138-23 Queens Boulevard Rezoning

Environmental Assessment Statement

CEQR No.: ***24DCP103Q***

Prepared for:
RJ Capital Holdings LLC

Prepared by:
Philip Habib & Associates

Lead Agency:
New York City Department of City Planning
120 Broadway, 31st Floor
New York, NY 10271

March 6, 2024

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Environmental Assessment Statement

CEQR No.: TBD

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EAS SHORT FORM

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* **138-23 Queens Boulevard**

3. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency)	BSA REFERENCE NUMBER (if applicable)
24DCP103Q	
ULURP REFERENCE NUMBER (if applicable)	OTHER REFERENCE NUMBER(S) (if applicable) (*e.g.*, legislative intro, CAPA)

4a. *Lead Agency Information*			**4b. *Applicant Information***		
NAME OF LEAD AGENCY **New York City Department of City Planning (DCP)**			NAME OF APPLICANT **RJ Capital Holdings, LLC**		
NAME OF LEAD AGENCY CONTACT PERSON **Stephanie Shellooe, AICP, Director, EARD**			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON **Justin Jarboe, Eric Palatnik P.C.**		
ADDRESS **120 Broadway**			ADDRESS **32 Broadway, Suite 114**		
CITY **New York**	STATE **NY**	ZIP **10271**	CITY **New York**	STATE **NY**	ZIP **10004**
TELEPHONE **212.720.3328**	EMAIL **sshellooe@planning.nyc.gov**		TELEPHONE **212.425.4343**	EMAIL **justin@ericpalatnikpc.com**	

5. *Project Description*

The Applicant, RJ Capital Holdings, LLC, is requesting two discretionary approvals, including: (1) a zoning map amendment to rezone an approximately 68,948 square foot (sf) portion of Queens Block 9649, including Lots 17, 25, 37 (p/o), 42, 44 (p/o), and 53 (p/o) ("Rezoning Area") from R6A/C1-4 to R8X/C2-4; and (2) a zoning text amendment to Appendix F of the Zoning Resolution to establish a Mandatory Inclusionary Housing (MIH) Area (either MIH Option 1 or MIH Option 2) coterminus with the area to be rezoned, to facilitate the development of a 17-story (175-foot roof height; 195-foot bulkhead height), mixed-use commercial and residential building at 138-23 Queens Boulevard (Block 9649, Lots 17, 25, and 37; "Projected Development Site 1"). The Rezoning Area includes portions of the applicant-owned Block 9649, Lots 17, 25, and part of 37, as well as the non-applicant-owned Lot 42 and parts of Lots 44 and 53 located in the Briarwood neighborhood of Queens Community District (CD) 8.

As a result of the Proposed Actions, the Applicant would demolish the existing single-story commercial buildings on Projected Development Site 1 to construct a new 17-story (175-foot roof height; 195-foot bulkhead height) mixed-use building with approximately 33,020 gsf of ground-floor retail space and approximately 311 total DUs, of which at least approximately 78 would be designated as permanently affordable pursuant to MIH Option 1. However, for CEQR analysis purposes, the reasonable worst-case development scenario (RWCDS) will assume a smaller average DU size of 850 zsf. Thus, under the RWCDS for the Proposed Actions, Projected Development Site 1 could be developed with up to approximately 339 total DUs, of which at least approximately 85 would be designated as permanently affordable pursuant to MIH Option 1 at an average of 60% AMI. For CEQR analysis purposes (i.e., Early Childhood Programs), 20% (approximately 68 DUs) of the residential floor area is assumed to be affordable at or below 60% AMI. The Applicant would provide approximately 132 accessory parking spaces, which would be located in a second-floor garage.

Under the With-Action RWCDS, the Proposed Actions are expected to also facilitate the development of one additional non-applicant-owned site (Queens Block 9649, Lots 42/44; the "Projected Development Site 2") located at 138-01 to 138-11 Queens Boulevard, which would be developed as a single, 17-story, (175-foot roof height; 195-foot bulkhead height) mixed use residential and commercial building including approximately 12,790 gsf of ground-floor retail space and approximately 110 total DUs, of which at least approximately 28 would be designated as permanently affordable pursuant to MIH Option 1. For CEQR analysis purposes (i.e., Early Childhood Programs), 20% (approximately 22 DUs) of the residential floor area is assumed to be affordable at or below 60% AMI. The Applicant would provide approximately 40 accessory parking spaces, which would be located in a second-floor garage.

In total, the Proposed Actions would facilitate the development of two mixed-use residential-commercial buildings that would total 530,156-gsf, including 449 DUs, 25-30% (113-135 units) of which would be affordable pursuant to MIH at an average of 60-80% AMI depending on the Option selected, 45,810-gsf of local retail uses, and 172 enclosed parking spaces.

In absence of the Proposed Actions, it is anticipated that both Projected Development Sites would be redeveloped in accordance with existing R6A/C1-4 zoning with two mixed-use developments totaling 174,471-gsf of residential with 189 market rate DUs, 51,115-gsf of commercial retail space, and 103 enclosed parking spaces. Thus, the total increment resulting from the Proposed Actions is an increase of 260 total DUs over the No-Action condition (of which 113 would be affordable according to MIH Option 1), a decrease of 5,304-gsf of commercia retail space, and an increase of 69 parking spaces.

Project Location

BOROUGH **Queens**	COMMUNITY DISTRICT(S) **8**	STREET ADDRESS **138-23 Queens Boulevard**
TAX BLOCK(S) AND LOT(S) **Block 9649, Lots 17, 25, 37, 42, 44, & 53 (p/o)**		ZIP CODE **11435**
DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS **84th Drive, Manton Street, 139th Street, 86th Avenue, and Queens Boulevard**		
EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY **R6A, C1-4**		ZONING SECTIONAL MAP NUMBER **14d**

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 **Map 14d, ZR Section 23-90: Appendix F**

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

☐ VARIANCE (use)

☐ VARIANCE (bulk)

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

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

***Department of Environmental Protection*:** ☐ YES ☒ NO ☐ 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.): **68,948 sf (Lots 17, 25, 37, 42, 44 and 53(p/o))** Waterbody area (sq. ft) and type: **0 sf**

Roads, buildings, and other paved surfaces (sq. ft.): **68,948 sf** Other, describe (sq. ft.):

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

SIZE OF PROJECT TO BE DEVELOPED (gross square feet): **530,156 GSF**

NUMBER OF BUILDINGS: **two**

GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): **395,931 GSF and 134,225 gsf**

HEIGHT OF EACH BUILDING (ft.): **175 ft for both buildings**

NUMBER OF STORIES OF EACH BUILDING: **two 17 story buildings**

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: **47,969 SF (Lots 17, 25, and 37)**

The total square feet not owned or controlled by the applicant: **approx. 20,979 SF (Lots 42, 44 and 53 (p/o)**

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: **68,948** sq. ft. (width x length)

VOLUME OF DISTURBANCE: **689,480** cubic ft. (width x length x depth)

AREA OF PERMANENT DISTURBANCE: **68, 948** 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.)	**412,292 GSF**	**45,810 GSF**	**N/A**	**N/A**
Type (*e.g.,* retail, office, school)	**449** units	**Local retail**		

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

If "yes," please specify: NUMBER OF ADDITIONAL RESIDENTS: **718** NUMBER OF ADDITIONAL WORKERS: **-7**

Provide a brief explanation of how these numbers were determined: **Residential population is based on 2.76 persons per household (Queens Community District 8 2020 US Census Data); Worker population is based on one worker per 25 dwelling units (includes live-in superintendant), one worker per 333 sf of local retail, and 1 worker per 50 parking spaces.**

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: **Absent the Proposed Actions, Projected Development Sites 1 and 2 would be redeveloped on an as-of-right basis pursuant to existing R6A/C1-4 zoning. All existing buildings at the two development sites would be demolished. The applicant-owned Projected Development Site 1 (Lots 17/25/37) would be developed with a 7-story (approximately 75-foot roof height; 85-foot bulkhead height), mixed-use commercial and residential building containing 133 total DUs, approximately 33,020 gsf of ground-floor local retail space, and approximately 72 accessory parking spaces located in a second-floor garage, for a total of approximately 207,327 gsf. The non-applicant-owned Projected Development Site 2 (Lots 42/44) will be improved with a 7-story (approximately 75-foot roof height; 85-foot bulkhead height) mixed-use commercial and residential building containing 56 total DUs, approximately 18,094 gsf of ground floor local retail space, and approximately 31 accessory parking spaces located in a second-floor garage, for a total of approximately 84,714 gsf.**

9. *Analysis Year* CEQR Technical Manual Chapter 2

ANTICIPATED BUILD YEAR (date the project would be completed and operational): **2028**

ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: **approximately 30 months**

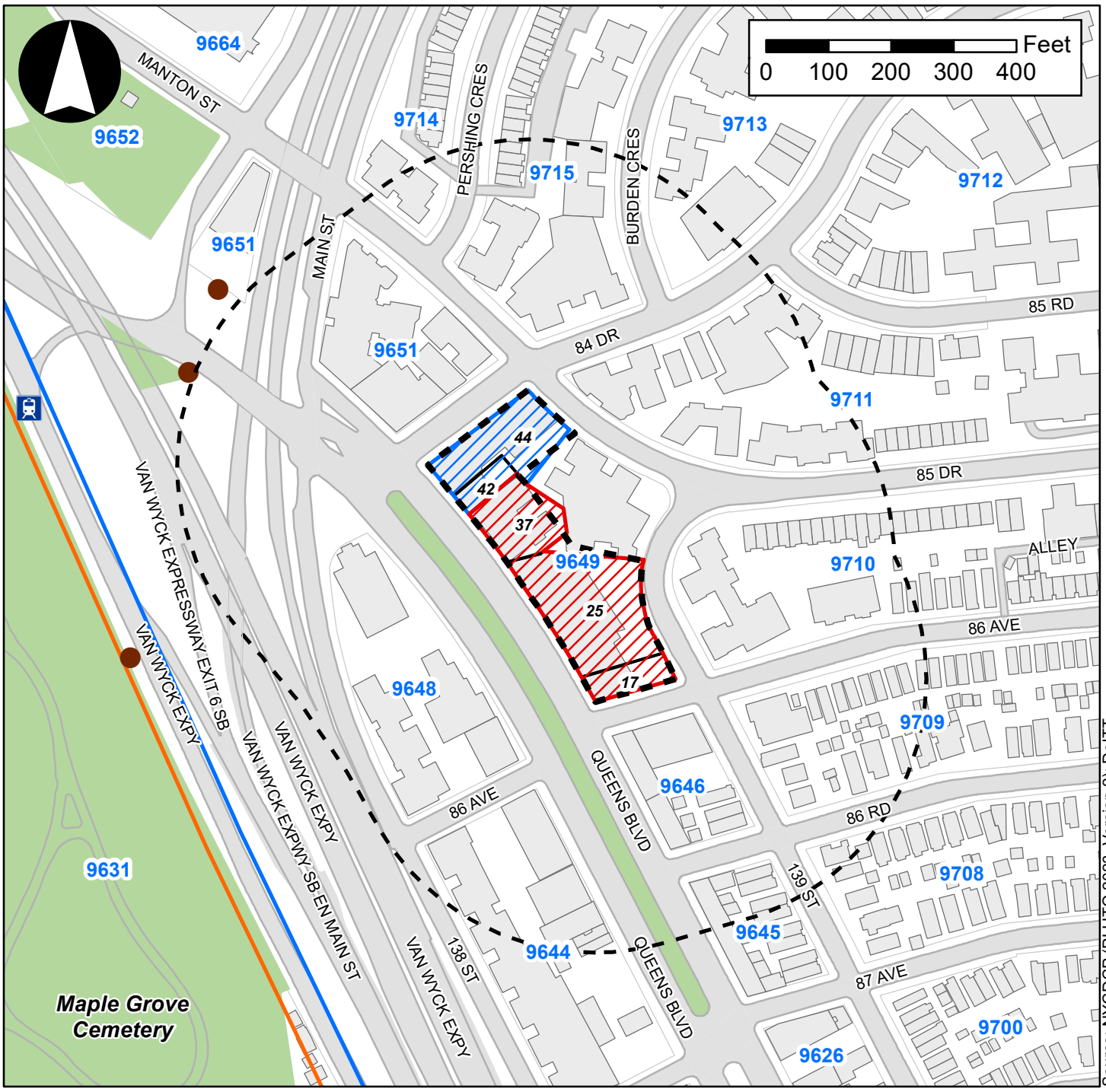
WOULD THE PROJECT BE IMPLEMENTED IN A SINGLE PHASE? ☒ YES ☐ NO IF MULTIPLE PHASES, HOW MANY? **N/A**

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE: It is assumed that the ULURP process would be completed in Q3 2025. Construction would begin on the Applicant-controlled Projected Development Site 1 in Q2 2026 following an approximately 8-month buffer period after ULURP approval, and would last 30 months (5 months for demolition/excavation/foundation, 16 months for superstructure/exterior, and 9 months for interior fit-out) with completion in Q3 2028. For Projected Development Site 2 (non-Applicant-owned), it is assumed that an additional 12-month buffer would occur following ULURP approval before the beginning of construction, which would start in Q2 of 2027 and last 18 months (3 months for demolition/excavation/foundation, 7 months for superstructure/exterior, and 8 months for interior fit-out), with completion in Q3 2028. Construction on Projected Development site 2 would fully overlap with Projected Development Site 1, constituting a single phase.

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

☒ RESIDENTIAL ☐ MANUFACTURING ☒ COMMERCIAL ☒ PARK/FOREST/OPEN SPACE ☒ OTHER, specify: **Community facility/institutional use**

Figure 1
Project Location Map



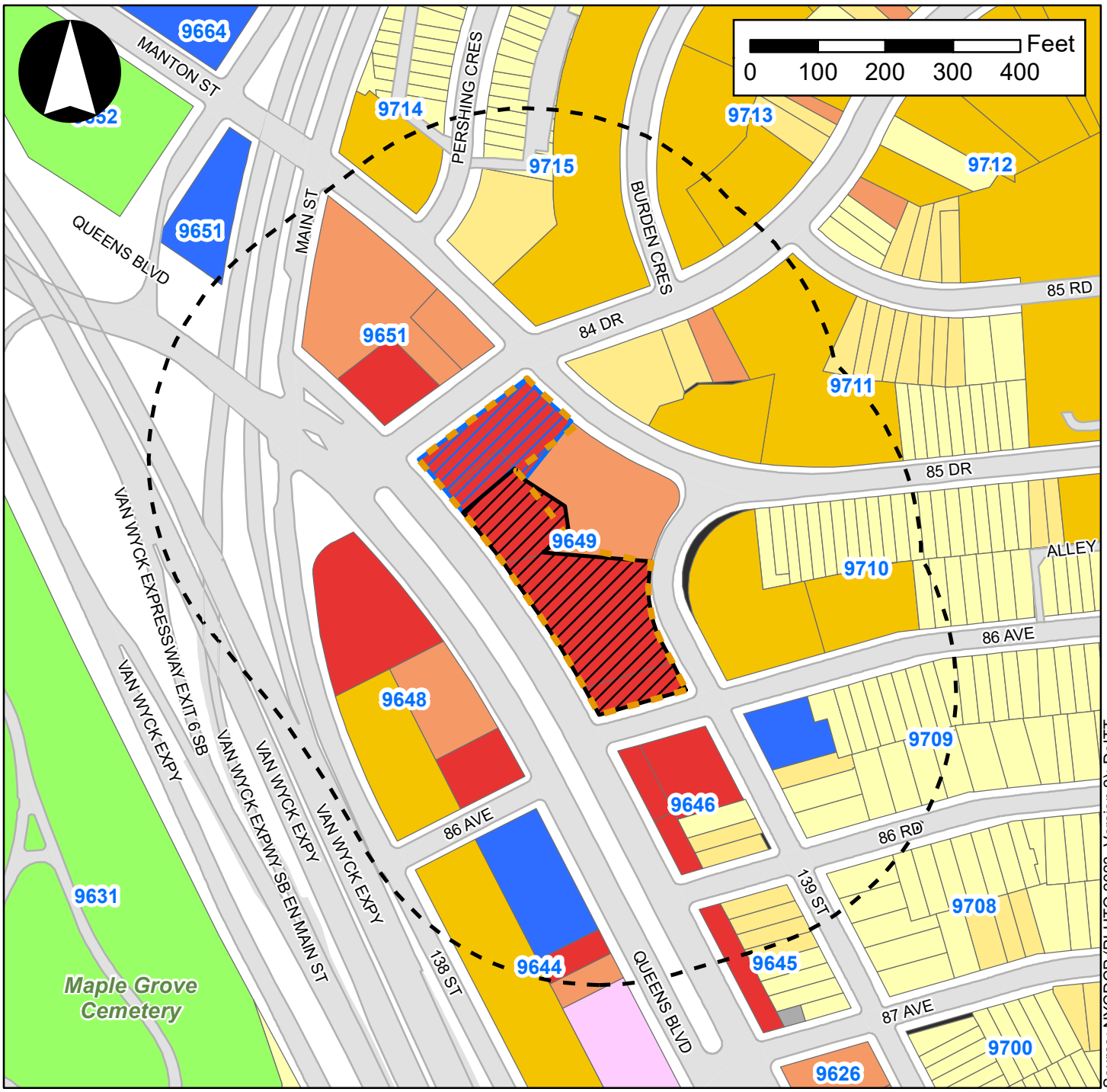
Source: NYCDCP (PLUTO 2023, Version 2); DoITT

Legend

- Project Area
- Projected Development Site 1
- Projected Development Site 2
- 400-Foot Radius
- E Train
- F Train
- Briarwood Subway Station (E & F Trains)
- Subway Entrances
- 9649 Tax Blocks
- Existing Building Footprints
- Open Space



Figure 2
Land Use Map

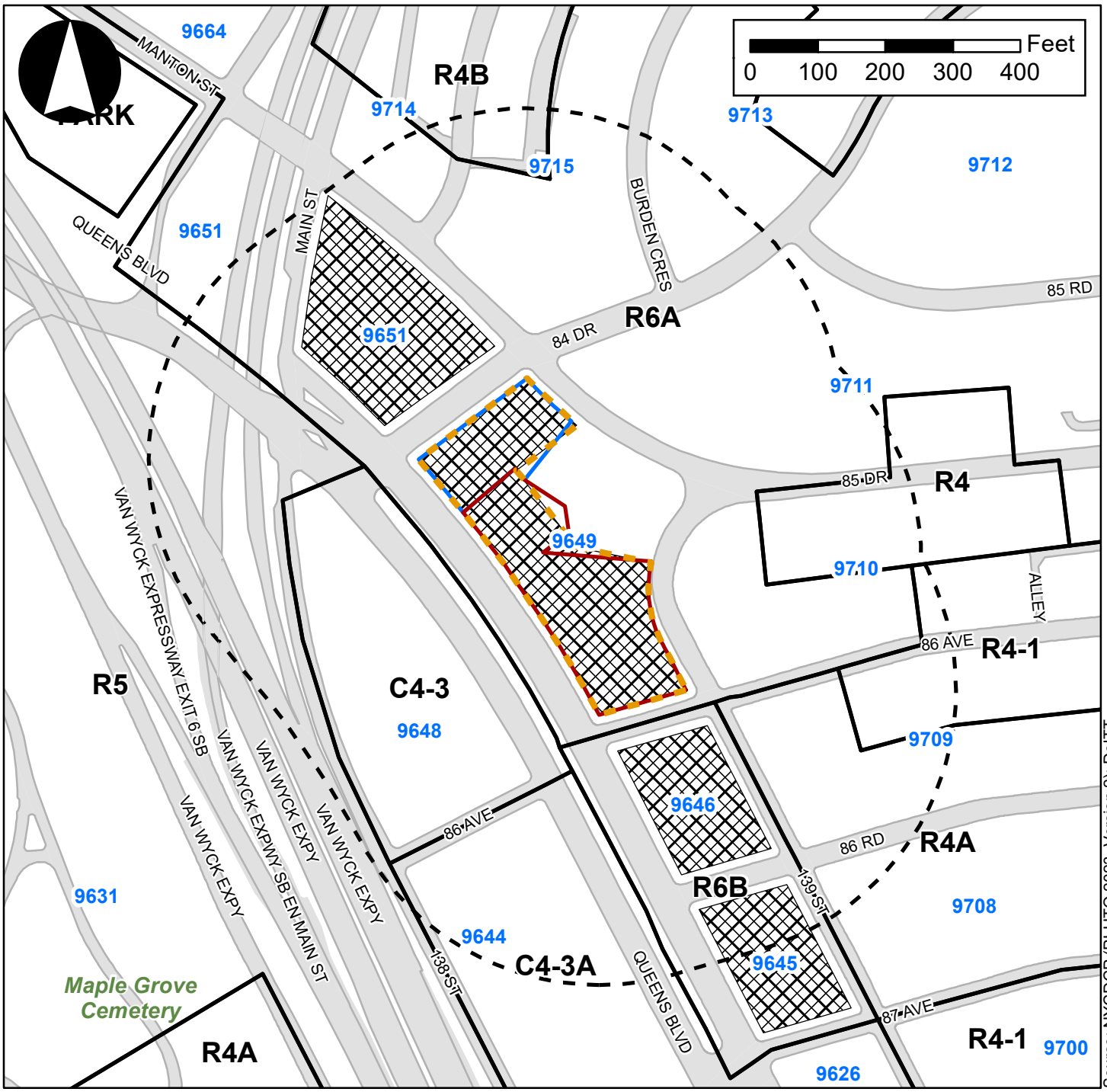


Legend

- Project Area
- 400-Foot Radius
- Projected Development Site 1
- Projected Development Site 2

Land Use

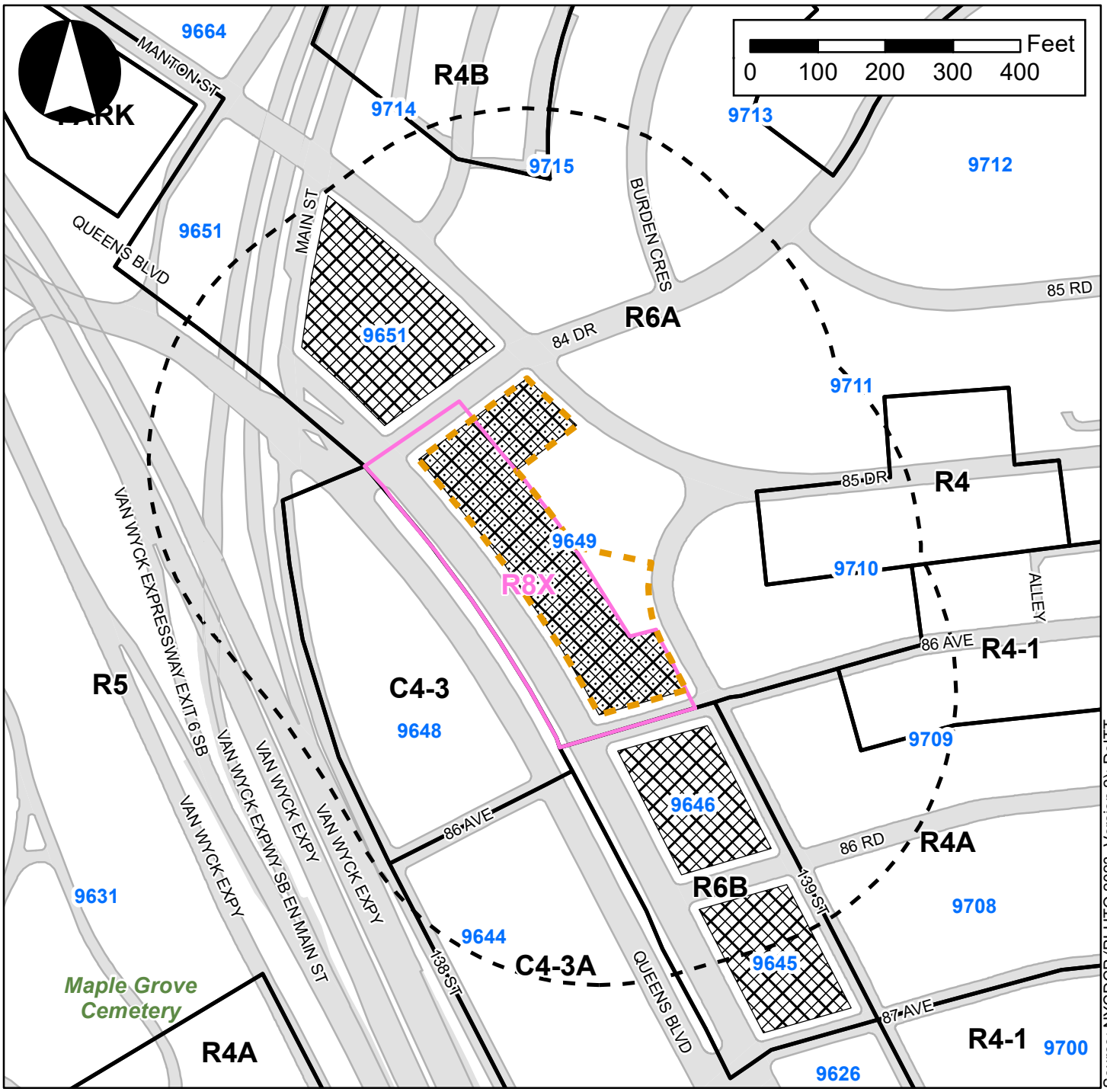
- One & Two Family Buildings
- Multi-Family Walkup Buildings
- Multi-Family Elevator Buildings
- Mixed Commercial/Residential Buildings
- Commercial/Office Buildings
- Industrial/Manufacturing
- Transportation/Utility
- Public Facilities & Institutions
- Open Space
- Parking Facilities
- Vacant Land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



Legend

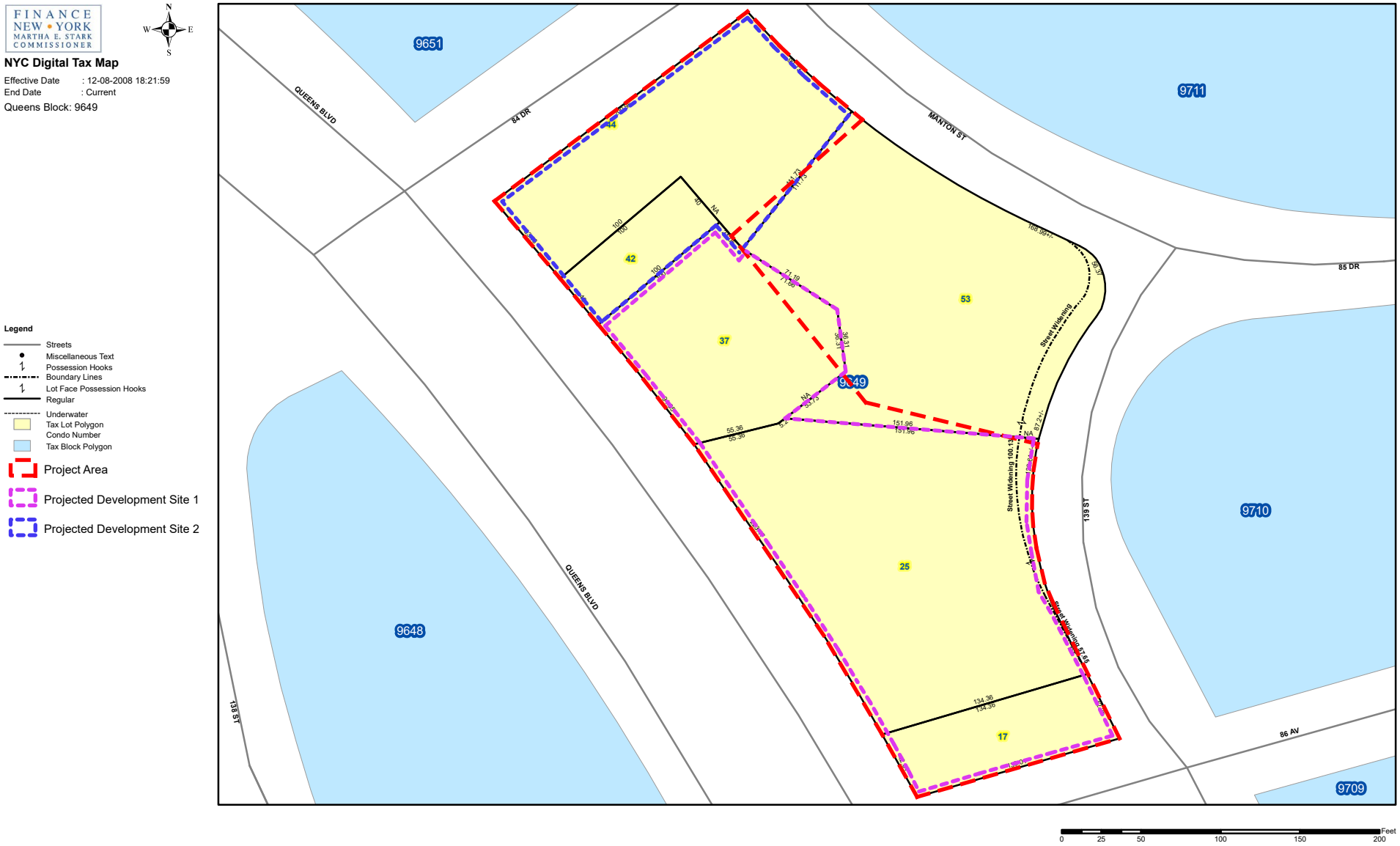
- Project Area
- 400-Foot Radius
- Projected Development Site 1
- Projected Development Site 2
- R6A — Existing Zoning District Boundaries
- C1-4 Overlay

Figure 4
Proposed Zoning Map



Legend

- Project Area
- 400-Foot Radius
- R6A Existing Zoning District Boundaries
- C1-4 Overlay
- Proposed R8X Zoning District
- Proposed C2-4 Overlay

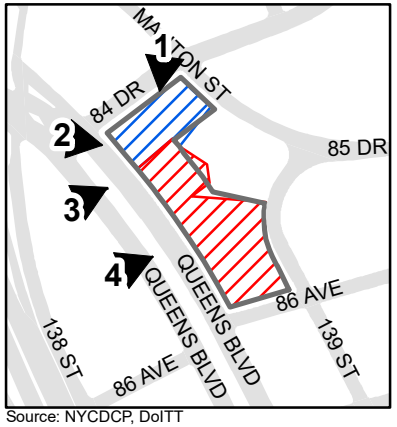


138-23 Queens Boulevard Rezoning EAS

Figure 5
Tax Map



1. View of the Project Area looking south across 84th Drive.



Source: NYCDCP, DoITT
Notes:
1. The Project Area is outlined by a gray solid line.
2. Projected Development Site 1 is outlined in red striped symbology.
3. Projected Development Site 2 is outlined in blue striped symbology.



2. View of the Project Area looking southeast from the intersection of Queens Boulevard and 84th Drive.



3. View of the Project Area looking northeast across Queens Boulevard between 84th Drive and 86th Avenue.



4. View of the Project Area looking east across Queens Boulevard between 84th Drive and 86th Avenue.



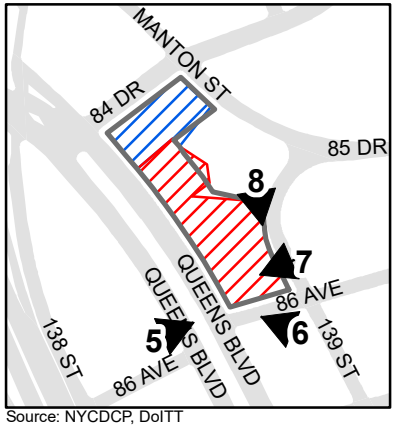
5. View of the Project Area looking northeast across Queens Boulevard between 84th Drive and 86th Avenue.



6. View of the Project Area looking northwest from 86th Drive between Queens Boulevard and 139th Street.



7. View of the Project Area looking southwest across 139th Street between 86th Avenue and 85th Drive and Manton Street.



Source: NYCDCP, DoITT
Notes:
1. The Project Area is outlined by a gray solid line.
2. Projected Development Site 1 is outlined in red striped symbology.
3. Projected Development Site 2 is outlined in blue striped symbology.



8. View of the Project Area looking south from 139th Street between 86th Avenue and 85th Drive and Manton Street.

Part II: TECHNICAL ANALYSIS

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

- If the proposed project can be demonstrated not to meet or exceed the threshold, check the "no" box.
- If the proposed project will meet or exceed the threshold, or if this cannot be determined, check the "yes" box.
- For each "yes" response, provide additional analyses (and, if needed, attach supporting information) based on guidance in the CEQR Technical Manual to determine whether the potential for significant impacts exists. Please note that a "yes" answer does not mean that an EIS must be prepared—it means that more information may be required for the lead agency to make a determination of significance.
- The lead agency, upon reviewing Part II, may require an applicant to provide additional information to support the Short EAS Form. For example, if a question is answered "no," an agency may request a short explanation for this response.

	YES	NO
1. *LAND USE, ZONING, AND PUBLIC POLICY*: CEQR Technical Manual Chapter 4		
(a) Would the proposed project result in a change in land use different from surrounding land uses?	☒	☐
(b) Would the proposed project result in a change in zoning different from surrounding zoning?	☒	☐
(c) Is there the potential to affect an applicable public policy?	☐	☒
(d) If "yes," to (a), (b), and/or (c), complete a preliminary assessment and attach. **See Attachment C, "Land Use, Zoning & Public Policy**		
(e) Is the project a large, publicly sponsored project?	☐	☒
○ If "yes," complete a PlaNYC assessment and attach.		
(f) Is any part of the directly affected area within the City's Waterfront Revitalization Program boundaries?	☐	☒
○ If "yes," complete the Consistency Assessment Form.		
2. *SOCIOECONOMIC CONDITIONS*: CEQR Technical Manual Chapter 5		
(a) Would the proposed project:		
○ Generate a net increase of 200 or more residential units?	☒	☐
○ Generate a net increase of 200,000 or more square feet of commercial space?	☐	☒
○ Directly displace more than 500 residents?	☐	☒
○ Directly displace more than 100 employees?	☐	☒
○ Affect conditions in a specific industry?	☐	☒
3. *COMMUNITY FACILITIES*: CEQR Technical Manual Chapter 6		
(a) Direct Effects		
○ 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		
○ **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)	☐	☒
○ **Public Schools:** Would the project result in 50 or more elementary or middle school students, or 150 or more high school students based on number of residential units? (See Table 6-1 in Chapter 6)	☒	☐
○ **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)	☐	☒
○ **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 more than 200 additional residents or 500 additional employees?	☒	☐
5. *SHADOWS*: CEQR Technical Manual Chapter 8		
(a) Would the proposed project result in a net height increase of any structure of 50 feet or more?	☒	☐
(b) Would the proposed project result in any increase in structure height and be located adjacent to or across the street from a sunlight-sensitive resource? **See Attachment D, "Shadows"**	☐	☒
6. *HISTORIC AND CULTURAL RESOURCES*: CEQR Technical Manual Chapter 9		

	YES	NO
(a) Does the proposed project site or an adjacent site contain any architectural and/or archaeological resource that is eligible for or has been designated (or is calendared for consideration) as a New York City Landmark, Interior Landmark or Scenic Landmark; that is listed or eligible for listing on the New York State or National Register of Historic Places; or that is within a designated or eligible New York City, New York State or National Register Historic District? (See the GIS System for Archaeology and National Register to confirm)	☐	☒
(b) Would the proposed project involve construction resulting in in-ground disturbance to an area not previously excavated?	☐	☒
(c) If "yes" to either of the above, list any identified architectural and/or archaeological resources and attach supporting information on whether the proposed project would potentially affect any architectural or archeological resources. **See Appendix IV, LPC confirmed that the Projected Development Site 1 (Block 9649, Lots 17/25/37) and Projected Development Site 2 (Block 9649, Lots 42/44) do not contain any architecturally nor archaeologically significant resources**		
7. *URBAN DESIGN AND VISUAL RESOURCES*: CEQR Technical Manual Chapter 10		
(a) Would the proposed project introduce a new building, a new building height, or result in any substantial physical alteration to the streetscape or public space in the vicinity of the proposed project that is not currently allowed by existing zoning?	☒	☐
(b) Would the proposed project result in obstruction of publicly accessible views to visual resources not currently allowed by existing zoning? **See Attachment E, "Urban Design & Visual Resources"**	☐	☒
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?	☐	☒
○ 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?	☒	☐
○ If "yes," complete the Jamaica Bay Watershed Protection Plan Project Tracking Form, and submit according to its instructions. **See Appendix I**		
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?	☒	☐
○ If "yes," were Recognized Environmental Conditions (RECs) identified? Briefly identify: **See Attachment B, "Supplemental Screening"**	☒	☐
(j) Based on the Phase I Assessment, is a Phase II Investigation needed? **See Attachment B, "Supplemental Screening"**	☒	☐
10. *WATER AND SEWER INFRASTRUCTURE*: CEQR Technical Manual Chapter 13		
(a) Would the project result in water demand of more than one million gallons per day?	☐	☒
(b) If the proposed project located in a combined sewer area, would it result in at least 1,000 residential units or 250,000 square feet or more of commercial space in Manhattan, or at least 400 residential units or 150,000 square feet or more of commercial space in the Bronx, Brooklyn, Staten Island, or Queens?	☐	☒
(c) If the proposed project located in a separately sewered area, would it result in the same or greater development than the amounts listed in Table 13-1 in Chapter 13?	☒	☐
(d) Would the proposed project involve development on a site that is 5 acres or larger where the amount of impervious surface would increase?	☐	☒
(e) If the project is located within the Jamaica Bay Watershed or in certain specific drainage areas, including Bronx River, Coney Island Creek, Flushing Bay and Creek, Gowanus Canal, Hutchinson River, Newtown Creek, or Westchester Creek, would it involve development on a site that is 1 acre or larger where the amount of impervious surface would increase?	☒	☐

	YES	NO
(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): **29,277 lbs/wk**		
○ 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): **62,146,099 Thousand BTUs**		
(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:		
○ 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.*	☐	☒
○ 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?	☐	☐
○ 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?	☒	☐
○ If "yes," would the proposed project exceed the thresholds in Figure 17-3, Stationary Source Screen Graph in Chapter 17? (Attach graph as needed) **See Attachment J, "Air Quality"**	☐	☒
(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 **See Attachment F, "Noise"**		
(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?	☒	☐
(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?	☐	☒

	YES	NO
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. **No significant unmitigated adverse impact is found in the CEQR analysis areas of air quality, water quality, hazardous materials, or noise; accordingly, no public health analysis is warranted.**		
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. **The Proposed Actions would not result in significant adverse impact in any CEQR analysis areas related neighborhood character. Additionally, the Proposed Actions and resultant project would not result in impact to any of the constituent elements of neighborhood character when considered together. Therefore, pursuant to Chapter 21, Section 200 of the *CEQR Technical Manual*, no further analysis of neighborhood character is warranted.**		
19. *CONSTRUCTION*: CEQR Technical Manual Chapter 22		
(a) Would the project's construction activities involve:		
○ Construction activities lasting longer than two years?	☒	☐
○ Construction activities within a Central Business District or along an arterial highway or major thoroughfare?	☒	☐
○ Closing, narrowing, or otherwise impeding traffic, transit, or pedestrian elements (roadways, parking spaces, bicycle routes, sidewalks, crosswalks, corners, *etc.*)?	☐	☒
○ Construction of multiple buildings where there is a potential for on-site receptors on buildings completed before the final build-out?	☒	☐
○ The operation of several pieces of diesel equipment in a single location at peak construction?	☐	☒
○ Closure of a community facility or disruption in its services?	☐	☒
○ Activities within 400 feet of a historic or cultural resource?	☐	☒
○ Disturbance of a site containing or adjacent to a site containing natural resources?	☐	☒
○ 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. **Refer to Attachment L, "Construction"**		

20. *APPLICANT'S CERTIFICATION*

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

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

APPLICANT/REPRESENTATIVE NAME	DATE
Philip Habib, P.E. | Philip Habib & Associates	3/6/2024

SIGNATURE



ATTACHMENT A

PROJECT DESCRIPTION

I. INTRODUCTION

The Applicant, RJ Capital Holdings LLC, is seeking zoning map and zoning text amendments ("Proposed Actions") that would affect a portion of Queens Block 9649, including Lots 17, 25, 37 (p/o), 42, 44 (p/o), and 53 (p/o), coterminous with the existing R6A/C1-4 zoning district mapped on the east side of Queens Boulevard between 84th Drive and 86th Avenue (the "Project Area"). The Proposed Actions would facilitate the development of an approximately 395,931-gross square foot (gsf) mixed-use residential and commercial building with up to 17-stories (175-feet tall) above grade and no below-grade levels (the "Proposed Project") at 138-23 Queens Boulevard (Queens Block 9649, Lots 17, 25, and 37; "Projected Development Site 1") in the Briarwood neighborhood of Queens Community District (CD) 8. The proposed zoning changes would affect a portion of a single block (Block 9649) and would map R8X with a C2-4 commercial overlay to a depth of 100 feet along the north side of 86th Avenue and 100-foot depth on the east side of Queens Boulevard, as well as establish a Mandatory Inclusionary Housing (MIH) area coterminous with the proposed R8X district. The proposed zoning changes would also create a new R6A/C2-4 district at a depth of 100 feet from 84th Drive, extending east to Manton Street from the newly created R8X district boundary. In addition, the proposed zoning changes would eliminate the existing C1-4 overlay mapped along 139th Street beyond 100 feet from 86th Avenue.

The Applicant intends to build a new 17-story, 175-foot tall (up to 195 feet including mechanical bulkhead) mixed-use residential and commercial building with a floor area ratio (FAR) of 6.64, which would consist of 311,154-gsf (287,817-zoning square feet; zsf) of residential space for a total of 311 dwelling units (DUs), 33,020-gsf (30,554-zsf) of local retail space that would occupy a portion of the ground floor, and 132-space above-grade accessory parking garage on a portion of the second floor, which would be accessible via a ramp entrance from an existing curb cut on 139th Street. Projected Development Site 1 would include 311 DUs, 25-30% (78-93 DUs) of which would be affordable pursuant to MIH at an average of 60-80% AMI depending on the basic MIH Option selected.[1] Given that the Proposed Project would maximize the allowable building height and nearly maximizes the allowable blended FAR at the site under the proposed zoning changes, the future With-Action scenario, or reasonable worst-case development scenario (RWCDS), for the Proposed Actions is largely consistent with the Applicant's development proposal for Projected Development Site 1. However, the With-Action RWCDS assumes a smaller DU size with an average DU size of 850 zsf for all DUs. As such, under the RWCDS, the With-Action development at Projected Development Site 1 would include a 17-story (approximately 175-foot roof height; 195-foot bulkhead height), mixed-use building containing 339 total DUs (average DU size of 850 zsf), of which 25-30% (85-102 DUs) percent would be affordable pursuant to MIH, and 33,020-gsf of ground floor local retail, as well as 132-space above-grade accessory parking garage accessible via an existing curb cut. No below-grade levels would be constructed at the site.

In addition, for RWCDS analysis purposes, it is assumed that the proposed zoning changes would allow for redevelopment of Block 9649, Lots 42/44 ("Projected Development Site 2"), which are not under the Applicant's control, pursuant to the proposed zoning regulations. As described further below, Projected

[1] For the purposes of Early Childhood Programs analysis in the EAS, 20% (62 DUs) of residential floor area is assumed to be affordable at or below 60% AMI.

Development Site 2 is expected to be improved with a 17-story (175-feet tall; up to 195 feet including mechanical bulkhead) approximately 134,225-gsf (105,384-zsf) mixed-use residential and commercial building, including approximately 101,138-gsf (93,553-zsf) of residential use containing 110 DUs, of which 28 affordable DUs – 25 percent -- under Option 1 of MIH, or 33 affordable DUs– 30 percent – under MIH Option 2, and 12,790-gsf (11,831-zsf) of ground floor local retail, as well as 40 accessory parking spaces in a second floor garage. In total, the RWCDS assumes that the two projected development sites would introduce up to approximately 449 DUs (of which 25-30 percent (approximately 113-135 DUs) would be affordable), 48,810-gsf of retail uses, and 172 accessory parking spaces. It is expected that the two projected development sites would be completely constructed and fully occupied by 2028.

This attachment provides a summary and description of the Proposed Actions, including rezoning area, development sites, existing conditions, project's purpose and need, RWCDS under future No-Action and future With-Action conditions, and the governmental approvals required. The attached supplemental studies examine the potential for the Proposed Actions to result in impacts in any City Environmental Quality Review (CEQR) technical areas, including separate attachments with analyses of land use, zoning, and public policy, socioeconomic conditions, community facilities, open space, shadows, urban design and visual resources, water and sewer infrastructure, air quality, noise, and construction, in **Attachments C through L**, respectively. All others either screened out in the EAS Form or warranted preliminary screening assessments, which are summarized in **Attachment B, "Supplemental Screening."**

The New York City Department of City Planning is proposing a citywide zoning text amendment, the City of Yes for Housing Opportunity "CHO" (CEQR No. 24DCP033Y) to expand opportunities for housing within all zoning districts, and across all 59 of the City's Community Districts. These changes to the City's Zoning Resolution would enable more housing and a wider variety of housing types in every neighborhood, from the lowest density districts to the highest, to address the housing shortage and high cost of housing in New York City. It is anticipated that this proposed zoning text amendment would be referred into public review in spring 2024. Given that this project may be affected by the proposals included in the proposed zoning text amendment, a technical memorandum has been included in **Appendix V** that assesses whether the conclusion of the environmental review would by altered by CHO.

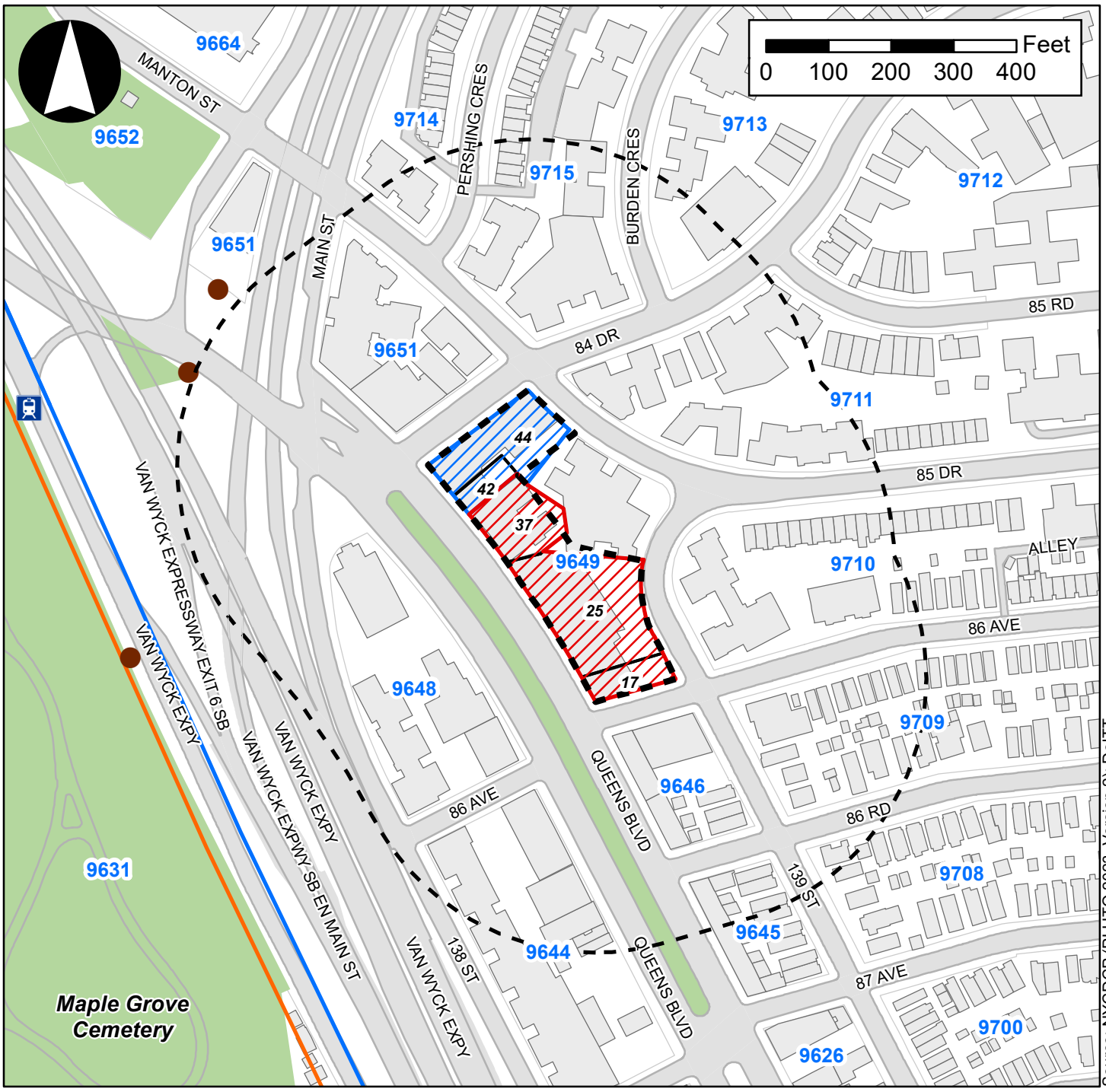
II. EXISTING CONDITIONS

Directly Affected Area

The directly affected area (or "Project Area") is coterminous with the Proposed Rezoning Area and comprises the majority of a single, irregular-shaped block in Central Queens located on the east side of Queens Boulevard between 84th Drive and 86th Avenue (see **Figure A-1**). It includes approximately 68,994 sf, consisting of portions of six privately-owned tax lots on Block 9649, including Lots 17, 25, 37 (p/o), 42, 44 (p/o), and 53 (p/o), which comprise the block bounded by 84th Drive to the north, Manton and 139th Streets to the east, 86th Avenue to the south, and Queens Boulevard to the west.

The Project Area is mapped within an R6A residential zoning district with a C1-4 commercial overlay that is mapped to a depth of 100-feet on Queens Boulevard, 84th Drive, 86th Avenue, and a portion of 139th Street on the subject block. R6A is a medium-density contextual residential district that allows a maximum residential FAR of 3.0 and requires residential buildings to conform to Quality Housing regulations. The C1-4 overlay allows a maximum commercial FAR of 2.0 in R6 districts.

Figure A-1
Project Location Map



Legend

- Project Area
- Projected Development Site 1
- Projected Development Site 2
- 400-Foot Radius
- E Train
- F Train
- Briarwood Subway Station (E & F Trains)
- Subway Entrances
- 9649 Tax Blocks
- Existing Building Footprints
- Open Space



As shown in **Figure 3** in the **EAS Form**, the Project Area has approximately 465 feet of frontage along the east side of Queens Boulevard, 201 feet of frontage along the south side of 84th Drive, 133 feet of frontage along the north side of 86th Avenue, and 200 feet of frontage along the west side of 139th Street. Queens Boulevard is defined as a wide street with a mapped width of 150 feet, whereas the other three bounding streets are considered narrow streets pursuant zoning with mapped widths of less than 75 feet. Queens Boulevard is a major six-lane, two-way arterial street running north-south directly to the west of the Project Area. 84th Drive is a two-lane, two-way local street containing 70 feet in total width, running east-west to the north of the Project Area. Manton Street is a two-lane, two-way, 60-foot wide local street that runs northwest southeast and forms the northeast boundary of Block 9649. 139th Street is a northbound one-lane, one-way local street of 60 feet in total width (narrow street) which curves to intersect with 85th Drive to the east of the Project Area. The streets that border the Project Area are curved and irregular-shaped (i.e., they do not meet at right angles), resulting in lots with variable size and shape.

The Project Area is occupied by five single-story attached commercial buildings which contain a variety of local retail uses. The buildings were constructed from approximately 1941 to 1957, and range in size from approximately 2,530 gross square feet (gsf) to approximately 19,751 gsf. The total built area of these buildings is approximately 52,141 gsf. The Floor Area Ratio (FAR) of the existing buildings ranges from approximately 0.54 to approximately 0.82, and all are substantially underbuilt pursuant to the Project Area's existing R6A/C1-4 zoning. All five of the existing buildings have frontage along Queens Boulevard, for a total of approximately 465 feet of frontage. In addition, the building on Lot 44 has approximately 200 feet of frontage along 84th Drive at the northern boundary of the Project Area. There is an accessory parking lot with approximately 25 spaces at the rear of Lots 17 and 25.

Projected Development Site 1 (Applicant-owned Property; Block 9649, Lots 17, 25, 37)

The Applicant-owned, approximately 47,970-sf Projected Development Site 1 comprises the western and southern portions of Block 9649. It consists of three, irregular-shaped lots (Lots 17, 25, and 37) that have frontage on Queens Boulevard, 86th Avenue, and 139th Street. Lot 17 is rectangular corner lot that comprises the southernmost portion of the site and includes 5,670-sf of lot area with approximately 42-feet frontage on Queens Boulevard and 139th Street and 133-feet of frontage on 86th Street. Lot 25 comprises an irregular-shaped 24,430-sf through lot with 223 feet of frontage on Queens Boulevard and 200 feet of frontage on 139th Street. Lot 37 is an irregular-shaped interior lot that comprises 11,800-sf of lot area with approximately 95 feet of frontage on Queens Boulevard.

Projected Development Site 1 is occupied by three attached, single story commercial buildings ranging in size from 3,536 gsf to 19,751 gsf. The commercial buildings are built to the street line and are oriented along Queens Boulevard. They accommodate local retail and neighborhood service uses, such as a supermarket, catering hall, restaurants, dry cleaners, and pharmacies. All of the retail uses have their main entrances along Queens Boulevard with at-grade, off-street accessory parking lot located in the rear of the buildings on portions of Lots 17 and 25. The off-street accessory parking is accessible from a curb cut on 86th Street and another curb cut on 139th Street.

Projected Development Site 2 (not applicant-owned; Block 9649, Lots 42, 44)

Projected Development Site 2 consists of two privately-owned tax lots (Lots 42/44), under separate ownership, that comprise the northern 20,978-sf portion of Block 9649. Lot 44 is L-shaped and includes 17,025 sf of lot area with frontage on Queens Boulevard, 84th Drive, and Manton Street. It contains a single-story, approximately 16,100 gsf commercial store building that is occupied by a number of local

retail, restaurants and neighborhood services. Lot 42 is a rectangular tax lot that includes 4,000 sf of lot area with 40-feet of frontage on Queens Boulevard. It is occupied by a single-story, approximately 2,530-sf store building that accommodates three local retail stores/services.

Remainder of the Project Area

The remaining lot (Lot 53) at 85-02 Manton Street is partially included in the Project Area and is not under the control of the Applicant. This privately-owned lot is irregularly shaped with frontages along Manton and 139th Streets. It includes 27,400 sf of lot area and contains a six-story, approximately 100,970 sf elevator apartment building with ground professional offices, 80 DUs and an accessory parking garage. Most of Lot 53 is located outside of the Project Area and is zoned R6A. Only small portions of Lot 53 comprising roughly 800 sf is in the Project Area (less than 3 percent of the lot area).

Surrounding Area and Context

The Project Area is in the Briarwood neighborhood of Queens. As shown in **Figure A-2**, land uses near the Project Area are varied, and consist of a mix of residential, commercial, mixed-use commercial and residential, and institutional. The area to the east of the Project Area is residential. Residential uses include one-and two-family detached houses that occupy narrow rectangular-shaped tax lots, as well as multifamily elevator and walkup apartment buildings that occupy larger lots.

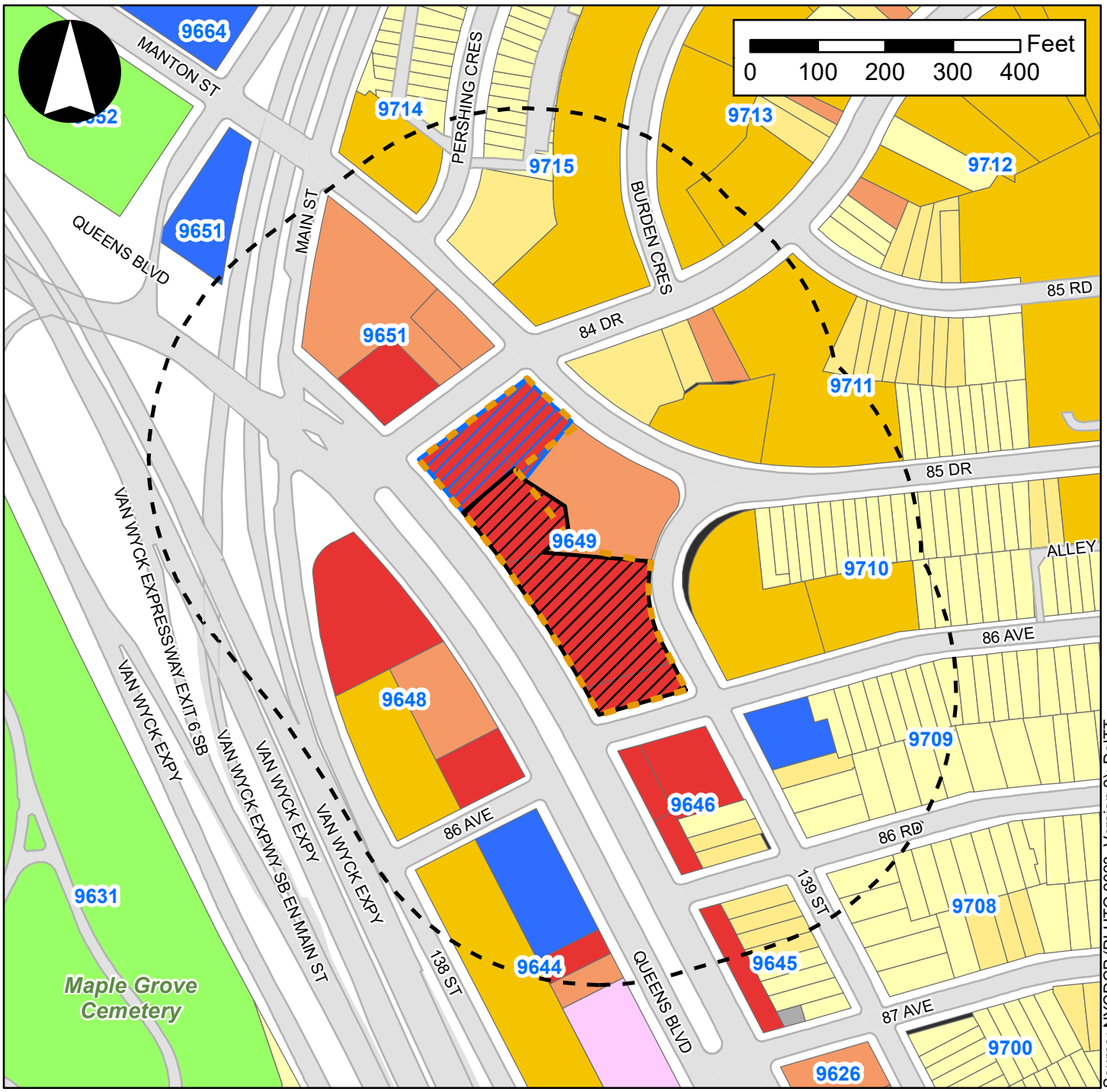
Commercial uses consist largely of local neighborhood retail establishments, which line Queens Boulevard and include low-rise single story buildings and the ground floors of mixed-use residential and commercial buildings, as well as commercial offices.

Further to the north of the Project Area is Hoover-Manton Playgrounds and the Archbishop Molloy High School at 83-53 Manton Street. The Van Wyck Expressway is located approximately 300 feet to west of the Project Area. The Van Wyck Expressway (I-678) is a vital transportation corridor providing access to and from the John F. Kennedy (JFK) International Airport, which is a major international gateway to the United States. The Van Wyck is a limited access highway that extends for 14 miles through both Queens and the Bronx with three travel lanes in each direction. Just beyond the 400-foot radius from the Project Area to the west of the Van Wyck Expressway is the southeastern portion of the expansive Celebration Hall Maple Grove Cemetery, which is a historic 65-acre cemetery located at 127-15 Kew Gardens Road.

The nearest subway station is the below-grade Briarwood-VanWyck E and F subway station located 1.5 blocks north of the Project Area at the intersection of 84th Drive, Main Street, Queens Boulevard and the Van Wyck Expressway. The E subway line operates between Jamaica Center-Parsons/Archer in Jamaica, Queens and the World Trade Center in Lower Manhattan. The F subway line provides service between Jamaica-179th Street in Queens and Coney Island-Stillwell Avenue/Surf Avenue in Brooklyn via Manhattan and stops at the Briarwood Station at all times, whereas the E train stops here during the evenings, late nights and weekend. During the weekdays, the E service operates express in Queens and bypasses this station.

There are a few buses that travel along Queens Boulevard near the Project Area: the Q20A, Q20B, Q60, SBS44, and X68. The Q20A/Q20B provide local service between College Point and Jamaica via 20th Avenue/Main Street. The Q60 provides local service between South Jamaica and East Midtown Manhattan via Sutphin Boulevard/Queens Boulevard. The Q20A/20B and Q60 have a stop on Queens Boulevard adjacent to the Project Area. The Q44-SBS provides select bus service between the Bronx Zoo

Figure A-2
Land Use Map



Legend

- Project Area
- 400-Foot Radius
- Projected Development Site 1
- Projected Development Site 2

Land Use

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

in the Bronx and Jamaica via Main Street and Cross Bronx Service Road. The X68 offers express bus service that operates only during the week between Floral Park, Queens and Midtown Manhattan via Hillside Avenue and Queens Boulevard in Queens. Both the Q44 SBS and X68 have a stop to the north of the Project Area on Queen Boulevard.

The Project Area is also well served by the street network. Queens Boulevard fronts the Project Area's western edge. It is a major two-way, divided north-south thoroughfare in Queens that extends for approximately 7.5-miles and connects Midtown Manhattan via the Queensborough Bridge to Jamaica, Queens. Near the Project Area, Queens Boulevard is approximately 150 feet wide with three traffic and a park lane in each direction and features a central median with trees and an interior landscaped walkway enclosed by wrought iron fencing. 86th Avenue fronts the Project Area's southern frontage and is a narrow, 60 foot wide, two-way, east-west bound road that extends between the Wan Wyck Expressway on the west to 143rd Stret on the east. 84th Drive borders the Project Area to the north. It is a narrow 70-foot wide east-west bound two-way road that extends between Queens Boulevard and 164th Street. Manton and 139th Street border the Project Area to the east and are narrow 60-foot wide local streets. Manton Street is a two-way north-south street extending between 83rd Avenue and 85th Drive/139th Street. 139th Street extends for one block between 86th Avenue and Manton Street/85th Drive and is one-way northbound. The Van Wyck Expressway is located one block to the west of the site. It is a 14-mile interstate limited access highway (I-678) that extends through portions of Queens and the Bronx.

Zoning

As shown in **Figure A-3**, the Project Area is in a R6A/C1-4 commercial zoning district. R6A contextual zoning districts permit all types of residences at a maximum FAR of 3.0, require a street wall between 40-60 feet and have a maximum height of 70 feet. This district typically produces six-or seven-story apartment buildings built near the street line with little to no setbacks. Community facilities are permitted up to a FAR of 3.0. Off street parking is required for 50 percent of dwelling units.

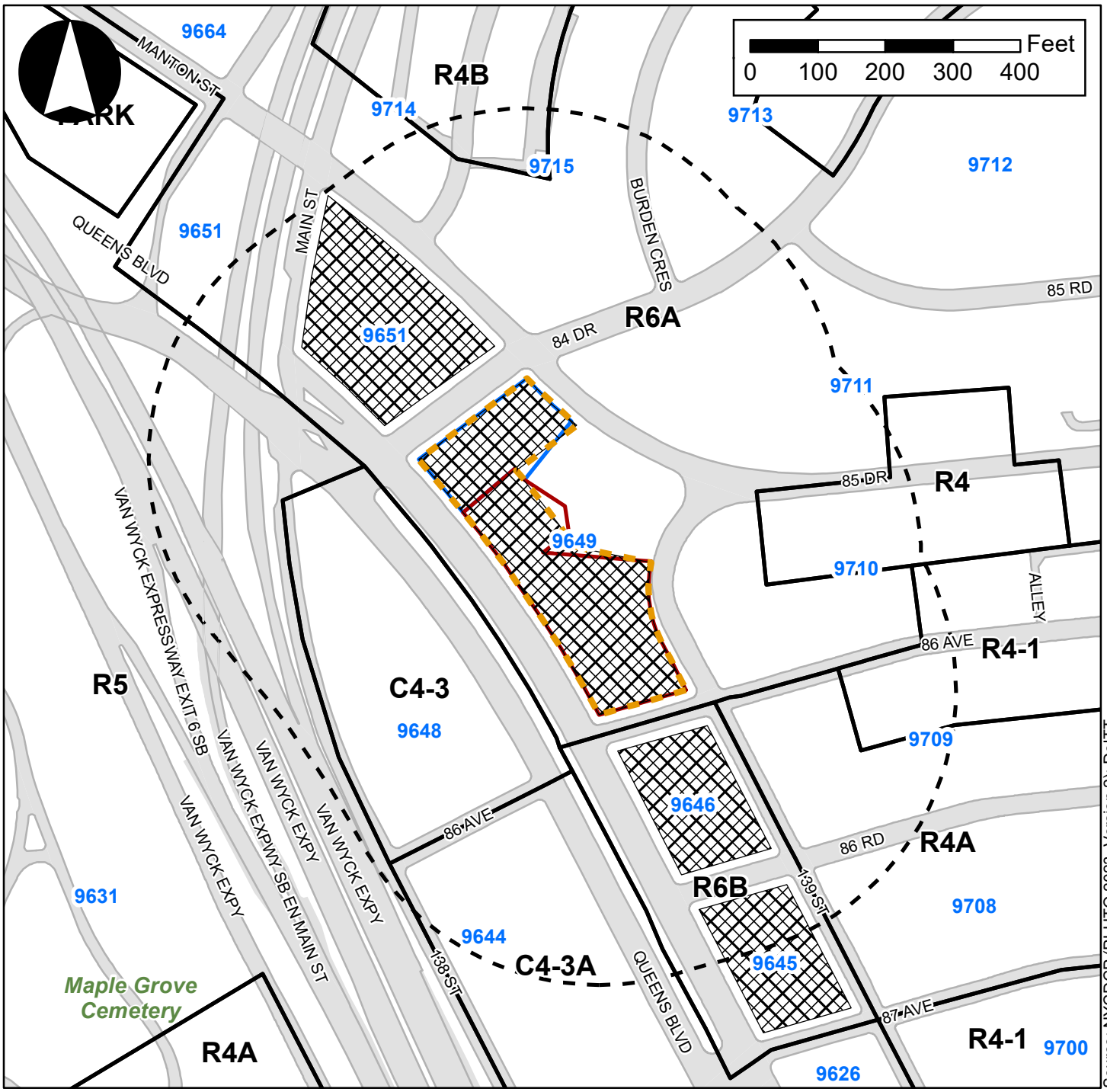
The surrounding area is primarily zoned for low- and moderate-density residential uses with R4B and R6A mapped to the north, R4 and R4-1 to the east, and R4A and R6B to the south. C1-4 commercial overlays are mapped along the east side of Queens Boulevard and C4-3 and C4-3A central commercial districts are mapped on the west side of Queens Boulevard.

III. THE PROPOSED ACTIONS

The Applicant's development proposal for 138-23 Queens Boulevard requires the following discretionary land use actions:

- ***Zoning Map Amendments*:** The Applicant is proposing zoning map amendments to rezone an approximately 68,994-sf portion of Queens Block 9649, which includes Lots 17, 25, 37 (p/o), 42, 44 (p/o), and 53 (p/o), coterminous with the existing R6A/C1-4 zoning district mapped on the east side of Queens Boulevard between 84th Drive and 86th Avenue. The proposed zoning change would establish an R8X/C2-4 district that would extend along the eastern and southern blockfronts of Block 9649. As shown in **Figure A-4**, the proposed R8X/C2-4 district would be mapped to a depth of approximately 100 feet from the north side of 86th Avenue and 100 feet from the east side of Queens Boulevard. The Proposed Actions would also create a new R6A/C2-4 district at a depth of 100 feet from 84th Drive, extending east to Manton Street from the newly created R8X district boundary, which would replace existing C1-4 overlay and would eliminate

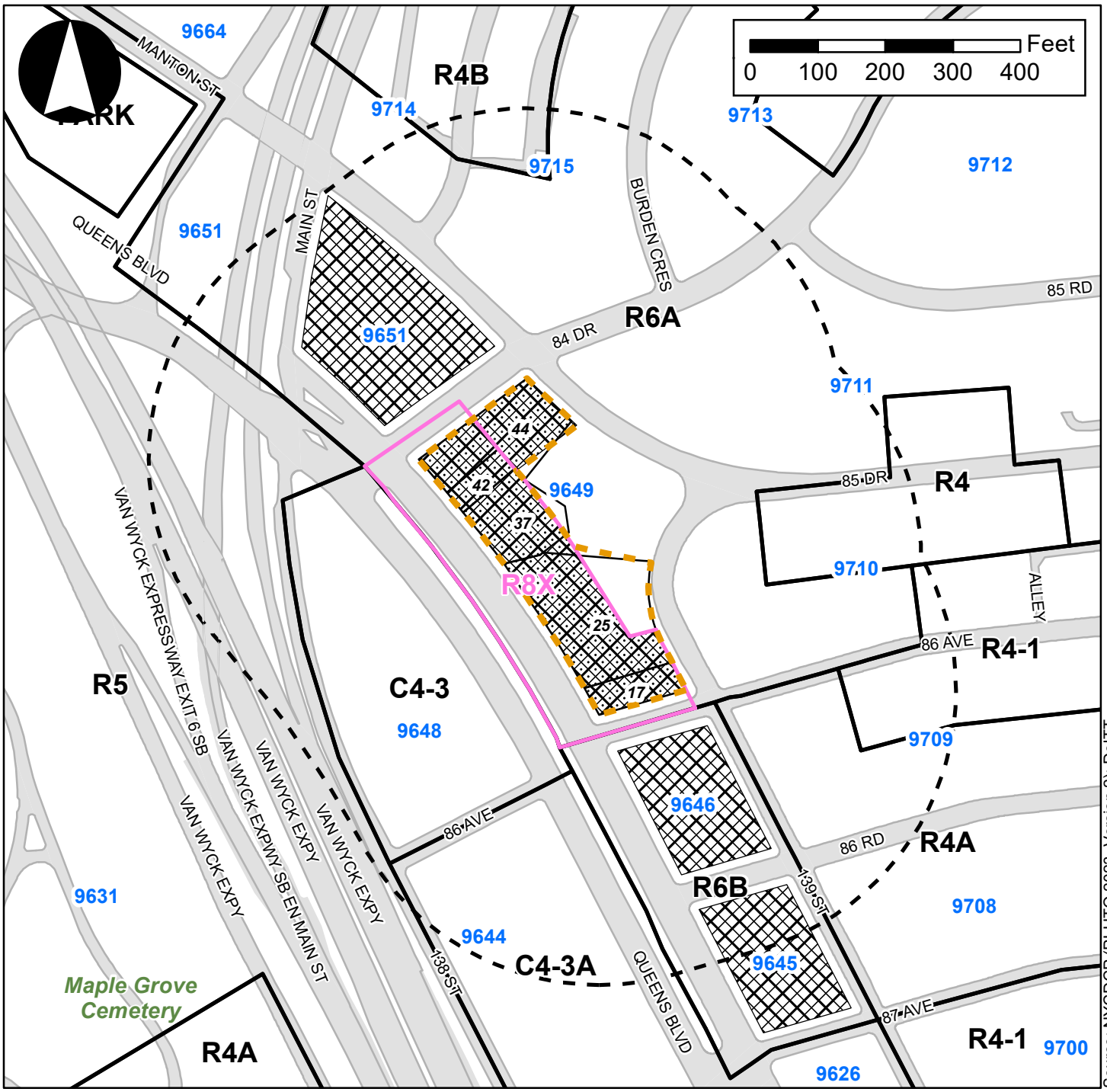
Figure A-3
Zoning Map



Legend

- Project Area
- 400-Foot Radius
- Projected Development Site 1
- Projected Development Site 2
- R6A — Existing Zoning District Boundaries
- C1-4 Overlay

Figure A-4
Proposed Zoning Map



Legend

- Project Area
- 400-Foot Radius
- R6A — Existing Zoning District Boundaries
- C1-4 Overlay
- Proposed R8X Zoning District
- Proposed C2-4 Overlay

the existing C1-4 overlay mapped along 139th Street beyond 100 feet from 86th Avenue (this area would continue to be zoned R6A). **Table A-1** compares the use and bulk requirements under the existing and proposed zoning districts. The proposed R8X district would increase the maximum allowable residential and community facility density as well as increase maximum base height and maximum building height, permitting a maximum building height of 175 feet with a qualifying ground floor. The R8X district also would reduce the accessory parking requirements. Off-street accessory parking would be required for 40 percent of a building's residential units as compared to 50 percent under R6A, but requirements are lower for income-restricted housing units.

Table A-1: Comparison of Allowable Uses and Maximum FAR for the Existing and Proposed Zoning

	Existing Zoning	Proposed Zoning		
Zoning District	**R6A/C1-4**	**R8X/C2-4**	**R6A**	**R6A/C2-4**
Use Groups	UG 1 to 4, 5 and 6	UG 1 to 4, 5 to 9, 14	UG 1 to 4	UG 1 to 4, 5 to 9, 14
Maximum FAR				
Residential	3.0	7.2 with MIH	3.0	3.0
Community Facility	3.0	6.0	3.0	3.0
Commercial	2.0	2.0	N/A	2.0
Manufacturing	N/A	N/A	N/A	N/A

Source: *Zoning Resolution of the City of New York.*
Notes: The MIH area sets a new maximum permitted residential FAR that supersedes the FAR permitted by the underlying zoning district. With both the designation of the proposed rezoning area as an MIH area and its rezoning to R8X/C2-4 zoning district, the maximum permitted residential FAR within the proposed R8X/C2-4 would be 7.2, and the maximum building height would be up to 175 feet with qualifying ground floor.

- ***Zoning Text Amendment:*** The Applicant is proposing zoning text amendments to Appendix F of the *Zoning Resolution (ZR) of the City of New York* to establish the proposed R8X/C2-4 district as a Mandatory Inclusionary Housing (MIH) designated area. The establishment of the MIH designated area would require a share of new housing to be permanently affordable where significant new housing capacity would be created. At this time, the Applicant is seeking to designate the proposed rezoning area as MIH area with Option 1. Under MIH Option 1, 25 percent of a MIH development's residential floor area must be income restricted.

IV. PURPOSE AND NEED FOR THE PROPOSED ACTIONS

The proposed zoning changes would map a R8X zoning district and C2-4 commercial overlay on the eastern and southern portions of the block, which would increase the allowable residential density at a scale and bulk appropriate for a wide street near public transportation. The proposed R8X is a contextual zoning district which would continue to limit height and allow for residential growth along a major north-south street corridor in Queens. It would also maintain a commercial overlay, replacing the existing C1-4 with C2-4.

The Proposed Actions would facilitate the redevelopment of the Applicant-owned projected development site 1 (Block 9649, Lots 17, 25 and 37) for a mixed use residential and commercial development along Queens Boulevard, which is a major six-lane, two-way arterial street that supports a variety of uses. The Proposed Actions would be consistent with existing land uses and reflective of the broader Queens Boulevard corridor, as most of the uses surrounding the Project Area consists of residential uses and Queens Boulevard is more mixed-use supporting a variety of local neighborhood retail establishments,

including low-rise single story buildings and the ground floors of mixed-use residential and commercial buildings, as well as commercial offices. The Proposed Actions would promote and reaffirm a mixed-use live-work neighborhood, by balancing the preservation of neighborhood scale and allowing a moderate increase in density along a wide street with the opportunity to increase mixed-income housing. In addition, eliminating the C1-4 overlay along 139th Street beyond 100 feet from 86th Avenue would preclude the introduction of commercial uses on the residential side street, which could help maintain the consistency of the built environment and preserve the residential character.

The Proposed Actions are intended to facilitate the development of new housing, including much-needed affordable housing units, in an area where there is a strong demand, and which is near public transportation. As described above, the Briarwood-VanWyck E and F subway station is located 1.5 blocks north of the Project Area at the intersection of 84th Drive, Main Street, Queens Boulevard and the Van Wyck Expressway. The area is also well served by several bus lines and well served by the street network. The proposed zoning text amendment, which would designate the proposed R8X/C2-4 district as a MIH area, would require the construction of permanently affordable residential units on the Applicant-owned and controlled site. These required permanently affordable units at the site would help to address affordable housing goals set forth by the City in *Housing New York 2.0*. The proposed zoning text amendment would be aligned with Queens Community Board 8's identified need for affordable housing. The creation of new affordable housing supply at various income levels helps to alleviate the upward pressure on housing prices and contributes to housing affordability in the surrounding area and larger City.

V. PROPOSED PROJECT

Projected Development Site 1 (Block 9649, Lots 17/25/37; the Proposed Project) at 138-23 Queens Boulevard would be developed with a new 17-story, mixed-use commercial and residential building, which would replace the three existing single-story commercial buildings. Refer to **Figure A-5** for an illustrative site plan of the Proposed Project, and **Figure A-6** for an illustrative schematic section of the Proposed Project. The Proposed Project would be built to the maximum allowable height with a qualifying ground floor (175-foot roof height; 195-foot bulkhead height) and would come close to the maximum permitted blended FAR at the site (6.64 FAR as compared to a maximum allowable blended FAR of 6.65). It would include approximately 311,154 gsf (287,817 zoning square feet [zsf], equivalent to 6.00 FAR) of residential space consisting of 311 total dwelling units (DUs) at a factor of approximately 1,000 gsf per DU (925 zsf per DU). The Proposed Project would also include approximately 33,020 gsf (30,554 zsf, 0.64 FAR) of ground-floor local retail space and 132-space above-grade accessory parking garage on the building's second floor. The Proposed Project would not include a cellar.

Depending on the MIH Option selected during ULURP, either 25% (approximately 78 DUs) or approximately 30% (approximately 93 DUs) of the residential floor area would be designated as permanently affordable pursuant to MIH. The Applicant intends to pursue MIH Option 1, which would result in approximately 78 DUs designated as permanently affordable at an average of 60 percent of Area Median Income (AMI). The Proposed Project would total approximately 395,931 gsf (318,361 zsf, 6.64 FAR).

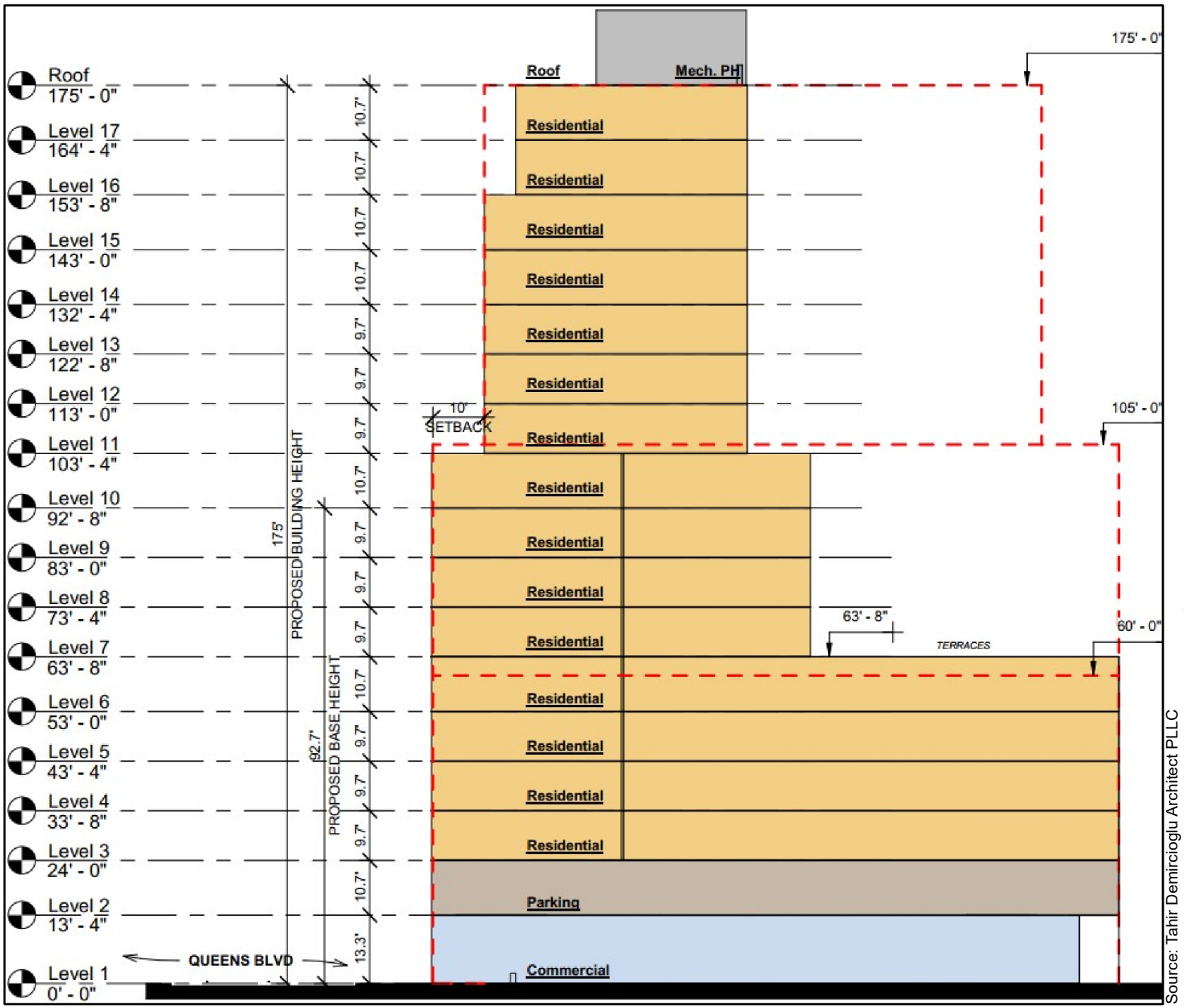
Given that the Proposed Project nearly maximizes the allowable FAR under the proposed zoning, the RWCDS for the Proposed Actions is largely consistent with the Applicant's development proposal for Projected Development Site 1. However, the With-Action RWCDS assumes a smaller DU size with an average DU size of 850 zsf for all DUs as compared to 1,000 gsf per DU.

Figure A-5
Illustrative Site Plan - Projected Development Sites 1 and 2



Legend

- Project Area
- Projected Development Site 1
- Projected Development Site 2
- Proposed Development Entrances
- Projected Development Site 2 Entrances



Source: Tahir Demircioglu Architect PLLC
Note: For Illustrative Purposes Only. Drawing is Not to Scale.

Figure A-6
Illustrative Schematic Section Looking North from 86th Avenue - Proposed Development

VI. ANALYSIS FRAMEWORK

It is anticipated that the Proposed Actions would be certified into ULURP in 2025. Assuming completion of the ULURP process in 2025 after an approximately seven-month period, and a period of approximately 30-months of construction, completion and occupancy of Projected Development Site 1 is expected to occur by 2028. In addition to the Proposed Project, an additional projected development site (Projected Development Site 2) has been identified in the Project Area that is likely to be developed because of the Proposed Actions (Lots 42/44). However, as described below, no formal redevelopment plans exist for the site. Nonetheless, the site meets the CEQR soft site criteria and, as such, is assumed to be redeveloped by 2028. This reflects a reasonable estimate of the time needed for the site to demolish the existing structures on Lots 42/44, design the project, obtain design approvals, and construct the project. Accordingly, this environmental review will use 2028 as the Build Year for analysis of future conditions consistent with *CEQR Technical Manual* guidance.

Identification of Development Sites

According to the *CEQR Technical Manual,* the following factors, commonly referred to as "soft site criteria," are generally considered when evaluating whether some amount of development would likely be constructed by the build year as a result of the Proposed Actions:

- The uses and bulk allowed: Lots located in areas where changes in use would be permitted and/or contain buildings built to substantially less than the maximum allowable floor area ratio (FAR) under the existing zoning are considered "soft" enough such that there would likely be sufficient incentive to develop in the future, depending on other factors specific to the area (e.g., the amount and type of recent as-of-right development in the area, recent real estate trends, site specific conditions that make development difficult, and issues relating to site control or site assemblage that may affect redevelopment potential); and

- Size of the development site: Lots must be large enough to be considered "soft." Generally, lots with a small lot size are not considered likely to be redeveloped, even if currently built to substantially less than the maximum allowable FAR. A small lot is often defined for this purpose as 5,000 square feet or less, but the lot size criteria is dependent on neighborhood specific trends, and common development sizes in the study area should be examined prior to establishing these criteria.

However, the following uses and types of buildings that meet the soft site criteria are typically excluded from development scenarios because they are unlikely to be redeveloped as a result of the Proposed Actions:

- Full block and newly constructed buildings with utility uses, as these uses are often difficult to relocate;

- Lots where construction is actively occurring, or has recently been completed, as well as lots with recent alterations that would have required substantial capital investment, unless recently constructed or altered lots were built to less than or equal to half of the maximum allowable FAR under the proposed zoning;

- Lots whose location or irregular shape would preclude or greatly limit future as-of-right development. Generally, development on irregular lots does not produce marketable floor space;

- Long-standing institutional uses with no known development plans; or

- Residential buildings with six (6) or more units and constructed before 1974. These buildings are likely to be rent-stabilized and difficult to demolish due to tenant re-location requirements.

Definition of Projected and Potential Development Sites

To produce a reasonable, conservative estimate of future growth identified development sites are typically divided into two categories: projected development sites and potential developments. Projected development sites are considered more likely to be developed within the analysis period for the Proposed Actions (i.e., by 2028), while potential sites are considered less likely to be developed over the same period.

Projected Development Site 1

The Applicant-owned site (Lots 17/25/37) is considered a projected development site, as in the future with the Proposed Actions the Applicant intends to redevelop the site with a 17-story mixed-use commercial and residential building, as detailed above.

Projected Development Site 2 (Not Applicant-Owned)

Lots 42/44 comprise approximately 20,978 sf and is a rectangular-shaped site with frontage along Queens Boulevard, 84th Drive, and Manton Street. It is currently occupied by two single-story commercial retail buildings with FARs of less than 1.0 built well below 50 percent of the maximum allowable FAR in the future with the Proposed Actions. As such, it is expected that Lots 42/44 would be redeveloped to the maximum allowable blended FAR[2] in the future with the Proposed Action. The With-Action development would have a building height of up to 175 feet tall including qualifying ground floor and no below-grade levels. In the future with the Proposed Actions, the existing structures on Lots 42/44 would be demolished, and the lots would be redeveloped with an approximately 134,225-gsf mixed-use residential building with ground floor local retail (refer to **Table A-2**). Projected Development Site 2 would include approximately 101,138-gsf of residential use (110 DUs; 28-33 affordable DUs under MIH Option 1 or 2) and 12,790-gsf of local retail use. Forty accessory parking spaces would be provided in an enclosed garage on a portion of the building's second floor. No below-grade levels would be provided.

Remainder of Project Area

As discussed above, the remaining lot (Lot 53) at 85-02 Manton Street is only partially included in the Project Area and is not under the control of the Applicant. Approximately 2.9 percent of the 27,400 sf lot is included in the area to be rezoned. It is improved with a six-story, approximately 100,970 sf elevator apartment building (3.68 FAR) with ground professional offices, 80 DUs and an accessory parking garage. As such, it would not meet the CEQR threshold of a soft site and is not considered a development site.

[2] The maximum allowable FAR on Projected Development Site 2 under the proposed zoning would be a blended FAR (R8X[MIH]/C2-4 and R6A/C2-4) with the MIH bonus applied proportionally.

As such, for RWCDS purposes, only two projected development sites have been identified in the directly affected area. The Applicant-owned site (Projected Development Site 1), along with one additional projected development site (Projected Development Site 2), which are discussed above, represent the RWCDS for analysis purposes. Lot 53 is not projected to be redeveloped as a result of the Proposed Actions and is not considered a development site.

Future without the Proposed Actions (No-Action Condition)

In the 2027 No-Action condition, the Project Area's existing R6A/C1-4 zoning would remain in place. Absent the Proposed Actions (the "No-Action condition"), it is assumed that development would occur on an as-of-right basis on both identified Projected Development Sites, given that both development sites are underbuilt at less than half the allowable FAR pursuant to the existing R6A/C1-4 zoning. No changes would occur to the existing residential building on Lot 53.

On the Applicant-owned Projected Development Site 1 (Lots 17, 25, and 37), the Applicant would demolish the existing single-story commercial buildings and construct an as-of-right mixed-use residential and commercial development. The No-Action development on Projected Development Site 1 would consist of a seven-story (approximately 75-foot tall; 85-foot bulkhead height), mixed-use commercial and residential building containing approximately 122,550 gsf (113,359 zsf, 2.36 FAR) of residential space, consisting of 133 total DUs. The building would also contain approximately 33,020 gsf (30,544 zsf, 0.64 FAR) of ground-floor local retail space, and approximately 67 accessory parking spaces located in a second-floor garage, for a total of approximately 207,327 gsf (143,903 zsf, 3.00 FAR). The building would not contain a cellar.

The non-Applicant-owned Projected Development Site 2 would be developed on an as-of-right basis in the No-Action condition. The existing single-story commercial buildings would be demolished, and the development site would be developed with a seven-story (approximately 75-foot roof height; 85-foot bulkhead height) mixed-use commercial and residential building containing approximately 51,921 gsf of residential space (47,201 zsf, 2.25 FAR), consisting of approximately 56 total DUs. The building would also contain approximately 18,094 gsf (15,734 zsf, 0.75 FAR) of ground floor local retail space, and approximately 31 accessory parking spaces located in a second-floor garage, for a total of approximately 78,414 gsf (62,934 zsf, 3.00 FAR). The same as in the With-Action Scenario, the building would have an above-grade parking garage and no cellar. The No-Action developments on both Projected Development Sites would maximize the allowable 3.0 FAR on each development site.

In total, in the future without the Proposed Actions, it is expected that Projected Development Sites 1 and 2 will contain a total of approximately 285,741 gsf (206,837 zsf) of built space, composed of approximately 189 total DUs (174,471 residential gsf [160,560 zsf]), approximately 51,114 gsf (46,278 zsf) of commercial (local retail) space, and approximately 103 accessory parking spaces in two seven-story (approximately 75-foot roof height; 85-foot bulkhead height) buildings.

Future with the Proposed Actions (With-Action Scenario)

In the future with the Proposed Actions (With-Action condition), the proposed zoning map and zoning text amendments would be approved. As such, R8X (MIH)/C2-4 zoning district would be mapped on most of Block 9649 bounded by 84th Drive to the north, Manton and 139th Street to the east, 86th Avenue to the south, and Queens Boulevard to the west, replacing the existing R6A/C1-4 zoning. Under the With-Action conditions, the maximum allowable FAR in the proposed R8X district would increase to 7.2 FAR when fully utilizing the additional FAR under the MIH Program.

Projected Development Site 1

As detailed above, the Applicant-owned Lots 17/5/37 is considered a projected development site, as in the future with the Proposed Actions the Applicant intends to redevelop the site with mixed-use residential and commercial building with 17-stories and no below grade levels. For RWCDS purposes, the Applicant's development proposal assumes close to the maximum allowable blended FAR (an FAR of 6.64 as compared to 6.65 FAR) and would maximize the allowable building height (up to 175 feet or 195 feet including mechanical bulkhead), however, the With-Action scenario assumes a smaller average DU size of 850 zsf as compared to the applicant's proposal. The With-Action building would total approximately 395,931-gsf and rise to 175 feet tall (17-stories) and include 311,154 gsf of residential use (287,817 zsf; 339 DUs) and 33,020 gsf of local retail (refer to **Table A-2**). 132 accessory parking spaces would be provided in an approximately 51,757-gsf garage on the second level (the building would not include a cellar).

Projected Development Site 2

As discussed above, Lots 42/44 comprise a slightly irregular-shaped site at the northern end of Block 9649 that includes approximately 20,978 sf with frontage on Queens Boulevard, 84th Drive, and Manton Street. Under the Proposed Actions, it is expected that Lots 42/44 would be redeveloped with a mixed-use residential and commercial development with an FAR of 5.03[3] and a building height of up to 175 feet, including qualifying ground floor and an average DU size of 850 sf. The With-Action building at Projected Development Site 2 would include 17-stories and no below grade levels. It would accommodate 110 total DUs of which 28 DUs would be affordable and approximately 12,790 sf of local ground floor retail space. Approximately 40 parking spaces (20,297 gsf) would be included in a second-floor garage.

Table A-2: With-Action Development Scenarios for Projected Development Sites 1 and 2

	Lots	Lot Area (SF) [1]	Residential [2]			Commercial (GSF)	Total Mixed- Use Building (GSF)[3]	Parking Spaces	Max. Building Height (FT)
			GSF	Market DUs	Affordable DUs				
Projected Development Site 1	17/25/37	47,970	311,154	254	85	33,020	395,931	132	175 (roof) 195 (max. bulkhead)
Projected Development Site 2	42/44	20,978	101,138	82	28	12,790	134,225	40	175 (roof) 195 (max. bulkhead)
	Total	68,948	412,292	336	113	45,810	530,156	172	

Notes: [1]

[2] The lot area areas for the projected development sites are sourced from the project architect's plans.

[3] Under the With-Action condition, the estimated DUs are based on a standard average unit size of approximately 850 sf per DU.

[3] Neither projected development would include any below-grade levels.

Possible Effects of the Proposed Actions

Table A-3 below provides a comparison of the No-Action and With-Action conditions identified for CEQR analysis purposes for both projected development sites. As shown, the incremental (net) change that would result from the Proposed Actions is the addition of 237,821-gsf of residential uses, including approximately 260 DUs, of which approximately 113 (25 percent) would be affordable DUs under MIH Option 1 and 69 accessory parking spaces, as well as a decrease of approximately 5,304-gsf of commercial

[3] The maximum allowable FAR on Projected Development Site 2 under the proposed zoning would be a blended FAR (R8X[MIH]/C2-4 and R6A/C2-4) with the MIH bonus applied proportionally.

(local retail) space. In terms of population, the Proposed Actions are expected to generate an estimated 718 incremental residents and a decrease of seven incremental employees, as compared to the 2028 No-Action condition.

Table A-3: Comparison of No-Action and With-Action Development Scenarios for Projected Development Sites 1 and 2

Use	No-Action	With-Action	Increment
Residential Total Dwelling units (DUs) Gross Square Footage (GSF) Market Rate DUs Affordable DUs	189 Total DUs 174,471 GSF 189 Market-rate DUs 0 Affordable DUs	449 Total DUs 412,292 GSF 336 Market-rate DUs 113 Affordable DUs	+260 Total DUs + 237,821 GSF +147 Market-rate DUs +113 Affordable DUs
Commercial (GSF) Local Retail	51,114 GSF	45,810 GSF	(-5,304 GSF)
Parking (spaces)	103 (enclosed parking spaces)	172 (enclosed parking spaces)	+69 parking spaces
Population/Employment [1]	**No-Action**	**With-Action**	**Increment**
Residents	522	1,239	+718
Workers	163	156	(-7)

Notes: [1] Assumptions based on the average household size of 2.76 persons per household for Queens CD 8 according to the 2020 Census. Employee generation rates are based on one worker per 333 gsf of retail space, one worker per 25 DUs, and one worker per 50 project spaces.

VII. REQUIRED APPROVALS

The Applicant requires zoning text and map amendments to construct the Proposed Project at 138-23 Queens Boulevard. The proposed zoning map and text amendments are discretionary public actions that are subject to both the Uniform Land Use Review Procedure (ULURP) and CEQR.

The City's ULURP process, mandated by Sections 197-c and 197-d of the New York City Charter, is designed to allow public review of ULURP applications at four levels: the Community Board; the Borough President; the CPC and the City Council. The procedure has mandated time limits for review at each stage to ensure a maximum review period of approximately seven months. The process begins with certification by CPC that the ULURP application is complete. The application is then referred to the relevant Community Board (in this case Queens Community Board 8). The Community Board has up to 60 days to review and discuss the proposal, hold a public hearing, and adopt an advisory resolution on the ULURP application. The Queens Borough President then has up to 30 days to review the application. The CPC then has up to 60 days, during which time a public hearing is held on the ULURP application. If CPC approved, the application is then forwarded to the City Council, which has 50 days to review the ULURP application.

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

ATTACHMENT B

SUPPLEMENTAL SCREENING

I. INTRODUCTION

This Environmental Assessment Statement ("EAS") has been prepared in accordance with the guidance and methodologies presented in the 2021 *City Environmental Quality Review ("CEQR") Technical Manual*. For each technical area, thresholds are defined, which if met or exceeded, require that a detailed technical analysis be undertaken. Using this guidance, preliminary screening assessments were conducted for the Proposed Actions to determine whether detailed analysis of any technical area may be appropriate.

As described in **Attachment A, "Project Description,"** the Proposed Actions include a zoning map amendment and zoning text amendment that would affect the Project Area, which consists of Queens Block 9649, Lots 17, 25, 37 (p/o), 42, 44 (p/o) and 53 (p/o) in the Briarwood neighborhood of Queens Community District (CD) 8. The Proposed Actions would facilitate the construction of a new 17-story, 175-foot tall (roof height, 195-foot bulkhead height), approximately 395,931 gross square-foot (gsf) mixed-use building on the Applicant-controlled Block 9649, Lots 17, 25, and 37 (Projected Development Site 1), including approximately 311,154 gsf of residential floor area (311 dwelling units [DUs]) and 33,020 gsf of ground-floor retail space, and an approximate 132-space above-grade accessory parking garage on the second floor. Under the Reasonable Worst-Case Development Scenario (RWCDS) for the Proposed Actions, a smaller unit size of 850 zoning square feet (zsf) is assumed compared to the Applicant's proposal, resulting in 339 DUs. Under the RWCDS, depending on the MIH option selected during the public review process, either 25 percent (85 DUs) or 30 percent (102 DUs) of the residential floor area would be designated as affordable housing. The Applicant intends to pursue MIH Option 1, which would result in approximately 85 DUs designated as permanently affordable at an average of 60% Area Median Income (AMI). For CEQR analysis purposes (i.e., Early Childhood Programs), 20% (approximately 68 DUs) of the residential floor area is assumed to be affordable at or below 60% AMI.

In addition, under the RWCDS, it is assumed that the Proposed Actions would allow for redevelopment of Block 9649, Lots 42 and 44, which are not owned or controlled by the Applicant ("Projected Development Site 2"). As described in **Attachment A**, the RWCDS for Projected Development Site 2 consists of an approximately 134,225 total gsf, 17-story, 175-foot (roof height, 195-foot bulkhead height) building, with an estimated 101,138 gsf of residential space (110 DUs including 28 affordable DUs according to MIH Option 1), 12,790 gsf of local retail space and an approximately 40-space parking lot on the second floor.

In absence of the Proposed Actions, it is assumed that Applicant-controlled Projected Development Site 1 would be developed on an as-of-right basis in accordance with the existing R6A/C1-4 zoning, with a seven-story mixed-use building containing approximately 207,327 gsf, with approximately 122,550 gsf of residential floor area (133 DUs), approximately 33,020 gsf of ground-floor local retail space, and approximately 72 accessory parking spaces in a second-floor, 51,767-gsf garage. Additionally, the non-Applicant-owned Projected Development Site 2 would be developed on an as-of-right basis with a seven-story, approximately 78,414-gsf mixed use building containing 51,921 gsf of residential space (56 DUs), 18,094 gsf of ground-floor local retail space, and approximately 31 parking spaces in a second-floor garage.

Part II of the EAS Form identifies those technical areas that warrant additional assessment. For those technical areas that warranted a "Yes" answer in Part II of the EAS Form, supplemental screening assessments are provided in this attachment. The supplemental screenings contained herein identified that additional analyses are required in the areas of Land Use, Zoning, and Public Policy, Socioeconomic Conditions, Community Facilities and Services, Open Space, Shadows, Urban Design and Visual Resources, Water and Sewer Infrastructure, Air Quality, and Noise. These analyses are provided in **Attachments C to L**, respectively. The remaining technical areas detailed in the *CEQR Technical Manual* were not deemed to require supplemental screening because the project increment did not trigger initial CEQR thresholds and/or are unlikely to result in significant adverse impacts. **Table B-1** presents a summary of analysis screening information for the Proposed Actions.

TABLE B-1
Summary of CEQR Technical Areas Screening

***CEQR* TECHNICAL AREA**	**SCREENED OUT PER EAS FORM**	**SCREENED OUT PER SUPPLEMENTAL SCREENING**	**ANALYSIS REQUIRED**
Land Use, Zoning, & Public Policy			X
Socioeconomic Conditions			X
Community Facilities and Services			X
Open Space			X
Shadows			X
Historic & Cultural Resources	X		
Urban Design & Visual Resources			X
Natural Resources		X	
Hazardous Materials		X	
Water and Sewer Infrastructure			X
Solid Waste & Sanitation Services	X		
Energy	X		
Transportation - Traffic & Parking - Transit - Pedestrians		 X X X	
Air Quality - Mobile Sources - Stationary Sources	X		X
Greenhouse Gas Emissions	X		
Noise			X
Public Health	X		
Neighborhood Character		X	
Construction		X	

II. SUPPLEMENTAL SCREENING AND SUMMARY OF DETAILED ANALYSES

Land Use, Zoning, and Public Policy

Refer to **Attachment C, "Land Use, Zoning, and Public Policy."**

Socioeconomic Conditions

Refer to **Attachment D, "Socioeconomic Conditions."**

Community Facilities and Services

Refer to **Attachment E, "Community Facilities and Services."**

Open Space

Refer to **Attachment F, "Open Space."**

Shadows

Refer to **Attachment G, "Shadows."**

Urban Design and Visual Resources

Refer to **Attachment H, "Urban Design and Visual Resources."**

Natural Resources

The *CEQR Technical Manual* defines natural resources as (1) the city's biodiversity (plants, wildlife, and other organisms); (2) any aquatic or terrestrial areas capable of providing suitable habitat to sustain the life processes of plants, wildlife, and other organisms; and (3) any areas capable of functioning in support of the ecological systems that maintain the city's environmental stability. In determining if a natural resources analysis is appropriate, two possibilities are considered in evaluating the needs for a more detailed analysis: (a) the presence of a natural resource on or near the site; and (b) disturbance of that resource caused by the project. Due to the Project Area's location within the Jamaica Bay Watershed, a preliminary analysis of natural resources is warranted.

The Jamaica Bay Watershed is a source of freshwater and brackish water to the Hudson-Raritan Estuary and extends deep into Brooklyn, Queens, and Nassau County. Jamaica Bay is one of the largest and most productive coastal ecosystems in the northeast United States and includes the largest tidal wetland complex in New York City and the surrounding metropolitan areas. Connecting to the Atlantic Ocean via the Rockaway Inlet, Jamaica Bay's wetlands serve as flood protection and shoreline erosion control for the homes and businesses of the encircling neighborhoods.

The New York State Department of Environmental Conservation ("NYSDEC") has included Jamaica Bay on its Section 303(d) impaired water list since 1998 due to violations of water quality standards related to pathogens, nitrogen, and oxygen demand. The primary causes of the impairment are combined sewage overflows ("CSOs") and wastewater discharges. In June 2006, the Jamaica Bay Watershed Protection Plan Advisory Committee issued preliminary recommendations for improving the water quality and ecology of

Jamaica Bay, which included best management practices to minimize and control soil erosion and stormwater and reduce point and nonpoint source pollution.

Pursuant to Local Law 71, enacted in July 2005, the New York City Department of Environmental Protection ("DEP") was required to develop the Jamaica Bay Watershed Protection Plan ("JBWPP") to assess the legal, technical, environmental, and economic feasibility of possible measures to protect Jamaica Bay. The final JBWPP, submitted in October 2007, outlines a set of objectives and recommended strategies to address current and future threats to Jamaica Bay and ensure that comprehensive watershed protection is coordinated, focused, and cost-effective. The plan also includes a schedule, with interim and final milestones, to implement the plan's measures and meet the specific objectives and methods for monitoring progress.

The Jamaica Bay Watershed Protection Plan Project Tracking Form was completed as per *CEQR Technical Manual* requirements and is provided in **Appendix I**. In particular, it was noted that there were some animal species listed as either threatened or of special concern in proximity to the Project Area. The USFWS Information, Planning and Consultation (IPaC) website identified the piping plover (*Charadrius melodus*, threatened), red knot (*Calidris canutus rufa*, threatened), monarch butterfly (*danaus plexippus*, candidate), and northern long-eared bat (*Myotis septentrionalis*) as occurring in or near the Project Area. There are no habitats that would support these species located within the Project Area and therefore, habitat characteristics would remain unaffected by the Proposed Project.

The New York Natural Heritage Program is a program of NYSDEC and is implemented as a partnership between NYSDEC and the State University of New York College of Environmental Science and Forestry (ESF). The Program refers to different types of habitats or ecosystems as "natural ecological communities." It documents only those locations of natural communities where the community type is rare in New York State or, for more common community types, where the community at that location is a high-quality example and meets specific, documented criteria for state significance in terms of size, undisturbed and intact condition, and the quality of the surrounding landscape. These documented natural communities are identified as "Significant Natural Communities of New York State," and may include areas of rare or high-quality wetlands, forests, grasslands, ponds, streams, and other types of habitats, ecosystems, and ecological areas. According to the NYSDEC Environmental Resource Mapper, the Project Area is not located within a Significant Natural Community nor a Rare Plants or Animals area. As a result, the Proposed Project would not affect habitat characteristics.

The Proposed Action would facilitate construction of a commercial warehouse building, improving the existing low-rise commercial buildings and surface parking lots. The Applicant-owned Projected Development Site 1 measures approximately 47,970 sf in area and Projected Development Site 2 measures approximately 20,978 sf in area, both representing a very small portion of the entire watershed draining to Jamaica Bay. Stormwater best management practices would be required by DEP for new construction within the Project Area. Therefore, the Proposed Action would not result in significant adverse impacts to natural resources, and a more detailed analysis of natural resources is not required.

Hazardous Materials

As defined in the 2021 *CEQR Technical Manual*, a hazardous material is any substance that poses a threat to human health or the environment. Substances that can be of concern include, but are not limited to, heavy metals, volatile and semivolatile organic compounds (VOCs and SVOCs), methane, polychlorinated biphenyls (PCBs) and hazardous wastes (defined as substances that are chemically reactive, ignitable,

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

Phase I Environmental Site Assessment (ESA)

A Phase I Environmental Site Assessment (ESA) dated September 13, 2023 was performed by HydroTech Environmental Engineering and Geology, DPC (HydroTech) for Queens Block 9649, Lots 17, 25, and 37 (refer to **Appendix II** for Phase I ESA Executive Summary). A Phase I ESA is intended to define the historical uses of the Subject Property and identify any potential Recognized Environmental Conditions (RECs) that could warrant further consideration, in accordance with ASTM International Standard Practice E1527-13 (Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process). HydroTech utilized a variety of information sources to perform the Phase I ESA , including a site visit, a review of federal, state, and local regulatory databases pertaining to hazardous wastes and contaminated materials, a review of resources that provided historical information about the subject property, as well as interviews with the property owner, current tenants, and other appropriate person(s) with knowledge of the subject property.

The Phase I ESA report identified five recognized environmental conditions ("RECs") in connection with the subject property.

Recognized Environmental Conditions

A recognized environmental condition (REC) is defined as the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property 1) due to a release of any hazardous substances or petroleum products; 2) under conditions indicative of a release to the environment; or 3) under conditions that pose a material threat of a future release to the environment. The Phase I ESA identified the following Recognized Environmental Conditions:

- The presence of historical occupants related with auto repair operations.
- The presence of current and historical occupants related with dry cleaning operations.
- The presence of Potential Vapor Encroachment Conditions at and adjacent to the Subject Property.
- The presence of a storm water drywell.
- The presence of an interior sump.

Assessment

The assessment above established that the subject property (Block 9649, Lots 17, 25, and 37) has potential hazardous materials contamination. Under existing conditions, the subject property includes multiple businesses, of which the Key Food supermarket operates 12+ hours per day, 7 days per week. Aside from the parking lot located along 86th Avenue and 139th Street for employees, the remainder of the subject property contains restaurants that are generally open to the public from 12PM to 10:00PM.

As the Applicant rents the subject property to active commercial retail tenants, it does not have the ability to force the businesses to close. As such, Phase II ESA testing is not feasible at this time and an (E) Designation is required to undertake Phase II ESA testing once the subject property is vacated,

demolished, and cleared, following approval of the Proposed Actions. A Phase II ESA Investigation Protocol/Work Plan would be best designed and implemented for a vacant property in order to address the environmental concerns that focus on the design of the Proposed Development.

Therefore, by assigning an (E) Designation on Queens Block 9649, Lots 17, 25, and 37 (the Applicant-controlled Projected Development Site 1), as well as Lots 42 and 44 (the non-Applicant-controlled Projected Development Site 2), the potential for a significant adverse impact to human health and the environment resulting from the Proposed Actions would be reduced or avoided. The (E) Designation provides the impetus to identify and address environmental conditions so that significant adverse impacts during development would be reduced, with OER providing the regulatory oversight of the environmental investigation and remediation during the development process. Building permits are not issued by the New York City Department of Buildings ("NYCDOB") without prior OER approval of the investigation and/or remediation pursuant to the provisions of Section 11-15 of the New York City Zoning Resolution.

The text of the hazardous materials (E) Designation (E-###) for Queens Block 9649, Lots 17, 25, 37, 42 and 44 would be as follows:

Task 1: Sampling Protocol

Prior to construction, the Applicant must submit to the New York City Mayor's Office of Environmental Remediation (OER), for review and approval, a Phase II Investigation protocol, including a description of methods and a site map with all sampling locations clearly and precisely represented.

No sampling should begin until written approval of a protocol is received by OER. The number and location of sample sites should be selected to adequately characterize the site, the specific source of suspected contamination (i.e., petroleum based contamination and non-petroleum based contamination), and the remainder of the site's condition. The characterization should be complete enough to determine what remediation strategy (if any) is necessary after review of the 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 for the test results, a proposed remedial action plan (RAP) must be submitted by OER for review and approval. The Applicant must complete such remediation as determined necessary by OER. The Applicant should then provide proper documentation that the work has been satisfactorily completed.

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

Water and Sewer Infrastructure

Refer to **Attachment I, "Water and Sewer Infrastructure."**

Transportation

The *CEQR Technical Manual* identifies minimum development densities that have the potential to result in significant adverse impacts to transportation and therefore require a detailed transportation analysis. As shown in Table 16-1 of the *CEQR Technical Manual*, actions that result in fewer than 50 peak hour vehicle trips are generally not likely to cause significant adverse impacts. For projects in Zone 3 (which includes areas within 0.5-miles of a subway station in Brooklyn), the development thresholds requiring trip generation analysis are 200 DUs and 15,000 gsf of local retail space.

The RWCDS would result in the net increase of 260 DUs and a net decrease of 5,304 gsf of local retail space compared to the No-Action Condition. Given the residential uses exceed the thresholds in Table 16-1 of the *CEQR Technical Manual*, and the RWCDS involves a mix of land uses, per *CEQR Technical Manual* guidance, a preliminary trip generation assessment is warranted and has been provided in **Appendix III.** Per CEQR guidance, a screening assessment was completed to determine if the Proposed Actions and RWCDS warrant detailed analyses of traffic, parking, transit, or pedestrians. The screening assessment consisted of a Level 1 Project Trip Generation and a Level 2 Project-Generated Trip Assignment, presented in **Appendix III.**

As detailed in **Appendix III**, the Proposed Actions do not warrant detailed analyses of traffic, transit, parking or ferry service. Although the RWCDS would generate 50 or more trips in the weekday AM and Saturday peak hours, which is the CEQR threshold for a detailed traffic analysis, the incremental peak hour vehicle trips generated by the Proposed Actions would not exceed the 50-trip *CEQR Technical Manual* analysis threshold at any intersections during those peak hours. Therefore, a detailed analysis of traffic is not warranted. It is also not expected that any subway or bus lines near the Project Area would experience an increase of more than 200 peak hour rail or 50 peak hour bus transit riders, the CEQR thresholds for a detailed transit analysis. Likewise, the RWCDS would not result in 200 or more peak hour pedestrian trips at any pedestrian element (sidewalk, corner area, or crosswalk), the analysis threshold set forth by the CEQR Technical Manual. As such, no significant adverse impacts to traffic, transit, parking or pedestrians would be expected in the future with the Proposed Actions.

Air Quality

Refer to **Attachment J, "Air Quality."**

Noise

Refer to **Attachment K, "Noise."**

Neighborhood Character

According to the 2021 *CEQR Technical Manual*, an assessment of neighborhood character may be appropriate if a proposed action(s) has the potential to result in significant adverse impacts on land use, zoning, public policy, socioeconomic conditions, open space, historic and cultural resources, urban design and visual resources, shadows, transportation, or noise, or when an action may have moderate effects on

several of the elements that define a neighborhood's character. As the EAS provides assessments of land use, zoning, and public policy (**Attachment C**), socioeconomic conditions (**Attachment D**), open space (**Attachment F**), shadows **(Attachment G)** urban design and visual resources and noise (**Attachment K**), a preliminary screening analysis is necessary to determine if a detailed neighborhood character analysis is warranted.

Neighborhood character is an amalgam of various elements that give neighborhoods their distinct "personality." According to the *CEQR Technical Manual*, a preliminary assessment may be appropriate if a project has the potential to result in any significant adverse impacts on any of the technical areas mentioned. Per the analyses provided in this EAS, although the Proposed Actions required supplemental screening or assessment of some of these technical areas, there would be no action-generated significant adverse impacts.

The *CEQR Technical Manual* also states that for projects not resulting in significant adverse impacts to any technical areas related to neighborhood character, additional analyses may be required to determine if the Proposed Actions would result in a combination of moderate effects to several elements that cumulatively may affect neighborhood character. However, the *CEQR Technical Manual* indicates that neighborhood character impacts are rare and it would be unusual that, in the absence of a significant adverse impact in any of the relevant technical areas, a combination of moderate effects in the neighborhood would result in any significant adverse impact to neighborhood character.

The Proposed Actions would not adversely affect any component of the surrounding area's neighborhood character, conflict with the surrounding activities, or significantly affect land use patterns. The development facilitated by the Proposed Actions would bring occupancy and activity to the two Projected Development Sites within the Project Area, which are currently occupied by small commercial tenants and a surface parking lot. The RWCDS residential and local commercial uses on two development sites would add market-rate and affordable housing and convenient amenities to the neighborhood, which would not only offset the loss of existing commercial properties, but are expected to further enhance the mixed-use character of the area. As the Proposed Actions would not be considered to have any significant adverse effects on any of the technical areas relating to neighborhood character, a neighborhood character assessment can be screened out, and no significant adverse neighborhood character impacts would occur. Therefore, no additional analysis is warranted for neighborhood character.

Construction

Refer to **Attachment L, "Construction."**

ATTACHMENT C

LAND USE, ZONING, AND PUBLIC POLICY

I. INTRODUCTION

As outlined in the 2021 *City Environmental Quality Review* ("CEQR") *Technical Manual*, a detailed analysis of land use and zoning is appropriate if a proposed project would result in a significant change in land use or would substantially affect regulations or policies governing land use. An analysis of zoning is typically performed in conjunction with a land use analysis when the proposed project would change the zoning on a site or result in the loss of a particular land use. As the Proposed Actions include one zoning map amendment and one zoning text amendment, a detailed analysis of land use, zoning, and public policy is warranted and is provided in this attachment.

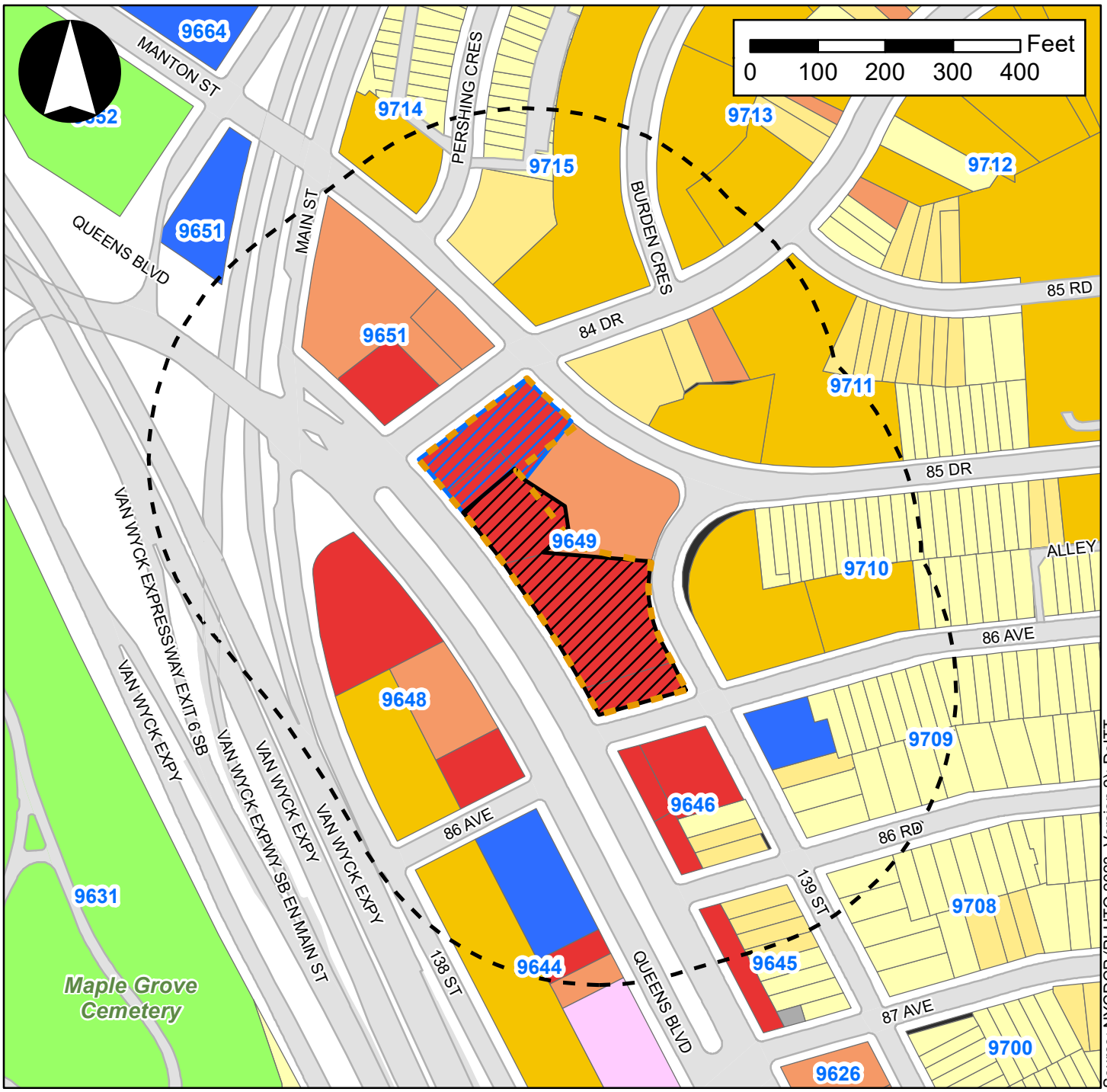
II. METHODOLOGY

As mentioned above, the Proposed Actions include zoning map and zoning text amendments that would affect a portion of Queens Block 9649, including Lots 17, 25, 37 (p/o), 42, 44 (p/o), and 53 (p/o), coterminous with the existing R6A/C1-4 zoning district mapped on the east side of Queens Boulevard between 84th Drive and 86th Avenue (the "Project Area"). For the purpose of this analysis, the primary study area encompasses the Project Area (Block 9649, Lots 17, 25, 37 [p/o], 42, and 44 [p/o]), where development could occur as a result of the Proposed Actions. The secondary study area encompasses areas that have the potential to experience indirect impacts as a result of the Proposed Actions. The secondary study area extends an approximate 400-foot radius from the boundary of the primary study area. The secondary study area is generally bound by Main Street to the north, the midblock portions of Blocks 9713, 9711, 9710, and 9709 to the east, the midblock portion of Block 9645 to the south, and the Van Wyck Expressway to the west. Both the primary and secondary study areas have been established in accordance with 2021 *CEQR Technical Manual* guidance and are presented in **Figure C-1**.

The analysis of land use, zoning, and public policy first provides a description of the existing land use, zoning, and public policy conditions in each of the study areas. Existing land uses within the primary and secondary study areas were determined based on the New York City Primary Land Use Tax Lot Output ("PLUTO") data files for 2023 and September 2023 field visits; no discrepancies between PLUTO data files and existing field conditions were observed. New York City Zoning and Land Use ("ZoLa"), New York City Zoning maps, and the *Zoning Resolution of the City of New York* ("ZR") were consulted to describe existing zoning districts in each of the study areas. Relevant public policy documents, recognized by the New York City Department of City Planning ("DCP") and other city agencies were utilized to describe existing public policies pertaining to the primary and secondary study areas.

The analysis then projects land use, zoning, and public policy conditions in the 2028 build year without the Proposed Actions. This is the "No-Action Condition" or "future without the Proposed Actions", which is developed by identifying known and proposed developments and other relevant changes anticipated to occur within the primary and secondary study areas within this time frame. The No-Action condition describes the baseline conditions in each of the study areas against which the Proposed Actions' Reasonable Worst Case Development Scenario ("RWCDS") incremental changes are measured. Finally, the

Figure C-1
Land Use Map



Source: NYCDCP (PLUTO 2023, Version 2); DoITT

Legend

- Primary Study Area (Project Area)
- Secondary Study Area (400-Foot Radius)
- Projected Development Site 1
- Projected Development Site 2

Land Use

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

analysis projects land use, zoning, and public policy conditions in 2028 with the approval of the Proposed Actions. This is the "With-Action" or "future with the Proposed Actions" condition.

III. PRELIMINARY ASSESSMENT

Land Use and Zoning

A preliminary assessment, which includes a basic description of existing and future land uses and zoning, should be provided for all projects that would affect land use or would change the zoning on a site, regardless of the proposed project's anticipated effects. As the Proposed Actions include one zoning map amendment, one zoning text amendment, a detailed analysis of land use and zoning is warranted and provided in Section IV, "Detailed Analysis."

Public Policy

According to the 2021 *CEQR Technical Manual*, a proposed project that would be located within areas governed by public policies controlling land use, or that has the potential to substantially affect land use regulation or policy controlling land use, requires an analysis of public policy. A preliminary assessment of public policy should identify and describe any public policies, including formal plans or published reports that pertain to the study areas. If a proposed project could potentially alter or conflict with identified policies, a detailed analysis should be conducted; otherwise, no further analysis of public policy is necessary.

The primary and secondary study areas are not located within a designated Industrial Business Zone ("IBZ"), a Business Improvement District ("BID"), a designated historic district, or within an area defined by an adopted 197-a plan; nor would the Proposed Actions involve the siting of any public facilities (Fair Share). Further, as shown in **Figure C-2**, the primary and secondary study areas are not located within New York City's designated Coastal Zone Boundary ("CZB"). However, several adopted city policies are applicable to both the primary and secondary study areas: *Housing Our Neighbors: A Blueprint for Housing and Homelessness*, *OneNYC 2050: Building a Strong and Fair City*, *Where We Live NYC Plan*, the Food Retail Expansion to Support Health (FRESH) Program and the Transit Zone. These public policies are discussed in Section IV, "Detailed Analysis."

IV. DETAILED ANALYSIS

Existing Conditions

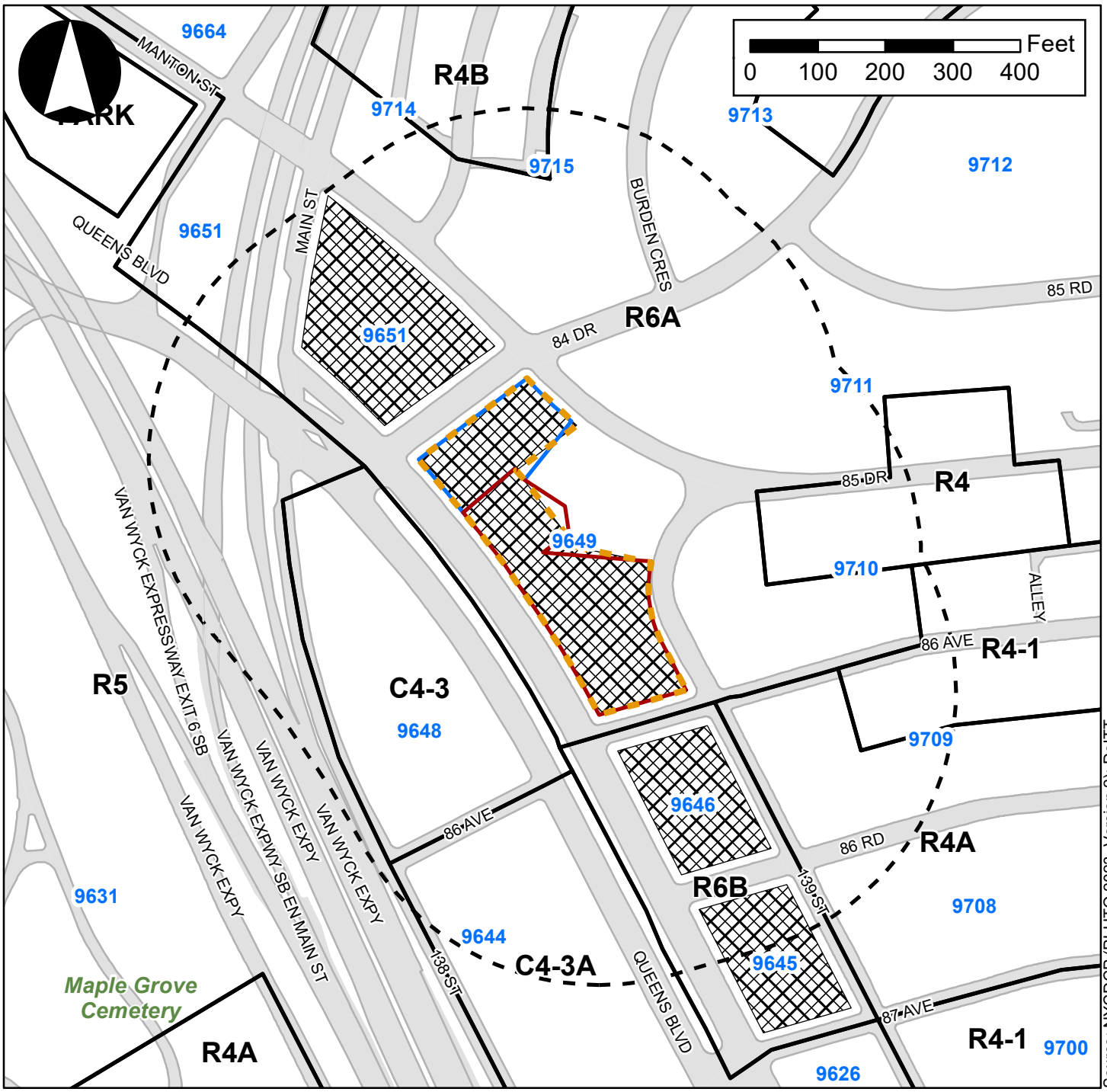
Land Use

PRIMARY STUDY AREA

Projected Development Site 1

The Applicant-controlled Projected Development Site 1 measures approximately 47,970 sf, comprising Queens Block 9649, Lots 17, 25, and 37. Located in the western and southern portions of the Project Area

Figure C-2
Zoning Map



Legend

- Primary Study Area (Project Area)
- Secondary Study Area (400-Foot Radius)
- Projected Development Site 1
- Projected Development Site 2
- R6A — Existing Zoning District Boundaries
- C1-4 Overlay

(as shown in **Figure C-1**), it consists of three irregular-shaped lots that have frontage on Queens Boulevard, 86th Avenue, and 139th Street. As shown in **Table C-1,** Projected Development Site 1 is occupied by three attached, single story commercial buildings ranging in size from 3,536 gsf to 19,751 gsf. The commercial buildings are built to the street line and are oriented along Queens Boulevard. Lot 17 is occupied by a single-story (approximately 15-foot roof height), 3,536-gsf commercial retail building containing three retail storefronts, which all have their entrances along Queens Boulevard. Lot 25 is occupied by a single-story (19-foot roof height), 19,751-gsf commercial retail building occupied by a supermarket and restaurant with entrances along Queens Boulevard. The buildings on Lots 17 and 25 are built to the lot line on Queens Boulevard but share an approximately 25-space accessory surface parking lot which is located along 139th Street, occupying the eastern portion of these two lots at a depth of approximately 40 feet to 80 feet between 139th Street and the existing buildings along Queens Boulevard. Lot 37 is occupied by a single-story (15-foot roof height), 10,224-gsf local retail building with five storefronts along Queens Boulevard. The built commercial FAR on Lots 17, 25, and 37 is 0.54, 0.70, and 0.71, respectively, and all are substantially underbuilt pursuant to the Project Area's existing R6A/C1-4 zoning.

Table C-1: Primary Study Area – Existing Conditions

Lot	Affected Lot Area (sf)	Address	Owner	Zoning	Land Use	Total Building GSF	Built FAR	Residential GSF/DUs	Parking Spaces
Projected Development Site 1 (Applicant-Controlled)									
17	5,670	138-43 QUEENS BOULEVARD	RJ BLVD III LLC	R6A/ C1-4	Commercial & Office Buildings	3,075	0.54	0/0	25
25	24,430	138-31 QUEENS BOULEVARD	RJ BLVD LLC		Commercial & Office Buildings	17,175	0.7	0/0	
37	11,800	138-13 QUEENS BOULEVARD	RJ BLVD IV LLC		Commercial & Office Buildings	8,890	0.71	0/0	8
Projected Development Site 2 (Non-Applicant Controlled or Owned)									
42	4,000	138-11 QUEENS BOULEVARD	BRIARWOOD PREMIER LLC	R6A/C 1-4	Commercial & Office Buildings	2,200	0.55	0/0	0
44	17,025	138-01 QUEENS BOULEVARD	JAMES ALAN ASSOCIATES, LLC		Commercial & Office Buildings	14,000	0.82	0/0	0

Note: Properties controlled by the Applicant (comprising Projected Development Site 1) are highlighted in gray.
Sources: DCP 2023 PLUTO Data (Version I); Field observations (September 2023).

Projected Development Site 2

As shown in **Table C-1**, Projected Development Site 2 is composed of two properties not owned or controlled by the Applicant (Queens Block 9649, Lots 42 and 44) located within the primary study area; both properties are occupied by attached single-story commercial/office buildings. Lot 42 is occupied by a single-story (approximately 15-foot roof height), 2,530-gsf commercial retail building containing three storefronts along Queens Boulevard. Lot 44 is occupied by a single-story (19-foot roof height), 16,100-gsf commercial retail building with frontages on Queens Boulevard, 84th Drive, and Manton Street. There are approximately four storefronts along Queens Boulevard, ten along 84th Drive, and one along Manton Street. The buildings on Lots 42 and 44 are both built to the lot lines along all their street frontages.

SECONDARY STUDY AREA

As shown in **Figure C-1** and **Table C-2**, the secondary study area mainly exhibits a residential character, with commercial and office buildings, mixed-use buildings, public facilities and institutions, transportation and utility uses, and vacant land scattered throughout the area.

Table C-2: Existing Land Uses within the Secondary Study Area

Land Use	Number of Lots	Percentage of Total Lots (%)	Lot Area (sf)	Percentage of Total Lot Area (%)	Building Area (sf)	Percentage of Total Building Area (%)
Residential (Total)	53	67.9	459,082	61.1	936,652	58.3
One & Two-Family Buildings	*33*	*42.3*	*103,841*	*13.8*	*61,383*	*3.8*
Multi-Family Walkup Buildings	*10*	*12.8*	*52,916*	*7.0*	*68,767*	*4.3*
Multi-Family Elevator Buildings	*10*	*12.8*	*302,325*	*40.2*	*806,502*	*50.2*
Mixed Commercial/Residential Buildings	6	7.7	90,900	12.1	467,100	29.1
Commercial/Office Buildings	11	14.1	134,613	17.9	150,350	9.4
Industrial/Manufacturing	0	0.0	0	0.0	0	0.0
Transportation/Utility	1	1.3	20,000	2.7	2400	0.1
Public Facilities & Institutions	3	3.8	44,719	6.0	48,827	3.0
Open Space	0	0.0	0	0.0	0	0.0
Parking Facilities	0	0.0	0	0.0	0	0.0
Vacant Land	4	5.1	1,997	0.3	0	0.0
All Others or No Data	0	0.0	0	0.0	0	0.0
Totals	**78**	**100.0**	**751,311**	**100.0**	**1,605,329**	**100.0**

Sources: DCP 2023 PLUTO Data (Version I); Field observations (September 2023).
Note: Total lot areas and built areas included for all lots which have 50 percent or more of their area within a 400-foot radius of the primary study area; Block 9649, Lots 17, 25, 37, 42, and 44 (the primary study area) are excluded from the analysis of land uses within the secondary study area (refer to **Figure C-1**).

As shown in **Figure C-1**, residential buildings are located throughout the secondary study area and represent a majority of lots, lot area, and building area within the secondary study area. Different types of residential buildings are located within the secondary study area. One- and two-family attached row houses rising to a height of either two- or three-stories are well represented in the north and southeast of the study area. Large, multi-family residential elevator buildings are located throughout the study area, mostly east of Queens Boulevard. These uses are generally located on large, irregularly-shaped lots within the study area, as compared with the single- and two-family residential buildings and multi-family walk-up buildings, which are generally located on smaller, rectangular lots. There are several mixed-use residential and commercial developments clustered along Queens Boulevard consisting of both multi-family walk-up and elevator buildings with ground-floor retail. The mixed-use buildings in the secondary study area range in height from 6 to 14 stories and include Block 9649, Lot 53, the only lot on the block not contained within the Primary Study Area. Commercial uses in mixed buildings are typically local restaurant, retail, and office establishments located on the ground floors of low-rise buildings with residential uses located on the upper floors.

As shown in **Figure C-1**, two-, three-, and four-story mixed-use commercial/residential buildings are located throughout the secondary study area along Queens Boulevard and Manton Street. As shown in **Figure C-1**, commercial/office buildings are concentrated along Queens Boulevard. Notable commercial/office buildings within the secondary study area that host main services and retail stores that serve the neighborhood include USPS office on 13869 Queens Blvd, Blvd Car Wash on 138-77 Queens Blvd, Hi Mango Natural Market on 137-75 Queens Blvd, and Chase Bank on 138-02.

The secondary study area also includes three parcels of land occupied by Public Facilities & Institutions. These are Ohr-Natan Briarwood Jewish Community Center (Block 9709, Lot 9), the Briarwood branch of Queens Public library (Block 9651, Lot 25) and a homeless shelter (Block 9644, Lot 6). Additionally, there is one transportation/utility parcel occupied by a gas station (e.g., auto repair businesses), and four parcels of vacant land. No open spaces or parking facilities are located within the secondary study area.

Zoning

PRIMARY STUDY AREA

As shown in **Figure C-2**, the primary study area is zoned R6A with overlay C1-4. R6A is a medium-density district that requires Quality Housing regulations for new development. They produce buildings seven to eight stories tall with high lot coverage and street wall location rules. Maximum base heights (40 - 65 feet) ensure a scale similar to older buildings in medium-density neighborhoods. The districts are mostly mapped along wide streets such as the Queens Boulevard. Maximum FAR is 3.0, or 3.60 for MIH; maximum building height is 70 feet, or 80 feet for MIH; and the maximum number of stories is seven, or eight for MIH. Properties located within the primary study area comply with the R6A zoning regulations. C1-4 overlay is a commercial overlay mapped within residence districts. It is usually found in lower- and medium-density areas like the primary study area. C1-4 usually includes the retail uses for the neighborhood such as grocery stores, restaurants and beauty parlors.

The surrounding area is primarily zoned for low- and moderate-density residential uses with R4B and R6A mapped to the north, R4 and R4-1 to the east, and R4A and R6B to the south. C1-4 commercial overlays are mapped along the east side of Queens Boulevard and C4-3 and C4-3A central commercial districts are mapped on the west side of Queens Boulevard.

SECONDARY STUDY AREA

As shown in **Figure C-2**, the secondary study area is zoned with a mix of commercial and residential zoning districts. The surrounding area is primarily zoned for low- and moderate-density residential uses with R4B and R6A mapped to the north, R4 and R4-1 to the east, and R4A and R6B to the south. C1-4 commercial overlays are mapped along the east side of Queens Boulevard and C4-3 and C4-3A central commercial districts are mapped on the west side of Queens Boulevard. **Table C-3** provides a detailed description of each zoning district.

Table C-3: Existing Zoning in the Secondary Study Area

Name	Definition/General Use	Maximum FAR
Residential Districts		
R4	R4 districts allow all types of housing at a slightly higher density than permitted in R3-2 districts. These districts usually produce buildings with three story homes with pitched roofs.	R: 0.751,2; C: 0.0; CF: 2.0; M: 0.0
R4A	R4A contextual districts are widely mapped in older neighborhoods. Only one- and two-family detached residences are permitted. Differences in the maximum permitted FAR and minimum required lot size result in variations in the typical building envelope found in each district. Characterized by houses with two stores and an attic beneath a pitched roof, R4A districts have a FAR of up to 0.75 (plus an attic-allowance) and a minimum lot width of 30 feet.	R: 0.75; C: 0.0; CF: 2.0; M: 0.0
R4-1	R4-1 contextual districts, like R3-1 districts, permit only one- and two-family de-tached and semi-detached houses. Despite a narrower minimum lot width of 25 feet for detached homes, houses in R4-1 districts tend to be larger than those in R3-1 districts because of the higher floor area ratio (FAR) of 0.75 plus an attic allowance.	R: 0.75; C:0.0; CF: 2.0; M: 0.0
R4B	R4B districts are primarily contextual rowhouse districts limited to low-rise one- and two-family residences that typically produce a two-story flat-roofed rowhouse.	R: 0.9; C: 0.0; CF: 2.0; M: 0.0
R5	R5 districts allow a variety of housing at a higher density than permitted in R3-2 and R4 districts and typically produce three- and four-story attached houses and small apartment houses. R5 districts provide a transition between lower- and higher-density neighborhoods.	R: 1.252; C: 0.0; CF: 2.0; M: 0.0
R6	R6 districts are widely mapped in built-up, medium-density areas. Developers can choose between Height Factor and Quality Housing bulk regulations.	R: 0.78-2.43; C: 0.0; CF: 4.8; M: 0.0
R6A	R6A districts are medium-density contextual residential districts where Quality Housing bulk regulations are mandatory. The maximum permitted residential FAR is 3.0, which increases to 3.6 with MIH. The maximum FAR for community facility uses is 3.0. After a base height of 45 feet, buildings in R6A districts must set back by 10 feet on wide streets and 15 feet on narrow streets. The maximum height is 75 feet if providing a qualifying ground floor. Off-street parking is generally required for 50 percent of a building's dwelling units, but requirements are lower for income-restricted housing units.	R: 3.0/3.6 (IH); C:0.0; CF: 3.0; M: 0.0
R6B	R6B districts are contextual residential districts and are often traditional rowhouse districts. The base height must be between 30 and 40 feet, and a maximum building height after setback is 50 feet.	R: 2.0/2.2 (IH); C: 0.0; CF: 2.0; M: 0.0
Commercial Districts		
C4-3	Use Groups 5, 6, 8, 9, 10, and 12, which include most retail establishments, are permitted in C4 districts. Uses that would interrupt the desired continuous retail frontage (such as Use Group [UG] 7) are not allowed. C4-1 districts are mapped in outlying area that required a large amount of parking. C4-3 districts are mapped in more densely built areas.	R: 1.25; C: 1.0; CF: 2.03; M: 0.0 R: 0.78-2.434; C: 3.4; CF: 4.83; M: 0.0
C4-3A	C4-3A Zoning District is a sub district of C4 Zoning and C4-3 Zoning in NYC a commercial zoning district with optional residential use. Zoning districts that end with a letter are contextual zoning districts which are required to comply with the Quality Housing Program for residential use. Commercial Buildings in Contextual Zoning have some Quality Housing Regulation applied to them as well specifically height and setback requirements. It is required to include an accessory parking 1 per 400 sq f.	R: 3.0/3.6 (IH):C: 3.0; CF: 3.0; M:0.0

Public Policy

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

identify and describe any public policies, including formal plans or published reports, which pertain to the study area. If a proposed project could potentially alter or conflict with identified policies, a detailed assessment should be conducted; otherwise, no further analysis of public policy is necessary.

As noted above, the primary and secondary study areas are not located within a designated IBZ, a BID, a designated historic district, or within an area defined by an adopted 197-a plan; nor would the Proposed Actions involve the siting of any public facilities (Fair Share). Further, the primary and secondary study area are not located within New York City's designated CZB. However, several adopted city policies are applicable to both the primary and secondary study areas: *Housing Our Neighbors: A Blueprint for Housing and Homelessness*, *OneNYC 2050: Building a Strong and Fair City*, *Where We Live NYC Plan*, the Transit Zone and FRESH Program.

HOUSING OUR NEIGHBORS: A BLUEPRINT FOR HOUSING AND HOMELESSNESS

On June 14, 2022, the administration of Mayor Eric Adams released *Housing Our Neighbors: A Blueprint for Housing and Homelessness*, a comprehensive plan intended to cover the entire spectrum of New Yorkers' housing needs and options, including City-subsidized affordable housing, public housing, private market-rate housing, and greater support programs for New Yorkers' experiencing homelessness. The plan is the result of an extensive stakeholder input and community engagement process, which included direct engagement with New Yorkers who are experiencing or having experienced homelessness and outlines major steps the Adams administration will take up:

- Significantly expand affordable homeownership opportunities and help communities build and maintain wealth;
- Accelerate the creation of supportive housing by completing the 15,000 supportive homes promised by 2030 two years ahead of schedule;
- Transform the New York City Housing Authority (NYCHA) by both delivering much-needed resources for repairs and improving and streamlining the services NYCHA provides residents and the processes by which they do so;
- Break down government siloes to bolster transparency and address the full scope of the homelessness crisis, adding to the City's homeless count while creating a more even playing field to give more New Yorkers in all the city's shelter systems access to critical services and resources; and
- Get New Yorkers into safe, high-quality, affordable homes faster and without forcing them to relive past trauma by eliminating unnecessary paperwork and obstacles to obtaining housing.

WHERE WE LIVE NYC PLAN

Through the *Where We Live NYC Plan*, the city has developed a plan to take bold, transformative action to break down barriers to opportunity and build more integrated, equitable, and inclusive neighborhoods throughout New York City. The plan recognizes that intentional policies and practices have created segregation and inequity across the country and in New York City, and that it will take concerted effort from all levels of government, as well as partners in the private and non-profit sectors, to undo legacies of segregation and inequity. The plan is separated into six key goals that will guide the city's work in advancing fair housing through 2025:

- Goal 1 – Combat persistent, complex discrimination with expanded resources and protections;
- Goal 2 – Facilitate equitable housing development in New York City and the region;

- Goal 3 – Preserve affordable housing and prevent displacement of long-standing residents;
- Goal 4 – Enable more effective use of rental assistance benefits, especially in amenity-rich neighborhoods;
- Goal 5 – Create more independent and integrated living options for people with disabilities;
- Goal 6 – Make equitable investments to address the neighborhood-based legacy of discrimination, segregation, and concentrated poverty.

TRANSIT ZONE

The boundaries of the Transit Zone are set forth in Appendix I of the ZR. The Transit Zone is defined by DCP as an area where special lower accessory parking requirements apply for various types of affordable housing, including IRHUs. Areas located within the Transit Zone are generally areas of the city beyond the Manhattan Core within one-half mile of a subway station where auto ownership rates are among the lowest in the city. As set forth in Appendix I of the ZR, Queen Community District 8 mainly is not located within Transit Zone except for the west and south side are within the boundaries of the Transit Zone. As shown in **Figure C-4**, the primary study area is not located within the Transit Zone, but the southern and western potions of the secondary study area along Queens Boulevard are located within the Transit Zone.

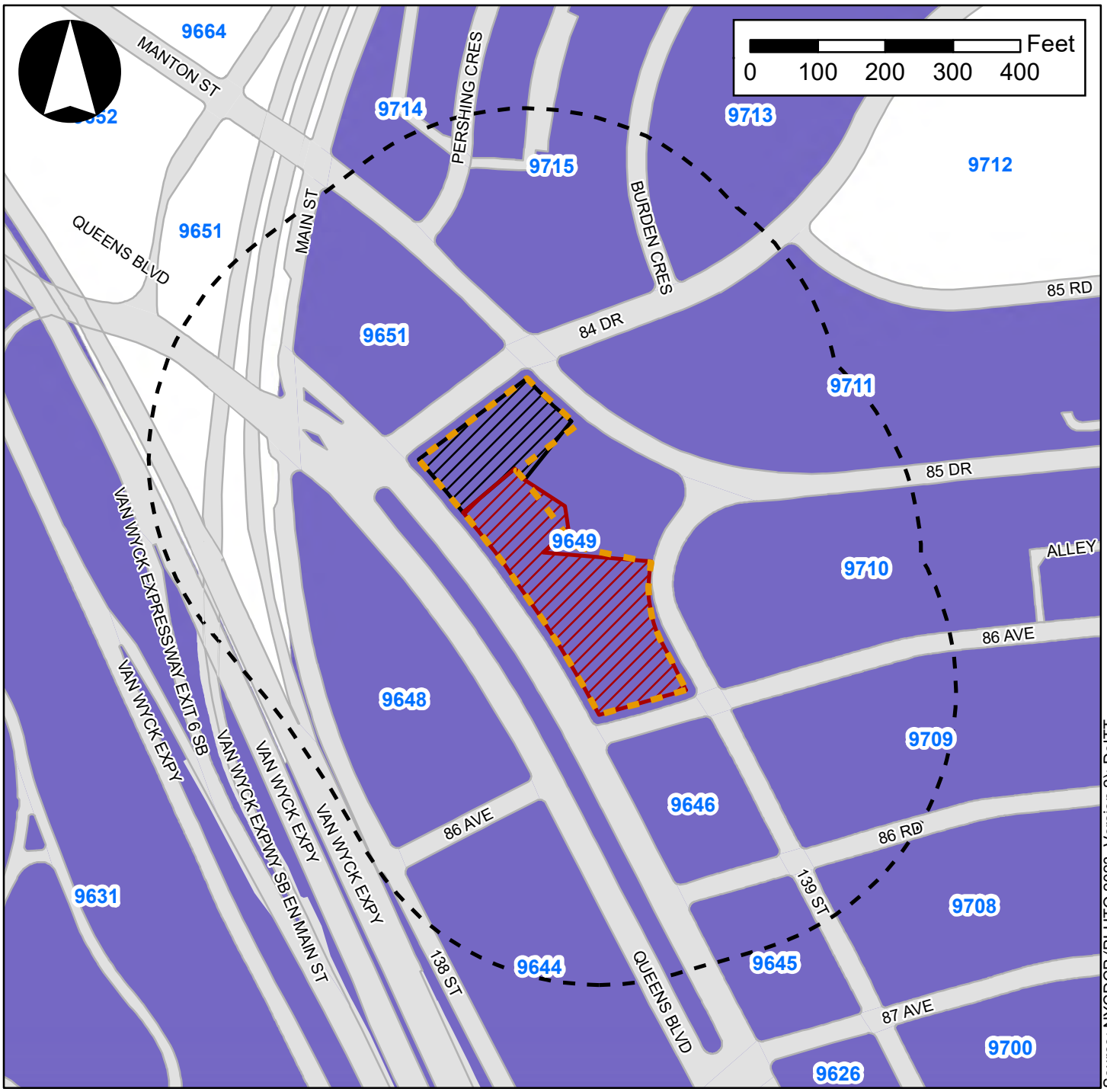
FRESH PROGRAM

The Food Retail Expansion to Support Health ("FRESH") Program was developed in response to a citywide study, *Going to Market*, conducted by DCP in 2008, which highlighted the widespread shortage of neighborhood grocery stores providing fresh food options in several communities of the city. The FRESH Program offers zoning incentives and financial benefits in these underserved communities. The goal of the FRESH Program is to encourage the development and retention of convenient, accessible stores that provide fresh meat, fruit and vegetables, and other perishable goods in addition to a full range of grocery products. The FRESH Program offers a set of zoning incentives that provide additional floor area in mixed-use buildings, reduce the amount of required accessory parking for food stores, and permit larger grocery stores as-of-right in light manufacturing districts. The financial benefits, administered by the New York City Industrial Development Agency, exempt or reduce certain taxes for qualifying FRESH food stores.

In 2021, the city modified and expanded the FRESH Program (Z 210380 ZRY) into 10 additional neighborhoods in the Bronx, Brooklyn, Queens, and Staten Island. The modifications to the FRESH Program included the introduction of a mechanism to prevent saturation of FRESH food stores, amendments to the glazing requirement for conversions, amendments to the accessory parking regulations for FRESH food stores, and the clarification of sundry zoning text.

As shown in **Figure C-3**, the primary study area and the secondary study area are located within an area designated for discretionary tax incentives pursuant to the FRESH Program. To utilize the incentives applicable to the FRESH Program, an Applicant must demonstrate that the primary business of the commercial use is associated with the FRESH Program, and the FRESH food store must provide at least 6,000 sf toward the FRESH food store use. In addition, a percentage of the ground floor street wall must be glazed and transparent.

Figure C-3
FRESH Program

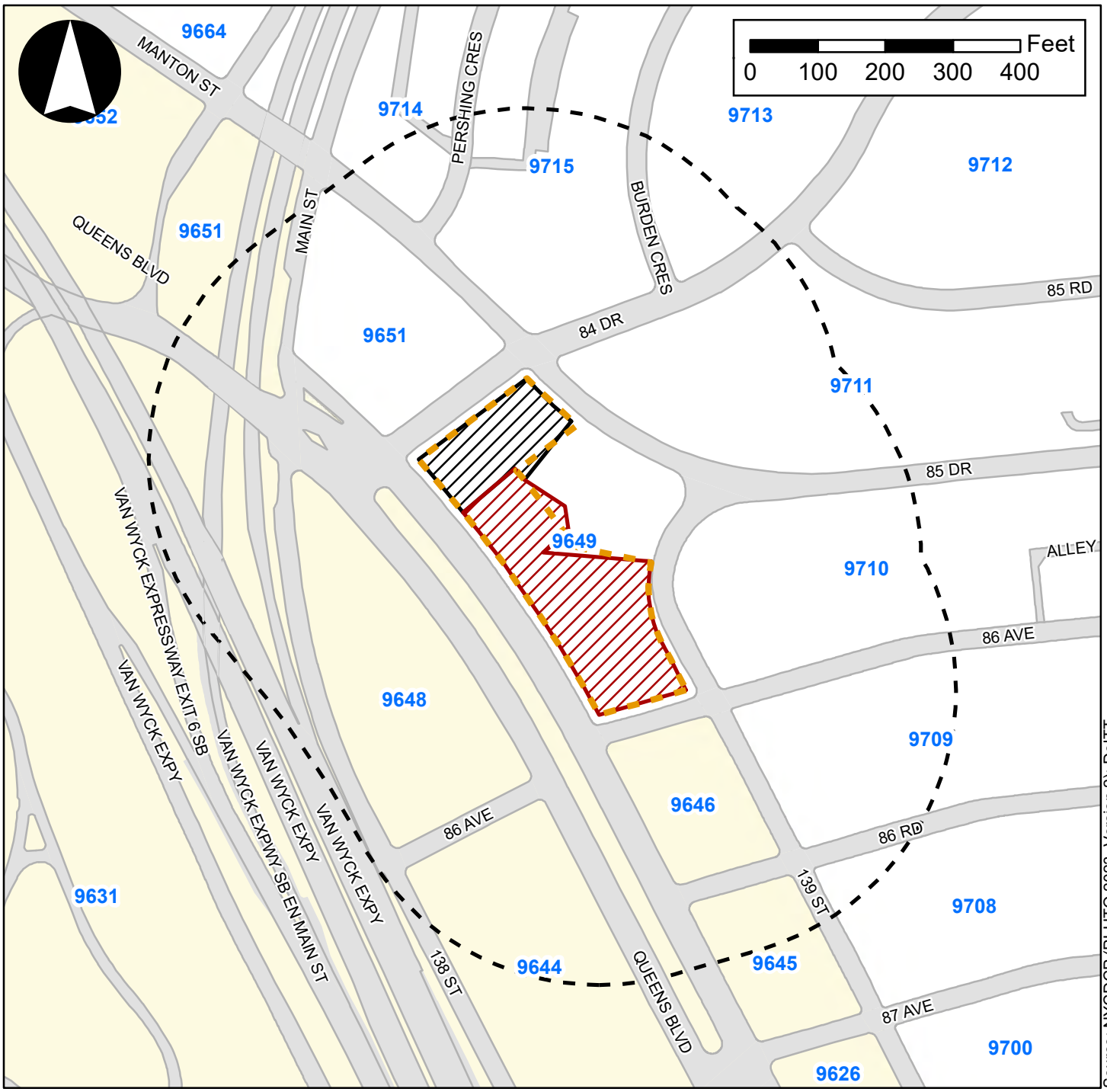


Source: NYCDCP (PLUTO 2023, Version 2); DoITT

Legend

- Primary Study Area (Project Area)
- Secondary Study Area (400-Foot Radius)
- Projected Development Site 1
- Projected Development Site 2
- FRESH Program Discretionary Tax Incentives
- FRESH Program Zoning & Discretionary Tax Incentives
- FRESH Program Zoning Incentives

Figure C-4
Transit Zone



Legend

- Primary Study Area (Project Area)
- Secondary Study Area (400-Foot Radius)
- Projected Development Site 1
- Projected Development Site 2
- Transit Zone

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

Land Use and Zoning

PRIMARY STUDY AREA

As described in **Attachment A, "Project Description,"** in 2028 without the Proposed Actions, the Project Area's existing R6A/C1-4 zoning would remain in place. Absent the Proposed Actions (the "No-Action condition"), it is assumed that development would occur on an as-of-right basis on both identified Projected Development Sites, given that both development sites are underbuilt at less than half the allowable FAR pursuant to the existing R6A/C1-4 zoning. No changes would occur to the existing residential building on Lot 53.

On the Applicant-owned Projected Development Site 1 (Lots 17, 25, and 37), the Applicant would demolish the existing single-story commercial buildings and construct a mixed-use residential and commercial development pursuant to existing zoning. The No-Action development on Projected Development Site 1 would consist of a seven-story (approximately 75-foot tall; 85-foot bulkhead height), mixed-use commercial and residential building containing approximately 122,550 gsf (113,359 zsf, 2.36 FAR) of residential space, consisting of 133 total DUs. The building would also contain approximately 33,020 gsf (30,544 zsf, 0.64 FAR) of ground-floor local retail space, and approximately 67 accessory parking spaces located in a second-floor garage, for a total of approximately 207,327 gsf (143,903 zsf, 3.00 FAR). The building would not contain a cellar.

The non-Applicant-owned Projected Development Site 2 would be developed pursuant to existing zoning in the No-Action condition. The existing single-story commercial buildings would be demolished, and the development site would be developed with a seven-story (approximately 75-foot roof height; 85-foot bulkhead height) mixed-use commercial and residential building containing approximately 51,921 gsf of residential space (47,201 zsf, 2.25 FAR), consisting of approximately 56 total DUs. The building would also contain approximately 18,094 gsf (15,734 zsf, 0.75 FAR) of ground-floor local retail space, and approximately 31 accessory parking spaces located in a second-floor garage, for a total of approximately 78,414 gsf (62,934 zsf, 3.00 FAR). The No-Action developments on both Projected Development Sites would maximize the allowable 3.0 FAR on each development site.

It is anticipated that there would be no zoning changes in the primary study area in the future without the Proposed Actions. The Project Area's existing R6A/C1-4 zoning would remain in place.

SECONDARY STUDY AREA

In the future without the Proposed Actions, there are no known development projects anticipated to be completed within the secondary study area. In addition, there are no known or anticipated proposals to alter existing zoning designations within the secondary study area. As such, land use and zoning in the secondary study area in the future without the Proposed Actions would be the same as existing conditions.

Public Policy

There are no known or planned changes to public policy applicable to either the primary or secondary study areas in the future without the Proposed Actions.

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

Under the With-Action condition, the Proposed Actions, which include a zoning map amendment and a zoning text amendment, would be approved. As shown in **Figure C-5**, an R8X (MIH)/C2-4 zoning district would be mapped on most of Block 9649 bounded by 84th Drive to the north, Manton and 139th Street to the east, 86th Avenue to the south, and Queens Boulevard to the west, replacing the existing R6A/C1-4 zoning. Under the With-Action conditions, the maximum allowable FAR in the proposed R8X district would increase to 7.2 FAR when fully utilizing the additional FAR under the MIH Program.

Land Use

PRIMARY STUDY AREA

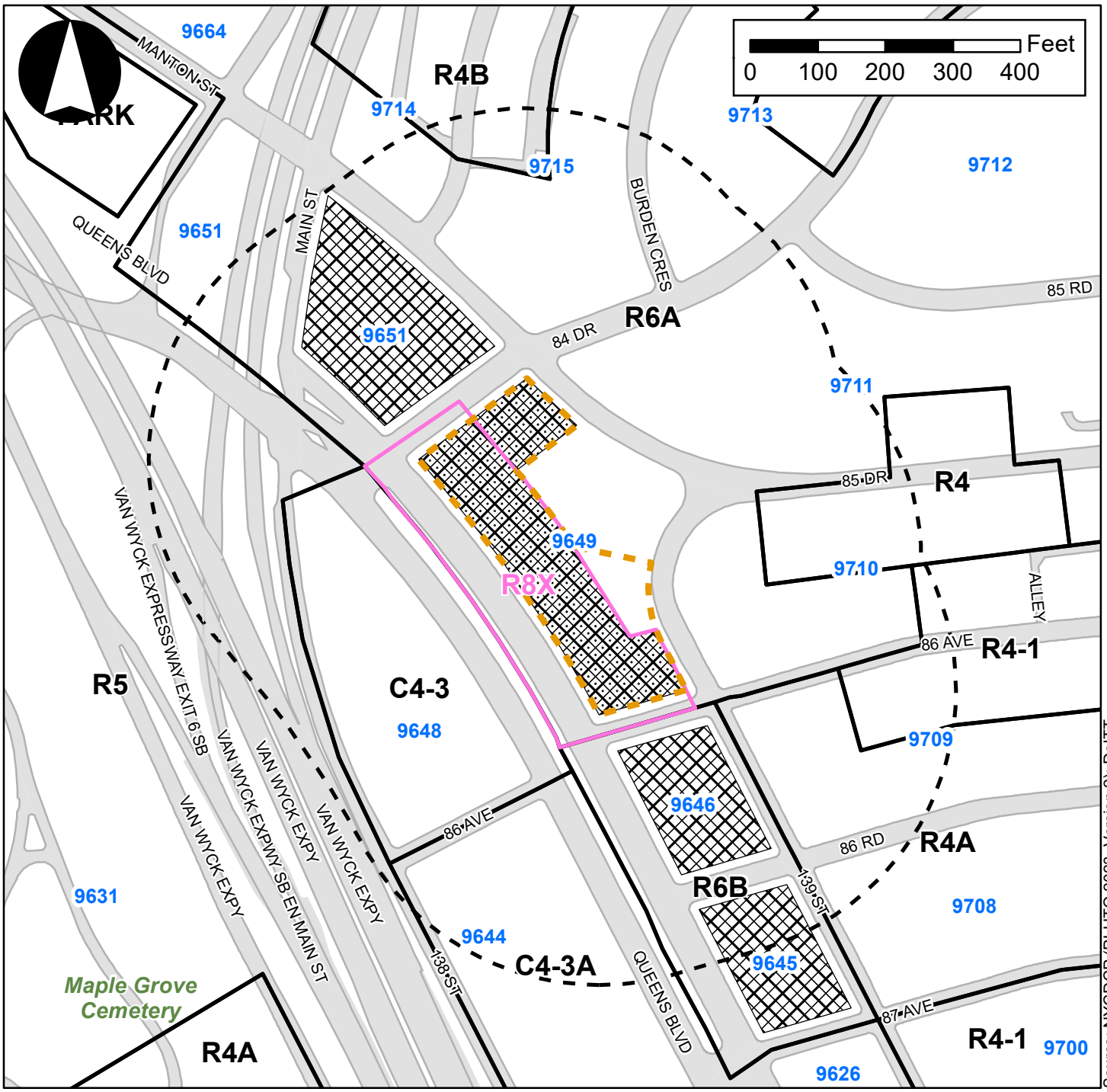
Projected Development Site 1 (Block 9649, Lots 17/25/37; the Proposed Project) at 138-23 Queens Boulevard would be developed with a new 17-story, mixed-use commercial and residential building, which would replace the three existing single-story commercial buildings. The Proposed Project would be built to the maximum allowable height with a qualifying ground floor (175-foot roof height; 195-foot bulkhead height) and would come close to the maximum permitted blended FAR at the site (6.64 FAR as compared to a maximum allowable blended FAR of 6.65). It would include approximately 311,154 gsf (287,817 zoning square feet [zsf], equivalent to 6.00 FAR) of residential space consisting of 311 total dwelling units (DUs) at a factor of approximately 1,000 gsf per DU (925 zsf per DU). The Proposed Project would also include approximately 33,020 gsf (30,554 zsf, 0.64 FAR) of ground-floor local retail space and 132-space above-grade accessory parking garage on the building's second floor. The Proposed Project would not include a cellar. Refer to **Figure A-5 in Attachment A, "Project Description"** for an illustrative site plan of the Proposed Project, and **Figure A-6** for an illustrative schematic section of the Proposed Project.

Depending on the MIH Option selected during ULURP, either 25% (approximately 78 DUs) or 30% (approximately 93 DUs) of the residential floor area would be designated as permanently affordable pursuant to MIH. The Applicant intends to pursue MIH Option 1, which would result in approximately 78 DUs designated as permanently affordable at an average of 60% Area Median Income (AMI). The Proposed Project would total approximately 395,931 gsf (318,361 zsf, 6.64 FAR).

The Proposed Actions would result in changes to land use within the primary study area by increasing the allowable density from what is currently allowed as-of-right. As described above, the Project Area is occupied by five single-story attached commercial buildings which contain a variety of local retail uses. Under the RWCDS, the Development Site would be redeveloped to a maximum FAR of 6.65. Therefore, compared to the No-Action condition, the With-Action condition would introduce additional residential and commercial uses to an underutilized area currently occupied by single-story commercial buildings. The new residential and commercial retail uses introduced by the Proposed Actions would be complementary to and compatible with the existing mixed-use buildings, multi-family elevator buildings, and standalone commercial buildings along the Queens Boulevard corridor.

The Proposed Actions would not generate land uses that would be incompatible with surrounding land uses, nor would it displace existing land uses located within the primary study area in such a way as to adversely affect surrounding land uses. The introduction of housing in a transit accessible area would further contribute to the mission and purpose of integrating housing with transportation and jobs, thus encouraging live-work communities and transit-oriented development. Additionally, the Proposed Actions would add to recent developments along the Queens Boulevard corridors, a wide street

Figure C-5
Proposed Zoning Map



Legend

- Primary Study Area (Project Area)
- Secondary Study Area (400-Foot Radius)
- R6A — Existing Zoning District Boundaries
- C1-4 Overlay
- Proposed R8X Zoning District
- Proposed C2-4 Overlay

appropriate to accommodate increased density. Therefore, the Proposed Actions would support land use trends, and no significant adverse land use impacts are expected. Therefore, the With-Action condition would not introduce any new land uses that would be incompatible with their surroundings and would not alter or accelerate existing development patterns in the secondary study area, and no significant adverse land use impacts would occur within the secondary study area.

SECONDARY STUDY AREA

The Proposed Actions are not expected to alter development trends or patterns in the secondary study area. The secondary study area would not undergo any changes because of the Proposed Actions. The Proposed Actions would have no direct effect on land use in the secondary study area. The proposed residential uses at the Development Site would complement and be consistent with the mix of residential uses in the secondary study area. As noted above, land uses in the secondary study area are predominantly residential uses with some commercial uses. Replacing underutilized and underbuilt buildings currently located at the Development Site would also activate the streetscape along Queens Boulevard.

Therefore, the Proposed Actions would not introduce any new land uses that would be incompatible with their surroundings, and the Proposed Actions would not represent a significant adverse impact on land use in the secondary study area in accordance with the criteria set forth in the *CEQR Technical Manual.*

Zoning

Primary Study Area

In the future with the Proposed Actions, the requested zoning map amendment and zoning text amendment would be approved, resulting in a rezoning from an R6A/C1-4 district to an R8X/C2-4 district along Queens Boulevard between 86th Avenue and 84th Drive (refer to **Figure C-5**).

The proposed zoning district would continue to allow residential and community facility uses (Use Groups 1-4), as well as local retail uses (Use Groups 5 and 6). In fact, it would permit a wider range of commercial uses (Use Groups 7 to 9, and 14). It would also increase the allowable density and would create additional zoning capacity in a transit-accessible area to support new housing creation and increase the number of affordable housing units available in New York City. The proposed rezoning area is well suited for additional development. It is well served by public transportation options in the form of buses and subways and Queens Boulevard is a major arterial road that can support additional density.

The proposed zoning text amendment would establish an MIH area coterminous with the Rezoning Area through ZR Appendix F: Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing Areas for CD 1. The proposed text amendment would require the Applicant to develop in accordance with the MIH program and would mandate the provision of affordable housing. Pursuant to the MIH program, a percentage of the new dwelling units would be affordable units, resulting in an affordable housing set-aside for either 25 percent of the residential floor area at an average of 60 percent AMI (Option 1) or 30 percent of the residential floor area at an average of 80 percent of AMI (Option 2). The Applicant intends to pursue MIH Option 1. The proposed affordable housing set asides would ensure that the development within the Rezoning Area would help to address the need for housing to serve diverse incomes. It would also align with one of Community Board 8's needs for more affordable housing.

As shown in **Table C-4**, within the proposed R8X zoning district, the proposed zoning map amendment would increase the maximum permitted residential FAR to 7.2 (with MIH bonuses) from 3 and the maximum permitted community facility FAR to 6.0 from 3.0. As shown in **Table C-4**, within the proposed R8X/C2-4 zoning district, the proposed zoning map amendment would increase the maximum permitted residential FAR to 7.2 (with MIH bonuses) from 3.0, the maximum permitted community facility FAR to 6.0 from 3.0, and the maximum permitted commercial FAR will stay the same as 2.0.

SECONDARY STUDY AREA

The Proposed Actions would only apply in the primary study area and would not affect the larger secondary study area. The proposed one zoning map and one zoning text amendment would align with the City's land use, zoning, and public policy objectives to encourage denser development in areas well served by public transit and to facilitate the development of permanent affordable housing. The proposed zoning changes would be consistent with other residential and commercial overlay zoning designations in the secondary study area as the entire secondary study area is zoned for residential uses and the eastern side of Queens Boulevard is zoned with a commercial overlay. The Proposed Actions would not result in any significant impacts to zoning patterns in the secondary study area, nor have a significant impact on the extent of conformity within the secondary study area.

Public Policy

As detailed below, the Proposed Actions would not result in any significant adverse public policy impacts to the primary or secondary study areas. The proposed zoning changes are expected to help foster diverse and livable neighborhoods with mixed-use residential and commercial buildings in an underutilized area and ensure the City's housing supply increases in a more equitable way, through the construction of new affordable housing units alongside market-rate housing units.

HOUSING OUR NEIGHBORS: A BLUEPRINT FOR HOUSING AND HOMELESSNESS

The Proposed Actions would support the policies and goals of *Housing Our Neighbors: A Blueprint for Housing and Homelessness* by establishing an MIH area encompassing the primary study area, which would require future residential development to include permanent income-restricted housing units (IRHUs). An MIH area requires compliance with one of the income-restricted housing options provided in ZR Section 23-154(d)(3). As the Applicant intends to select Option 1, this would result in approximately 78 DUs designated as permanently affordable at an average of 60% Area Median Income (AMI). The income-restricted units provided at Projected Development Site 1 would help foster a diverse and livable neighborhood as well as preserve affordability and quality of housing stock in the surrounding area. Therefore, the Proposed Actions would be consistent with the policy goals and objectives of *Housing Our Neighbors: A Blueprint for Housing and Homelessness*.

ONENYC 2050: BUILDING A STRONG AND FAIR CITY

The Proposed Actions would support the policies and goals of OneNYC 2050. The Proposed Actions would create new housing opportunities, including income-restricted housing options, thereby contributing to the community development of the Briarwood neighborhood. Therefore, the Proposed Actions would be consistent with the policy goals and objectives of OneNYC 2050.

WHERE WE LIVE NYC PLAN

The Proposed Actions would support Goal 2 of the *Where We Live NYC Plan* by establishing an MIH area encompassing the primary study area, which would require future residential development to include permanent IRHUs. An MIH area requires compliance with one of the income-restricted housing options provided in ZR Section 23-154(d)(3). The Applicant is pursuing MIH option 1. Therefore, the Proposed Actions would be consistent with Goal 2 of the *Where We Live NYC Plan*.

TRANSIT ZONE

The Proposed Actions would facilitate additional residential land uses in a transit-accessible area of Queen Community District 8. The primary study area is located in close proximity to mass transit, including the Briarwood subway station (serviced by the E and F train) and the Q20A, Q20B and Q60 bus routes. The Proposed Actions would not conflict with the primary study area's location with regards to the Transit Zone.

For these reasons, the Proposed Actions would not result in a significant adverse impact on public policy within the primary or secondary study areas, in accordance with the criteria set forth in the 2021 *CEQR Technical Manual*.

FRESH PROGRAM

The Applicant does not intend to participate in the FRESH program, and the Proposed Actions would not have an effect on this policy.

ATTACHMENT D

SOCIOECONOMIC CONDITIONS

I. INTRODUCTION

This attachment assesses whether the Proposed Actions and associated reasonable worst case development scenario (RWCDS) would result in significant adverse impacts to the socioeconomic character of the area surrounding the Project Area in the Briarwood neighborhood of Queens Community District (CD) 8. As described in the 2021 *City Environmental Quality Review* (CEQR) *Technical Manual*, the socioeconomic character of an area includes its population, housing, and economic activities. Socioeconomic changes may occur when a project directly or indirectly changes these elements. Although some socioeconomic changes may not result in environmental 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.

As described in **Attachment A, "Project Description,"** the Applicant is seeking discretionary actions (the "Proposed Actions") to facilitate a mixed-use residential and commercial development at 138-23 Queens Boulevard (Queens Block 9649, Lots 17, 25, and 37; "Projected Development Site 1"). Under the RWCDS, the Proposed Actions would result in the addition of 237,821 gross square feet (gsf) of residential space, including 260 residential dwelling units (DUs), of which between 113 and 135 DUs would be affordable under the Mandatory Inclusionary Housing (MIH) program[1], and 69 accessory parking spaces, as well as a net reduction of 5,304 gsf of local retail at two projected development sites[2], compared to the No-Action condition. The Proposed Actions do not exceed the thresholds warranting analyses of direct residential or business displacement, indirect business displacement, or adverse effects on specific industries. As the Proposed Actions would exceed the *CEQR Technical Manual* threshold warranting a preliminary indirect residential displacement analysis (increase of 200 DUs or more), a preliminary assessment is provided herein.

II. 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) affect either or both of these segments in similar 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. The objective of the CEQR analysis is to disclose whether any changes created by the proposed action would have a significant impact compared with what would happen in the future without the proposed action (i.e., the "No-Action condition").

[1] Under MIH Option 1, the RWCDS would introduce 113 affordable DUs (25%), which would be affordable to households at an average of 60% of the Area Median Income (AMI), and under MIH Option 2, the RWCDS would introduce 135 affordable DUs (30%), which would be affordable to households at an average of 80% of the AMI.

[2] In addition to the Applicant's Projected Development Site 1, for RWCDS analysis purposes, it is assumed that the proposed zoning changes could allow for redevelopment of the non-applicant controlled Lots 42 and 44 on Block 9649 ("Projected Development Site 2") pursuant to the proposed R8X zoning.

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 action. Examples include the proposed redevelopment of a currently occupied site for new uses or structures, or a proposed easement or right-of-way that would take a portion of a parcel and thus render it unfit for its current use. Since the occupants of a particular site are usually known, the disclosure of direct displacement focuses on specific businesses and employment and an identifiable number of residents and workers.

Indirect or secondary displacement is defined as the involuntary displacement of residents, businesses, or employees in an area adjacent to, or close to, a project site that results from changes in socioeconomic conditions created by a proposed action. Examples include rising residential 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; a similar turnover of industrial to higher-rent commercial tenancies induced by the introduction of a successful office project in an area; or the flight from a neighborhood that can occur if a proposed project creates conditions that break down the community (such as a highway dividing the area). Unlike direct displacement, the exact occupants to be indirectly displaced are not known. Therefore, an assessment of indirect displacement usually identifies the size and type of groups of residents, businesses, or employees potentially affected.

Even if a proposed action does not directly or indirectly displace businesses, it may affect the operation and viability of a major industry or commercial operation in the city. An example would be new regulations that prohibit or restrict the use of certain processes that are critical to certain industries. In these cases, the CEQR review may involve the assessment of the economic impact of the project on the specific industry in question.

Determining Whether a Socioeconomic Assessment is Appropriate

According to the *CEQR Technical Manual*, a socioeconomic assessment should be conducted if a project may be reasonably expected to create socioeconomic changes in the area affected by the project that would not be expected to occur in the absence of the project. 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.

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

Neither Projected Development Site 1 nor 2 contains any existing residential units. As such, the Proposed Actions and associated RWCDS would not result in any direct residential displacement, and therefore, would not result in significant adverse impacts due to direct residential displacement. In the absence of the Proposed Actions, Projected Development Sites 1 and 2 would be developed pursuant to the existing zoning and are anticipated to accommodate two mid-rise multiunit residential buildings with ground floor local retail, which would accommodate a combined total of 189 market-rate DUs.

2. ***Direct Business Displacement: Would the project directly displace more than 100 employees, or 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.

Irrespective of the Proposed Actions, both projected development sites are anticipated to be redeveloped with residential and commercial uses in accordance with the existing zoning by 2028. As such, the Proposed Actions and associated RWCDS would not result in any direct business or institutional displacement, and therefore, are not expected to result in significant adverse impacts due to direct business or institutional displacement. The existing commercial establishments at Projected Development Site 1 and 2 would be displaced irrespective of the Proposed Actions. The two projected development sites currently accommodate 25 local retail and service establishments, including 10 retail stores, nine restaurants, three personal services establishments, two medical establishments, and one gym/fitness center, which employ an estimated 117 workers.

3. ***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 200 units or less or commercial development of 200,000 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 and associated RWCDS would introduce 260 DUs to the Project Area as compared to the No-Action condition, and therefore would exceed the preliminary screening assessment threshold of 200 units warranting a preliminary assessment of indirect residential displacement. As such, the indirect residential displacement analysis provided below assesses the potential of the Proposed Actions to result in significant adverse impacts in regard to indirect residential displacement.

The Proposed Actions and associated RWCDS would result in a net decrease of 5,304 gsf of commercial space, which would not exceed the 200,000 gsf *CEQR Technical Manual* threshold. Therefore, an assessment of potential indirect business displacement is not warranted.

4. ***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? This type of development may have the potential to draw a substantial amount of sales from existing businesses within the study area, resulting in indirect business displacement due to market saturation.***

An assessment of indirect business displacement due to market saturation (i.e., competition) is not warranted based on *CEQR Technical Manual* guidance. As described above, the Proposed Actions and associated RWCDS are expected to result in a net decrease of 5,304 gsf of local retail compared to the No-Action condition, which is well below the 200,000 sf *CEQR Technical Manual* threshold warranting assessment of indirect business displacement due to market saturation.

The Proposed Actions and associated RWCDS are not expected to add to or create a retail concentration that may draw a substantial amount of sales from existing businesses within the study area to the extent that certain categories of business close and vacancies in the area increase, thus resulting in a potential for disinvestment on local retail streets.

5. ***Adverse Effects on Specific Industries: Is the project expected to affect conditions within a specific industry? This could affect socioeconomic conditions if a substantial number of workers or residents depend on the goods and services provided by the affected businesses, or if the project would result in the loss or substantial diminishment of a particularly important product or service within the City.***

The Proposed Actions would not have a significant adverse impact on specific industries. The Proposed Actions would not displace any business that is critical to the viability of any specific industry within or outside of the study area. As described in **Attachment C, "Land Use, Zoning, and Public Policy,"** the Project Area is located within the boundaries of the City's Food Retail Expansion to Support Health (FRESH) Program[3] (see **Figure C-3** in **Attachment C**). Key Food supermarket at 138-37 Queens Boulevard (occupying portion of the existing building on Lot 25, Block 9649 of Projected Development Site 1) is a neighborhood grocery store within the boundaries of the FRESH Program, and therefore, is the subject of a plan or program to preserve, enhance, or protect it, but has not benefitted from FRESH incentives. None of the other existing businesses within the Project Area are the subject of a plan/program to preserve, enhance, or protect it. The existing buildings on Projected Development Site 1 would be demolished and the site redeveloped irrespective of the Proposed Actions. Therefore, the Proposed Actions would not directly or indirectly affect business conditions in any industry or category or business within or outside of the study area and would not substantially reduce employment or impair viability in a specific industry or category of business.

Based on the screening assessment presented above, the Proposed Actions and associated RWCDS warrant an analysis of indirect residential displacement. No further analysis is warranted for direct residential displacement, direct business displacement, indirect business displacement, nor adverse effects on specific industries.

Indirect Residential Displacement Analysis Format

Based on *CEQR Technical Manual* guidance, described in Section 330 of Chapter 5, the analysis of indirect residential displacement begins with a preliminary assessment. The objective of the preliminary assessment is to learn enough about the potential effects of the Proposed Actions and RWCDS to either rule out the possibility of significant adverse impacts or determine that a more detailed analysis is required to fully determine the extent of the project's effect. A detailed analysis, when required, is framed in the context of existing conditions and evaluates the changes to those conditions in the With-Action condition as compared with the changes that would be expected in the No-Action condition. In conjunction with the land use task, specific development projects expected to occur by the project's analysis year are identified. These projects are described in terms of the possible changes to socioeconomic conditions that they would cause, including potential population increases, changes in income characteristics of the affected area, changes to the rents or sale prices of residential units, new commercial or industrial uses, or changes to employment or retail sales. Those conditions are then compared with the future with the Proposed Actions to determine the potential for significant adverse impacts. A preliminary assessment was sufficient to conclude that the Proposed Actions and resultant RWCDS would not result in any significant adverse socioeconomic impacts due to indirect residential displacement.

[3] The FRESH Program provides zoning and/or financial incentives to help promote the establishment and retention of neighborhood grocery stores.

Study Area Definition

To assess these socioeconomic issues, information was gathered regarding the surrounding area's demographic characteristics, housing inventory, and housing market. Typically, the socioeconomic study area boundaries are similar to those of the land use study area. The study area generally encompasses the area affected by the Proposed Actions (i.e., directly affected area or primary study area), and an adjacent area (study area) within a quarter mile or half mile, depending on project size and area characteristics. The socioeconomic assessment seeks to assess a project's potential to change socioeconomic character relative to the study area populations (i.e., a project that would result in a substantial increase in population may be expected to affect a larger study area).

The *CEQR Technical Manual* explains that for projects that would increase the residential population by more than five percent as compared to the population expected to reside in the quarter mile study area in the No-Action condition, a half-mile study area is appropriate. The RWCDS associated with the Proposed Actions would result in an incremental (net) increase of 260 DUs, which would increase the population of the quarter-mile study area by more than five percent as compared to the No-Action condition.[4] Therefore, in accordance with *CEQR Technical Manual* guidance, the study area for socioeconomic conditions approximates a half (0.5)-mile perimeter around the directly affected area (or proposed rezoning area).

The boundary of the socioeconomic study area was modified to match the census tracts that most closely define a 0.5-mile perimeter surrounding the rezoning area (i.e., are at least 50 percent within the 0.5-mile perimeter around the rezoning area), including census tracts 138, 214, 216.02, 216.03[5], 220.01, 220.02, 232 and 238 (see **Figure D-1**). By conforming to census tract boundaries, the socioeconomic analysis more accurately applies Census data to depict the demographic characteristics of the surrounding area. In addition, in accordance with *CEQR Technical Manual* guidance, the indirect residential displacement analysis considers an area "near" the study area (i.e., within a quarter-mile radius of the study area) to examine real estate market trends and ascertain whether the surrounding area has experienced a readily observable trend toward increasing rents and the likely effect of the Proposed Actions on such trends.

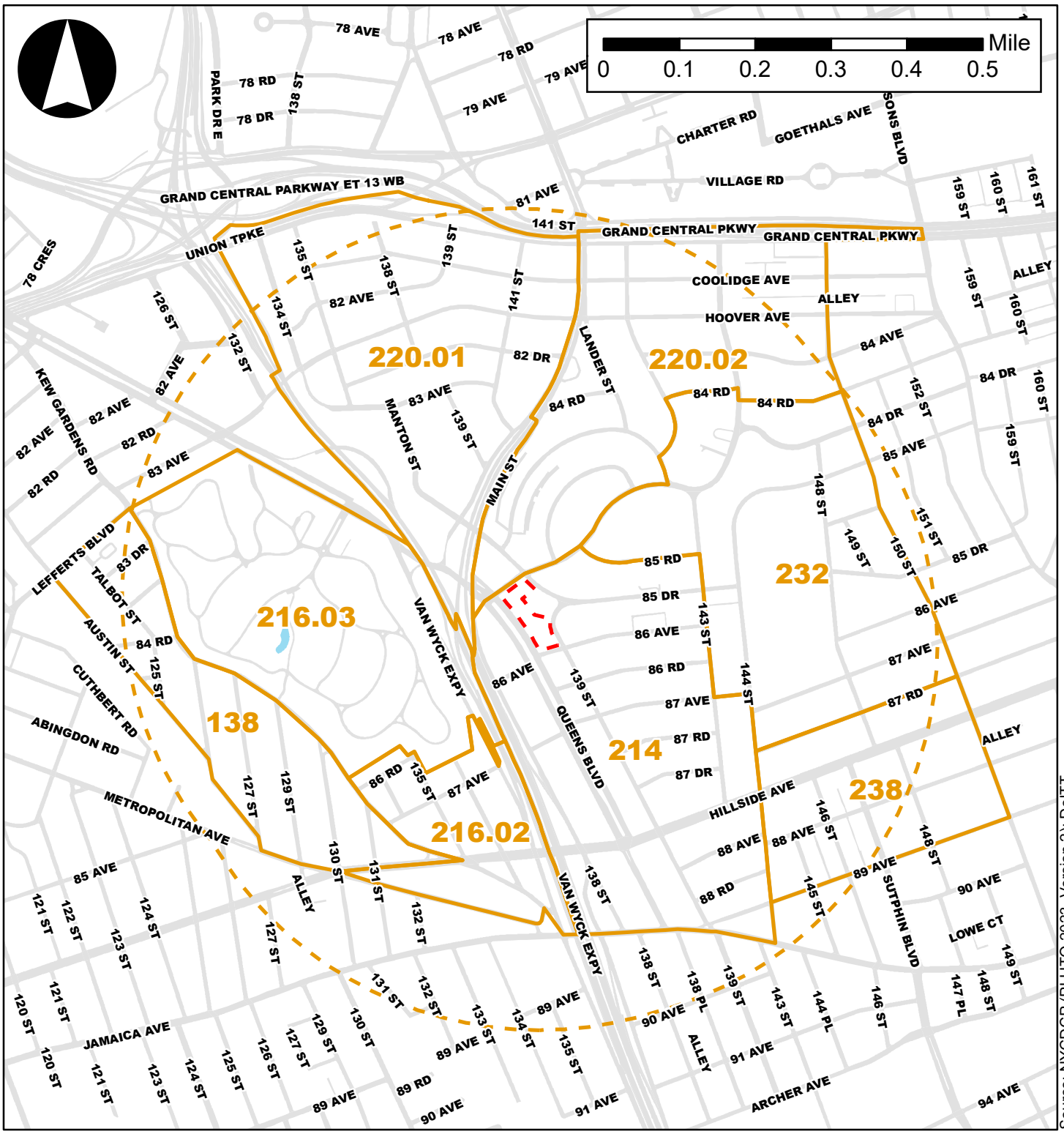
III. INDIRECT RESIDENTIAL DISPLACEMENT PRELIMINARY ASSESSMENT

As described in the *CEQR Technical Manual*, indirect residential displacement usually results from substantial new development that is markedly different from existing uses and activity in an area and that causes increased property values in the area. Increased property values can lead to increased rents in non-regulated rental housing units, which can make it difficult for some existing residents to afford to stay in their homes. Pursuant to *CEQR Technical Manual* guidance, the indirect residential displacement assessment aims to determine whether the Proposed Actions would either introduce a trend or accelerate an existing trend of changing real estate market conditions that may have the potential to displace a vulnerable residential population and substantially change the socioeconomic character of the

[4] Assumes 100 percent occupancy and an average household size of 2.76 persons, which is based on the average household size of Queens Community District (CD) 8 according to the 2017-2021 Five Year ACS. The With-Action RWCDS would increase the quarter mile population (8,179 as of 2020 Census) by an estimated 723 people[4] (or an approximate 8.8 percent increase).

[5] Census tract 216.03 comprises Maple Grove Cemetery in Kew Gardens, which is an expansive 65-acre cemetery, and does not include any associated residential population or housing units.

Figure D-1
Socioeconomic Conditions Study Area



Source: NYCDCP (PLUTO 2023, Version 2); DoITT

Legend

- Project Area
- Half-Mile Radius
- 214 Socioeconomic Conditions Study Area
- Roadways
- Water Bodies

neighborhood. Residents who are homeowners, or who are renters living in rent regulated[6] or subsidized housing units would not be vulnerable to rent pressures according to *CEQR Technical Manual* guidance.

This preliminary assessment follows the step-by-step preliminary assessment guidance described in Section 332.1 of the 2021 *CEQR Technical Manual*.

Step 1: Determine if the proposed project would add new population with higher average incomes compared to the average incomes of the existing populations and any new population expected to reside within the study area in the future without the proposed project.

Household Incomes

Household income characteristics for the study area population are described using the average (or mean) and median household incomes, as well as a breakdown of income distribution. The median household income represents the mid-point of all household incomes in a study area, and the mean household income is calculated by dividing aggregate income by the total number of households in a study area. The presence of higher- or lower-income households raises or lowers the area's mean income, sometimes substantially higher or lower than the median of household incomes in a study area.

According to 2017-2021 ACS Five-Year Estimates, the mean annual household income of residents living within the 0.5-mile study area is approximately $91,463 as compared to $82,357 in 2006-2010 (refer to **Table D-1**).[7] The existing mean annual household income of study area residents is relatively low and comparable to 75 percent of the area median income ("AMI") of New York City for a family of three.[8] As shown in **Table D-1**, residents within the study area have lower mean household incomes, as compared to Queens ($100,067) and New York City ($113,315) as a whole.

Trends in the mean household income within Queens and greater city indicate that the mean household income is increasing. As shown in **Table D-1**, the mean household income in Queens increased by nearly 14 percent since 2006-2010, and in New York City by 16 percent. Neither the directionality nor the percentage of change in mean household income could be reported with statistical confidence for the study area between the 2006-2010 and 2017-2021 ACS Five-Year Estimates.

Table D-1:
Household Income Characteristics within the Study Area, Queens, and New York City [1]

	Median Household Income			Mean Household Income		
	2006-2010 ACS	2017-2021 ACS	Percent Change or Directional Change	2006-2010 ACS	2017-2021 ACS	Percent Change or Directional Change
0.5-Mile Study Area	$70,704	$71,144	N/A	$82,357	$91,463	N/A
Queens	$69,352	$75,886	9.4%	$88,062	$100,067	13.6%
New York City	$63,072	$70,663	12.0%	$97,706	$113,315	16.0%

[6] Rent regulated housing includes both rent-controlled and rent stabilized apartments that are protected from steep rent increases and offer tenants greater legal protections than those living in market-rate housing.

[7] Based on the MOE for the mean household income of the study area according to the 2017-2021 ACS Five-Year Estimates (MOE of $9,412), the average household income is, with 90% confidence, between $82,051 to $100,875. Neither the percentage change nor directionality in mean household income between the 2006-2010 and 2017-2021 ACS Five-Year Estimates within the study area can be reported with statistical confidence.

[8] The 2023 AMI for the New York City region is $127,00 for a three-person family (100 percent AMI) and therefore, 75 percent of the AMI for a three-person family is $95,325. The AMI for a three-person family is used given that the average household size of Queens CD 8 is 2.76 The AMI for a three-person family is used given that the average household size of Queens CD 8 is 2.76.

Sources: Bureau of the Census, 2017-2021 and 2006-2010 ACS Five-Year Estimates, as reported on DCP's Population Factfinder in November 2023.
Notes: * All dollar values have been adjusted to 2021 dollars.
[1] Statistical reliability of the data included in this table has been vetted using DCP's NYC Population FactFinder.
[2] If the MOE of the difference between 2006-2010 and 2017-2021 ACS Five-Year Estimates is greater than the difference, a change cannot be reported with confidence; if the MOE of the difference is greater than one third of the difference, a chance cannot be estimated with confidence and only the direction of change can be reported (i.e., increase/decrease). For the study area, neither the directionality nor the percent change could be reported for the study area's median and mean annual household incomes.

In all areas, the median household income is lower than the mean household income, indicating the presence of higher-income households within the study area, larger borough, and overall city (refer to **Table D-1**). As shown in **Table D-1**, the median household income within the study area is comparable to the larger borough and city. According to 2017-2021 ACS Five-Year Estimates, the median household income for the study area is an estimated $71,144,[9] as compared to $75,886 for Queens households and $70,663 for New York City households, respectively. The study area's existing median annual household income falls below 60 percent of the 2023 AMI for the New York City region for a three-person family.[10] Like mean household incomes, the median household incomes within the larger borough and overall city have increased indicating a trend of increasing household incomes.

Table D-2 illustrates the distribution of household incomes within the study area as compared to the larger borough and New York City. As shown in **Table D-2**, the distribution of household incomes within the study area is comparable to Queens and New York City. Nearly 34 percent of households within the study area earned $100,000 or more, as compared to approximately 37 and 36.5 percent of households in Queens and New York City, respectively. At the lower end of the spectrum, slightly more than 17 percent of households earned less than $25,000, as compared to nearly 16 percent in Queens and approximately 21 percent in New York City.

Table D-2: Household Income Distribution within the Study Area, Quens, and New York City (2017-2021)

	Total Households	Households Earning Less than $25,000		Households Earning $25,000 to $49,999		Households Earning $50,000 to $99,999		Households Earning $100,000 to $199,999		Households Earning $200,000 or more	
		#	%	#	%	#	%	#	%	#	%
Study Area	13,040	2,254	17.3%	2,021	15.5%	4,346	33.3%	3,340	25.6%	1,079	8.3%
Queens	807,468	125,533	15.6%	142,856	17.7%	236,567	29.3%	220,679	27.3%	81,833	10.1%
New York City	3,250,657	689,576	21.2%	549,830	16.9%	811,566	25.0%	759,843	23.4%	439,842	13.5%

Source: US Census Bureau, 2017-2021 Five-Year Estimates via NYC Population FactFinder in November 2023.
Note: The statistical reliability of the data included in this table has been vetted using DCP's NYC Population FactFinder.

2028 No-Action Condition

In the absence of the Proposed Actions, no zoning changes would occur within the Project Area and it is anticipated that the current land use trends and general development patterns would continue within the study area. The study area would continue to support a predominantly residential area with some new development. Under the No-Action condition, the existing buildings at Projected Development Sites 1 and 2 would be demolished and the two sites would be redeveloped pursuant to the existing zoning. In the

[9] Based on the MOE for the median household income of the study area according to the 2017-2021 ACS Five-Year Estimates (MOE of $14,254), the average household income is, with 90% confidence, between $126,248 to $154,756.
[10] The median income for all cities across the country is defined each year by the U.S. Department of Housing and Urban Development ("HUD"). In the New York City region, 65 percent of the AMI for a three-person family is $76,260. The AMI for a three-person family is used given that the average household size of Queens CD 8 is 2.76 according to the 2017-2021 5-year ACS.

absence of the Proposed Actions, two new mixed-use residential and commercial buildings would introduce 189 DUs, combined, all of which would be market-rate, to the Project Area.

Table D-3 identifies 10 known and planned development projects anticipated to be completed within the 0.5-mile study area by 2028 which would introduce residential uses. The largest planned development would be located at 88-36 139th Street, which would introduce approximately 81 DUs within an 8-story mixed-use residential and commercial building. As shown in **Table D-3**, a total of approximately 338 DUs are anticipated to be introduced within the study area by 2028.

Table D-3: Known Planned No-Action Development Projects within the 0.5-Mile Study Area

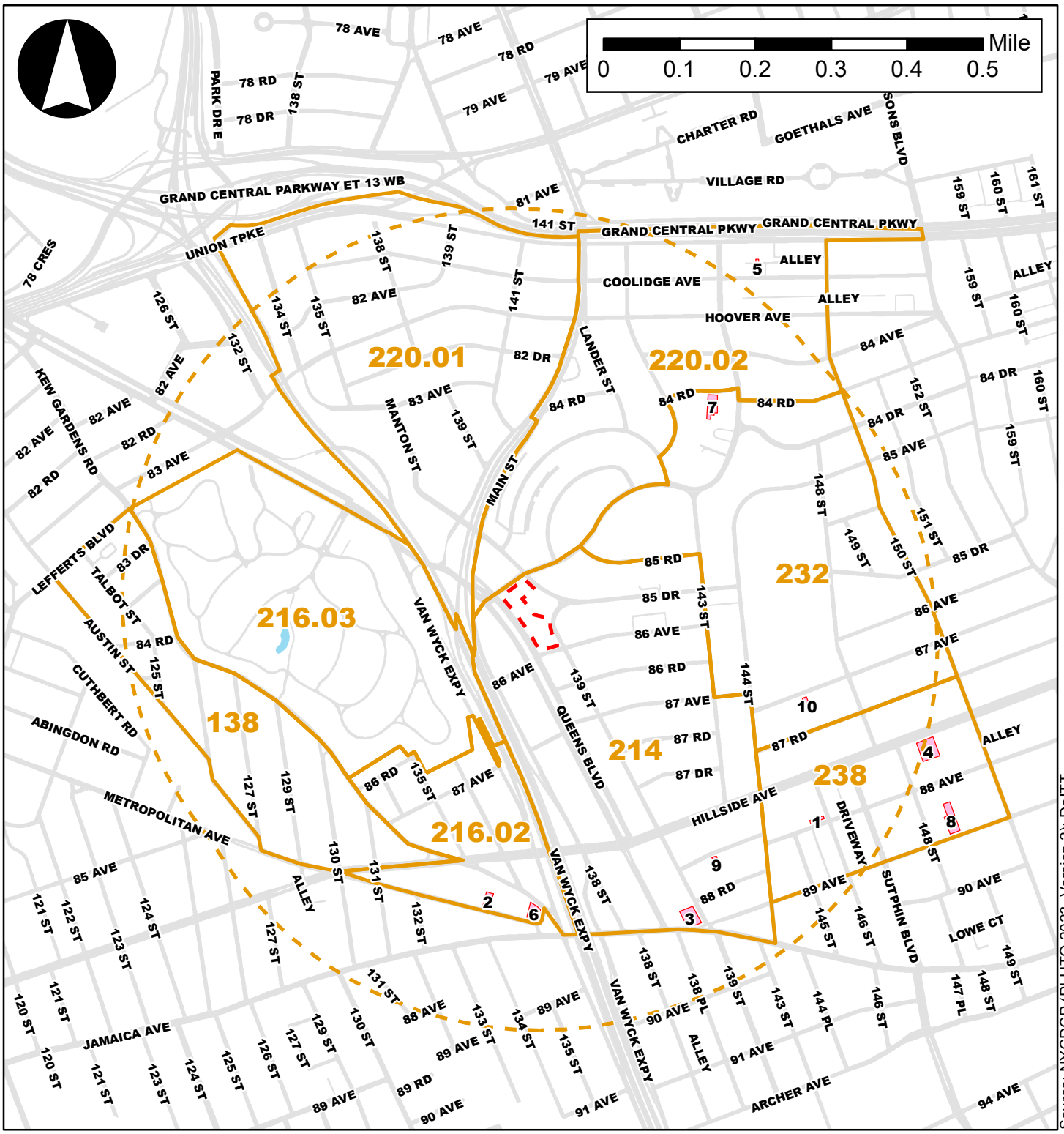
Map No.	Address	Number of Residential DUs	Estimated Residential Population
1	87-84 146th Street	1	3
2	132-47 Metropolitan Avenue	21	63
3	88-36 139th Street	81	243
4	148-18 Hillside Avenue	80	239
5	147-25 Coolidge Avenue	1	3
6	132-77 Metropolitan Avenue	40	120
7	143-26 84th Road	42	110
8	148-15 89th Avenue	69	205
9	139-24 88th Avenue	2	6
10	144-38 87th Avenue	1	3
Total		***338***	***995***

Source: DCP Housing Database: Project-Level Files (2nd Quarter 2023)
Notes:
[1] The No-Action development projects are mapped in **Figure D-2**.
[2] The residential population figures were calculated as follows: For development projects located within Queens CD 8, the average household size of 2.76 and vacancy rate of 4.7% from the 2020 Census was applied. For developments located within Queens CD 9, the average household size of 3.16 and vacancy rate of 5.4% from the 2020 Census was applied. For developments located within Queens CD 12, the average household size of 3.15 and vacancy rate of 5.1% from the 2020 Census was applied.

2028 With-Action Condition

In the future with the Proposed Actions, the proposed zoning changes would permit an increase in residential density within the Project Area and would facilitate the development of a considerable amount of new housing, including affordable housing, as well as local retail and services. Under the RWCDS, the With-Action condition would result in the total development of approximately 449 total DUs and 113 affordable DUs pursuant to MIH Option 1 (25% of DUs at an average of 60% AMI), or up to 135 affordable DUs pursuant to MIH Option 2 (30% of DUs at an average of 80% of AMI) at two projected development sites. Compared to the No-Action condition, the Proposed Actions would result in an incremental (net) increase of approximately 260 total DUs and 113 affordable DUs pursuant to MIH Option 1 (25% of DUs at an average of 60% AMI), or up to 135 affordable DUs pursuant to MIH Option 2 (30% of DUs at an average of 80% AMI). In the future with the Proposed Actions, the Project Area would be rezoned from R6A to R8X with a C2-4 commercial overlay to a depth of 100 feet along the north side of 86th Avenue and 100-foot depth on the east side of Queens Boulevard. The Project Area would also be designated an MIH area, which would set mandatory income-restricted housing requirements pursuant to the MIH program and require a share of new housing be set aside as permanently income-restricted. The production of permanently income-restricted housing would be a condition of any future residential development within the Project Area, which is expected to help preserve income-restricted housing in the surrounding area. There would be no expiration to the affordability requirements of housing units created through the MIH program, making them a long-term, stable reservoir of income-restricted housing in the surrounding area, a key policy to meet the goals outlined in the city's *Housing Our Neighbors: A Blueprint for Housing and Homelessness*.

Figure D-2
Socioeconomic Conditions Study Area No-Action Developments



Source: NYCDCP (PLUTO 2023, Version 2); DoITT

Legend

- Project Area
- Half-Mile Radius
- 214 Socioeconomic Conditions Study Area
- No-Action Developments (Keyed to Table D-3)
- Roadways
- Water Bodies

Across the city, community boards have identified affordable housing as the most pressing issue citywide. According to the *Statement of Community District Needs and Community Board Budget Requests Fiscal Year 2024*, there is a need for affordable housing in Queens CD 8 as there is a significant percentage of renters who are rent burdened. The proposed zoning changes would require any new residential development to introduce permanently income-restricted housing as part of the development program. As such, the Proposed Actions' RWCDS is expected to expand housing opportunities in an area of the city where a strong demand for income-restricted and market-rate housing exists. The MIH program would provide assurance that new residential development would address the needs of residents at lower-income levels even in the event that local housing market conditions continue to change with the requirement of permanent income-restricted housing.

The amount of affordable housing units produced and resulting range of affordability presented would depend on which MIH Option is utilized and selected during ULURP. The City Council will select the final MIH Option during ULURP. The New York City Department of Housing Preservation and Development ("HPD"), as a supporting and regulatory agency, would at a later date establish levels of affordability for Projected Development Site 1 (Applicant-owned) in coordination with the Applicant ,as well as for the non-applicant owned Projected Development Site 2. The affordability requirements would be defined and ensured through regulatory agreements with HPD.

The levels of affordability for the MIH units would be based on percentages of the HUD-defined AMI for the region. The 2023 income limits by family size for the New York City region are presented in **Table D-4**. These levels will change over time, however, based on these data, residents of the income-restricted housing units (averaging 60 and/or 80 percent AMI, depending on which MIH Option(s) is selected) are generally expected to have lower mean household incomes in comparison to the existing income levels of households within the study area (refer to **Table D-1**). The income-restricted housing added by the Proposed Actions' RWCDS is expected to help maintain a more diverse demographic composition within the study area and would further expand housing opportunities in an area where a strong demand for income-restricted housing exists. As noted previously, the Applicant intends to map MIH Option 1 within the Project Area.

Table D-4: 2023 New York City Area AMI

Family Size	30% of AMI	40% of AMI	50% of AMI	60% of AMI	80% of AMI	100% of AMI	130% of AMI
1	$29,670	$39,560	$49,450	$59,340	$79,120	$98,900	$128,570
2	$33,900	$45,200	$56,500	$67,800	$90,400	$113,000	$146,900
3	$38,130	$50,840	$63,550	$76,260	$101,680	$127,100	$165,230
4	$42,360	$56,480	$70,600	$84,720	$112,960	$141,200	$183,560

Source: HPD, https://www1.nyc.gov/site/hpd/services-and-information/area-median-income.page

For conservative analysis purposes, the analysis assumes the MIH Option (either Option 1 or 2) that would introduce higher household income levels. Based on this assumption, MIH Option 2 would be mapped. Under MIH Option 2, approximately 30 percent of a development's residential floor area would be income-restricted and be income-restricted to households earning on average 80 percent AMI (or up to $101,680 for a family of three in 2023). Based on this assumption, the Proposed Actions' RWCDS would introduce approximately 314 market-rate DUs and approximately 135 DUs occupied by families/residents earning an average of 80 percent AMI under the With-Action condition (a total of approximately 449 DUs) at the two projected development sites.

To estimate the average household income of residents introduced by the Proposed Actions' RWCDS, the incomes of future residents in both the market-rate and income-restricted units at Projected

Development Sites 1 (Applicant-owned) and 2 (non-applicant-owned) have been projected. Housing is considered income-restricted if it costs about one-third or less of total household income, as HUD defines families who pay more than 30 percent of their income for housing as rent-burdened. Assuming the 30 percent threshold is conservative for this analysis as it would result in a higher assumed income for the RWCDS market-rate tenants.

As shown in **Table D-4**, according to HUD, three-person families in the New York City region would be eligible for the income-restricted housing units within the Project Area if they were earning $101,680 annually, which is 80 percent AMI.[11] Since the study area's average household size is 2.76 persons per household, it is assumed that the average income of a family living in an income-restricted unit would be $98,980, which is higher than the study area's current average household income of $91,463 (refer to **Table D-1**).

Consistent with 2021 *CEQR Technical Manual* guidance, the third quartile of market-rate apartment rents is assumed to represent 30 percent of the introduced population's monthly income for the market-rate apartments, given that new construction tends to be at the higher end of market rents and that 30 percent is the standard threshold for what is considered a non-rent-burdened household. For the market-rate units, research into current market-rate asking rents within the study area (summarized in **Table D-5**) and the assumption that incoming market-rate renters would be spending approximately 30 percent of their household income on rent[12] have been used to estimate the expected income level of future market-rate tenants.

Table D-5: Estimated Third Quartile Asking Rental Rates and Calculated Estimated Household Incomes for the Proposed Market-Rate Units

Unit Type	Number of Apartments Listed [1]	Third Quartile Asking Rent [1]	Estimated Monthly Income [2]	Estimated Yearly Income [2]
Studios	18	$2,200	$7,333	$88,000
1-Bedrooms	47	$3,625	$8,333	$100,000
2-Bedrooms	24	$4,703	$10,930	$131,160
3+ Bedrooms	15	$5,446	$11,325	$135,900
Estimated Weighted Average [3]		**$2,872**	**$9,573**	**$114,880**

Source: Corcoran.com, Compass.com, Street Easy, http://streeteasy.com/, accessed in November 2023
Notes:
[1] Represents the number of apartments listed and the third quartile rent based on November 2023 market listings in Briarwood, Kew Gardens, Richmond Hill, and Jamaica neighborhoods.
[2] Household incomes were imputed using HUD's 30 percent guideline and were rounded to nearest tenth for yearly household income.
[3] The weighted averages for the proposed market-rate units were calculated based on a similar mix of unit types as currently available within the study area based on 2017-2021 5-Year ACS estimates for the 0.5-mile study area.

Assuming that the incoming market-rate renters would be spending approximately 30 percent of their income on rent, a person or household renting a market-rate unit because of the Proposed Actions' RWCDS is expected to have an average income ranging between approximately $88,000 and $135,900 depending on the unit type (refer to **Table D-5**). Assuming that the mix of unit types would be similar to the current distribution within the study area, a household renting a market-rate unit that would be

[11] https://www1.nyc.gov/site/hpd/services-and-information/area-median-income.page; As noted earlier in the attachment, the Applicant intends to establish MIH Option 1 within the Project Area, which would require that 25 percent of housing units must be income-restricted, on average, to households earning 60 percent AMI ($76,260 for a family of three in 2023).
[12] HUD defines families who pay more than 30 percent of their income for housing as rent-burdened.

available as a result of the Proposed Actions' RWCDS would have a weighted average income of approximately $114,880.

As noted above, the RWCDS would result in an incremental net increase of approximately 260 total DUs, of which approximately 135 would be income-restricted to families making an average of 80 percent AMI under MIH Option 2, and approximately 125 would be market-rate. The average income of a household in an income-restricted unit would be $98,980 annually, and the average income of a household in a market-rate unit would be $114,880. As such, the overall estimated average income of the market-rate and affordable units would be $110,100, which would be higher than the study area's current average household income (see **Table D-1**).

Although the Proposed Actions would introduce affordable income-restricted housing and expand housing options available to range of household income levels in the study area, given the potential difference between the study area's existing average household income and that of the project-generated population, the Proposed Actions would introduce new residents that would have average household incomes that are expected to exceed the average incomes of the 0.5-mile study area population. According to *CEQR Technical Manual* guidance, Step 2 of the preliminary assessment is warranted.

Step 2: Determine if the project's increase in population is large enough relative to the size of the population expected to reside in the study area without the project affecting real estate market conditions in the study area.

Based on *Step 1, Step 2* of the preliminary assessment is warranted for the Proposed Actions. According to *CEQR Technical Manual* analysis thresholds, if the population increase would be greater than five percent in the study area, the incremental population may be large enough to affect real estate market conditions, and *Step 3* of the preliminary assessment is warranted. If the population increase is expected to be more than 10 percent in the study area, a detailed analysis is warranted.

Study Area Population Change 2010 to 2020

Based on 2020 Census data, the 0.5-mile study area has an estimated population of 34,652. As shown in **Table D-6**, the study area population has increased by 5.5 percent since 2010. Both Queens and New York City had a larger growth rate of slightly less than eight percent during the same time period.

Table D-6: Residential Population

	2010	2020	Numeric Change	Percent Change
Study Area	32,852	34,652	1,800	5.5%
Queens	2,230,722	2,405,464	174,742	7.8%
New York City	8,175,133	8,804,190	629,057	7.7%

Source: US Census Bureau, 2010 and 2020 Census via NYC Population FactFinder in November 2023.

Estimated Population Change 2020 to 2023

Based on certificates of occupancy issued by the New York City Department of Buildings (DOB), the study area has continued to experience a net increase in the housing supply with the addition of 318 DUs in 13 developments between 2020 Census and 2023 (see **Table D-7**). As shown in **Table D-7**, roughly 90 percent of the new housing units are market-rate units. Only one development, 148-37 88th Avenue, which added 109 housing units in the Briarwood neighborhood included both market-rate and affordable units. The 33 affordable housing units at 148-37 88th Avenue are targeted to households earning 130 percent of AMI.

Assuming an average household size of 2.76 and a vacancy rate of 4.7 percent in CD 8, an average household size of 3.16 and a vacancy rate of 5.4 percent in CD 9 and an average household size of 3.15 and a vacancy rate of 5.1 percent in CD 12, these recent residential developments have introduced an estimated 841 additional residents (2.4 percent increase) to the study area between 2020 and 2023, resulting in an estimated population of 35,493 for the study area.[13]

Table D-7: Recent Residential Development in the 0.5-Mile Study Area since 2020 Census

Building Name/Address	Block	Lot	Total Residential DUs	Market-Rate DUs	Affordable DUs
148-37 88th Avenue	9694	49	109	76	33
138-28 Queens Boulevard	9648	11	64	64	0
80-08 135th Street	9663	2	54	54	0
84-42 Smedley Street	9736	141	45	45	0
84-03 Lander Street	9716	122	22	22	0
147-07 88th Avenue	9692	85	8	8	0
88-38 144th Street	9683	16	3	3	0
88-36 144th Street	9683	15	3	3	0
139-48 88th Road	9683	13	2	2	0
88-34 144th Street	9683	114	2	2	0
88-30 144th Street	9683	14	2	2	0
147-13 Hillside Avenue	9702	55	2	2	0
134-07 87th Avenue	9630	11	2	2	0
		Total	***318***	***285***	***33***

Source: DCP Housing Database: Project-Level Files, completed constructed (2nd Quarter 2023)
Notes:
[1] The residential population figures were calculated as follows: For development projects located within Queens CD 8, the average household size of 2.76 and vacancy rate of 4.7% from the 2020 Census was applied. For developments located within Queens CD 9, the average household size of 3.16 and vacancy rate of 5.4% from the 2020 Census was applied. For developments located within Queens CD 12, the average household size of 3.15 and vacancy rate of 5.1% from the 2020 Census was applied.

2028 No-Action Projected Population Change

As described above, in the absence of the Proposed Actions, 189 DUs are anticipated to be constructed at the two projected development sites, which would introduce 522 new residents. The larger study area would also continue to experience residential growth. Ten (10) known and planned developments are anticipated to introduce additional residential uses (338 new DUs) in the 0.5- mile study area under the No-Action condition by 2028 (refer to **Table D-3**), which would increase the study area's residential population. These planned No-Build sites would add an estimated 995 residents to the 0.5-mile study area in the No-Action condition. In the No-Action condition, the residential population is anticipated to increase to 37,010 residents, an approximate 4.27 percent increase from 2023.

2028 With-Action Project-Generated Population Change

The Proposed Actions and associated RWCDS would result in the incremental development of up to 260 additional DUs at two projected development sites, including both market rate DUs and affordable DUs. These 260 incremental DUs are expected to generate approximately 718 incremental residents, as

[13] The residential population figures were calculated as follows: For development projects located within Queens CD 8, the average household size of 2.76 and vacancy rate of 4.7% from the 2020 Census was applied. For development projects located within Queens CD 9, the average household size of 3.16 and vacancy rate of 5.4% from the 2020 Census was applied. For developments located within Queens CD 12, the average household size of 3.15 and vacancy rate of 5.1% from the 2020 Census was applied.

compared to the 2028 No-Action condition. As shown in **Table D-8**, this represents less than a two percent increase over the No-Action condition residential population.

Table D-8: 2028 No-Action and With-Action Residential Populations in the 0.5-Mile Study Area

	No-Action Population Residents	With-Action Population Residents	Incremental Number Change	Percent Change
Study Area	37,010	37,728	+718	+1.94%

Source: US Census Bureau, 2020 Census via NYC Population FactFinder in November 2023, and NYC Departments of Buildings (DOB).

According to *CEQR Technical Manual* methodology, if the project-generated population increase is less than five percent in the study area, it would not introduce a substantial new population that could substantially affect residential real estate market conditions in the study area. As the Proposed Actions would result in an increase in the 0.5-mile study area residential population of approximately 1.94 percent, this would not represent a substantial new population, and no significant adverse indirect residential displacement impacts would result pursuant to CEQR.

ATTACHMENT E

COMMUNITY FACILITIES AND SERVICES

I. INTRODUCTION

This attachment examines the potential effects of the Proposed Actions' Reasonable Worst Case Development Scenario ("RWCDS") on community facilities and services in and around the Project Area. The 2021 *City Environmental Quality Review* ("CEQR") *Technical Manual* defines community facilities and services as public or publicly funded educational facilities, libraries, health care facilities, and fire/police protection services. CEQR methodology focuses on a project's potential effect on the services provided by these facilities. A project can affect facility services when it physically displaces or alters a community facility or causes a change in population that may affect the services delivered by a community facility, as might happen if a facility is already over-utilized, or if a project is large enough to create a demand that could not be met by the existing facility.

As detailed in **Attachment A, "Project Description,"** the Proposed Actions' RWCDS would facilitate the net incremental development of approximately 260 total dwelling units ("DUs") on Projected Development Site 1 (Applicant-owned) and Projected Development Site 2 within the Project Area, including approximately 113-135 DUs[1] that would be affordable pursuant to MIH Options 1 or 2 at a range of 60-80% of the Area Median Income ("AMI") depending on the MIH Option selected. It is expected that the RWCDS on Projected Development Site 1 (Applicant-owned) and Projected Development Site 2 within the Project Area would be completely constructed and fully occupied in 2028.

The following analysis of community facilities and services has been conducted in accordance with 2021 *CEQR Technical Manual* guidance, utilizing data sourced from agencies such as the New York City Department of Education ("DOE"), the New York City School Construction Authority ("SCA"), and the New York City Department of City Planning ("DCP").

II. PRELIMINARY SCREENING

The purpose of the preliminary screening is to determine whether an assessment of community facilities and services is required for the Proposed Actions' RWCDS. As recommended by the 2021 *CEQR Technical Manual*, an assessment of community facilities and services is required if a project has the potential to result in either direct or indirect effects on community facilities and services. If a project would physically alter a community facility, whether by displacement of the facility or other physical change, this "direct" effect triggers the need to assess the service delivery of the facility and the potential effect that the physical change may have on that service delivery. Temporary direct effects should also be considered. Increased population in an area caused by a project would increase demand for existing services, which may result in potential "indirect" effects on service delivery. Depending on the size, income characteristics, and age distribution of the new population, there may be effects on public or publicly funded educational facilities and libraries.

[1] The number of incremental affordable DUs is based on the total RWCDS DU count established for the With-Action condition, which would result in the development of approximately 449 total DUs, 25-30% (approximately 113-135 DUs) of which would be affordable pursuant to MIH Options 1 or 2 at a range of 60-80% AMI depending on the MIH Option selected.

Direct Effects

The Proposed Actions would not directly displace or otherwise directly affect any public or publicly funded educational facilities, libraries, health care facilities, or fire/police protection services. Therefore, the Proposed Actions would not result in any significant adverse direct effects on community facilities and services, and further analysis is not required.

Indirect Effects

The 2021 *CEQR Technical Manual* includes thresholds that provide guidance in making an initial determination of whether a detailed analysis is necessary to determine potential impacts. **Table E-1** lists those 2021 *CEQR Technical Manual* thresholds for each community facility and services analysis area. If a project exceeds the threshold for a specific analysis area, a more detailed analysis is required. A preliminary screening analysis was conducted to determine if the Proposed Actions' RWCDS would exceed established 2021 *CEQR Technical Manual* thresholds warranting further analysis.

Table E-1: Preliminary Screening Analysis Criteria

Community Facility	Threshold for Detailed Analysis
Public Schools	50 or more elementary/middle school students or 150 or more high school students based on the number of residential units using the SCA's Projected Public School Ratio
Means-tested Early Childhood Programs	20 or more eligible children under age five based on the number of low or low/moderate income residential units
Libraries	More than a five percent increase in the ratio of residential units to library branches
Police/Fire Services and Health Care Facilities	Introduction of a sizeable new neighborhood

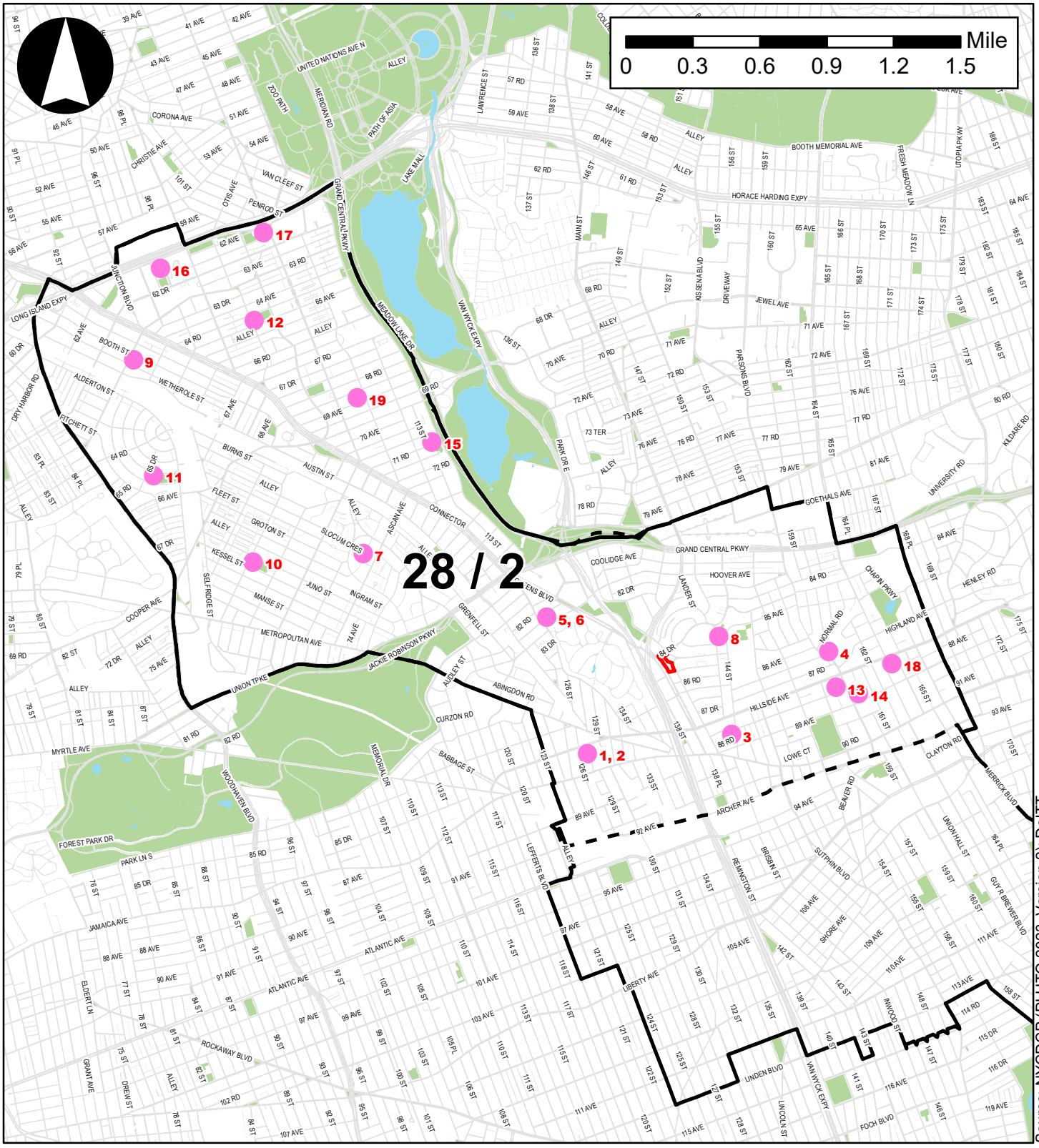
Source: 2021 *CEQR Technical Manual*, Table 6-1 "Community Facility Thresholds for Detailed Analyses."

Public Schools

Potential impacts on schools may result if there would be insufficient seats available to serve the population. Because it is rare that a project physically displaces an operating school, impacts are more likely to occur when a project introduces school-age children to an area. The 2021 *CEQR Technical Manual* recommends conducting a detailed analysis of public schools if a project would yield 50 or more elementary/middle school students and/or 150 or more high school students. The Proposed Actions' RWCDS would result in the net incremental development of approximately 260 DUs within the Project Area. As shown in **Figure E-1**, the Project Area is located in Community School District ("CSD") 15. Based on the SCA's Projected Public School Ratio student generation rates for CSD 28, 260 DUs would generate approximately 58 elementary school students, approximately 21 middle school students, and approximately 26 high school students.[2] As the Proposed Actions' RWCDS would introduce a total of 79 elementary and middle school students to the Project Area, a detailed analysis of public elementary and middle schools is required and is provided herein. The Proposed Actions' RWCDS would not generate 150 or more high school students. Therefore, the Proposed Actions would not result in significant adverse impacts on public high schools and further analysis of high schools is not required.

[2] Per the SCA's Projected Public School Ratio student generation rates, residential units in CSD 28 generate approximately 0.2245 elementary school students per DU, approximatley 0.0789 middle school students per DU, and approximatley 0.1 high school students per DU.

Figure E-1
Study Area Primary Schools



Source: NYCDCP (PLUTO 2023, Version 2); DoITT

Legend

Project Area

Primary Schools

28 / 2 Community School District/Subdistrict

Means-Tested Early Childhood Programs

Publicly funded Means-tested Early Childhood Programs are available for eligible children aged five and younger (until the child is eligible to attend Kindergarten for a fall start date). According to the 2021 *CEQR Technical Manual*, if a project would add 20 or more eligible children under age five, a detailed analysis is required. For CEQR analysis purposes, the number of residential units expected to be subsidized and targeted for households with incomes at or below 80% AMI should be used as a proxy for eligibility (equivalent to 139 residential units in Queens). This provides a conservative assessment of demand, since eligibility for subsidized child care is not defined strictly by income, but also takes into account family size and other reasons for care. The Proposed Actions' RWCDS would result in the net incremental development of approximately 260 DUs within the Project Area, 25-30% (approximately 113-135 DUs) of which would be affordable pursuant to MIH Options 1 or 2 at a range of 60-80% AMI depending on the MIH Option selected. For CEQR analysis purposes (i.e., Early Childhood Programs), 20% (90 DUs) of the residential floor area is assumed to be affordable at or below 60% AMI. Therefore, the Proposed Actions would not result in significant adverse impacts on Means-tested Early Childhood Programs and further analysis of Means-tested Early Childhood Programs is not required.

Libraries

Potential impacts on libraries may result from an increased user population. According to the 2021 *CEQR Technical Manual*, if a project would increase the average number of residential units served by library branches in the borough in which the project is located by more than five percent (equivalent to 663 residential units in Queens), the project may cause significant impacts on library services and further analysis is required. The Proposed Actions' RWCDS would not generate 663 residential units in Queens. Therefore, the Proposed Actions would not result in significant adverse impacts on libraries and further analysis of libraries is not required.

Police/Fire Services and Health Care Facilities

The 2021 *CEQR Technical Manual* recommends a detailed analysis of indirect impacts on health care facilities and fire and police protection services when a project would create a sizeable new neighborhood where none existed before. The Proposed Actions' RWCDS would facilitate the net incremental development of approximately 260 DUs within the Project Area. Therefore, the Proposed Actions would not create a sizeable new neighborhood where none existed before, and further analysis of health care facilities and fire and police protection services is not required. Therefore, the Proposed Actions would not result in significant adverse impacts on health care facilities and fire and police protection services.

III. INDIRECT EFFECTS ON PUBLIC ELEMENTARY AND MIDDLE SCHOOLS

Public schools are free for all students ages five and older and are operated and funded by DOE (charter schools are not considered public schools). Public schools include elementary (PS) schools (grades Kindergarten through 5), middle (IS/MS) schools (grades 6 through 8), and high (HS) schools (grades 9 through 12). CEQR analysis excludes charter and private schools, regardless of location (some charter schools are co-located in buildings owned by DOE or the SCA). CEQR analyzes potential impacts to public elementary and middle schools at a local level (the CSD sub-district), and potential impacts to high schools

at a borough-wide or citywide level. Schools are analyzed based on the potential for the project to cause overcrowding (i.e., a shortage of seats for an age group within the district).

Indirect Effects Methodology

Based on the SCA's Projected Public Schools Ratio student generation rates for CSD 28, the Proposed Actions' RWCDS would generate approximately 58 elementary school students, approximately 21 middle school students, and approximately 26 high school students. Therefore, a detailed analysis of public elementary and middle schools is required.

The study area for the analysis of public elementary and middle schools should be the CSD sub-district in which the project is located. The locations of public elementary and middle schools within the sub-district should be mapped. As shown in **Figure E-1**, the Project Area is located within sub-district 2 of CSD 28.

The detailed analysis presents the most recent capacity, enrollment, and utilization rates for public elementary and middle schools in the study area, including Mini-Schools and Annexes that are part of these school organizations. Enrollment, but not capacity, of Transportable Classroom Units ("TCUs") should also be provided. Conditions in the future No-Action condition are then predicted based on enrollment projections and proposed residential development projects located in the study area[3], and the future utilization rate for public school facilities is calculated by adding the estimated enrollment from the proposed residential development projects in the study area to DOE's projected enrollment and then comparing that number with projected school capacity. DOE's most recent enrollment projections are provided on SCA's website.[4] In addition, new school projects identified in DOE's Five-Year Capital Plan for Fiscal Years 2020-2024 (and/or subsequent amendments) are included if construction has begun. According to the 2021 *CEQR Technical Manual*, some schools may be included in the analysis if they are in DOE's Five-Year Capital Plan for Fiscal Years 2020-2024, but are not yet under construction, if the lead agency, in consultation with SCA, concurs that such inclusion is appropriate.

To determine the With-Action condition school utilization rates, the elementary and middle school students generated by the Proposed Actions' RWCDS are added to the study area student population. Then, the effect of the new students introduced by the Proposed Actions' RWCDS on the capacity of schools in the study area is evaluated. For public elementary and middle schools, a significant adverse impact may result if the project would result in both of the following: (1) a utilization rate of the public elementary or middle schools that is equal to or greater than 100 percent in the With-Action condition; and (2) 100 or more new students generated from the project past the 100 percent utilization rate.

Existing Conditions

Public Elementary Schools

As presented in **Table E-2** and shown in **Figure E-1**, there are 19 public schools serving elementary school students in the study area. In the 2022-2023 school year, public elementary schools in the study area had a utilization rate of approximately 103.7 percent and a deficit of approximately 346 seats. The zoned elementary school for the Project Area is P.S. 117 J. Keld / Briarwood School located at 85-15 143rd Street (Map No. 8 in **Figure E-1**).

[3] SCA's *Projected New Housing Starts for PS and MS Level Analysis, FY 2020-2024 Capital Plan*.
[4] Statistical Forecasting's *Enrollment Projections for the New York City Public Schools 2022-23 to 2032-33*.

Table E-2: 2022-2023 School Year Public Elementary School Enrollment, Capacity, and Utilization in CSD 28, Sub-District 2

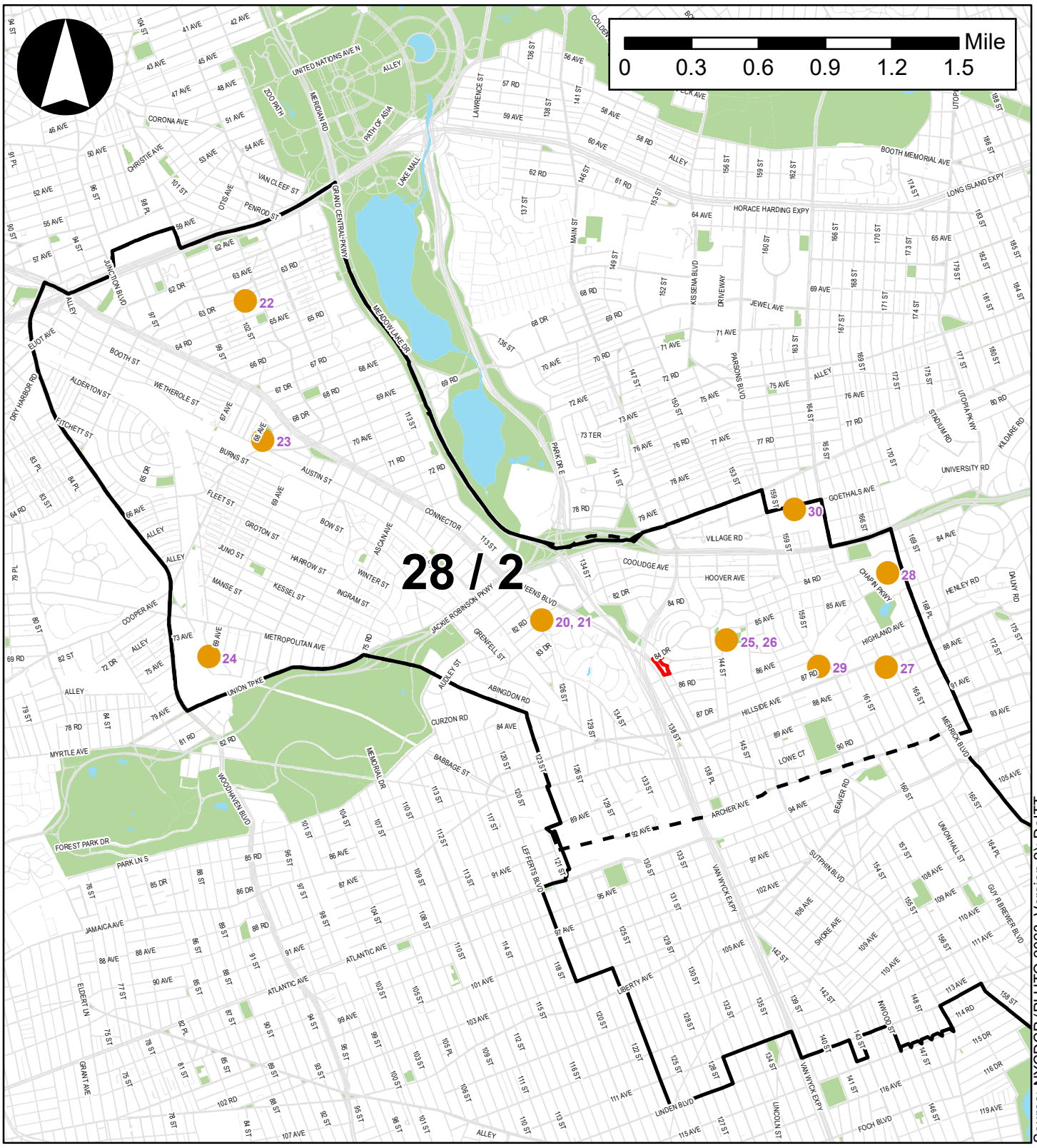
Map No.[1]	School Name	Address	Org. Level	Enrollment[2]	Target Capacity[2]	Available Seats	Utilization
1	P.S. 54 Hillside	86-02 127th Street	PS	306	242	-64	126.4%
2	P.S. 54 Mini-school	86-02 127th Street	PS	135	0	-135	0.0%
3	P.S. 82 Hammond	88-02 144th Street	PS	486	432	-54	112.5%
4	P.S. 86	87-41 Parsons Boulevard	PS	633	818	185	77.4%
5	P.S. 99 Kew Gardens	82-37 Kew Gardens Road	PS/IS	321	437	116	73.5%
6	P.S. 99 Kew Gardens Annex	83-34 Kew Gardens Road	PS/IS	321	0	-321	0.0%
7	P.S. 101 School in the Gardens	2 Russell Place	PS	585	361	-224	162.0%
8	P.S. 117 J. Keld / Briarwood School	85-15 143rd Street	PS	778	837	59	93.0%
9	P.S. 139 Rego Park	93-06 63rd Drive	PS	562	633	71	88.8%
10	P.S. 144 Col Jeromus Remsen	69-20 Juno Street	PS	832	1,045	213	79.6%
11	P.S. 174 William Sidney Mount	65-10 Dieterle Crescent	PS	541	476	-65	113.7%
12	P.S. 175 The Lynn Gross Discovery School	64-35 102nd Street	PS	660	599	-61	110.2%
13	P.S. 182 Samantha Smith	153-27 88th Avenue	PS	427	522	95	81.8%
14	P.S. 182 Annex	88-13 Parsons Boulevard	PS	215	0	-215	0.0%
15	P.S. 196 Grand Central Parkway	71-25 113th Street	PS	792	1,059	267	74.8%
16	P.S. 206 The Horace Harding School (Including TCU Enrollment)	61-01 97th Place	PS	501	446	-55	112.3%
17	P.S. 220 Edward Mandel	62-10 108th Street	PS	580	494	-86	117.4%
18	The Queens School for Leadership and Excellence	88-08 164th Street	PS	586	380	-206	154.2%
19	P.S. 303	68-60 110th Street	PS	473	607	134	77.9%
Study Area Totals				***9,734***	***9,388***	***-346***	***103.7%***

Source: DOE's *Enrollment, Capacity & Utilization, Target Calculation, 2022-2023 School Year*.
Notes:
[1] Refer to **Figure E-1** for the locations of public elementary schools.
[2] Target capacity sets a goal of reduced class sizes of 20 students for grades K-3 and 28 students for grades 4-8 and is used by DOE for capital planning purposes. In addition, per 2021 *CEQR Technical Manual* guidance, Mini-Schools, Annexes, and TCUs are not included in the target capacity for analysis purposes.

Public Middle Schools

As presented in **Table E-3** and shown in **Figure E-2**, there are 11 public schools serving middle school students in the study area. In the 2022-2023 school year, public middle schools in the study area had a utilization rate of approximately 101.9 percent and a deficit of approximately 104 seats. The zoned middle school for the Project Area is J.H.S. 217 Robert A. Van Wyck located at 85-05 144th Street (Map Nos. 33 and 34 in **Figure E-2**).

Figure E-2
Study Area Intermediate Schools



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Project Area

Intermediate Schools

28 / 2 Community School District/Subdistrict

Table E-3: 2022-2023 School Year Public Middle School Enrollment, Capacity, and Utilization in CSD 28, Sub-District 2

Map No.[1]	School Name	Address	Org. Level	Enrollment[2]	Target Capacity[2]	Available Seats	Utilization
20	P.S. 99 Kew Gardens	82-37 Kew Gardens Road	PS/IS	31	42	11	74.4%
21	P.S. 99 Kew Gardens Annex	83-34 Kew Gardens Road	PS/IS	31	0	-4	116.0%
22	J.H.S. 157 Stephen A. Halsey	63-55 102nd Street	IS/HS	1,524	1,406	-24	101.6%
23	J.H.S. 190 Russell Sage	68-17 Austin Street	IS	1,015	1,063	15	98.6%
24	Metropolitan Campus	91-30 Metropolitan Avenue	IS/HS	375	380	34	91.7%
25	J.H.S. 217 Robert A. Van Wyck	85-05 144th Street	IS	1,127	1,391	254	82.2%
26	J.H.S. 217 Robert A. Van Wyck (Temp. C.R. Building)	85-05 144th Street	IS	220	0	-14	105.5%
27	The Queens School for Leadership and Excellence - M.S. 358	88-08 164th Street	IS	339	259	-57	120.4%
28	Queens Collegiate: A College Board School	167-01 Gothic Drive	IS/HS	262	287	33	88.9%
29	Young Women's Leadership School, Queens	150-91 87th Road	IS/HS	255	243	-2	100.8%
30	Queens Gateway to Health Sciences Secondary School	160-20 Goethals Avenue	IS/HS	272	276	9	96.9%
Study Area Totals				***5,451***	***5,347***	***-104***	***101.9%***

Source: DOE's *Enrollment, Capacity & Utilization, Target Calculation, 2022-2023 School Year*.
Notes:
[1] Refer to **Figure E-2** for the locations of public middle schools.
[2] Target capacity sets a goal of reduced class sizes of 20 students for grades K-3 and 28 students for grades 4-8 and is used by DOE for capital planning purposes. In addition, per 2021 *CEQR Technical Manual* guidance, Mini-Schools, Annexes, and TCUs are not included in the target capacity for analysis purposes.

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

In the future without the Proposed Actions, the utilization of public elementary and middle schools serving the study area would be affected by changes in enrollment, mainly due to: (1) aging of the existing student body and new arrivals born into the study area or moving into it; and (2) changes in capacity, or number of available seats, in the public elementary and middle schools as a result of planned construction of new public schools or building additions to existing public schools.

Capacity Changes

As outlined in the 2021 *CEQR Technical Manual*, the No-Action condition school capacity changes considered in the detailed analysis should include information on proposed and adopted "Significant Changes in School Utilization" and information provided in the DOE's Five-Year Capital Plan.

There are two projects currently under construction in the study area. An addition to P.S. 174 William Sidney Mount is under construction at 65-10 Dieterle Crescent. The addition to P.S. 174 William Sidney Mount includes additional classroom space providing approximately 403 new elementary school seats. As

stated in the SCA's DOE's Five-Year Capital Plan for Fiscal Years 2020-2024, the P.S. 174 William Sidney Mount addition is slated for completion in June 2024. An addition to the P.S. 182 Annex is under construction at 88-13 Parsons Boulevard. The addition to the P.S. 182 Annex includes additional classroom space providing approximately 100 new elementary school seats. As stated in the SCA's DOE's Five-Year Capital Plan for Fiscal Years 2020-2024, the P.S. 182 Annex addition is slated for completion in March 2025. No capacity changes to public middle schools in study area are expected in the No-Action condition.

Enrollment Changes

The SCA provides future enrollment projections by district for up to 10 years. The latest available enrollment projections (Statistical Forecasting's *Enrollment Projections for the New York City Public Schools 2022-23 to 2032-33*) have been used in the detailed analysis to project student enrollment in 2031, in accordance with 2021 *CEQR Technical Manual* guidance. The SCA projections demonstrate that, within the study area, demand for public elementary schools is expected to increase, while demand for public middle schools is expected to decrease. In 2028, the projected enrollment for public elementary schools is expected to increase to approximately 9,807 and the projected enrollment for public middle schools is expected to decrease to approximately 4,576. These enrollment projections focus on natural growth of the city's student population and other population changes that do not account for demographic fluctuations or new residential development planned in the study area (i.e., No-Action condition development projects).

New residential development is also expected in the study area by 2033. As shown in **Table E-4**, utilizing numbers derived from the SCA's Projected New Housing Starts for the study area, approximately 867 new public elementary school students and approximately 161 new public middle school students are expected to be added to the study area by 2033. Therefore, in the future without the Proposed Actions, projected public elementary school enrollment would increase to approximately 10,674 and projected public middle school enrollment would decrease to approximately 4,737.

Table E-4: Estimated No-Action Condition Elementary and Middle School Enrollment in CSD 28, Sub-District 2

Study Area	School Level	Projected No-Action Condition Enrollment 2028[1]	Students Introduced by No-Action Condition Residential Development[2]	Total No-Action Condition Enrollment
CSD 28, Sub-district 2	Elementary	9,807	867	10,674
	Middle	4,576	161	4,737

Sources:
[1] Statistical Forecasting's *Enrollment Projections for the New York City Public Schools 2022-23 to 2032-33*.
[2] The SCA's *Projected New Housing Starts for PS and MS Level Analysis, FY 2020-2024 Capital Plan*.

Public Elementary Schools

In the future without the Proposed Actions, study area public elementary schools are expected to operate overcapacity. Specifically, as shown in **Table E-5**, public elementary schools are expected to operate with a utilization rate of approximately 107.9 percent and a shortfall of approximately 783 seats.

Table E-5: Estimated No-Action Condition Elementary and Middle School Enrollment, Capacity, and Utilization in CSD 28, Sub-District 2

Study Area	School Level	Enrollment[1]	Capacity[2]	Available Seats	Utilization
CSD 28, Sub-district 2	Elementary	10,674	9,891	-783	107.9%
	Middle	4,737	5,347	610	88.6%

Notes:
[1] Refer to **Table E-4**.
[2] The capacity figures reflect expected capacity changes for public elementary schools.

Public Middle Schools

In the future without the Proposed Actions, study area public middle schools are expected to operate with available capacity. Specifically, as presented in **Table E-5**, public middle schools are expected to operate with a utilization rate of approximately 88.6 percent and approximately 610 available seats.

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

As detailed in **Attachment A, "Project Description,"** in the future with the Proposed Actions, the Proposed Actions' RWCDS would result in the net incremental development of approximately 260 DUs within the Project Area. Based on the student generation rates for CSD 28, the Proposed Actions' RWCDS would introduce approximately 58 elementary school students and approximately 21 middle school students to the Project Area. No changes to public elementary or middle school capacities in the study area would occur as a result of the Proposed Actions' RWCDS.

Public Elementary Schools

In the future with the Proposed Actions, study area public elementary schools are expected to operate overcapacity, as under the No-Action condition. As presented in **Table E-6**, the addition of approximately 58 elementary school students is expected to increase the utilization rate of study area public elementary schools by approximately 0.6 percentage points, to approximately 108.5 percent.

Table E-6: Estimated With-Action Condition Elementary and Middle School Enrollment, Capacity, and Utilization in CSD 28, Sub-District 2

School Level	Projected Enrollment in No-Action Condition	New Students Generated by the Proposed Actions	Total Projected Enrollment in With-Action Condition	Projected With-Action Condition Capacity	Seats Available	Utilization	Change in Utilization from No-Action Condition
Elementary	10,674	58	10,732	9,891	-841	108.5%	0.6%
Middle	4,737	21	4,758	5,347	589	89.0%	0.4%

Public Middle Schools

In the future with the Proposed Actions, study area public middle schools are expected to operate with available capacity, as under the No-Action condition. As presented in **Table E-6**, the addition of approximately 21 middle school students is expected to increase the utilization rate of study area public middle schools by approximately 0.4 percentage points, to approximately 89.0 percent.

According to the 2021 *CEQR Technical Manual*, a significant adverse impact may result if the project would result in both of the following: (1) a utilization rate of the public elementary or middle schools that is equal to or greater than 100 percent in the With-Action condition; and (2) 100 or more new students generated from the project past the 100 percent utilization rate. As presented in **Table E-6**, the With-Action condition utilization rate of study area public elementary schools in CSD 28 would be equal to or greater than 100 percent; however, the Proposed Actions' RWCDS would not generate 100 or more new elementary students in CSD 28. Therefore, the Proposed Actions would not meet both of these criteria for public elementary schools and would not result in any significant adverse impacts on public elementary schools in CSD 28. As also presented in **Table E-6**, the With-Action condition utilization rate of study area public middle schools in CSD 28 would not be equal to or greater than 100 percent, nor would the Proposed Actions' RWCDS generate 100 or more new middle students in CSD 28. Therefore, the Proposed Actions would not meet both of these criteria for public middle schools and would not result in any significant adverse impacts on public middle schools in CSD 28.

It is expected that DOE will continue to monitor enrollment trends within CSD 28 and its sub-districts, as new residential units identified in the No-Action and With-Action conditions are developed and will plan for new capacity or administrative actions to accommodate new public school students accordingly. Measures utilized by DOE to address increased public elementary school enrollment could include: relocating administrative functions to other public school sites, thereby freeing up space for classrooms; making space within the study area available to DOE; restructuring or reprogramming existing public school space within CSD 28 and its sub-districts; or providing for new capacity by constructing a new public school or an addition to an existing public school.

ATTACHMENT F

OPEN SPACE

I. INTRODUCTION

This attachment assesses the potential impacts of the Proposed Actions on open space resources. Open space is defined in the 2021 *City Environmental Quality Review* (CEQR) *Technical Manual* as publicly accessible, publicly or privately owned land that is available for leisure, play, or sport or serves to protect or enhance the natural environment. An open space analysis should be conducted if an action would result in a direct effect or an indirect effect on open space. A direct effect would "physically change, diminish, or eliminate an open space or reduce its utilization or aesthetic value." An indirect effect may occur when the population generated by a proposed action would be sufficient to diminish noticeably the ability of an area's open space to serve the existing or future population. Per the *City Environmental Quality Review (CEQR) Technical Manual*, if a project would generate more than 200 residents or 500 nonresidential users, an open space assessment should be conducted pursuant to CEQR.

While the Proposed Actions would not directly displace any existing open space resources, development facilitated by the Proposed Actions at the Project Area (Queens Block 9649, Lots 17, 25, 37 (p/o), 42, 44 (p/o), & 53 (p/o)) is expected to result in an incremental increase of up to 260 dwelling units (DUs) over the 2028 No-Action condition. This would result in an incremental increase of approximately 718 residents[1], as compared to the No-Action condition, which would exceed the *CEQR Technical Manual* preliminary screening threshold for an indirect open space analysis. Both quantitative and qualitative assessments were conducted to determine whether the Proposed Actions would significantly affect the use and enjoyment of publicly accessible open space in an identified study area. The Proposed Actions are not expected to introduce a net increment of employees[2] to the Development Site, as compared to the No-Action condition, this is below the *CEQR Technical Manual* preliminary screening threshold for analysis based on nonresidential users. Therefore, the analysis of indirect open space impacts focuses exclusively on the open space needs of the area's residential population.

II. METHODOLOGY

The analysis of open space resources has been conducted in accordance with *CEQR Technical Manual* guidance. Using CEQR methodology, the adequacy of open space in the study area is assessed quantitatively using a ratio of usable open space acreage to the study area population, referred to as the open space ratio (OSR). This quantitative measure is then used to assess the changes in the adequacy of open space resources in the future, both without and with the Proposed Actions. In addition, qualitative factors are considered in assessing the Proposed Actions' potential effects on open space resources.

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

[1] The estimated number of residents is based on the average household size in Queens Community District 8 (2.76 persons per household) per the 2020 Decennial Census.
[2] Estimate of workers based on standard rates and are as follows: three employees per 1,000 sf of retail space; one employee per 25 DUs; and one garage employee per 50 spaces.

Open Space Study Area

The first step in assessing potential open space impacts is to establish the appropriate study areas for the new population(s) to be added as a result of the Proposed Actions. Pursuant to *CEQR Technical Manual* guidance, the open space study area is generally defined by a reasonable walking distance that users would travel to reach local open space and recreational resources, which differs by user. Workers typically use passive open spaces within a short walking distance of their workplaces. Residents are more likely to travel farther to reach parks and recreational facilities, and they use both passive and active neighborhood open spaces. While residents may also visit certain regional parks (like Flushing Meadows Corona Park and Forest Park), such open spaces were not included in the study area's quantitative analysis but are described qualitatively. Workers are assumed to walk up to a ¼-mile distance to reach neighborhood open spaces, and residents are assumed to walk up to a ½-mile distance.

In accordance with the guidance established in the *CEQR Technical Manual*, the residential open space study area includes all census tracts that have at least 50 percent of their area located within a half mile of the Rezoning Area and all open spaces within it that are publicly accessible.[3] As described above, residents typically walk up to a ½-mile distance for recreational spaces.

The Project Area comprises of six lots (Lots 17, 25, 37 (p/o), 42, 44 (p/o), & 53 (p/o)) on the western portion of Queens Block 9649, between 84th Drive and 86th Avenue, east of Queens Boulevard, and west of Manton Street and 139th Street. As shown in **Figure F-1**, the half-mile open space study area includes the following 8 census tracts in their entirety: census tracts 138, 214, 216.02, 216.03, 220.01, 220.02, 232, and 238. The open space study area extends approximately as far north as Grand Central Parkway, as far south as Metropolitan Avenue, as far east as 150th Street, and as far west as Austin Street.

Analysis Framework

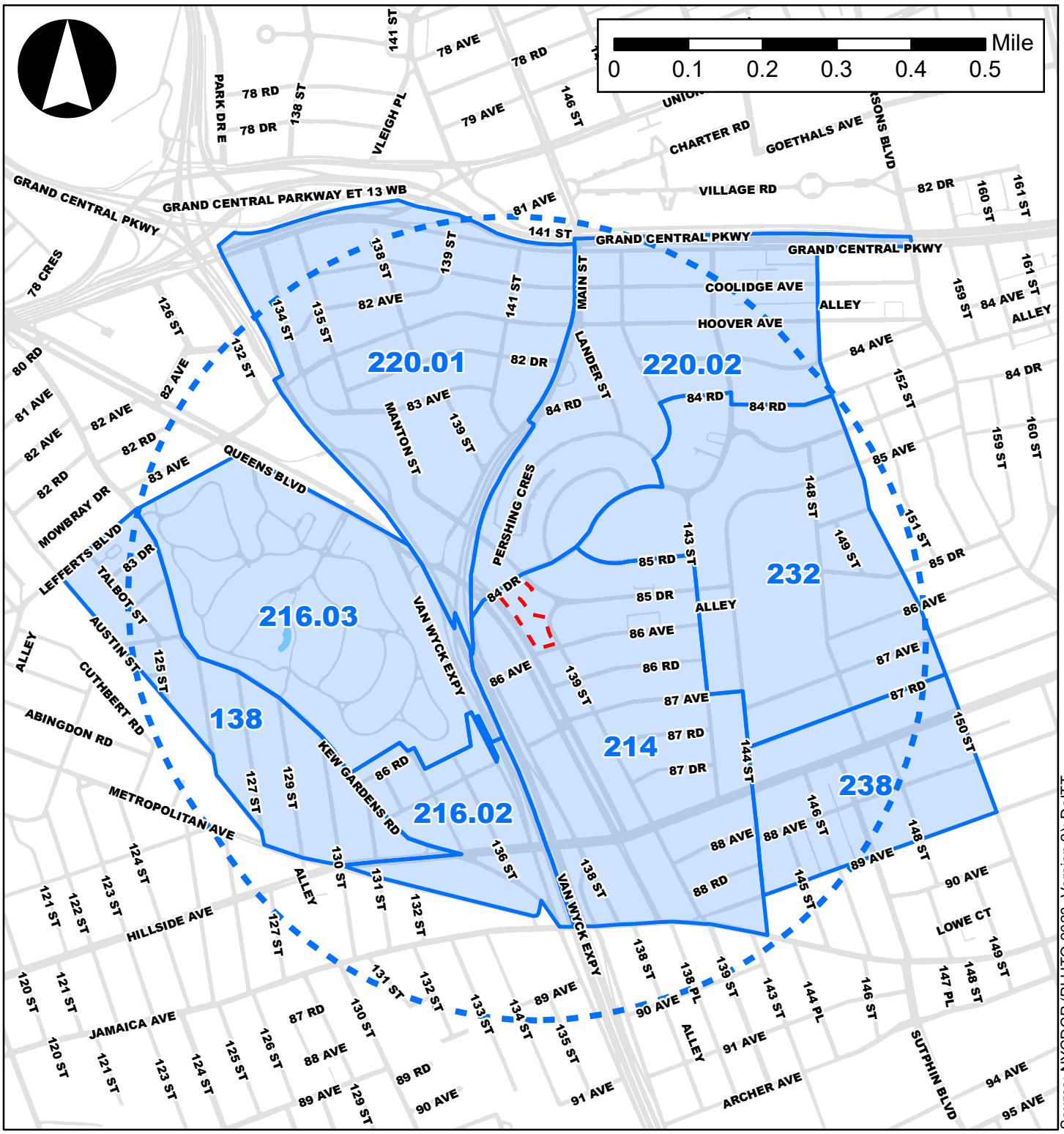
Indirect Effects Analysis

As described in the *CEQR Technical Manual*, open space can be indirectly affected by a proposed action if the project would add enough population, either workers or residents, to noticeably diminish the ability of an area's open space to serve the existing or future populations. Indirect effects may occur when the population generated by a proposed action overtaxes the capacity of existing public open spaces so that the service provided to existing and future populations in the area would be diminished substantially or noticeably.

As part of the preliminary assessment for open space, a project should be reviewed to determine if it is located in an area of the City within a Walk to a Park Service Area. A Walk to a Park Service Area (WtPSA) is a part of the *OneNYC 2050 Building a Strong and Fair City* plan, in which New York City has laid out a goal for 85 percent of New York City residents living within a walking distance of a park by 2030. Existing areas located within a WtPSA are within a walking distance of a park (i.e., within a ½-mile distance). Areas not located within a WtPSA are considered "walk gaps", which are areas of New York City that are not within walking distance to a park. As shown in **Figure F-2**, the majority of the Project Area and a majority of the ½-mile study area are located within area of the City that has been identified as a WtPSA as it is within a walking distance of a park (i.e. not a walk gap area).

[3] Pursuant to the *CEQR Technical Manual,* "public" open space that is analyzed under CEQR is defined as open space that is accessible to the public on a constant and regular basis for active and passive recreation, including for designated daily periods. Public open space may be under government or private jurisdiction.

Figure F-1
Open Space Study Area

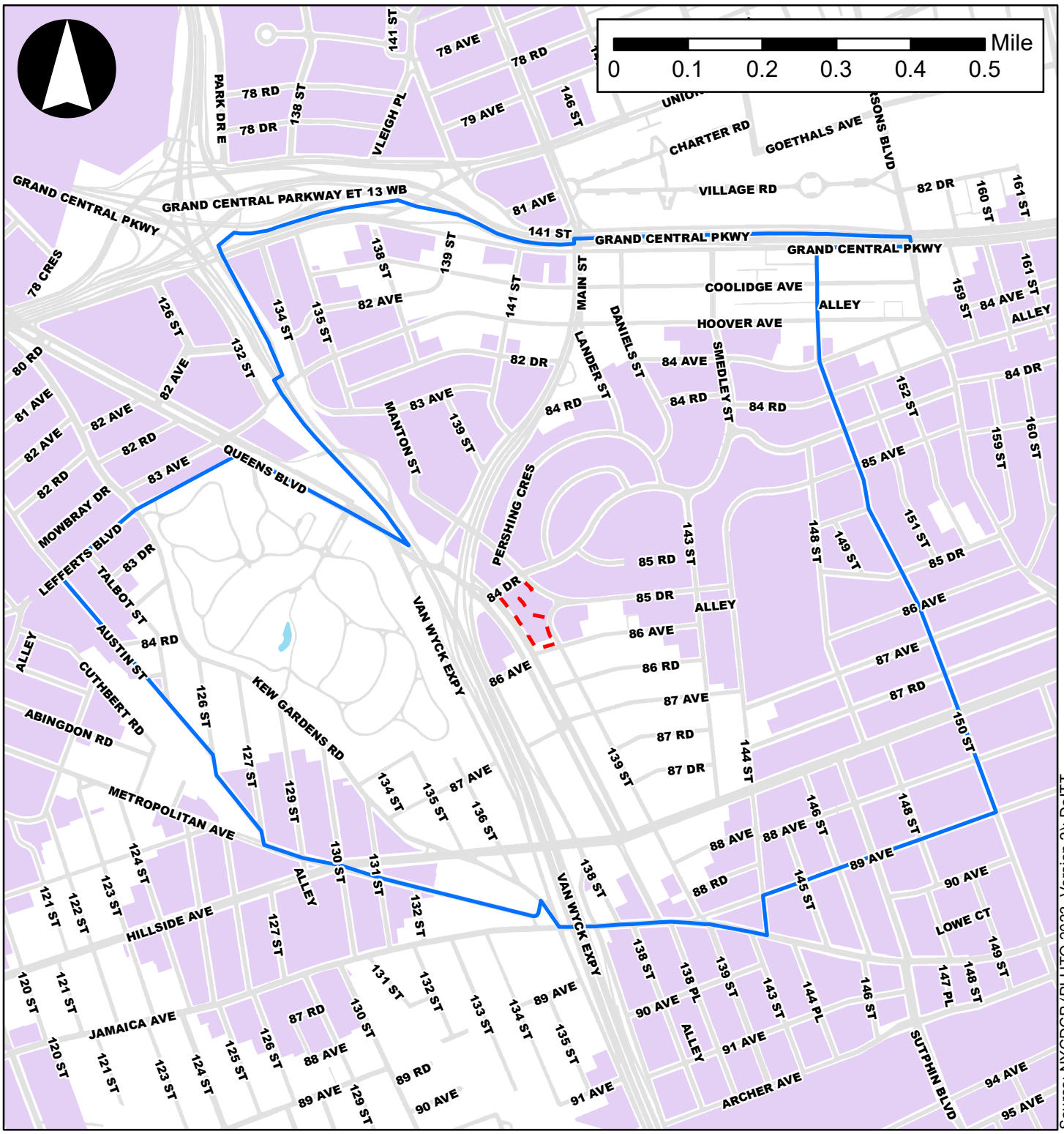


Source: NYCDCP (PLUTO 2023, Version 2); DoITT

Legend

- Project Area
- Half-Mile Radius
- 214 Half-Mile Open Space Study Area Census Tracts
- Open Space Study Area
- Roadways
- Water Bodies

Figure F-2
NYC Parks Walk to a Park Initiative



Source: NYCDCP (PLUTO 2023, Version 2); DoITT

Legend

- Project Area
- Open Space Study Area
- Walk to a Park Service Area
- Roadways
- Water Bodies

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

- Characteristics of the residential users. To determine the number of residents in the study area, 2017-2021 American Community Survey (ACS) Five-Year Estimates data have been compiled for the census tracts comprising the open space study area.
- An inventory of all publicly accessible passive and active recreational facilities in the open space study area.
- An assessment of the quantitative ratio of open space in the study area by computing the ratio of open space acreage to the population in the study area and comparing this open space ratio with the City's planning goal. In New York City, the optimal open space ratio for residential populations is 2.5 acres of open space per 1,000 residents. Ideally, this would be comprised of a balance of 80 percent active open space (2.0 acres per 1,000 residents) and 20 percent passive open space (0.5 acres per 1,000 residents).
- An evaluation of qualitative factors affecting open space use.
- A determination of the adequacy of open space in the residential open space study area for existing, No-Action, and With-Action conditions.

Preliminary Assessment

According to the *CEQR Technical Manual*, a preliminary assessment may be useful to determine if a detailed open space analysis is necessary, or whether the open space assessment can be targeted to a particular user group. This initial assessment calculates an open space ratio by relating the existing residential and nonresidential populations to the total open space in the study area. It then compares that ratio with the open space ratio in the future with the Proposed Actions. If there is a decrease in the open space ratio that would approach or exceed one percent in areas exhibiting low open space ratios that are 0.50 or less, a detailed analysis is warranted. The detailed analysis examines passive and active open space resources available to residents within the open space study area delineated in accordance with the *CEQR Technical Manual*, as outlined above. As the Proposed Actions would introduce a residential population in an area with a limited amount of available open space, which exhibits a low open space ratio under existing conditions, a detailed open space analysis is warranted and is provided below.

Impact Assessment

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

An action's potential effects on an area's open space are based, in part, on how a project would change the open space ratios in the study area, as well as other qualitative considerations. According to the *CEQR Technical Manual*, a project that would reduce the open space ratio by more than the general guidance for the open space percentage change shown in **Table F-1** may be considered significant, as these reductions may result in overburdening existing facilities or further exacerbating a deficiency in open

space. As shown in **Table F-1**, the guidance for tolerated percent change in open space ratio is determined based on the open space ratio ranges outlined in the *CEQR Technical Manual*. In areas that are within a WtPSA, a greater percentage of change (more than five percent) may be tolerated.

TABLE F-1: Guidance for Percentage Change in Open Space Ratio

Open Space Ratio Range	Percent Change in Open Space Ratio
2.01 to 2.50 or Greater	5%
1.51 to 2.0	4%
1.01 to 1.5	3%
0.51 to 1.0	2%
0.50 or Less	1%
*2.5 open space ratio is the planning goal in New York City.	

Source: Table 7-1 in Chapter 7, "Open Space" of the 2021 *CEQR Technical Manual.*

It should be noted that the City's optimal open space ratios and percentage reductions shown in **Table F-1** do not constitute an absolute impact threshold. The *CEQR Technical Manual* also recommends consideration of qualitative factors in assessing the potential for open space impacts. Furthermore, as discussed in Section 321 of Chapter 7, "Open Space" of the 2021 *CEQR Technical Manual*, projects located outside of the WtPSA should be further assessed for qualitative impacts. As such, projects that may result in significant quantitative impacts on open space are typically further assessed in a qualitative assessment to determine the overall significance of the impact.

The qualitative assessment supplements the quantitative assessment and considers the distribution of open space, whether a site is within the WtPSA, the distance from the site to regional parks, the connectivity of open space(s), and any additional open space created by the Proposed Actions not available to the general public, if applicable, and determinations as to what constitutes a significant adverse open space impact are not based solely on the results of the quantitative assessment.

III. DETAILED ANALYSIS

Existing Conditions

Study Area Population

To determine the residential population served by existing open space resources, data from the U.S. Census was compiled for the census tracts comprising the ½-mile study area. As shown in **Table F-2**, the study area has a total residential population of approximately 36,865.

Within a given area, the age distribution of a population affects the way open spaces are used and the need for various types of recreational facilities. Typically, children four years old or younger use traditional playgrounds that have play equipment for toddlers and preschool children. Children ages five through nine typically use traditional playgrounds, as well as grassy and hard-surfaced open spaces, which are important for activities such as ball playing, running, and skipping rope. Children ages ten through 14 use playground equipment, court spaces, Little League fields, and ball fields. Teenagers' and young adults' needs tend toward court game facilities such as basketball and field sports. Adults between the ages of 20 and 64 continue to use court game facilities and fields for sports, as well as more individualized recreation such as rollerblading, biking, and jogging, requiring bike paths, promenades, and vehicle-free roadways. Adults also gather with families for picnicking, *ad hoc* active sports such as Frisbee, and recreational activities in which all ages can participate. Senior citizens engage in active recreation such as tennis, gardening, and swimming, as well as recreational activities that require passive facilities.

TABLE F-2: Existing Residential Population in the ½-Mile Study Area

Census Tract	Residential Population
138	3,819
214	6,025
216.02	1,784
216.03	0
220.01	6,630
220.02	7,406
232	5,923
238	5,278
Total	***36,865***

Source: 2017-2021 ACS Five-Year Estimates

The residential population of the study area was also broken down by age group. As shown in **Table F-3**, people between the ages of 20 and 64 make up the majority (63.3 percent) of the residential population. Children and teenagers (0 to 19 years old) account for approximately 23.6 percent of the entire residential population, and persons 65 years and over account for approximately 13.0 percent of the residential study area population. Based on this data, the peak hours of open space demand would be expected to be concentrated during weekends and the early morning and late afternoon to evening hours during the week, as it could be assumed that most residents aged 20 to 64 would work or attend school on weekdays.

TABLE F-3: Residential Population Age Distribution in the ½-Mile Study Area

Age Category	Residential Population	Percent of Population
Under 5 years old	3,213	8.7%
5 to 9 years	2,402	6.5%
10 to 14 years	1,677	4.5%
15 to 19 years	1,444	3.9%
20 to 64 years	23,344	63.3%
65 years and older	4,785	13.0%

Source: 2017-2021 ACS Five-Year Estimates

Inventory of Publicly Accessible Open Space

According to the *CEQR Technical Manual*, open space may be public or private and may be used for active or passive recreational purposes. Pursuant to the *CEQR Technical Manual*, public open space is defined as facilities open to the public at designated hours on a regular basis and is assessed for impacts under CEQR guidance, whereas private open space is not accessible to the public on a regular basis, and is therefore only considered qualitatively. Field surveys and secondary sources were used to determine the number, availability, and condition of publicly accessible open space resources in the study area.

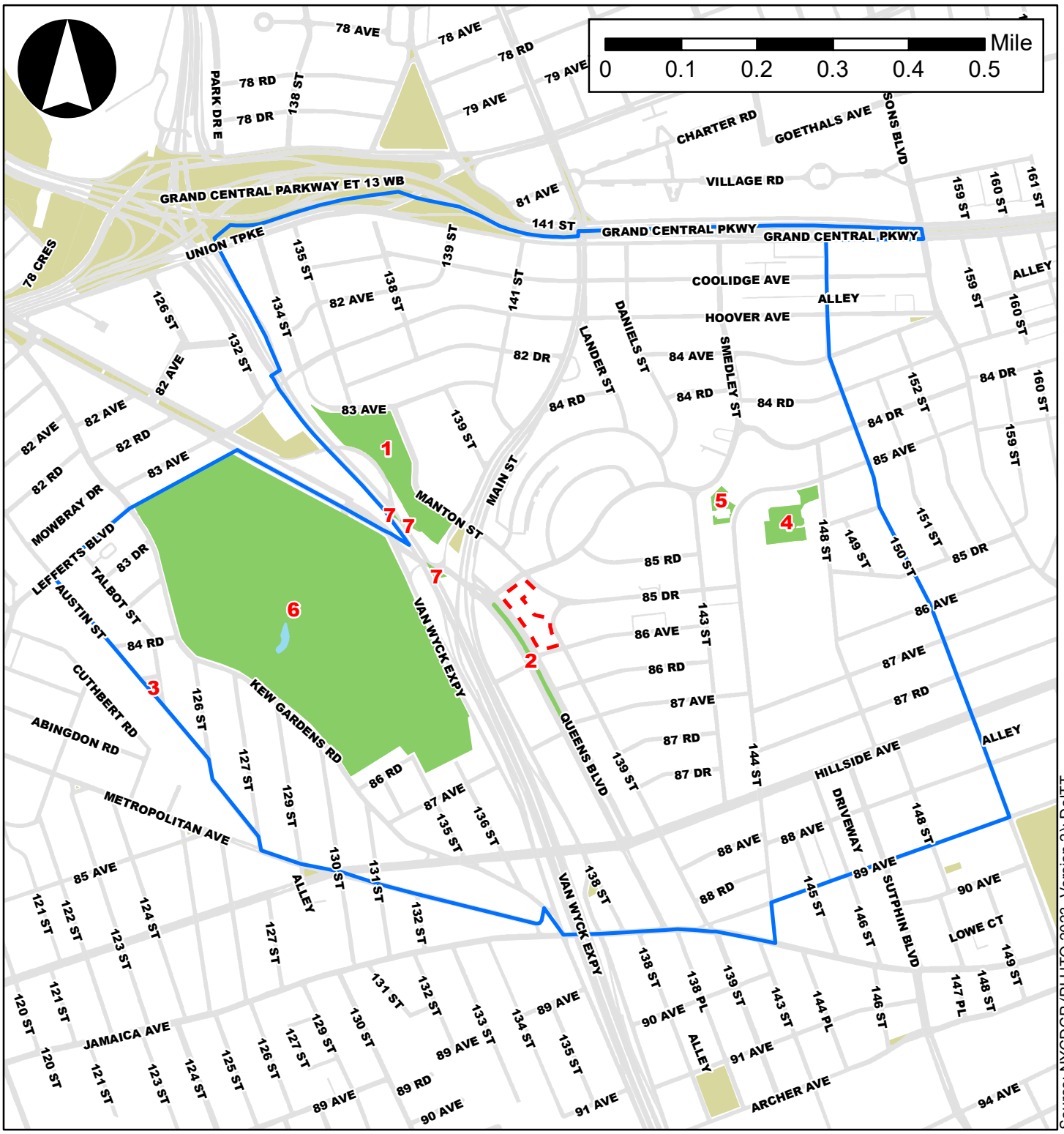
An open space is determined to be active or passive by the uses that the design of the space allows. Active open space is the part of a facility used for active play such as sports or exercise and may include playground equipment, playing fields and courts, swimming pools, skating rinks, golf courses,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

Within the defined study area, all publicly accessible open spaces were inventoried and identified by their location, size, owner, type, utilization, equipment, hours, and condition. The information used for this analysis was gathered through field inventories conducted in August 2023, the New York City Department of Parks and Recreation (NYC Parks)'s website, and other secondary sources of information.

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

Likewise, judgments as to the intensity of use of the facilities were qualitative, based on an observed degree of activity or utilization on a weekday afternoon. If a facility seemed to be at or near capacity (i.e. the majority of benches or equipment was in use), then utilization was considered heavy. If the facility or equipment was in use but could accommodate additional users, utilization was considered moderate. If a playground or sitting area had few people, usage was considered light. **Table F-4** identifies the address, ownership, hours, and acreage of active and passive open spaces in the study area, as well as their condition and utilization. **Figure F-3** maps their location in the study area.

Figure F-3
Open Space Resources



Source: NYCDCP (PLUTO 2023, Version 2); DoITT

Legend

- Project Area
- Open Space Study Area
- Open Space Included in Quantitative Analysis (Keyed to Table F-3)
- Open Space Excluded From Quantitative Analysis
- Roadways
- Water Bodies

TABLE F-4: Inventory of Existing Open Space and Recreational Resources in Study Area

Map No. [1]	Name	Address	Owner/ Agency [2]	Amenities	User Groups	Hours of Access	Total Acres	Active		Passive		Condition & Utilization
								%	Acres	%	Acres	
Open Space Resources Included in Quantitative Assessment												
1	Hoover-Manton Playgrounds	Bound by 83rd Avenue, Manton Street, Van Wyck Expressway, and Main Street	NYC Parks	Basketball Courts, Fitness Equipment, Handball Courts, Playgrounds, Spray Showers, Public Restrooms, Game Tables, Benches, Landscaping, Trees	Children, Teens, Adults, Seniors	6 AM - 9 PM	5.20	4.68	90%	0.52	10%	Good/High
2	Queens Gate	Queens Boulevard between 84th Drive and 87th Avenue	NYC Parks	Greenway With Benches and Trees	Teens, Adults, Seniors	24 Hours	0.67	0.50	75%	0.17	25%	Good/Light
3	Eight Oaks Triangle	Bound by 84th Drive, Austin Street, and 125th Street	NYC Parks	Plaza With Benches, Landscaping, and Trees	Teens, Adults, Seniors	24 Hours	0.40	0.00	0%	0.40	100%	Excellent/Low
4	Briarwood Playground	148 Street between 85th Avenue and 85th Road	NYC Parks	Basketball Courts, Handball Courts, Playgrounds, Spray Showers, Benches, Landscaping, Trees	Children, Teens, Adults, Seniors	6 AM - 9 PM	1.30	1.17	90%	0.13	10%	Excellent/Moderate
5	P.S. 117 Playground	P.S. 117 Campus (85-15 143rd Street)	DOE	Playground, Benches	Children, Teens	Monday - Friday: School close until dusk; Saturday, Sunday, and Holidays: 8 AM until dusk	0.50	0.50	100%	0.00	0%	Good/Light
6	Maple Grove Cemetery	Bound by 83rd Avenue, Kew Gardens Road, 86th Road, 135th Street, Van Wyck Expressway, and Queens Boulevard	Maple Grove Cemetery	Cemetery, Landscaped Grounds, Pathways, and Seating	Adults, Seniors	8 AM to 5 PM (October-March); 8 AM to 6 PM (April-September)	65.00	0.00	0%	65.00	100%	Excellent/Low
7	Queens Boulevard Plazas	Queens Boulevard Overpass at Van Wyck Expressway	DOT	Plazas With Seating, Planters, and Shade Structures	Teens, Adults, Seniors	24 Hours	0.31	0.00	0%	0.31	100%	Poor/Light
						½-Mile Study Area Total:	**73.37**	**6.85**	**9.3%**	**66.52**	**90.7%**	
Open Space Resources Not Included in Quantitative Assessment												

Sources: NYC OASIS, NYC Parks, August 2023 field visits.

Notes:

[1] Refer to **Figure F-3**.

[2] NYC Parks = New York City Department of Parks and Recreation; DOE= New York City Department of Education.

Open Space Resources

As shown in **Table F-4**, approximately 73.37 acres of open space are included in the quantitative analysis, of which approximately 6.85 acres are considered active open space and approximately 66.52 acres are passive open space. Most of the open spaces in the study area are neighborhood parks and playgrounds; however, much of the total acreage is comprised of a single resource, Maple Grove Cemetery, which is 65.0 acres in size. A typical neighborhood park within the study area includes facilities for passive use (such as benches, landscaping, lawns, and comfort stations) and active recreation (such as sports fields, dog runs, and basketball courts), and is generally used by people of all ages. The typical playground might include play equipment and sports facilities as well as passive seating areas, and would generally be used by children.

A majority of the publicly accessible open space resources included in the quantitative indirect open space impact assessment are in good to excellent condition. In terms of utilization, all of the study are open space resources exhibit low to heavy utilization. The resources in the secondary study area are mostly under the jurisdiction of NYC Parks, with the exception of the cemetery, which is under private jurisdiction, as well as the Queens Boulevard Plazas and P.S. 117 Playground, which are under DOT and DOE jurisdiction, respectively.

Hoover-Manton Playgrounds (Map No. 1) are a pair of conjoined playgrounds located between 83rd Avenue, Manton Street, Van Wyck Expressway, and Main Street which together total 5.2 acres of open space. The playgrounds feature mostly active amenities including basketball courts, fitness equipment, handball courts, playground equipment, spray showers and benches. According to field observations, the playgrounds are in good condition and exhibited high utilization.

Queens Gate (Map No. 2) is an approximately 0.67-acre greenway located in the median of Queens Boulevard between 84th Drive and 87th Avenue. Primarily a walkway, Queens Gate is mostly an active resource, however benches on either side of the walkway offer passive recreation space as well. The park is in good condition and exhibited light utilization.

Eight Oaks Triangle (Map No. 3) is an approximately 0.40-acre pedestrian plaza located at the intersection of 84th Drive, Austin Street, and 125th Street. The plaza is landscaped and features mostly active amenities (being primarily a walkway), but also includes benches for passive use. During field observations, the plaza is in excellent condition and exhibited low utilization.

Briarwood Playground (Map No. 4) is an approximately 1.30-acre playground located at 148th Street between 85th Avenue and 85th Road. The playground mainly features active amenities such as a playground, basketball courts, handball courts, and spray showers. The playground is in excellent condition and exhibited moderate utilization.

P.S. 117 Playground (Map No. 5) is part of the Schoolyards to Playgrounds program and owned by the NYC Department of Education (DOE). As part of the Schoolyards to Playgrounds program, the resource is open to the public from school close to dusk during the weekdays and from 8AM to dusk during the weekends. P.S. 117 Playground is an approximately 0.50-acre park located at 85-15 143rd Street. The playground features both passive and active amenities in the form of playground equipment and benches. It is in good condition and exhibited light utilization.

Maple Grove Cemetery (Map No. 6), the largest open space resource in the study area at 65.00 acres, is a privately-owned cemetery located between the Van Wyck Expressway and Queens Boulevard to the east, 83rd Avenue to the north, Kew Gardens Road to the west, and 86th Road to the south. Despite private

ownership, the cemetery constitutes an open space resource according to the *CEQR Technical Manual*, as it is regularly open to the public from 8AM-5PM during the fall and winter and from 8AM-6PM during the spring and summer. The cemetery is entirely comprised of passive open space, and features landscaped grounds, pathways, and seating. As of 2004, the cemetery is listed in the National Register of Historic Places. The cemetery is in excellent condition and exhibited low utilization.

The Queens Boulevard Plazas (Map No.7) are a series of pedestrian plazas located along Queens Boulevard which together total 0.31 acres of open space. Under the jurisdiction of DOT, the plazas are comprised entirely of passive open space and feature seating, shade structures, and planters. The plazas are in poor condition and exhibited light utilization.

Assessment of Open Space Adequacy

Quantitative Assessment

The following analysis of the adequacy of existing open space resources within the study area takes into consideration the ratios of active, passive, and total open space resources per 1,000 residents. As an optimal planning goal, the City tries to achieve an overall residential open space ratio of 2.5 acres per 1,000 residents (80 percent [2 acres] active and 20 percent [0.5 acres] passive) for large-scale plans and proposals. Although a typical population mix may call for such a goal, it is often not feasible for many areas of the City (especially higher density areas). As such, the City's optimal open space ratios and percentage reductions do not constitute an absolute impact threshold.

In calculating the open space ratio per 1,000-user population for the study area, all of the resources listed in the "Open Space Resources Included in the Quantitative Analysis" section of **Table F-4** were included.

Table F-5 shows that, with an existing study area residential population of approximately 36,865 people, the existing total open space ratio in the study area is approximately 1.99 acres per 1,000 residents; the study area has approximately 0.186 acres of active open space per 1,000 residents and approximately 1.804 acres of passive open space per 1,000 residents. As indicated in **Table F-5**, the existing total, active, and passive residential open space ratios are below the City's open space planning goals of 2.5, 2.0, and 0.5 acres per 1,000 residents, respectively.

TABLE F-5: Adequacy of Open Space Resource in the Study Area – Existing Conditions

		Open Space Acreage			Open Space per 1,000 Residents			City Open Space Planning Goals		
	Population	Total	Active	Passive	Total	Active	Passive	Total	Active	Passive
Residents	36,865	73.37	6.85	66.52	1.990	0.186	1.804	2.50	2.0	0.50

Qualitative Assessment

The total, active, and passive open space resources that exist within the open space study area fall below the City's quantitative guidelines, as discussed above. This quantitative deficiency may be partially ameliorated by several factors.

As shown in **Table F-4**, the residential study area resources are in good to excellent condition (with the exception of the Queens Boulevard Plazas, which constitute only 0.31 acres of open space) and feature low to heavy utilization levels, depending on the resource. The residential study area includes a variety of programming for passive and active open space uses, such as playgrounds, basketball courts, handball courts, fitness equipment, spray showers, benches, and landscaped areas. A variety of active

programming is available and appropriate for all user groups including children, teenagers, and adults within the study area. As shown in **Figure F-3**, three of the four largest open space resources in the quantitative analysis are located within three blocks from the Project Area. These resources (Maple Grove Cemetery, Hoover-Manton Playgrounds, and Queens Gate) constitute 70.87 acres (approximately 97 percent) of all open space resources in the quantitative analysis and include ball courts, fitness equipment, spray showers, playgrounds, benches, and landscaped areas.

In addition, as detailed in the *CEQR Technical Manual*, residents may travel further than ½-mile to frequent regional parks. Regional parks in close proximity to the Development Site include Flushing Meadows Corona Park and Forest Park. All three regional parks would serve local residents and draw visitors from greater distances throughout the City and provide extensive areas for active recreational activities. The closest, Forest Park, is comprised of 507 acres, and is located approximately 0.84 miles from the Project Area. Flushing Meadows Corona Park is comprised of approximately 898 acres, and located approximately 0.57 miles east of the Rezoning Area. The approximately 898-acre Flushing Meadows Corona Park is located approximately 1.05 miles north of the Project Area. Regional parks typically contain unique facilities, including expansive ball courts and fields, hiking trails, horseback riding trails, zoos, skate parks, roller hockey, monuments, etc., that are not found within other open space resources in the quantitative analysis. It is likely that residents throughout the residential open space study area would travel further to make use of these open space resources, particularly for active recreational activities such as hiking and jogging and thus, reducing the burden on other open space resources within the residential open space study area. Nevertheless, Forest Park and Flushing Meadows Corona Park are not located within the ½-mile open space study area and are not included in the quantitative analysis pursuant to CEQR guidance.

Aside from the regional parks, there are two open space resources located just beyond the study area boundary, which are not included in the quantitative analysis but could be used or enjoyed by the residents. Rufus King Park, located just outside the residential open space study area, features 11.5-acres of passive and active open space amenities, including playgrounds, handball courts, and spray showers. Maple Grove Park provides 1.5 acres of primarily passive open space, featuring walkways, benches, and landscaping. In total, open space resources not included in the quantitative analysis but in the vicinity of the Rezoning Area provide an additional approximately 1,417.6 acres of open space for residents in the study area. It is expected that a proportion of open space users in the study would frequent these spaces given their proximity, size, and range of amenities.

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

In the absence of the Proposed Actions, it is expected that the Applicant would develop the Development Site pursuant to the existing R6A/C1-4 zoning district. The No-Action development would be a seven-story (75-foot-tall; 85-foot-tall including the mechanical bulkhead), approximately 155,570-gsf mixed commercial/residential building, comprising approximately 122,550-gsf of residential space (133 DUs) and approximately 33,020-gsf of commercial retail space (0.64 FAR). There would also be an approximately 51,757-gsf accessory parking garage with 67 spaces located on the second floor of the building. The No-Action development is anticipated to add 133 new residential units to the study area, generating approximately 522 residents.[4]

[4] The estimated number of residents is based on the average household size in Queens Community District 8 (2.76 persons per household) per the 2020 Decennial Census.

Study Area Population

As presented below in **Table F-6** and shown in **Figure F-4**, ten new developments are currently planned or anticipated to be completed within the ½-mile open space study area in the future without the Proposed Actions by 2028, which would increase the residential population within the study area. These No-Action developments are anticipated to add approximately 338 new residential units to the study area. **Table F-6** shows that with the Applicant-owned No-Action development, these ten No-Action developments are anticipated to increase the ½-mile study area population by approximately 1,541 residents, for a total residential population of approximately 38,406 by 2028.

TABLE F-6: Known Planned No-Action Developments within the ½-Mile Study Area

Map No.[1]	Address	Dwelling Units (DUs)	Estimated Residents[2]
Development Site	***138-23 Queens Boulevard***	***133***	***522***
1	87-84 146th Street	1	3
2	132-47 Metropolitan Avenue	21	50
3	88-36 139th Street	81	232
4	148-18 Hillside Avenue	80	271
5	147-25 Coolidge Avenue	1	3
6	132-77 Metropolitan Avenue	40	96
7	143-26 84th Road	42	121
8	14815 89th Avenue	69	234
9	139-24 88th Avenue	2	6
10	144-38 87th Avenue	1	3
	Half-Mile Total	***1,019***	***338***

Source: NYC DOB, November 2023

Notes:

[1] Refer to **Figure F-4**

[2] The residential population figures were calculated as follows: For development projects located within Kew Gardens Neighborhood Tabulation Area ("NTA") QN0901, the average household size of 2.4 from the 2017-2021 ACS Five-Year Estimates was applied; For development projects located within Jamaica Hills-Briarwood NTA QN0805, the average household size of 2.87 from the 2017-2021 ACS Five-Year Estimates was applied; For development projects located within Jamaica NTA QN1201, the average household size of 3.39 from the 2017-2021 ACS Five-Year Estimates was applied.

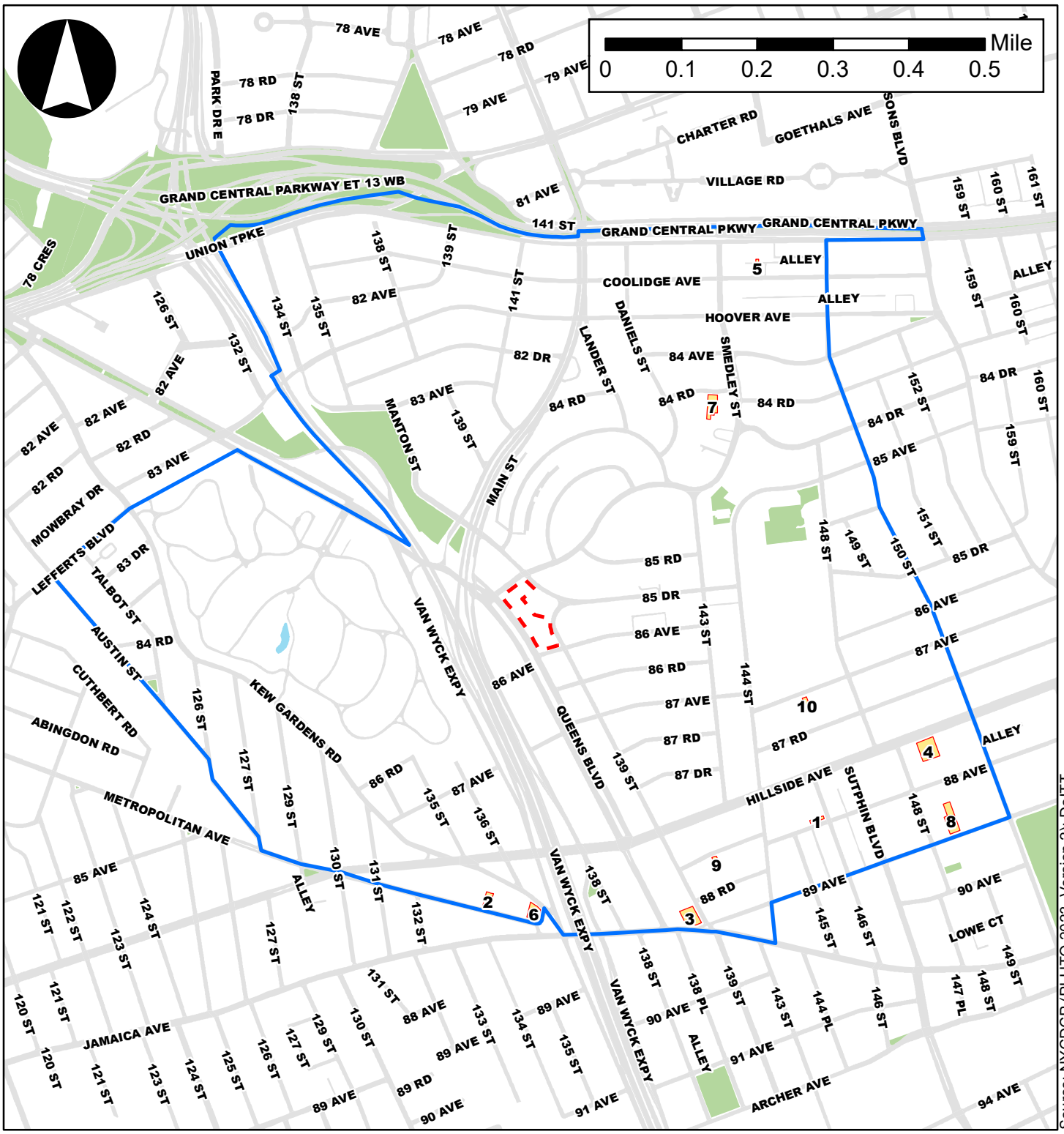
Open Space Resources

There are no new publicly accessible open spaces expected to be added to either the residential or non-residential study areas under the 2028 No-Action condition, and there are no anticipated changes to any of the existing open space resources currently located within those study areas.

Open Space Adequacy

As detailed above, it is anticipated that under 2028 No-Action conditions, new development in the residential (½ -mile) study area would result in an increase in the population, and thus, would increase the demand on the area's open spaces. As shown in **Table F-7**, similar to existing conditions, the total, active, and passive open space ratios in the No-Action condition would be less than the City's open space planning goals of 2.5 acres of open space per 1,000 residents (including 0.5 acres of passive open space and two acres of active open space), as well as the City's median community district open space ratio of 1.5 acres per 1,000 residents. The total, active, and passive open space ratios would continue to be less than the established open space planning goals, and there would be a net decrease of approximately 0.080, 0.008, and 0.072 in the total, active, and passive open space ratios, respectively, as a result of the anticipated population growth in the 2028 No-Action condition.

Figure F-4
Open Space Study Area No-Action Developments



Legend

- Project Area
- Open Space Study Area
- No-Action Developments (Keyed to Table F-5)
- Open Space
- Roadways
- Water Bodies

TABLE F-7: Adequacy of Open Space Resource in the Study Area – No-Action Conditions

		Open Space Acreage			Open Space per 1,000 Residents			City Open Space Planning Goals		
	Population	Total	Active	Passive	Total	Active	Passive	Total	Active	Passive
Residents	38,406	73.37	6.85	66.52	1.910	0.178	1.732	2.5	2.0	0.5

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

This section describes the open space conditions that would result from the Proposed Actions by 2028. It evaluates the potential for the Proposed Actions to result in significant adverse indirect impacts to open space resources based on a comparison of the No-Action condition (described above) to the With-Action condition.

As described in **Attachment A, "Project Description,"** the Applicant is seeking a zoning map amendment and text amendment to facilitate new development in the Applicant-owned Projected Development Site 1. The With-Action development would be a 17-story (175-foot-tall; 195-foot-tall including mechanical bulkhead), approximately 395,931-gsf mixed commercial and residential building (6.64 FAR), containing approximately 311,154 gsf of residential space (254 DUs, of which approximately 85 DUs would be permanently affordable pursuant to MIH Option 1) and 19,807-gsf of local retail space. There would also be an accessory parking garage with 132 parking spaces.

Additionally, as described in **Attachment A, "Project Description,"** it is expected that under the Proposed Actions, Lots 44/42 (the non-Applicant-owned Projected Development 2) would be redeveloped with a mixed-use residential and commercial development with an FAR of 5.03. It is assumed that this building would total 134,225-gsf, with 101,138-gsf of residential area (110 DUs, of which 28 DUs would be permanently affordable), 12,790-gsf of local ground floor retail space, and approximately 31 parking spaces in an 8,400-gsf garage.

Together, the Applicant-owned Projected Development Site 1 and Projected Development Site 2 would result in the incremental development of approximately 237,821 gsf of residential uses, including approximately 260 dwelling units (DUs); of which, up to approximately 113 units would be permanently affordable pursuant to MIH, a net decrease of approximately 5,304 gsf of local retail uses, and a net increase of approximately 69 parking spaces. The With-Action Condition is expected to generate approximately 718 incremental residents and a net decrease of 7 incremental workers, as compared to the 2028 No-Action condition.

Direct Effects Analysis

No publicly accessible open space is currently located within the Rezoning Area. Therefore, the Proposed Actions would not cause the physical loss of publicly accessible open space. In addition, the Proposed Actions would not result in any significant adverse shadows, operational air quality, or noise impacts affecting existing open space resources. Furthermore, the Proposed Actions would not change the use of a publicly accessible open space resource so that it no longer serves the same user population, nor would it limit public access to any open space resources.

Indirect Effects Analysis

Study Area Population

In the 2028 future with the Proposed Actions, the two projected development sites would introduce approximately 449 DUs to the Project Area, for a net increment of approximately 260 DUs. Using the same planning assumptions as the No-Action conditions of 2.76 residents per DU, the Proposed Actions are expected to introduce a net increase of approximately 718 residents, and would therefore increase the study area's population to approximately 39,124 residents in the 2028 With-Action condition (refer to **Table F-8**).

TABLE F-8: 2028 With-Action Open Space Study Area Population

	No-Action Population	Additional Population from With-Action Developments[1]	Future 2024 With-Action Population
Residential (0.5-mile)	38,406	718	39,124

Notes:
[1] Residential population estimate for With-Action developments based on Queens CD 8 average of approximately 2.76 persons per household (U.S. Census Bureau, 2020 Census).

Open Space Resources

The Proposed Actions would not introduce any new active or passive open space resources to the study area as part of the Proposed Development. As such, under the With-Action condition, open space in the ½-mile open space study area would total approximately 73.37 acres, comprised of approximately 6.85 acres of active open space and approximately 66.52 acres of passive open space.

Open Space Adequacy

As noted above, the open space impact analysis consists of both quantitative and qualitative assessments. The quantitative assessment considers how a proposed action(s) could change the open space ratios in the study area.

The total open space ratio in the study area would slightly decrease to 1.875 acres per 1,000 residents in the With-Action condition, which falls below the 2.5 total open space ratio goal set by the City (see **Table F-9**). The active open space ratio would decrease from approximately 0.178 to 0.175 per 1,000 residents and the passive open space ratio would also decrease from approximately 1.732 acres to 1.700 acres per 1,000 residents. Both active and passive open space ratios would remain below the City's open space planning ratio goal. Thus, the total, active, and passive open space ratios are expected to decrease slightly from the No-Action to the With-Action conditions.

TABLE F-9: Adequacy of Open Space Resource in the Study Area – With-Action Conditions

		Open Space Acreage			Open Space per 1,000 Residents			City Open Space Planning Goals		
	Population	Total	Active	Passive	Total	Active	Passive	Total	Active	Passive
Residents	39,124	73.37	6.85	66.52	1.875	0.175	1.700	2.5	2.0	0.5

Potential Effects of the Proposed Actions on Publicly Accessible Open Space

Quantitative Assessment

According to the 2021 *CEQR Technical Manual*, a significant adverse open space impact may occur if proposed actions would reduce the open space ratio by more than the general guidelines for the open space percentage change provided in **Table F-10**.

TABLE F-10: Detailed Assessment – Percentage Change Guidance to Determine Possible Open Space Impact

Total Open Space Ratio Range*	Active Open Space Ratio Range*	Passive Open Space Ratio Range*	Percentage Change in Open Space ratio Signifying a Possible Adverse Open Space Impact
2.01 to 2.50 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%
* 2.5 open space ratio is the planning goal in NYC, with optimal distribution goal of 2.0 active open space ratio and 0.5 passive open space ratio.			

Source: Table 7-5 in Chapter 7, "Open Space" of the 2021 *CEQR Technical Manual.*

Table F-11 expresses the percentage change from No-Action to With-Action conditions for the study area. As noted previously, in the future with the Proposed Actions, ratios of total, active, and passive open spaces to residents would continue to be lower than the optimal planning goals furnished by DCP. As shown in **Table F-11**, the study area's total open space ratio in the future with the Proposed Actions would decrease to approximately 1.875 acres per 1,000 residents, which would also be a minor decrease from the No-Action condition. The active open space ratio for residents would also decrease slightly from approximately 0.178 acres per 1,000 residents in the No-Action condition to approximately 0.175 acres per 1,000 residents in the With-Action condition. The passive open space ratio in the study area would also decrease from approximately 1.732 acres per 1,000 residents in the No-Action condition to approximately 1.700 acres per 1,000 residents in the With-Action condition.

TABLE F-11: Comparison of No-Action to With-Action Open Space Ratios in the ½-Mile Study Area

Ratio	*CEQR Technical Manual* Open Space Optimal Planning Goal (acres per 1,000)	Open Space Ratios Per 1,000			Percent Change
		Existing	No-Action	With-Action	Future No-Action to Future With-Action
Total – Residents	2.50	1.990	1.910	1.875	-1.84%
Active – Residents	2.0	0.186	0.178	0.175	-1.84%
Passive – Residents	0.5	1.804	1.732	1.700	-1.84%

As shown in **Table F-11**, the Proposed Actions would result in a percentage change in open space ratio below the threshold signifying a possible adverse impact for total and passive open space. The expected approximately 1.84 percent change in the total and passive open space ratios would be a smaller decrease than the applicable 4 and 5 percent decrease figures referenced in **Table F-10** for considering the significance of changes to the total and passive open space ratios. However, given the active open space ratio of 0.175, the 1.84 percent decrease is above the percentage change of 1 percent.

The reduction in the active open space ratio in the study area would be ameliorated by several factors. As shown in **Table F-3**, the study area open space resources that feature ≥90% of their acreage as active open space (i.e., Map Nos. 1, 4, and 5) are in good to excellent condition and mostly exhibit low to moderate utilization rates that could accommodate additional demand for active recreation. In particular, the 5.32-

acre Hoover-Manton Playgrounds are located approximately one block from the northernmost point of the Project Area, and feature numerous active recreational amenities, such as playground equipment, exercise equipment, spray showers, and basketball/handball courts. Further, the northern and eastern portions of the study area, as well as the Project Area, are located within areas of the city that have been identified as Walk to a Park Service Areas (refer to **Figure F-2**), which are areas of the city that are within a walking distance of a park (i.e., not located within a walk gap area). The western portions of the study area are in proximity to additional active open space acreage located beyond the boundary of the study area, within the 506.9-acre Forest Park, a regional park which includes playgrounds, ball courts, sporting fields, a running track, fitness equipment, and hiking trails for active recreation. Another open space resource At its closest point, Forest Park is located approximately five blocks northwest the study area's westernmost point. Therefore, in consideration of these qualitative factors, the Proposed Actions would not result in a significant adverse impact on open space in the study area, in accordance with 2021 *CEQR Technical Manual* impact criteria.

Qualitative Assessment

In the future with the Proposed Actions, the study area would continue to have a shortfall of total, active, and passive open space similar to the existing and No-Actions conditions. Although these open space ratios in the study area would remain less than the DCP planning goals, the deficiency of open space resources in the study area would be ameliorated by several factors.

The population to be generated by the Proposed Actions is not expected to have any special characteristics, such as a disproportionately younger or older population, that would place heavy demand on facilities that cater to specific groups. Residents in the future with the Proposed Actions are expected to exhibit similar characteristics to the current residents of the study area and the breakdown in population by age group is expected to remain the same. Moreover, the open space resources included in the quantitative analysis were found to be in good to excellent condition and characterized by low to heavy utilization (refer to **Table F-4**).

Data from the U.S. Census Bureau's American Community Survey indicates the approximately 63 percent of the population in the study area falls between the ages of 20 and 64. According to the *CEQR Technical Manual*, this user group utilizes active recreational facilities such as courts and fields for sports, as well as individualized recreation such as biking, jogging, and rollerblading, which require bike paths, esplanades, and vehicle-free roadways. Adults also engage in passive recreational activities such as picnicking, and ad-hoc active sports such as Frisbee, and other recreation activities in which all ages can participate. Per this definition, open space resources in the future with the Proposed Actions would generally be suitable to meet the needs of this user population (refer to **Table F-4**).

The demand for open space generated by the Proposed Actions is not expected to exacerbate the No-Action deficiency, with an approximate 0.45 percent change in the study area's total, active, and passive open space ratios. The population added because of the Proposed Actions is not expected to noticeably affect utilization of the area's open spaces. As noted above, most of the study area open space resources are in good condition and offer a variety of amenities which, therefore, could likely handle some increased demand. In addition, as shown in **Figure F-2**, the Project Area is mostly located within a WtPSA and, therefore, is not located within a walk gap area (i.e., an area of the City that is not within walking distance to a park).

Furthermore, and as described above, there are several open space resources not included in the quantitative analysis as per guidance from the *CEQR Technical Manual*. These resources include Rufus King Park and Maple Grove Park. Rufus King Park is located is located directly across 150th Street and 89th

Avenue from the open space study area and provides approximately 11.5 acres of open space, with amenities such as playgrounds, handball courts, and spray showers. The 1.5-acre Maple Grove Park is located within the ½-mile radius and directly across Queens Boulevard from the study area and provides walking paths and landscaping. There are also several other Greenstreets located within the residential open space study area that have not been included in the quantitative analysis as they do not provide seating and therefore, do not meet the *CEQR Technical Manual* definition of a public open space. The two largest open space resources not included in the quantitative analysis and located beyond the residential open space study area are Queens regional parks, including the approximately 897.7-acre Flushing Meadows Corona Park and the approximately 506.9-acre Forest Park. Of the two regional parks, Forest Park is the closest in proximity to the Project Area at 0.84 miles to the northwest, while Flushing Meadows Corona Park is located 1.05 miles to the north. Combined, these open space resources offer approximately 1,404.6 acres for the residential study area population that is not considered in the quantitative analysis. As such, it can be assumed that residents from both the residential open space study area and those that would reside in the future Proposed Development would likely visit and utilize these additional open space resources.

ATTACHMENT G

SHADOWS

I. INTRODUCTION

According to the 2021 *CEQR Technical Manual*, an adverse shadows impact is considered to occur when an incremental shadow from a proposed project falls on a sunlight-sensitive resource and substantially reduces or completely eliminates direct sunlight exposure, thereby significantly altering the public's use of the resource, or threatens the viability of vegetation or other resources. Pursuant to *CEQR Technical Manual* guidance, sunlight-sensitive resources of concern are those resources that depend on sunlight, or for which direct sunlight is necessary to maintain the resource's usability or architectural integrity. Sunlight-sensitive resources can include publicly accessible open spaces, architectural resources, natural resources, and Greenstreets. In general, shadows on city streets, sidewalks, buildings, or project-generated open spaces are not considered significant under CEQR. In addition, shadows occurring within an hour and a half of sunrise or sunset generally are not considered significant under CEQR.

According to the *CEQR Technical Manual*, a shadows assessment is required only if a proposed action would result in structures (or additions to existing structures) of 50 feet or more and/or be located adjacent to, or across the street from, a sunlight-sensitive resource. As described in **Attachment A, "Project Description,"** the Proposed Actions would facilitate the construction of a new 17-story, 195-foot tall (bulkhead height) building. As the Proposed Actions would result in a structure taller than 50 feet and located adjacent to open space (Queens Gate Park, Celebration Hall Maple Grove Cemetery, and Hoover-Manton Playgrounds), an analysis of shadows is warranted. This attachment assesses the potential for the Proposed Actions and subsequent development to result in a significant adverse shadow impact on any sunlight-sensitive resources.

II. METHODOLOGY

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

First, a preliminary screening assessment must be conducted to ascertain whether shadows resulting from a project could reach any sunlight-sensitive resource at any time of year. The *CEQR Technical Manual* defines sunlight-sensitive resources as those resources that depend on sunlight or for which direct sunlight is necessary to maintain the resource's usability or architectural integrity. The following are considered to be sunlight-sensitive resources.[1]

- *Public open space* (e.g., parks, playgrounds, plazas, schoolyards, greenways, and landscaped medians with seating). Planted areas within unused portions or roadbeds that are part of the Greenstreets program are also considered sunlight-sensitive resources. The use of vegetation in

[1] According to the *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.

an open space establishes its sensitivity to shadows. This sensitivity is assessed for both (1) warm-weather dependent features, like wading pools and sandboxes, or vegetation that could be affected by loss of sunlight during the growing season (i.e., March through October); and (2) features, such as benches, that could be affected by a loss of winter sunlight. Uses that rely on sunlight include: passive use, such as sitting or sunning; active use, such as playfields or paved courts; and such activities as gardening, or children's wading pools and sprinklers. Vegetation requiring direct sunlight includes the tree canopy, flowering plants, and plots, particularly plots for food production in community gardens. The amount of sunlight typically considered to be the minimum that plantings and vegetation would need is six to eight hours of direct sunlight. However, certain plantings and vegetation can tolerate partial sun, with a reduced minimum requirement of four to six hours of direct sunlight. Examples of areas that can tolerate partial sun are established tree canopies, shrubs or perennials.

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

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

If the third tier of analysis does not eliminate the possibility of new shadows on sunlight-sensitive resources, a detailed shadow analysis is required to determine the extent and duration of the incremental shadow (i.e. the additional, or new, shadow) resulting from the project. The detailed shadow analysis establishes a baseline condition (the No-Action condition) that is compared to the future condition resulting from the Proposed Actions (the With-Action condition) to illustrate the shadows cast by existing or future buildings and distinguish the additional (incremental) shadows cast by the development of projected and potential development sites. In accordance with the CEQR Technical Manual, shadows on sunlight-sensitive resources of concern were modeled for four representative days of the year. For the New York City area, the months of interest for an open space resource encompass the growing season (i.e., March through October) and one month between November and February representing a cold-weather month (usually December). Representative days for the growing season are generally the March

21 vernal equinox (or the September 21 autumnal equinox, which is approximately the same), the June 21 summer solstice, and a spring or summer day halfway between the summer solstice and equinoxes, such as May 6 or August 6 (which are approximately the same). For the cold- weather months, the December 21 winter solstice is included to demonstrate conditions when open space users rely most heavily on available sunlight warmth. As these months and days are representative of the full range of possible shadows, they are also used for assessing shadows on sunlight-sensitive historic and natural resources. The *CEQR Technical Manual* defines the temporal limits of a shadow analysis period to fall from an hour and a half after sunrise to an hour and a half before sunset.

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

- Vegetation: a substantial reduction in sunlight duration available to sunlight-sensitive features of the resource to less than the time of its minimum sunlight needs (when there would be sufficient sunlight in the future without the project) or a reduction in direct sunlight exposure where the sensitive feature of the resource is already subject to substandard sunlight (i.e., less than the minimum sunlight needs).
- Historic and cultural resources: a substantial reduction in sunlight available for the enjoyment or appreciation of the sunlight-sensitive features of an historic or cultural resource.
- Open space utilization: a substantial reduction in the usability of open space as a result of increased shadow, including information regarding anticipated new users and the open space's utilization rates throughout the affected time periods.
- For any sunlight-sensitive feature of a resource: complete elimination of all direct sunlight on the sunlight-sensitive feature of the resource, when the complete elimination results in substantial effects on the survival, enjoyment, or, in the case of open space or natural resources, the use of the resource.

In general, a significant adverse 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.

III. PRELIMINARY SCREENING ASSESSMENT

First, an assessment of sites within the Project Area was performed in order to determine which sites and/or which development scenarios required a preliminary screening assessment. As noted above, pursuant to *CEQR Technical Manual* guidance, only new development or enlargement that would result in an incremental increase of 50 feet or more compared to the No-Action condition require assessment. In addition, any development site adjacent to, or across the street from, a sunlight sensitive resource requires a preliminary screening, regardless of its height. New structures of greater than 50 feet in incremental height are anticipated as part of the Proposed Project, and consequently, a preliminary screening assessment of shadows is warranted.

Figure G-1 shows the Project Area, the surrounding street layout, and all sunlight-sensitive resources (publicly-accessible open spaces and Greenstreets, and sunlight-sensitive architectural, natural, historic resources) as well as the Tier I longest shadow radius and Tier II screening area for the Proposed Project.

Tier I Screening Assessment

According to the *CEQR Technical Manual*, the longest shadow that a structure will cast in New York City, except for periods close to dawn or dusk, is 4.3 times its height. The maximum shadow radius for the Proposed Project was determined using the maximum height as provided in the RWCDS (175-feet tall to the rooftop and 195-feet tall including the bulkhead height). The maximum shadow radius was used to form the longest shadow study area (Tier I Assessment).

Within this longest shadow study area, there are a number of potentially sunlight-sensitive open spaces. Due to the presence of sunlight-sensitive resources within the Tier I screening area, further screening is warranted in order to determine whether any sunlight-sensitive resources could be affected by project-generated shadows.

Tier II Screening Assessment

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

Table G-1: Sunlight-Sensitive Resources Warranting Further Analysis Based on Tier 1 and 2 Screening

Map No.[1]	Sunlight Sensitive Resource
1	Queens Gate
2	Maple Grove Cemetery
3	Queens Boulevard Plaza
4	Hoover-Manton Playgrounds

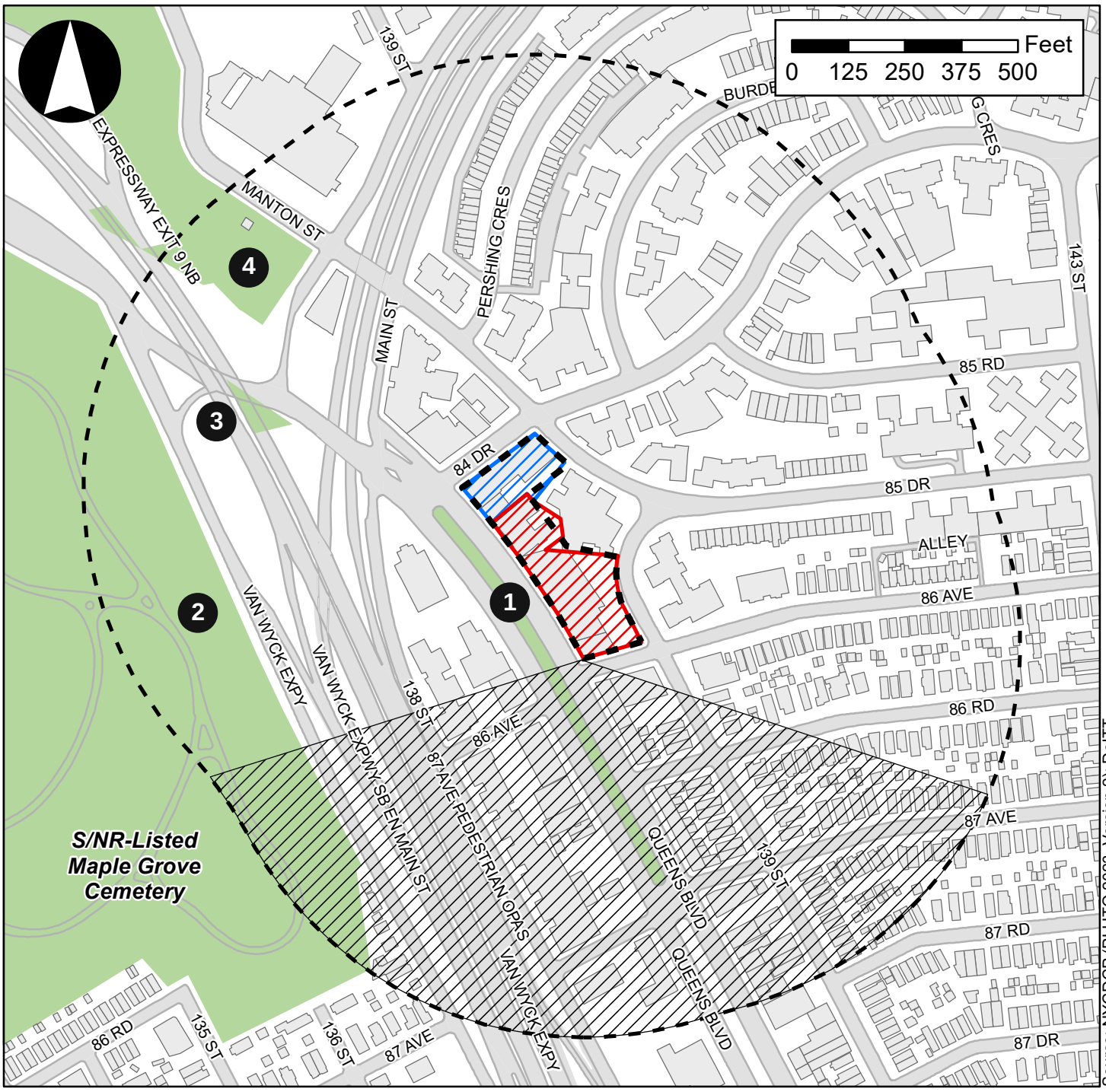
Notes: [1] Refer to Figure G-1

Figure G-1 provides a base map illustrating the results of the Tier 1 and Tier 2 screening assessments (i.e., the portion of the longest shadow study area lying within -108 degrees from the true north and +108 degrees from true north as measured from southernmost portions of the Project Area). Four resources were identified as sunlight-sensitive resources that warranted further assessment, as shown in **Table G-1.**

Tier III Screening Assessment

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

Figure G-1
Tier 1 and 2 Screening Assessments



Legend

- Project Area
- Projected Development Site 1
- Projected Development Site 2
- Tier 1 Screening Assessment: Longest Shadow Study Area
- Tier 2 Screening Assessment: Area That Cannot Be Shaded
- Existing Building Footprints
- Open Space
- Roadbed

Table G-2: Tier 3 Assessment Results

Map No.[1]	Sunlight Sensitive Resource	March 21/ September 21	May 6/ August 6	June 21	December 21	Number of Analysis Days
1	Queens Gate	Yes	Yes	Yes	No	3
2	Queens Boulevard Plaza	Yes	No	No	No	1
3	Maple Grove Cemetery	No	No	Yes	No	1
4	Hoover-Manton Playgrounds	No	No	No	Yes	1

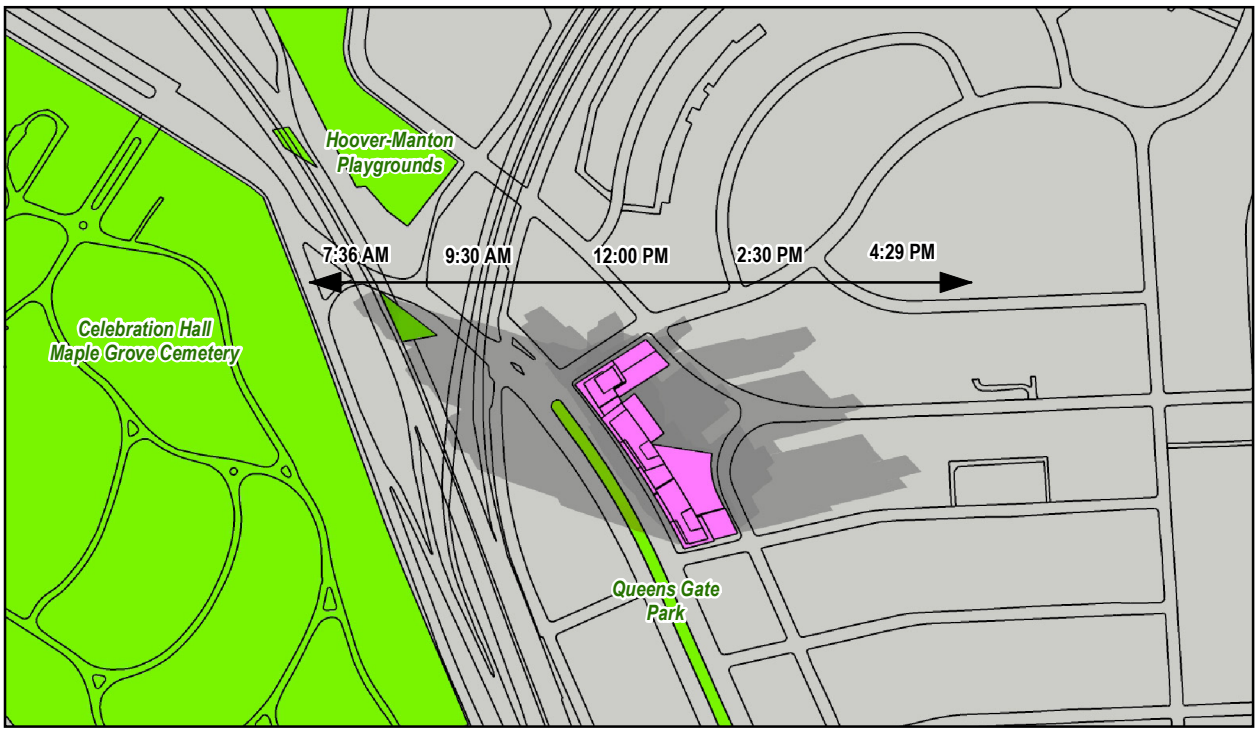
Notes: [1] Refer to Figure G-1

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

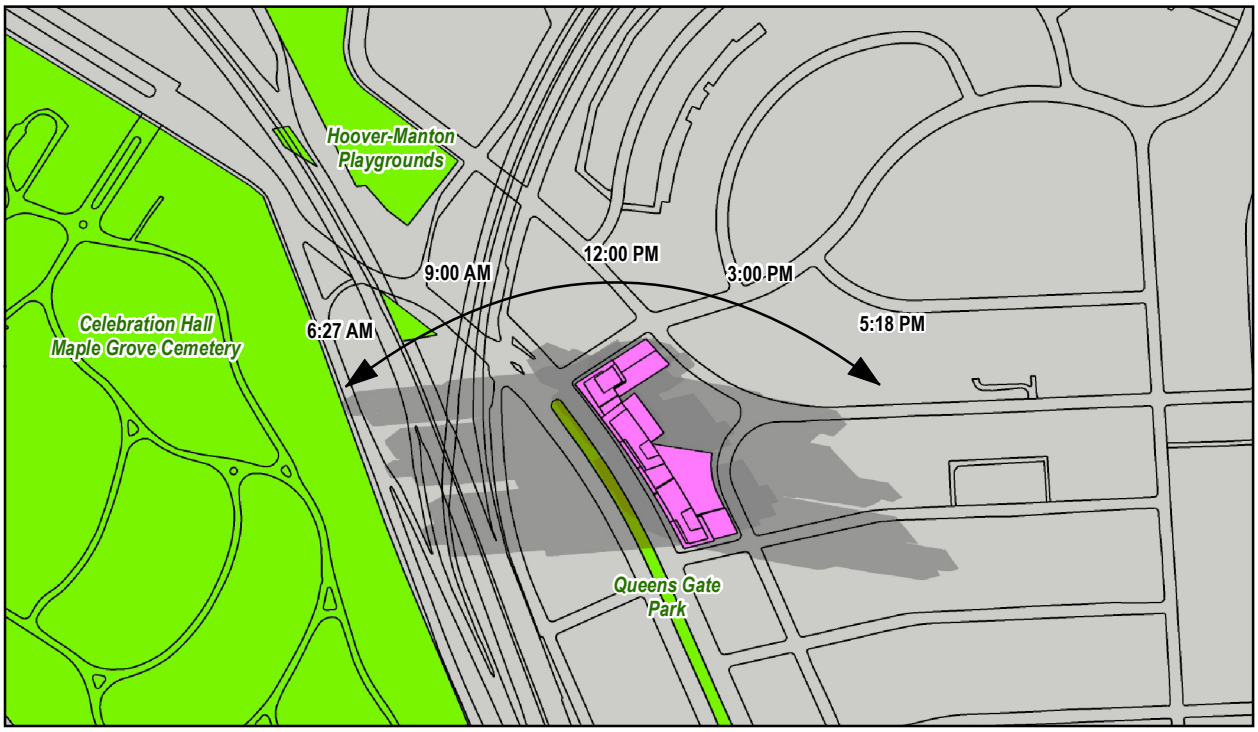
The Tier III analysis showed that all four sunlight-sensitive resources shown in **Table G-1** could receive incremental shadow on at least one analysis day. **Table G-2** presents a summary of the Tier III assessment, showing the sunlight-sensitive resources that could, in the absence of intervening buildings, receive project-generated shadows, and on which analysis days the new shadows would occur. The results of the Tier III analysis for the Project Area are illustrated in **Figure G-2a** to **Figure G-2b.**

IV. DETAILED ANALYSIS OF SHADOW IMPACTS

Per *CEQR Technical Manual* guidance, shadow analyses were performed for the four sunlight-sensitive resources identified above on four representative days of the year: March 21/September 21, the equinoxes; May 6, the midpoint between the summer solstice and the equinox (and equivalent to August 6); June 21, the summer solstice and the longest day of the year; and December 21, the winter solstice and shortest day of the year. These four representative days indicate the range of shadows over the course of the year. *CEQR Technical Manual* guidance defines the temporal limits of a shadow analysis period to fall from 1.5 hours after sunrise to 1.5 hours before sunset. As discussed above, the results of the shadows analysis show the incremental difference in shadow impact between the No-Action and With-Action conditions (see **Table G-3**).



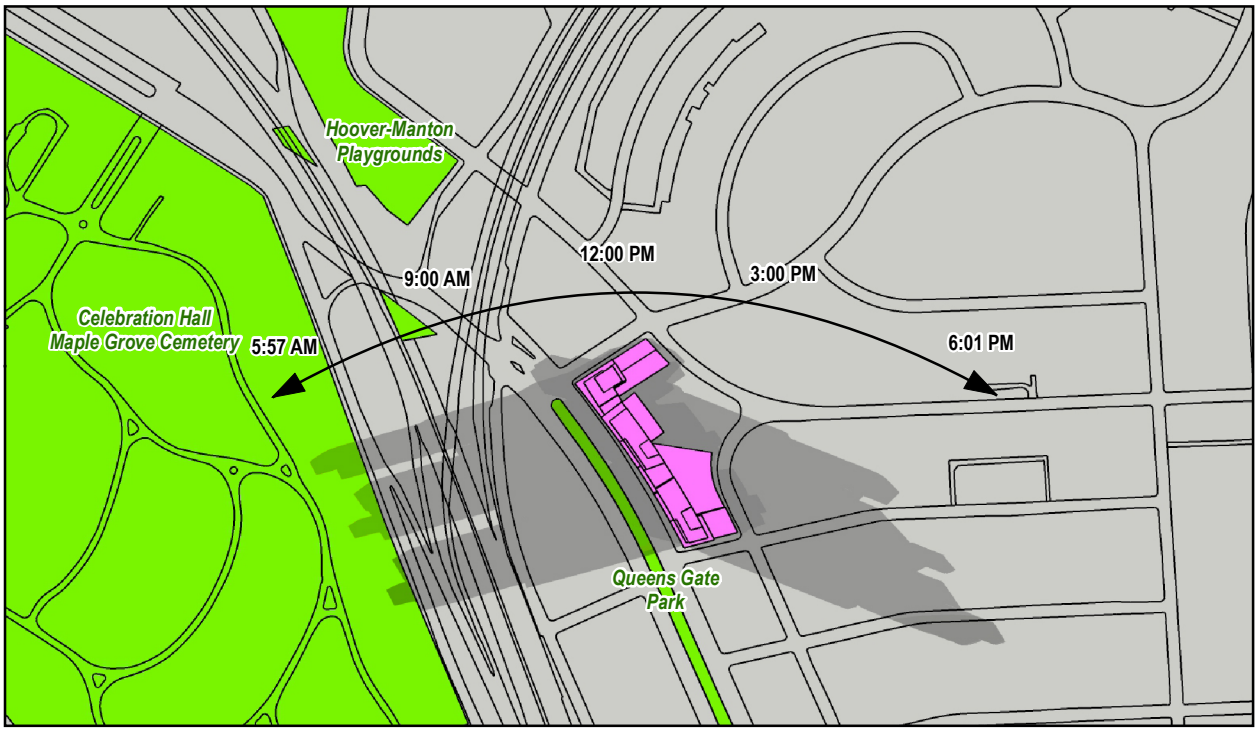
MARCH 21 / SEPTEMBER 21



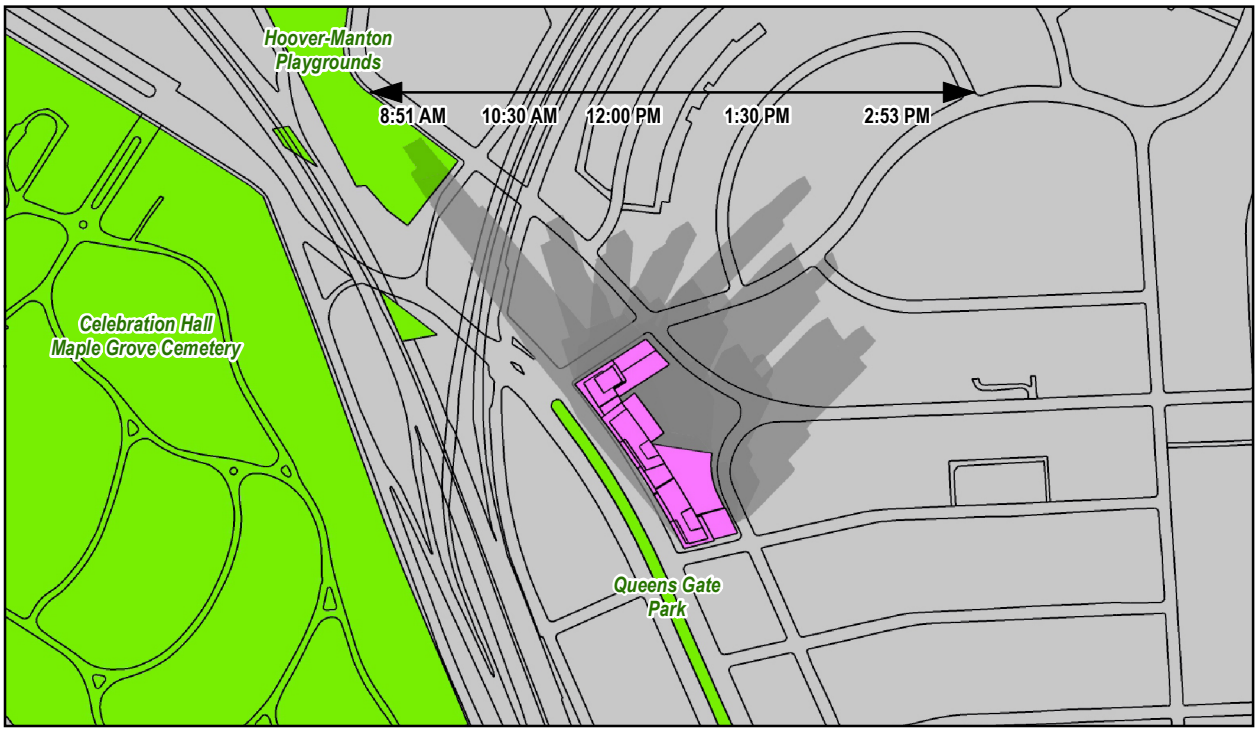
MAY 6 / AUGUST 6

Proposed Development

Sunlight-Sensitive Open Space Resource



JUNE 21



DECEMBER 21

Proposed Development

Sunlight-Sensitive Open Space Resource

Table G-3: Duration of Shadows on Sunlight Sensitive Resources (Increment Compared to No-Action)

Sunlight Sensitive Resource	Analysis Day	March 21/ Sept. 21 7:36 AM - 4:29 PM	May 6/ August 6 6:27 AM - 5:18 PM	June 21 5:57 AM - 6:01 PM	December 21 8:51 AM - 2:53 PM
Queens Gate	Shadow Enter/Exit Time	7:36 AM – 9:22 AM	6:27 AM – 9:28 AM	5:57 AM – 8:01 AM	
	Incremental Shadow Duration	1 hour 46 minutes	3 hours 1 minute	2 hours 4 minutes	
Queens Boulevard Plaza	Shadow Enter/Exit Time	7:36 AM – 7:59 AM			
	Incremental Shadow Duration	23 minutes			
Maple Grove Cemetery	Shadow Enter/Exit Time			5:57 AM – 6:12 AM	
	Incremental Shadow Duration			15 minutes	
Hoover-Manton Playgrounds	Shadow Enter/Exit Time				
	Incremental Shadow Duration				

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

As shown in **Table G-3**, incremental project-generated shadows would reach three resources identified in the Tier 3 assessment, with Hoover-Manton Playgrounds being unreached by incremental shadows. Queens Gate would experience incremental shadows from the Proposed Project on three of four analysis days (March 21/September 21, May 6/August 6, and June 21), for durations ranging from three hours one hour 46 minutes to three hours one minute. The pedestrian plaza located on the Queens Boulevard overpass of the Van Wyck Expressway would experience incremental on one analysis day (March 21/September 21) for a duration of 23 minutes. Finally, Maple Grove Cemetery would receive incremental shadows on one analysis day (June 21) for a duration of 15 minutes.

Figures G-3a through G-3f, G-4, and G-5 show representative shadow views for the sunlight-sensitive resources of concern on the representative analysis days during which they would receive shadows from the Proposed Project.

It should be noted that, per the *CEQR Technical Manual*, all times reported herein are Eastern Standard Time and do not reflect adjustments for daylight savings time that is in effect from mid-March to early November. As such, the times reported in this chapter for March 21/September 21, May 6/August 6, and June 21 need to have one hour added to reflect the Eastern Daylight-Savings Time.

Sunlight Sensitive Resources

Queens Gate

Queens Gate is a 0.67-acre public park located directly across from the Project Area to the west, situated in the median of Queens Boulevard. Queens Gate is a linear park that runs from 87th Avenue to 84th Drive to the north. The park is devoted entirely to passive recreation space, with a walking path running through the middle and landscaping and benches to either side.

As shown in **Table G-3**, as a result of the Proposed Project, Queens Gate would receive new incremental shadows from the Proposed Project on three of the four analysis days. Given the location of the park

relative to the Project Area (directly west), shadows would generally be cast on Queens Gate in the morning.

Assessment

Queens Gate would receive incremental shadows from the Proposed Project for one hour 46 minutes on the March 21/September 21 analysis day, three hours one minute on the May 6/August 6 analysis day, and two hours four minutes on the June 21 analysis day. The duration of project-generated incremental shadow coverage would be longest on May6/August6 and shortest on March 21/September 21.

As noted above, Queens Gate is a linear park with a walking path in the center and benches and landscaping on either side. Per *CEQR Technical Manual* guidance, the vegetation within the park could be affected by a loss of sunlight during the growing season (which occurs during March through October), and the bench areas could be affected by a loss of sunlight throughout the year.

On March 21/September 21, project-generated shadows would enter Queens Gate at 7:36 AM and would travel from west to east throughout the analysis day until they completely exit at 9:22 AM (see **Figures G-3a and G-3b**). In the early morning, incremental shadows would be small and limited to a sliver in the portion of the park across from the southern end of the Proposed Project. The largest incremental shadow would occur at approximately 9:00 AM, with much of the northern portion of the park covered in shadow. As shown in **Figures G-3a and G-3b**, incremental shadows on March 21/September 21 (representing the beginning and end of the growing season) would move from west to east through the park during the analysis day, affecting the vegetation but only marginally affecting the seating areas, which are located slightly further south along the block. However, all sunlight-sensitive vegetation in the park would receive well above six hours of sunlight, which is the minimum required during the growing season per *CEQR Technical Manual* guidance. Seating areas would receive sunlight starting at approximately 9:00 AM, before which time usage for a primarily passive park such as Queens Gate is expected to be low. Thus, it is not expected that incremental shadows from the Proposed Project would significantly alter the public's use of the park or threaten the viability of vegetation or other resources on this analysis day.

On May 6/August 6, project-generated shadows would enter Queens Gate at 6:27 AM and would travel from west to east until 9:28 AM, when project-generated shadows completely exit (see **Figures G-3c through G-3d**). In the early morning, incremental shadows would be limited to a small sliver in the portion across from the southern end of the Proposed Project. The largest incremental shadow would occur at approximately 8:00 AM , at which point most of the park across from the Proposed Project would be shaded. On this analysis day, all sunlight-sensitive vegetation in the park would receive six hours or more of sunlight, which is the minimum required during the growing season per CEQR Technical Manual guidance. The benches would receive sunlight starting at approximately 9:00 AM, and it is not expected that incremental shadows from the Proposed Project would significantly alter the public's use of the park or threaten the viability of vegetation or other resources on May 6/August 6.

On June 21, project-generated shadows would enter Queens Gate at 5:57 AM and would travel from west to east throughout the analysis day until 8:01 AM (see **Figures G-3e through G-3f**). In the early morning, incremental shadows would be limited to a small sliver in the portion across from the southern end of the Proposed Project. Incremental shadows would cover the greatest area at around 7:30 AM, at which time incremental shadows would mostly affect the western half of the park. Similar to March 21/September 21 and May 6/August 6, all vegetation in the park would receive enough sunlight to enable growth. Benches would receive sunlight starting at approximately 8:00 AM, with usage before that time expected to be low. Incremental shadows on June 21 are not expected to significantly alter the public's use of the park or threaten the viability of vegetation or other resources.

Though Queens Gate would receive incremental shadows from the Proposed Project throughout much of the year, the Proposed Project is not expected to cause a significant adverse impact to the park through project-generated incremental shadows. First, in the future with the Proposed Project, Queens Gate would still receive direct sunlight on all four analysis days. All sunlight-sensitive features (the landscaped areas and benches) would receive sunlight during the day, and all sunlight-sensitive vegetation would receive adequate sunlight during the growing season. Second, Queens Gate is an open space in a dense urban area surrounded by nearby mid-rise buildings, a condition that would continue in the 2028 future without the Proposed Actions. As such, the Proposed Project would not create a fundamentally different condition and would not result in a significant adverse impact to Queens Gate due to incremental shadows.

Queens Boulevard Plaza

The "Queens Boulevard Plaza" refers to a small, paved seating area located along Queens Boulevard atop the overpass of the Van Wyck expressway. The area is 0.13-acres and is fenced off to the south and west from the Van Wyck Expressway, with the eastern edge along Queens Boulevard entirely open. The triangle features benches and structures to provide shade, but no vegetation.

As shown in Table G-3, as a result of the Proposed Project, the plaza would receive new incremental shadows from the Proposed Project on one of the four analysis days. Given the location of the plaza relative to the Project Area (northwest), shadows would generally be cast on the area in morning.

Assessment

The Queens Boulevard Plaza would receive incremental shadows from the Proposed Project for only 23 minutes on the March 21/September 21 analysis day. As noted above, the plaza is a small, paved area with benches and public art, with no vegetation. Given that the incremental shadows from the Proposed Project would affect the area only for a short period time, and on one analysis day between approximately 7:30 AM and 8:00 AM when usage is expected to be low, it is not expected that incremental shadows would significantly alter the public's use of the park. As such, the Proposed Project would not create a fundamentally different condition and would not result in a significant adverse impact to the Queens Boulevard Plaza due to incremental shadows.

Maple Grove Cemetery

Maple Grove Cemetery is a 65-acre cemetery located directly west of the Project Area across both Queens Boulevard and the Van Wyck Expressway. The cemetery is listed on the National Register of Historic Places. It is carefully landscaped and features a commemorative center as well as a memorial to victims of 9/11.

As shown in **Table G-3**, as a result of the Proposed Project, Maple Grove Cemetery would receive new incremental shadows from the Proposed Project on one of the four analysis days. Given the location of the cemetery relative to the Project Area (directly west), shadows would generally be cast on Maple Grove Cemetery in the morning.

Assessment

Per *CEQR Technical Manual* guidance, the vegetation within the park could be affected by a loss of sunlight during the growing season (which occurs during March through October). Maple Grove Cemetery would only receive incremental shadows from the Proposed Project for 15 minutes on the June 21 analysis day.

Given that the incremental shadows from the Proposed Project would affect a small portion of the cemetery for a short period time, vegetation in the cemetery would receive significantly more than the minimum of six hours set by the *CEQR Technical Manual*. Additionally, because all shadows generated by the Proposed Project would exit the cemetery by approximately 6:12 AM, well before its opening time at 8:30 AM (according to their website), it is not expected that incremental shadows would affect use of the cemetery. Thus, all sunlight-sensitive features would receive sunlight during the day, and all sunlight-sensitive vegetation would receive adequate sunlight during the growing season. As such, the Proposed Project would not create a fundamentally different condition and would not result in a significant adverse impact to Maple Grove Cemetery due to incremental shadows.

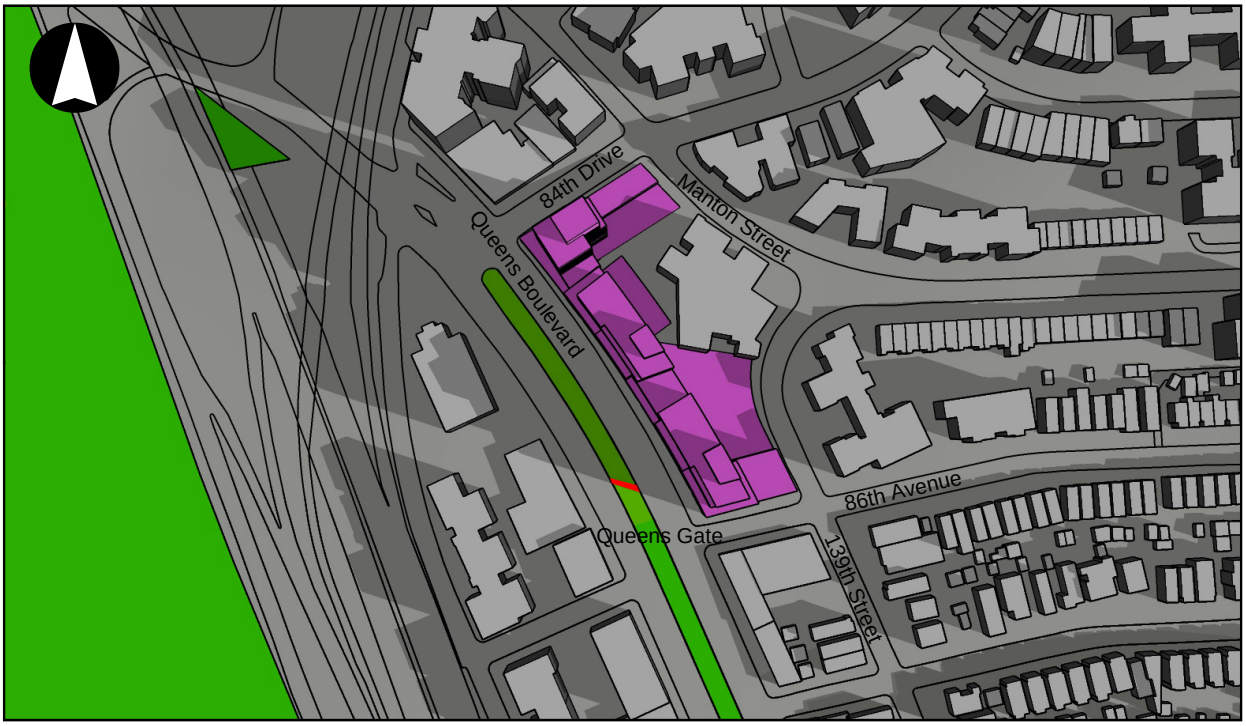
Hoover-Manton Playgrounds

Hoover-Manton Playgrounds is a 5.20-acre playground located northwest of the Project Area on Queens Block 9652, Lot 112. The playground contains features for both active and passive recreation, including landscaping, seated areas, exercise equipment, and basketball courts.

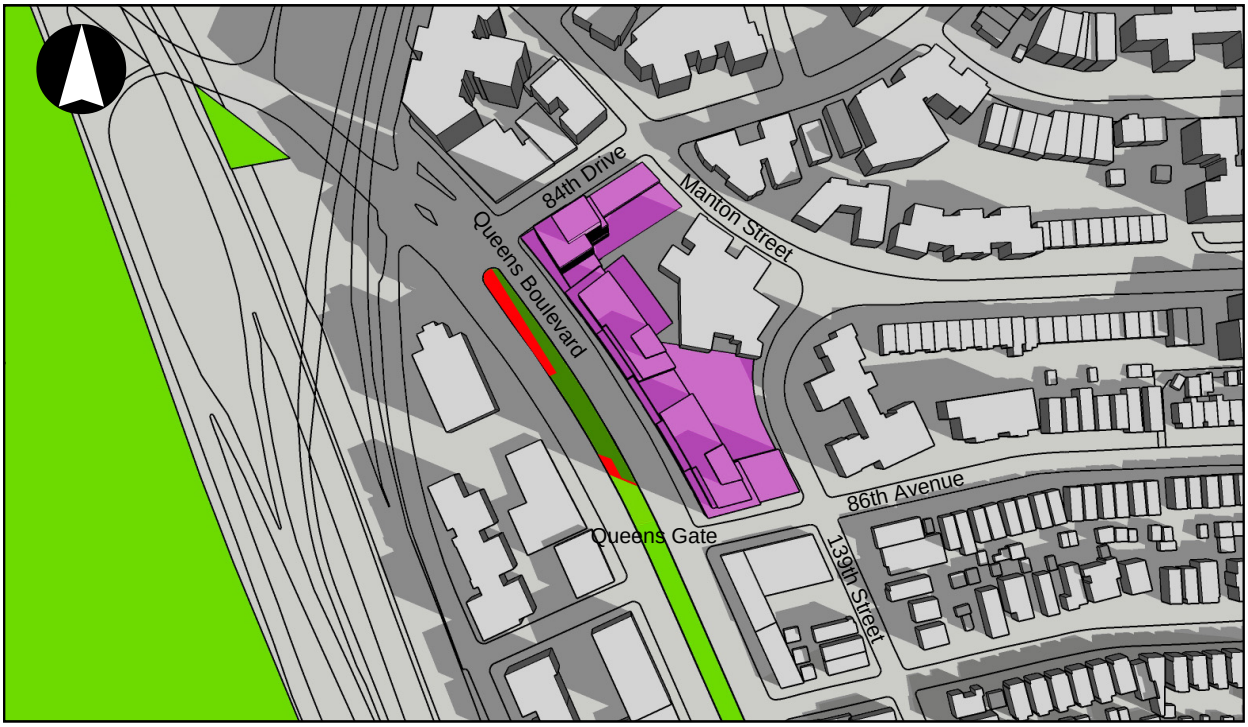
As shown in **Table G-3**, as a result of the Proposed Project, Queens Gate Park would not receive any new incremental shadows from the Proposed Project on any of the analysis days. As such, the Proposed Project would not create a fundamentally different condition and would not result in a significant adverse impact to Hoover-Manton Playgrounds due to incremental shadows.

Figure G-3a

Incremental Shadows - March 21/September 21
Queens Gate Park



7:36 AM



8:00 AM

Proposed Project

Project-Generated Incremental Shadow

Sunlight-Sensitive Open Space Resource

Incremental Shadows - March 21/September 21
Queens Gate Park



9:00 AM

Proposed Project

Project-Generated Incremental Shadow

Sunlight-Sensitive Open Space Resource

Figure G-3c
Incremental Shadows - May 6th/August 6th
Queens Gate Park



6:27 AM



7:00 AM

Proposed Project
Project-Generated Incremental Shadow
Sunlight-Sensitive Open Space Resource

Figure G-3d
Incremental Shadows - May 6th/August 6th
Queens Gate Park



8:00 AM



9:00 AM

Proposed Project

Project-Generated Incremental Shadow

Sunlight-Sensitive Open Space Resource

Incremental Shadows - June 21st
Queens Gate Park



5:57 AM



6:30 AM

Proposed Project

Project-Generated Incremental Shadow

Sunlight-Sensitive Open Space Resource

Figure G-3f

Incremental Shadows - June 21st

Queens Gate Park



7:30 AM

Proposed Project

Project-Generated Incremental Shadow

Sunlight-Sensitive Open Space Resource

Figure G-4

Incremental Shadows - March 21st/September 21st
Pedestrian Triangle



7:36 AM

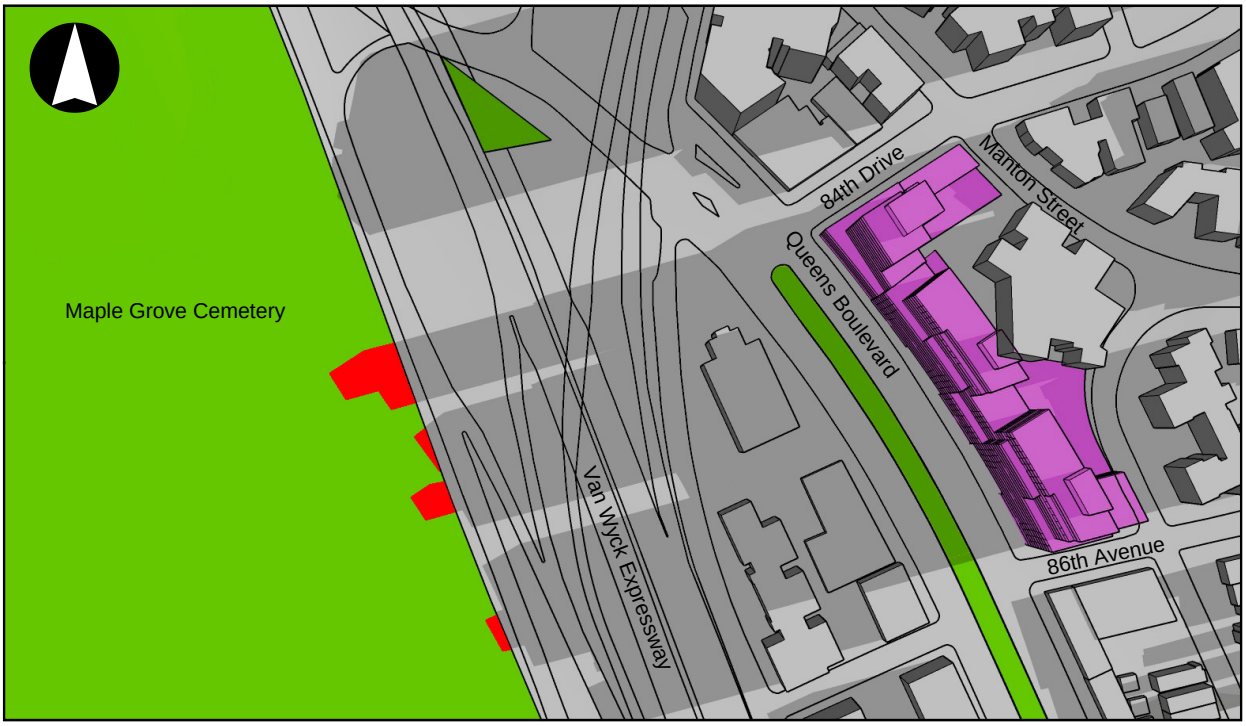
Proposed Project

Project-Generated Incremental Shadow

Sunlight-Sensitive Open Space Resource

Figure G-5

Incremental Shadows - June 21st
Celebration Hall Maple Grove Cemetery



6:00 AM

Proposed Project

Project-Generated Incremental Shadow

Sunlight-Sensitive Open Space Resource

ATTACHMENT H

URBAN DESIGN AND VISUAL RESOURCES

I. INTRODUCTION

This attachment assesses the Proposed Actions' potential effects on urban design and visual resources. Per the 2021 *City Environmental Quality Review* (CEQR) *Technical Manual*, urban design is defined as the totality of elements that shape and may affect a pedestrian's experience of public space. The practice of urban design focuses on people and their relationship to the buildings and the parks, streets, waterfronts, plazas, and natural areas around them. These features can be further described as characteristics of the public realm which shape and influence how we live, learn, work, exercise, play, socialize, walk, get around, or simply rest. A visual resource is defined as the connection from the public realm to significant natural or built features, including, but not limited to, views of the waterfront, public parks, public art, statues, or sculptures, landmark structures or districts, otherwise distinct buildings or groups of buildings that may be iconic or historic, or natural resources. In an urban design assessment pursuant to CEQR, one considers whether and how a project may change the experience of a pedestrian, focusing on the components of the project that may have the potential to significantly and adversely alter the arrangement, appearance, and functionality of the built and natural environments.

As discussed in **Attachment A, "Project Description,"** the Proposed Actions include zoning map and text amendments that would facilitate the development of a new 17-story, mixed-use residential and commercial building at 138-23 Queens Boulevard in the Briarwood neighborhood of Queens Community District (CD) 8 ("Projected Development Site 1"). In addition, for reasonable worst-case development scenario (RWCDS) analysis purposes, it is assumed that the proposed zoning changes would allow for redevelopment of Block 9649, Lots 42/44 ("Projected Development Site 2"), which are not under the Applicant's control, with a new 17-story, mixed-use residential and commercial building. In total, the RWCDS assumes that the two projected development sites would introduce up to approximately 449 dwelling units (DUs), of which 25-30 percent (approximately 113-135 DUs) would be affordable units; approximately 48,810 gross square feet (gsf) of retail uses; and approximately 172 accessory parking spaces. It is expected that the two projected development sites would be completely constructed and fully occupied by 2028.

An analysis of the potential impacts of the Proposed Actions on urban design and visual resources was prepared in conformance with the 2021 *CEQR Technical Manual*, and is provided below. This analysis describes existing conditions and compares conditions in the futures with and without the Proposed Actions to determine potential urban design and visual resource impacts. The urban design and visual resources analysis relies on observations, drawings, maps, renderings, and photographs taken from a pedestrian's eye level, as detailed below.

II. METHODOLOGY

In general, an assessment of urban design is needed when a project may have effects on one or more of the elements that contribute to a pedestrian's experience of public space. These elements, the totality of which defines the concept of urban design, are described below:

- *Streets.* For many neighborhoods, streets or rights-of-way are the primary component of public space. The dimensions, arrangement, and orientation of streets create blocks on which buildings and open spaces are organized, set street views, and define the experience and flow of activity in an area. The apportionment of street space between cars, bicycles, transit, and sidewalks and the careful design of street furniture, grade, materials used, and permanent fixtures, including buildings, streetlights, fire hydrants, curb cuts, or any other furniture, are critical in creating a successful streetscape.

- *Buildings.* Buildings and streets together form the backdrop for public space and activity. A building's streetwall forms the most common backdrop in the City for public space. A building's size, shape, orientation, height, setbacks, lot coverage, density, placement, and use on the zoning lot and block; the orientation of active uses; and pedestrian and vehicular entrances all play major roles in the vitality of the streetscape. Furthermore, building facades, accessible spaces, or rooftops also make up the public realms that enrich the visual and experiential character of an area.

- *Open Space.* For the purpose of urban design, open space includes public and private areas such as parks, yards, cemeteries, parking lots, playgrounds, community gardens, plazas, and privately-owned public spaces.

- *Natural Features.* Natural features include vegetation (i.e., trees, shrubs, grasses, etc.), geologic, topographic, and aquatic features. Rock outcroppings, steep slopes, or varied ground elevation, beaches, or wetlands may help define the overall character of an area.

- *Visual Resources.* A visual resource is the connection from the public realm to significant natural or built features, including, but not limited to, views of the waterfront, public parks, public art, statues, or sculptures, landmark structures or districts, otherwise distinct buildings or groups of buildings that may be iconic or historic, and natural resources.

- *Wind.* Channelized wind pressure from between tall buildings and "down-washed" wind pressure from parallel tall buildings may cause winds that affect pedestrian comfort and safety. "Down-washed" wind is wind that is propelled downward by an intervening structure, such as a high-rise building, which causes high wind speeds at the street level.

As the Proposed Actions would allow physical changes in the Project Area beyond the bulk and form currently permitted as-of-right under existing zoning, it would have the potential to change a pedestrian's experience of public space. As such, it is appropriate to assess the Proposed Actions' potential impacts on urban design and visual resources. This assessment, conducted pursuant to the guidance of the *CEQR Technical Manual*, is provided below.

A pedestrian wind condition analysis is not warranted for the Proposed Actions pursuant to *CEQR Technical Manual* methodology. As detailed therein, projects involving multiple tall buildings at or in close proximity to waterfront sites may result in exacerbation of wind conditions due to "channelization" or "down-wash" effects that may affect pedestrian comfort and safety. The need for a wind analysis is based on a number of factors, including whether the location is exposed to high wind conditions, such as along west and northwest-facing waterfronts, as well as the number, size, and orientation of buildings that are proposed to be constructed, the site plan, and the surrounding

pedestrian context. As shown in **Figure H-1**, the Project Area is not located adjacent to or in close proximity to the waterfront and thus is not exposed to high wind conditions. Therefore, a pedestrian wind condition analysis is not warranted for the Proposed Actions.

Study Areas

Pursuant to *CEQR Technical Manual* guidance, study areas for the assessment of urban design and visual resources correspond to the areas where the Proposed Actions may influence land use patterns and the built environment, and are consistent with those used in the land use analysis of **Attachment C, "Land Use, Zoning, & Public Policy."** For visual resources, the view corridors within the study areas from which such resources are publicly viewable have been identified. The urban design analysis considers both a primary study area, which is coterminous with the boundaries of the Project Area, and a secondary study area, which extends approximately 400 feet from the Project Area. As illustrated in **Figure H-1**, the secondary study area is generally bounded by Main Street to the north, the midblock portions of Blocks 9713, 9711, 9710, and 9709 to the east, the midblock portion of Block 9645 to the south, and the Van Wyck Expressway to the west.

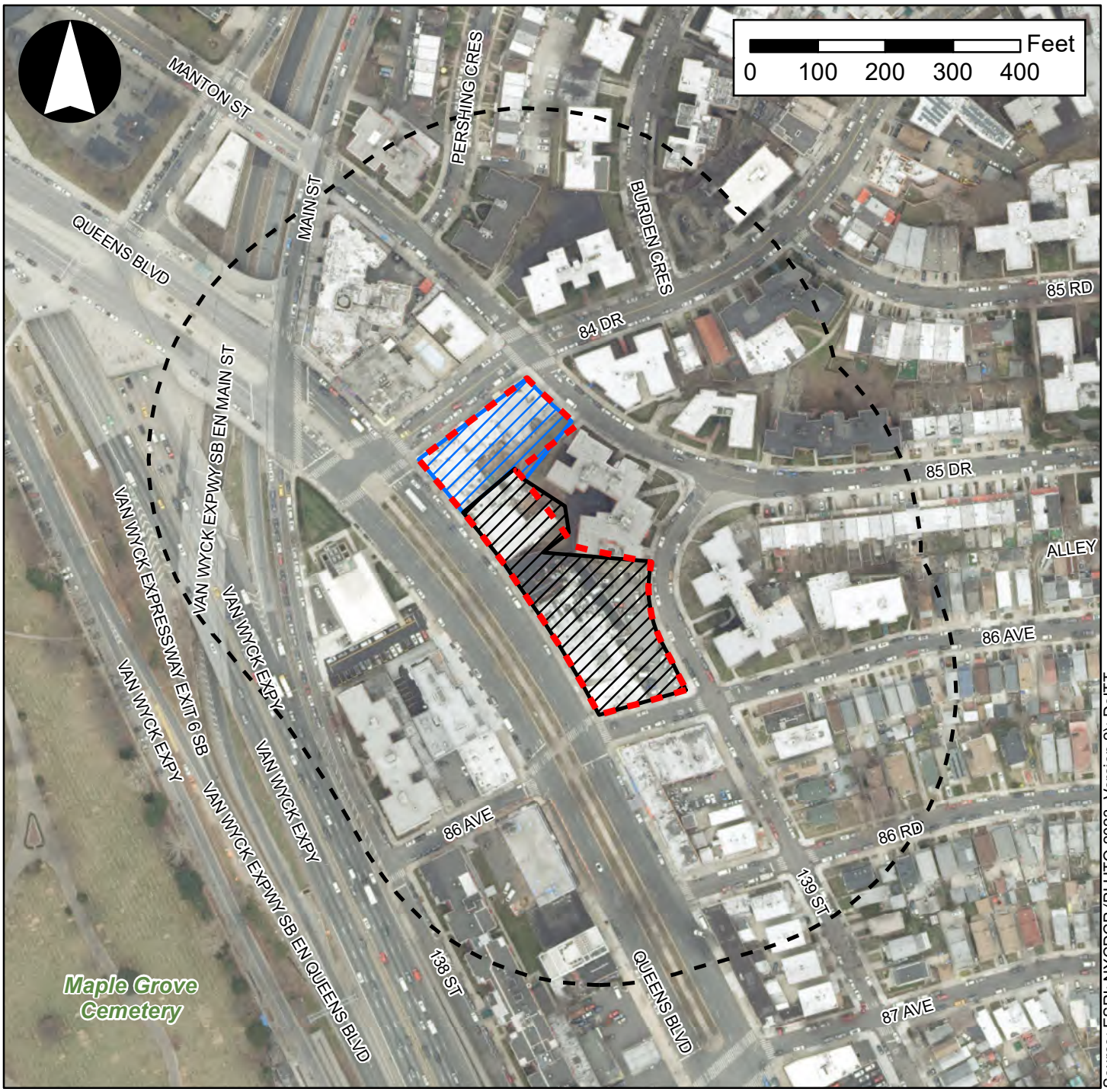
III. PRELIMINARY ASSESSMENT

Per CEQR methodology, a preliminary assessment of urban design and visual resources should be conducted in accordance with the checklist provided in Chapter 10, Section 320 of the *CEQR Technical Manual*. This checklist forms a "snapshot" of the project and provides the appropriate information to help determine whether a potential for significant adverse impacts exists and, consequently, whether further analysis is warranted. If a preliminary assessment determines that a change to the pedestrian experience is minimal and unlikely to disturb the vitality, the walkability, or the visual character of the area, then no further assessment is warranted. Detailed analyses are generally appropriate for area-wide rezonings, general large-scale developments, or projects that would result in substantial changes to a historic district or building. Examples may include projects that have the potential to obstruct view corridors, compete with icons in the skyline, or make substantial alterations to the streetscape of a neighborhood by noticeably changing the scale of buildings.

Existing Conditions

This section discusses existing urban design components and visual resources in the primary and secondary study areas. The assessment focuses on streets, buildings, open space, natural resources, and visual resources. The visual resources assessment considers important views of landmark structures and other distinct buildings within, or viewable from, the study areas that may be obstructed due to buildings or structures developed as a result of the Proposed Actions. **Figure H-1** contains an aerial map of the study areas and **Figure H-4** illustrates existing land uses in the areas. Additionally, **Figure H-7** shows the existing built density of the study areas and **Figure H-8** illustrates existing building heights in the study areas. Photos of the existing conditions in the primary study area are provided in **Figures H-2** and **H-3**. **Figures H-7** and **H-8** provide existing photos of the secondary study area, and **Figures H-9** and **H-10** show existing streetscapes in the secondary study area.

Figure H-1
Study Areas - Aerial Map



Source: ESRI; NYCDCP (PLUTO 2023, Version 2); DoITT

Legend

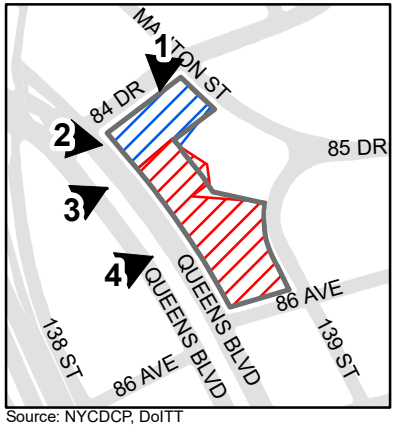
- Primary Study Area (Project Area)
- Secondary Study Area (400-Foot Radius)
- Projected Development Site 1
- Projected Development Site 2



1. View of the Primary Study Area looking south across 84th Drive.



2. View of the Primary Study Area looking southeast from the intersection of Queens Boulevard and 84th Drive.



Source: NYCDCP, DoITT
Notes:
1. The Primary Study Area is outlined by a gray solid line.
2. Projected Development Site 1 is outlined in red striped symbology.
3. Projected Development Site 2 is outlined in blue striped symbology.



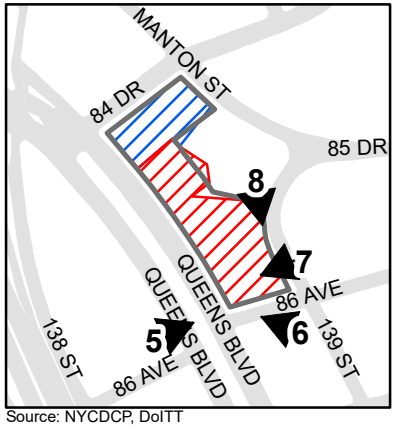
3. View of the Primary Study Area looking northeast across Queens Boulevard between 84th Drive and 86th Avenue.



4. View of the Primary Study Area looking east across Queens Boulevard between 84th Drive and 86th Avenue.



5. View of the Primary Study Area looking northeast across Queens Boulevard between 84th Drive and 86th Avenue.



Source: NYCDCP, DoITT
Notes:
1. The Primary Study Area is outlined by a gray solid line.
2. Projected Development Site 1 is outlined in red striped symbology.
3. Projected Development Site 2 is outlined in blue striped symbology.



6. View of the Primary Study Area looking northwest from 86th Drive between Queens Boulevard and 139th Street.

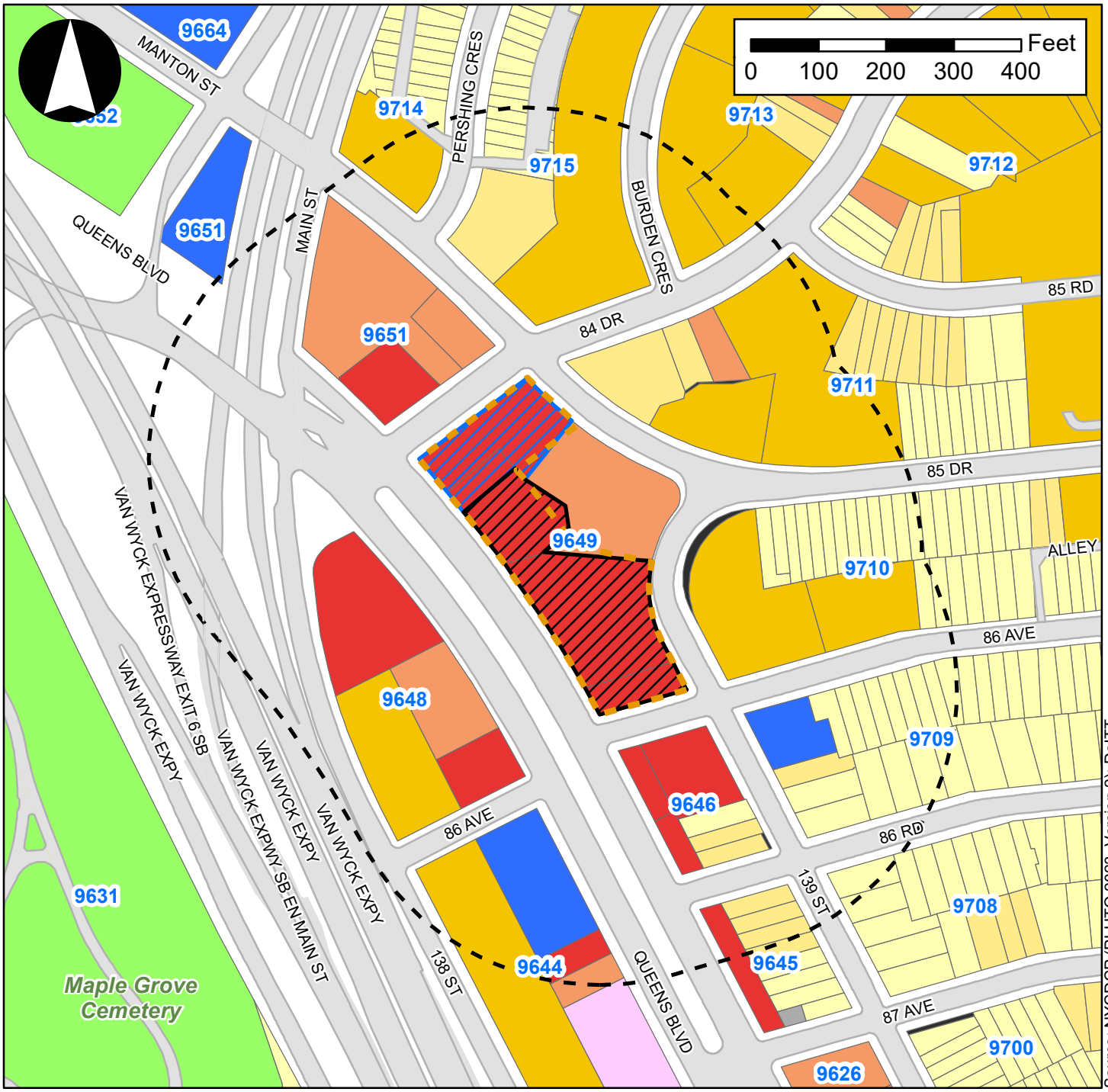


7. View of the Primary Study Area looking southwest across 139th Street between 86th Avenue and 85th Drive and Manton Street.



8. View of the Primary Study Area looking south from 139th Street between 86th Avenue and 85th Drive and Manton Street.

Figure H-4
Land Use Map



Legend

- Primary Study Area (Project Area)
- Secondary Study Area (400-Foot Radius)
- Projected Development Site 1
- Projected Development Site 2

Land Use

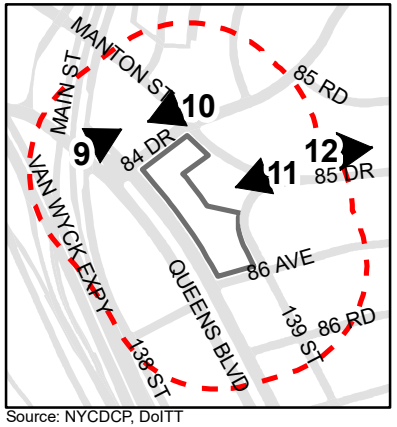
- One & Two Family Buildings
- Multi-Family Walkup Buildings
- Multi-Family Elevator Buildings
- Mixed Commercial/Residential Buildings
- Commercial/Office Buildings
- Industrial/Manufacturing
- Transportation/Utility
- Public Facilities & Institutions
- Open Space
- Parking Facilities
- Vacant Land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



9. View of a low-rise commercial buliding and a mid-rise mixed-use building looking northeast from the intersection of Queens Boulevard and Main Street.



11. View of a mid-rise mixed-use building looking west from the intersection of Manton Street, 85th Drive, and 139th Street.



Source: NYCDCP, DoITT
Notes:
1. The Primary Study Area is outlined by a gray solid line.
2. The Secondary Study Area is outlined by a red dashed line.



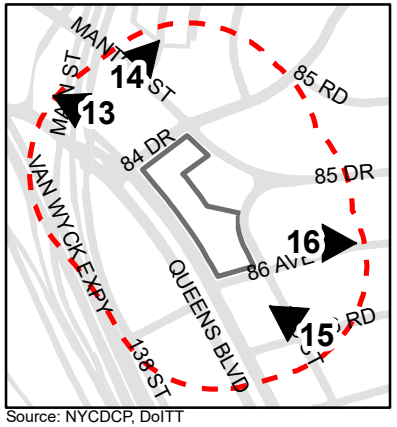
10. View of a low-rise mixed-use building looking southwest from Manton Street between 84th Drive and Main Street.



12. View of low-rise and mid-rise residential buildings looking east from 85th Drive.



13. View of the Briarwood branch of the Queens Public Library looking northwest from Main Street between Queens Boulevard and Manton Street.



Source: NYCDCP, DoITT
Notes:
1. The Primary Study Area is outlined by a gray solid line.
2. The Secondary Study Area is outlined by a red dashed line.



14. View of a mid-rise residential building looking northeast from Manton Street between Main Street and Pershing Crescent.

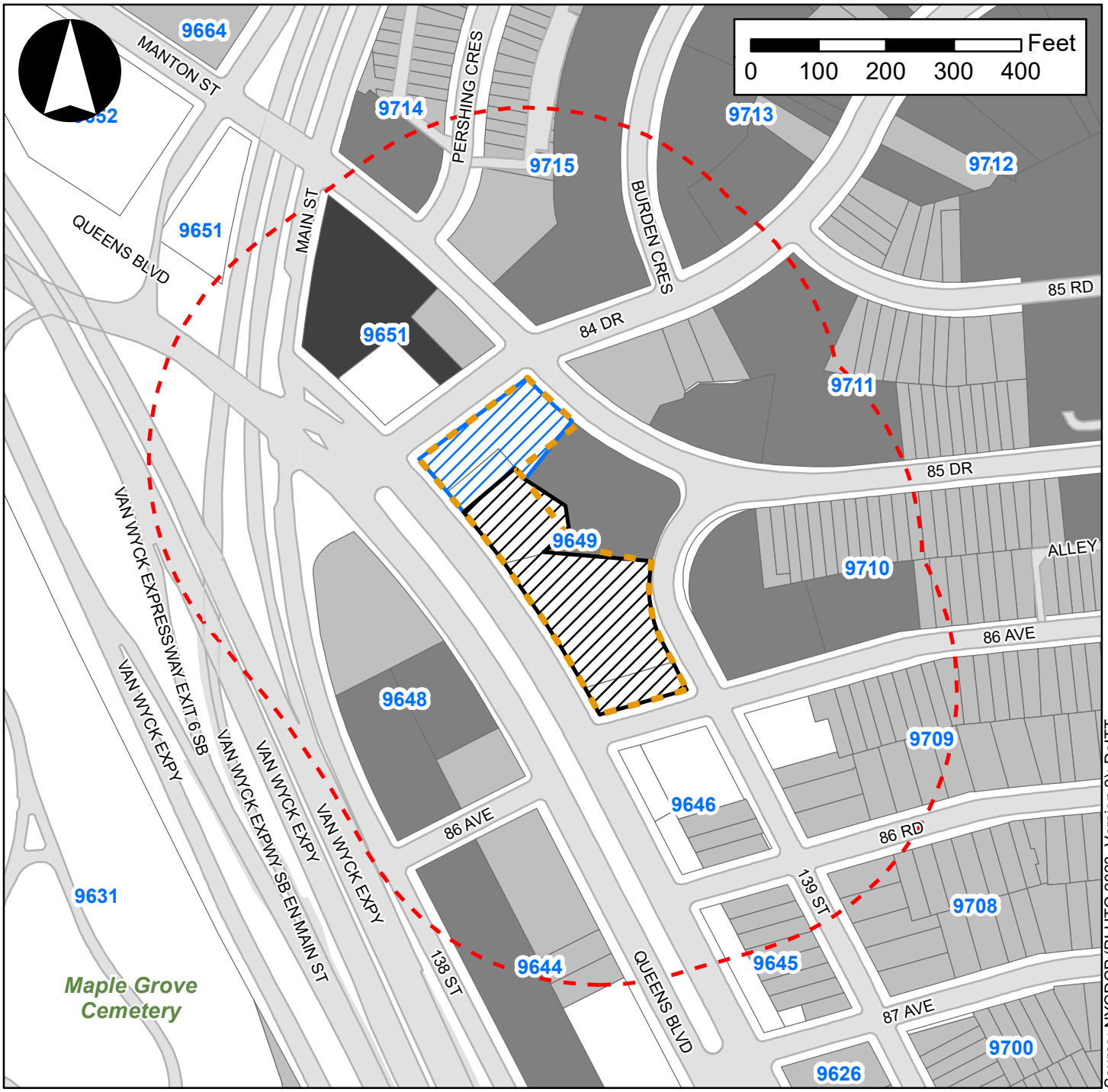


15. View of low-rise buildings looking northwest from the intersection of 139th Street and 86th Road.



16. View of low-rise residential buildings looking east along 86th Avenue.

Figure H-7
Existing Building Heights



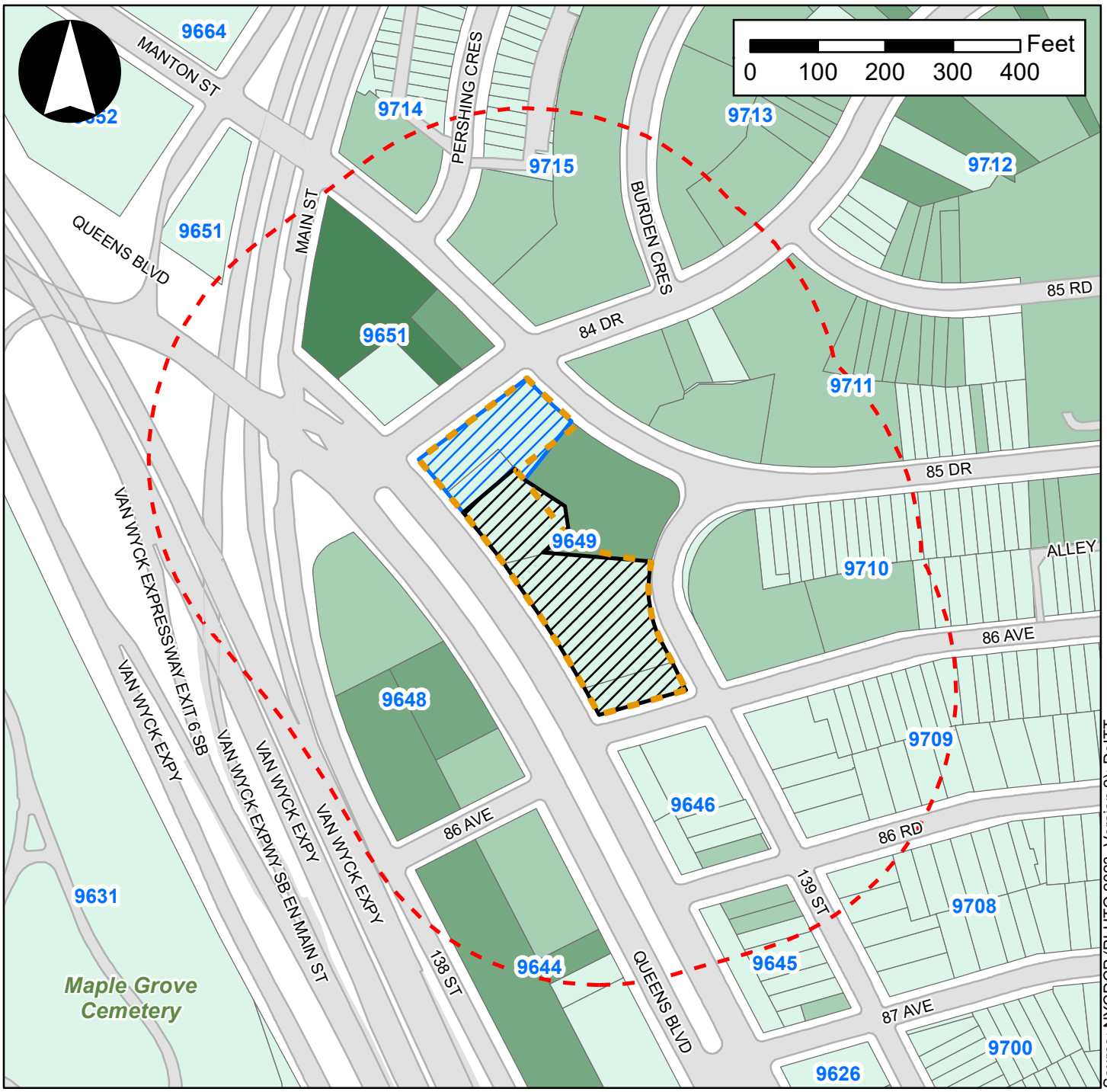
Legend

- Primary Study Area (Project Area)
- Secondary Study Area (400-Foot Radius)
- Projected Development Site 1
- Projected Development Site 2

Number of Stories

- 1 Story or Less
- 2 - 4 Stories
- 5 - 10 Stories
- 11 - 37 Stories
- Greater than 37 Stories

Figure H-8
Existing Building Density



Legend

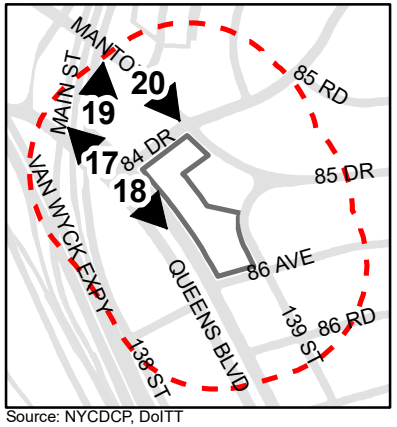
- Primary Study Area (Project Area)
- Secondary Study Area (400-Foot Radius)
- Projected Development Site 1
- Projected Development Site 2

Existing Building Density

- 0.0 - 1.0 FAR
- 1.1 - 3.0 FAR
- 3.1 - 5.0 FAR
- 5.1 - 10.0 FAR
- Greater than 10.1 FAR



17. View of streetscape conditions looking northwest from the intersection of Queens Boulevard and 84th Drive.



Source: NYCDCP, DoITT
Notes:
1. The Primary Study Area is outlined by a gray solid line.
2. The Secondary Study Area is outlined by a red dashed line.



18. View of streetscape conditions looking southeast from the intersection of Queens Boulevard and 84th Drive.



19. View of streetscape conditions looking north from Main Street between Queens Boulevard and Manton Street.



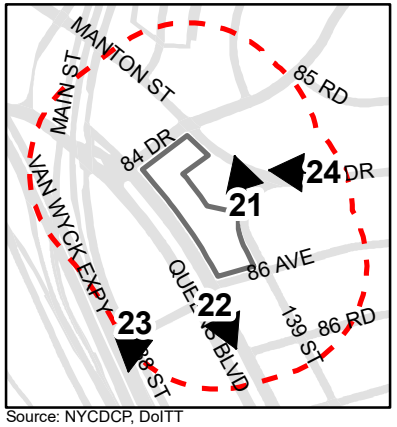
20. View of streetscape conditions looking southeast from Manton Street between Pershing Crescent and 84th Drive.



21. View of streetscape conditions looking north from 139th Street between 86th Avenue and Manton Street and 85th Drive.



23. View of streetscape conditions looking south at the Van Wyck Expressway (Interstate 678).



Source: NYCDCP, DoITT
Notes:
1. The Primary Study Area is outlined by a gray solid line.
2. The Secondary Study Area is outlined by a red dashed line.



22. View of streetscape conditions looking southeast from the intersection of Queens Boulevard and 86th Avenue.



24. View of streetscape conditions looking west from 85th Drive.

Primary Study Area (Project Area)

STREETS

The Project Area does not contain any streets. As detailed further below, it is bounded by Queens Boulevard to the west, 84th Drive to the north, Manton and 139th Streets to the east (partially), and 86th Avenue to the south. These streets are all flanked by parallel parking lanes and concrete sidewalks, and are punctuated by streetlights, traffic lights, road signs, fire hydrants, utility boxes, and a bus shelter station near the corner of Queens Boulevard and 86th Avenue. There are a few curb cuts adjacent to garage entrances and the parking lot, and there are no street trees in the Project Area. Street furniture in the Project Area is limited to garbage cans, mailboxes, bike racks, and parking meter kiosks.

BUILDINGS

The Project Area is occupied by five single-story attached commercial buildings ranging in size from approximately 2,530 gsf to 19,751 gsf with floor area ratios (FARs) of 0.54 to 0.82. The buildings have frontages along Queens Boulevard and 84th Drive and contain a variety of local retail and neighborhood service uses, including a supermarket, catering hall, restaurants, dry cleaners, retail stores/services, and pharmacies. All of these buildings are built to the lot line and are oriented towards the street, with large glass entrances and windows covered in advertisements, topped with bright signage on shallow awnings. There is also a 25-space at-grade accessory parking lot in the Project Area at the corner of 86th Avenue and 139th Street, which is surrounded by a short metal barrier at the lot line.

OPEN SPACE & NATURAL RESOURCES

There are no open spaces or natural resources located in the Project Area.

VISUAL RESOURCES

The Project Area does not contain any significant visual resources. The Queens Gate Greenway (the median portion of Queens Boulevard detailed further below) is a significant visual resource in the secondary study area that can be seen from most sidewalks along the Project Area on Queens Boulevard, 84th Drive, and 86th Avenue. Additionally, the historic 65-acre Celebration Hall Maple Grove Cemetery, a significant visual resource just west of the secondary study area, can be seen from sidewalks on 84th Drive in the Project Area.

Secondary Study Area

STREETS

Due to the convergence of different street grids and major roadways traversing the area, the secondary study area is comprised of irregular block forms. In the western portion of the secondary study area, Main Street intersects Queens Boulevard before converging with the Van Wyck Expressway and 138th Street. Main Street is an approximately 175-foot-wide major street and local truck route that splits to the northeast of the secondary study area. The portion of the at-grade road in the secondary study area contains one lane of northbound vehicular traffic flanked by parallel parking lanes and sidewalks on the east side, converging with 138th Street near 84th Drive. The below-grade portion of Main Street in the

secondary study area contains one lane each of north and southbound vehicular traffic separated by a grassy median, which traverse beneath the Manton Street and Queens Boulevard overpasses before converging at-grade with the Van Wyck Expressway.

The Van Wyck Expressway is located one block to the west of the Project Area in the western portion of the secondary study area. It is a 14-mile interstate limited access arterial highway (I-678) and through truck route that crosses through Queens and the Bronx, providing access to and from JFK International Airport. In the secondary study area, the Van Wyck Expressway contains four lanes of northbound and three lanes of southbound vehicular traffic, separated by a jersey barrier and flanked by tall metal fencing to the east. 138th Street is located on the other side of the tall metal fencing. 138th Street is a 50-foot-wide local street with one lane of northbound vehicular traffic with parallel parking on both sides of the street in the secondary study area.

Queens Boulevard is a 150-foot-wide arterial highway and through truck route that extends for approximately 7.5 miles, connecting Midtown Manhattan to Jamaica, Queens via the Queensborough Bridge. In the secondary study area, the boulevard contains three lanes each of north and southbound vehicular traffic separated by a wide concrete median and flanked by parallel parking lanes on both sides of the street. The roadbeds are each 40 feet wide, and the portion of the median to the south of Main Street (called the Queens Gate Greenway) features walking paths, landscaping, trees, sculptural balls, and short metal fencing maintained by NYC Parks.

In the eastern portion of the secondary study area, the north-southbound streets of Manton Street and 139th Street converge into the east-westbound 85th Drive. Manton Street is a 60-foot-wide local street with one lane each of northwest and southeast-bound vehicular traffic, flanked by a parallel parking lane on the western side of the street north of 84th Drive and on the eastern side of the street south of 84th Drive. 139th Street is a 60-foot-wide local street with one lane of northbound vehicular traffic and parallel parking on both sides of the street. 85th Drive is a 50-foot-wide local street with one lane each of east and westbound vehicular traffic flanked by parallel parking lanes.

The remainder of streets in the secondary study area include 84th Drive, 86th Avenue, and 86th Road, east-westbound streets which intersect the north-southbound roads detailed above, as well as Pershing and Burden Crescents, curving roads entering the northern secondary study area in a north-southbound direction. 84th Drive is a 70-foot-wide local road, and 86th Avenue and 86th Road are 60-foot-wide local streets; all have parallel parking lanes flanking both sides of the streets. 84th Drive and 86th Avenue contain one lane each of east and westbound vehicular traffic, while 86th Road is comprised of one lane of westbound vehicular traffic. Pershing and Burden Crescents are also 60-foot-wide local roads, both with one lane of southbound vehicular traffic flanked by parallel parking on both sides of the streets.

Except for the Van Wyck Expressway, all streets in the secondary study area are bordered by concrete sidewalks. These sidewalks are in largely good condition and are punctuated by streetlights, traffic lights, street trees, some utility poles carrying overhead wires, road signs, fire hydrants, and curb cuts adjacent to driveways and garage entrances. There are also elevator and stairwell entrances to the Briarwood subway station on the sidewalk at Queens Boulevard at Main Street. The secondary study area does not contain any designated bike lanes. Street furniture in the area includes garbage cans, bike racks, newspaper kiosks, benches, bus stop shelters, parking meter kiosks, and mailboxes.

BUILDINGS

The secondary study area contains a variety of building types, forms, and uses. The buildings along Queens Boulevard are predominately commercial and mixed commercial/residential structures built out to the lot lines, creating uniform streetwalls with largely active ground-floor commercial uses. The buildings along the east side of Queens Boulevard in the secondary study area are generally one-story commercial buildings with large signage and shallow awnings. The west side of Queens Boulevard contains a mix of one to four-story commercial buildings, two to seven-story, medium-density residential buildings with ground-floor commercial uses, and a four-story institutional building (the newly reconstructed Briarwood Homeless Shelter). The four-story Chase Bank office building just south of the intersection of Queens Boulevard and the Van Wyck Expressway is the only structure along the boulevard in the secondary study area that is entirely setback from the street behind landscaping and accessory parking. Most of the commercial structures along Queens Boulevard are low-density, except for the recently renovated four-story architectural office building with ground-level retail space at 138-72 Queens Boulevard, which has an FAR of 4.2. Additionally, the newly constructed seven-story mixed-use building immediately across the street from the Project Area at 138-28 Queens Boulevard has an FAR of 4.87.

There are several six to eight-story redbrick apartment buildings along the Van Wyck Expressway in the secondary study area with FARs of 3.49. These structures are largely built out to the lot lines, with some recesses for entryways and landscaping as well as slightly projecting balconies. The seven-story redbrick residential apartment building immediately adjacent to the Project Area (Lot 53) is similar in design, with a recessed entrance at 85th Drive, slightly projecting balconies, and an FAR of 3.69, although most of its facades are slightly setback from the sidewalk behind grass and short metal fencing. The three to six-story redbrick apartment buildings in the north and eastern sections of the secondary study area are similar in design, slightly recessed behind grass, landscaping, and trees surrounded by short metal fencing at the sidewalk, with occasional ground-level commercial spaces. The tallest and densest building in the secondary study area is the 14-story, 8.0-FAR redbrick apartment building at 85-15 Main Street, which has a similar design to the other residential apartments in the area detailed above.

In contrast, the southeastern section of the secondary study area is largely comprised of low-rise, low-density one- and two-family detached homes on narrow rectangular-shaped lots. Most of these buildings have shallow, landscaped front and side yards that are surrounded by low walls and fencing in a variety of materials and styles. These lots also typically contain driveways to attached front garages or freestanding rear garages. This area also contains one institutional use: the two-story redbrick Briarwood Jewish Center at the southeast corner of 86th Avenue and 139th Street.

OPEN SPACE & NATURAL RESOURCES

The topography of the secondary study area is generally flat, sloping upward to the northeast of Manton Street. Open spaces in the secondary study area are limited to residential yards and the planted median in the center of Queens Boulevard called the Queens Gate Greenway. Natural features in the area are limited to street trees and vegetation found in residential yards and along the Queens Gate Greenway.

VISUAL RESOURCES

There are no significant historic resources or other notable buildings in the secondary study area that would be considered important visual resources in the neighborhood. The Queens Gate Greenway, a significant visual resource in the secondary study area, can be seen from most sidewalks along Queens Boulevard and adjacent streets. Additionally, the historic Celebration Hall Maple Grove Cemetery, a significant visual resource to the west of the secondary study area, can be seen from sidewalks on 84th Drive and 138th Street within the secondary study area.

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

Primary Study Area (Project Area)

As detailed further in **Attachment A, "Project Description,"** absent the Proposed Actions, it is assumed that new construction would occur on an as-of-right basis on both identified Projected Development Sites. No other changes would be expected to occur in the Project Area in the future without the Proposed Actions.

On the Applicant-owned Projected Development Site 1 (Lots 17, 25, and 37), it is expected that the Applicant would demolish the existing single-story commercial buildings and construct an as-of-right mixed-use residential and commercial structure in the future without the Proposed Actions. The No-Action development on Projected Development Site 1 would consist of a seven-story (approximately 85 feet tall with bulkhead) mixed-use commercial and residential building containing approximately 133 DUs, approximately 33,020 gsf of ground-floor local retail space, and approximately 67 accessory parking spaces located in a second-floor garage, for a total of approximately 207,327 gsf (3.0 FAR).

It is also expected that the non-Applicant-owned Projected Development Site 2 would be developed on an as-of-right basis in the No-Action condition. The existing single-story commercial buildings would be demolished, and a seven-story (approximately 85 feet tall with bulkhead) mixed-use commercial and residential building would be constructed with approximately 56 DUs, approximately 18,094 gsf of ground-floor local retail space, and approximately 31 accessory parking spaces located in a second-floor garage, for a total of approximately 78,414 gsf (3.0 FAR).

Secondary Study Area

STREETS

In the No-Action condition, it is expected that the New York City Department of Transportation (NYC DOT)'s Vision Zero safety improvement plan for Queens Boulevard between Union Turnpike and Hillside Avenue would be implemented. Changes proposed for the boulevard include the installation of a protected bike lane on the median; repurposing the third travel lane; installing left turn signals; painting median tips; and establishing turn calming measures along the boulevard.

BUILDINGS

As detailed further in **Attachment C, "Land Use, Zoning, & Public Policy,"** there are no known development projects slated for completion within the secondary study area in the future without the Proposed Actions.

OPEN SPACE & NATURAL RESOURCES

As detailed further in **Attachment F, "Open Space,"** there are no anticipated changes to any existing open space resources or any new publicly accessible open space resources slated for construction in the secondary study area in the future without the Proposed Actions.

VISUAL RESOURCES

No changes to visual resources in the secondary study area are expected in the future without the Proposed Actions.

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

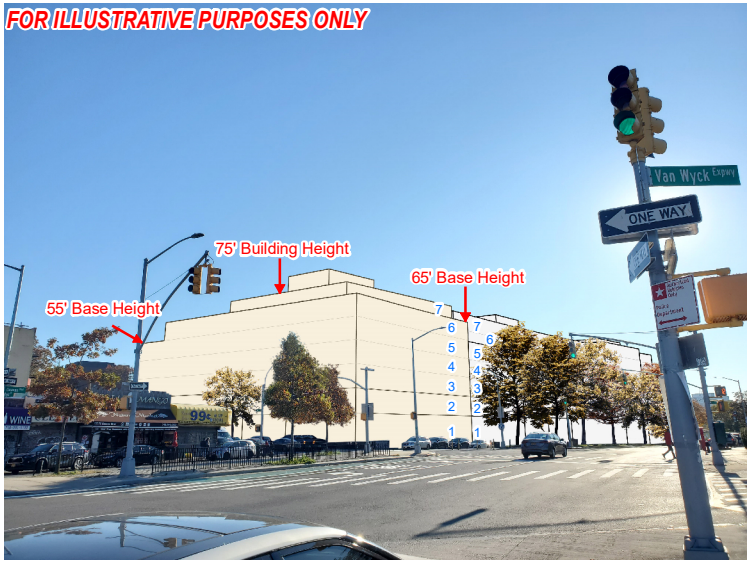
Primary Study Area (Project Area)

As detailed further in **Attachment A, "Project Description,"** the Proposed Actions would map an R8X zoning district in the Project Area with a C2-4 commercial overlay to a depth of 100 feet along the north side of 86th Avenue and 100-foot depth on the east side of Queens Boulevard, as well as establish a Mandatory Inclusionary Housing (MIH) area coterminous with the proposed R8X district. The Proposed Actions would also create a new R6A/C2-4 district at a depth of 100 feet from 84th Drive, extending east to Manton Street from the newly created R8X district boundary, and would eliminate the existing C1-4 overlay mapped along 139th Street beyond 100 feet from 86th Avenue.

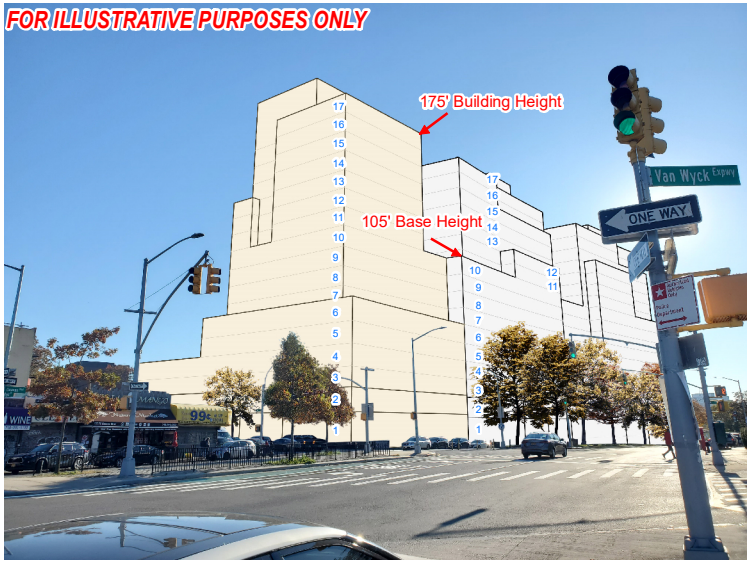
The Proposed Actions would facilitate the development of an approximately 395,931 gsf mixed-use building on Applicant-owned Projected Development Site 1. The new 17-story (up to 195 feet tall including mechanical bulkhead) residential and commercial building would have an FAR of 6.64. Under the RWCDS detailed further in **Attachment A**, the With-Action building on Projected Development Site 1 would be comprised of 339 DUs (with 85-102 affordable units), approximately 33,020 gsf of ground-floor local retail space, and a 132-space second-story accessory parking garage accessible via a curb cut on 139th Street.

Additionally, Projected Development Site 2 is also expected to be redeveloped in the future with the Proposed Actions. Under the RWCDS discussed further in **Attachment A**, the site would be improved with a 17-story (up to 195 feet tall including mechanical bulkhead), approximately 134,225 gsf (5.03 FAR) mixed-use residential and commercial building with 110 DUs (28-33 affordable), approximately 12,790 gsf of ground-floor local retail space, and a 40-space second-story accessory parking garage accessible via a curb cut on Manton Street.

Figures H-11 and **H-12** provide illustrative renderings of the No-Action and With-Action conditions in the Project Area from the pedestrian perspective along Queens Boulevard and 139th Street, respectively.



No-Action Condition: View of the Primary Study Area looking southeast from the intersection of Queens Boulevard and 84th Drive.



With-Action Condition: View of the Primary Study Area looking southeast from the intersection of Queens Boulevard and 84th Drive.



Note: The Primary Study Area is outlined by a blue solid line.



No-Action Condition: View of the Primary Study Area looking northwest from 139th Street.



With-Action Condition: View of the Primary Study Area looking northwest from 139th Street. Please note that the 11th floor is not visible from this vantage due to the setback after the 10th floor.



138-23 Queens Boulevard Rezoning EAS

Figure H-12

Viewpoint 2 - Comparison of No-Action Condition and With-Action Condition Massings

Assessment

The Proposed Actions would not result in any significant adverse urban design or visual resource impacts. Development facilitated by the Proposed Actions would be constructed on an existing block, and would not change topography, street patterns or hierarchy, block shapes, open spaces, natural features, or visual resources in the primary or secondary study areas. The Proposed Actions are expected to facilitate the construction of two new mixed-use buildings in the Project Area with massings and scales not currently permitted under existing zoning. The Proposed Actions and subsequent RWCDS would introduce new residential land uses, as well as increased height, bulk, and density to Projected Development Sites 1 and 2 in the Project Area that would change the appearance of the built environment in a way that would not negatively alter a pedestrian's experience of the area.

The Proposed Actions would introduce residents, workers, and active ground-floor retail uses along Queens Boulevard and 84th Drive, as well as new street trees, which would contribute to an improved pedestrian experience in the Project Area. The 17-story With-Action buildings on Projected Development Sites 1 and 2 would have FARs of 6.64 and 5.03, respectively, as compared to the seven-story No-Action buildings with FARs of 3.0. However, these taller and denser buildings would not be out of scale in the surrounding neighborhood. Rather, the increased allowable residential density and bulk in the Project Area is appropriate for a wide street near public transportation. The proposed R8X contextual zoning district in the Project Area would continue to limit height while allowing for residential growth along a major north-south corridor in Queens. It would also permit the active ground-floor commercial spaces currently located in the Project Area, but with a wider range of allowable uses under the proposed C2-4 overlay, maintaining the established commercial corridor along Queens Boulevard in the primary and secondary study areas.

Although the additional height and bulk in the Project Area would be a change from the pedestrian's No-Action views of the block, this change would be in keeping with the existing built environment and established redevelopment trends in and around the Project Area, and would not constitute a significant adverse impact to pedestrians. Development facilitated by the Proposed Actions would not alter the arrangement, appearance, or functionality of the area so as to negatively affect a pedestrian's experience in the vicinity of the Projected Development Sites. Moreover, the Proposed Actions are area-specific, and would not affect urban design conditions in the surrounding secondary study area beyond the Project Area.

Additionally, development facilitated by the Proposed Actions would not result in any changes to visual resources or view corridors in the primary or secondary study areas. The Proposed Actions would not result in any direct impacts to open spaces or historic resources, and the With-Action developments would not eliminate or screen significant public views of any surrounding visual resources, which would continue to remain visible in view corridors on adjacent public streets and sidewalks. Therefore, the Proposed Actions would not result in any significant adverse impacts to visual resources.

ATTACHMENT I

WATER AND SEWER INFRASTRUCTURE

I. INTRODUCTION

As defined in the 2021 *City Environmental Quality Review* (CEQR) *Technical Manual*, infrastructure comprises the physical systems that support populations and includes structures such as water mains and sewers, bridges and tunnels, roadways, and electrical substations. Because these are static structures, they have defined capacities that may be affected by growth in a particular area. This attachment assesses the potential effects of the Proposed Actions on the city's water supply, wastewater treatment, and stormwater management infrastructure in accordance with the 2021 *CEQR Technical Manual*.

As detailed in **Attachment A, "Project Description,"** the Proposed Actions would facilitate the development of an approximately395,931-gross square foot (gsf) mixed-use residential and commercial building (the "Proposed Project") at 138-23 Queens Boulevard (Queens Block 9649, Lots 17, 25, and 37; "Projected Development Site 1") in the Briarwood neighborhood of Queens Community District (CD) 8. The Reasonable Worst Case Development Scenario (RWCDS) for Projected Development Site 1 comprises 339 total DUs, approximately 33,020-gsf of commercial (local retail) uses, and approximately 132 parking spaces.

In addition to the Applicant-owned Projected Development Site 1 (Lots 17, 25, and 37), the Proposed Actions would affect four lots on Block 9649 not owned or controlled by the Applicant: the entirety of Lots 17, 25, and 42, as well as portions of (p/o) Lots 37, 44, and 53. Collectively, all lots entirely or partially affected by the Proposed Actions are heretofore referred to as the Project Area. As detailed in **Attachment A, "Project Description,"** for RWCDS analysis purposes, it is assumed that the Proposed Actions would facilitate the development of Lots 42 and 44 (aka "Projected Development Site 2") with a 17-story (175 feet tall rooftop height), approximately 134,225-gsf mixed-use residential and commercial building containing approximately 110 total DUs, as well as approximately 12,790-gsf of commercial uses and 40 accessory parking spaces.

II. METHODOLOGY

Water Supply

According to the 2021 *CEQR Technical Manual*, a preliminary water supply infrastructure analysis is needed if a project would result in an exceptionally large demand for water (e.g., more than one million gallons per day [mgd]) or is located in an area that experiences low water pressure (e.g., areas at the end of the water supply distribution system). The Project Area is located in the Briarwood neighborhood of Queens CD 8 and is not located in an area that experiences low water pressure (i.e., it is not located at the end of the water supply distribution system, such as the Rockaway Peninsula or Coney Island). Compared to the No-Action condition, the RWCDS for Projected Development Sites 1 and 2 is estimated to generate an incremental water demand of approximately 69,585 gallons per day (gpd) (including water related to sanitary and domestic uses).[1] While this would represent an increase in demand on the New York City water supply system, it does not meet the 2021 *CEQR Technical Manual* threshold requiring a detailed analysis, which is more than one million gpd. Therefore, the Proposed Actions do not meet the 2021 *CEQR*

[1] Existing and future water usage and sanitary sewage generation are calculated based on use generation rates set forth in Table 13-2 of the 2021 *CEQR Technical Manual*.

Technical Manual thresholds requiring a detailed analysis and no significant adverse impacts on the city's water supply would result. It is expected that there would be adequate water service and existing infrastructure to meet the incremental water demand generated by the Proposed Actions.

Wastewater Treatment and Stormwater Conveyance

For wastewater and stormwater conveyance and treatment, a preliminary sewer analysis is warranted if a project is located in a separately sewered area, is zoned R6-R10, C, M, or MX under existing conditions, and would result in the incremental development of at least 100 residential units or 100,000-sf or more of commercial, public and institution, and/or community facility space. The Project Area is located in a separately sewered area, is zoned R6A, and the RWCDS for the Proposed Actions would result in the net incremental development of at least 100 residential units. Therefore, a preliminary assessment of wastewater and stormwater infrastructure is provided herein.

Existing and future sanitary sewage generation is calculated for Projected Development Sites 1 and 2 based on use generation rates set forth in Table 13-2 of the 2021 *CEQR Technical Manual*. DEP's Volume Calculation Matrix is then used to calculate the overall sanitary sewage and stormwater runoff volume discharged to the sewer system for four rainfall volume scenarios with varying durations. In accordance with 2021 *CEQR Technical Manual* guidance, the ability of the city's sewer infrastructure to handle the estimated sanitary sewage and stormwater runoff generated from the RWCDS for the Proposed Actions is assessed by estimating and comparing existing, No-Action condition, and With-Action condition sanitary sewage and stormwater runoff generation.

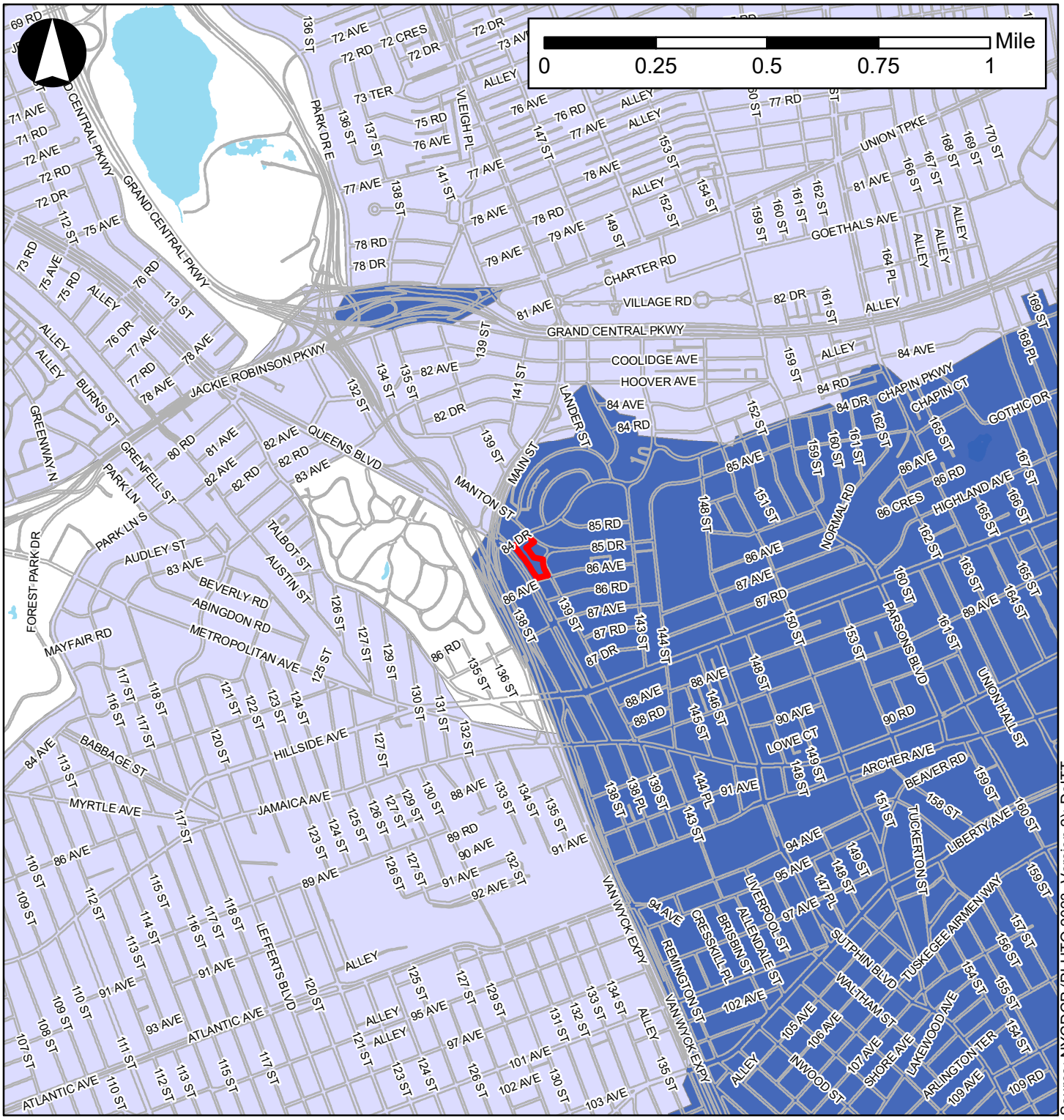
III. EXISTING CONDITIONS

Wastewater Treatment

The majority of New York City's wastewater treatment system is comprised of the sewer network beneath the streets and the 14 Wastewater Resource Recovery Facilities (WRRFs) located throughout the city. Approximately half of New York City's sewers are combined sewers as they receive sanitary wastewater and stormwater runoff. Wastewater generated in a "drainage basin" or "catchment area" (the area served by a WRRF) is conveyed through a network of sewers to the WRRFs. Portions of Brooklyn, Queens, and Staten Island are managed by separate storm sewers or are in unsewered areas. As shown in **Figure H-1**, the Project Area is located in a separately sewered area, where sanitary wastewater is transported for treatment at the Jamaica WRRF and stormwater runoff is directly discharged via outfalls into Jamaica Bay. In the vicinity of the Project Area, there are separate storm and sanitary sewers present on 84th Drive, Queens Boulevard, 86th Avenue, 139th Street, and Manton Street. As shown in **Figure H-2**, stormwater runoff from the Project Area flows to outfall JAM-006, where the receiving water body is Bergen Basin.

At the Jamaica WRRF, in operation since 1943, wastewater is fully treated by physical and biological process before it is discharged into Jamaica Bay. The quality of the treated wastewater (effluent) is regulated by a State Pollutant Discharge Elimination System (SPDES) permit issued by the New York State Department of Environmental Conservation (NYSDEC), which establishes limits for effluent parameters (i.e., suspended solids, fecal coliform bacteria, and other pollutants). As the volume of flow to a WRRF affects the level of treatment a facility can provide, the maximum permitted dry weather capacity for the Jamaica WRRF is 100 mgd. As shown in **Table H-1**, the average daily flows to the Jamaica WRRF for the 12-month period ending in September 2023 (the latest 12-month period available) was approximately 77 mgd, which is approximately 23 mgd below the maximum permitted capacity of 100 mgd. Based on these

Figure I-1
Seperately Sewered Area

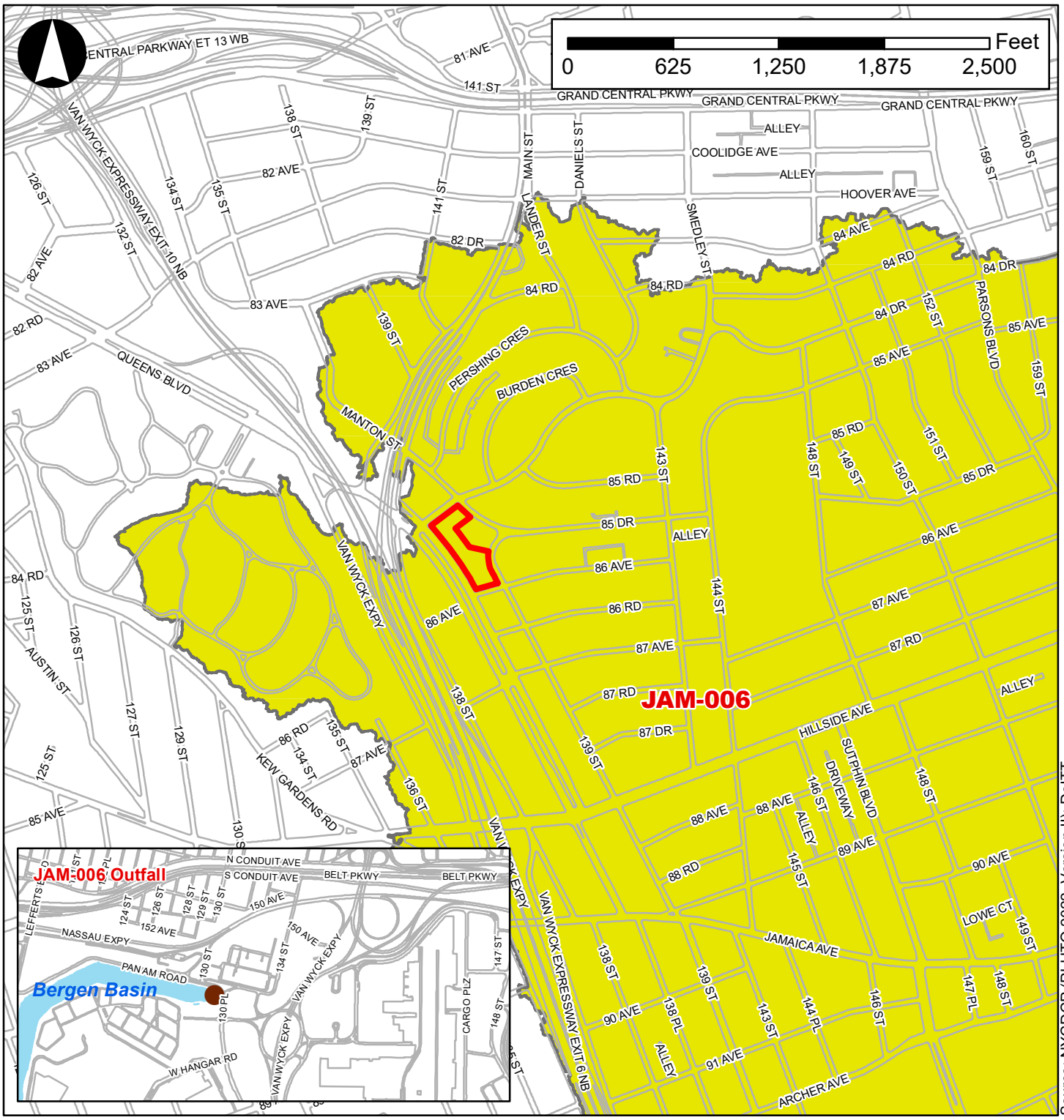


Source: NYCDCP (PLUTO 2023, Version 2); DoITT

Legend

- Project Area
- Water Bodies
- Combined Sewer System
- Direct Drainage
- Seperate Sewer System

Seperate Storm Sewer Drainage Area



Source: NYCDCP (PLUTO 2022, Version II); DoITT

Legend

- Project Area
- Seperate Storm Sewer Outfall
- Seperate Storm Sewer Drainage Area
- Water Bodies

average daily flows, the Jamaica WRRF has an excess capacity of approximately 23 percent of its total capacity.

Table H-1: Existing Jamaica WRRF Average Daily Sewer Flows

Year	Month	Average Daily Flows (mgd)
2022	October	79
	November	73
	December	78
2023	January	79
	February	75
	March	79
	April	78
	May	78
	June	73
	July	74
	August	75
	September	83
12-Month Average		***77***

Sources: DEP "Monthly Operating Efficiency" tables, 2022 and September 2023.

Projected Development Site 1 is occupied by three attached, single story commercial buildings totaling approximately 33,511-gsf and a 25-space surface parking lot. Projected Development Site 2 is occupied by two attached, single story commercial buildings totaling approximately 18,630-gsf. Using the generation rates set forth in Table 13-2 of the 2021 *CEQR Technical Manual*, **Table H-2** shows the existing water consumption demand to be 21,378 gpd and the wastewater generation to be 12,514 gpd.

Table H-2: Existing Water Consumption and Wastewater Generation – Projected Development Sites

Land Use	Rate	Size (GSF)	Wastewater Generation (gpd)	A/C (gpd)
Projected Development Site 1				
Commercial (Retail Stores)	Domestic: 0.24 gpd/sf; A/C: 0.17 gpd/sf	33,511 gsf	8,043	5,697
Projected Development Site 2				
Commercial (Retail Stores)	Domestic: 0.24 gpd/sf; A/C: 0.17 gpd/sf	18,630 gsf	4,471	3,167
Total Water Consumption (Domestic Water + A/C)			***21,378 gpd***	
Total Wastewater Generation			***12,514 gpd***	

Source: Wastewater and air conditioning generation rates based on 2021 *CEQR Technical Manual* Table 13-2.

Stormwater Conveyance

The volume of stormwater runoff at a site varies depending on the type of land cover, which can be either pervious or impervious. DEP defines runoff coefficients to correlate with the pervious or impervious qualities of the land cover. According to the 2021 *CEQR Technical Manual*, grass and softscape have a runoff coefficient of 0.20 because of their ability to absorb rainfall, whereas roof area and pavement have much higher runoff coefficients of 1.00 and 0.85, respectively, due to the inability of these types of land cover to absorb or sequester rainfall. Projected Development Sites 1 and 2 are primarily occupied by existing building footprints and pavement. **Table H-3** shows the weighted runoff coefficient for Projected Development Sites 1 and 2 is 0.88.

Table H-3: Existing Surface Types – Projected Development Sites 1 and 2

Surface Type	Roof[1]	Pavement and Walks	Grass and Softscape	Total
Projected Development Site 1				
Area (%)	68	25	7	100
Surface Area (sf)	32,758	12,023	3,188	47,969
Runoff Coefficient[2]	1.0	0.85	0.20	0.91
Projected Development Site 2				
Area (%)	75	0	25	100
Surface Area (sf)	15,675	0	5,350	21,025
Runoff Coefficient[2]	1.0	0.85	0.20	0.80
Total Surface Area (sf) of Projected Development Sites 1 and 2				***68,994***
Weighted Runoff Coefficient of Projected Development Sites 1 and 2[3]				***0.88***

Notes:
1. Total roof area of each site.
2. Runoff coefficients for each surface type are sourced from DEP.
3. The weighted runoff coefficient is based on the total surface area (sf) for each site.

Standard DEP runoff coefficients were used to determine the stormwater runoff generated during a variety of rainfall events over specified periods of time ranging from 3.8 to 19.5 hours. During storm events with up to 2.5 inches of rainfall, Projected Development Sites 1 and 2 would discharge up to 0.09 millions of gallons (mg) of stormwater to outfall JAM-006, and up to 0.01 mg of sanitary flows to the Jamaica WRRF. **Table H-4** shows the existing stormwater and sanitary discharges during representative storm events.

Table H-4: Existing Runoff and Wastewater Generation – Projected Development Sites 1 and 2

Rainfall (inches)	Duration (Hours)	Total Area (Acres)	Runoff Coefficient[1]	Stormwater Runoff to Outfall (MG)	Sanitary to CSS (MG)[2]
0.00	3.80	1.58	0.88	0.00	0.002
0.40	3.80			0.02	0.002
1.20	11.30			0.05	0.006
2.50	19.50			0.09	0.01

Notes:
1. Refer to **Table H-3**.
2. Derived from **Table H-3**.

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

Wastewater Treatment

In the No-Action condition, the Proposed Actions would not be approved. However, as described in **Attachment A, "Project Description,"** in the future without the Proposed Actions it is assumed that development would occur on an as-of-right basis on both Projected Development Sites 1 and 2. In the No-Action condition, Projected Development Site 1 would be developed with an approximately 207,327-gsf mixed-use residential and commercial building containing approximately 133 total DUs, as well as approximately 33,020-gsf of commercial uses and 72 accessory parking spaces. In the No-Action condition, Projected Development Site 2 would be developed with an approximately 78,414-gsf mixed-use residential and commercial building containing approximately 56 total DUs, as well as approximately 18,094-gsf of commercial uses and 31 accessory parking spaces.

Using the generation rates set forth in Table 13-2 of the 2021 *CEQR Technical Manual*, **Table H-5** shows the water consumption demand to be 73,121 gpd and the wastewater generation to be 64,431 gpd in the No-Action condition.

Table H-5: No-Action Condition Water Consumption and Wastewater Generation – Projected Development Sites

Land Use	Rate	Size (GSF)/Residents	Wastewater Generation (gpd)	A/C (gpd)
Projected Development Site 1				
Residential	100 gpd/person	367 residents	36,708	-
Commercial (Retail Stores)	Domestic: 0.24 gpd/sf; A/C: 0.17 gpd/sf	33,020 gsf	7,925	5,613
Projected Development Site 2				
Residential	100 gpd/person	155 residents	15,456	-
Commercial (Retail Stores)	Domestic: 0.24 gpd/sf; A/C: 0.17 gpd/sf	18,094 gsf	4,343	3,076
Total Water Consumption (Domestic Water + A/C)			***73,121***	
Total Wastewater Generation			***64,431***	

Source: Wastewater and air conditioning generation rates based on 2021 *CEQR Technical Manual* Table 13-2.

Stormwater Conveyance

In the No-Action condition, the amount of impervious land cover at Projected Development Sites 1 and 2 would increase to the full extent of each site. As shown in **Table H-6**, the weighted runoff coefficient for Projected Development Sites 1 and 2 would increase to 1.0 in the No-Action condition, as compared to 0.88 under existing conditions.

Table H-6: No-Action Condition Surface Types – Projected Development Sites 1 and 2

Surface Type	Roof[1]	Pavement and Walks	Grass and Softscape	Total
Projected Development Site 1				
Area (%)	100	0	0	100
Surface Area (sf)	47,969	0	0	47,969
Runoff Coefficient[2]	1.0	0.85	0.20	1.0
Projected Development Site 2				
Area (%)	100	0	0	100
Surface Area (sf)	21,025	0	0	21,025
Runoff Coefficient[2]	1.0	0.85	0.20	1.00
Total Surface Area (sf) of Projected Development Sites 1 and 2				***68,994***
Weighted Runoff Coefficient of Projected Development Sites 1 and 2[3]				***1.0***

Notes:
1. Total roof area of each site.
2. Runoff coefficients for each surface type are sourced from DEP.
3. The weighted runoff coefficient is based on the total surface area (sf) for each site.

Table H-7 shows the stormwater and sanitary discharges during representative storm events for the No-Action condition. In the No-Action condition, during storm events with up to 2.5 inches of rainfall, Projected Development Sites 1 and 2 would discharge up to 0.11 mg of stormwater to outfall JAM-006, and up to 0.053 mg of sanitary flows to the Jamaica WRRF.

Table H-7: No-Action Condition Runoff and Wastewater Generation – Projected Development Sites 1 and 2

Rainfall (inches)	Duration (Hours)	Total Area (Acres)	Runoff Coefficient[1]	Stormwater Runoff to Outfall (MG)	Sanitary to CSS (MG)[2]
0.00	3.80	1.58	1.0	0.00	0.01
0.40	3.80			0.02	0.01
1.20	11.30			0.05	0.031
2.50	19.50			0.11	0.053

Notes:
1. Refer to **Table H-6**.
2. Derived from **Table H-6**.

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

Wastewater Treatment

In the With-Action condition, the Proposed Actions would be approved. Projected Development Site 1 would be developed with 339 total DUs, approximately 33,020-gsf of commercial (local retail) uses, and approximately 132 parking spaces. Projected Development Site 2 would be developed with 110 total DUs, approximately 12,790-gsf of commercial uses, and 40 accessory parking spaces. Using the generation rates set forth in Table 13-2 of the 2021 *CEQR Technical Manual*, **Table H-8** shows the water consumption demand to be 142,706 gpd and the wastewater generation to be 134,918 gpd in the With-Action condition. Under the RWCDS established for Projected Development Sites 1 and 2, the With-Action condition would generate an incremental increase of 70,487 gpd (0.071 mgd) of wastewater over the No-Action condition. The increase in wastewater generation under the With-Action condition would not result in an exceedance of the Jamaica WRRF's available capacity of 23 mgd.

Table H-8: With-Action Condition Water Consumption and Wastewater Generation – Projected Development Sites

Land Use	Rate	Size (GSF)/Residents	Wastewater Generation (gpd)	A/C (gpd)
Projected Development Site 1				
Residential	100 gpd/person	936 residents	93,564	-
Commercial (Retail Stores)	Domestic: 0.24 gpd/sf; A/C: 0.17 gpd/sf	33,020 gsf	7,925	5,613
Projected Development Site 2				
Residential	100 gpd/person	304 residents	30,360	-
Commercial (Retail Stores)	Domestic: 0.24 gpd/sf; A/C: 0.17 gpd/sf	12,790 gsf	3,070	2,174
Total Water Consumption (Domestic Water + A/C)			***142,706***	
Incremental Water Consumption (Compared to No-Action Condition)			***69,585***	
Total Wastewater Generation			***134,918***	
Incremental Wastewater Generation (Compared to No-Action Condition)			***70,487***	

Source: Wastewater and air conditioning generation rates based on 2021 *CEQR Technical Manual* Table 13-2.

Connecting to the city's sanitary sewer system requires certification from DEP as part of the building permit process, which is not a discretionary approval. Before becoming operational, Projected Development Sites 1 and 2 would be required to file a site connection proposal for approval from DEP to tie into the adjacent sanitary sewer system. To obtain a sewer connection permit from DEP, each development site would be required to demonstrate that the existing sanitary sewer system could handle the increased flows due to operation of the future buildings. As part of the site connection approval process, a hydraulic analysis of the existing sanitary sewer system would likely be required to determine whether the existing sanitary sewer system is capable of supporting higher density development and the related increase in wastewater flows, or whether there will be a need to upgrade the existing sanitary sewer system. In addition, there may be a need to amend the existing drainage plan based on the hydraulic analysis calculations. These analyses would be undertaken prior to construction of buildings on Projected Development Sites 1 and 2 and would be coordinated with DEP for review and approval. In

addition, in accordance with the New York City Plumbing Code (Local Law 33 of 2007), while not accounted for in the quantitative analysis, the future buildings on Projected Development Sites 1 and 2 would be required to utilize low-flow plumbing fixtures, which would reduce sanitary flows to the Jamaica WRRF. Therefore, the RWCDS for the Proposed Actions on Projected Development Sites 1 and 2 would not result in a significant adverse impact to the city's wastewater treatment.

Stormwater Conveyance

As shown in **Table H-9**, in the With-Action condition, the amount of impervious land cover at Projected Development Sites 1 and 2 would be the same as under the No-Action condition.

Table H-9: With-Action Condition Surface Types – Projected Development Sites 1 and 2

Surface Type	Roof[1]	Pavement and Walks	Grass and Softscape	Total
Projected Development Site 1				
Area (%)	100	0	0	100
Surface Area (sf)	47,969	0	0	47,969
Runoff Coefficient[2]	1.0	0.85	0.20	1.0
Projected Development Site 2				
Area (%)	100	0	0	100
Surface Area (sf)	21,025	0	0	21,025
Runoff Coefficient[2]	1.0	0.85	0.20	1.00
Total Surface Area (sf) of Projected Development Sites 1 and 2				***68,994***
Weighted Runoff Coefficient of Projected Development Sites 1 and 2[3]				***1.0***

Notes:
1. Total roof area of each site.
2. Runoff coefficients for each surface type are sourced from DEP.
3. The weighted runoff coefficient is based on the total surface area (sf) for each site.

Table H-10 shows the stormwater and sanitary discharges during representative storm events for the With-Action condition. In the With-Action condition, during storm events with up to 2.5 inches of rainfall, Projected Development Sites 1 and 2 would discharge up to 0.11 mg of stormwater to outfall JAM-006, and up to 0.114 mg of sanitary flows to the Jamaica WRRF. Stormwater flows in the With-Action condition would not represent an increase when compared to stormwater flows in the No-Action condition. Sanitary flows to the Jamaica WRRF would increase by up to 0.061 mgd over the No-Action condition.

Table H-10: With-Action Condition Runoff and Wastewater Generation – Projected Development Sites 1 and 2

Rainfall (inches)	Duration (Hours)	Total Area (Acres)	Runoff Coefficient[1]	Stormwater Runoff to Outfall (MG)	Sanitary to CSS (MG)[2]
0.00	3.80	1.58	1.0	0.00	0.022
0.40	3.80			0.02	0.022
1.20	11.30			0.05	0.066
2.50	19.50			0.11	0.114

Notes:
1. Refer to **Table H-9**.
2. Derived from **Table H-9**.

The Project Area is located in an area of the city that is well-served by sewer infrastructure. As previously stated, adjacent to the Project Area, there are separate storm and sanitary sewers present on 84th Drive, Queens Boulevard, 86th Avenue, 139th Street, and Manton Street. Stormwater runoff from the Project Area flows to outfall JAM-006, where the receiving water body is Bergen Basin. Given the location of the separate sewer system in the vicinity of the Project Area, it is anticipated that there is ample capacity in the adjacent sewer infrastructure to accommodate the additional stormwater and sanitary flows generated by the RWCDS for Projected Development Sites 1 and 2. As noted above, prior to becoming

operational, Projected Development Sites 1 and 2 would be required to file a site connection proposal for approval from DEP to tie into the city's sewer system. As part of the site connection approval process, a stormwater analysis would be required in order to ensure that Projected Development Sites 1 and 2 would comply with the required stormwater release rate.

Stormwater Best Management Practices

The Flow Volume Matrix calculations presented above do not reflect the use of any stormwater and sanitary source control Best Management Practices (BMPs) to reduce stormwater runoff volumes and sanitary flows to the separate sewer system. It should also be noted that DEP has published a Unified Stormwater Rule (USWR) that increases the amount of stormwater to be managed on-site as part of new development. For sites within municipal separate storm sewer system (MS4) areas, the release rate will be limited to 1.0 cubic feet per second (cfs) per acre or 0.046 cfs, whichever is greater. The new rules became effective on February 15, 2022, and will apply to Projected Development Sites 1 and 2.

Stormwater BMPs would be required as part of the DEP site connection approval process in order to bring the future buildings on Projected Development Sites 1 and 2 into compliance with the required stormwater release rate in effect at the time of building construction. Specific BMP methods will be determined with further refinement of the design of the future buildings and in consultation with DEP.

The implementation of low-flow fixtures, as required per the New York City Plumbing Code, Local Law 33 of 2007, and the U.S. Environmental Protection Agency's WaterSense Program, would help control sanitary flows from Projected Development Sites 1 and 2. In addition, the following typical BMP measures could be used to help manage stormwater flows: the implementation of BMPs described in the New York City Green Infrastructure Plan and/or green technologies, such as blue and green roofs, subsurface detention and infiltration, porous pavement, enhanced tree pits, and rain cisterns, depending on conditions at each site.

Therefore, with the incorporation of appropriate BMPs that would be required as part of the site connection approval process to be reviewed and approved by DEP, the overall volumes of stormwater runoff and sanitary sewer discharge, as well as the peak stormwater runoff rate, would be reduced. Sewer conveyance near Projected Development Sites 1 and 2 and the treatment capacity at the Jamaica WRRF is sufficient to handle stormwater and sanitary flows resulting from the RWCDS for Projected Development Sites 1 and 2. Therefore, there would be no significant adverse impacts on wastewater treatment or stormwater conveyance infrastructure as a result of the Proposed Actions.

ATTACHMENT J

AIR QUALITY

I. INTRODUCTION

Ambient air quality, defined as pollutant levels in the surrounding environment to which the public has access, 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. As discussed in **Attachment B, "Supplemental Screening,"** the Reasonable Worst-Case Development Scenario (RWCDS) facilitated by the Proposed Actions would not warrant detailed analysis of existing manufacturing processing facilities or "large" or "major" source(s). Fossil fuel could be used in the RWCDS heating/hot water, ventilation, and air conditioning (HVAC) system(s); therefore, a detailed HVAC analysis is warranted. In addition, the Reasonable Worst-Case Development Scenario (RWCDS) facilitated by the Proposed Actions requires a detailed analysis of mobile source air quality. This analysis was conducted in accordance with the *2021 CEQR Technical Manual* methodology.

Project Description

The Proposed Actions would facilitate the development of the Applicant, RJ Capital Holdings LLC, owned property with a mixed-use residential and commercial building at 138-23 Queens Boulevard (Queens Block 9649, Lots 17, 25, and 37; "Projected Development Site 1") in the Briarwood neighborhood of Queens Community District (CD) 8. Projected Development Site 1 With-Action building would total approximately 395,931-gsf and rise to 175 feet tall (17 stories; up to 195 feet including mechanical bulkhead) and include 311,154 gsf of residential use and 33,020 gsf of local retail. One hundred thirty-two (132) accessory parking spaces would be provided in an approximately 51,757-gsf garage on the second level (the building would not include a cellar).

In addition, for RWCDS analysis purposes, it is assumed that the proposed zoning changes would allow for redevelopment of Block 9649, Lots 42/44 ("Projected Development Site 2"), which are not under the Applicant's control, pursuant to the proposed zoning regulations. Projected Development Site 2 is expected to be improved with a 17-story (175-foot tall; up to 195 feet including mechanical bulkhead) approximately 134,225-gsf mixed-use residential and commercial building, including approximately 101,138-gsf of residential use and 12,790-gsf of ground floor local retail, as well as 40 accessory parking spaces in a second-floor garage.

Applicable Air Quality Standards and Significant Impact Criteria

As required by the Clean Air Act, National Ambient Air Quality Standards (NAAQS) have been established for the most common air pollutants (six criteria pollutants) by the U.S. Environmental Protection Agency ("EPA"). The presence of these pollutants in ambient air is generally due to numerous diverse and widespread sources of emissions. New York has adopted the NAAQS as the State ambient air quality standard. Relevant pollutants for the analysis are associated with stationary source combustion of natural gas and vehicle emissions. These include particulate matter with aerodynamic diameters less than or equal to 2.5 microns ("$PM_{2.5}$") and nitrogen dioxide ("NO_2").

In addition to the NAAQS, the *CEQR Technical Manual* requires that projects subject to CEQR apply carbon monoxide (CO) and $PM_{2.5}$ significant impact criteria (*de minimis*). The *CEQR Technical Manual de minimis* criteria set allowable incremental increases in CO and $PM_{2.5}$ concentrations that would result as a consequence of a proposed project. The *de minimis* for CO is:

- An increase of 0.5 parts per million (ppm) or more in the maximum 8-hour average CO concentration at a location where the predicted No-Action 8-hour concentration is equal to 8 ppm or between 8 ppm and 9 ppm; or

- An increase of more than half the difference between baseline (i.e., No-Action) concentrations and the 8-hour standard, when No-Action concentrations are below 8 ppm.

$PM_{2.5}$ *de minimis*, for projects under CEQR, is evaluated as follows:

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

- Predicted annual average $PM_{2.5}$ concentration increments 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 for mobile sources, at a distance from a roadway corridor similar to the minimum distance defined for locating neighborhood scale monitoring stations).

- Predicted annual average $PM_{2.5}$ concentration increments greater than 0.3 $\mu g/m^3$ at any receptor location for stationary sources.

Determination of significant impact related to criteria pollutants accounts for existing pollutant concentrations in the ambient air (background concentrations). Background concentrations from the nearest New York State Department of Environmental Conservation (NYSDEC) federally-mandated monitoring station(s) were applied in the analysis. **Table J-1** shows the NAAQS, background concentration, and the *City's de minimis* for the pollutants/sources applicable to the analysis.

Table J-1: NAAQS and CEQR *de minimis* for the relevant pollutants

Pollutant	Averaging Period	NAAQS	Background Concentration ($\mu g/m^3$)[1]	Monitoring Station	CEQR *de minimis*
NO_2	1 Hour	0.10 ppm (188 $\mu g/m^3$)	55.1 ppb (103.6 $\mu g/m^3$)	Queens College Site No. 36-081-0124 (1)	---
	Annual	0.053 ppm (100 $\mu g/m^3$)	14.18 ppb (26.8 $\mu g/m^3$)		---
CO	1 Hour	35 ppm (40,000 $\mu g/m^3$)	2.13 ppm	Queens College Site No. 36-081-0124 (2)	---
	8 Hour	9 ppm (10,000 $\mu g/m^3$)	1.60 ppm		3.70 ppm
$PM_{2.5}$	24 Hour	35 $\mu g/m^3$	17.7 $\mu g/m^3$	Queens College Site No. 36-081-0124 (2)	8.65 $\mu g/m^3$
	Annual	12 µg/m^3	7.0 $\mu g/m^3$		0.3 $\mu g/m^3$

Note:
1. NO_2 background concentration: NYSDEC. 2019. "New York State Ambient Air Quality Report for 2019." File version: 11/12/2020. extapps.dec.ny.gov/docs/air_pdf/2019airqualreport.pdf.
2. $PM_{2.5}$ background concentration: NYSDEC. 2020. "New York State Ambient Air Quality Report for 2020." File version: 4/13/2020. extapps.dec.ny.gov/docs/air_pdf/2020airqualreport.pdf.

ppm = parts per million
ppb = parts per billion
µg/m^3 = micrograms per cubic meter

II. MOBILE SOURCE DETAILED ANALYSIS

According to the *CEQR Technical Manual,* projects may result in significant mobile source air quality impacts when they increase or cause a redistribution of traffic, create any other mobile sources of pollutants (e.g., diesel trains, helicopters, boats), or add new uses near mobile sources (e.g., roadways, garages, parking lots). Certain types of projects may require further analysis, including microscale analyses.

Screening Analysis

Based on the projected traffic volumes (see **Attachment B, "Supplemental Screening"**, and the Transportation Planning Factors and Travel Demand Forecast Memo provided in **Appendix III**), the maximum projected hourly incremental traffic volumes generated by the Proposed Actions would not exceed 50 vehicles at any intersection during any peak-hour period (*CEQR Technical Manual* transportation Level 2 screening). Therefore, the projected traffic volumes would not exceed the CO screening threshold defined in the 2021 *CEQR Technical Manual* (170 peak-hour vehicle trips at an intersection in the study area). However, the Proposed Actions would generate peak hour HDDV traffic or its equivalent in vehicular emissions exceeding the 12 or more HDDV threshold for local roads with average daily traffic of fewer than 5,000 vehicles. Therefore, a detailed $PM_{2.5}$ analysis is required.

HDDV screens were compiled, using the transportation trip assignment analysis, for each project-generated peak hour traffic increment at the most affected intersections. Using the New York City Department of Environmental Protection's ("DEP's") Equivalent Truck Calculation Matrix, the $PM_{2.5}$ vehicular emission screening threshold ranges from 12 to 23 HDDVs depending on the type of roadway. For analysis purposes, all autos were assumed to be LDGT1 class vehicles based on guidance from the New York City Department of City Planning (DCP) for similar projects. To account for both roadways in an

intersection (HDDV screening assessment applies to a single roadway), based on DCP methodology for similar projects under CEQR, the ratios of the equivalent truck calculation to the HDDV threshold for each roadway were summed. If the aggregate ratio at an intersection at all peak-hour periods is less than 1, the intersection passes the HDDV screen. **Table J-2** shows the peak-hour periods action-generated incremental traffic volumes by vehicle type at the most affected intersections (vehicle entering the intersection), the *CEQR Technical Manual* Equivalent Truck Calculation Matrix values, and the aggregated ratio of the equivalent truck calculation to the HDDV threshold at each intersection for each peak-hour period.

Table J-2: Peak-Hour Period Incremental Vehicle Traffic by Vehicle Type, Equivalent Truck Calculation Matrix, and the Aggregated Ratios of the Equivalent Truck Calculation to The HDDV Threshold

Peak Hour	HDDV Threshold	Auto; Truck Per Hour	E-Truck	HDDV Threshold	Auto; Truck Per Hour	E-Truck	Combined E-Truck Ratio
	Intersection of 139th Street & 86th Avenue						
	139th Street			**86th Avenue**			
AM	12	9; 1	5.18	12	1; 0	0.48	0.45
Midday	12	13; 0	6.27	12	1;0	0.48	0.54
PM	12	23; 0	11.09	12	4; 0	1.93	**1.05**
Sat Midday	12	24;0	11.57	12	4; 0	0.00	**1.08**
	Intersection of 139th Street & 85th Drive/Manton Street						
	139th Street			**85th Drive/Manton Street**			
AM	12	42; 1	21.09	12	80; 0	0.00	**1.69**
Midday	12	14; 0	6.75	12	0; 0	0.00	0.54
PM	12	15; 0	7.23	12	0; 0	0.00	0.58
Sat Midday	12	22;0	10.61	12	0; 0	0.00	0.85
	Intersection of Manton Street & 84th Drive						
	Manton Street			**84th Drive**			
AM	12	24; 0	11.57	12	0; 0	0.00	0.93
Midday	12	10; 0	4.82	12	0; 0	0.00	0.39
PM	12	11; 0	5.30	12	0; 0	0.00	0.43
Sat Midday	12	16;0	7.71	12	0; 0	0.00	0.62

Table J-2 shows that the HDDV equivalent truck to HDDV threshold aggregate ratio is greater than one (1) at the intersections of 139th Street with 86th Avenue and 139th Street with 85th Drive/Manton Street. Therefore, both intersections fail the HDDV screen, and a detailed microscale analysis is required.

In the future with the Proposed Actions, the RWCDS for Projected Development Site 1 includes an approximately 51,757 gsf enclosed parking garage accommodating 132 accessory parking spaces. The RWCDS for Projected Development Site 2 has 40 accessory parking spaces in a second-floor garage. A detailed parking assessment was undertaken for Projected Development Site 1, the larger parking garage.

Mobile Source Detailed Analysis

Intersection HDDVs Detailed Analysis

Based on the HDDV screening (see **Table J-2**), the Proposed Actions would most significantly affect the intersection of 139th Street and 85th Drive/Manton Street. Therefore, this intersection was selected for the detailed microscale analysis. Project increment traffic volumes and characteristics (vehicle class and speed) at the intersection were prepared by the transportation engineer for this project. Existing vehicle classification was applied for the No-Action scenario. The project increment by vehicle type was added to the No-Action traffic to project the With-Action traffic. The AM peak-hour traffic was used for the annual

$PM_{2.5}$ analysis, and a Tier 1 approach, applying the AM hourly traffic data, was used for the short-term analysis.

The EPA's Mobile Vehicle Emission Simulator (MOVES3 version) was utilized to predict vehicular emissions. MOVES inputs of inspection/maintenance, fuel data, age distribution, and meteorology were obtained from NYSDEC. 2020 Average vehicle fuel technology (AVFT) was applied from 2021 to the project Build year (2028) as the database did not include data for these vehicle model years. Queens County's projected vehicle population dataset, part of the MOVES3 database, was used to augment the intersection's vehicle classification (e.g., intercity bus, transit bus, and school bus). The MOVES3 model was run for January (a winter month) and July (a summer month). Maximum emission was predicted during the summer month (similar mobile source analyses for projects under CEQR show that $PM_{2.5}$ emission peaks in the summer). In addition, $PM_{2.5}$ emissions of dust generated by vehicles traveling on paved roadways were added to estimate total particulate matter emissions for the short-term analysis (annual fugitive dust emission is negligible, based on similar types of analysis under CEQR). Fugitive dust emissions were calculated using the EPA's AP-42 manual methodology,[1] where a conservative assumption of "dry" road conditions (precipitation reduces silt loading) was used. A silt loading factor of 0.4 grams per meter square (g/m^2), applicable to local roadways, was applied in the analysis based on the *CEQR Technical Manual* specification.

AERMOD was used to predict $PM_{2.5}$ concentrations. The AERMOD modeling application is discussed in the **Detailed HVAC Analysis** section of this Attachment, below. Lakes Environmental, Inc.'s commercial application of AERMOD (AERMOD View) was used to spatially locate sources and receptors. AERMOD line area sources were used to model traffic emissions on the roadways. A vehicle height of 1.53 meters for cars and 4.0 meters for heavy-duty vehicles and the methodology outlined in the EPA's manual[2] were used to calculate sources' dispersion parameters (release height and initial vertical dimension (also known as "Sigma Z")). A standard driving lane width of 12 feet was used for 139th Street. Ten-foot-width driving lanes (10 feet plus 6 meters) were used for Manton Street and 85th Drive so that the sidewalk receptors would not be in the mixing zone. Receptors were placed in spaced intervals in the middle of the sidewalk for the short-term analysis and 15 meters from the curbside for the annual $PM_{2.5}$ analysis. All modeling features specified a base elevation of a building located near the intersection. The base elevation dataset is discussed in the **Detailed HVAC Analysis** section of this Attachment.

Predicted concentrations were evaluated with the *de minimis* for mobile source. **Table J-3** shows the dispersion analysis results for the $PM_{2.5}$ intersection analysis. **Table J-3** shows that the Proposed Actions' HDDVs incremental $PM_{2.5}$ concentration would not exceed the *CEQR Technical Manual de minimis* criteria. Therefore, the Proposed Actions incremental traffic will not result in significant adverse air quality impact(s) at the local scale.

[1] EPA. Compilation of Air Pollutant Emission Factors AP-42 Fifth Edition, Vol. 1: Paved Roads Chapter 13: Miscellaneous Sources. epa.gov/ttn/chief/ap42. January 2011.

[2] EPA. Transportation Conformity Guidance for Quantitative Hot-spot Analyses in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas – Appendix J. EPA-420-B-10-040, Transportation and Regional Programs Division, Office of Transportation and Air Quality, U. S. Environmental Protection Agency, December 2010.

Table J-3: $PM_{2.5}$ Dispersion Analysis Results – 139th Street & 85th Drive/Manton Street

Pollutant	No-Action Concentration (µg/m³)	With-Action Concentration (µg/m³)	Increment Concentration (µg/m³)	*de minimis* (µg/m³)
24-Hour $PM_{2.5}$	---	3.80	3.80	8.65 (1)
Annual $PM_{2.5}$	0.108	0.122	0.014	0.1

1. A background concentration of 17.7 µg/m³ was used to calculate the 24-hour *de minimis*.

Parking Facility Detailed Analysis

Under the RWCDS, Projected Development Site 1 would include an approximately 51,757-gsf enclosed parking garage accommodating 132 accessory parking spaces, and Projected Development Site 2 would include 40 accessory parking spaces. A detailed parking assessment was undertaken for Projected Development Site 1, which would contain the larger parking garage. Based on the Site Plans provided by the building architect for this project, vehicles will enter and exit the parking garage through 139th Street. Seven parking spaces will be provided on the first-floor level and the rest on the second-floor level. The second-floor level would be accessible through a ramp near the garage entrance/exit. The parking accumulation (ingress and egress) derived by the transportation engineer for this project was used in the analysis.

All vehicles using the parking facility were assumed to use the second-floor level, maximizing the driving distance within the garage. Based on the *CEQR Technical Manual*, cars in the parking garage (incoming/outgoing vehicles) were assumed to travel half the width and two-thirds the length of the garage, and outgoing vehicles were assumed to idle for 1 minute before exiting the parking facility. Emissions of cars traveling to, from, or on the ramp and vehicle start (engine ignition) emissions were accounted for in the analysis, where all starting vehicles were assumed to soak for at least 720 minutes (as can be derived from the parking accumulation, all cars can't soak for 8 hours or longer). On-street traffic on 139th Street was included in the analysis.

The EPA's MOVES3 was utilized to predict vehicular emissions in the parking garage (project scale, inventory calculation type). The MOVES3 model and dataset are discussed in the Intersection HDDVs Detailed Analysis section of this Attachment, above. However, a temperature of 45 degrees Fahrenheit in the garage was utilized in the MOVES3, based on the *CEQR Technical Manual*. The MOVES3 model was run for each season (January, April, July, and October). The maximum emission on each link was used for the short-term analysis and the average emission for the annual $PM_{2.5}$ analysis. Dust emission generated by vehicles traveling on 139th Street was added to estimate total particulate matter emissions for the short-term analysis.

Pollutant concentrations at sensitive receptors resulting from the parking garage vent and on-street traffic were modeled with AERMOD. The AERMOD modeling application is discussed in the Detailed HVAC Analysis section of this Attachment. The model (AERMOD) was run with the regulatory default option, where applicable, and for both with and without downwash effects options, where the Building Profile Input Program (BPIP) was run with the downwash effect enabled. The parking garage vent was placed near the garage exit/entrance and 13 feet above grade. The *CEQR Technical Manual* default stack parameters were specified in the AERMOD model. Receptors were placed in spaced intervals in the middle of the sidewalk on both sides of 139th Street, five feet above the garage vent, simulating window

receptors, and on the existing six-story building across the street and the six-story building adjacent to Projected Development Site 1. Receptors at the existing six-story buildings were placed 6-30 feet above grade in 2-foot increments over the wall façades facing the parking garage vent. The AM peak-hour traffic was used to account for on-street emissions. On-street emission was analyzed as a line area source, and the parking garage vent as a point source. The base elevation (the base elevation database is discussed in the Detailed HVAC Analysis section of this Attachment) of the receptors and the parking garage vent were set to their building's base elevations. The base elevation of the on-street emission on 139th Street was set to Projected Development Site 1's base elevation. Annual $PM_{2.5}$ increment was evaluated for the With-Action condition (parking garage vent plus on-street traffic) and the No-Action condition (on-street traffic only). The increment between the With-Action and No-Action conditions was calculated for each receptor.

Table J-4 shows the parking accumulation of Projected Development Site 1 in the future with the Proposed Actions.

Table J-4: Projected Development Site 1 Parking Garage Accumulation (With-Actions Condition)

Time Ending	Weekday			Saturday		
	In	Out	Accumulation	In	Out	Accumulation
1:00 AM	8	4	231	16	10	233
2	3	1	233	10	5	238
3	2	1	234	7	2	243
4	1	1	234	5	3	245
5	1	2	233	4	2	247
6	2	6	229	2	3	246
7	6	16	219	3	5	244
8	16	41	194	7	15	236
9	29	71	152	17	28	225
10	34	53	133	28	41	212
11	36	42	127	38	49	201
12	40	44	123	47	55	193
1:00 PM	53	52	124	54	62	185
2	54	53	125	55	57	183
3	57	55	127	62	61	184
4	62	57	132	61	61	184
5	64	59	137	65	59	190
6	73	60	150	83	75	198
7	92	74	168	57	51	204
8	70	59	179	49	47	206
9	55	41	193	46	38	214
10	40	28	205	38	31	221
11	27	14	218	26	23	224
12	19	10	227	21	18	227

Table J-5 shows the Projected Development Site 1 parking garage dimensions and dispersion parameters applied in the analysis.

Table J-5: Projected Development Site 1 Parking Garage Parameters

Parameter	No.
No. Floors (No.)	2
Area (gsf)	51,757
Mean travel distance (ft)	449
Ramp length (ft)	75
Travel distance to/from ramp (ft)	127
Car travel speed in the garage (mph)	5.0
Idle time (min/veh)	1
Vent height above grade/sidewalk (ft)	13
Number of vents	1
Maximum outgoing vehicle per hour	75
Maximum incoming vehicle per hour	92
24-hour average outgoing vehicle per hour	35.2
24-hour average incoming vehicle per hour	35.2
Annual average outgoing vehicle per hour	34.7
Annual average incoming vehicle per hour	34.7

Table J-6 shows the parking garage dispersion analysis results, where the results are the maximum between the no downwash and with downwash scenarios. The concentration increments were evaluated with the *CEQR Technical Manual de minimis*.

Table J-6: Parking facility dispersion analysis results

Pollutant	Traffic scenario	Concentration	*de minimis*	Concentration Unit
8-Hour CO	With-Action increment	2.98	3.70	ppm
24-Hour $PM_{2.5}$	With-Action increment	2.83	8.15	$\mu g/m^3$
Annual $PM_{2.5}$	No/With-Action increment (1)	0.286	0.3	$\mu g/m^3$

Note:

1. Concentration increment is the maximum difference between the With-Action concentration (parking garage vent plus on-street traffic) and the on-street No-Action traffic calculated for each receptor.

Table J-6 shows that the 8-hour CO and $PM_{2.5}$ concentrations do not exceed the *de minims*. Therefore, no significant adverse air quality impact is predicted from the Proposed Actions parking facility with the parking garage vent located at least 13 feet above grade.

Mobile Source Conclusion

Based on the analysis, conditions associated with the Proposed Actions mobile source would not result in any violations of the ambient air quality standards, with the following environmental requirement(s) adhered to:

> ***(E) Designation***
>
> ***Block 9649, Lots 17, 25, and (Projected Development Site 1): Any new residential or commercial development on the above-referenced property must ensure that the parking garage vent is located at a minimum of 13 feet above grade to avoid any potential significant adverse air quality impacts.***

III. HEAT AND HOT WATER SYSTEM

The Proposed Actions would facilitate the development of two buildings: one building on Projected Development Site 1 and one building on Projected Development Site 2. Each Projected Development Site could have a fossil fuel-fired HVAC system(s). The potential of the Projected Development Sites' HVAC systems to significantly impact other land use in the area is evaluated in this section. Based on the *CEQR Technical Manual*, a preliminary screening assessment could be conducted as a first step to predict whether the potential impact of the heat and hot water system(s) boiler emissions can be significant. A detailed analysis is required if the screening assessment fails.

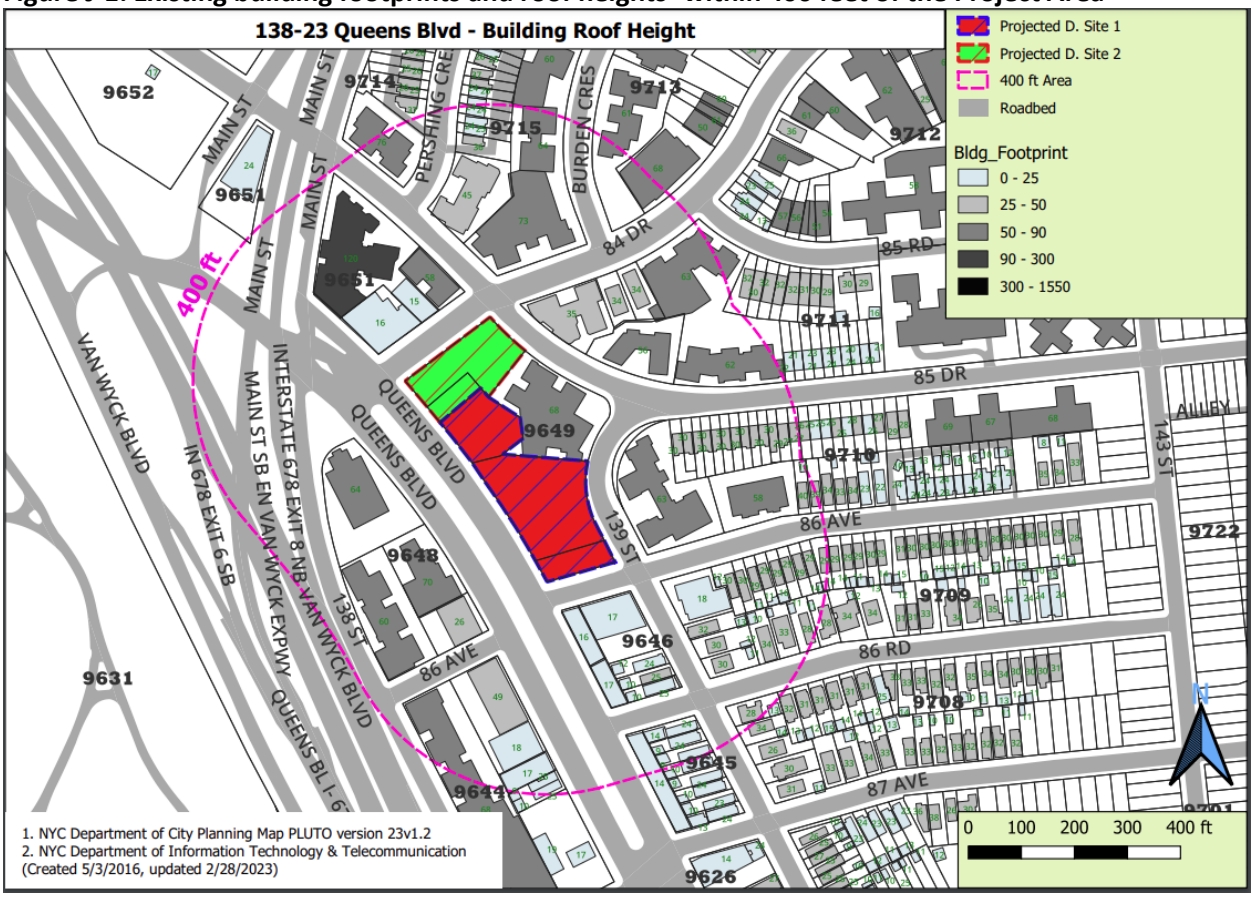
Screening Assessment

The *CEQR Technical Manual* Figure 17-3 nomograph was used for the screening assessment. The nomograph depicts the size of the development versus the distance below which the potential impact can occur and provides a conservative estimate of the threshold distance. As screening analysis only applies to a single smokestack, the cumulative project-on-existing screening analysis combined emissions from multiple stacks in a single stack situated as close as possible to a receiving building.

Project-on-Existing

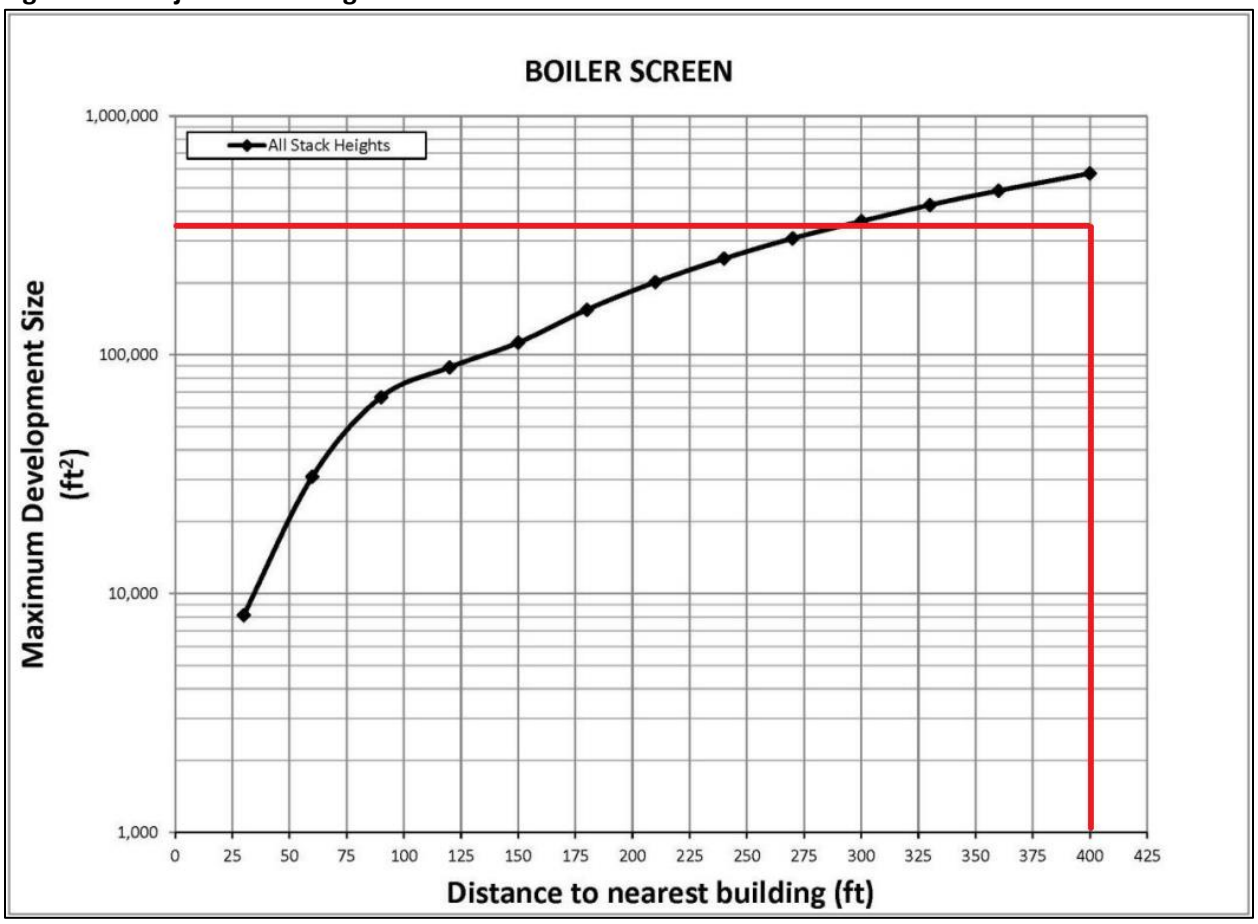
Projected Development Site 1 and Projected Development Site 2 combined floor area, excluding the parking garage floor areas, were combined for the project-on-existing screening assessment. Based on the methodology above, the combined building (Projected Development Site 1 and Projected Development Site 2 gsf) was analyzed as a 175-foot-tall building containing 352,915 gsf. A distance of 400 feet was applied in the screening nomograph as no other building similar or greater height is located within 400 feet of either Projected Development Site. **Figure J-1** shows existing building footprints and roof heights within 400 feet of the Projected Development Sites 1 and 2. **Figure J-2** shows the project-on-existing screening analysis. As shown in **Figure J-2** (using Figure 17-3 of the *CEQR Technical Manual*), the combined gsf of the RWCDS buildings on Projected Development Sites 1 and 2 intersects the 400-foot distance from the stack below the curve for the fossil fuel-fired HVAC system. As such, the Proposed Actions passes the HVAC screening analysis on existing land uses.

Figure J-1: Existing building footprints and roof heights[3] within 400 feet of the Project Area



[3] City of New York, Office of Technology and Innovation (2016). "Building-Footprints." opendata.cityofnewyork.us, Feb. 28, 2023.

Figure J-2: Project on Existing – HVAC Screen



Project-on-Project

Projected Development Site 1 and Projected Development Site 2 are adjacent. The Proposed Actions would facilitate 175-foot tall buildings (not including bulkhead) Projected Development Sites 1 and 2 under the RWCDS. Therefore, the screening analysis is not applicable, and a detailed analysis is required.

HVAC Detailed Analysis

Pollutant concentrations were predicted with AERMOD. AERMOD MPI version 23132 executable was used in the dispersion analysis. Lakes Environmental, Inc. adjusted the EPA AERMOD source code and recompiled the model to parallelize the processing of receptors, reducing run-time significantly. The MPI executable (used in the analysis) modified the EPA AERMOD executable model version 23132. The AERMOD model incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of surface and elevated sources and simple and complex terrain. The model was run with the regulatory default option, where applicable. AERMOD was run for both downwash effect options, where the Building Profile Input Program (BPIP) was run with the downwash effect enabled.

All analyses used five consecutive years of meteorological data (2017-2021) from the NYSDEC. Meteorology surface data is from LaGuardia Airport, and upper air data is from Brookhaven station, New York. The meteorological data provided hour-by-hour wind speeds and directions, stability states, and temperature inversion elevations over the five years. Population in New York City was specified to account for the effects of increased surface heating from an urban area on pollutant dispersion under stable atmospheric conditions.

Natural gas was assumed to be the type of fossil fuel, if any, used in the Projected Development Sites HVAC systems. As determined in the analysis, the natural gas-fired HVAC system(s) must be fitted with low-NOx (Projected Development Site 1 with at least 20 ppm burner(s) and Projected Development Site 2 with at least 30 ppm burner(s)) burners. The pollutants of concern for natural gas-fueled boilers are NO_2 and $PM_{2.5}$. The HVAC systems' total energy capacities were calculated based on the developments' gsf, excluding the parking garages' gsf, and an energy consumption rate of 60.3 thousand Btu per gsf[4] (natural gas consumption rate of 59.1 ft^3 per gsf per year, using a natural gas heating value of 1,020 Btu per ft^3). All fuel was assumed to be consumed during the 100-day heating season (2,400 hours) based on the *CEQR Technical Manual.*

$PM_{2.5}$ emission was calculated using an emission factor for external combustion sources published in the EPA AP-42 manual. NOx emission of the low-NOx (30 ppm) HVAC system was calculated based on an emission factor from the DCP. Projected Development Site 1 low-NOx (20 ppm) HVAC system's NOx emission was calculated using EPA *Method 19—Determination of sulfur dioxide removal efficiency and particulate, sulfur dioxide and nitrogen oxides emission rates, Equation 19-1*, where a conversion factor of 1.194E-07 (Table 19–1—Conversion Factors for Concentration) was used to convert concentration in ppm to pounds per square feet.[5] **Table J-7** shows the pollutant emission rates of the RWCDSs HVAC systems.

Table J-7: HVAC Systems Short-term and Annual Emission Rates

Projected Development Site	Floor Area[1] (gsf)	HVAC System Specs.	Pollutant	Short-term Emission Rate (g/s)	Annual Emission Rate (g/s)
Site 1	344,174	Natural gas, low-NOx (20 ppm)	NO_2	2.65E-02	7.25E-03
			$PM_{2.5}$	8.12E-03	2.22E-03
Site 2	113,928	Natural gas, low-NOx (30 ppm)	NO_2	1.31E-02	3.60E-03
			$PM_{2.5}$	2.69E-03	7.36E-04

Note:
1. The floor area does not include the parking garage gsf.

The boiler stack diameters were estimated based on values obtained from the New York City Department of Environmental Protection (DEP) "CA Permit" database.[6] The boiler stack exit temperatures were estimated based on a low-NOx boiler specification.[7] The stack exit velocities were calculated based on the fuel dry volume of combustion components per unit of heat content. The boiler stacks were placed 3 feet

[4] Energy Information Administration (2022). "Table US1. Total Energy Consumption, Expenditures, and Intensities, 2005 Part 1: Housing Unit Characteristics and Energy Usage Indicators." *2005 Residential Energy Consumption Survey: Energy Consumption and Expenditures Tables.*

[5] Appendix A–7 to Part 60, Title 40.

[6] NYCDEP "CA Permit" database obtained from the New York City Department of City Planning, February 2020.

[7] Aerco. "Benchmark 1500 and 2000." aerco.com/products/hvac-hot-water-solutions/boilers/benchmark/benchmark-1500-and-2000#jl_439b2059-2f3c-46ca-a4d6-2e2f0d0af485

above the roofline and as close as possible to the receiving building. If a significant adverse impact was predicted, the stack(s) was raised or set back from the receiving building.

Projected Development Site 1 was modeled based on the Site Plans provided by the building architect for this project. Projected Development Site 2 was modeled with the 175-foot-tall tower section at the western part of the lot(s) to comply with the proposed reasoning. Receptors were placed around the building envelopes from the ground floor to rooftop height in spaced intervals. Receptors on Projected Development Site 1 were also placed above the lower tower portion, near the Projected Development Site 2, up to a height of 175 feet above grade (the Site Plans show that the Projected Development Site 1 175-foot-tall tower portion is set back from the northern lot line (Projected Development Site 2)).

The map application in Urchin Tracking Module (UTM) coordinates (zone 18), built into Lakes Environmental, Inc.'s commercial application of AERMOD (AERMOD View), was used to spatially locate buildings. The New York City Building Footprint database[3] was consulted to determine building heights, and the building configuration (AERMOD View model) was reviewed in Google Earth. The U.S. Geological Service (USGS) National Elevation Dataset (NED) 1/3 arc-second resolution (GeoTIFF dataset), the terrain data set recommended by the EPA for use in the United States for regulatory purposes, was used to process the base elevation of buildings. The base elevation of receptors and sources was set to the base elevation of their buildings. However, as a conservative measure, Projected Development Sites 1 and 2 were placed at the same base elevation in the Projected Development Site 2 potential for significant impact on the Projected Development Site 1 model (elevation points[8] south and north of the rezoning area shows approximately 15 feet increment from 86th Avenue to 84th Drive).

The one-hour NO_2 NAAQS standard of 0.100 ppm (188 ug/m^3) is the three-year average of the 98th percentile of daily maximum one-hour average concentrations in a year. Nitrogen oxides ("NOx") are emitted from both mobile and stationary sources, and Nitric Oxide ("NO") accounts for approximately 90% of the total oxidized nitrogen emitted. In the atmosphere and while in the presence of sunlight, NO reacts with free radicals and ozone ("O_3"), forming mainly nitrogen dioxide ("NO_2").[9] The EPA developed a three-tiered modeling approach for estimating one-hour NO_2 concentration: Tier 1, the most conservative approach, assumes a full (100%) conversion of NO_x to NO_2; Tier 2 applies a conservative ambient NOx/NO_2 ratio to the NOx estimated concentrations; and Tier 3, which is the most precise approach, accounts for chemical transformation of NO emitted from the stack to NO_2 within the source plume using hourly ozone background concentrations. Tier 1 and Tier 2 approaches were used in the HVAC analysis, where the national default minimum and maximum NO_2/NOx ratios were applied in the Tier 2 approach.

The model was run twice, with the building wake effect enabled/disabled. The predicted concentration is the highest concentration of these. The NO_2 modeled concentrations were added to the background concentrations, and the result was evaluated with the NAAQS. $PM_{2.5}$ modeled concentrations were evaluated with the *de minimis* for stationary source. The HVAC dispersion analysis results are shown in **Table J-8**.

[8] New York City Open Data (2023). "Elevation Points." https://data.cityofnewyork.us/Transportation/Elevation-points/szwg-xci6. December 21, 2023.

[9] EPA. *Integrated Science Assessment (ISA) for Oxide of Nitrogen – Health Criteria (Final Report, Jan 2010)*. U.S. Environmental Protection Agency, Washington, DC, EPA/ EPA/600/R-15/068, 2016.

Table J-8: HVAC System(s) Dispersion Analysis Results

Pollutant	Maximum Modeled (Increment) Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Evaluated Concentration ($\mu g/m^3$)	Threshold Concentration ($\mu g/m^3$)	Threshold Standard
Projected Development Site 1-on-Projected Development Site 2					
1-hour NO_2	68.03	103.59	171.6	188	NAAQS
Annual NO_2	0.97	26.8	28	100	NAAQS
24-hour $PM_{2.5}$	5.86	17.7	5.9	8.65	*de minimis*
Annual $PM_{2.5}$	0.30	7.0	0.30	0.3	*de minimis*
Projected Development Site 2-on-Projected Development Site 1					
1-hour NO_2	77.53	103.59	181.1	188	NAAQS
Annual NO_2	0.87	26.8	28	100	NAAQS
24-hour $PM_{2.5}$	3.49	17.7	3.5	8.65	*de minimis*
Annual $PM_{2.5}$	0.18	7.0	0.18	0.3	*de minimis*

As seen in **Table 8**, the NO_2 future ambient concentrations (1-hour or annual) are within the NAAQS, and the $PM_{2.5}$ increment concentrations do not exceed the *de minimis*. These results were predicted with specific requirements to ensure no impact(s) would occur. The air quality environmental requirement(s) (E-Designation) are presented in the next section (see - "**Heating and Hot Water Systems Conclusion**").

Heating and Hot Water Systems Conclusion

Based on the analysis, conditions associated with the Proposed Actions HVAC system(s) would not result in any violations of the ambient air quality standards, with the following environmental requirement(s) adhered to:

> ***(E) Designation***
>
> ***Block 9649, Lots 17, 25, and (Projected Development Site 1): Any new residential or commercial development on the above-referenced property must exclusively use natural gas as the type of fuel for heating, ventilating, and air conditioning (HVAC) system and hot water equipment and must be fitted with low NOx (20 ppm) burners, ensure that the HVAC system and hot water equipment stack is located at the building's highest level and at a minimum of 178 feet above grade, and that the stack is located at least 90 feet from the northern lot line of Block 9649, Lot 37 to avoid any potential significant adverse air quality impacts.***
>
> ***Block 9649, Lots 42 and 44 (Projected Development Site 2): Any new residential or commercial development on the above-referenced property must exclusively use natural gas as the type of fuel for heating, ventilating, and air conditioning (HVAC) system and hot water equipment and must be fitted with low NOx (30 ppm) burners, ensure that the HVAC system and hot water equipment stack is located at the building's highest level and at a minimum of 181 feet above grade, and that the stack is located at least 20 feet from the southern lot line of Block 9649, Lot 42 to avoid any potential significant adverse air quality impacts.***

ATTACHMENT K

NOISE

I. INTRODUCTION

This attachment assesses the potential for the Proposed Actions to result in significant adverse noise impacts. As detailed in **Appendix III, "Transportation Planning Factors and Travel Demand Forecast Technical Memorandum"** the Reasonable Worst Case Development Scenario ("RWCDS") facilitated by the Proposed Actions would generate approximately 54, 28, 42, and 50 incremental vehicle trips in the weekday AM, midday, and PM peak hours, and Saturday peak hour, respectively. Therefore, operation of the Proposed Project would change traffic patterns and volumes in the general vicinity of the Project Area. As local vehicular traffic is a major source of ambient noise in the area surrounding the Project Area, vehicular traffic generated by the RWCDS facilitated by the Proposed Actions could lead to changes in the ambient noise levels. According to the 2021 *City Environmental Quality Review* ("CEQR") *Technical Manual*, if existing noise passenger car equivalent ("PCE") values are increased by 100 percent or more due to a proposed project (which is equivalent to an increase of 3 dBA or more) a detailed analysis is generally warranted. Conversely, if existing noise PCE values are not increased by 100 percent or more it is likely that a proposed project would not cause a significant adverse vehicular noise impact, and therefore no further vehicular noise analysis is needed.

The noise analysis for the Proposed Actions was carried out in compliance with 2021 *CEQR Technical Manual* guidelines and has two components:

1. A screening analysis to determine whether traffic generated by the Proposed Actions' RWCDS would have the potential to result in significant adverse noise impacts on existing receptors;
2. An analysis to determine the level of building attenuation necessary to ensure that interior noise levels for future development within the Project Area satisfy applicable interior noise criteria. This attachment does not include an analysis of mechanical equipment because such mechanical equipment would be designed to meet all applicable noise regulations and, therefore, would not result in adverse noise impacts.

II. ACOUSTICAL FUNDAMENTALS

Sound is a fluctuation in air pressure. Sound pressure levels ("SPLs") are measured in units called "decibels" ("dB"). The particular character of the sound that we hear (a whistle compared with a French horn, for example) is determined by the speed, or "frequency," at which the air pressure fluctuates, or "oscillates." Frequency defines the oscillation of sound pressure in terms of cycles per second. One cycle per second is known as one Hertz ("Hz"). People can hear over a relatively limited range of sound frequencies, generally between 20 Hz and 20,000 Hz, and the human ear does not perceive all frequencies equally well. High frequencies (e.g., a whistle) are more easily discernible and, therefore, more intrusive than many of the lower frequencies (e.g., the lower notes on the French horn).

"A"-Weighted Sound Level (dBA)

In order to establish a uniform noise measurement that simulates people's perception of loudness and annoyance, the decibel measurement is weighted to account for those frequencies most audible to the human ear. This is known as the A-weighted sound level, or "dBA," and it is the descriptor of noise levels most often used for community noise. As shown in **Table K-1**, the threshold of human hearing is defined as 0 dBA; very quiet conditions (as in a library, for example) are approximately 40 dBA; levels between 50 dBA and 70 dBA define the range of noise levels generated by normal daily activity; levels above 70 dBA would be considered noisy, and then loud, intrusive, and deafening as the scale approaches 130 dBA.

In considering these values, it is important to note that the dBA scale is logarithmic, meaning that each increase of 10 dBA describes a doubling of perceived loudness. Thus, the background noise in an office, at 50 dBA, is perceived as twice as loud as a library at 40 dBA. For most people to perceive an increase in noise, it must be at least 3 dBA. At 3 dBA, the change will be readily noticeable.

Table K-1: Noise Levels of Common Sources

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

Note: A change in 3 dBA is a just noticeable change in SPL. A change in 10 dBA is perceived as a doubling or halving of SPL.
Source: Cowan, James P. *Handbook of Environmental Acoustics*, Van Nostrand Reinhold, New York, 1994. Egan, M. David, Architectural Acoustics. McGraw-Hill Book Company, 1988.

Noise Descriptors Used in Impact Assessment

As the SPL unit of dBA describes a noise level at just one moment and very few noises are constant, other ways of describing noise over extended periods have been developed. One way of describing fluctuating sound is to describe the fluctuating noise heard over a specific time period as if it had been a steady, unchanging sound. For this condition, a descriptor called the "equivalent sound level," L_{eq}, can be computed. L_{eq} is the constant sound level that, in a given situation and time period (e.g., one hour, denoted by $L_{eq(1)}$, or 24 hours, denoted as $L_{eq(24)}$), conveys the same sound energy as the actual time-varying sound. The Day-Night Sound Level (L_{dn}) refers to a 24-hour average noise level with a 10 dB penalty applied to the noise levels during the hours between 10 PM and 7 AM, due to increased sensitivity to noise levels during these hours. Statistical sound level descriptors such as L_1, L_{10}, L_{50}, L_{90}, and L_x, are used to indicate noise levels that are exceeded 1, 10, 50, 90, and x percent of the time, respectively.

The relationship between L_{eq} and levels of exceedance is worth noting. Because L_{eq} is defined in energy rather than straight numerical terms, it is not simply related to the levels of exceedance. If the noise fluctuates very little, L_{eq} will approximate L_{50} or the median level. If the noise fluctuates broadly, the L_{eq} will be approximately equal to the L_{10} value. If extreme fluctuations are present, the L_{eq} will exceed L_{90} or

the background level by ten or more decibels. Thus, the relationship between L_{eq} and the levels of exceedance will depend on the character of the noise. In community noise measurements, it has been observed that the L_{eq} is generally between L_{10} and L_{50}.

For purposes of the Proposed Actions, the maximum one-hour equivalent sound level ($L_{eq(1)}$) has been selected as the noise descriptor to be used in this noise impact evaluation. $L_{eq(1)}$ is the noise descriptor recommended for use in the 2021 *CEQR Technical Manual* for vehicular traffic and is used to provide an indication of highest expected sound levels. For dominant traffic noise, the one-hour L_{10} is the noise descriptor used in the 2021 *CEQR Technical Manual* noise exposure guidelines for city environmental impact review classification. As the Proposed Actions do not include federal sources of funding, only the required attenuation levels to meet CEQR noise guidelines are provided in this attachment.

III. APPLICABLE NOISE CODES AND NOISE STANDARDS AND CRITERIA

New York City Noise Code

The New York City Noise Control Code, which was enacted in December 2005 and became effective July 2007, defines "unreasonable and prohibited noise standards and decibel levels" for the City of New York. The Noise Code generally seeks to reduce ambient noise, prohibiting all unreasonable and unnecessary noise and addressing construction hours and activities. It also (1) establishes sound level standards for specific noise sources, such as motor vehicles, air compressors, and construction activities; (2) requires that all exhausts be muffled; and (3) prohibits all unnecessary noise adjacent to schools, hospitals, or courts. It specifies maximum allowable SPLs for designated octave bands emanating from a commercial or business enterprise as measured within a receiving property (such as a mixed-use and residential property). The Noise Code's enforcement is driven by complaints of violations.

New York CEQR Technical Manual Noise Standards

The 2021 *CEQR Technical Manual* sets external noise exposure standards, which are shown in **Table K-2** below. Noise exposure is classified into four categories based on the L_{10} or L_{dn}: Acceptable, Marginally Acceptable, Marginally Unacceptable, and Clearly Unacceptable. The 2021 *CEQR Technical Manual* Noise Exposure Guidelines shown in **Table K-2** are guidelines, not a law. However, city reviewing agencies use the guidelines in determining potential impacts when a project comes under their review.

Table K-2: Noise Exposure Guidelines for Use in City Environmental Impact Review[1]

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

Source: New York City Department of Environmental Protection ("DEP"); adopted policy 1983.

Notes:

(i) In addition, any new activity shall comply with the Impact Thresholds detailed in Section 410 of Chapter 19, "Noise," of the 2021 *CEQR Technical Manual*.

1. Measurements and projections of noise exposures are to be made at appropriate heights above site boundaries as given by American National Standards Institute (ANSI) Standards; all values are for the worst hour in the time period.
2. Tracts of land where serenity and quiet are extraordinarily important and serve an important public need and where the preservation of these qualities is essential for the area to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of parks or open spaces dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet. Examples are grounds for ambulatory hospital patients and patients and residents of sanitariums and nursing homes.
3. One may use the Federal Aviation Administration- ("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 octave bands).

The 2021 *CEQR Technical Manual* also defines attenuation requirements for buildings based on exterior noise levels (refer to **Table K-3**). For dominant traffic noise, recommended noise attenuation values for buildings are designed to maintain interior noise levels of 45 dBA or lower for residential, hotel, or community facility uses and interior noise levels of 50 dBA or lower for commercial office uses and are determined based on exterior $L_{10(1)}$ noise levels.

Table K-3: Required Attenuation Values to Achieve Acceptable Interior Noise Level

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

Source: DEP; 2021 *CEQR Technical Manual*, Table 19-3.

Notes:

A. DNL descriptor based on average values of L_{dn} over a year period.

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

C. The required attenuation value is the difference between L_{huild} 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 dBA for vehicular noise, 40 dBA for aircraft and train noise)

IV. METHODOLOGY

Noise Prediction Methodology

Future No-Action and With-Action noise levels were calculated using a proportional modeling technique, which is used as a screening tool to estimate changes in noise levels. The proportional modeling technique is an analysis methodology recommended for analysis purposes in the 2021 *CEQR Technical Manual*.

Using the proportional modeling technique, the prediction of future noise levels where traffic is the dominant noise source is based on a calculation using measured existing noise levels and predicted changes in traffic volumes to determine noise levels in the future without the Proposed Actions (the No-Action condition) and with the Proposed Actions (the With-Action condition). Vehicular traffic volumes are converted into noise PCE values, for which one medium-duty truck (cargo vehicles with two axles and six tires) is assumed to generate the noise equivalent of 13 cars, one heavy-duty truck (cargo vehicles with three or more axles) is assumed to generate the noise equivalent of 47 cars, and one bus (vehicles having two or three axles and designed to carry more than nine passengers) is assumed to generate the noise equivalent of 18 cars. Future noise levels are calculated using the following equation:

F NL - E NL = 10 * log10 (F PCE / E PCE)

where:

F NL = Future Noise Level
E NL = Existing Noise Level
F PCE = Future PCEs
E PCE = Existing PCEs

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

by 1.8 dBA. Similarly, if the future traffic were increased by 100 PCEs, or doubled to a total of 200 PCEs, the noise level would increase by 3 dBA.

For the purpose of this analysis, during the noise recording, vehicles were counted and classified. To calculate the 2028 No-Action PCE values, an annual background growth rate of 0.5 percent (for 2023 to 2028)[1], plus the estimated travel demand from the No-Action condition (refer to **Appendix III, "Transportation Planning Factors and Travel Demand Forecast Technical Memorandum"** for the No-Action condition's estimated travel demand) was applied to the counted PCE values. In order to obtain the necessary 2028 With-Action PCE values to calculate the With-Action noise levels, the With-Action condition's estimated travel demand presented in **Appendix III, "Transportation Planning Factors and Travel Demand Forecast Technical Memorandum,"** were converted into PCE values and added to the calculated No-Action PCE values.

Building Attenuation Analysis Procedure

In general, the following procedure was used in performing the 2021 *CEQR Technical Manual* building attenuation analysis:

- Noise receptor locations that have the greatest potential for being adversely affected by project-generated noise in the 2028 build year and the location of dominant sources of ambient noise were identified;
- Noise receptor locations were selected based on the following criteria: (1) locations where the highest noise levels are likely to occur based upon the consideration of existing land use patterns (e.g., locations near major commercial roadways, industrial uses, or stationary sources, etc.); and (2) along the future street frontage of the Project Area;
- Existing noise levels were determined through field measurements of ambient noise adjacent to the Project Area;
- Future (2028) noise levels without the Proposed Actions were predicted using the PCE-based proportionality equation (per 2021 *CEQR Technical Manual* guidelines) for all locations where traffic is the dominant source of noise and were based on the No-Action condition's estimated travel demand presented in **Appendix III, "Transportation Planning Factors and Travel Demand Forecast Technical Memorandum;"**
- Future (2028) noise levels with the Proposed Actions were predicted using the PCE-based proportionality equation (per 2021 *CEQR Technical Manual* guidelines) based on the With-Action condition's estimated travel demand presented in **Appendix III, "Transportation Planning Factors and Travel Demand Forecast Technical Memorandum;"**
- Future (2028) noise levels with the Proposed Actions were compared with future noise levels without the Proposed Actions to determine, by applying 2021 *CEQR Technical Manual* impact criteria, whether the Proposed Actions would have the potential to result in a significant adverse impact;
- Noise levels were determined for exterior building façades at the Project Area; and
- In compliance with CEQR requirements to determine an acceptable interior space noise environment, façade-based composite window/wall attenuation specifications for the Project Area were estimated based on future projected maximum exterior noise exposure at the Project

[1] Growth rate according to Table 16-4 in the 2021 *CEQR Technical Manual.*

Area; CEQR requirements are based on the maximum L_{10} values for dominant traffic noise condition.

Impact Significance Criteria

According to 2021 *CEQR Technical Manual*, for the purposes of determining a significant impact during daytime hours, it is reasonable to consider a L_{eq} noise level of 65 dBA as an absolute noise level that should not be significantly exceeded. Therefore, a significant noise impact would occur at a noise receptor (i.e., residences, play areas, parks, schools, libraries, and houses of worship) during daytime hours under the following circumstances:

- A noise increase of 3 dBA or greater is predicted in the With-Action condition, when the future noise level in the No-Action condition is 62 dBA or greater; or
- When the No-Action noise level is below 62 dBA, a predicted With-Action noise increase that exceeds the difference between 65 dBA and the No-Action noise level. For example, if the No-Action noise level is 61 dBA, then the maximum noise increment with the Proposed Actions would be 4 dBA, since an increase higher than 4 dBA would result in a noise level that exceeds the 65 dBA L_{eq} significant impact threshold.
- Additionally, an increase of With-Action noise levels by 5 dBA over a No-Action noise level that is at or below 60 dBA would be considered significant.

V. EXISTING NOISE LEVELS

According to the established RWCDS for the Proposed Actions, two projected development sites have been identified within the Project Area, as described in further detail in **Attachment A, "Project Description"**. Projected Development Site 1 (Block 9649, Lots 17, 25, and 37) is Applicant-controlled and contains approximately 360 feet of total frontage along Queens Boulevard, 133 feet of frontage along 86th Street, and 242 feet of frontage along 139th Street. Projected Development Site 1 has a total lot area of approximately 47,970 square feet (sf) of lot area, and is occupied by three attached single-story commercial retail buildings ranging in size from 3,536 gsf to 19,751 gross square feet (gsf) with storefronts along the north side of Queens Boulevard. There is an accessory surface parking lot along the 139th-street frontage of Lots 17 and 25, which contains approximately 25 parking spaces. Projected Development Site 2 (Block 9649, Lots 42 and 44) is not Applicant-controlled (consisting of two lots under separate private ownership), and has approximately 17,025 sf of total lot area with approximately 105 feet of frontage along Queens Boulevard, approximately 200 feet of frontage along 84th Drive, and approximately 70 feet of frontage along 139th Street. It is occupied by two single-story commercial retail buildings with storefronts and entrances along all three street frontages.

No other properties within the Project Area (Block 9649, Lot 53 [p/o]), other than Projected Development Sites 1 (Applicant-controlled) and 2 (non-Applicant-controlled), are anticipated to be developed as a result of the Proposed Actions.

Noise Monitoring Locations

As traffic is the dominant source of noise in the vicinity of the Project Area, the receptor locations were selected based upon the assumption that the future development within the Project Area would be built

to their respective lot lines. As such, existing noise levels at the Project Area were measured at five locations along Prospect Avenue. These locations are shown in **Figure K-1** and described below:

- Receptor Location 1 – Northern corner of Projected Development Site 2 at the intersection of Manton Street and 84th Drive.
- Receptor Location 2 – Western corner of Projected Development Site 2 at the intersection of Queens Boulevard and 84th Drive.
- Receptor Location 3 – Western frontage of Projected Development Site 1 along Queens Boulevard (approximately 250 feet north of 86th Avenue).
- Receptor Location 4 – Southern corner of Projected Development Site 1 at the intersection of Queens Boulevard and 86th Avenue.
- Receptor Location 5 – Eastern corner of Projected Development Site 1 at the intersection of 86th Avenue and 139th Street.

At the five receptor locations, 20-minute spot measurements were performed during the weekday AM (8:00 – 9:00 AM) peak period, midday (12:00 – 1:00 PM) peak period, and PM (5:00 – 6:00 PM) peak period. The noise monitoring occurred on Thursday, November 30, 2023. During the three measurements periods, the weather was primarily sunny and in the low-30s to high-40s°F, with a wind speed average of five miles per hour. Additionally, vehicle classification counts were conducted during the 20-minute spot measurements, which were used in the proportional modeling analysis.

Equipment Used During Noise Monitoring

Measurements were performed using Brüel & Kjær Sound Level Meters ("SLM") Type 2250 and 2260, Brüel & Kjær ½-inch microphones Type 4189, and Brüel & Kjær Sound Level Calibrators Type 4231. The Brüel & Kjær SLMs are Type 1 instruments according to ANSI Standard S1.4- 1983 (R2006). The SLMs had a laboratory calibration date within one year of the time of use. For the five receptor locations, the microphones were mounted at a height of approximately five feet above the ground surface on a tripod and approximately six feet or more away from any large sound-reflecting surface to avoid major interference with sound propagation. The SLMs were calibrated before and after readings with a Brüel & Kjær Type 4231 Sound Level Calibrator using the appropriate adaptor. Measurements at each location were made on the A-scale (i.e., dBA). The data were digitally recorded by the SLMs and displayed at the end of the measurement period in units of dBA. Measured quantities included the L_{eq}, L_1, L_{10}, L_{50}, and L_{90} values, as well as ⅓-octave bands. A windscreen was used during all sound measurements except for calibration. All measurement procedures were based on the guidelines outlined in ANSI Standard S1.13-2005.

Existing Noise Levels at Receptor Locations

Measured Noise Levels

Noise monitoring results for Receptor Locations 1 through 5 are summarized in **Table K-4**. Traffic was the dominant noise source and the values shown reflect the level of vehicular activity on Queens Boulevard and the other streets adjacent to the Project Area. Vehicular traffic volumes were counted during the noise recordings for each peak period and converted into hourly PCE values.

Figure K-1
Receptor Locations



Source: ESRI; NYCDCP (PLUTO 2023, Version 2); DoITT

Legend

- Project Area
- Projected Development Site 1
- Projected Development Site 2
- ❶ Receptor Locations

As shown in **Table K-4**, the results of the noise monitoring indicated that noise levels are generally highest during the weekday AM peak period. The highest L_{10} noise levels were observed at Receptor Location 3, measuring 73.8 dBA in the weekday AM peak period, falling into the "Marginally Unacceptable (II) *CEQR* noise exposure category. Noise levels at the remaining locations (locations 1, 2, 4, and 5) range between 69.2 and 69.5 dBA, and all four of these locations are in the "Marginally Acceptable" noise exposure category.

Table K-4: Existing Noise Levels (dBA)

Receptor[1]	Measurement Location	Time[2]	L_{eq}	L_1	L_{10}[3]	L_{50}	L_{90}	CEQR Noise Exposure Category
1	Intersection of Manton Street and 84th Drive	AM	66.6	78.0	**69.4**	61.7	57.8	Marginally Acceptable
		MD	64.2	75.8	64.6	59.4	56.3	
		PM	64.2	74.4	66.6	60.1	56.4	
2	Intersection of Queens Boulevard and 84th Drive	AM	67.4	77.2	**69.5**	64.7	61.2	Marginally Acceptable
		MD	68.6	78.9	68.3	63.0	59.5	
		PM	66.6	77.0	68.3	62.9	59.2	
3	Queens Boulevard (btw. 84th Drive and 86th Avenue)	AM	70.3	79.8	**73.8**	67.2	60.0	Marginally Unacceptable (II)
		MD	65.2	74.2	68.2	62.8	58.4	
		PM	66.1	74.5	69.5	62.9	58.5	
4	Intersection of Queens Boulevard and 86th Avenue	AM	65.4	73.2	68.2	63.6	60.0	Marginally Acceptable
		MD	66.1	76.1	**68.3**	61.7	58.4	
		PM	64.5	74.7	65.7	59.9	58.5	
5	Intersection of 86th Avenue and 139th Street	AM	60.2	69.3	62.5	58.1	56.0	Marginally Acceptable
		MD	63.8	74.0	**67.2**	59.9	58.1	
		PM	60.5	70.0	62.5	58.0	55.6	

Notes: Field measurements were performed by Philip Habib & Associates on Thursday, November 30, 2023.

[1] Receptor locations are shown in **Figure K-1**.

[2] AM = weekday AM peak period; MD = weekday midday peak period; PM = weekday PM peak period.

[3] The highest measured noise level at each receptor is indicated in **bold**.

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

Mobile Source Noise Screening Analysis

In the future without the Proposed Actions (the No-Action condition), it is assumed that Projected Development Site 1 and Projected Development Site 2 would both separately be developed on an as-of-right basis. As a result, one new mixed-use building would be constructed on Applicant-controlled Projected Development Site 1 and one new mixed-use building would be constructed on non-Applicant-controlled Projected Development Site 2. In total, Projected Development Site 1 would contain approximately 133 DUs, 33,020 gsf of local retail, and 72 accessory parking spaces. Projected Development Site 2 would contain approximately 56 DUs, 18,094 gsf of local retail, and 31 accessory parking spaces. No other changes to the remaining lots within the Project Area are anticipated in the future without the Proposed Actions.

As such, traffic patterns and volumes under the No-Action condition are expected to differ from existing conditions. As traffic along the streets bordering the Project Area is the dominant source of noise at Receptor Locations 1 through 5, the change in traffic patterns is expected to affect the levels of ambient noise at those locations. Using the noise prediction methodology described in **Section IV** above, future noise levels in the No-Action condition were calculated for the three analysis periods for the 2028 build

year. **Table K-5** shows the measured existing noise levels and calculated future No-Action condition noise levels at Receptor Locations 1 through 5.

Comparing future No-Action noise levels with existing noise levels, the increases in L_{eq} noise levels would range from a minimum of 0.3 dBA to a maximum of 3.3 dBA for all analysis periods. The maximum projected No-Action L_{10} noise levels at Receptor Location 1 would be 70.4 dBA and would fall into in the "Marginally Unacceptable (I)" CEQR Noise Exposure category. The maximum projected L_{10} noise levels at Receptor Location 2 would be 69.9 dBA and would remain in the "Marginally Acceptable" CEQR Noise Exposure category, as under existing conditions. The maximum projected L_{10} noise levels at Receptor Location 3 would be 74.1 dBA and would remain in the "Marginally Unacceptable (II)" CEQR Noise Exposure category, as under existing conditions. The maximum projected L_{10} noise levels at Receptor Location 4 would be 68.7 dBA and would remain in the "Marginally Acceptable" CEQR Noise Exposure category, as under existing conditions. The maximum projected L_{10} noise levels at Receptor Location 5 would be 70.5 dBA and would fall in the "Marginally Unacceptable (I)" CEQR Noise Exposure category. Compared to the existing conditions, there would be a perceptible increase in noise levels (an increase of greater than 3 dBA) at Location 5 in the MD and PM peak periods in the future without the Proposed Actions.

Table K-5: 2028 No-Action Condition Noise Levels and PCE Values (dBA)

Noise Receptor Location[1]	Time[2]	Existing PCEs	No-Action PCEs	Existing L_{eq}	No-Action L_{eq}	Change in L_{eq}[3]	No-Action L_{10}[4]	CEQR Noise Exposure Category
1	AM	759	939	66.6	67.5	0.9	**70.4**	Marginally Unacceptable (I)
	MD	672	873	64.2	65.3	1.1	65.7	
	PM	552	750	64.2	65.6	1.3	67.9	
2	AM	2,919	3,154	67.4	67.7	0.3	**69.9**	Marginally Acceptable
	MD	2,526	2,774	68.6	69.0	0.4	68.7	
	PM	2,838	3,094	66.6	67.0	0.4	68.7	
3	AM	2,481	2,705	70.3	70.6	0.4	**74.1**	Marginally Unacceptable (II)
	MD	2,145	2,383	65.2	65.7	0.5	68.6	
	PM	2,316	2,558	66.1	66.5	0.4	69.9	
4	AM	2,622	2,849	65.4	65.8	0.4	68.6	Marginally Acceptable
	MD	2,274	2,515	66.1	66.6	0.4	**68.7**	
	PM	2,409	2,654	64.5	64.9	0.4	66.1	
5	AM	219	386	60.2	62.7	2.5	64.9	Marginally Unacceptable (I)
	MD	165	353	63.8	67.1	3.3	**70.5**	
	PM	174	362	60.5	63.7	3.2	65.7	

Notes:
Values are rounded to the nearest 0.1 dBA.
[1] Receptor locations are shown in **Figure K-1**.
[2] AM = weekday AM peak period; MD = weekday midday peak period; PM = weekday PM peak period.
[3] Change in L_{eq} = No-Action L_{eq} – Existing L_{eq}.
[4] The highest No-Action noise level at each receptor is indicated in **bold**.

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

In the future with the Proposed Actions (the With-Action condition), the requested zoning map amendment and zoning text amendment would be approved, allowing the Applicant to construct the Proposed Project at Projected Development Site 1 (Applicant-controlled). Under the RWCDS, the Proposed Project comprises a new mixed-use building containing approximately 339 DUs, 33,020 gsf of retail space, and 132 accessory parking spaces. The RWCDS for the Proposed Actions would also lead to

development on Projected Development Site 2 (non-Applicant-controlled) which would consist of a mixed-use building with approximately 110 DUs, 12,790 gsf of retail space, and 40 accessory parking spaces. No other development is expected to occur as a result of the Proposed Actions and no changes would occur within the remainder of the Project Area.

Mobile Source Noise Screening Analysis

Using the methodology described in **Section IV**, future noise levels in the With-Action condition were calculated for the three analysis periods for the 2028 build year, which are presented in **Table K-6**. As presented in the table, after accounting for additional traffic introduced by the Proposed Actions' RWCDS, the maximum projected L_{10} noise level at Location 1 in the With-Action condition would be 70.7 dBA during the weekday AM peak period, which would be in the Marginally Unacceptable (I) CEQR Noise Exposure category. The maximum projected L_{10} noise level at Receptor Location 2 would be 70 dBA during the weekday AM peak period, which would remain in the Marginally Unacceptable (I) CEQR Noise Exposure category. The maximum projected L_{10} noise level at Receptor Location 3 would be 74.2 dBA during the weekday AM peak period, which would remain in the Marginally Unacceptable (II) CEQR Noise Exposure category. The maximum projected L_{10} noise level at Receptor Location 4 would be 68.8 dBA during the weekday AM peak period, which would remain in the Marginally Acceptable CEQR Noise Exposure category. The maximum projected L_{10} noise level at Receptor Location 5 would be 70.8 dBA during the weekday MD peak period, which would remain in the Marginally Unacceptable (I) CEQR Noise Exposure category.

Table K-6: 2027 No-Action and With-Action Condition Noise Levels and PCE Values (dBA)

Noise Receptor Location[1]	Time[2]	No-Action PCEs	With-Action PCEs	No-Action L_{eq}	With-Action L_{eq}	Change in L_{eq}[3]	With-Action L_{10}[4]	CEQR Noise Exposure Category
1	AM	939	1,017	67.5	67.9	0.3	**70.7**	Marginally Unacceptable (I)
	MD	873	901	65.3	65.5	0.1	65.8	
	PM	750	792	65.6	65.8	0.2	68.1	
2	AM	3,154	3,232	67.7	67.8	0.1	**70.0**	Marginally Unacceptable (I)
	MD	2,774	2,802	69.0	69.0	0.0	68.8	
	PM	3,094	3,136	67.0	67.0	0.1	68.8	
3	AM	2,705	2,783	70.6	70.8	0.1	**74.2**	Marginally Unacceptable (II)
	MD	2,383	2,411	65.7	65.7	0.1	68.7	
	PM	2,558	2,600	66.5	66.6	0.1	70.0	
4	AM	2,849	2,927	65.8	65.9	0.1	68.7	Marginally Acceptable
	MD	2,515	2,543	66.6	66.6	0.0	**68.8**	
	PM	2,654	2,696	64.9	65.0	0.1	66.2	
5	AM	386	464	62.7	63.5	0.8	65.7	Marginally Unacceptable (I)
	MD	353	381	67.1	67.4	0.3	**70.8**	
	PM	362	404	63.7	64.2	0.5	66.2	

Notes:
Values are rounded to the nearest 0.1 dBA.
[1] Receptor locations are shown in **Figure K-1**.
[2] AM = weekday AM peak period; MD = weekday midday peak period; PM = weekday PM peak period.
[3] Change in L_{eq} = With-Action L_{eq} – No-Action L_{eq}.
[4] The highest With-Action noise level at each receptor is indicated in **bold**.

Comparing the future With-Action noise levels with No-Action noise levels, increases in L_{eq} noise levels would range from less than 0.1 to 0.8 dBA. Compared with the No-Action condition, increases of these magnitudes would not be perceptible as they are less than 3 dBA, and based upon CEQR impact criteria would not be significant. As the noise levels at all locations would experience changes less than the CEQR

impact thresholds described in **Section IV** above in all peak periods, the overall changes to noise levels as a result of the Proposed Actions would not result in any significant adverse noise impacts.

VIII. NOISE ATTENUATION REQUIREMENTS

As shown in **Table K-3**, the 2021 *CEQR Technical Manual* has noise attenuation guidance for buildings based on exterior noise levels. For dominant traffic noise, recommended noise attenuation values for buildings are designed to maintain a maximum interior noise level of 45 dBA or lower for residential uses and interior noise levels of 50 dBA or lower for commercial office uses and are determined based on exterior L_{10} noise levels.

The attenuation of a composite structure is a function of the attenuation provided by each of its component parts and how much of the area is made up of each part. Typically, a building façade is composed of the wall, windows, and any vents or louvers for heating, ventilation, and air conditioning ("HVAC") systems in various ratios of area. Window/Wall attenuation can be described in terms of sound transmission class ("STC"), transmission loss ("TL"), and outdoor-indoor transmission class ("OITC"). Although these terms are sometimes used interchangeably, they are unique from each other. Transmission loss refers to how many decibels of sound a façade (wall) or façade accessory (window or door) can stop at a given frequency. The TL for a given construction material varies with the individual frequencies of the noise.

To simplify the noise attenuation properties of a wall, the STC rating was developed. It is a single number that describes the sound isolation performance of a given material for the range of test frequencies between 125 and 4,000 Hz. These frequencies sufficiently cover the range of human speech. Higher STC values reflect greater efficiencies to block airborne sound. HUD uses the STC when identifying the required sound attenuation for a façade.

The OITC is similar to the STC, except that it is weighted more towards the lower frequencies associated with aircraft, rail, and truck traffic. The OITC classification is defined by the American Society of Testing and Materials (ASTM E1332-90 [Reapproved 2003]) and provides a single-number rating that is used for designing a building façade including walls, doors, glazing, and combinations thereof. The OITC rating is designed to evaluate building elements by their ability to reduce the overall loudness of ground and air transportation noise. DEP uses the OITC when identifying the required sound attenuation for a façade.

For dominant traffic noise, all façades that would experience an L_{10} of 70 dBA or greater must provide an alternate means of ventilation ("AMV") permitting a closed window condition during warm weather. This can be achieved by installing double-glazed windows on a heavy frame for masonry structures or windows consisting of laminated glass, along with AMV such as central air conditioning, through-wall sleeve-fitted air conditioners, packaged terminal air conditioning ("PTAC") units, trickle vents integrated into window frames, or other approved means. Where the required window/wall attenuation is above 40 dBA, special design features may be necessary that go beyond the normal double-glazed window and air conditioning. These may include specially designed windows (e.g., windows with small sizes, windows with air gaps, windows with thicker glazing, etc.) and additional building insulation.

Noise Attenuation Measures

Based on With-Action exterior noise levels and 2021 *CEQR Technical Manual* criteria, With-Action noise levels at Receptor Locations 1, 2, 3, and 5 would exceed the acceptable CEQR noise thresholds. Maximum With-Action L_{10} noise levels at Receptor Locations 1, 2, and 5 would fall in the "Marginally Unacceptable (I)" CEQR Noise Exposure category, and maximum With-Action L_{10} noise levels at Receptor Location 3 would fall in the "Marginally Unacceptable (II)" CEQR Noise Exposure category, requiring special noise attenuation measures in order to achieve the required interior noise levels. Maximum With-Action L_{10} noise levels at Receptor Location 4 would remain in the "Marginally Acceptable" CEQR Noise Exposure category.

As described above and presented in **Table K-6,** maximum With-Action L_{10} noise levels at Receptor Locations 1, 2, and 5 would be 70.7 dBA, 70.0 dBA, and 70.8 dBA, respectively, and therefore a minimum of 28 dBA of composite window/wall attenuation would be required for the associated frontages. Maximum L_{10} noise levels at Receptor Location 3 would be 74.2 dBA, necessitating a minimum of 31 dBA of composite window/wall attenuation for the associated frontages. Specifically, to achieve the required residential interior noise level of 45 dBA or lower, a minimum of 28 dBA of composite window/wall attenuation would be required for the proposed residential uses along all future building facades and frontages of Projected Development Site 1 and Projected Development Site 2 facing 84th Drive, Manton Street, 139th Street, and 86th Avenue. Further, to achieve the required residential interior noise level of 45 dBA or lower, a minimum of 31 dBA of composite window/wall attenuation would be required for the proposed residential uses along all future building facades and frontages of Projected Development Site 1 and Projected Development Site 2 facing Queens Boulevard.

Composite building attenuation requirements are presented in **Table K-6** and shown in **Figure K-2**. No attenuation beyond standard construction practices would be required along any future building facades that do not have frontages on the surrounding streets.

Table K-7: Required Attenuation (CEQR)

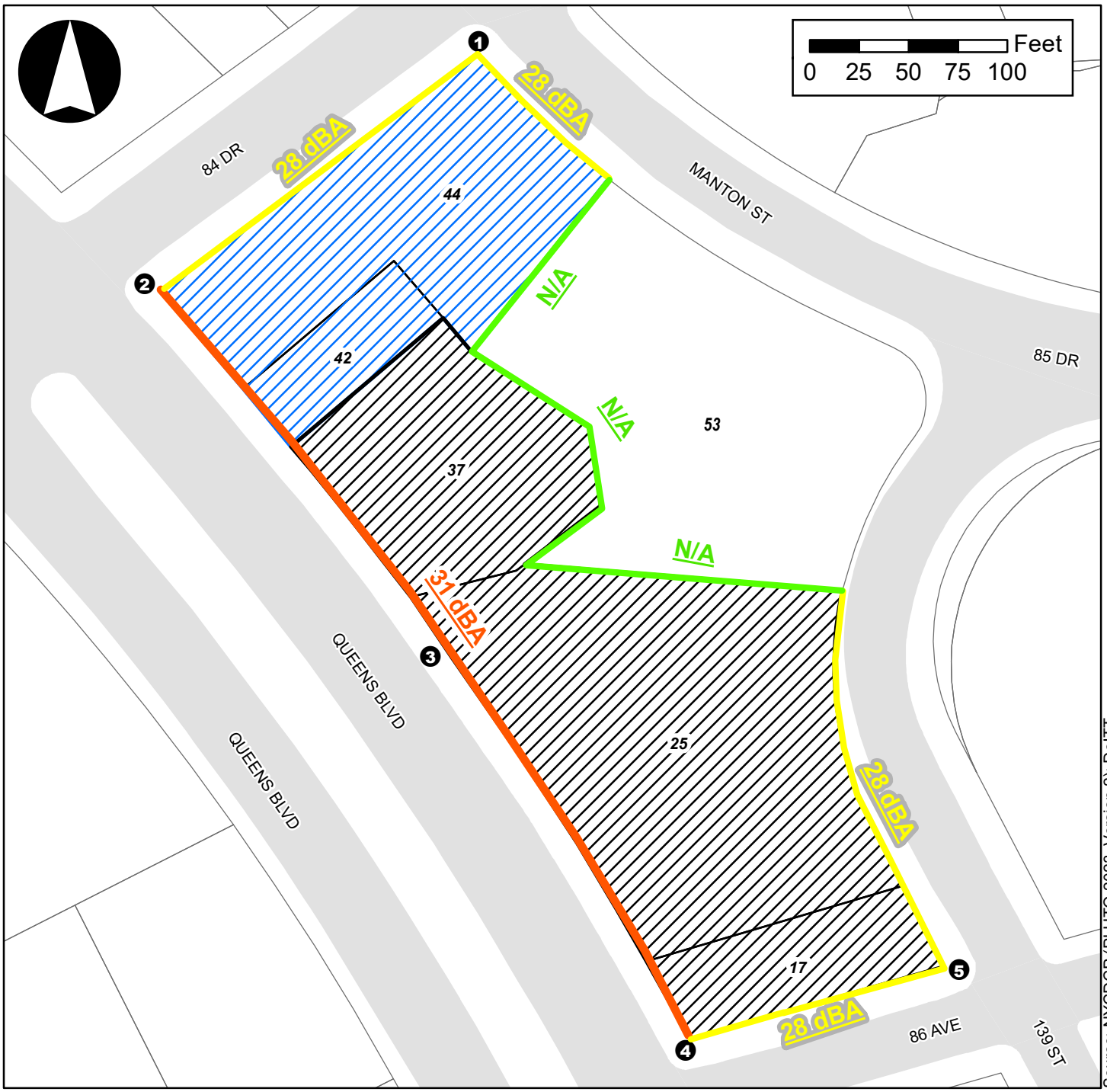
Location	Frontage/ Façade	Associated Receptor Location	Maximum Projected With-Action L_{10} Noise Level	CEQR Noise Exposure Category	Required Attenuation for Residential Uses (OITC)[1, 2]
Projected Development Site 1	86th Avenue	5	70.8	Marginally Unacceptable (I)	28
Projected Development Site 1	139th Street	5	70.8	Marginally Unacceptable (I)	28
Projected Development Site 1	Queens Boulevard	3	74.2	Marginally Unacceptable (II)	31
Projected Development Site 2	Queens Boulevard	3	74.2	Marginally Unacceptable (II)	31
Projected Development Site 2	84th Drive	1	70.7	Marginally Unacceptable (I)	28
Projected Development Site 2	Manton Street	1	70.7	Marginally Unacceptable (I)	28

Notes:

[1] The above composite window-wall attenuation values are for residential/community facility uses. All the above categories require a closed window situation and an alternate means of ventilation. Commercial office uses would require attenuation values 5 dBA less.

[2] The required attenuation values are illustrated in **Figure K-2**.

Figure K-2
CEQR Noise Attenuation Requirements



Source: NYCDCP (PLUTO 2023, Version 2); DoITT

Legend

- Projected Development Site 1
- Projected Development Site 2
- ❶ Receptor Locations

CEQR Building Noise Attenuation Requirements for Residential Uses

31 dBA | 28 dBA | N/A

Attenuation requirements are 5 dBA less for commercial office uses

(E) Designation

The composite window/wall noise attenuation described above would be required through the assignment of an (E) designation (E-XXX) for noise to the Applicant-controlled Projected Development Site 1 (Queens Block 9649, Lots 17, 25, and 37) and non-Applicant-controlled Projected Development Site 2 (Block 9649, Lots 42 and 44). With the implementation of this composite window/wall noise attenuation, no significant adverse noise impacts would occur as a result of the Proposed Actions. The text of the (E) designation is as follows:

> **Queens Block 2061, Lots 17, 25, and 37 (Projected Development Site 1)**
> **In order to ensure an acceptable interior noise environment, future residential uses must provide a closed-window condition with a minimum of 31 dBA window/wall attenuation on all facades facing Queens Boulevard and 28 dBA window/wall attenuation on all facades facing 86th Avenue and all facades facing 139th Street in order to maintain an interior noise level not greater than 45 dBA for residential uses as illustrated in the EAS. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.**
>
> **Queens Block 2061, Lots 42 and 44 (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 31 dBA window/wall attenuation on all facades facing Queens Boulevard and 28 dBA window/wall attenuation on all facades facing 84th Drive and all facades facing Manton Street in order to maintain an interior noise level not greater than 45 dBA for residential uses as illustrated in the EAS. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.**

With implementation of the attenuation levels outlined above, future development under the RWCDS for the Proposed Actions would provide sufficient attenuation to achieve 2021 *CEQR Technical Manual* interior noise level guidelines of 45 dBA for residential uses. Therefore, the Proposed Actions would not result in any significant adverse noise impacts.

IX. OTHER NOISE CONCERNS

Mechanical Equipment

The Proposed Actions would not result in the operation of any unenclosed mechanical equipment for building ventilation purposes, and would not include any active outdoor recreational space that could result in stationary source noise impacts to the surrounding area. All mechanical equipment would be located either inside the building(s) or would be enclosed on the roof of the building(s) and would be designed to meet all applicable noise regulations and requirements (i.e., Subchapter 5, §24-227 of the New York City Noise Control Code, the New York City Department of Buildings Code). Therefore, the

Proposed Actions would not result in any significant increase in ambient noise levels in the vicinity of the Project Area or the surrounding area.

Train Noise

An initial train noise impact screening analysis would be warranted if a new receptor would be located within 1,500 feet of existing rail activity and have a direct line of sight to that activity. The Briarwood Subway Station (serviced by the E and F trains) is located within 1,500 feet of the Project Area. However, the subway station and associated rail activity are located underground and there is no direct line of sight to the rail activity from the Project Area. Therefore, no initial train noise impact screening analysis is warranted for the Proposed Actions.

Aircraft Noise

An initial aircraft noise impact screening analysis would be warranted if the Proposed Actions would either generate or reroute aircraft or introduce new receptor(s) that would be located within a 65 dBA DNL contour. Since the Proposed Actions would not generate or reroute aircraft, and as the Project Area is not located within a 65 dBA DNL contour, no initial aircraft noise impact screening analysis is warranted for the Proposed Actions.

ATTACHMENT L

CONSTRUCTION

I. INTRODUCTION

This attachment assesses the potential impacts associated with construction activities that would likely be induced as a result of the approval of the Proposed Actions. Construction impacts, although temporary, can include noticeable and disruptive effects from an action that is associated with construction or could induce construction. As stated in the 2021 *City Environmental Quality Review* ("CEQR") *Technical Manual*, determination of the significance of construction impacts and the need for mitigation is generally based on the duration and magnitude of the construction impacts. Construction impacts are usually important when construction activities could affect traffic conditions, hazardous materials, archaeological resources, the integrity of historic and cultural resources, community noise patterns, and/or air quality conditions.

As described in **Attachment A, "Project Description,"** the Applicant, RJ Capital Holdings LLC, is seeking zoning map and zoning text amendments (the "Proposed Actions") from the City Planning Commission ("CPC") pursuant to the City's Uniform Land Use Review Procedure ("ULURP") and CEQR to facilitate the Applicant's intended development and programming. The area subject to the Proposed Actions is a portion of Queens Block 9649, including Lots 17, 25, 37 (p/o), 42, 44 (p/o), and 53 (p/o), coterminous with the existing R6A/C1-4 zoning district mapped on the east side of Queens Boulevard between 84th Drive and 86th Avenue (the "Project Area"). The Proposed Actions would facilitate the development of an approximately 395,931-gross square foot (gsf) mixed-use residential and commercial building with up to 17-stories (175-feet tall) above grade and no below-grade levels (the "Proposed Project") at 138-23 Queens Boulevard (Queens Block 9649, Lots 17, 25, and 37; "Projected Development Site 1") in the Briarwood neighborhood of Queens Community District ("CD") 8. In addition, it is assumed that the proposed zoning changes would allow for redevelopment of Block 9649, Lots 42/44 ("Projected Development Site 2"), which are not under the Applicant's control, pursuant to the proposed zoning regulations. It is expected that the two new buildings on the two Projected Development Sites would be completely constructed and fully occupied by 2028.

According to the 2021 *CEQR Technical Manual*, construction duration is often broken down into short-term (less than two years) and long-term (two or more years). Where the duration of construction is expected to be short-term, any impacts resulting from short-term construction generally do not require detailed assessment. Multi-sited projects with overall construction periods lasting longer than two years and that are near sensitive receptors should undergo a preliminary impact assessment. This attachment summarizes the conceptual construction phasing and schedule for the Proposed Actions and assesses the potential for significant adverse impacts during the construction period. The city, state, and federal regulations and policies that govern construction are described, followed by the anticipated construction schedule and types of activities likely to occur during construction. The types of construction equipment are also discussed, along with the number of workers and truck deliveries. Finally, the potential impacts from construction activity are assessed.

II. GOVERNMENTAL COORDINATION AND OVERSIGHT

Construction oversight involves several city, state, and federal agencies. **Table L-1** lists the primary involved agencies and their areas of responsibility. For projects in New York City, primary construction oversight lies with the New York City Department of Buildings ("DOB"), which ensures that construction projects meet the requirements of the New York City Building Code and that buildings are structurally, electrically, and mechanically safe. In addition, DOB enforces safety regulations to protect workers and the general public during construction: the areas of oversight include installation and operation of equipment such as cranes, sidewalk sheds, and safety netting and scaffolding. The New York City Department of Environmental Protection ("DEP") enforces the New York City Noise Code, reviews and approves any needed Remedial Action Work Plans ("RAWPs") and Construction Health and Safety Plans ("CHASP"), and regulates water disposal into the sewer system as well as abatement of hazardous materials. The City of New York Department of Sanitation ("DSNY") has regulatory and enforcement oversight of the storage, transport, and disposal of asbestos waste. The New York City Fire Department ("FDNY") 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 ("DOT")'s Office of Construction Mitigation and Coordination ("OCMC") reviews and approves any traffic lane and sidewalk closures. The New York City Landmarks Preservation Commission ("LPC") reviews any archaeological testing or monitoring that may be required. LPC also reviews and approves construction protection plans ("CPPs") and any monitoring measures necessary to prevent damage to historic structures.

At the state level, the New York State Department of Labor ("DOL") licenses asbestos workers. The New York State Department of Environmental Conservation ("DEC") regulates disposal of hazardous materials, and construction and operation of bulk petroleum and chemical storage tanks. At the federal level, the U.S. Environmental Protection Agency ("EPA") has wide-ranging authority over environmental matters, including air emissions, noise, hazardous materials, and the use of poisons, although much of the responsibility is delegated to the state level. The Occupational Safety and Health Administration ("OSHA") sets standards for work site safety and construction equipment.

Table L-1: Construction Oversite in New York City

Agency	Area(s) of Responsibility
New York City	
Department of Buildings (DOB)	Primary oversight for Building Code and site safety
Department of Parks and Recreation (NYC Parks)	Tree protection and removal
Department of Environmental Protection (DEP)	Noise, hazardous materials, dewatering, dust
Fire Department (FDNY)	Compliance with Fire Code, tank operation
Department of Transportation (DOT)	Traffic lane and sidewalk closures
Landmarks Preservation Commission (LPC)	Archaeological and historic architectural protection
New York State	
Department of Labor (DOL)	Asbestos workers
New York City Transit Authority (NYCTA)	Bus stop relocation; any subsurface construction within 200 feet of a subway
Department of Environmental Conservation (DEC)	Dewatering, hazardous materials, tanks, Stormwater Pollution Prevention Plan, Industrial SPDES, if any discharge into the Hudson River
United States	
Environmental Protection Agency (EPA)	Air emissions, noise, hazardous materials, toxic substances
Occupational Safety and Health Administration (OSHA)	Worker safety

III. CONCEPTUAL CONSTRUCTION PHASING AND SCHEDULE

With the Proposed Actions under the 2028 RWCDS, it is anticipated that the Project Area would be developed with two new buildings. The first new building, on the Applicant-owned Projected Development Site 1 (Queens Block 9649, Lots 17, 25, and 37), would total approximately 395,931-gsf and rise to 175 feet tall (17-stories). The second building, on the non-Applicant-owned Projected Development Site 2 (Queens Block 9649, Lots 42 and 44), would total approximately 134,225-gsf and also rise to 175 feet tall (17-stories).

At this time, there are no finalized construction programs or designs for the two Projected Development Sites. Actual construction methods and materials may vary, depending on how the construction contractors choose to implement work to be most cost effective, within the requirements set forth in bid, contracts, and construction documents. Construction specifications would require that construction contractors comply with applicable environmental regulations and obtain necessary permits for the duration of construction. In addition, construction under the Proposed Actions would be required to follow applicable federal, state, and local laws for building and safety, as well as the local noise ordinance, as appropriate. Therefore, for analysis purposes, a reasonable worst-case conceptual construction phasing and schedule for the development anticipated to occur under the Proposed Actions was established to illustrate how construction could occur over approximately the next four years. The conceptual construction schedule conservatively accounts for overlapping construction activities and simultaneously operating construction equipment, thus capturing the cumulative nature of potential construction impacts which would result at nearby receptors.

Table L-2 and **Figure L-1** presents the anticipated construction schedule for the two Projected Development Sites in the Project Area. As shown in **Figure L-1**, it is anticipated that the ULURP approval process would continue through 2025, with approval anticipated in the third quarter of 2025. To be conservative, an approval buffer period is assumed prior to the start of construction in the Project Area. As such, it is anticipated that construction on the Applicant-owned Projected Development Site 1 would begin in the second quarter of 2026 (Year 1), with the entire construction duration for both Projected Development Sites occurring over an approximately 2.5-year period into 2028 (Year 3).

Construction under the Proposed Actions would proceed in several stages, some of which would overlap, including: demolition, excavation, foundation, superstructure, exteriors, and interiors. These stages are described in greater detail below.

Table L-2: Conceptual Construction Schedule

Construction Task	Start Month	Finish Month	Approximate Duration
Projected Development Site 1 (Applicant-owned)			
Demolition / Excavation / Foundation	Year 1, Month 1	Year 1, Month 5	5 months
Building Superstructure / Exterior	Year 1, Month 6	Year 2, Month 17	12 months
Interior Fit-Out	Year 2, Month 18	Year 3, Month 30	13 months
Projected Development Site 2 (Non-Applicant-owned)			
Demolition / Excavation / Foundation	Year 2, Month 13	Year 2, Month 15	3 months
Building Superstructure / Exterior	Year 3, Month 16	Year 3, Month 22	7 months
Interior Fit-Out	Year 3, Month 23	Year 3, Month 30	8 months

IV. CONSTRUCTION DESCRIPTION

The following provides a description of the general construction practices and activities anticipated to occur following approval of the Proposed Actions.

General Construction Practices

Hours of Work

Construction would generally be carried out in accordance with New York City laws and regulations, which allow construction activities between 7:00 AM and 6:00 PM on weekdays. Construction work would typically begin at 7:00 AM on weekdays, with most workers arriving between 6:00 AM and 7:00 AM. Normally work would end at 3:30 PM, but it can be expected that, in order to complete certain critical tasks (e.g., finishing a concrete pour for a floor deck), the workday may occasionally be extended beyond normal work hours. Any extended workdays would generally last until approximately 6:00 PM and would not include all construction workers on-site, but only those involved in the specific task requiring additional work time.

While not expected to be frequent, weekend or night work may also be occasionally required for certain construction activities. Appropriate work permits from DOB would be obtained for any necessary work outside of normal construction hours and no work outside of normal construction hours would be performed until such permits are obtained. The numbers of workers and pieces of equipment in operation for night or weekend work would typically be limited to those needed to complete the particular authorized task. Therefore, the level of activity for any weekend or night work would be less than that of a normal workday.

Deliveries and Access

During construction, access to the construction areas would typically be fully controlled. Work areas would be fenced off, and limited access points for workers and trucks would be provided. Material deliveries to the construction sites would be controlled and scheduled. After work hours, the gates are closed and locked. Pedestrian circulation along the perimeter of the two Projected Development Sites as well as the number of moving lanes on streets adjacent to the two Projected Development Sites are expected to be maintained at all times during construction. Maintenance and Protection of Traffic ("MPT") plans would be developed as required by DOT. Approval and implementation of these plans would be coordinated with DOT's OCMC. Measures specified in the MPT plans that are typically implemented would include parking lane closures, safety signs, safety barriers, and construction fencing.

Public Safety

A variety of measures would typically be employed to ensure public safety during the construction, including sidewalk bridges to provide overhead protection; safety signs to alert the public about active construction work; safety barriers to ensure the safety of the public passing by construction areas; flag persons to control trucks entering and exiting the construction areas and/or to provide guidance for pedestrians and bicyclists safety; and safety nettings as the superstructure work advances upward to prevent debris from falling to the ground. All DOB safety requirements would be followed to ensure the safety of the community and the construction workers themselves.

Rodent Control

Construction contracts would typically include provisions for a rodent (i.e., mouse and rat) control program. Before the start of construction, the contractor would survey and bait the appropriate areas and provide proper site sanitation. During construction, the contractor would carry out a maintenance program, as necessary. Signage would be posted, and coordination would be conducted with appropriate agencies.

Description of Construction Activities

Prior to the commencement of construction, the work areas would typically be prepared for construction, including the installation of public safety measures such as barriers, netting, and signs. The construction areas would be fenced off. Worker and truck access points would be established, and existing street trees would be protected.

Construction would then proceed with the demolition, excavation, foundation, superstructure, exteriors, and interiors stages, which are discussed below.

Demolition

Before the commencement of demolition activities on the existing buildings on the two Projected Development Sites, the buildings would typically be surveyed for asbestos by a New York City-certified asbestos investigator and all asbestos-containing materials ("ACM") would be removed and disposed of in accordance with local, state, and federal requirements. Any activities with the potential to disturb lead-based paint ("LBP") would be performed in accordance with the applicable OSHA regulations (including federal OSHA regulation 29 CFR 1926.62—*Lead Exposure in Construction*). In addition, any suspected polychlorinated biphenyls ("PCB")-containing equipment that would be disturbed (such as fluorescent light ballasts) would be evaluated prior to disturbance. Unless labeling or test data indicate the contrary, such equipment would be assumed to contain PCBs, and would be removed and disposed of at properly licensed facilities in accordance with all applicable regulatory requirements.

Prior to demolition, any economically salvageable materials that could be reused would typically be removed. Then the buildings would be demolished using excavators with hoe ram attachments. Demolition activities would typically involve the use of jackhammers, compressors, and bobcats. Demolition debris would typically be sorted prior to being disposed at landfills to maximize recycling opportunities.

Excavation

Excavation work would typically begin with the installation of walls and berms to contain soil around the excavation area, and excavators would then be used to excavate soil. The soil would be loaded onto dump trucks for transport to a licensed disposal facility or stored for reuse on any portion of the two Projected Development Sites that may require fill. Excavation activities would also typically involve the use of bobcats, generators, compressors, and loaders.

DEWATERING

Water from rain and snow collected in the excavation areas during construction would be removed using a dewatering pump. If groundwater dewatering is required, it would be performed in accordance with DEP sewer use requirements.

Foundation

This stage would include the construction of the foundation and below-grade elements of the two new buildings. The foundation stage may include pile installation activities with the use of drill rigs. Concrete trucks would be used to pour the foundations. Foundation activities would also typically involve the use of bar bending machines and concrete vibrators.

Superstructure

The superstructure work would include the framework for the two new buildings, such as beams, slabs, and columns. Construction of the interior structure—or core—of the buildings would include elevator shafts; vertical risers for mechanical, electrical, and plumbing systems; electrical and mechanical equipment rooms; core stairs; and restroom areas. A crane would be used to lift structural components and other large material during the superstructure work. Superstructure activities would also typically include the use of bar bending machines, concrete vibrators, concrete finishers, forklifts, and a variety of trucks. In addition, temporary construction elevators (hoists) would be used for the vertical movement of workers and materials during superstructure work.

Exteriors

During this stage of construction, the exterior envelope systems of the two new buildings would be installed. The exterior units would typically be transported via a hoist to the appropriate floors for installation or lifted into place by a crane. This stage of construction would typically overlap with a portion of the superstructure work.

Interiors

Activities during the interiors stage would include the construction of interior partitions, installation of lighting fixtures and interior finishes (e.g., flooring, painting, etc.), and mechanical and electrical work, such as the installation of elevators and lobby finishes. Final cleanup and touchup of the buildings and final building systems (e.g., electrical systems, fire alarms, plumbing systems, etc.) testing and inspections would be part of this stage of construction. Equipment used during interiors and finishing would typically include a hoist, welders, and a variety of small handheld tools.

Interiors and finishing would typically be the quietest period of construction in terms of its effect on the public because most of the construction activities would occur inside the buildings with the façades substantially completed and the two new buildings enclosed.

Number of Construction Workers and Material Deliveries

Tables L-3, **L-4**, and **L-5** show the estimated average daily numbers of workers and deliveries for the Applicant-owned Projected Development Site 1, the non-Applicant-owned Projected Development Site 2, and the combination of both Projected Development Sites under the Proposed Actions, by calendar

quarter for all construction activities. For the Proposed Actions, the combined peak construction worker vehicle and truck trip generation would occur during the second quarter of Year 2 of construction (2027). The average number of workers throughout the construction period would be 150 workers per day. The peak number of workers would be 200 per day in the third quarter of Year 2 of construction (2027). For truck trips, the average number of trucks would be 17 trucks per day, and the peak would occur in the second quarter of Year 2 construction (2027), with 28 trucks per day.

Table L-3: Average Number of Daily Workers and Trucks by Quarter – Projected Development Site 1

Year	Year 1 (2026)				Year 2 (2027)			
Quarter	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Workers	0	43	84	**166**	**166**	**166**	151	120
Trucks	0	15	17	**21**	**21**	**21**	16	7
a								
Year	Year 3 (2028)				Average		Peak	
Quarter	Q1	Q2	Q3	Q4				
Workers	120	120	120	0	126		**166**	
Trucks	7	7	7	0	14		**21**	

Table L-4: Average Number of Daily Workers and Trucks by Quarter – Projected Development Site 2

Year	Year 1 (2026)				Year 2 (2027)			
Quarter	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Workers	0	0	0	0	0	21	**49**	**49**
Trucks	0	0	0	0	0	**7**	**7**	**7**
a								
Year	Year 3 (2028)				Average		Peak	
Quarter	Q1	Q2	Q3	Q4				
Workers	44	41	41	0	24		**49**	
Trucks	4	2	2	0	3		**7**	

Table L-5: Average Number of Daily Workers and Trucks by Quarter – Project Area (Combined)

Year	Year 1 (2026)				Year 2 (2027)			
Quarter	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Workers	0	43	84	166	166	187	**200**	169
Trucks	0	15	17	21	21	**28**	23	14
a								
Year	Year 3 (2028)				Average		Peak	
Quarter	Q1	Q2	Q3	Q4				
Workers	164	161	161	0	150		**200**	
Trucks	11	9	9	0	17		**28**	

V. PRELIMINARY ASSESSMENT

Transportation

Traffic

Construction activities would generate construction worker auto trips and truck trips. As shown in **Table L-5**, the number of daily workers would peak at 200 during the third quarter of 2027, and the number of daily construction trucks would peak at 28 during the second quarter of 2027. The combined peak construction worker vehicle and truck trip generation would occur during the second quarter of Year 2 of construction (2027). This period represents the peak days of work and is used for the preliminary transportation assessment as many days during the construction period would have fewer construction workers and trucks on each site.

Similar to other construction projects in New York City, most of the construction activity at the Projected Development Sites is expected to take place during the typical construction shift hours of 7:00 AM to 3:30 PM. The estimated daily vehicle trips were distributed throughout the workday based on projected work shift allocations and conventional arrival/departure patterns of construction workers and trucks. While construction truck trips would be made throughout the day (with more trips typically being made during the early morning hours), construction workers would typically commute during the hours before and after the standard work shift. For analysis purposes, each truck delivery was assumed to result in two truck trips during the same hour (one "in" and one "out"), and each truck trip was assumed to have a passenger car equivalent (PCE) of 2.0, consistent with 2021 *CEQR Technical Manual* guidance. For construction workers, the majority (80 percent) of arrival and departure trips are expected to take place during the hour before and after each shift. For construction trucks, deliveries would typically peak during the early morning hours, with an estimated 25 percent overlapping with construction worker arrival traffic. Based on a 2017 survey of construction workers at the Hallets Point site in Queens and the Project Area's proximity to public transit, it is anticipated that construction workers' travel to the Projected Development Sites would be primarily split between those using autos (approximately 48 percent by private autos and approximately three percent by taxis/rideshare services) and those using public transportation (approximately 40 percent by subway and approximately four percent by bus), with a small percentage walking/biking (approximately five percent). It is also estimated that auto occupancy would average approximately 1.50 persons per vehicle. These trip generation assumptions were used as the basis for assessing the potential transportation-related impacts during construction.

Table L-6 shows a forecast of hourly construction worker auto and construction truck trips during the second quarter of 2027 based on the assumptions described above. As shown in **Table L-6**, it is estimated that peak construction activities would result in 84 PCEs between 6:00 AM to 7:00 AM during the second quarter of 2027. For the 3:00 PM to 4:00 PM period, there would be a maximum of 56 PCEs associated with construction activities.

Table L-6: 2027 (Q2) Peak Construction Vehicle Trip Projections (in PCEs)

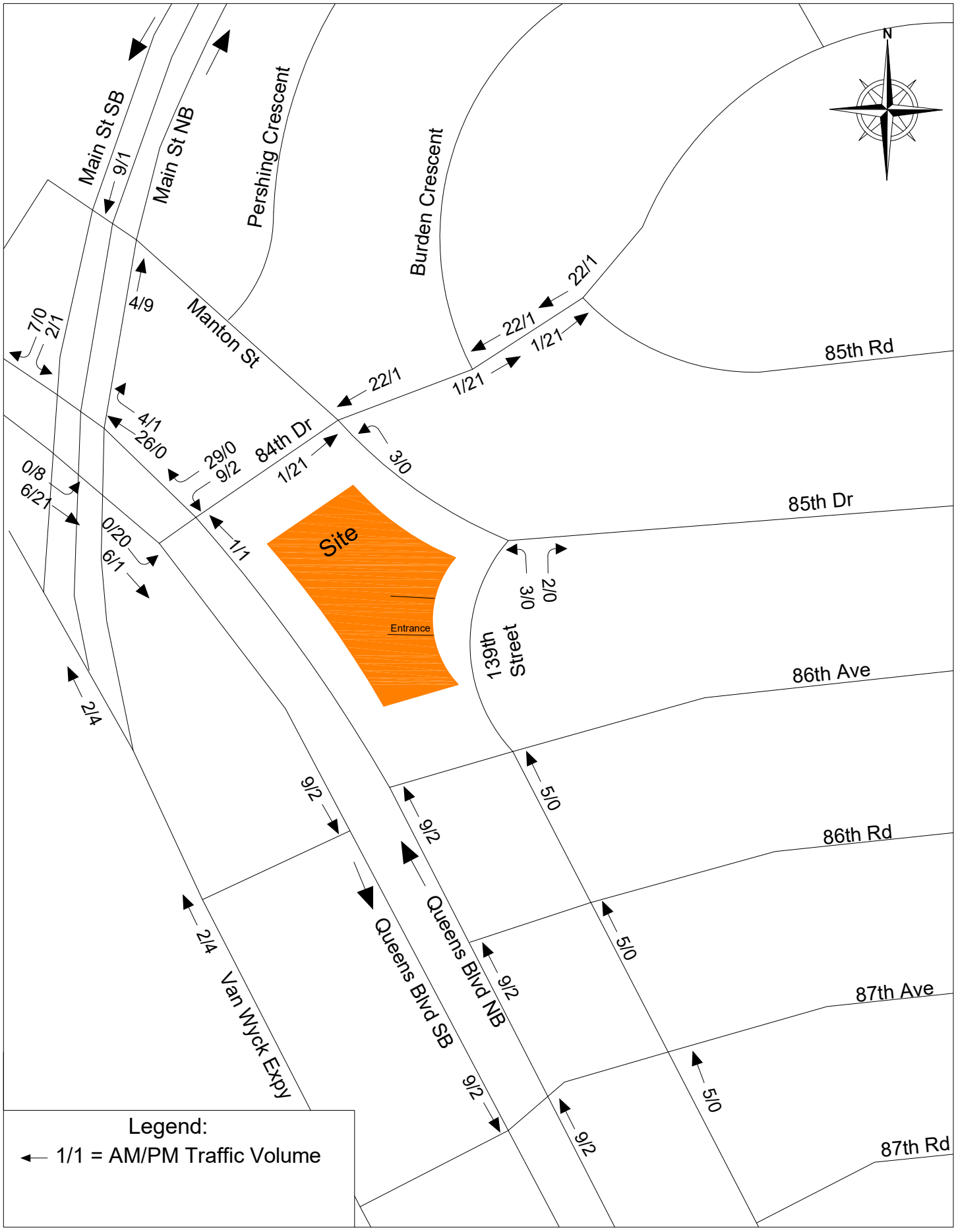
Trip Distribution Percentage					Vehicle Trips by Peak Hour											
	Worker		Truck		Auto			Taxi			Truck			Total Vehicle Trips		
	In	Out	In	Out	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
6-7 A	80%	0%	25%	25%	48	0	48	3	3	6	15	15	30	66	18	84
7-8 A	20%	0%	10%	10%	12	0	12	1	1	2	6	6	12	19	7	26
8-9 A	0%	0%	10%	10%	0	0	0	0	0	0	6	6	12	6	6	12
9-10 A	0%	0%	10%	10%	0	0	0	0	0	0	6	6	12	6	6	12
10-11 A	0%	0%	10%	10%	0	0	0	0	0	0	6	6	12	6	6	12
11-12 P	0%	0%	10%	10%	0	0	0	0	0	0	6	6	12	6	6	12
12-1 P	0%	0%	10%	10%	0	0	0	0	0	0	6	6	12	6	6	12
1-2 P	0%	0%	5%	5%	0	0	0	0	0	0	3	3	6	3	3	6
2-3 P	0%	5%	5%	5%	0	3	3	0	0	0	3	3	6	3	6	9
3-4 P	0%	80%	2.5%	2.5%	0	48	48	3	3	6	1	1	2	4	52	56
4-5 P	0%	15%	2.5%	2.5%	0	8	8	1	1	2	1	1	2	2	10	12
5-6 P	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0	0	0	0

As shown in **Table L-6**, as the 6:00 AM to 7:00 AM and 3:00 PM to 4:00 PM construction peak hours would exceed the 50-trip threshold, a Level 2 screening assessment was prepared. **Figure L-2** shows the AM (6:00 AM to 7:00 AM) and PM (3:00 PM to 4:00 PM) vehicle trip assignments that would be generated during the construction peak hours under the Proposed Actions. As shown in **Figure L-2**, no intersections would experience an increase of 50 or more construction-generated vehicle trips during the 6:00 AM to 7:00 AM construction peak hour or during the 3:00 PM to 4:00 PM construction peak hour. As peak traffic from construction trucks and worker vehicles would not exceed the 2021 *CEQR Technical Manual* threshold for a detailed traffic analysis at any intersection, significant adverse traffic impacts are not expected to occur in the construction peak hours during the second quarter of 2027 peak construction period.

Curb Lane Closures and Staging

Construction staging would most likely occur within the two Projected Development Sites and may extend within portions of sidewalks, curbs, and travel lanes of public streets adjacent to the two Projected Development Sites. Like many other construction projects in New York City, temporary curb lane and sidewalk closures are expected to be required adjacent to the two Projected Development Sites, which would have dedicated gates, driveways, or ramps for delivery vehicle access. However, it is anticipated that construction activity would mostly take place within the two Projected Development Sites. Any sidewalk or street closures would require the approval of DOT's OCMC, the entity that ensures critical travel arteries are not interrupted, especially in peak travel periods.

Flaggers are expected to be present at active driveways in the construction areas of the two Projected Development Sites, where needed, to manage the access and movement of trucks to ensure there is no on-street queuing. Some deliveries may also occur along the perimeter of the two Projected Development Sites within delineated closed-off areas for concrete pour or steel delivery.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← 1/1 = AM/PM Traffic Volume

Transit

As discussed above and shown in **Table L-5**, in the construction peak period during the second quarter of 2027, approximately 187 construction workers would travel to and from the two Projected Development Sites each day. As also discussed above, a total of approximately 44 percent of construction workers are expected to travel to and from the two Projected Development Sites by public transit (subway and bus) and five percent by walking. In addition, it is estimated that approximately 80 percent of all construction workers would arrive and depart in the peak hour before and after each shift. Therefore, it is estimated that approximately 83 construction workers would travel to and from the Projected Development Sites via public transit each day, and that approximately 66 of these trips would occur in each of the 6:00 AM to 7:00 AM and 3:00 PM to 4:00 PM construction peak hours.

As peak transit demand from construction workers on the Projected Development Sites would not meet the 200 trips/hour 2021 *CEQR Technical Manual* analysis threshold for a detailed subway analysis, nor the 50 trips/hour/direction analysis threshold for a detailed bus analysis, significant adverse impacts to subway and bus services are not expected to occur in the construction peak period during the second quarter of 2027.

Pedestrians

As discussed previously, it is anticipated that approximately 187 construction workers would travel to and from the Projected Development Sites in the construction peak period during the second quarter of 2027. An estimated 146 of these workers (80 percent, excluding those traveling via taxi/rideshare) would arrive and depart on the pedestrian network surrounding the Project Area in the peak hour before and after each shift. Therefore, peak pedestrian demand from construction workers on the Projected Development Sites would not meet the 200 trips/hour 2021 *CEQR Technical Manual* analysis threshold for a detailed pedestrian analysis, and significant adverse pedestrian impacts are not expected to occur during the construction peak period during the second quarter of 2027. During construction, where sidewalk closures are required, adequate protection or temporary sidewalks would be provided in accordance with DOT's OCMC requirements.

Parking

Of the estimated 187 construction workers who would travel to the Projected Development Sites during the second quarter of 2027 peak construction period, approximately 48 percent are expected to travel by private auto. Based on an average auto occupancy of 1.50 persons per auto, the maximum daily parking demand from construction workers would total approximately 60 spaces. As it is assumed that there would be no on-site parking until full completion of the two new buildings within the Project Area, it is anticipated that construction workers would park on-street or in nearby off-street public parking facilities located in proximity to the Projected Development Sites during this period.

Under 2021 *CEQR Technical Manual* guidance, the inability of the Proposed Actions or the surrounding area to accommodate future parking demands would be considered a parking shortfall but would generally not be considered significant due to the magnitude of available alternative modes of transportation (including the E and F subway routes). Therefore, should any parking shortfall occur due to incremental demand from construction workers during the second quarter of 2027 peak construction period, it would be short-term and not be considered a significant parking shortfall pursuant to 2021 *CEQR Technical Manual* guidance.

Air Quality

Construction under the Proposed Actions would require use of both non-road construction equipment and on-road vehicles, which results in emissions that have the potential to affect air quality. Non-road construction equipment includes equipment operating on-site, such as excavators, loaders, and cranes. On-road vehicles include construction delivery trucks, dump trucks, concrete trucks, and construction worker vehicles arriving at and departing from the two Projected Development Sites, as well as operating on-site, within the two Projected Development Sites. In addition, emissions from dust-generating construction activities (i.e., truck loading and unloading operations) also have the potential to affect air quality. The 2021 *CEQR Technical Manual* lists several factors for consideration in determining whether a quantified on-site and/or off-site construction impact assessment for air quality is appropriate. These factors include the use of emission control measures, the duration and intensity of construction activities, the location of nearby sensitive receptors, and project-generated, construction-related vehicle trips. This guidance was followed to assess the potential for construction air quality impacts from the Proposed Actions.

According to the 2021 *CEQR Technical Manual* screening thresholds, if 170 or more project-generated vehicles pass through an intersection in any peak hour (for CO impact), or if a project would result in greater than 12 to 23 heavy duty diesel vehicle ("HDDV") trips or its equivalent vehicle emissions based on the type of road (for $PM_{2.5}$ impact), there is the potential for mobile source air quality impacts and a detailed analysis is required. Using the 2021 *CEQR Technical Manual* screening thresholds for mobile sources, an intersection mobile source screening analysis was performed for the Proposed Actions' construction traffic for intersections proximate to the two Projected Development Sites.

As shown in **Table L-5**, the number of daily workers would peak at 200 during the third quarter of 2027 while the number of daily construction trucks would peak at 28 during the second quarter of 2027. The combined peak construction worker vehicle and truck trip generation would occur during the second quarter of Year 2 of construction (2027). As such, this period was used for the preliminary construction transportation assessment. **Table L-6** shows a forecast of hourly construction worker auto and construction truck trips during the second quarter of 2027. It is estimated that peak construction activities would result in 84 PCEs between 6:00 AM and 7:00 AM during the second quarter of 2027. The number of total vehicle trips not converted to PCEs is approximately 66 total vehicle trips (15 truck trips and 51 auto/taxi trips). Therefore, the Proposed Actions' construction activities would not generate 170 or more vehicles through an intersection in any peak hour. As such, a detailed mobile source air quality analysis for CO emissions is not warranted for the Proposed Actions' construction traffic.

The $PM_{2.5}$ equivalent truck calculation in vehicular emission screen ranges from 12 to 23 HDDVs depending on the type of roadway. As described above, it is estimated that peak construction activities would result in approximately 66 total vehicle trips (15 truck trips and 51 auto/taxi trips) between 6:00 AM and 7:00 AM during the second quarter of 2027. **Figure L-2** shows the 6:00 AM to 7:00 AM construction peak hour vehicle trip assignment that would be generated during the construction peak period of the Proposed Actions. During the construction peak period, it is anticipated that the intersection of Queens Boulevard and 84th Drive would experience the greatest number of construction peak hour vehicle trips (18 truck trips and 27 auto/taxi trips). All autos were assumed to be LDGT1 class vehicles, and all trucks were assumed to be HDDV7 class vehicles, based on guidance from DCP. **Table L-7** shows the peak hour construction traffic generated by the Proposed Actions (by vehicle type) and the 2021 *CEQR Technical Manual* Equivalent Truck Calculation.

Table L-7: 2024(Q4)/2025(Q1) Construction Peak Hour Construction Traffic Volumes

Intersection	Roadway Classification (Threshold HDDVs screen)[1]	Peak-Hour Period	Trucks Per Hour	Vehicle Per Hour	Equivalent Truck	Equivalent Truck Threshold	Pass/Fail
Queens Boulevard and 84th Drive	Principal Arterial	6-7 AM	18	27	14	23	Pass

Note: [1] Roadway classification obtained from the New York State Department of Transportation (NYSDOT) Functional Class Maps <https://www.dot.ny.gov/gisapps/functional-class-maps> (January 2024).

As shown in **Table L-7**, the Proposed Actions' $PM_{2.5}$ equivalent truck calculation in vehicular emissions does not exceed the HDDVs screening threshold criterion for the 6:00 AM and 7:00 AM construction traffic peak hour for the intersection of Queens Boulevard and 84th Drive. As such, a detailed mobile source air quality analysis for $PM_{2.5}$ emissions is not warranted for Proposed Actions' construction traffic. Therefore, the Proposed Actions would not result in significant adverse mobile source construction air quality impacts.

According to the 2021 *CEQR Technical Manual*, for mobile sources related to construction activities, if the operational air quality analysis indicates that the project would not result in significant mobile source air quality impacts, and the vehicular trip generation for construction activities would be less than the vehicular trip generation for the project once operational, then a more detailed assessment of mobile sources related to construction activities is not necessary. In this case, the analysis may be qualitative, describing how the determination of no significant impact was reached. However, if the construction peak hour would generate significantly more vehicles than the project peak hour or if significant air quality impacts are expected under the With-Action condition, more detailed analyses may be necessary for mobile sources related to construction activities.

As discussed in **Attachment J, "Air Quality,"** the Proposed Actions would not result in significant adverse mobile source air quality impacts at the local scale, in particular, at the intersection of 139th Street and 85th Drive/Manton Street, which was analyzed for a detailed microscale analysis. Therefore, a detailed mobile source construction air quality analysis would not be required for mobile sources related to construction activities induced by the Proposed Actions. Further, although the vehicular trip generation for construction activities would be higher than that of the vehicular trip generation for the With-Action condition RWCDS, the construction peak hour would not generate significantly more vehicles than the project peak hour. As shown in Table 4 in **Appendix 3**, the With-Action condition RWCDS for the Proposed Actions would generate approximately 54 net vehicle trips in the weekday AM peak hour. As described above, it is estimated that peak construction activities would result in approximately 66 total vehicle trips in the 6:00 AM and 7:00 AM construction peak hour during the second quarter of 2027, or approximately 20 percent higher volumes than during the project peak hour. As such, the Proposed Actions would not result in significant adverse mobile source construction air quality impacts.

While the overall construction activities are anticipated to occur over a period of approximately 2.5 years, the approach and procedures for construction activities at the two Projected Development Sites would be typical of the methods utilized in other building construction projects throughout New York City and therefore would not be considered out of the ordinary in terms of intensity. Construction sources would move around the two Projected Development Sites over the construction period such that the air pollutant concentration increments would not persist in any single location. Furthermore, fit-out activities would generally occur within enclosed buildings, thereby shielding nearby sensitive receptors from

construction activities. Therefore, emissions during the fit-out stage are also less likely to directly affect nearby sensitive receptor locations.

Overall, emissions associated with construction activities at the two Projected Development Sites would likely be lower than a typical project due to the implementation of emission control measures during construction (see "Emission Control Measures"). With implementation of the emission control measures as detailed below, the Proposed Actions would not likely cause significant adverse construction air quality impacts and would not require further analysis.

Emission Control Measures

Measures would be taken to reduce pollutant emissions during construction in accordance with all applicable laws, regulations, and building codes. These include dust suppression measures and idling restrictions:

- *Clean Fuel*. Ultra-low-sulfur diesel ("ULSD")[1] fuel will be used exclusively for all diesel engines throughout the two Projected Development Sites.

- *Dust Control.* To minimize dust emissions from construction activities, a dust control plan, including a robust watering program, would be required as part of contract specifications. For example, all trucks hauling loose material would be equipped with tight-fitting tailgates and their loads securely covered prior to leaving the two Projected Development Sites; and water sprays would be used for all demolition, excavation, and transfer of soils to ensure that materials would be dampened as necessary to avoid the suspension of dust into the air. All measures required by the portion of the DEP Construction Dust Rules regulating construction-related dust emissions would be implemented.

- *Idling Restriction.* In accordance with Title 24, Chapter 1, Subchapter 7, Section 24-163 of the Administrative Code of the City of New York, the local law restricting unnecessary idling on roadways, truck idle time will be restricted to three (3) minutes except for vehicles that are 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.

- *Diesel Equipment Reduction*. Electrically powered equipment would be utilized over diesel-powered and gasoline-powered versions of that equipment to the extent practicable.

Overall, the emissions control measures identified above are expected to significantly reduce air pollutant emissions during construction under the Proposed Actions.

[1] 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 ("ppm").

Potential Air Quality Effects during Construction

On-Site Sources

DURATION AND INTENSITY OF CONSTRUCTION ACTIVITIES

As shown in **Figure L-1**, it is anticipated that construction on the Applicant-owned Projected Development Site 1 would begin in the second quarter of 2026, with the entire construction duration for both Projected Development Sites occurring over an approximately 2.5-year period from 2026 to 2028. At Projected Development Site 1, total construction duration would occur over approximately 30 months, including approximately five months for demolition, excavation, and foundation work, 12 months for building superstructure and exterior work, and 13 months for interior fit-out. At Projected Development Site 2, total construction duration would occur over approximately 18 months, including approximately three months for demolition, excavation, and foundation work, seven months for building superstructure and exterior work, and eight months for interior fit-out.

As also shown in **Figure L-1**, it is expected that there would be overlap in construction schedules at the two Projected Development Sites. It is expected that demolition, excavation, and foundation work at Projected Development Site 2 would commence when building superstructure and exterior work is still underway at Projected Development Site 1. As indicated in **Figure L-1**, construction work at the two Projected Development Sites is estimated to overlap for approximately 18 months; it is anticipated that the two new buildings on the two Projected Development Sites would both be completed in the third quarter of 2028. Therefore, no on-site sensitive receptors would be completed at Projected Development Site 1 while construction activities are underway at Projected Development Site 2.

Construction activity associated with the Proposed Actions, as is the case with any construction project, would result in temporary disruption to the surrounding area. While the overall construction activities associated with the Proposed Actions are anticipated to occur over a period of approximately 2.5 years, the most intense construction activities in terms of air pollutant emissions from diesel engines (i.e., demolition, excavation, and foundation construction activities where the largest number of large non-road diesel engines such as excavators, concrete mixing trucks, and concrete pumps would be employed) would occur over a total period of approximately eight (8) months. At Projected Development Site 1, demolition, excavation, and foundation construction activities would occur over a five-month period in 2026. At Projected Development Site 2, demolition, excavation, and foundation construction activities would occur over a three-month period in 2027. During the demolition, excavation, and foundation construction activities at the two Projected Development Sites, diesel engines would only be in use during a portion of these periods. The other stages of construction, including superstructure, exteriors, and interiors work would result in substantially lower air emissions since these stages would require fewer pieces of heavy-duty diesel equipment. These later stages of construction would not involve soil disturbance activities and therefore would result in lower dust emissions. In addition, interior construction work would generally occur within enclosed buildings shielded from nearby sensitive receptors.

The approach and procedures for constructing the two new buildings within the Project Area would be typical of the methods utilized in other building construction projects throughout New York City and therefore would not be considered out of the ordinary in terms of intensity. The air pollutant emission levels associated with construction activities at the two Projected Development Sites are typical of ground-up building construction in New York City that would require limited demolition, limited

excavation, and limited foundation construction (where large equipment such as excavators, concrete mixing trucks, and concrete pumps would be employed).

LOCATION OF NEARBY SENSITIVE RECEPTORS

The area surrounding the two Projected Development Sites contains a mixture of sensitive uses, including residential buildings and community facility/institutional uses. The two buildings on the two Projected Development Sites would both be completed in the third quarter of 2028. Therefore, no new sensitive receptors would be completed at Projected Development Site 1 while construction activities are underway at Projected Development Site 2.

As discussed above under "Emission Control Measures," measures would be taken to reduce pollutant emissions during construction in accordance with all applicable laws, regulations, and building codes. For example, a robust watering program would be implemented to minimize dust emissions from construction activities. Furthermore, construction sources would move throughout the two Projected Development Sites over the construction period, which would reduce the air quality effects of construction to any one location. Moreover, construction activities at the two Projected Development Sites would move from one area (construction phase) to another such that no portion of the existing adjacent sensitive receptors would be subject to the full effects of construction for the entire construction period. The construction areas within the Project Area would be fenced off with solid fencing, which would serve as a buffer between the emission sources, which would mostly operate at or near ground level, and nearby ground-level sensitive receptor locations. Therefore, potential concentration increments from on-site construction sources at nearby existing sensitive receptor locations would be substantially reduced. Due to these reasons, the Proposed Actions would not result in any significant adverse construction air quality impacts from on-site construction sources.

Noise

Potential impacts on community noise levels during construction could result from the operation of construction equipment and from construction and delivery vehicles traveling to and from construction sites. Noise levels at a given location are dependent on the type and quantity of construction equipment being operated, the acoustical utilization factor of the equipment (i.e., the percentage of time the equipment is operating at full power), the distance from the construction sites, and any shielding effects (e.g., from structures such as walls or barriers). Because the location of the construction activities relative to noise sensitive receptor locations would vary over the course of the construction period, as would the amount and type of construction equipment, the level of noise experienced at each noise sensitive receptor would also vary during this period. The most noise intensive construction activities would not occur every day or every hour on those days that they would occur. During hours when the loudest pieces of construction equipment are not in use, noise sensitive receptors would experience lower construction noise levels. Construction noise levels would fluctuate during the construction period at each noise sensitive receptor, with the greatest levels of construction noise occurring for limited periods.

Noise Reduction Measures

Construction noise is regulated by the requirements of the New York City Noise Control Code (also known as Chapter 24 of the Administrative Code of the City of New York, or Local Law 113) and DEP's Notice of Adoption of Rules for Citywide Construction Noise Mitigation (also known as Chapter 28). These requirements mandate that specific construction equipment and motor vehicles meet specified noise

emission standards; that construction activities be limited to weekdays between the hours of 7:00 AM and 6:00 PM; and that construction materials be handled and transported in such a manner as not to create unnecessary noise. For work performed on weekends and after hours, permits would be required, as specified in the New York City Noise Control Code. As required under the New York City Noise Control Code, site-specific noise mitigation plans for construction under the Proposed Actions would be developed and implemented that may include source and path controls. Future noise control plans are expected to include such measures as avoiding unnecessary evening construction and truck idling. A copy of noise mitigation plans would also be kept at the construction sites for compliance review by DOB and DEP.

Noise control measures would typically include a variety of source and path controls. In terms of source controls (i.e., reducing noise levels at the source or during the most sensitive time periods), the following measures would be implemented in accordance with NY regulations:

- Equipment that meets the sound level standards specified in Subchapter 5 of the New York City Noise Control Code would be used from the start of construction.

- As early in the construction period as logistics would allow, diesel- or gas-powered equipment would be replaced with electrical-powered equipment such as pumps, compressors, and hoists (i.e., early electrification) to the extent feasible and practicable.

- Where feasible and practical, construction sites would be configured to minimize back-up alarm noise. In addition, all trucks would not be allowed to idle for more than three (3) minutes at the construction sites based upon New York City Local Law.

- Contractors and subcontractors would be required to properly maintain their equipment and mufflers.

In terms of path controls (e.g., placement of equipment, implementation of barriers or enclosures between equipment and noise sensitive receptors), the following measures for construction would be implemented in accordance with NY regulations:

- Where logistics allow, noisy equipment, such as cranes, concrete mixing trucks, concrete pumps, and delivery trucks, would be located away from and shielded from noise sensitive receptor locations.

- Noise barriers would be utilized to provide shielding (i.e., the construction sites would have perimeter barriers of at least eight [8] feet in height).

- Path noise control measures (i.e., portable noise barriers, panels, enclosures, and acoustical tents, where feasible) would be required for certain dominant noise equipment (i.e., generators, jack hammers, pile drivers, and pumps) to the extent feasible and practical, where this analysis indicates there may be a potential for a significant adverse impact. The details to construct portable noise barriers, enclosures, tents, etc., are provided in DEP's Rules for Citywide Construction Noise Mitigation.

Potential Noise Effects during Construction

As shown in **Figure L-1**, it is anticipated that construction on the Applicant-owned Projected Development Site 1 would begin in the second quarter of 2026, with the entire construction duration for both Projected Development Sites occurring over an approximately 2.5-year period from 2026 to 2028. At Projected Development Site 1, total construction duration would occur over approximately 30 months, including approximately five months for demolition, excavation, and foundation work, 12 months for building superstructure and exterior work, and 13 months for interior fit-out. At Projected Development Site 2, total construction duration would occur over approximately 18 months, including approximately three months for demolition, excavation, and foundation work, seven months for building superstructure and exterior work, and eight months for interior fit-out.

As described in **Attachment K, "Noise,"** existing noise levels at Receptor Locations 1, 2, 3, and 4 surrounding the Project Area are in the "Marginally Acceptable" category in terms of 2021 *CEQR Technical Manual* noise exposure guidance. Noise levels at Receptor Location 3, located on Queens Boulevard between 84th Drive and 86th Avenue, adjacent to the two Projected Development Sites, are in the "Marginally Unacceptable" category in terms of 2021 *CEQR Technical Manual* noise exposure guidance.

MOBILE CONSTRUCTION NOISE SOURCES

Throughout the construction period, vehicles, including construction-related trucks and vehicles driven by construction workers, would travel to and from the two Projected Development Sites. Most of these vehicles would be expected to use Queens Boulevard and 84th Drive to access the two Projected Development Sites. Considering the construction vehicle trip projections shown above and the existing traffic volumes at these thoroughfares, construction traffic would not likely substantially increase the ambient noise levels to cause significant adverse construction noise impacts. Farther away from the two Projected Development Sites, construction-related trucks and vehicles would be distributed throughout the surrounding street network, and the amount of construction-related traffic would be low in comparison to existing traffic levels along these roadways. Consequently, construction-related traffic would not have the potential to result in significant adverse impacts at noise sensitive receptors further away from the two Projected Development Sites.

ON-SITE CONSTRUCTION NOISE SOURCES

Although the overall construction duration on the two Projected Development Sites is anticipated to be approximately 2.5 years, the most noise intensive construction activities (demolition, excavation, and foundation construction activities) are anticipated to occur over a total period of approximately eight (8) months. At Projected Development Site 1, demolition, excavation, and foundation construction activities would occur over a five-month period in 2026. At Projected Development Site 2, demolition, excavation, and foundation construction activities would occur over a three-month period in 2027. Therefore, these periods of noise intensive construction activities would not overlap.

There are existing noise sensitive receptor locations adjacent to the two Projected Development Sites; as such, the distance between adjacent noise sensitive receptors and the nearest construction work area would be maximized, where feasible, to reduce the potential for construction-related noise impacts. In addition, to the extent practicable, best efforts would be made to stage construction activities within the two Projected Development Sites, and perimeter fencing would be erected to shield noise emitted from construction activities. Further, it is anticipated that the two buildings on the two Projected Development Sites would both be completed in the third quarter of 2028. Therefore, no on-site sensitive receptors

would be completed at Projected Development Site 1 while construction activities are underway at Projected Development Site 2. As such, no on-site sensitive receptors would have the potential to experience significant adverse construction noise impacts from construction activity within the two Projected Development Sites.

Although overall construction induced by the Proposed Actions would occur over an approximately 2.5-year period to develop two projected buildings, construction noise impact from each new building would be limited and partial to the overall construction schedules and as construction would comply with NY regulations, the Proposed Actions would not likely cause significant adverse construction noise impacts and would not require further analysis.

Vibration

Construction activities have the potential to result in vibration levels that may in turn result in structural or architectural damage, and/or annoyance or interference with vibration-sensitive activities. In general, vibratory levels at a receiver are a function of the source strength (which in turn is dependent upon the construction equipment and methods utilized), distance between the equipment and the receiver, characteristics of the transmitting medium, and receiver building construction. Construction equipment operation causes ground vibrations, which spread through the ground and decrease in strength with distance. Vehicular traffic, even in locations close to major roadways, typically does not result in perceptible vibration levels unless there are discontinuities in the roadway surface. With the exception of the case of fragile and possibly historically significant structures or buildings, generally construction activities do not reach the levels that can cause architectural or structural damage but can rise to levels that may be perceptible and annoying in buildings or structures (i.e., elevated subway structures) close to a construction site. Localized increases in vibration associated with construction facilitated by the Proposed Actions would be temporary.

The New York City Building Code provides some measures of protection for all properties against accidental damage from adjacent construction by requiring that all buildings, lots, and service facilities adjacent to foundation and earthwork areas be protected and supported. Additional protective measures apply to NYCL-designated and S/NR-listed historic buildings located within 90 linear feet of a proposed construction site. For these structures, DOB's Technical Policy and Procedure Notice ("TPPN") #10/88 applies. TPPN #10/88 supplements the standard building protections afforded by the New York City Building Code by requiring, among other things, a monitoring program to reduce the likelihood of construction damage to adjacent NYCL-designated or S/NR-listed resources (within 90 linear feet) and to detect at an early stage the beginnings of damage so that construction procedures can be changed. The nearest designated resource to the two Projected Development Sites is the S/NR-listed Maple Grove Cemetery, which is located at approximately 580 feet from the two Projected Development Sites at its closest point. This is well beyond the 90 linear feet maximum distance at which an adverse physical impact may be significant, as defined by DOB. For these reasons, the Proposed Actions would not result in any potential significant adverse vibration impacts during construction.

Other Technical Areas

Land Use and Neighborhood Character

According to the 2021 *CEQR Technical Manual*, a construction impact analysis for land use and neighborhood character is typically needed if construction would require continuous use of property for

an extended duration, thereby having the potential to affect the nature of the land use and character of the surrounding neighborhood. A land use and neighborhood character assessment for construction impacts examines construction activities that would occur on a particular construction site (or portions of a construction site) and their duration. The analysis determines whether the type and duration of the activities would affect neighborhood land use patterns or neighborhood character. For example, a single property might be used for staging for several years, resulting in a "land use" that would be industrial in nature. Depending upon the nature of existing land uses in the surrounding area, the use of a single piece of property for an extended duration and its compatibility with neighboring properties may be assessed to determine whether it would have a significant adverse impact on the surrounding area.

Construction activities associated with the Proposed Actions would not alter land uses surrounding the two Projected Development Sites. As is typical with construction projects, during periods of peak construction activity there would be some disruption to the nearby area. There would be construction trucks and construction workers coming to and from the two Projected Development Sites. There would also be noise, sometimes intrusive, from demolition, excavation, and foundation activities, as well as trucks and other vehicles backing up, loading, and unloading. These disruptions would be temporary in nature and would have limited effects on land uses within the surrounding area, particularly as most construction activities would take place within the two Projected Development Sites. In addition, throughout the construction period, measures would be implemented to control noise and dust on the two Projected Development Sites, including the erection of construction fencing and barriers. The fencing and barriers would reduce potentially undesirable views of the construction sites and buffer noise emitted from construction activities. Since none of these impacts would be continuous or ultimately permanent, they would not create significant adverse impacts on land use patterns or neighborhood character in the surrounding area. Therefore, it is expected that such impacts would be temporary and would not impact neighborhood character. Therefore, no significant construction impacts to land use and neighborhood character are expected as a result of the Proposed Actions and further assessment is not warranted.

Socioeconomic Conditions

According to the 2021 *CEQR Technical Manual*, construction impacts to socioeconomic conditions are possible if a project would entail construction of a long duration that could affect access to and thereby viability of a number of businesses and if the failure of those businesses has the potential to affect neighborhood character. Construction activities associated with the Proposed Actions would not result in any significant adverse impacts to socioeconomic conditions. As noted above, most construction activities and staging are anticipated to take place within the two Projected Development Sites. Construction of the two new buildings on the two Projected Development Sites would be of limited duration. In some instances, construction would temporarily affect pedestrian and vehicular access on street frontages immediately adjacent to the two Projected Development Sites; however, any lane and/or sidewalk closures are expected to be of very limited duration, lasting only a few months and are not expected to occur in front of entrances to any existing businesses. In addition, construction activities are not expected to expand beyond the boundaries of the two Projected Development Sites and would not obstruct major thoroughfares used by customers or businesses. Businesses would not be significantly affected by any temporary reductions in the amount of pedestrian foot traffic or vehicular delays that could occur as a result of project-related construction activities. As such, no significant construction impacts to socioeconomic conditions are expected as a result of the Proposed Actions and further assessment is not warranted.

Community Facilities and Services

According to 2021 *CEQR Technical Manual* guidance, construction impacts to community facilities and services are possible if a community facility or service would be directly affected by construction (e.g., if construction would disrupt services provided at a facility or close a facility temporarily, etc.). No community facilities and services would be directly affected by construction activities associated with the Proposed Actions. The two Projected Development Sites would be surrounded by construction fencing and barriers that would limit the effects of construction on nearby community facilities and services. Construction workers would not place any burden on public or publicly funded schools and would have minimal, if any, demand for libraries, early childhood centers, and health care facilities. Construction activities at the two Projected Development Sites would not block or restrict access to any community facilities and services in the surrounding area and are not expected to materially affect emergency response times. NYPD and FDNY emergency services and response times would not be materially affected as a result of the geographic distribution of the police and fire facilities and their respective coverage areas. Therefore, no significant construction impacts to community facilities and services are expected as a result of the Proposed Actions and further assessment is not warranted.

Open Space

According to 2021 *CEQR Technical Manual* guidance, construction impacts to open space are possible if open space resources are taken out of service for a period of time during the construction process. No publicly accessible open space resources would be disrupted during the proposed construction work, nor would access to any publicly accessible open space be impeded during construction. Furthermore, construction activities would be implemented in accordance with NY regulations, which regulates construction noise to reduce the effects on noise sensitive receptors including public open space. As such, no construction impacts related to open space are expected as a result of the Proposed Actions and further assessment is not warranted.

Historic and Cultural Resources

According to 2021 *CEQR Technical Manual* guidance, construction impacts may occur on historic and cultural resources if in-ground disturbances or vibrations associated with project construction could undermine the foundation or structural integrity of nearby historic and cultural resources. As detailed above, the two Projected Development Sites are not located within 90 linear feet of any NYCL-designated or S/NR-listed resources. As such, the Proposed Actions would have no significant adverse construction-related impacts on historic and cultural resources and further assessment is not warranted.

Hazardous Materials

According to 2021 *CEQR Technical Manual* guidance, a construction assessment is not needed for hazardous materials unless the construction activities would disturb a site or be located adjacent to a site containing hazardous materials. As discussed in **Attachment B, "Supplemental Screening,"** with adherence to the requirements of the (E) Designation for hazardous materials, no significant adverse impacts related to hazardous materials are expected. As all investigations and any remediation would be undertaken prior to any construction on the two Projected Development Sites, no significant adverse impacts related to hazardous materials would be expected to occur as a result of the Proposed Actions and no further assessment is warranted.

Furthermore, as discussed above, to minimize dust emissions from construction activities at the two Projected Development Sites, a dust control plan, including a robust watering program, would be required as part of contract specifications. For example, all trucks hauling loose material would be equipped with tight-fitting tailgates and their loads securely covered prior to leaving the two Projected Development Sites; and water sprays would be used for all demolition, excavation, and transfer of soils to ensure that materials would be dampened as necessary to avoid the suspension of dust into the air. All measures required by the portion of the DEP Construction Dust Rules regulating construction-related dust emissions would be implemented.

APPENDIX I

JAMAICA BAY WATERSHED PROTECTION PLAN

PROJECT TRACKING FORM

Print Form

Jamaica Bay Watershed Protection Plan
Project Tracking Form

The Jamaica Bay Watershed Protection Plan, developed pursuant to Local Law 71 of 2005, mandates that the New York City Department of Environmental Protection (DEP) work with the Mayor's Office of Environmental Coordination (MOEC) to review and track proposed development projects in the Jamaica Bay Watershed (http://www.nyc.gov/html/oec/downloads/pdf/ceqr/Jamaica_Bay_Watershed_Map.jpg) that are subject to CEQR in order to monitor growth and trends. If a project is located in the Jamaica Bay Watershed, (the applicant should complete this form and submit it to DEP and MOEC. This form must be updated with any project modifications and resubmitted to DEP and MOEC.

The information below will be used for tracking purposes only. It is not intended to indicate whether further CEQR analysis is needed to substitute for the guidance offered in the relevant chapters of the CEQR Technical Manual.

A. GENERAL PROJECT INFORMATION

1. CEQR Number: _____ 1a. Modification ☐
2. Project Name: 138-23 Queens Boulevard Rezoning
3. Project Description:

The Applicant, RJ Capital Holdings LLC, is seeking zoning map and zoning text amendments ("Proposed Actions") that would affect a portion of Queens Block 9649, including Lots 17, 25, 37 (p/o), 42, 44 (p/o), and 53 (p/o), coterminous with the existing R6A/C1-4 zoning district mapped on the east side of Queens Boulevard between 84th Drive and 86th Avenue (the "Project Area"). The Proposed Actions would facilitate the development of an approximately 395,931-gross square foot (gsf) mixed-use residential and commercial building with up to 17-stories (175-feet tall) above grade and no below-grade levels (the "Proposed Project") at 138-23 Queens Boulevard (Queens Block 9649, Lots 17, 25, and 37; "Projected Development Site 1") in the Briarwood neighborhood of Queens Community District (CD) 8.

4. Project Sponsor: New York City Department of City Planning (DCP)
5. Required approvals: Zoning map amendment to rezone lots to establish R8X/C2-4 district, zoning text amendment to establish Mandatory Inclusionary Housing (MIH) designated area
6. Project schedule (build year and construction schedule): 2028

B. PROJECT LOCATION:

1. Street address: 138-23 Queens Boulevard, Queens, NY 11435
2. Tax block(s): 9649 Tax Lot(s): 17, 25, and 37
3. Identify existing land use and zoning on the project site: Commercial & Office, R6A/C1-4
4. Identify proposed land use and zoning on the project site: Mixed Residential/Commercial, R8C/C2-4
5. Identify land use of adjacent sites (include any open space): Commercial & Office, Mixed Residential/ Commercial
6. Describe existing density on the project site and the proposed density:

Existing Condition	Proposed Condition
Lot 17 = 0.54 FAR Lot 25 = 0.70 FAR Lot 37 = 0.75 FAR	7.2 FAR

7. Is project within 100 or 500 year floodplain (specify)? ☐ **100 Year** ☐ **500 Year** ☒ **No**

C. GROUND AND GROUNDWATER

1. Total area of in-ground disturbance, if any (in square feet): N/A
2. Will soil be removed (if so, what is the volume in cubic yards)? N/A
3. Subsurface soil classification:
   (per the New York City Soil and Water Conservation Board): UtB
4. If project would change site grade, provide land contours (**attach** map showing existing in 1' contours and proposed in 1' contours).
5. Will groundwater be used (list volumes/rates)? ☐ **Yes** ☒ **No**

   Volumes: Rates:
6. Will project involve dewatering (list volumes/rates)? ☐ **Yes** ☒ **No**

   Volumes: Rates:
7. Describe site elevation above seasonal high groundwater:

   N/A

D. HABITAT

1. Will vegetation be removed, particularly native vegetation? ☐ **Yes** ☒ **No**

   If YES,
   - **Attach** a detailed list (species, size and location on site) of vegetation to be removed (including trees >2" caliper, shrubs, understory planting and groundcover).
   - **List** species to remain on site.
   - **Provide** a detailed list (species and sizes) of proposed landscape restoration plan (including any wetland restoration plans).
2. Is the site used or inhabited by any rare, threatened or endangered species? ☐ **Yes** ☒ **No**
3. Will the project affect habitat characteristics? ☐ **Yes** ☒ **No**

   If YES, describe existing wildlife use and habitat classification using "Ecological Communities of New York State." at http://www.dec.ny.gov/animals/29392.html.
4. Will pesticides, rodenticides or herbicides be used during construction? ☐ **Yes** ☒ **No**

   If YES, estimate quantity, area and duration of application.
5. Will additional lighting be installed? ☒ **Yes** ☐ **No**

   If YES and near existing open space or natural areas, what measures would be taken to reduce light penetration into these areas?

   Not near existing open space or natural areas

E. SURFACE COVERAGE AND CHARACTERISTICS

(describe the following for both the existing and proposed condition):

	Existing Condition	Proposed Condition
1. ***Surface area:***		
Roof:	29,140 sf	47,200 sf
Pavement/walkway:	10,810 sf	0 sf
Grass/softscape:	1,950 sf	770 sf
Other (describe):	0 sf	0 sf
2. ***Wetland*** (regulated or non-regulated) area and classification:	0 sf	0 sf
3. ***Water surface area:***	0 sf	0 sf

4. ***Stormwater management*** (describe):

Existing – how is the site drained?

The site is within a separately sewered area (JAM-006), which drains into the Jamaica water pollution control plant at the Bergen Basin.

Proposed – describe, including any infrastructure improvements necessary off-site:

N/A

APPENDIX II

PHASE I ESA PREPARED BY HYDROTECH ENVIRONMENTAL

(EXECUTIVE SUMMARY)

1.0 EXECUTIVE SUMMARY

HydroTech Environmental Engineering and Geology, DPC. (HydroTech) has performed a Phase I Environmental Site Assessment (Phase I ESA) at the properties located at 138-13 to 138-49 Queens Boulevard in Queens, New York. The Phase I ESA was performed to meet or surpass the American Standard of Testing Materials Standard for Phase I Environmental Site Assessments E 1527-21. The Phase I ESA is also compliant with USEPA All Appropriate Inquires as set forth in E 1527-13. The purpose of the assessment was to characterize the environmental quality of the Subject Property through the identification of Recognized Environmental Conditions. All work was performed under the supervision of a HydroTech Project Manager and under the guidance of a HydroTech geologist.

The results of the Phase I Environmental Site Assessment are contained in this report. The Phase I ESA has identified the following Recognized Environmental Conditions:

- The presence of historical occupants related with auto repair operations (§4.0).
- The presence of current and historical occupants related with dry cleaning operations (§4.0).
- The presence of Potential Vapor Encroachment Conditions at and adjacent to the Subject Property (§5.0).
- The presence of a storm water drywell (§6.0).
- The presence of an interior sump (§6.0).

The following Non-Scope Considerations were identified:

- The presence of an MTA Subway line within 200 feet (§7.0).
- The presence of current and historical occupants associated with the generation of PFOS/PFOAs.

No effort has been made to perform any investigation beyond what is included in this Report. The observations and conclusions included herein summarize the results of the Phase I Environmental Site Assessment up to the date of the fieldwork and the date of this Report.

The following sections provide the details and specific information pertaining to the various components of the Phase I Environmental Site Assessment.

APPENDIX III

TRANSPORTATION PLANNING FACTORS AND TRAVEL DEMAND FORECAST MEMORANDUM

Philip Habib & Associates
Engineers and Planners • 432 Park Avenue South • New York, NY 10016 • 212 929 5656 • 212 929 5605 (fax)

DRAFT
TECHNICAL MEMORANDUM

TO: **NYCDCP**

FROM: **Philip Habib & Associates**

DATE: **January 23, 2024**

PROJECT: **138-23 Queens Boulevard EAS (PHA No. 2311)**

RE: **Transportation Planning Factors and Travel Demand Forecast**

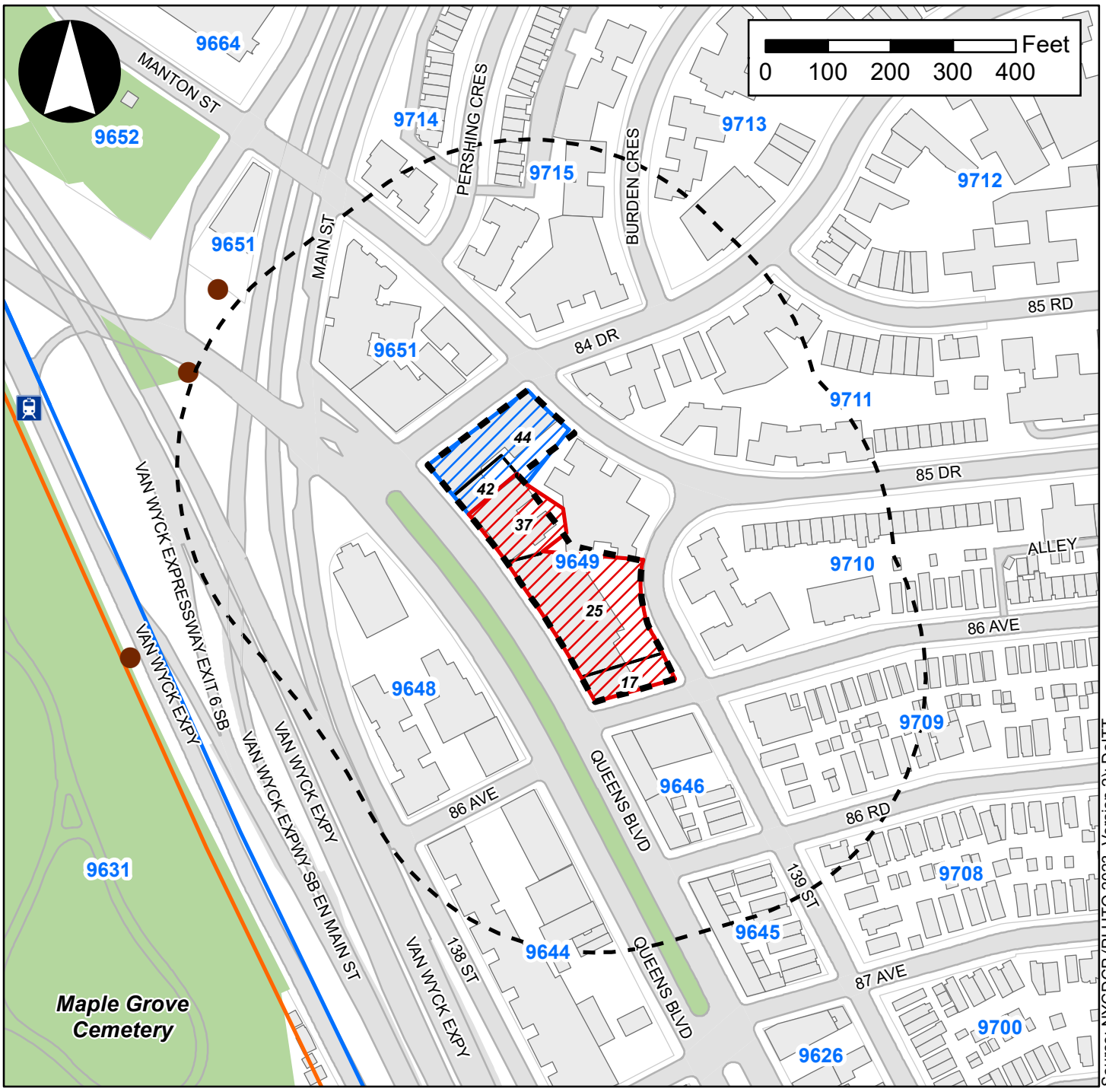
This memorandum summarizes the transportation planning factors to be used for the assessment of traffic, parking, transit, and pedestrian conditions for the *138-23 Queens Boulevard EAS*. Estimates of the peak travel demand for the Proposed Actions' reasonable worst-case development scenario (RWCDS) are provided, along with a discussion of trip assignment methodologies and study area definitions.

THE PROPOSED ACTIONS

The Applicant, RJ Capital Holdings LLC, is seeking zoning map and zoning text amendments ("Proposed Actions") that would affect a portion of Queens Block 9649, including Lots 17, 25, 37 (p/o), 42, 44 (p/o), and 53 (p/o), coterminous with the existing R6A/C1-4 zoning district mapped on the east side of Queens Boulevard between 84th Drive and 86th Avenue (the "Project Area") (**Figure 1**). The Proposed Actions would facilitate the development of an approximately 395,931 gross square foot (gsf) mixed-use residential and commercial building with up to 17-stories (175-feet tall) above grade and no below-grade levels (the "Proposed Project") at 138-23 Queens Boulevard (Queens Block 9649, Lots 17, 25, and 37; "Projected Development Site 1") in the Briarwood neighborhood of Queens Community District (CD) 8.

The approximately 395,931 gsf mixed-used building facilitated by the Proposed Actions, which are subject to environmental review under City Environmental Quality Review (CEQR) regulations and guidance, would consist of approximately 311,154 gsf of residential space for a total of 311 dwelling units (DUs), approximately 33,020 gsf of local retail space, and a 132-space above-grade accessory parking garage on a portion of the second floor, which would be accessible via a ramp entrance from an existing curb cut on 139th Street. It is expected that the Proposed Project would be completely constructed and fully occupied by 2028. However, it should be noted that as the Proposed Project would maximize the allowable building height and nearly maximizes the allowable blended FAR under the

Figure 1
Project Location Map



Legend

- Project Area
- Projected Development Site 1
- Projected Development Site 2
- 400-Foot Radius
- E Train
- F Train
- Briarwood Subway Station (E & F Trains)
- Subway Entrances
- 9649 Tax Blocks
- Existing Building Footprints
- Open Space



proposed zoning changes, it would not be considered the Reasonable Worst-Case Development Scenario (RWCDS) under the Proposed Actions. In addition, for RWCDS analysis purposes, it is assumed that the proposed zoning changes would allow for redevelopment of Block 9649, Lots 42/44 ("Projected Development Site 2") pursuant to the proposed zoning regulations. Therefore, the EAS analyzes a RWCDS for Projected Development Sites 1 and 2, which is discussed below.

DEVELOPMENT SCENARIOS

In order to assess the potential effects of the Proposed Actions, a RWCDS for both "future without the Proposed Actions" (No-Action) and "future with the Proposed Actions" (With-Action) conditions are analyzed for an analysis year of 2028.

Future without the Proposed Actions (No-Action Condition)

In the future without the Proposed Actions (the No-Action condition), it is assumed that development would occur on an as-of-right basis on both identified Projected Development Sites. No changes would occur to the existing residential building on Lot 53.

On the Applicant-owned Projected Development Site 1 (Lots 17, 25, and 37), the Applicant would demolish the existing single-story commercial buildings and construct an approximately 207,327 gsf as-of-right seven-story (approximately 75-foot tall) mixed-use residential and commercial development, containing approximately 122,550 gsf of residential space (133 total DUs), approximately 33,020 gsf of ground-floor local retail space, and approximately 67 accessory parking spaces located in a second-floor garage. The building would not contain a cellar.

The non-Applicant-owned Projected Development Site 2 (Lots 42 and 44) would be developed on an as-of-right basis in the No-Action condition. The existing single-story commercial buildings would be demolished, and the development site would be developed with an approximately 78,414 gsf seven-story (approximately 75-foot tall) mixed-use commercial and residential building containing approximately 51,921 gsf of residential space (56 total DUs), approximately 18,094 gsf of ground floor local retail space, and approximately 28 accessory parking spaces located in a second-floor garage. The building would also not contain a cellar.

In total, in the future without the Proposed Actions, it is expected that Projected Development Sites 1 and 2 will contain a total of approximately 285,741 gsf of built space, composed of approximately 189 total DUs (174,471 residential gsf), approximately 51,114 gsf of commercial (local retail) space, and approximately 103 accessory parking spaces in two seven-story (approximately 75-foot tall) buildings.

Future with the Proposed Actions (With-Action Scenario)

As detailed above, the Applicant intends to redevelop Projected Development Site 1 with a 17-story, approximately 395,931 gsf mixed-use residential and commercial building and no below grade levels.

For RWCDS purposes, the With-Action scenario assumes a smaller average DU size of 850 gsf as compared to the Applicant's proposal. As such, the Applicant-owned With-Action building would total approximately 395,931 gsf and include 311,154 gsf of residential space (339 DUs), 33,020 gsf of local retail, and 132 accessory parking spaces above-grade (refer to **Table 1**).

In addition, under the Proposed Actions, it is expected that Projected Development Site 2 would be redeveloped with a mixed-use approximately 134,225 gsf building, consisting of approximately 101,138 gsf of residential space (a total of 110 DUs), approximately 12,790 gsf of ground floor local retail, and 40 accessory parking spaces above-grade (refer to **Table 1**).

In total, in the future with the Proposed Actions, it is expected that Proposed Development Sites 1 and 2 will contain a total of approximately 530,156 gsf of built space, composed of approximately 449 total DUs (412,292 gsf), approximately 45,810 gsf of commercial (local retail) space, and approximately 172 accessory parking spaces (refer to **Table 1**).

TABLE 1: With-Action Development Scenarios for Projected Development Sites 1 and 2

	Lots	Residential [1]			Commercial (GSF)	Total Mixed- Use Building (GSF)[2]	Parking Spaces
		GSF	Total DUs	Affordable DUs			
Projected Development Site 1	17/25/37	311,154	339	85	33,020	395,931	132
Projected Development Site 2	42/44	101,138	110	28	12,790	134,225	40
	Total	412,292	449	113	45,810	530,156	172

Notes:

[1] Under the With-Action condition, the estimated DUs are based on a standard average unit size of approximately 850 gsf per DU.

[2] Neither projected development would include any below-grade levels.

RWCDS Increment

Table 2 below provides a comparison of the No-Action and With-Action conditions identified for the purposes of transportation forecasting for both Projected Development Sites. As shown, the incremental (net) change that would result from the Proposed Actions is the addition of 237,821 gsf of residential uses, including approximately 260 DUs and 69 accessory parking spaces, as well as a decrease of approximately 5,304 gsf of commercial (local retail) space.

TABLE 2: 2028 Comparison of No-Action and With-Action Scenarios for Projected Development Sites 1 and 2

Use	No-Action	With-Action	Increment
Residential	174,471 GSF (189 Total DUs) *189 Market-rate DUs* *0 Affordable DUs*	412,292 GSF (449 Total DUs) *336 Market-rate DUs* *113 Affordable DUs*	+ 237,821 GSF (+260 Total DUs) *+ 147 Market-rate DUs* *+ 113 Affordable DUs*

Commercial (GSF) Local Retail	51,114 GSF	45,810 GSF	- 5,304 GSF
Parking (spaces)	103 (enclosed parking spaces)	172 (enclosed parking spaces)	+ 69 parking spaces

TRANSPORTATION PLANNING FACTORS

The transportation planning factors used to forecast the travel demand that would be generated by the No-Action and With-Action scenarios on both Projected Development Sites are summarized in **Table 3** and discussed below. The trip generation rates, temporal distributions, modal splits, vehicle occupancies, and truck trip factors for each of the land uses were primarily based on those cited in the 2021 *City Environmental Quality Review* ("CEQR") *Technical Manual,* census data, and factors cited in the 2022 *Innovation QNS Rezoning and LSGD FEIS*. Factors are shown for the weekday AM and PM peak hours (the typical peak periods for commuter travel demand) and the weekday midday and Saturday peak hours (the typical peak periods for retail demand and for office pedestrian demand).

Residential

The forecast of travel demand for the residential portion used trip generation rates, temporal distributions, directional splits, and truck trip generation rates sourced from the 2021 *City Environmental Quality Review (CEQR) Technical Manual*. A weekday trip generation rate of 8.18 person trips per DU and a Saturday trip generation rate of 9.08 person trips per DU were utilized to forecast residential demand. Temporal distributions of 9.3 percent, 5.6 percent, 8.5 percent, and 8.4 percent for the weekday AM, midday, PM, and Saturday peak hours, respectively, were sourced from the 2021 *CEQR Technical Manual*. The residential modal split and auto vehicle occupancy were derived from 2015-2019 American Community Survey ("ACS") Five-Year Estimates Journey-to-Work data for Queens census tracts 214, 216.02, 220.01, 220.02, and 232. The modal splits used to forecast residential demand were 31.9 percent, 0.5 percent, 52.0 percent, 8.2 percent, 0.7 percent, and 6.8 percent for autos, taxis, subway, bus, bike, and walk/other, respectively. A residential vehicle occupancy of 1.06 was utilized based on the 2015-2019 ACS data. A taxi occupancy rate of 1.40 was based on data from the 2022 *Innovation QNS Rezoning and LSGD FEIS*.

Commercial (Local Retail)

The forecast of travel demand for the local retail portion used trip generations rates, temporal distributions, modal splits, directional splits, and truck trip generation rates sourced from the 2021 *CEQR Technical Manual*. A weekday trip generation rate of 329 person trips per 1,000 gsf and a Saturday trip generation rate of 358 person trips per 1,000 gsf were utilized to forecast local retail demand. Temporal distributions of 4.8 percent, 8.0 percent, 10.9 percent, and 11.7 percent for the weekday AM, midday, and PM and Saturday midday peak hours, respectively were sourced from the 2021 *CEQR Technical Manual*. The weekday local retail modal splits used were 11.0 percent, 0.0 percent, 4.0 percent, 3.0 percent, 0.0 percent, and 82.0 percent for autos, taxis, subway, bus, bike, and walk/other, respectively. The weekend local retail modal splits used were 8.0 percent, 0.0 percent, 7.0 percent, 4.0 percent, 0.0

percent, and 81.0 percent for autos, taxis, subway, bus, bike, and walk/other, respectively. A local retail auto and taxi occupancy of 1.40 was utilized for all periods based on data provided by the New York City Department of Transportation (NYCDOT). A zero percent linked or pass-by trip credit was applied to the local retail use.

TABLE 3: Transportation Planning Factors

Land Use:	**Residential**		**Local Retail**	
Trip Generation:	(1)		(1)	
Weekday	8.18		329	
Saturday	9.08		358	
	per DU		per 1,000 gsf	
Temporal Distribution:	(1)		(1)	
AM	9.3%		4.8%	
Midday	5.6%		8.0%	
PM	8.5%		10.9%	
Saturday	8.4%		11.7%	
Modal Splits:	(2)		(1)	
	All Periods		Weekday	Weekend
Auto	31.9%		11.0%	8.0%
Taxi	0.5%		0.0%	0.0%
Subway/Rail	52.0%		4.0%	7.0%
Transit Bus	8.2%		3.0%	4.0%
Ferry	0.0%		0.0%	0.0%
Bike	0.7%		0.0%	0.0%
Walk/Other	6.8%		82.0%	81.0%
	100.0%		100.0%	
In/Out Splits:	(1)		(1)	
	In	Out	In	Out
AM	22%	78%	52%	48%
Midday	50%	50%	50%	50%
PM	62%	38%	50%	50%
Saturday	55%	45%	50%	50%
Vehicle Occupancy:	(2)(3)		(4)	
	All Periods		All Periods	
Auto	1.06		1.40	
Taxi	1.40		1.40	
Truck Trip Generation:	(1)		(1)	
Weekday	0.06		0.35	
Saturday	0.02		0.04	
	per DU		per 1,000 gsf	
Truck Temporal Distribution:	(1)		(1)	
AM	12.0%		8.0%	
MD	9.0%		11.0%	
PM	2.0%		2.0%	
Saturday	9.0%		11.0%	
Truck Directional Distribution:	In	Out	In	Out
AM	50%	50%	50%	50%
MD	50%	50%	50%	50%
PM	50%	50%	50%	50%
Saturday	50%	50%	50%	50%

Notes:

(1) 2021 *City Environmental Quality Review (CEQR) Technical Manual*.

(2) Based on CTPP ACS Reverse journey-to-work 5-Year (2012-2016) data for Queens Census Tracts 214, 216.02, 220.01, 220.02, 232.

(3) Based on data from the 2022 *Innovation QNS Rezoning & LSGD FEIS*.

(4) Based on data provided by NYCDOT.

TRIP GENERATION

The net incremental change in person and vehicle trips expected to result from the Proposed Actions by the 2028 analysis year was derived based on the net change in land uses shown in **Table 2** and the transportation planning factors shown in **Table 3. Table 4** shows estimates of the net incremental change in peak hour person trips and vehicle trips for both Projected Development Sites, which would occur in 2028 under the Proposed Actions. As shown in **Table 4**, compared to the No-Action condition, the Proposed Actions would generate a net increase of approximately 114 person trips (in + out combined) in the weekday AM peak hour and a net decrease of approximately 22, 9, and 24 person trips in the weekday midday and PM and Saturday peak hours, respectively. As shown in **Table 4**, peak hour vehicle trips (including auto, taxi, and truck trips) would increase by a net total of 54, 28, 42, and 50 trips during the weekday AM, midday, and PM and Saturday peak hours, respectively. Subway demand would increase by approximately 100, 54, 85, and 87 trips during the weekday AM, midday, and PM and Saturday peak hours, respectively. Bus demand would increase by approximately 12, 4, 9, and 6 trips during the weekday AM, midday, and PM and Saturday peak hours, respectively. Lastly, trips made entirely on foot (walk-only trips) or by other non-motorized modes would decrease by approximately 53, 106, 142, and 164 during the weekday AM, midday, and PM peak hours, and Saturday peak hour, respectively.

LEVEL 1 SCREENING ASSESSMENT

The *CEQR Technical Manual* describes a two-level screening procedure for the preparation of a "preliminary analysis" to determine if quantified operational analyses of transportation conditions are warranted. As discussed in the following sections, the preliminary analysis begins with a trip generation (Level 1) analysis to estimate the numbers of person and vehicle trips attributable to the Proposed Actions. According to the *CEQR Technical Manual*, if the Proposed Actions are expected to result in fewer than 50 vehicle or ferry trips in each peak hour, and fewer than 200 peak hour transit or pedestrian trips, further quantified analyses are not warranted. When these thresholds are exceeded, detailed trip assignments (a Level 2 assessment) are to be performed to estimate the incremental trips that could occur at specific transportation elements and to identify potential locations for further analysis. If the trip assignments show that the Proposed Actions would generate 50 or more peak hour vehicle trips at an intersection, 200 or more peak hour subway trips at a station, 50 or more peak hour bus trips in one direction along a bus route, 25 or more peak hour trips by Citywide Ferry Service ("CWFS") in a single direction on a single route, 50 or more at a ferry landing, or 200 or more peak hour pedestrian trips traversing a sidewalk, corner area or crosswalk, then further quantified operational analyses may be warranted to assess the potential for significant adverse impacts on traffic, transit, ferry, pedestrians, vehicular and pedestrian safety, and parking.

TABLE 4: Travel Demand Forecast

Land Use:		**Local Retail**		**Residential**			
Size/Units:		-5,304 gsf		260 DUs			
Peak Hour Trips:						**Total Trips**	
	AM	-84		198		114	
	Midday	-140		118		-22	
	PM	-190		181		-9	
	Saturday	-222		198		-24	
Person Trips:							
AM		In	Out	In	Out	In	Out
	Auto	-5	-5	14	49	9	44
	Taxi	0	0	0	0	0	0
	Subway	-2	-2	23	81	21	79
	Public Bus	-2	-2	3	13	1	11
	Ferry	0	0	0	0	0	0
	Bike	0	0	1	1	1	1
	Walk/Other	-34	-32	3	10	-31	-22
	Total	-43	-41	44	154	1	113
Midday		In	Out	In	Out	In	Out
	Auto	-8	-8	19	19	11	11
	Taxi	0	0	1	1	1	1
	Subway	-3	-3	30	30	27	27
	Public Bus	-2	-2	4	4	2	2
	Ferry	0	0	0	0	0	0
	Bike	0	0	1	1	1	1
	Walk/Other	-57	-57	4	4	-53	-53
	Total	-70	-70	59	59	-11	-11
PM		In	Out	In	Out	In	Out
	Auto	-11	-11	36	22	25	11
	Taxi	0	0	1	1	1	1
	Subway	-4	-4	57	36	53	32
	Public Bus	-3	-3	9	6	6	3
	Ferry	0	0	0	0	0	0
	Bike	0	0	0	1	0	1
	Walk/Other	-77	-77	7	5	-70	-72
	Total	-95	-95	110	71	15	-24
Saturday		In	Out	In	Out	In	Out
	Auto	-9	-9	34	28	25	19
	Taxi	0	0	1	1	1	1
	Subway	-8	-8	56	47	48	39
	Public Bus	-5	-5	8	8	3	3
	Ferry	0	0	0	0	0	0
	Bike	0	0	0	1	0	1
	Walk/Other	-89	-89	8	6	-81	-83
	Total	-111	-111	107	91	-4	-20
Vehicle Trips :		**Local Retail**		**Residential**			
						Total Trips	
AM		In	Out	In	Out	In	Out
	Auto	-4	-4	14	46	10	42
	Taxi	0	0	0	0	0	0
	Taxi (Balanced)	0	0	0	0	0	0
	Truck	0	0	1	1	1	1
	Total	-4	-4	15	47	11	43
Midday		In	Out	In	Out	In	Out
	Auto	-6	-6	18	18	12	12
	Taxi	0	0	1	1	1	1
	Taxi (Balanced)	0	0	2	2	2	2
	Truck	0	0	0	0	0	0
	Total	-6	-6	20	20	14	14
PM		In	Out	In	Out	In	Out
	Auto	-8	-8	33	21	25	13
	Taxi	0	0	1	1	1	1
	Taxi (Balanced)	0	0	2	2	2	2
	Truck	0	0	0	0	0	0
	Total	-8	-8	35	23	27	15
Saturday		In	Out	In	Out	In	Out
	Auto	-6	-6	32	26	26	20
	Taxi	0	0	1	1	1	1
	Taxi (Balanced)	0	0	2	2	2	2
	Truck	0	0	0	0	0	0
	Total	-6	-6	34	28	28	22

Traffic

Based on *CEQR Technical Manual* guidance, a quantified traffic analysis is typically required if the Proposed Actions would result in 50 or more vehicle trip-ends in a peak hour at one or more intersections. As shown in **Table 4**, under the Proposed Actions there would be net increases of 54, 28, 42, and 50 vehicle trips in the weekday AM, midday, and PM and Saturday peak hours, respectively. As the numbers of trips would exceed the 50-trip threshold in the weekday AM and Saturday peak hours, a Level 2 screening assessment is warranted to determine which, if any, intersections require quantified analysis for those peak hours.

Transit

According to the general thresholds used by the Metropolitan Transportation Authority (MTA) and specified in the *CEQR Technical Manual*, detailed transit analyses are generally not required if the Proposed Actions are projected to result in fewer than 200 peak hour rail or bus transit riders. If the Proposed Actions would result in 50 or more bus passengers being assigned to a single bus route in one direction, or if it would result in an increase of 200 or more passengers at a single subway station or on a single subway line, a detailed bus and/or subway analysis would be warranted. Transit analyses typically focus on the weekday AM and PM commuter peak hours, as it is during these periods that overall demand on the subway and bus systems is usually highest.

As shown in **Table 4**, the Proposed Actions are expected to generate a net total of approximately 100 and 85 incremental subway trips in the weekday AM and PM peak hours, respectively. As these numbers of trips would not exceed the 200-trip *CEQR Technical Manual* analysis threshold, further analysis is not warranted. As also shown in **Table 4,** there is expected to be a net increase of 12 and 9 incremental bus trips in the weekday AM and PM peak hours, respectively. As these numbers of trips would not exceed the 50-trip *CEQR Technical Manual* analysis threshold, further analysis is not warranted. Therefore, significant adverse impacts to transit subway and bus services are not expected to occur under the Proposed Actions, and a detailed analysis of subway and bus conditions is not warranted based on *CEQR Technical Manual* guidance.

CWFS

According to *CEQR Technical Manual* guidance, detailed analyses of the CWFS are not typically required if the Proposed Actions would result in 50 or fewer peak hour CWFS peak hour ferry riders to a ferry landing within a half-mile of the Project Area. As the Project Area is not located within a half-mile of a CWFS ferry landing, a Level 2 screening analysis is not warranted according to *CEQR Technical Manual* guidance.

Pedestrians

According to *CEQR Technical Manual* guidance, a quantified analysis of pedestrian conditions is typically required if the Proposed Actions would result in 200 or more peak hour pedestrian trips at any pedestrian element (sidewalk, corner area or crosswalk). As shown in **Table 4**, the Proposed Actions would generate a net incremental increase of approximately 61 total pedestrian trips in the weekday AM peak hour and a net incremental decrease of 46, 47, and 70 total pedestrian trips in the weekday midday and PM and Saturday peak hours, respectively. These would include walk-only trips, pedestrians walking to and from the subway and bus stops, and those travelling on bikes (conservatively). As the numbers of trips would not exceed the 200-trip threshold in any of the peak hours, a Level 2 screening assessment is not warranted according to *CEQR Technical Manual* guidance.

LEVEL 2 SCREENING ASSESSMENT

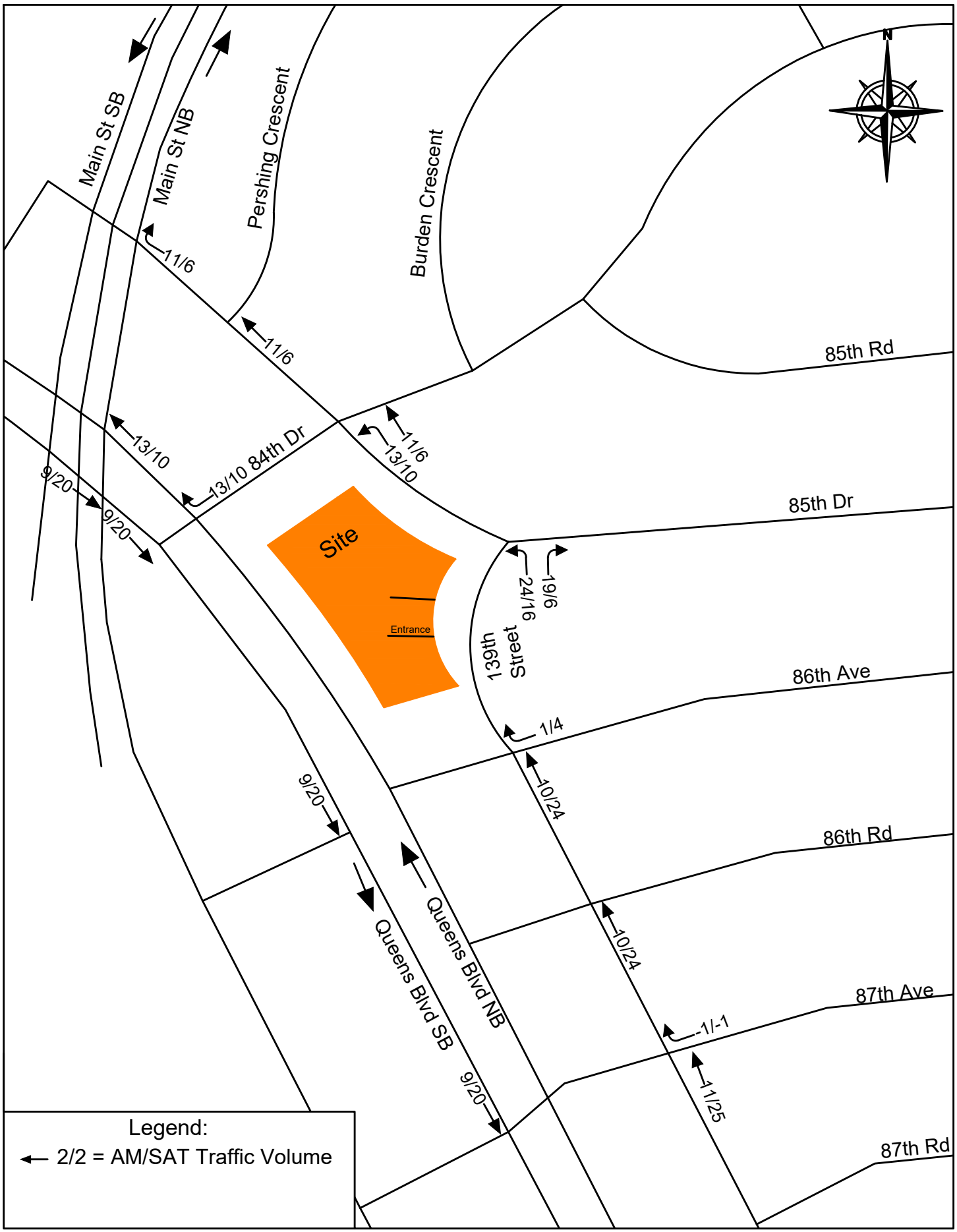
Traffic

As shown in **Table 4**, the Proposed Actions would generate approximately 54 and 50 net vehicle trips in the weekday AM and Saturday peak hours, respectively. As shown in **Figure 1**, the Project Area street network is a grid system mainly composed of arterials and local streets with several expressways in vicinity of the Project Site. The action-generated vehicle trips were subsequently assigned to this street network surrounding the Projected Development Sites. All vehicle trips were conservatively assigned to the Project Site to concentrate the vehicle trips at the nearest intersections. The origins and destinations for the vehicle trip assignments were based on the population density within a half-mile radius of the Project Area for the local retail use and 2012-2016 American Association of State Highway, Transportation Officials ("AASHTO") Census Transportation Planning Products ("CTPP") journey-to-work data for the residential use. The Proposed Project's entrance would be located on 139th Street.

Tables 5a and 5b show the directional distribution of auto and taxi trips by land use based on the origin/destination data. Trips for the local retail land use were assigned locally based on population density within a mile of the Project Area. Auto and taxi trips were first assigned to various portals on the periphery of the Project Area and from there via the most direct route to the Projected Development Sites. All auto trips are conservatively assigned to the proposed garage entrance located on 139th Street. Truck trips were first assigned to designated Through and Local truck routes providing access to the Projected Development Sites, and then to the most direct paths to and from the Projected Development Sites.

Preliminary assignments for the weekday AM and Saturday peak hours (including auto, taxi, and truck trips) are shown in **Figure 2**. Based on the vehicular assignments shown in **Figure 2**, the incremental peak hour vehicle trips generated by the Proposed Actions would not exceed the 50-trip *CEQR Technical Manual* analysis threshold at any intersections during the weekday AM and Saturday peak hours.

AM & SAT Project Increment Traffic Volumes



Therefore, a detailed traffic analysis is not warranted in the EAS, and based on *CEQR Technical Manual* guidance, significant adverse impacts to traffic conditions are not anticipated.

TABLE 5a: Directional Distribution of Local Retail Trips

Land Use	Direction	Percentage
Local Retail	North (N)	19.9%
	East (E)	24.4%
	South (S)	35.6%
	West (W)	20.2%
	Total	**100.0%**

TABLE 5b: Directional Distribution of Residential Trips

Land Use	County	Percentage
Residential	Queens	46%
	Bronx	3%
	Brooklyn	15%
	Manhattan	11%
	Long Island	12%
	New Jersey	5%
	Upstate/Other	5%
	Total	**100.0%**

PARKING

According to *CEQR Technical Manual* guidance, on- and off-street parking analyses may be warranted if a quantified traffic analysis is necessary based on the Levels 1 and 2 screening assessments. Based on the screening assessments detailed above, a quantified traffic analysis would not be warranted for the Proposed Actions. Therefore, according to CEQR Technical Manual guidance, quantified on- and off-street parking analyses would also not be warranted for the Proposed Actions.

VEHICULAR AND PEDESTRIAN SAFETY

Under *CEQR Technical Manual* guidance, an evaluation of vehicular and pedestrian safety is needed for locations within traffic and pedestrian study areas that have been identified as high crash locations These are defined as locations along a Vision Zero priority intersection or locations where five or more pedestrian/bicyclist injury crashes have occurred in any consecutive 12 months of the most recent three-year period for which data are available. In addition, any location along a Vision Zero priority corridor with three or more pedestrian/bicyclist injury crashes in any consecutive 12 months of the most recent three-year period for which data is available should be identified as a high crash location. For these locations, crash trends will

be identified to determine whether projected vehicular and pedestrian traffic would further impact safety, or whether existing unsafe conditions could adversely impact the flow of the projected new trips.

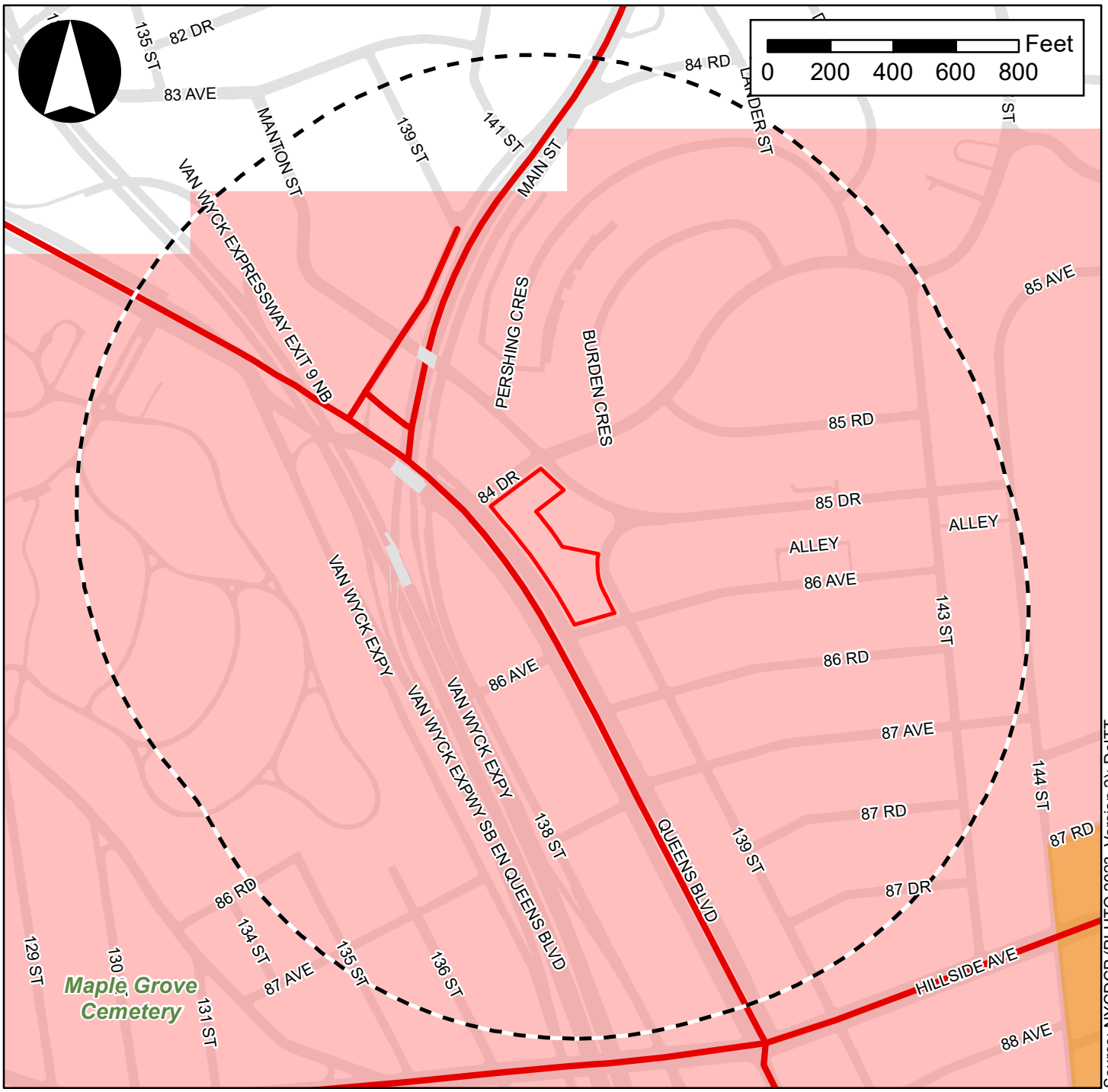
Vision Zero Queens Pedestrian Safety Action Plan

Consistent with the city's Vision Zero initiative, the *Vision Zero Queens Pedestrian Safety Action Plan* was released in 2015 and updated in 2019. The plan identifies a series of engineering/planning, enforcement, and education/awareness campaign strategies to enhance pedestrian safety along the borough's Priority Corridors and Priority Intersections. These strategies include measures such as reducing the speed limit to 25 miles per hour, expanding exclusive pedestrian crossing time, installing additional lighting around key transit stops, expanding the bicycle network, prioritizing targeted enforcement and deploying speed cameras, and targeting intensive street-level outreach. As shown in **Figure 3**, within a quarter mile of the Project Area, the plan identifies Queens Boulevard and Main Street as "Priority Corridors." No Priority Intersections were identified within quarter mile of the Project Area. In addition, as shown in **Figure 3**, the majority of the study area is located within the Senior Pedestrian Focus Area.

Crash Data

Table 6 shows the crash data summary for the three-year reporting period between January 1, 2017 and December 31, 2019 that were obtained from NYCDOT. This is the most recent three-year period for which data are available. The data obtained quantify the total number of reportable crashes (crashes involving a fatality, injury, or more than $1,000 in property damage), as well as a yearly breakdown of fatalities, injuries, and vehicular crashes involving pedestrians and bicycles at each location. **Table 6** summarizes the crash data for each intersection within the quarter-mile Project Area during the study period, including a breakdown of pedestrian and bicycle crashes by year.

During the three-year period, a total of 170 reportable and non-reportable crashes, zero fatalities, 93 total injuries, and 33 pedestrian/bicyclist injury crashes occurred at intersections within the quarter-mile study area. As shown in **Table 6**, 1 intersection along Priority Corridors were found to have experienced a total of three or more pedestrian/bicyclist injury crashes in any one year during the three-year period and were therefore identified as high crash locations. As shown in **Table 6**, the no high crash locations were identified as they have experienced a total of five or more pedestrian/bicyclist injury crashes in any one year during the three-year period and not along Priority Corridors.



Legend

- Project Area
- Quarter Mile Radius
- Safe Streets for Seniors
- Vision Zero Priority Zones
- Vision Zero Priority Corridors

TABLE 6: Crash Data Summary 2017-2019

Intersection		Pedestrian Injury Crashes			Bicycle Injury Crashes			Total Pedestrian/Bicyclist Injury Crashes			Total Crashes (Reportable + Non-Reportable)		
		2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019
MANTON STREET	83 AVENUE	0	0	0	0	0	0	0	0	0	0	2	0
	84 DRIVE	2	1	1	0	0	0	2	1	1	4	3	2
	139 STREET / 85 DRIVE	0	0	0	0	0	0	0	0	0	0	0	1
87 AVENUE	135 STREET	0	0	0	0	0	0	0	0	0	0	1	0
	136 STREET	0	0	0	0	0	0	0	0	0	0	0	1
	139 STREET	0	0	0	0	1	0	0	1	0	1	3	1
	143 STREET	0	3	0	0	0	0	0	3	0	1	3	1
	144 STREET	0	0	0	0	0	0	0	0	0	0	1	0
QUEENS BOULEVARD	86 ROAD	0	1	0	0	0	0	0	1	0	0	1	0
	84 DRIVE	2	1	1	0	0	0	2	1	1	3	3	3
	86 AVENUE	0	0	0	0	1	0	0	1	0	1	1	0
	87 AVENUE	2	0	0	0	0	0	2	0	0	4	0	0
MAIN STREET	138 STREET / QUEENS BOULEVARD	0	1	1	1	0	0	1	1	1	2	3	5
	84 ROAD	0	0	0	1	0	0	1	0	0	1	3	1
	141 STREET / GRAND CENTRAL PARKWAY	0	0	0	1	0	0	1	0	0	17	25	16
	MANTON STREET	0	1	0	0	0	0	0	1	0	2	5	5
	QUEENS BOULEVARD	1	1	1	0	0	0	1	1	1	1	1	2
	139 STREET	0	0	0	0	0	0	0	0	0	0	0	2
139 STREET	83 AVENUE	0	0	0	0	0	0	0	0	0	1	1	0
	86 AVENUE	1	0	1	0	0	0	1	0	1	1	2	2
	86 ROAD	1	0	0	0	0	0	1	0	0	1	0	0
84 DRIVE	85 ROAD	1	0	0	0	0	0	1	0	0	1	0	0
	BURDEN CRESCENT	0	1	1	1	0	0	1	1	1	2	1	2
	PERSHING CRESCENT	0	0	0	0	0	0	0	0	0	0	0	1
143 STREET	85 ROAD	0	0	0	0	0	0	0	0	0	0	2	0
	84 DRIVE	0	0	0	0	0	0	0	0	0	0	0	1
	87 DRIVE	0	0	0	0	0	0	0	0	0	0	2	1
	87 ROAD	0	0	0	0	0	0	0	0	0	1	0	0
	86 ROAD	0	0	0	0	0	0	0	0	0	0	1	0
	86 AVENUE	0	0	0	0	0	0	0	0	0	1	3	1
	85 DRIVE	0	0	0	0	0	0	0	0	0	2	3	0
LANDER STREET	PERSHING CRESCENT	0	0	0	0	0	0	0	0	0	1	0	0
DANIELS STREET	84 ROAD	0	0	0	0	0	0	0	0	0	1	0	0
144 STREET	87 ROAD	0	0	0	0	0	0	0	0	0	0	1	0
	85 DRIVE	0	1	0	0	0	0	0	1	0	1	1	0

APPENDIX IV

NYC LANDMARKS PRESERVATION COMMISSION CORRESPONDENCE

Landmarks Preservation Commission

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

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

ENVIRONMENTAL REVIEW

Project number: DEPARTMENT OF CITY PLANNING / LA-CEQR-Q
Project: 138-23 QUEENS BLVD
Date Received: 4/14/2023

Properties with no Architectural or Archaeological significance:

1) 138-43 QUEENS BOULEVARD, BBL: 4096490017
2) 138-23 QUEENS BOULEVARD, BBL: 4096490025
3) 138-13 QUEENS BOULEVARD, BBL: 4096490037
4) 138-11 QUEENS BOULEVARD, BBL: 4096490042
5) 138-01 QUEENS BOULEVARD, BBL: 4096490044
6) 85-02 MANTON STREET, BBL: 4096490053

Gina Santucci

4/25/2023

SIGNATURE DATE

Gina Santucci, Environmental Review Coordinator

File Name: 37048_FSO_DNP_04252023.docx

APPENDIX V

TECHNICAL MEMORANDUM FOR CITY OF YES FOR HOUSING OPPORTUNITY

Technical Memorandum for City of Yes for Housing Opportunity

A. INTRODUCTION

The New York City Department of City Planning is proposing a citywide zoning text amendment, the City of Yes for Housing Opportunity "CHO" (CEQR No. 24DCP033Y) to expand opportunities for housing within all zoning districts, and across all 59 of the City's Community Districts. These changes to the City's Zoning Resolution would enable more housing and a wider variety of housing types in every neighborhood, from the lowest density districts to the highest, to address the housing shortage and high cost of housing in New York City. It is anticipated that this proposed zoning text amendment would be referred into public review in spring 2024. Given that the 138-23 Queens Boulevard project may be affected by the proposals included in the proposed zoning text amendment, this technical memorandum assesses whether the conclusion of the project's environmental review would by altered by CHO.

RJ Capital Holdings LLC (the "Applicant") is seeking a zoning map amendment and a zoning text amendment from the New York City Planning Commission (CPC) (the "the Proposed Actions") to facilitate the development of an approximately 395,931-gross square foot (gsf) mixed-use residential and commercial building with up to 17-stories (175-feet tall to the rooftop) above grade and no below-grade levels (the "Proposed Project") at 138-23 Queens Boulevard (Queens Block 9649, Lots 17, 25, and 37; "Projected Development Site 1") in the Briarwood neighborhood of Queens Community District (CD) 8. The Proposed Actions would apply to the Project Area, which comprises the majority of Block 9649 and measures approximately 68,994-square feet (sf). The Project Area is generally bounded by 84th Drive to the north, Manton and 139th Streets to the east, 86th Avenue to the south, and Queens Boulevard to the west. The Project Area spans six privately-owned tax lots on Block 9649, including Lots 17, 25, 37 (p/o), 42, 44 (p/o), and 53 (p/o). Of these six lots, Lots 17, 25, and 37 are owned by the Applicant. The Project Area has approximately 465 feet of frontage along the east side of Queens Boulevard, 201 feet of frontage along the south side of 84th Drive, 133 feet of frontage along the north side of 86th Avenue, and 200 feet of frontage along the west side of 139th Street.

The Applicant's Proposed Project would contain approximately 311,154-gsf of residential uses, approximately 33,020-gsf of commercial (local retail) uses, and approximately 51,757-gsf of accessory parking garage space on the second floor. The Proposed Project's residential floor area would comprise approximately 311 total dwelling units (DUs), 25-30% (approximately 78-93 DUs) of which would be affordable pursuant to Mandatory Inclusionary Housing (MIH) at a range of 60-80% of the Area Median Income (AMI) depending on the MIH Option selected. The Applicant intends to pursue MIH Option 1, which would result in the provision of approximately 78 DUs. Approximately 132 accessory parking spaces would be provided within the second floor parking garage. The second floor parking garage would be accessible via a ramp entrance from an existing curb cut on 139th Street. At its highest point, the Proposed Project would reach 17-stories (175-feet tall to the rooftop; 195 feet including mechanical bulkhead) along Queens Boulevard.

EAS Reasonable Worst Case Development Scenario

Lots 17, 25, and 37 (Projected Development Site 1)

Projected Development Site 1 would be developed with the Proposed Project, an approximately 395,931-gsf mixed-use residential and commercial development containing approximately 311 total DUs and 33,020-gsf of commercial (local retail) space. For RWCDS purposes, the Applicant's development proposal assumes close to the maximum allowable blended FAR (an FAR of 6.64 as compared to 6.65 FAR) and would maximize the allowable building height (up to 175 feet to the rooftop, 195 feet including mechanical bulkhead), however, the Applicant's residential development program is based on an average unit size of approximately 1,000-gsf. For CEQR analysis purposes presented in the EAS, the With-Action RWCDS assumes an average unit size of approximately 850-zoning square feet (zsf), resulting in approximately 339 total DUs, 25-30% (approximately 85-102 DUs) of which would be affordable pursuant to MIH at a range of 60-80% AMI depending on the MIH Option selected. For CEQR analysis purposes presented in the EAS (i.e., Early Childhood Programs), 20% of the residential floor area (68 DUs) is assumed to be affordable at an average of 80% AMI.

Consistent with the Proposed Project, under the With-Action RWCDS, the With-Action condition would also provide approximately 33,020-gsf of commercial (local retail) space and an approximately 51,757-gsf of accessory parking garage space on the second floor containing 132 accessory parking spaces.

Lots 42 and 44 (Projected Development Site 2)

Within the Project Area, lots 42 and 44 are occupied by two single-story commercial retail buildings. In the future with the Proposed Actions, it is expected the existing buildings on Lots 42 and 44 would be demolished and the two lots would be redeveloped to the maximum allowable blended FAR of 5.03[1] with a 17-story, approximately 134,225-gsf mixed-use residential and commercial building with a maximum rooftop height of 175 feet including a qualifying ground floor (QGF) pursuant to ZR Section 23-664; a total building height of 195 feet including a 20-feet tall bulkhead is assumed for the building on Projected Development Site 2. The building would not contain a cellar. The building on Projected Development Site 2 would include approximately 101,138-gsf of residential space (110 total DUs including at least 28 income-restricted DUs pursuant to MIH Option 1) and 12,790-gsf of local retail space on the building's ground floor. Approximately 40 accessory parking spaces would be included in a second floor garage measuring approximately 20,297-gsf. For CEQR analysis purposes presented in the EAS (i.e., Early Childhood Programs), 20% of the residential floor area (22 DUs) is assumed to be affordable at an average of 80% AMI.

In sum, for Projected Development Sites 1 and 2, the net incremental changes resulting from the Proposed Actions would be a total of approximately (+)237,821-gsf of residential space, including approximately (+)260 total DUs, of which at least approximately (+)113 would be income-restricted DUs pursuant to MIH Option 1, approximately (-)5,304-gsf of commercial space, and approximately (+)69 accessory parking spaces.

[1] The maximum allowable FAR on Projected Development Site 2 under the Proposed Actions would be a blended FAR (R8X[MIH]/C2-4 and R6A/C2-4) with the MIH bonus applied proportionally.

B. ANALYSIS FRAMEWORK

This technical memorandum provides a preliminary assessment of the effects of CHO on the Proposed Actions and evaluates whether CHO would affect the analyses and conclusions presented in the EAS. The City of Yes for Housing Opportunity proposal as presented in the Draft Scope of Work would change the allowable residential FAR for the 138-23 Queens Boulevard project's proposed R6A/C2-4 district. In the proposed R6A/C2-4 district, the allowable residential FAR would change from 3.6 (pursuant to MIH) to 3.9 (pursuant to CHO's proposed Universal Affordability Preference [UAP]). In the proposed R8X/C2-4 district, the allowable residential FAR would remain 7.2 (pursuant to MIH and pursuant to CHO's proposed UAP).

For Projected Development Site 1, CHO's proposed UAP would increase the maximum allowable developable residential floor area in the proposed R6A/C2-4 district by approximately 0.3 FAR, or approximately 2,214-zsf (approximately 2,546-gsf), comprising approximately 3 DUs (assuming an average unit size of approximately 850-zsf). For Projected Development Site 1, CHO would change the maximum building height analyzed in the EAS for the proposed R6A/C2-4 district; in the proposed R6A/C2-4 district, the maximum building height would increase from 85 feet to 95 feet. In the proposed R8X/C2-4 district, the maximum building height would not change and would remain 175 feet. No parking spaces would be required because CHO proposes to eliminate parking requirements for new residential developments.

For Projected Development Site 2, CHO's proposed UAP would increase the maximum allowable developable residential floor area in the proposed R6A/C2-4 district by approximately 0.3 FAR, or approximately 3,287-zsf (approximately 3,780-gsf), comprising approximately 4 DUs (assuming an average unit size of approximately 850-zsf). For Projected Development Site 2, CHO would change the maximum building height analyzed in the EAS for the proposed R6A/C2-4 district; in the proposed R6A/C2-4 district, the maximum building height would increase from 85 feet to 95 feet. In the proposed R8X/C2-4 district, the maximum building height would not change and would remain 175 feet. No parking spaces would be required because CHO proposes to eliminate parking requirements for new residential developments.

Future No-Action Condition

In the 2028 No-Action condition, the Project Area's existing R6A and R6A/C1-4 zoning would remain in place and City of Yes for Housing Opportunity would be approved. Under the existing zoning, it is assumed that development would occur on an as-of-right basis on both Projected Development Sites 1 and 2, given that both Projected Development Sites 1 and 2 are underbuilt at less than half the allowable FAR pursuant to the existing R6A and R6A/C1-4 zoning.

On Projected Development Site 1, the Applicant would demolish the existing single-story commercial buildings and construct an as-of-right mixed-use residential and commercial development. The No-Action condition on Projected Development Site 1 would consist of a seven-story (approximately 75-feet tall to the rooftop; 85-feet tall including the bulkhead height), mixed-use commercial and residential building containing approximately 122,550-gsf (113,359-zsf, 2.36 FAR) of residential space, consisting of 133 total DUs. The building would also contain approximately 33,020-gsf (30,544-zsf, 0.64 FAR) of ground floor commercial (local retail) space, and approximately 67 accessory parking spaces located in a second floor parking garage, for a total of approximately 207,327-gsf (143,903-zsf, 3.00 FAR). The building would not contain a cellar.

On Projected Development Site 2, the existing single-story commercial buildings would be demolished and Projected Development Site 2 would be developed on an as-of-right basis. The No-Action condition

on Projected Development Site 2 would consist of a seven-story (approximately 75-feet tall to the rooftop; 85-feet tall including the bulkhead height) mixed-use commercial and residential building containing approximately 51,921-gsf (47,201-zsf, 2.25 FAR) of residential space, consisting of approximately 56 total DUs. The building would also contain approximately 18,094-gsf (15,734-zsf, 0.75 FAR) of ground floor commercial (local retail) space, and approximately 31 accessory parking spaces located in a second floor parking garage, for a total of approximately 78,414-gsf (62,934-zsf, 3.00 FAR). The building would not contain a cellar.

In sum, in the No-Action condition, it is expected that Projected Development Sites 1 and 2 would contain a total of approximately 285,741-gsf (206,837-zsf) of built space, comprised of approximately 189 total DUs (174,471-residential gsf [160,560-zsf]), approximately 51,114-gsf (46,278-zsf) of commercial (local retail) space, and approximately 103 accessory parking spaces in two seven-story (approximately 75-feet tall to the rooftop; 85-feet tall including the bulkhead height) buildings.

Future With-Action Condition

In the 2028 With-Action condition, City of Yes for Housing Opportunity would modify the With-Action condition analyzed in the EAS for Projected Development Sites 1 and 2 by facilitating the incremental development of approximately 5,501-zsf (approximately 6,326-gsf) of additional total floor area (resulting in the incremental development of an additional 7 total DUs pursuant to CHO's UAP).

For Projected Development Sites 1 and 2, CHO would increase the maximum building heights analyzed in the EAS by an increment of 10 feet in the proposed R6A/C2-4 district. In the proposed R8X/C2-4 district, the maximum building heights for Projected Development Sites 1 and 2 would not change and would remain 175 feet.

C. SUPPLEMENTAL SCREENING PROPOSED ACTIONS WITH CHO

The changes facilitated by CHO would not substantially alter the site-specific characteristics of the Project Area. The changes would not exceed the thresholds requiring analysis within the 2021 *CEQR Technical Manual* for Historic and Cultural Resources, Natural Resources, Solid Waste and Sanitation Services, Energy, Greenhouse Gas Emissions and Climate Change, Public Health, or Neighborhood Character. The conclusions presented in the EAS would not change and no further analysis related to these site-specific impact categories is warranted.

The proposed (E) Designations for Hazardous Materials, Air Quality, and Noise would remain the same as presented in the EAS to avoid significant adverse impacts to these three technical areas. For Air Quality, the analysis presented in the EAS is based on specific stack heights for Projected Development Sites 1 and 2, as well as the parking garage vent height for Projected Development Site 1; the stack heights and parking garage vent height (for Projected Development Site 1) used in the Air Quality analysis would be mandated through the proposed (E) Designation for Air Quality. Adherence to the proposed (E) Designation for Air Quality would avoid significant adverse air quality impacts. For Noise, composite window/wall noise attenuation would be mandated through the proposed (E) Designation for Noise. Adherence to the proposed (E) Designation for Noise would avoid significant adverse noise impacts. The potential changes to the With-Action condition facilitated by CHO would not alter the conclusions of the EAS related to Hazardous Materials, Air Quality, and Noise, and no further analysis related to these impact categories is warranted.

Land Use, Zoning, and Public Policy

The potential changes that would be facilitated by CHO would not require new analysis nor change the conclusion of the Land Use, Zoning, and Public Policy attachment in the EAS. The changes facilitated by CHO would continue to result in land uses that are compatible with the residential and mixed-use character of the secondary study area. The proposed R6A/C2-4 and R8X/C2-4 districts would be compatible with the secondary study area's C4-3, C4-3A, R4, R4-1, R4A, R4B, R5, R6A, R6A/C1-4, and R6B/C1-4 districts. The addition of 7 DUs facilitated by CHO's UAP would be supportive of the City's housing goals as identified in *Housing Our Neighbors: A Blueprint for Housing and Homelessness*. The incorporation of changes facilitated by CHO would not result in a significant adverse impact on Land Use, Zoning, and Public Policy and no further analysis is warranted.

Socioeconomic Conditions

The potential changes that would be facilitated by CHO would not require new analysis nor change the conclusion of the Socioeconomic Conditions attachment in the EAS. Compared to the With-Action condition analyzed in the EAS for Projected Development Sites 1 and 2, the addition of 7 DUs facilitated by CHO's UAP would generate approximately 19 residents.[2] According to 2021 *CEQR Technical Manual* methodology, if the project-generated population increase is less than five percent in the study area, it would not introduce a substantial new population that could substantially affect residential real estate market conditions in the study area. As displayed in **Table D-8** of **Attachment D, "Socioeconomic Conditions"** of the EAS, in the With-Action condition, the Proposed Actions would increase the residential population of the half-mile socioeconomic study area by approximately 1.94 percent, which would not represent a substantial new population. Therefore, the Proposed Actions would not result in significant adverse indirect residential displacement impacts pursuant to CEQR.

Compared to the With-Action condition analyzed in the EAS for Projected Development Sites 1 and 2, the addition of 19 residents facilitated by CHO would increase the residential population of the half-mile socioeconomic study area by an additional approximately 0.05 percent from the With-Action condition, to approximately 1.99 percent. Therefore, the potential changes that would be facilitated by CHO would not alter the conclusions of **Attachment D, "Socioeconomic Conditions"** of the EAS and the incorporation of changes facilitated by CHO would not result in significant adverse indirect residential displacement impacts pursuant to CEQR.

Therefore, analysis of Socioeconomic Conditions is not warranted for the changes facilitated by CHO. The incorporation of changes facilitated by CHO would not result in a significant adverse impact on Socioeconomic Conditions and no further analysis is warranted.

Community Facilities and Services

The potential changes that would be facilitated by CHO would not require new analysis nor change the conclusion of the Community Facilities and Services attachment in the EAS. Compared to the With-Action condition analyzed in the EAS for Projected Development Sites 1 and 2, the addition of 7 DUs facilitated by CHO's UAP would not exceed the applicable 2021 *CEQR Technical Manual* thresholds requiring assessment of Community Facilities and Services, including 50 or more elementary/middle school

[2] Estimates of the residential population have been calculated based on the average household size of 2.76 persons per household for Queens Community District 8 per the 2020 U.S. Census.

students and/or 150 or more high school students, 20 or more eligible children under age five, 663 DUs of new housing units in Queens, or a sizeable new neighborhood where none existed before.

For public schools, the addition of 7 DUs would generate approximately two elementary school students, one middle school student, and one high school student.[3] As displayed in **Table E-6** of **Attachment E, "Community Facilities and Services"** of the EAS, the With-Action condition utilization rate of study area public elementary schools in CSD 28 would be equal to or greater than 100 percent; however, the Proposed Actions' RWCDS would not generate 100 or more new elementary students in CSD 28. Therefore, the Proposed Actions would not meet both of these criteria for public elementary schools and would not result in any significant adverse impacts on public elementary schools in CSD 28. Compared to the With-Action condition analyzed in the EAS for Projected Development Sites 1 and 2, the addition of two elementary school students facilitated by CHO would not alter the conclusions of **Attachment E, "Community Facilities and Services"** of the EAS and the incorporation of changes facilitated by CHO would not result in a significant adverse impact on public elementary schools in CSD 28.

For early childhood programs, the addition of 7 DUs would not generate additional eligible child under age five[4], and the incorporation of changes facilitated by CHO would not result in a significant adverse impact on early childhood programs. Therefore, analysis of Community Facilities and Services is not warranted for the changes facilitated by CHO, and the incorporation of changes facilitated by CHO would not result in a significant adverse impact on Community Facilities and Services.

Open Space

The potential changes that would be facilitated by CHO would not require new analysis nor change the conclusion of the Open Space attachment in the EAS. Compared to the With-Action condition analyzed in the EAS for Projected Development Sites 1 and 2, the addition of 7 DUs facilitated by CHO's UAP would generate approximately 19 residents. As displayed in **Table F-11** of **Attachment F, "Open Space"** of the EAS, in the With-Action condition, the residential total, active, and passive open space ratios would each decrease by approximately 1.84 percent from the No-Action condition. Compared to the With-Action condition analyzed in the EAS for Projected Development Sites 1 and 2, the addition of 19 residents facilitated by CHO would decrease the residential total, active, and passive open space ratios by an additional approximately 0.04 percent from the With-Action condition, to approximately 1.88 percent. Therefore, the potential changes that would be facilitated by CHO would not alter the conclusions of **Attachment F, "Open Space"** of the EAS and the incorporation of changes facilitated by CHO would not result in a significant adverse impact on open space in the half-mile open space study area.

Therefore, analysis of Open Space is not warranted for the changes facilitated by CHO. The incorporation of changes facilitated by CHO would not result in a significant adverse impact on Open Space and no further analysis is warranted.

[3] Per the SCA's Projected Public School Ratio student generation rates, residential units in CSD 28 generate 0.2246 elementary school students per DU, 0.079 middle school students per DU, and 0.1 high school students per DU.

[4] Assuming 20 percent of 7 DUs (~ 1 DU). A multiplier 0.140, applicable to projects located in Queens per Table 6-1a of the 2021 *CEQR Technical Manual*, was applied to the 1 DU.

Shadows

For the Project Area, the Tier 1 Screening Assessment (i.e., the longest shadow study area) provided in the EAS was determined based on the maximum building heights of 175 feet (195-feet tall including the bulkhead height) applicable in the proposed R8X/C2-4 district for Projected Development Sites 1 and 2. The Tier 1 Screening Assessment identified four sunlight-sensitive resources of concern within the 839-foot longest shadow study area. For Projected Development Site 1, CHO would change the maximum building height analyzed in the EAS for the proposed R6A/C2-4 district; in the proposed R6A/C2-4 district, the maximum building height would increase from 85 feet to 95 feet. In the proposed R8X/C2-4 district, the maximum building height would not change and would remain 175 feet. For Projected Development Site 2, CHO would change the maximum building height analyzed in the EAS for the proposed R6A/C2-4 district; in the proposed R6A/C2-4 district, the maximum building height would increase from 85 feet to 95 feet. In the proposed R8X/C2-4 district, the maximum building height would not change and would remain 175 feet.

Therefore, the additional 10 feet of maximum building heights potentially enabled by CHO would not cause any maximum building heights to exceed the 195 feet in total height (including the bulkhead height) analyzed in the EAS for the Project Area, and the 839-foot longest shadow study area would not need to be expanded. Therefore, the additional maximum building heights potentially enabled by CHO would not result in significant adverse impacts related to Shadows and no further analysis is warranted.

Urban Design and Visual Resources

The additional maximum building heights potentially enabled by CHO, which would be 10 feet taller than what was assumed in the EAS for the proposed R6A/C2-4 district, would result in a negligible change in the appearance of buildings that would not negatively affect the pedestrian experience adjacent to the Project Area. The additional maximum building heights potentially enabled by CHO would not obstruct important visual resources, nor would they result in building heights that would be incompatible with their surroundings. Therefore, the additional maximum building heights potentially enabled by CHO would not result in significant adverse impacts on Urban Design and Visual Resources and no further analysis is warranted.

Water and Sewer Infrastructure

The potential changes that would be facilitated by CHO would not require new analysis nor change the conclusion of the Water and Sewer Infrastructure attachment in the EAS. As described in the 2021 *CEQR Technical Manual*, for wastewater and stormwater conveyance and treatment, a preliminary sewer analysis is warranted if a project is located in a separately sewered area, is zoned R6-R10, C, M, or MX under existing conditions, and would result in the incremental development of at least 100 residential units or 100,000-sf or more of commercial, public and institution, and/or community facility space. As described in the EAS, the Project Area is located in a separately sewered area and is located in an existing R6A zoning district. Compared to the With-Action condition analyzed in the EAS for Projected Development Sites 1 and 2, the addition of 7 DUs facilitated by CHO's UAP would not exceed the applicable 100-unit 2021 *CEQR Technical Manual* threshold requiring a preliminary sewer analysis. Therefore, analysis of Water and Sewer Infrastructure is not warranted for the changes facilitated by CHO, and the incorporation of changes facilitated by CHO would not result in a significant adverse impact on Water and Sewer Infrastructure.

Transportation

The potential changes that would be facilitated by CHO would not require new analysis nor change the conclusion of the Transportation screening assessments presented in **Appendix III** of the EAS. As outlined in the 2021 *CEQR Technical Manual*, the Project Area is located in CEQR Traffic Zone 2. Compared to the With-Action condition analyzed in the EAS for Projected Development Sites 1 and 2, the addition of 7 DUs facilitated by CHO's UAP would not exceed the applicable 200-unit 2021 *CEQR Technical Manual* minimum development density threshold for CEQR Traffic Zone 2. Therefore, numerical analysis in the form of a Level 1 (project trip generation) screening assessment is not warranted for the changes facilitated by CHO. The incorporation of changes facilitated by CHO would not result in a significant adverse impact on Transportation and no further analysis is warranted.

Noise

The potential changes that would be facilitated by CHO would not require new analysis nor change the conclusion of the Noise attachment in the EAS. Noise levels would continue to be above the level requiring additional window and wall attenuation to maintain interior noise levels of 45 dB(A) or lower for residential uses. Composite window/wall noise attenuation would be mandated through the proposed (E) Designation for Noise. Adherence to the proposed (E) Designation for Noise would avoid significant adverse noise impacts. The incorporation of changes facilitated by CHO would not result in a significant adverse impact on Noise and no further analysis is warranted.

Construction

The potential changes that would be facilitated by CHO would not require new analysis nor change the conclusion of the Construction attachment in the EAS. The additional building densities and heights potentially enabled by CHO would result in a negligible change in the conceptual construction schedules for Projected Development Sites 1 and 2. Therefore, the additional building densities and heights potentially enabled by CHO would not result in significant adverse impacts on Construction and no further analysis is warranted.

D. SUMMARY CONCLUSION

This technical memorandum assesses whether the City of Yes for Housing Opportunity proposal would potentially alter the analysis of the Proposed Actions and conclusions presented in the corresponding EAS for the 138-23 Queens Boulevard project. The City of Yes for Housing Opportunity proposal as presented in the Draft Scope of Work dated September 29, 2023 would increase the allowable residential FAR for this project's proposed R6A/C2-4 district by up to 0.3 FAR, as well as increase the allowable maximum building height by 10 feet in the proposed R6A/C2-4 district.

This technical memorandum concludes that the potential changes facilitated by CHO would not exceed thresholds nor create conditions that require new analysis or improvement measures, nor would the proposed changes affect the conclusions presented in the EAS.