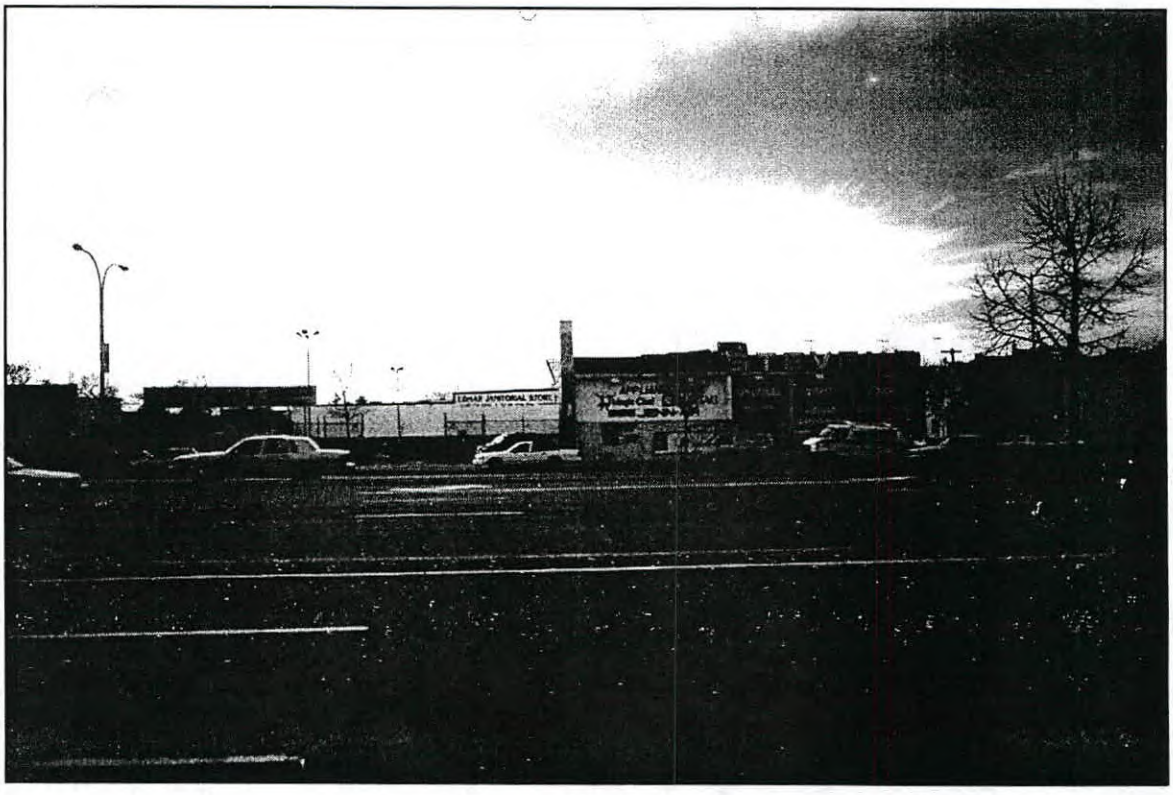
0 100 200 FEET

SCALE

Figure 4-1
Key to Photographs
I.S. 1000 • Sunnyside, Queens

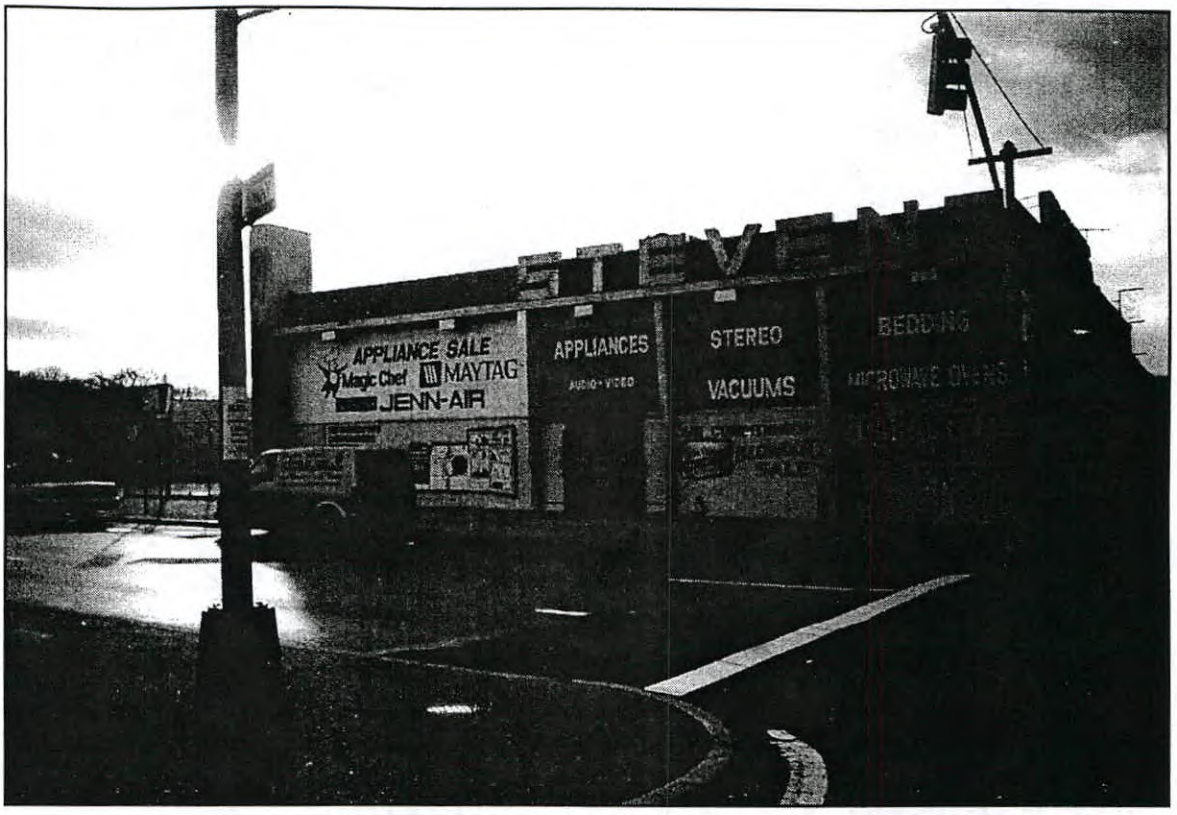


View of site from across Queens Boulevard **1**



North side of site from across Queens Boulevard **2**

Figure 4-2
Views of Project Site
I.S. 1000 • Sunnyside, Queens

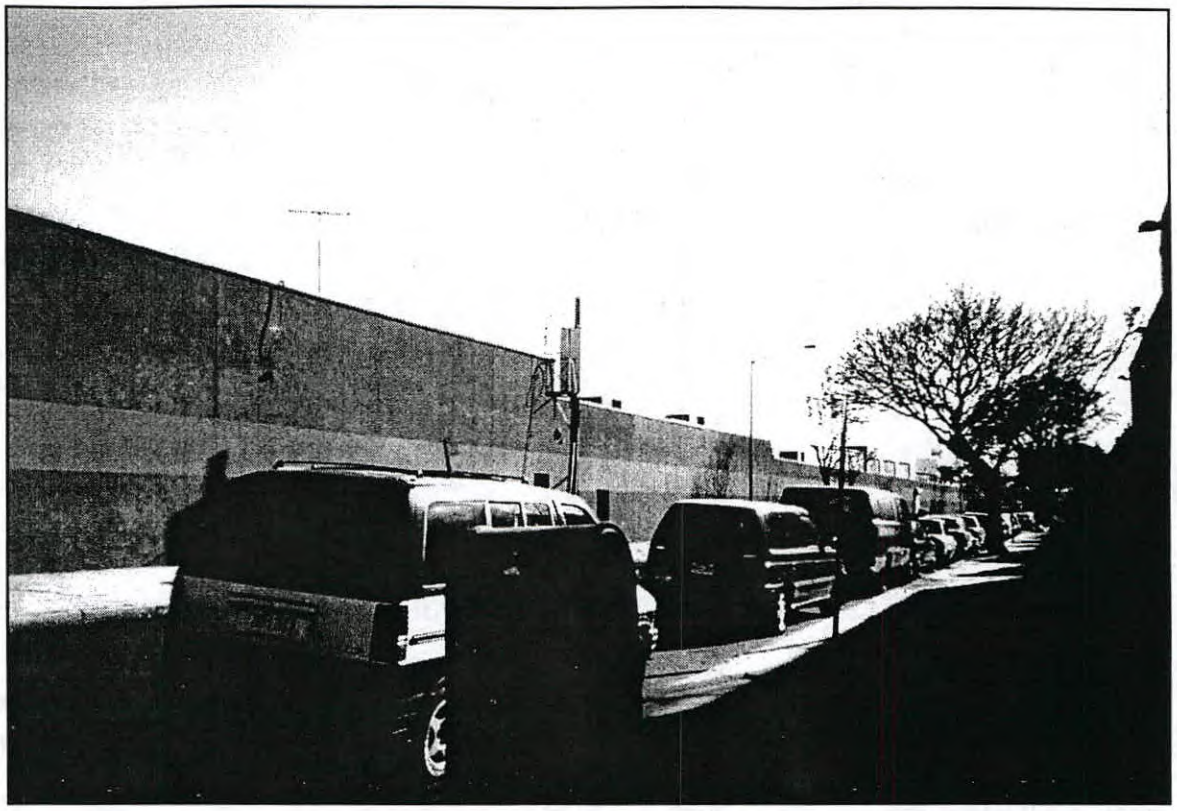


North side of commercial building; parking lot is located to the left **3**

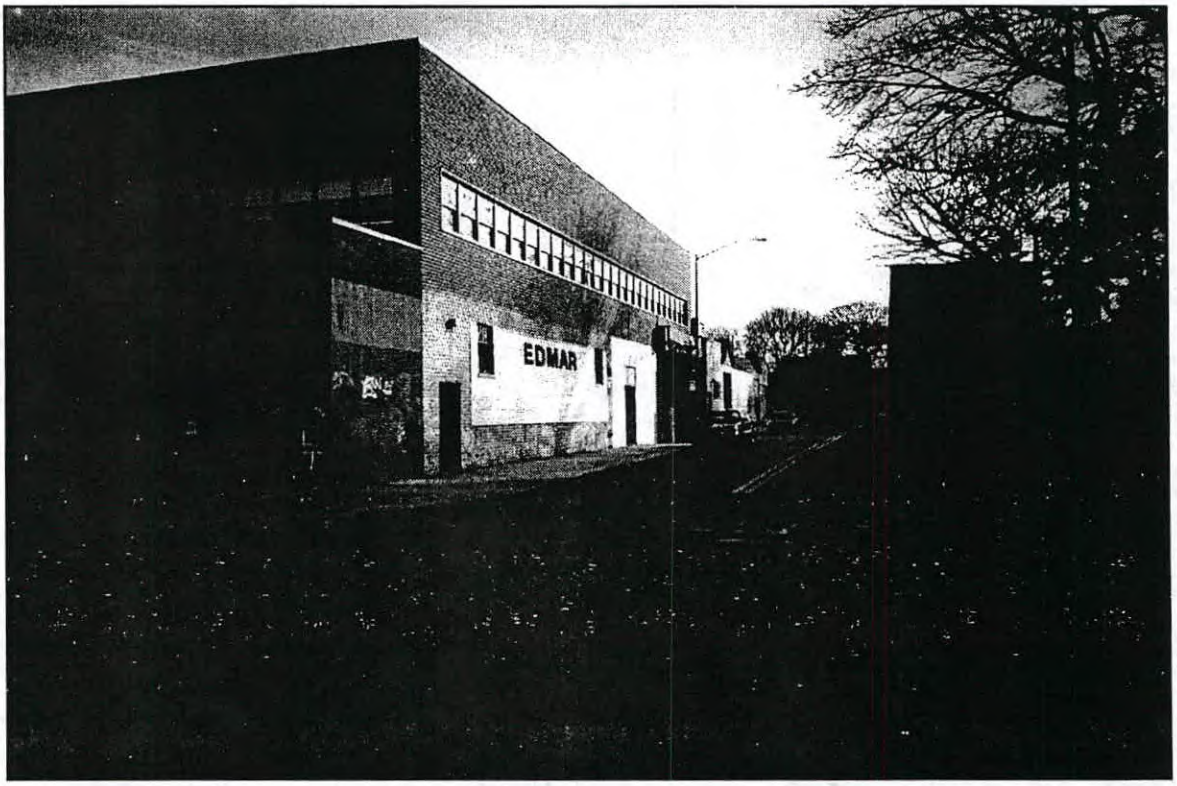


Existing surface parking lot with entrance onto Queens Boulevard **4**

Figure 4-3
Views of Project Site
I.S. 1000 • Sunnyside, Queens

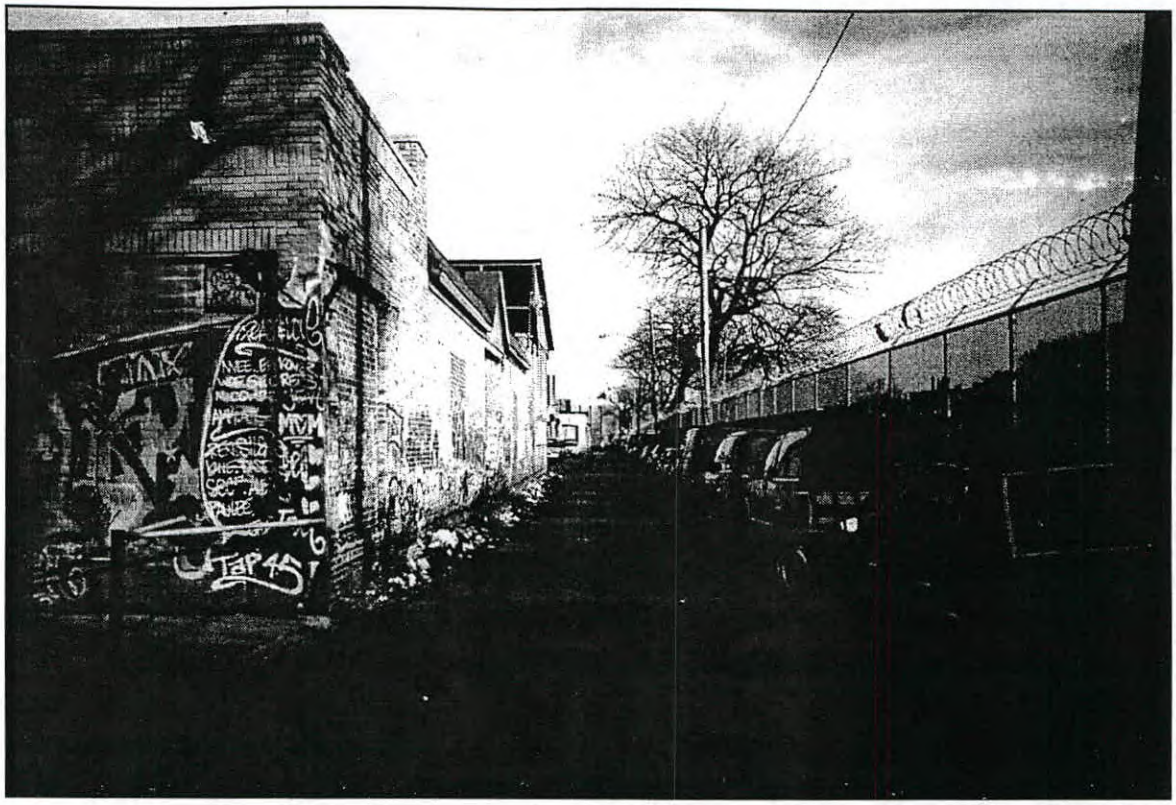


Western side of Stevens building facing 50th Street **5**



Southern side of existing building abutting Edmar building to the east **6**

Figure 4-4
Views of Project Site
I.S. 1000 • Sunnyside, Queens



View north on 51st Street toward Queens Boulevard **7**

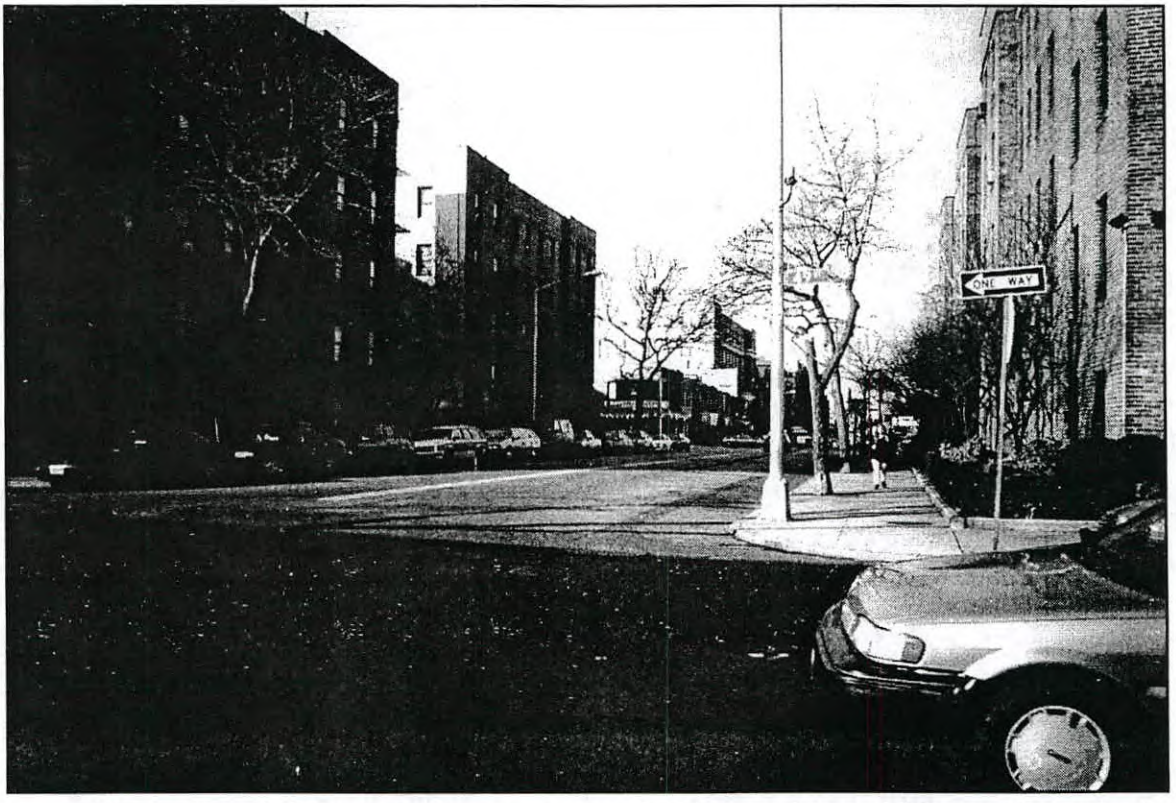


View looking west on 47th Avenue. New Calvary Cemetery is on the left, project site is to the right **8**

Figure 4-5
Views of the Study Area
I.S. 1000 • Sunnyside, Queens

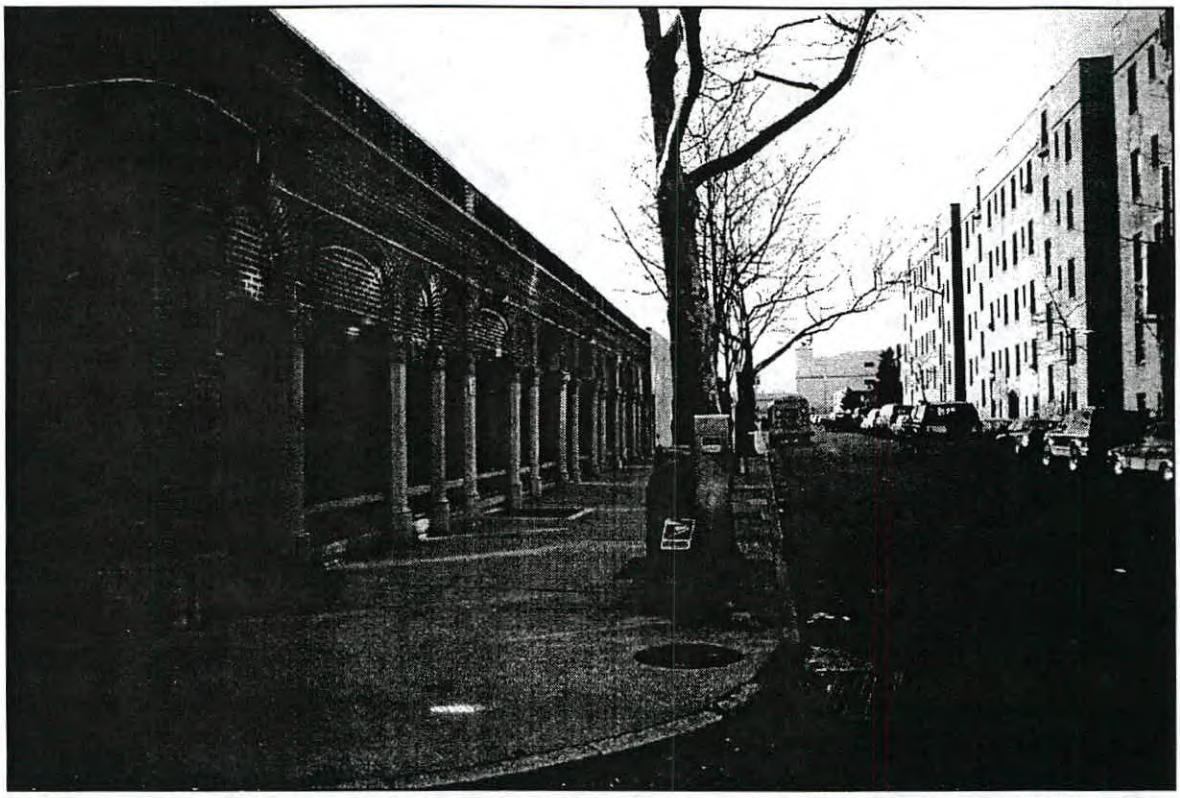


Rowhouses on 50th Avenue facing the western project site boundary **9**



View west on 47th Avenue of 5-story apartment buildings and ground-floor retail beyond **10**

Figure 4-6
Views of the Study Area
I.S. 1000 • Sunnyside, Queens

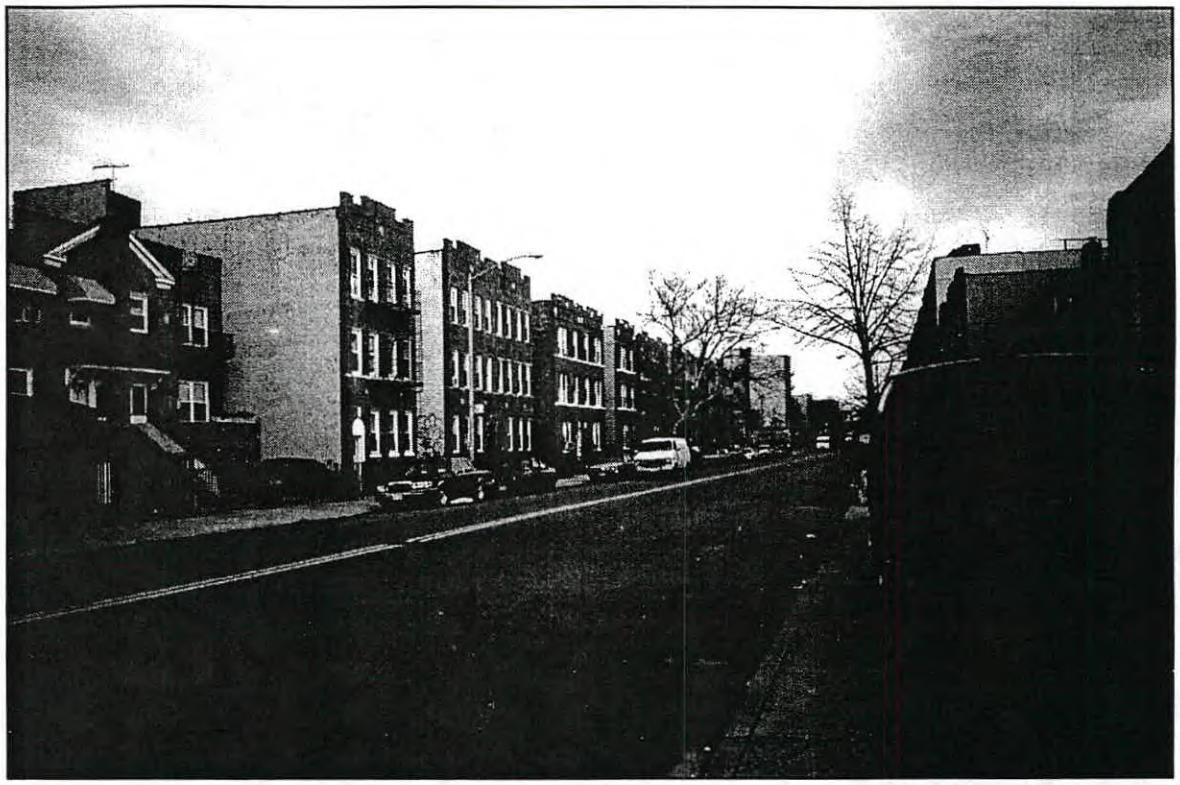


View south on 49th Street from 47th Avenue, showing commerical and industrial buildings on the left **11**



Three-story rowhouses on 49th Street, south of the project site **12**

Figure 4-7
Views of the Study Area
I.S. 1000 • Sunnyside, Queens



Typical apartment buildings in the study area shown looking north on 48th Street **13**

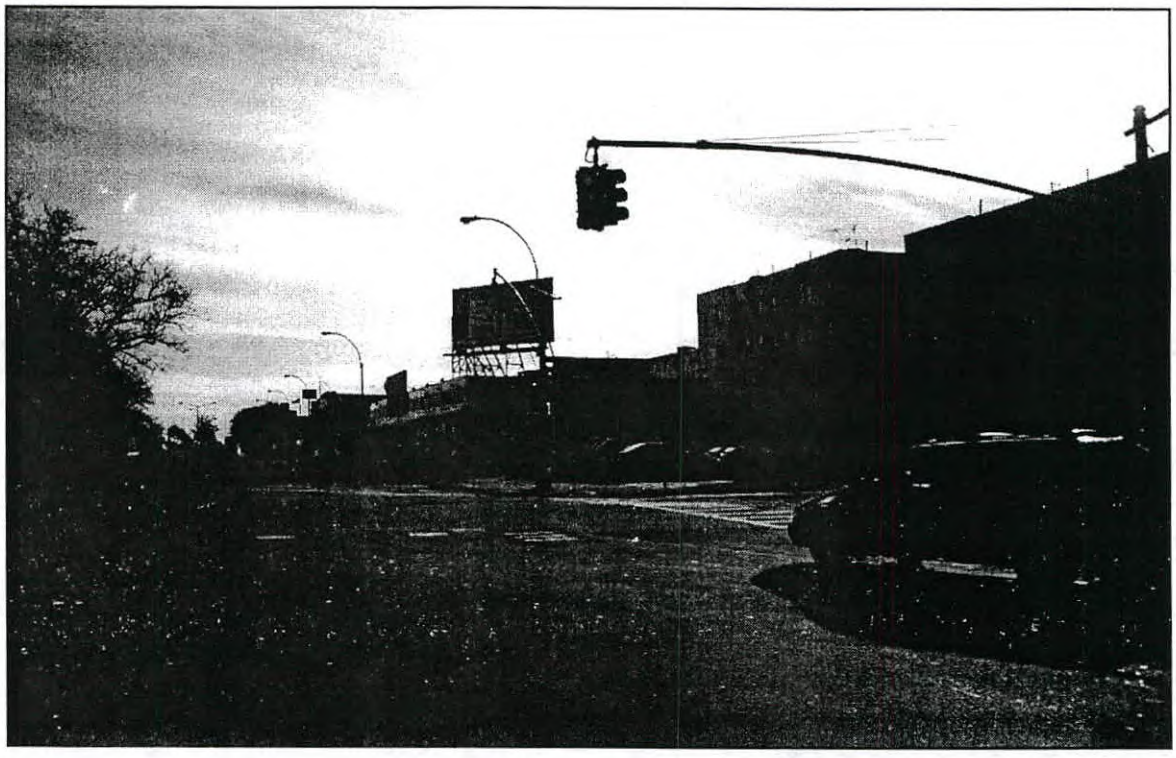


View looking northwest at corner of 48th Street and 47th Avenue showing residential and commercial buildings **14**

Figure 4-8
Views of the Study Area
I.S. 1000 • Sunnyside, Queens



Greenpoint Avenue at 48th Street, a busy neighborhood retail area **15**



Automotive uses are common on Queens Boulevard, such as this one between 48th and 49th Streets **16**

Figure 4-9
Views of the Study Area
I.S. 1000 • Sunnyside, Queens

Appendix B: Phase I Environmental Assessment Statement (ESA)

ASTM E 1527-21 PHASE I ENVIRONMENTAL SITE ASSESSMENT

Commercial Property

50-01 47th Avenue, 45-33 50th Street & 50-02-50-24 Queens Boulevard

Queens, New York

PREPARED FOR

5002 Woodside Development LLC
c/o Arbor Commercial Mortgage LLC
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Uniondale, NY 11553
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Effective Date: May 2, 2023
Report Completion Date: June 6, 2023

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Executive Summary

Vanasse Hangen Brustlin, Inc. (VHB) was retained by 5002 Woodside Development LLC c/o Arbor Commercial Mortgage LLC (the Client) to conduct a Phase I Environmental Site Assessment (Phase I ESA) of the commercial property located at 50-01 47th Avenue, 45-33 50th Street, and 50-02-50-24 Queens Boulevard in Queens, New York, hereinafter referred to as the "Site" or "subject property." The Site is proposed for redevelopment as a mixed-use building with residential, commercial, and community facility spaces. VHB understands that the purpose of this Phase I ESA is to provide environmental due diligence in support of the redevelopment of the Site.

This Phase I ESA has been completed using the American Society of Testing and Materials (ASTM) E 1527-21, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (the Standard) and the All Appropriate Inquiries (AAI) Final Rule at 40 CFR Part 312 as guidance.

The objective of this Phase I ESA is to identify Recognized Environmental Conditions (RECs) in connection with the Site. RECs are defined in the Standard as *"(1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment.*

The Client is the sole User of this Phase I ESA. Pursuant to Section 3.2.94.1 of the Standard, "the User has specific obligations for completing a successful application of this practice as outlined in Section 6" of the Standard.

The Phase I ESA should be read in its entirety to gain a comprehensive understanding of the findings presented in this Executive Summary.

Recognized Environmental Conditions

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527 for the commercial property located at 50-01 47th Avenue, 45-33 50th Street, and 50-02-50-24 Queens Boulevard in Queens, New York, the subject property. Any exceptions to, or deletions from, this practice are described in Section 8.1 of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the subject property except for the following:

REC#1 – On-Site Spill of Petroleum Constituents (Spill #9805297)

The Site was historically operated as a gasoline filling station and automotive service station dating back to the 1960s. In May 1993, an unknown amount of gasoline, methyl-tert-butyl ether (MtBE), and benzene, toluene, ethylbenzene and xylene (BTEX) impacted groundwater at the subject property and was reported to the New York State Department of Environmental Conservation (NYSDEC). The release was assigned Spill #9805297. The spill is currently being remediated using a groundwater extraction and treatment system being managed by the former operator at 50-24 Queens Boulevard, Equilon Enterprises LLC d/b/a Shell Oil Products US. Notes in the Spill case records indicate possible off-site impacts due to a groundwater contaminant plume as well as on-site impacts to groundwater. The open spill case associated with the subject property represents a REC.

REC#2 – On-Site Bulk Petroleum Storage and Closed-in-Place Underground Storage Tank (UST)

Based on a review of environmental databases, as many as 22 tanks were formerly located at the Site prior to their removal in the 2000s. Tank removal documentation was not obtained. Steven's Woodside Inc. was the retailer that occupied the building currently used by P.C. Richard & Son. Reportedly, a 2,000-gallon, #2 fuel oil underground storage tank (UST) was closed in place on October 1, 1999, at this portion of the Site. No spill files were identified in connection to this tank. However, there were no records of tank tightness or integrity testing or environmental data to suggest that the UST was in good condition prior to closure. Therefore, it is unknown whether a release of petroleum occurred from the former UST, which is considered a REC.

REC#3 – Nearby History of Spills and Resource Conservation and Recovery Act (RCRA) Violations

Based on a review of environmental records, two listings located within 500 feet of the Site were identified that have the potential to impact Site environmental conditions as follows:

- The property that now operates as Sana Tech Printing at 45-14 51st Street is listed as the location of a NYSDEC Spill case. Spill case 1002811 was closed August 6, 2010, after a NYC government HazMat team responded to the already vacant location. Due to the lack of information provided regarding this spill, the presumably upgradient spill is considered a concern in relation to the Site. Furthermore, RCRA violations were associated with Beyond Signs Inc., which generated ignitable waste, corrosive waste, lead, mercury, methyl ethyl ketone and spent nonhalogenated solvents as part of its operation.
- The property that now operates as SkyTrac at 50-05 47th Avenue is listed as the location of two NYSDEC Spill cases and RCRA violations. Handy Button Machine Co., which was involved in metal stamping, electroplating, plating, polishing, anodizing, and coloring was listed as a large and small quantity generator of hazardous waste in the past. It is unknown what types of hazardous waste were utilized, but the Environmental Protection Agency (EPA) also included this site in their per- and polyfluoroalkyl substances (PFAS) Enforcement and Compliance History Online (ECHO) list, as the company may have been handling PFAS in the metal coating industry.
- The corner of Queens Boulevard and 51st Street is listed as the location of a closed Spill case (#0305938) associated with the release of motor oil in the roadway. The case was closed September 26, 2003, however spill closure documentation regarding its remediation was unavailable for review during this Phase I ESA.

- The commercial property at 50-11 Queens Boulevard is listed as the location of closed Spill case (#1602145) that is associated with the release of an unknown amount of gasoline that affected soil and groundwater on the property. The case was closed on December 10, 2020, however spill closure documentation regarding its remediation was unavailable for review during this Phase I ESA.
- A Roy Rogers Restaurant formerly operated at an 50-01 Queens Boulevard. This address has a closed Spill case (#9516592) associated with the release of an unknown amount of gasoline that affected soil on the property. The case was closed September 12, 2008, however spill closure documentation regarding its remediation was unavailable for review during this Phase I ESA.

Due to the potential to impact environmental conditions at the Site, the nearby environmental listings summarized above were deemed a REC.

Vapor Encroachment Conditions (VECs)

A VEC is the presence or likely presence of Chemical(s) of Concern (COC) vapors in the subsurface of the Site caused by the off gassing of vapors from contaminated soil or groundwater either on or near the subject property. VHB has identified that a VEC exists for the Site. Based on the findings noted as RECs #1, #2 and #3, there is the potential that volatile COCs could impact environmental conditions at the Site.

Business Environmental Risks

The following business environmental risks represent potential risks which can have a material environmental or environmentally driven impact on the business associated with the current or planned use of the Site, but do not constitute RECs or *de minimis* conditions as defined in the Standard. However, the Environmental Professional views these as potential risks that should be considered when making decisions regarding the Site.

Historical Fill

Based upon the soil classification and historical demolition of buildings on a portion of the Site, urban historical fill may be present beneath the subject property. Urban historical fill is commonly found throughout the New York City metropolitan area and can contain contaminants such as hazardous building materials (e.g., asbestos-containing materials), heavy metals and semi-volatile organic compounds. If required to be removed from the subject property, urban fill should be appropriately characterized prior to following appropriate transportation and disposal/recycling procedures.

Data Gaps

VHB identified six data gaps at the Site during this Phase I ESA. The Environmental Professional's assessment as to whether these data gaps are considered significant is outlined below.

Data Gap	Assessment
VHB was provided historical records for the Site documenting development since 1914. Prior to 1914, the development history of the Site is unknown.	VHB believes that the recent Site history is likely representative of earlier development at the Site, and the data failure encountered does not constitute a significant data gap.

There were 71 sites listed within a 500-foot radius of the Site according to the EDR Report, all of which could not be reasonably reviewed during this Phase I ESA.	VHB believes that the selected listings reviewed and discussed located within a 500-foot radius of the Site include those that have the highest potential to represent a REC.
A Title Report was not provided for VHB review as part of this Phase I ESA.	VHB believes that the publicly available records of Site ownership reviewed are sufficiently up to date.
VHB did not receive a response from NYC Department of Health and Mental Hygiene to the Freedom of Information Request submitted to the agency.	VHB will alert the User and amend this report if a response is provided that changes the Phase I ESA findings after its issuance.
VHB was not provided access into the shipping container that housed remediation equipment near the Teachers Federal Credit Union building.	VHB has already concluded that the ongoing remediation and open Spill case represents a REC (REC #3) to the site, so this does not represent a significant data gap.
VHB was provided a response to the FOIL request to NYSDEC that stated some documents were being withheld due to certain provisions of the Public Officers Law.	VHB has already deemed the open Spill case as a REC (REC#3) so any additional documentation would not necessarily amend the findings of this report, however, more information may be useful in determining the extent of contamination on- or off-site.

1

Introduction

1.1 Purpose and Scope of Work

Vanasse Hangen Brustlin, Inc. (VHB) was retained by 5002 Woodside Development LLC c/o Arbor Commercial Mortgage LLC (the Client) to conduct a Phase I Environmental Site Assessment (Phase I ESA) of the commercial property located at 50-01 47th Avenue, 45-33 50th Street, and 50-02-50-24 Queens Boulevard, Queens, New York, hereinafter referred to as the "Site" or "subject property" as shown on **Figure 1**. It is VHB's understanding from the Client that the purpose of this Phase I ESA is to provide environmental due diligence in support of the Site's redevelopment as residential, commercial, and community facility space.

This Phase I ESA has been completed using the American Society of Testing and Materials (ASTM) E 1527-21, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (the Standard) and the All Appropriate Inquiries (AAI) Final Rule at 40 CFR Part 312 as guidance.

The Client is the User of this report as defined by the Standard. Pursuant to Section 3.2.94.1 of the Standard, "the User has specific obligations for completing a successful application of this practice as outlined in Section 6" of the Standard. This Phase I ESA is subject to the terms of the Agreement between VHB and the Client dated February 23, 2023 (the Agreement). Other than those limitations expressly provided in **Appendix A** and/or specified in Section 8, completion of the Phase I ESA was not subject to additional assumptions, limitations, or exceptions to the Standard.

The objective of this Phase I ESA is to identify, to the extent feasible pursuant to the process described in the Standard, Recognized Environmental Conditions (RECs) in connection with the Site. The Phase I ESA was completed following the Standard as guidance. RECs are defined in the Standard as "(1) *the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment.*

A Controlled REC is a REC "affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum allowed to remain in place subject to implementation of required controls (for example, activity and use limitations or other property use limitations)."

Although not considered RECs, the Phase I ESA may identify other concerns or considerations, referred to as Historical RECs, *de minimis* conditions, and/or business environmental risks as defined below.

Historical RECs are *"a previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities, without subjecting the property to any controls (for example, activity and use limitations or other property use limitations)."*

A *de minimis* condition is *"a condition related to a release that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of the appropriate governmental agencies."*

A business environmental risk is *"a risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of commercial real estate, not necessarily related to those environmental issues required to be investigated in [the Phase I ESA] practice."*

Per the agreement between VHB and the Client, the scope of services to complete this Phase I ESA consisted of the following main components:

- an inquiry by an "Environmental Professional" as defined by the Standard;
- interviews with past and present owners, operators, and occupants, or abutters if the subject property is abandoned, in an effort to gather any specialized knowledge or experience with regard to the subject property;
- a review of historical sources, including, but not limited to, chain of title documents, aerial photographs, building department records, and land use records to determine previous uses and occupancy since first development;
- searches for recorded environmental cleanup liens against the facility/subject property that are filed under federal, state or local law;
- a review of federal, state, or local government records; and
- a visual inspection of the subject property and surrounding properties.

The scope of the Phase I ESA did not include any environmental testing or sampling of soil, water, air, or soil vapor.

1.2 User Reliance

This Phase I ESA was completed solely for the Client and the Users, subject to the terms, conditions and limitations referenced herein and as issued in connection with the Agreement and the provisions thereof. Any use or reliance upon information provided in this report without the specific written authorization of the Client and VHB shall be at such party's sole risk.

2

Site Description

2.1 Site Location, Ownership, and Description

The approximate center of the Site is located at 40˚44'31.45'' north latitude and 73˚54'52.87'' west longitude. The Site comprises Queens Block 2283, Lots 1, 12, 22, 36, and 43 and is approximately 70,092 square feet in area. The current owners of the Site are 5002 Woodside Development LLC and Teachers Federal Credit Union according to New York City's Zoning & Land Use Map (ZoLa). The property is an irregular shape and used as commercial retail and office space, as well as parking.

A Site Location and Local Area Map showing the location of the Site is provided as **Figure 1**, a Site Plan depicting the Site and relevant Site features is included as **Figure 2**, and a Site Vicinity Map showing the vicinity of the Site and nearby sensitive receptors is provided as **Figure 3.**

2.2 Site and Vicinity General Characteristics

The Site is located in an urban, developed area in Queens, New York and can be accessed via 47th Avenue, 50th Street, Queens Boulevard, and 51st Street. The topography of the Site is generally flat at an average elevation of approximately 94 feet above mean sea level. The closest named surface water body is Newtown Creek located approximately 1.2 miles to the southwest of the Site. Additional information on the physical setting of the Site and nearby area is presented in **Section 4.1**.

2.3 Description of Structures, Roads, and Other Site Improvements

Two structures are located on Site. A three-story, slab-on-grade commercial building used by the Teachers Federal Credit Union was built in 2010. According to ZoLa, the building has a parking area and retail offices at grade, and private offices and accessory space on the second and third floors. The other structure is a one-story building with partial basement constructed between 1929 and 1931 according to ZoLa, currently used by P.C. Richard & Son as a retail store and warehouse for their products. Heat is provided via natural gas-fired boilers at both buildings. Water and sewer utilities are connected to municipal/Department of Environmental Protection services at both buildings.

2.4 Current Uses of Adjoining and Surrounding Properties

The table below presents the properties and features surrounding the Site:

Direction	Adjoining	Surrounding
North	› Boston Market restaurant at 50-01 Queens Boulevard › Residential apartment building at 50-17 Queens Boulevard › Korean Presbyterian Church of Southern New York at 51-05 Queens Boulevard	› Commercial and office buildings › Vacant land › Mixed Residential and commercial buildings
East	› Calvary Cemetery at 49th Street › Sana Tech Printing Corporation at 45-14 51st Street › So Accurate Refining Services (precious metals refiner) at 45-40 51st Street › SkyTrac Access Group (construction equipment supplier) at 50-05-50-15 47th Avenue	› Residential properties › Industrial and manufacturing buildings
South	› Calvary Cemetery at 49th Street	› Residential properties
West	› Knights of Columbus (non-profit organization) at 49-18 Queens Boulevard › 19 two-family dwellings at 45-48-45-12 50th Street › Multi-family apartment building at 45-50 50th Street	› Commercial and office buildings

3

User Provided Information

To qualify for one of the Landowner Liability Protections offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001, the User(s) and/or Grantee(s) or a party on behalf of the User(s) and/or Grantee(s) must collect the following information, if applicable, and should make the information available to the Environmental Professional upon request:

- Environmental cleanup liens that are filed or recorded against the subject property;
- Activity and land use limitations that are in place on the subject property or that have been filed or recorded in a registry;
- Specialized knowledge or experience of the person seeking to qualify for the Limited Liability Protections;
- Relationship of the purchase price to the fair market value of the subject property if it were not contaminated;
- Commonly known or reasonably ascertainable information about the subject property;
- The degree of obviousness of the presence or likely presence of contamination at the subject property and the ability to detect the contamination by appropriate investigation.

VHB provided the User Questionnaire to Sam Nolan of AMAC Holdings, which specifically requests information related to each of the six items listed above. Information obtained from User Questionnaire responses have been incorporated throughout this report. The completed questionnaire has been included as **Appendix H** of this report.

4

Records Review

VHB conducted a review of environmental databases and municipal files to identify potential environmental concerns at the Site. This review also included properties in the vicinity that have had a release or pose a threat of release of petroleum and/or hazardous substances that may potentially impact the quality of environmental media at the Site. VHB reviewed Federal and state environmental databases supplied by Environmental Data Resources, Inc. (EDR). VHB also conducted a targeted review of files available from the New York State Department of Environmental Conservation (NYSDEC). The results of the records review are summarized below.

4.1 Physical Setting

VHB reviewed several sources of information pertaining to the Site's physical setting to better understand natural characteristics of the Site and surrounding area as summarized below.

4.1.1 Topography

Topography of the Site and surrounding area is generally flat with an average elevation of approximately 94 feet above mean sea level.

4.1.2 Soils/Surficial Geology

According to the EDR report the soils at the Site are mapped by the U.S. Department of Agriculture's Soil Conservation Service as urban land, which consists of cemented material and gravelly sandy loam. This soil type is not classified with a hydrologic group, so typical infiltration rates are unknown.

4.1.3 Bedrock Geology

According to the Bedrock Geologic Map of New York (Fisher et. al, 1970), the bedrock at the Site is mapped as the Monmouth Group, Matawan Group, and Magothy Formation, which consists primarily of silty clay, glauconitic sandy clay, sand, and gravel.

4.1.4 Groundwater

Groundwater flow is best determined using site-specific groundwater elevation data and may be affected by surface topography, hydrology, and characteristics of the soil and nearby wells. No site-specific groundwater flow data was provided for the Site. In the absence of site-specific data, other sources of information are typically used to determine flow direction including surface topographic information and hydrogeologic information collected from nearby properties. Based on a review of available information, regional groundwater flow is presumed to be generally to the west-northwest.

According to the EDR report, no public drinking water wells are located in the vicinity of the Site.

4.1.5 Wetlands

According to the EDR report, there are no National Wetlands Inventory or NYSDEC Freshwater Wetlands located on the Site. VHB did not complete a formal wetlands survey at the Site.

4.1.6 Surface Water

The closest named surface water body is Newtown Creek located approximately 1.2 miles to the southwest of the Site.

4.1.7 Flood Plains

According to the Flood Insurance Rate Map (FIRM) for Queens, New York dated September 5, 2007 (Map Number 3604970206F), the Site is located within Zone X, defined as an area of minimal flood hazard. The National Flood Hazard Layer FIRMette is included as **Figure 4.**

4.2 Prior Environmental Investigations

During this Phase I ESA, VHB was not provided reports pertaining to prior environmental investigations at the Site.

4.3 Standard Environmental Record Sources

EDR provided a report dated May 2, 2023, summarizing available and reasonably ascertainable information from standard environmental record sources at the minimum distances required in Section 8.2.2 of the Standard. A copy of the EDR report is provided as **Appendix C**.

Sites with minimal address information that may be located in proximity to the Site are listed separately in the database report as "Orphan sites." A review of listed Orphan sites was conducted to estimate their location, distance, and direction from the Site. Based on information contained in the EDR report and information derived from local maps, no orphan sites were identified on the Site or abutting properties.

A summary of the EDR findings is included in the table below and following sections.

Record Source	Search Radii	Subject Property Listed	Number Sites Within Search Distance
Federal National Priorities List (NPL) Sites	1.0 mile	No	0
Federal Delisted NPL Sites	0.5 miles	No	0
Superfund Enterprise Management System (SEMS) Sites	0.5 miles	No	0
Federal SEMS No Further Action Planned Sites	0.5 miles	No	0
Federal Resource Conservation and Recovery Act (RCRA) Corrective Action (CORRACTS) Sites	1.0 mile	No	1
Federal RCRA Non-CORRACTS Treatment, Storage and Disposal Sites	0.5 miles	No	1
Federal RCRA Generators	Subject Property & Abutting	Yes	2
Federal Engineering/Institutional Control Sites	Subject Property	No	0
Federal Emergency Release Notification System	Subject Property	No	0
State and Tribal Equivalent SEMS Sites (i.e. State Hazardous Waste Sites, Release Sites)	1.0 mile	No	5
State and Tribal Landfill or Solid Waste Disposal Sites	0.5 miles	No	0
State and Tribal Leaking Storage Tank Sites	0.5 miles	No	58
State and Tribal Registered Storage Tank Sites	Subject Property & Abutting	Yes	3
State and Tribal Engineering/Institutional Control Sites (i.e. Activity and Use Limitations)	Subject Property	No	0
State and Tribal Voluntary Cleanup Sites	0.5 miles	No	0
State and Tribal Brownfield Sites	0.5 miles	No	1

The EDR report provides search results of other federal, state, and local databases which are not listed as *Standard Environmental Resources* in the Standard. These databases include, but are not limited to, Brownfields, Facility Indexing System (FINDS); Polychlorinated Biphenyl (PCB) Activity Database (PADS); Toxic Chemical Release Inventory System (TRIS); Toxic Substances Control Act (TSCA); Federal Insecticide, Fungicide & Rodenticide Act (FIFRA) and TSCA Tracking System; Section Seven Tracking System; Tier 2 data listing; dry cleaners; and manufactured gas plants. Tribal Records were also searched for this report. The Subject Property was listed in these additional databases. The full EDR report is included in **Appendix C**.

4.3.1 Summary of Site Records

According to the EDR report the Site was listed in standard environmental record sources under the following property names/addresses:

STEVENS WOODSIDE INC / 50-02 QUEENS BLVD

Steven's Woodside Inc. was the retailer that occupied the building currently used by P.C. Richard & Son. It is listed as having a 2,000-gallon, #2 fuel oil underground storage tank (UST) that was closed in place on October 1, 1999. There were no records of tank tightness or integrity testing or environmental data to suggest that the UST was in good condition prior to closure. Therefore, it is unknown whether a release of petroleum occurred from the UST, which is considered a REC as described in **Section 7**.

NICK OMMIKIANS SERV STA INC / LIMA SHELL SERVICE STATION / MOTIVA ENTERPRISES, LLC # 138726 / EQUILON ENTERPRISES LLC DBA SHELL OIL PRODUCTS US / SHELL STATION / 50 24 QUEENS BLV

Nick Ommikian's Service Station and Lima Shell Service Station are listed on the historic auto database as gasoline service stations at the Site from 1987 to 1990, and 1969 to 2014, respectively. Nicks Service Station Inc. is also listed as a RCRA Non-Generator and is in the Integrated Compliance Information System for Air and FINDS databases. The address is listed in the UST and aboveground storage tank (AST) databases under Motiva Enterprises, LLC. NYSDEC records indicate that 22 tanks were closed – removed from the Site and one AST was converted to a non-regulated use. One 1,000-gallon, gasoline UST and three 200-gallon, lube oil USTs were closed on July 18, 2008. Three 4,000-gallon, gasoline USTs were removed on July 20, 2006. Also closed on July 20, 2006, was one 500-gallon and twelve 550-gallon, gasoline USTs and one 240-gallon, waste oil/used oil AST. On February 10, 2005, a 275-gallon, #2 fuel oil AST was removed. The AST that was converted to a non-regulated use was not observed during the Site Reconnaissance visit and is assumed to have been removed from the property.

Equilon Enterprises LLC d/b/a Shell Oil Products US is listed as a small quantity generator of hazardous ignitable waste, corrosive waste, reactive waste, lead, benzene, tetrachloroethylene, and trichlorethylene. The Shell Station that formerly operated at this address is listed as having a leaking tank and associated spill cases. A tank test failure lead to creation of Spill #9302027, where an unknown amount of gasoline, methyl-tert-butyl ether (MTBE), and BTEX spilled and impacted groundwater on May 13, 1993. This spill was closed on October 24, 2004 with a note from DEC that the spill was to be investigated and remediated under Spill #9805297. Spill #9805297 is listed as having an unknown cause and gasoline impacts to soil as well as BTEX and MTBE spilled. This spill case is still open and appears to be undergoing remediation via a dual phase extraction system and groundwater monitoring wells were observed on Site. The latest NYSDEC spill note suggests that plume delineation and off-site monitoring is ongoing as of January 2023. The User Questionnaire response suggests the cleanup is complete, however, no information was identified that suggests the case is close. Therefore, this open spill case represents a release of petroleum constituents at the Site that constitutes a REC as described in **Section 7**.

4.3.2 Summary of Nearby Environmental Listings of Interest

Based on preliminary information from the EDR report, certain nearby environmental listings were deemed to require additional review to evaluate their potential to impact environmental conditions at the Site. Available records were reviewed electronically via NYSDEC Petroleum Bulk Storage and Spill databases and/or other state and federal databases. Information obtained during the additional reviews is summarized below.

There were 71 listings within a 500-foot radius of the Site. Due to the volume of listings and information provided, not all of these listings were considered reasonably reviewable. This is considered a data gap as discussed in Section 8.1. The nine orphan sites listed were either determined to be located beyond 500-feet of the Site or could

not be reasonably located based on the limited Site Name and Address provided by EDR. Nearby listings reviewed are summarized below.

BEYOND SIGNS INC / 45-14 51ST ST (Immediately Adjacent to the South of the Site)

Beyond Signs Inc. formerly operated at an address located upgradient from the Site with respect to presumed groundwater flow. The listing includes registration as a small quantity generator of ignitable waste, corrosive waste, lead, mercury, methyl ethyl ketone and spent nonhalogenated solvents. Beyond Signs was historically also a large quantity generator of hazardous wastes in its operations as sign manufacturer, metal coating, engraving, and allied services to manufacturers. New York State has found violations in connection with this listing and the site has been subject to enforcement actions after noncompliance. The EPA database lists this site as "active," however, the business storefront appeared to have been replaced by Sana Tech Printing as of the May 2023 Site Reconnaissance. This address also has a closed Spill case (#1002811) associated with the release of approximately ten gallons of ferric chloride that affected soil and groundwater. The case was closed August 6, 2010, after a NYC government HazMat team responded to the already vacant location. Based on the record of RCRA violations identified in connection with this property and location upgradient from the Site, it is possible that a release of hazardous substances associated with Beyond Signs Inc. has impacted environmental conditions at the Site, and therefore constitutes a REC as detailed in **Section 7.1**.

HANDY BUTTON MACHINE CO / 50-05 47TH AVENUE (33 Feet from the Site)

Handy Button Machine Co. formerly operated at an address located upgradient of the Site with respect to presumed groundwater flow. This address has a closed Spill case (#9100998) associated with the release of three gallons of #2 fuel oil that spilled due to a tank overfill. The case was closed the same day, April 25, 1991, and based on the proximity to the Site and volume released, the release of petroleum associated with this environmental listing does not constitute a REC.

The Handy Button Machine Co. is also associated with a 5,000-gallon #2 fuel oil UST that was removed June 1, 1995, and another closed Spill Case (#9207739) associated with the release of #2 fuel oil. The case was closed the same day, October 5, 1992, and based on the proximity to the Site, the release of petroleum associated with this environmental listing does not constitute a REC.

This facility, which was involved in metal stamping, electroplating, plating, polishing, anodizing, and coloring was listed as a large and small quantity generator of hazardous waste in the past. Several violations were noted in the database report, which also have corresponding compliance dates. EPA also included this site in their PFAS ECHO list, as the company may have been handling PFAS in the metal coating industry. The EPA database does not list this site as "active," and the business storefront appeared to have been replaced by SkyTrac as of the May 2023 Site Reconnaissance. Based on the record of RCRA violations identified in connection with this property and location upgradient from the Site, it is possible that a release of hazardous substances associated with Handy Button Machine Co. has impacted environmental conditions at the Site, and therefore constitutes a REC as detailed in **Section 7.1**.

43-30 51ST STREET QUEENS (~340 Feet from the Site)

43-30 51st Street is located upgradient from the Site with respect to presumed groundwater flow. According to EDR this address is located 79 feet from the Site, however, based on a review of ZoLa and Google Maps, VHB

believes this address is approximately 340 feet from the Site. This address has a closed Spill case (#8700575) associated with abandoned drums on the property. The case was closed April 21, 1987, and based on the proximity to the Site, the release of petroleum associated with this environmental listing does not constitute a REC.

CON EDISON / 45-32 50 ST (88 Feet from the Site)

A Con Edison service box is located downgradient from the Site with respect to presumed groundwater flow. This address was listed in the database in association with a manifest for the transportation of hazardous waste in 2014, however, there are no RCRA violations or spill cases associated with this environmental listing. Therefore, it does not constitute a REC.

QUEENS BLVD & 51ST ST (92 Feet from the Site)

Queens Boulevard and 51st Street is located upgradient from the Site with respect to presumed groundwater flow. This address has a closed Spill case (#0305938) associated the release of motor oil on the property. The case was closed September 26, 2003, however based on the proximity to the Site and lack of Spill closure documentation, the release of petroleum associated with this environmental listing constitutes a REC as detailed in **Section 7.1**..

CON EDISON / 49-14 QUEENS BLVD (125 Feet from the Site)

A Con Edison service box is located downgradient from the Site with respect to presumed groundwater flow. This address was listed in the database in association with a manifest for the transportation of hazardous waste in 2014, however there are no RCRA violations or spill cases associated with this environmental listing. Therefore, it does not constitute a REC.

LOT 47, TAXBLOCK 1320 / 51-25 QUEENS BOULEVARD (158 Feet from the Site)

Lot 47, Tax Block 1320 is located upgradient from the Site with respect to presumed groundwater flow. This address was assigned an E-Designation (E-163) as part of a City Environmental Quality Review action in 2006. The E-Designation was placed because the site was within 400 feet of an auto repair/service shop, however there are no RCRA violations or spill cases associated with this environmental listing. Therefore, it does not constitute a REC.

CON EDISON / 49-10 QUEENS BLVD (160 Feet from the Site)

A Con Edison service box is located downgradient from the Site with respect to presumed groundwater flow. This address was listed in the database in association with a manifest for the transportation of hazardous waste in 2014, however there are no RCRA violations or spill cases associated with this environmental listing, and thus it does not constitute a REC.

CON EDISON / 51-11 QUEENS BLVD (191 Feet from the Site)

A Con Edison service box is located upgradient from the Site with respect to presumed groundwater flow. This address was listed in the database in association with a manifest for the transportation of hazardous waste in 2014, however there are no RCRA violations or spill cases associated with this environmental listing. Therefore, it does not constitute a REC.

SUNNYSIDE PARKING & SV STN / 50-03 QUEENS BLVD (218 Feet from the Site)

Sunnyside Parking & Service Station is located upgradient from the Site with respect to presumed groundwater flow and is listed on the historical auto database as a gasoline service station at 50-03 Queens Boulevard from 1969 to 1970. There are no RCRA violations or spill cases associated with this environmental listing. Therefore, it does not constitute a REC.

COMMERCIAL / 50-11 QUEENS BLVD (218 Feet from the Site)

The commercial property at 50-11 Queens Boulevard is located upgradient from the Site with respect to presumed groundwater flow. This address has a closed Spill case (#1602145) associated with the release of an unknown amount of gasoline that affected soil and groundwater on the property. The case was closed on December 10, 2020, however based on the proximity to the Site and lack of Spill closure documentation, the release of petroleum associated with this environmental listing constitutes a REC as detailed in **Section 7.1**.

ROY ROGERS REST / 50-01 QUEENS BLVD (220 Feet from the Site)

A Roy Rogers Restaurant formerly operated at an address located upgradient from the Site with respect to presumed groundwater flow. This address has a closed Spill case (#9516592) associated with the release of an unknown amount of gasoline that affected soil on the property. The case was closed September 12, 2008, however based on the proximity to the Site and lack of Spill closure documentation, the release of petroleum associated with this environmental listing constitutes a REC as detailed in **Section 7.1**.

4.4 Local Records Review

VHB personnel submitted Freedom of Information Law requests to various municipal departments in the City and State of New York on May 3, 2023. The following is a summary of the files reviewed by department.

Office	Types of Information Available	Summary of Available Information
NYC Department of Finance	Tax assessment for 2022-2023 and account summary	Tax balance history available along with property owner and land information
NYC Department of Health and Mental Hygiene	Lead Poisoning Prevention Program system records, Environmental Records	Response pending as of report issuance.
Fire Department of New York (FDNY)	Fuel tank information and fire code violations	Record of one 275-gallon fuel oil tank, three fire code violations, and tank removal affidavit at 50-24 Queens Blvd; record of three fire code violations at 45-33 50th Street; record of five fire code violations at 50-02 Queens Blvd.
NYSDEC	UST information, Spill records, air emission permits	List of Petroleum Bulk Storage (PBS) registrations within zip code 11377; PBS Program Facility Information Report, 1992 and 1999 PBS applications for PBS#2-234656.

Office	Types of Information Available	Summary of Available Information
NYC Department of Buildings	Permits, boiler records, elevator records violations, Certificates of Occupancy	Details on the active, commercial low-pressure boiler located on the 3rd Floor of the Teachers Federal Credit Union building; certificate of occupancy for a radio & television repair shop and showroom of home appliances (currently 50-02 Queens Blvd); certificate of occupancy for a one-story garage near the corner of Queens Boulevard and Fitting Street (now 50th Street); certificate of occupancy for a gasoline station, motor vehicle repair shop, auto laundry, lubrication, office & accessory sales space at 50-24 Queens Blvd; certificate of occupancy for a three-story office (bank) building with parking garage; several other certificates of occupancy that were either illegible or appeared to be associated with another, unrelated property; mechanical data query for an active passenger elevator at 50-23 Queens Boulevard; active construction violation record ("Due to Fire") for 50-02 Queens Boulevard and active violation record for failure to file annual boiler and year inspection report for 50-24 Queens Boulevard.
NYC Department of Environmental Protection	Permit violations	No records located.

4.4.1 Land Records

A search of the land records at the NYC Office of the City Register was conducted. VHB staff are not title search professionals; a formal land records review should be conducted by a title insurance company or qualified title search professional. The tables below provide a summary of ownership history for the Site that was generated based on VHB's limited review of land records.

Block: 2283, Lot: 1

Grantor	Grantee	Book/Pg.	Date
Mellin Henry F	Stephen Sipos	391/244	3/26/1970
Sipos, Charlotte	Sipos Realty LLC	4761/2445	10/2/1997
Sipos, Stephen	Sipos, Charlotte	4762/741	10/2/1997
Sipos Realty LLC	5002 Woodside Development LLC	2019000204586	6/19/2019

Block: 2283, Lot: 12

Grantor	Grantee	Book/Pg.	Date
Alenobel Inc	Lenobel Company	279/322	9/20/1968

Grantor	Grantee	Book/Pg.	Date
Lenobel Company	5002 Woodside Development LLC	2019000204703	6/28/2019

Block: 2283, Lot: 22

Grantor	Grantee	Book/Pg.	Date
Sipos, Charlotte	Sipos Realty LLC	4761/2445	10/2/1997
Sipos, Stephen	Sipos, Charlotte	4762/741	10/2/1997
Sipos Realty LLC	5002 Woodside Development LLC	2019000204586	6/19/2019

Block: 2283, Lot: 36

Grantor	Grantee	Book/Pg.	Date
Sipos, Charlotte	Sipos Realty LLC	4761/2445	10/2/1997
Sipos, Stephen	Sipos, Charlotte	4762/741	10/2/1997
Sipos Realty LLC	5002 Woodside Development LLC	2019000204586	6/19/2019

Block: 2283, Lot: 43

Grantor	Grantee	Book/Pg.	Date
Tanga, Italia (Exec/of)	Kingsley, Emily	4122/518	4/21/1995
Kingsley, Emily (Ex/of)	Kaplan, Roberta K	5998/1295	9/4/2001
Marett, Elizabeth T	Lomto Federal Credit Union	2007000038836	1/9/2007
NCUA Board as Liquidating Agent for Lomto FCU	Teachers Federal Credit Union	2019000287946	8/29/2019

Copies of pertinent documents are provided in **Appendix I**.

4.4.2 Fire Department

The Fire Department provided record of one 275-gallon fuel oil tank, three fire code violations, and tank removal affidavit at 50-24 Queens Boulevard. The record related to the 275-gallon fuel oil tank may have been related to the former heating oil tank that was closed-removed according to NYSDEC on February 10, 2005. A release of petroleum at 50-24 Queens Boulevard has been documented, which VHB has deemed as a REC as noted in **Section 7.1**.

4.4.3 Summary of Records Review

VHB reviewed the EDR computer database search results, the NYSDEC online database, and relevant municipal files for properties that have or could potentially have impacted environmental conditions at the Site. Nearby properties of interest and releases of petroleum and/or hazardous substances have been documented, which VHB has deemed as a REC as noted in **Section 7.1**.

4.5 Historical Use Information

VHB reviewed the historical use information for the Site and nearby properties for conditions that have the potential to environmentally impact the Site.

4.5.1 Sanborn Maps

Sanborn maps are a uniform series of large-scale detailed maps, dating from 1867, that depict the commercial, industrial, and residential sections of cities. These maps historically assisted fire insurance agents in determining the degree of hazard associated with a particular property. Sanborn maps are currently used to track the changing landscape and property uses.

Summary of Sanborn Maps

Year(s)		Description
1902	Site:	The Site is only partially covered by the Sanborn map. It appears south of Thomson Avenue and east of Fitting Street.
	Surrounding Area:	A wagon house, dining room, dwelling, shop, and greenhouse appear on properties to the north of the Site, across Thomson Avenue. Blocks to the west of Fitting Street appear vacant.
1914	Site:	The Site is improved with a three-story store and one-story wagon shed. Jessie Place runs through the easternmost portion of the Site.
	Surrounding Area:	Louis Ruhes Animal Park and New Calvary Cemetery appear to the southeast of the Site. The animal park includes several structures labeled deer house, elephant house, lion & tiger house, and aviary.
1932	Site:	The three-story store remains on Site while several other new structures were added: six, one-story auto repair shops, two, one-story auto laundries, and a filling station with six gasoline storage tanks depicted.
	Surrounding Area:	A one-story garage with two gasoline storage tanks appears to the southeast of the Site along with a bottled beverage warehouse and office. Over a dozen two-story dwellings line the block across 50th Street to the west. A filling station to the north, across Queens Boulevard, appears to have four gasoline storage tanks.
1951	Site:	The three-story store and two auto repair shops have been replaced with a larger, one-story store. Another auto repair shop has been replaced with magazine storage. Two other auto repair shops have been replaced with storage space and a private garage. A one-story store and one-story shed now appear near the center of the Site.
	Surrounding Area:	The garage to the southeast of the Site has been replaced with a refrigerator equipment warehouse and the two gas tanks no longer appear in the Sanborn map. The bottled beverage warehouse has been replaced with a private garage. A structure to the west of the Site, across Fitting Street, is label as a manufacturer of auto seat covers. Near the filling station to the north, an auto show room and lumber yard has been constructed.
1981-2003	Site:	The one-story store and shed no longer appear near the center of the Site, which is now a parking lot. Buildings on the portion of the Site nearest 50th Street are labeled a machine shop, storage, private garage, store, and "Cent. Sta. Service"
	Surrounding Area:	Louis Ruhes Animal Park has been replaced with three, one-story buildings labeled as a research farm and a one-story warehouse labeled "Handy Button Machine Co." Buildings to the southeast of the Site now appear as a machine shop and metal stamping facility named Monarch Barrel Plating Works, Inc., a division of Handy Button Machine Company. The filling station to the north has been replaced by a commercial structure.
2004-2005	Site:	Structures on the Site remain unchanged since the 2003 Sanborn Map but are only labeled as a commercial space, auto laundry, and filling station.
	Surrounding Area:	Structures adjacent to the Site appear unchanged but are labeled as warehouses or loft spaces.

The historical use of the Site for industrial purposes was deemed a REC, as described in **Section 7.1**. A copy of the Sanborn map report is provided in **Appendix D**.

4.5.2 City Directory Abstracts

The City Directory Abstracts provided by EDR were reviewed; these provide address and owner or business name information from available City Directory data for the area. City Directory reports for 47th Avenue, 50th Street, 51st Street, and Queens Boulevard were provided for the years 1934 through 2020 at approximately 5-year intervals. Notable on-site and adjacent listings from the directories have been listed below.

45-33 50th Street

1939: Pilgrim Refrigeration Co.

50-02 Queens Boulevard

1934: G&J Sales Co Inc.; Showalter Auto Repair Shop; Stuart's Garage

1962-2000: Steven's Television & Appliances

2005-2020: P.C. Richard & Son

50-24 Queens Boulevard

1962: K&T Service Station Inc.

1970: Lima Shell Service

1983-1995: Nick Ommikian's Service Station Inc.

2000-2005: CDM Service Center Inc.

2010-202: Lomto Federal Credit Union

Copies of City Directory Abstracts are included as **Appendix E.**

4.5.3 Topographic Maps

Historical U.S. Geological Survey (USGS) topographic maps showing the Site for the years 2019, 2016, 2013, 1995, 1997, 1979, 1966, 1967, 1956, 1947, 1900, 1898, and 1897 were obtained from EDR and reviewed. The Site appears to be in a developed, urban near Calvary Cemetery since 1897. Copies of the historical topographic maps are included as **Appendix F**.

4.5.4 Aerial Photography

Aerial photographs were obtained from EDR for the Site and vicinity and were reviewed. Relevant information obtained from these photographs is detailed below.

Summary of Aerial Photographs

Year(s)		Description
1924	Site:	The Site appears to have two structures constructed near the north property boundary, along Queens Boulevard. Trees or landscaping covers the remainder of the Site.
	Surrounding Area:	A cemetery can be observed to the east and south of the Site and the residential houses that are currently to the west of the property have been built. Several structures are located to the southeast of the Site on the same block.
1941	Site:	Structures have been built on the southern portion of the Site along 50th Street toward 47th Avenue.
	Surrounding Area:	Additional development has been constructed across Queens Boulevard to the north and Queens Boulevard itself appears wider. The remainder of the block where the site is located has been developed with structures and no trees or landscaping remains.
1951-1954	Site:	A structure near the north of the Site in what is now the P.C. Richard & Son parking lot can be seen from aerial photograph.
	Surrounding Area:	No changes from the previous aerial photograph.
1961	Site:	The structure near the north-center of the Site no longer appears and this portion of the Site is being used for parking.
	Surrounding Area:	No changes from the previous aerial photograph.
1966-2006	Site:	No changes from the previous aerial photograph.
	Surrounding Area:	Small, separate buildings to the southeast of the Site have been replaced with one, larger building.
2011-2019	Site:	The gas station at the northeast corner of the Site has been replaces with a building that covers most of the northeast corner of the Site.
	Surrounding Area:	No changes from the previous aerial photograph.

Copies of the aerial photographs are included as **Appendix G**.

4.6 Site History Overview

Based on a review of historical records dating back to 1897, the Site has been developed with various structures since at least 1914. On site uses have been commercial and industrial in nature and include a store, auto repair and car washes, warehouse/storage space, and a gas station. Most recently, the site has been used as commercial space and parking for retail and offices on Site. It is possible that historical fill is present at this Site based on the history of development and redevelopment, which represents a BER, as described in Section 7.0.

4.7 Evaluation of Potential Vapor Encroachment

As part of this Phase I ESA, VHB conducted an Evaluation of Potential Vapor Encroachment (EPVE) in order to determine whether or not a Vapor Encroachment Condition (VEC) exists at the Site. A VEC is the presence or likely presence of Chemical(s) of Concern (COC) vapors in the vadose zone of the Site caused by the release of vapors from contaminated soil and/or groundwater either on or near the Site. This EPVE consisted of the review of information presented in previous or subsequent sections of this document such as:

- The Site's physical setting and features that may impact vapor migration

- Documented storage and releases of volatile COCs at the Site and/or nearby properties
- Potential preferential pathways for vapor migration such as subsurface utility corridors

VHB has concluded that:

- The Site and nearby area has been historically developed with various structures, which include the presence of subsurface utilities. These utilities may influence the movement of contaminants if they intersect the groundwater table.
- Soil at the Site is mapped as urban land, which consists of cemented material and gravelly sandy loam. The heterogenous nature of urban fill may cause local groundwater to flow in various directions depending on the soil properties.
- On-site releases of volatile COCs documented in Spill #9805297 and nearby historical storage and releases of volatile COCs have been documented.

There is the potential that volatile COCs have impacted the vadose zone at the Site because of nearby properties/on-site releases. Therefore, VHB has concluded that a VEC exists at the Site in connection with RECs #1, #2 and #3 as detailed in **Section 7.1**.

5

Site Reconnaissance

5.1 Methodology and Limiting Conditions

Isabel Mielczarek of VHB conducted a Site reconnaissance on May 16, 2023, for visual and reasonably identifiable indications of RECs as defined by ASTM E 1527-21. VHB was accompanied by Frederick Dumlao, the facilities manager for the Teachers Federal Credit Union building and a P.C. Richard & Son store manager. Weather conditions did not limit observations during the Site reconnaissance.

VHB's Site observations and information obtained at the time of the Site reconnaissance are presented in the following sections. Photographs taken during the Site Reconnaissance visit are provided in **Appendix J**.

Observation	Observed or Suspected
Areas of petroleum or hazardous substances product storage and use / Drums / Hazardous Substance and Petroleum Products Containers	The P.C. Richard & Son had several gasoline canisters and propane tanks in their storage room for sale to customers. They were stored on shelves on a floor in relatively good condition with no overt signs of a spill
Above Ground Storage Tanks (ASTs)	Not Observed
Underground Storage Tanks (USTs)	Not Observed
Odors	Not Observed
Pools of liquid	Not Observed
Unidentified Substance Containers	Not Observed
Transformers and any identified PCB-containing equipment	Not Observed
Heating/Cooling systems	Gas furnace and boiler in both P.C. Richard & Son and Teachers Federal Credit Union buildings. Rooftop HVAC provides central cooling to both buildings.
Interior stains or corrosion	Signs of evaporated water and typical staining on parking lot surfaces.
Interior drains, sumps, and below grade conveyances	Sump and below grade conveyances in P.C. Richard & Son basement. Floor drains and storm drains in parking lot areas.
Exterior pits/ponds/lagoons	Not Observed
Pesticide use	Not Observed
Stained soil or pavement	Not Observed

Observation	Observed or Suspected
Stressed vegetation	Not Observed
Evidence of solid waste disposal on the Site	Trash bins and storage containers belonging to the Site stored on easternmost parking lot. Good housekeeping practices.
Evidence of fill materials	Not Observed
Wastewater discharges	Not Observed
Wells	Several monitoring wells observed in and around Teachers Federal Credit Union property.
Septic systems	Not Observed
Evidence of spills/releases	Not Observed
Hazardous waste	Not Observed
Non-Hazardous waste	Not Observed
Air Emissions	Not Observed
Adjacent Properties	Adjacent properties appear to be using good housekeeping practices. Drums typically used to store chemicals were observed inside the Sana Tech Printing facility adjacent to the south of the Site.
Other	Evidence of dual phase groundwater extraction system in container on Teachers Federal Credit Union property.

5.2 Heating, Water, and Sewer Systems

No overt evidence of USTs or ASTs was observed at the Site. Both buildings appear to currently be serviced by natural gas-fired equipment for heating and hot water. Water and sewer utilities are provided by NYC Department of Environmental Protection.

5.3 Exterior Observations and Surface Conditions

The Site is generally flat and contains two commercial buildings separated by a paved parking lot. Generally, good housekeeping practices were observed from the outside of the buildings, however, there was some litter accumulated in the loading dock area associated with the P.C. Richard & Son building. The parking surface was in good condition and a container with remediation equipment was observed on the easternmost parking area at the Site. The remediation equipment is assumed to be associated with the on-Site releases detailed in **Section 4.3.1.**

5.3.1 Remediation Equipment

The container observed at the Teachers Federal Credit Union building appeared to treating groundwater being drawn from the ground from several pipes. The interior of the container was inaccessible at the time of inspection but the utilities servicing the container appeared to be active. Monitoring wells observed within the Teachers Federal Credit Union parking lot are presumably tied to remediation activities that are ongoing and connected to the container/groundwater extraction and treatment equipment.

5.4 Interior Observations

The interior of both structures on Site appeared to be in generally good condition. The P.C. Richard & Son building was older in appearance with more signs of wear and tear. Both buildings contained janitorial closets and utility rooms where consumer-sized products were apparently stored using good housekeeping practices. The P.C. Richard & Son housed a sales floor, product storeroom, loading dock, employee break room, and bathrooms on the first floor. There was a partial basement being used to store merchandise and electrical equipment. The Teachers Federal Credit Union building contained a retail banking area on the first floor as well as cubicles for employees. The second and third floors contained partially vacant offices and cubicles, bathrooms, and electrical equipment closets. There was also an elevator landing and lobby areas on each floor. The first floor contained a partially covered parking lot which could be accessed via Queens Boulevard via a security gate.

5.4.1 Utility Mark Outs

The P.C. Richard & Son building had some utility mark outs and spray paint on the floor, presumably tied to subgrade anomalies detected. There was a rectangular mark out in the rear of the storeroom that may have been related to the UST previously discussed as being closed in place at this site. No aboveground tank appurtenances were observed in this area. The potential presence of a UST represents a REC, as described in **Section 7**.

6

Interviews

6.1 Interview with Owner, Site Manager, Occupants, or Knowledgeable Person

Frederick Dumlao, the facilities manager for the Teachers Federal Credit Union building and a P.C. Richard & Son store manager was interviewed during the Site visit. Both people did not have a knowledge of the history of the Site beyond the months/recent years they were employed there. The User Questionnaire and letters provided by the report User confirm that environmental remediation associated with former gas station operations at 50-24 Queens Boulevard are ongoing. The information obtained during the interviews has been incorporated throughout this report.

6.2 Interviews with Local Government Officials

Information obtained from Local Government Officials is described in Section 4.2. No other local government officials were contacted as part of this Phase I ESA.

7

Conclusions and Opinions

The goal of the Phase I ESA is to identify RECs as defined in Section 1.1. This section identifies known or suspected RECs, Controlled RECs, Historical RECs as well as additional Site considerations. During the Phase I ESA, VHB identified three RECs in connection with the Site. VHB's opinion is limited by the conditions prevailing at the time the work was performed and the applicable regulatory requirements in effect.

7.1 RECs

To meet the requirements of Section 12.7.1 of the Standard, the statement below has been included to preface the conclusions of this report.

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527 for 50-01 47th Avenue, 45-33 50th Street, and 50-02-50-24 Queens Boulevard, Queens, New York, the subject property. Any exceptions to, or deletions from, this practice are described in Section 8.1 of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the subject property except for the following:

7.1.1 REC #1 – On-Site Spill of Petroleum Constituents (Spill #9805297)

The Site was historically operated as a gasoline filling station and automotive service station dating back to the 1960s. In May 1993, an unknown amount of gasoline, methyl-tert-butyl ether (MtBE), and benzene, toluene, ethylbenzene and xylene (BTEX) impacted groundwater at the subject property and was reported to the New York State Department of Environmental Conservation (NYSDEC). The release was assigned Spill #9805297. The spill is currently being remediated using a groundwater extraction and treatment system being managed by the former operator at 50-24 Queens Boulevard, Equilon Enterprises LLC d/b/a Shell Oil Products US. Notes in the Spill case records indicate possible off-site impacts due to a groundwater contaminant plume as well as on-site impacts to groundwater. The open spill case associated with the subject property represents a REC.

> Opinion: Petroleum releases at the Site have been confirmed to impact environmental conditions at the subject property. It is the Environmental Professional's Opinion that Spill #9805297 represents a REC. If additional information regarding the quality of groundwater, soil, and soil vapor is desired, VHB would suggest obtaining and reviewing the environmental reports that are not publicly available in order to determine the severity of impacts.

7.1.2 REC #2 – On-Site Bulk Petroleum Storage and Closed-in-Place Underground Storage Tank (UST)

Based on a review of environmental databases, as many as 22 tanks were formerly located at the Site prior to their removal in the 2000s. Tank removal documentation was not obtained. Steven's Woodside Inc. was the retailer that occupied the building currently used by P.C. Richard & Son. Reportedly, a 2,000-gallon, #2 fuel oil underground storage tank (UST) was closed in place on October 1, 1999, at this portion of the Site. No spill files were identified in connection to this tank. However, there were no records of tank tightness or integrity testing or environmental data to suggest that the UST was in good condition prior to closure. Therefore, it is unknown whether a release of petroleum occurred from the former UST, which is considered a REC.

> Opinion: There is a possibility that a release of petroleum from the bulk petroleum storage and UST noted above have impacted the Site environmental conditions. Therefore, it is the Environmental Professional's opinion that these environmental listings represent a REC.

7.1.3 REC #3 – Nearby History of Spills and RCRA Violations

Based on a review of environmental records, several listings located within 500 feet of the Site were identified that have the potential to impact Site environmental conditions as follows:

- The property that now operates as Sana Tech Printing at 45-14 51st Street is listed as the location of a NYSDEC Spill case. Spill case 1002811 was closed August 6, 2010, after a NYC government HazMat team responded to the already vacant location. Due to the lack of information provided regarding this spill, the presumably upgradient spill is considered a concern in relation to the Site. Furthermore, RCRA violations were associated with Beyond Signs Inc., which generated ignitable waste, corrosive waste, lead, mercury, methyl ethyl ketone and spent nonhalogenated solvents as part of its operation.
- The property that now operates as SkyTrac at 50-05 47th Avenue is listed as the location of two NYSDEC Spill cases and RCRA violations. Handy Button Machine Co., which was involved in metal stamping, electroplating, plating, polishing, anodizing, and coloring was listed as a large and small quantity generator of hazardous waste in the past. It is unknown what types of hazardous waste were utilized, but the EPA also included this site in their PFAS ECHO list, as the company may have been handling PFAS in the metal coating industry.
- The corner of Queens Boulevard and 51st Street is listed as the location of a closed Spill case (#0305938) associated with the release of motor oil in the roadway. The case was closed September 26, 2003, however spill closure documentation regarding its remediation was unavailable for review during this Phase I ESA.
- The commercial property at 50-11 Queens Boulevard is listed as the location of closed Spill case (#1602145) that is associated with the release of an unknown amount of gasoline that affected soil and groundwater on the property. The case was closed on December 10, 2020, however spill closure documentation regarding its remediation was unavailable for review during this Phase I ESA.
- A Roy Rogers Restaurant formerly operated at an 50-01 Queens Boulevard. This address has a closed Spill case (#9516592) associated with the release of an unknown amount of gasoline that affected soil on the property. The case was closed September 12, 2008, however spill closure documentation regarding its remediation was unavailable for review during this Phase I ESA.

Due to the potential to impact environmental conditions at the Site, the nearby environmental listings summarized above were deemed a REC.

> Opinion: There is a possibility that a release of petroleum or other chemicals of concern stored nearby throughout history have impacted the Site environmental conditions. Therefore, it is the Environmental Professional's opinion that these environmental listings represent a REC.

7.2 VEC

A VEC is the presence or likely presence of COC vapors in the vadose zone of the Site caused by the release of vapors from contaminated soil or groundwater either on or near the target property. VHB has concluded that a VEC exists at the Site.

Based on the findings noted as REC #1, #2 and #3, there is the potential that volatile COCs could impact environmental conditions at the Site.

7.3 Business Environmental Risks

The following business environmental risks represent conditions at the Site that may have an environmentally driven impact on the current or planned use of the Site, but do not constitute RECs or *de minimis* conditions as defined in the Standard. However, the Environmental Professional views these as potential risks that should be considered when making decisions regarding the Site.

7.3.1 Historical Urban Fill

Based upon the soil classification and historical demolition of buildings on a portion of the Site, urban historical fill may be present beneath the subject property. Urban historical fill is commonly found throughout the New York City metropolitan area and can contain contaminants such as hazardous building materials (e.g., asbestos-containing materials), heavy metals and semi-volatile organic compounds. If required to be removed from the subject property, urban fill should be appropriately characterized prior to following appropriate transportation and disposal/recycling procedures.

8

Data Gaps and Limitations

Other than those limitations expressly provided in **Appendix A** and/or specified herein, completion of this Phase I ESA was not subject to significant assumptions, limitations, or exceptions to the Standard.

8.1 Significant Assumptions, Limitations, Exceptions and Data Gaps.

VHB identified six data gaps at the Site during this Phase I ESA. The Environmental Professional's assessment as to whether these data gaps are considered significant is outlined below.

Data Gap	Assessment
VHB was provided historical records for the Site documenting development since 1914. Prior to 1914, the development history of the Site is unknown.	VHB believes that the recent Site history is likely representative of earlier development at the Site, and the data failure encountered does not constitute a significant data gap.
There were 71 sites listed within a 500-foot radius of the Site according to the EDR Report, all of which could not be reasonably reviewed during this Phase I ESA.	VHB believes that the selected listings reviewed and discussed located within a 500-foot radius of the Site include those that have the highest potential to represent a REC.
A Title Report was not provided for VHB review as part of this Phase I ESA.	VHB believes that the publicly available records of Site ownership reviewed are sufficiently up to date.
VHB did not receive a response from NYC Department of Health and Mental Hygiene to the Freedom of Information Request submitted to the agency.	VHB will alert the User and amend this report if a response is provided that changes the Phase I ESA findings after its issuance.
VHB was not provided access into the shipping container that housed remediation equipment near the Teachers Federal Credit Union building.	VHB has already concluded that the ongoing remediation and open Spill case represents a REC (REC #3) to the site, so this does not represent a significant data gap.
VHB was provided a response to the FOIL request to NYSDEC that stated some documents were being withheld due to certain provisions of the Public Officers Law.	VHB has already deemed the open Spill case as a REC (REC#3) so any additional documentation would not necessarily amend the findings of this report, however, more information may be useful in determining the extent of contamination on- or off-site.

As described above and when appropriate, these data gaps have been conservatively incorporated into the findings of this report. Should additional data become available, the findings of this report should be reevaluated.

9

References/Informational Sources

Aerial Photographs dated 2019, 2011, 2006, 1994, 1991, 1984, 1980, 1976, 1966, 1961, 1954, 1951, 1941, 1924. Obtained from Environmental Data Resources, Inc.

Environmental Data Resource, Inc. Radius Map Report with GeoCheck, Prepared using Field Check, dated May 2, 2023.

Environmental Data Resources, Inc. Certified Sanborn Map Report, dated May 3, 2023.

Environmental Data Resources, Inc. City Directory Image Report, dated May 3, 2023.

Topographic Maps, Brooklyn, Central Park, and Harlem Quadrangles dated, 2019, 2016, 2013, 1995, 1997, 1979, 1966, 1967, 1956, 1947, 1900, 1898, and 1897. Obtained from Environmental Data Resources, Inc.

Fisher, D.W., Isachsen, Y.W., and Rickard, L.V., 1970, Geologic Map of New York State, consisting of 5 sheets: Niagara, Finger Lakes, Hudson-Mohawk, Adirondack, and Lower Hudson, New York State Museum and Science Service, Map and Chart Series No. 15, scale 1:250,000.

10

Signature and Qualifications of Environmental Professional

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of 40 C.F.R. § 312.

I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 C.F.R. Part 312.

Preparer:

Isabel Mielczarek
Date: June 6, 2023

Environmental Professional:

George Lester, PE
Date: June 6, 2023

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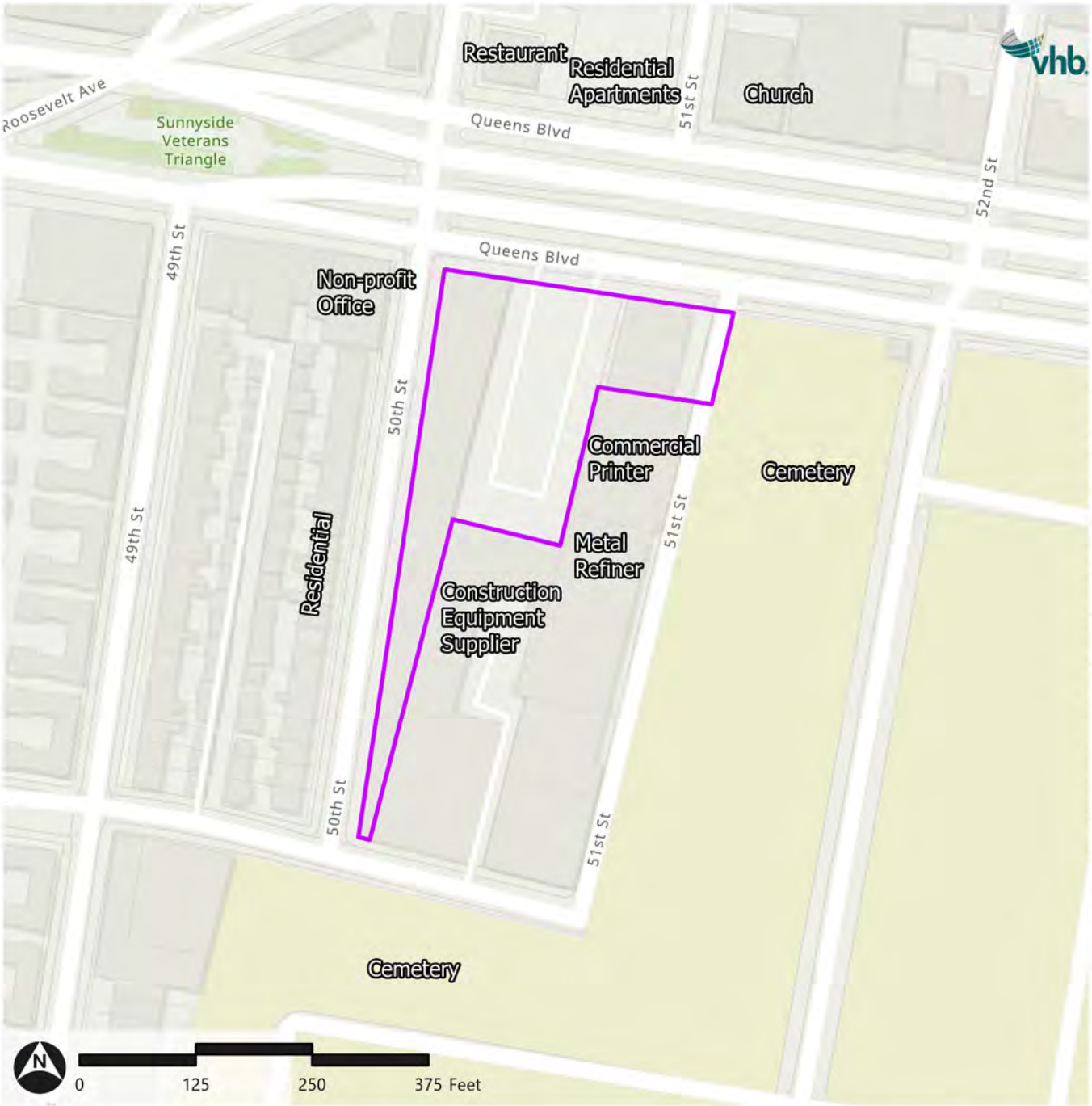
List of Acronyms

AAI	All Appropriate Inquires
AST	Aboveground Storage Tank
ASTM	American Society of Testing and Materials
COC	Contaminant of Concern
CORRACTS	Corrective Action
EDR	Environmental Data Resources
EPVE	Evaluation of Potential Vapor Encroachment
ESA	Environmental Site Assessment
FIFRA	Federal Insecticide, Fungicide & Rodenticide Act
FINDS	Facility Indexing System
LLP	Landowner Liability Protections
LUST	Leaking UST
NPL	National Priorities List
OHM	Oil and/or Hazardous Materials
PADS	PCB Activity Database
PCB	Polychlorinated Biphenyl
RCRA	Resource Conservation and Recovery Act
RECs	Recognized Environmental Conditions
SEMS	Superfund Enterprise Management System
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substance Controls Act
USGS	United States Geological Survey
UST	Underground Storage Tank
VEC	Vapor Encroachment Screening

Figures

Figure 1: Site Location Map

Commercial Property | 50-01 47th Ave., 45-33 50th St., & 50-02-50-24 Queens Blvd., Queens, NY



Source: Esri Community Maps Contributors, NYC OpenData.

Figure 2: Site Features

Commercial Property | 50-01 47th Ave., 45-33 50th St., & 50-02-50-24 Queens Blvd., Queens, NY

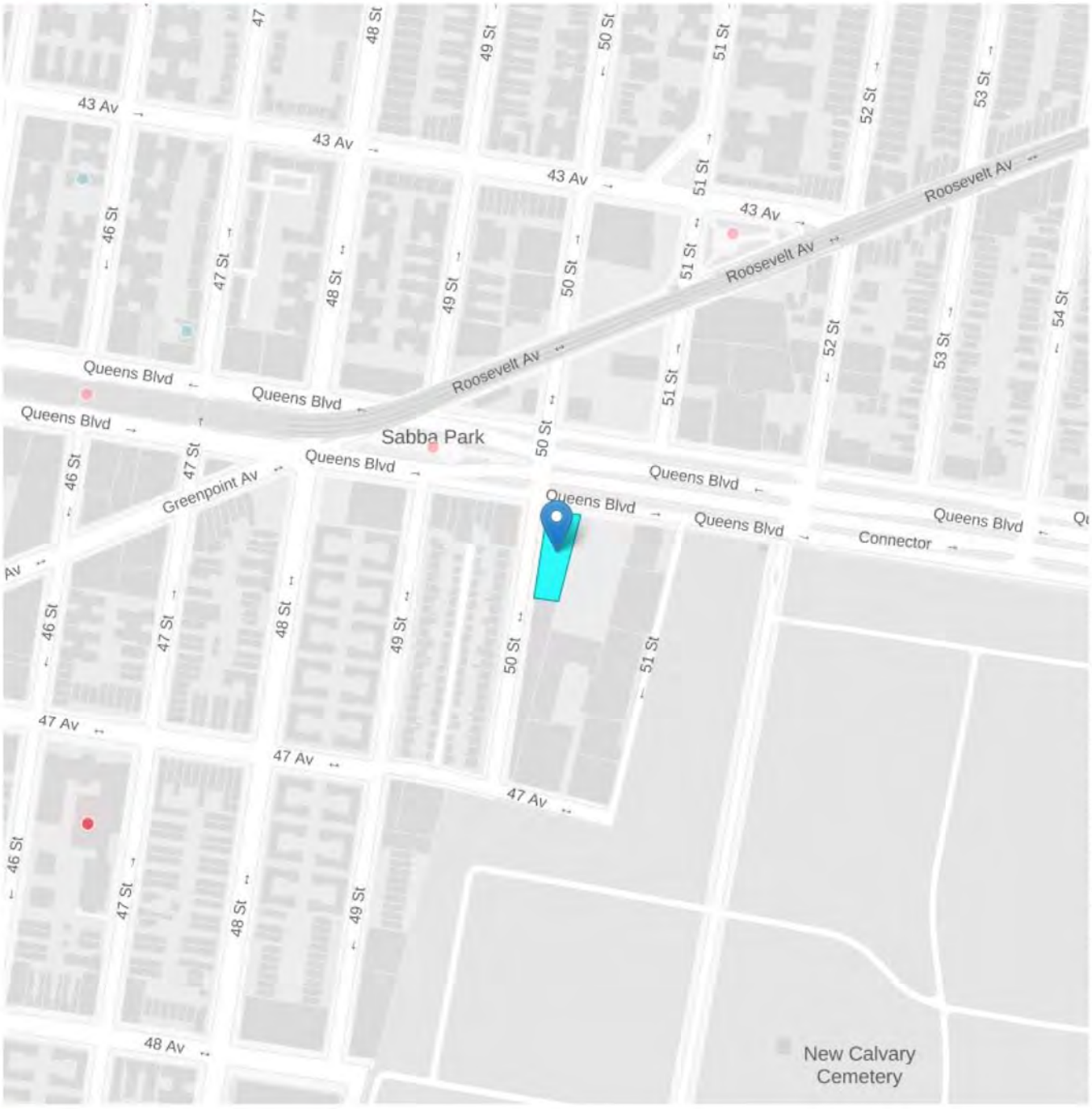


Path: \\vhb.com\gis\proj\NewYorkCity\20517.00 50-02 Queens Blvd Rezoni\Project\PhaseIESA\PhaseIESA.aprx (imielczarek, 6/6/2023)

Source: Esri Community Maps Contributors, NYC OpenData.

Figure 3: Site Vicinity Map

Commercial Property | 50-01 47th Ave., 45-33 50th St., & 50-02-50-24 Queens Blvd., Queens, NY

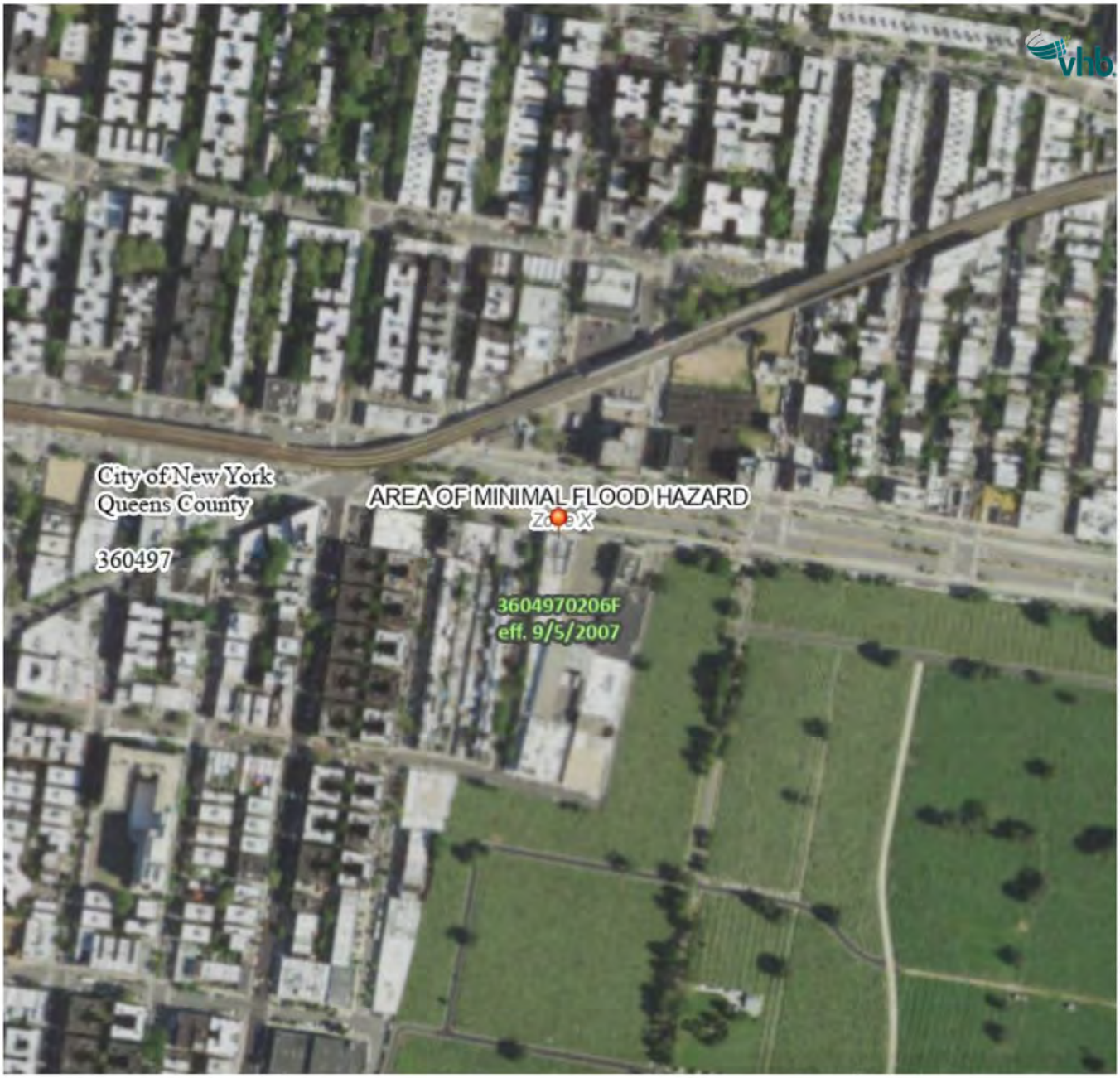


- DAY CARE AND PRE-KINDERGARTEN
- HEALTH CARE
- HIGHER EDUCATION
- LIBRARIES
- PARKS AND PLAZAS
- SCHOOLS (K-12)

Source: NYC Speed.

Figure 4: FEMA Flood Insurance Rate Map

Commercial Property | 50-01 47th Ave., 45-33 50th St., & 50-02-50-24 Queens Blvd., Queens, NY



Path: \\vhb.com\gis\proj\NewYorkCity\20517.00 50-02 Queens Blvd Rezoni\Project\PhaseIESA\PhaseIESA.aprx (imielczarek, 6/6/2023)

Source: FEMA, USGS National Map (data refreshed October 2020).