23-10 Queens Plaza South Rezoning

Environmental Assessment Statement (EAS)

PREPARED FOR

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CEQR #22DCP136Q
ULURP #210317ZMQ, N210318ZRQ, 210319ZSQ

October 20, 2022

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

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

Part I: GENERAL INFORMATION

PROJECT NAME 23-10 Queens Plaza South Rezoning

1. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency)	BSA REFERENCE NUMBER (if applicable)
22DCP136Q	
ULURP REFERENCE NUMBER (if applicable)	OTHER REFERENCE NUMBER(S) (if applicable) (*e.g.*, legislative intro, CAPA)
210317ZMQ, N210318ZRQ, 210319ZSQ	

2a. *Lead Agency Information*			**2b. *Applicant Information***		
NAME OF LEAD AGENCY NYC Department of City Planning			NAME OF APPLICANT AAGS Holdings, LLC		
NAME OF LEAD AGENCY CONTACT PERSON Stephanie Shellooe, AICP, Director of DCP EARD			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON Penny Lee		
ADDRESS 120 Broadway, 31st Floor			ADDRESS 67 Joggling Street		
CITY New York	STATE NY	ZIP 10271	CITY Mt. Pleasant	STATE SC	ZIP 29464
TELEPHONE (212) 720-3328	EMAIL sshellooe@planning.nyc.gov		TELEPHONE 718-791-6561	EMAIL plee@dynamicstarllc.com	

3. *Action Classification and Type*

SEQRA Classification

☐ UNLISTED ☒ TYPE I: Specify Category (see 6 NYCRR 617.4 and NYC Executive Order 91 of 1977, as amended): 617.4 (b)(6)(vi)

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

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

4. *Project Description*

The applicant, AAGS Holdings, LLC (also known as Dynamic Star), requests a series of land use actions, including a zoning map amendment, zoning text amendment, and special permit to facilitate the reuse and 22-story enlargement of an existing four-story industrial building, including approximately 216,600 additional commercial square feet (sf) at 23-10 Queens Plaza South (Block 425, Lot 5) in the Long Island City neighborhood, Queens Community District 2.

The development site comprises two tax lots (1 and 5) on one zoning lot (the "Development Site"). The reuse and 22-story proposed enlargement of the four-story existing industrial building would result in a 26-story commercial building on Lot 5 (the "Proposed Development"). The Proposed Development would have local retail, restaurant, exhibit, accessory office, and mechanical uses on its ground floor and cellar, office use on floors two through four within the envelope of the existing commercial building, and office use on new floors five through 26. The Proposed Development would have a total of 363,136 gsf (321,449 zsf) of commercial space, consisting of 135,361 gsf (104,849 zsf) within the envelope of the existing industrial building and 227,775 gsf (216,600 zsf) of commercial space within the proposed enlargement. Of the total commercial space, approximately 21,505 gsf (13,102 zsf) would be local retail which is proposed on the ground floor and cellar level, 7,254 gsf (7,025 zsf) would be restaurant space which is proposed on the ground floor and fifth floor, 2,410 gsf (0 zsf) would be community meeting space, 520 gsf (504 zsf) would be exhibit space documenting the former Eagle Electric manufacturing business that formerly occupied the building, and approximately 331,447 gsf (300,818 zsf) would be commercial office. The commercial office space in the Proposed Development would create 1,326 workers, based on the CEQR calculation of 1 employee per 250 sf. The retail component would create 73 workers and the restaurant 22 workers based on the CEQR assumption of 1 worker per 333.3 sf.

No change is proposed to an existing residential building located on Lot 1; accordingly, the Proposed Development, together with the residential building, will result in the Development Site having a total floor area of 632,145 zsf (15 FAR), 310,696 zsf (7.37 FAR) of which would be residential uses within the residential building (no change) and 321,449 zsf (7.63 FAR) of which would be commercial uses within the Proposed Development, consisting of new commercial occupancy within the long-vacant envelope of the existing industrial building and new commercial floor area within the

proposed enlargement. The existing residential building contains 391 units and approximately 911 residents based on the average household size in the QN31 neighborhood tabulation area (2.33).

The street walls of the Proposed Development would rise to a maximum base height of 150 feet, as per ZR 117-532 (Setback regulations for buildings that exceed the maximum base height). However, the fifth floor of the Proposed Development, located directly above the existing commercial building and extending from approximately 68 feet to 92 feet above the base plane, would be recessed from all three street frontages for 100 percent of its width, to a maximum depth of approximately 33 feet from Queens Plaza South, 40 feet from 23rd Street and 20 feet from 24th Street, in order to provide visual distinction between the existing commercial building and the proposed enlargement, allow for accessory passive recreation space and/or an eating or drinking establishment with outdoor table service on the roof of the existing commercial building, and allow for the possibility of a complying accessory sign pursuant to ZR Section 117-514 (special sign regulations). An application for a special permit pursuant to Section 117-533 (special permit to modify use or bulk provisions) is proposed to allow for this modified street wall location.

To allow the Proposed Development to have a variety of appropriately-sized commercial floorplates, the special permit pursuant to Section 117-533 is also proposed to modify Section 23-711(e) (standard minimum distance between buildings) of the Zoning Resolution to allow the portion of the Proposed Development above 125 feet that exceeds a lot coverage of 40 percent to be 60 feet apart from the adjacent residential building instead of the required 80 feet.

Project Location

BOROUGH Queens	COMMUNITY DISTRICT(S) 2	STREET ADDRESS 23-10 Queens Plaza South and 42-20 24th Street, Queens, NY
TAX BLOCK(S) AND LOT(S) Block 425 Lots 1 and 5		ZIP CODE 11101
DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS 23rd Street, 24th Street, 42nd Road, Queens Plaza South		
EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY M1-5/R9 (LIC)		ZONING SECTIONAL MAP NUMBER 9b

5. *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 117-502, 117-521, 117-522, 117-532, 117-533, Appendix C

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:

6. *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.): 42,143 (Lot 1: 14,921 sf; Lot 5: 27,222 sf)
Waterbody area (sq. ft.) and type: N/A
Roads, buildings, and other paved surfaces (sq. ft.): 42,143 sf
Other, describe (sq. ft.): N/A

7. *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): Lot 5: 363,136 sf
NUMBER OF BUILDINGS: 1
GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): Lot 5: 363,136 sf
HEIGHT OF EACH BUILDING (ft.): Lot 5: 383' (approximately 404' to the top of the mechanical bulkhead)
NUMBER OF STORIES OF EACH BUILDING: Lot 5: 26

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: 27,222 sf
The total square feet not owned or controlled by the applicant: 14,921 sf

Does the proposed project involve in-ground excavation or subsurface disturbance, including, but not limited to foundation work, pilings, utility lines, or grading? ☒ YES ☐ NO
If "yes," indicate the estimated area and volume dimensions of subsurface disturbance (if known):
AREA OF TEMPORARY DISTURBANCE: TBD sq. ft. (width x length)
VOLUME OF DISTURBANCE: TBD cubic ft. (width x length x depth)
AREA OF PERMANENT DISTURBANCE: TBD sq. ft. (width x length)

8. *Analysis Year* CEQR Technical Manual Chapter 2

ANTICIPATED BUILD YEAR (date the project would be completed and operational): 2024

ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: 18

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

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE: It is anticipated that the project will be certified into ULURP by September 2022 and that project approvals will be received by March 2023. A construction period of 18 months is anticipated. As the proposed building would be an expansion of the existing building, it would not involve a demolition or foundation phase. As such, construction activities would consist of superstructure and exterior cladding and interior finishes only. Given the foregoing, building occupancy is anticipated in 2024.

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

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

DESCRIPTION OF EXISTING AND PROPOSED CONDITIONS

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

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
LAND USE				
Residential	☒ YES ☐ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify the following:				
Describe type of residential structures	Multi-Family Residential	Multi-Family Residential	Multi-Family Residential	
No. of dwelling units	391	391	391	0
No. of low- to moderate-income units	0	0	0	0
Gross floor area (sq. ft.)	390,824	390,824	390,824	0
Commercial	☐ YES ☒ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify the following:				
Describe type (retail, office, other)		Retail	Retail, Office, Restaurant, Community Meeting Space, Exhibit Space	Office, Restaurant, Community Meeting Space, Exhibit Space
Gross floor area (sq. ft.)		27,713	363,136	335,423
Manufacturing/Industrial	☒ YES ☐ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
Type of use	Vacant			
Gross floor area (sq. ft.)	135,361			
Open storage area (sq. ft.)				
If any unenclosed activities, specify:				
Community Facility	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
Type				
Gross floor area (sq. ft.)				
Vacant Land	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," describe:				
Publicly Accessible Open Space	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify type (mapped City, State, or Federal parkland, wetland—mapped or otherwise known, other):				
Other Land Uses	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," describe:				
PARKING				
Garages	☒ YES ☐ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify the following:				
No. of public spaces	0	0	0	
No. of accessory spaces	62	62	62	
Operating hours	24/7	24/7	24/7	
Attended or non-attended	Attended	Attended	Attended	
Lots	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
No. of public spaces				
No. of accessory spaces				
Operating hours				
Other (includes street parking)	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," describe:				

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
POPULATION				
Residents	☒ YES ☐ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify number:	911	911	911	0
Briefly explain how the number of residents was calculated:	Multiplied the number of residential units (391) by the avg. household size (2.33) in Neigborhood Tabulation Area: Hunters Point-Sunnyside-West Maspeth (QN31)			
Businesses	☐ YES ☒ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify the following:				
No. and type	N/A	Number and Type TBD	Commercial Office: TBD; Local Retail: 5; Restaurant;1	TBD
No. and type of workers by business	N/A	Number and Type TBD	Commercial Office: 1,326; Local Retail: 73; Restaurant: 22	TBD
No. and type of non-residents who are not workers	N/A	TBD	TBD	TBD
Briefly explain how the number of businesses was calculated:	The physical space has been divided into 5 local retail spaces and one restaurant space. The number of commercial office tenants is TBD. The number of employees were calculated based on 1 employee per 250 sf of commerical office, 1 employee per 333.3 sf of local retail and restaurant use.			
Other (students, visitors, concert-goers, *etc.*)	☐ YES ☒ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If any, specify type and number:	N/A	Number of shoppers/visitors is TBD	Number of shoppers/visitors is TBD	
Briefly explain how the number was calculated:	The future tenants are not yet known. The type of local retail, restaurant and office uses would determine the number of restaurant patrons, shoppers, and office visitors. As such, the number of other users is TBD at this time.			
ZONING				
Zoning classification	M1-5/R9	M1-5/R9	M1-5/R9	
Maximum amount of floor area that can be developed	337,144	337,144	632,145	255,001
Predominant land use and zoning classifications within land use study area(s) or a 400 ft. radius of proposed project	Commercial, Multi-family walk-up buildings, Multi-family elevator buildings, Manufacturing buildings, M1-5, M1-5/R7-3, M1-6/R10.	Commercial, Multi-family walk-up buildings, Multi-family elevator buildings, Manufacturing buildings, M1-5, M1-5/R7-3, M1-6/R10.	Commercial, Multi-family walk-up buildings, Multi-family elevator buildings, Manufacturing buildings, M1-5, M1-5/R7-3, M1-6/R10.	
Attach any additional information that may be needed to describe the project. If your project involves changes that affect one or more sites not associated with a specific development, it is generally appropriate to include total development projections in the above table and attach separate tables outlining the reasonable development scenarios for each site.				

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 Full EAS Form. For example, if a question is answered "no," an agency may request a short explanation for this response.

	YES	NO
1. *LAND USE, ZONING, AND PUBLIC POLICY*: CEQR Technical Manual Chapter 4		
(a) Would the proposed project result in a change in land use 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 Attached.		
(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 more than 200 residential units *or* 200,000 square feet of commercial space?	☒	☐
▪ If "yes," answer *both* questions 2(b)(ii) and 2(b)(iv) below.		
○ Directly displace 500 or more residents?	☐	☒
▪ If "yes," answer questions 2(b)(i), 2(b)(ii), and 2(b)(iv) below.		
○ Directly displace more than 100 employees?	☐	☒
▪ If "yes," answer questions under 2(b)(iii) and 2(b)(iv) below.		
○ Affect conditions in a specific industry?	☐	☒
▪ If "yes," answer question 2(b)(v) below.		
(b) If "yes" to any of the above, attach supporting information to answer the relevant questions below. If "no" was checked for each category above, the remaining questions in this technical area do not need to be answered.		
i. Direct Residential Displacement		
○ If more than 500 residents would be displaced, would these residents represent more than 5% of the primary study area population?	☐	☒
○ If "yes," is the average income of the directly displaced population markedly lower than the average income of the rest of the study area population?	☐	☐
ii. Indirect Residential Displacement		
○ Would expected average incomes of the new population exceed the average incomes of study area populations?	☐	☒
○ If "yes:"		
▪ Would the population of the primary study area increase by more than 10 percent?	☐	☐
▪ Would the population of the primary study area increase by more than 5 percent in an area where there is the potential to accelerate trends toward increasing rents?	☐	☐
○ If "yes" to either of the preceding questions, would more than 5 percent of all housing units be renter-occupied and unprotected?	☐	☐
iii. Direct Business Displacement		
○ Do any of the displaced businesses provide goods or services that otherwise would not be found within the trade area, either under existing conditions or in the future with the proposed project?	☐	☒
○ Is any category of business to be displaced the subject of other regulations or publicly adopted plans to preserve,	☐	☒

	YES	NO
enhance, or otherwise protect it?		
iv. Indirect Business Displacement		
○ Would the project potentially introduce trends that make it difficult for businesses to remain in the area?	☐	☒
○ Would the project capture retail sales in a particular category of goods to the extent that the market for such goods would become saturated, potentially resulting in vacancies and disinvestment on neighborhood commercial streets?	☐	☒
v. Effects on Industry		
○ Would the project significantly affect business conditions in any industry or any category of businesses within or outside the study area?	☐	☒
○ Would the project indirectly substantially reduce employment or impair the economic viability in the industry or category of businesses?	☐	☒
3. *COMMUNITY FACILITIES*: CEQR Technical Manual Chapter 6		
(a) Direct Effects		
○ Would the project directly eliminate, displace, or alter public or publicly funded community facilities such as educational facilities, libraries, health care facilities, day care centers, police stations, or fire stations?	☐	☒
(b) Indirect Effects		
i. 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)	☐	☒
○ If "yes," would the project result in a collective utilization rate of the Early Childhood Programs in the study area that is greater than 100 percent?	☐	☐
○ If "yes," would the project increase the collective utilization rate by 5 percent or more from the No-Action scenario?	☐	☐
ii. 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)	☐	☒
○ If "yes," would the project result in a utilization rate of the elementary or middle schools that is equal to or greater than 100 percent?	☐	☐
○ If "yes," would the project generate 100 or more elementary or middle school students past the 100% utilization rate?	☐	☐
○ If "yes," would the project result in a utilization rate of the high schools that is equal to or greater than 100 percent?	☐	☐
○ If "yes," would the project increase the high school utilization rate by 5 percent or more from the No-Action scenario?	☐	☐
iii. 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)	☐	☒
○ If "yes," would the project increase the study area population by 5 percent or more from the No-Action levels?	☐	☐
○ If "yes," would the additional population impair the delivery of library services in the study area?	☐	☐
iv. Health Care Facilities		
○ Would the project result in the introduction of a sizeable new neighborhood?	☐	☒
○ If "yes," would the project affect the operation of health care facilities in the area?	☐	☐
v. Fire and Police Protection		
○ Would the project result in the introduction of a sizeable new neighborhood?	☐	☒
○ If "yes," would the project affect the operation of fire or police protection in the area?	☐	☐
4. *OPEN SPACE*: CEQR Technical Manual Chapter 7		
(a) Would the project change or eliminate existing open space?	☐	☒
(b) 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?	☒	☐
(c) If "yes" to either of the above questions, attach supporting information explaining whether the project's shadow would reach any sunlight-sensitive resource at any time of the year. Provided in EAS		

	YES	NO
6. *HISTORIC AND CULTURAL RESOURCES*: CEQR Technical Manual Chapter 9		
(a) Does the proposed project site or an adjacent site contain any architectural and/or archaeological resource that is eligible for or has been designated (or is calendared for consideration) as a New York City Landmark, Interior Landmark or Scenic Landmark; that is listed or eligible for listing on the New York State or National Register of Historic Places; or that is within a designated or eligible New York City, New York State or National Register Historic District? (See the GIS System for Archaeology and National Register to confirm)	☒	☐
(b) Would the proposed project involve construction resulting in in-ground disturbance to an area not previously excavated?	☒	☐
(c) If "yes" to either of the above, list any identified architectural and/or archaeological resources and attach supporting information on whether the proposed project would potentially affect any architectural or archeological resources. The Eagle Electric building		
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?	☐	☒
(c) If "yes" to either of the above, please provide the information requested in Chapter 10. Provided in EAS		
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 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.		
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: Provided in EAS	☒	☐
(j) Based on the Phase I Assessment, is a Phase II Investigation needed? Provided in EAS	☒	☐
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 that listed in Table 13-1 in Chapter 13?	☐	☒
(d) Would the project involve development on a site that is 5 acres or larger where the amount of impervious surface would increase?	☐	☒
(e) If the project is located within the Jamaica Bay Watershed or in certain specific drainage areas, including Bronx River, Coney Island Creek, Flushing Bay and Creek, Gowanus Canal, Hutchinson River, Newtown Creek, or Westchester Creek, would it involve development on a site that is 1 acre or larger where the amount of impervious surface would increase?	☐	☒
(f) Would the proposed project be located in an area that is partially sewered or currently unsewered?	☐	☒

	YES	NO
(g) Is the project proposing an industrial facility or activity that would contribute industrial discharges to a Wastewater Treatment Plant and/or contribute contaminated stormwater to a separate storm sewer system?	☐	☒
(h) Would the project involve construction of a new stormwater outfall that requires federal and/or state permits?	☐	☒
(i) If "yes" to any of the above, conduct the appropriate preliminary analyses and attach supporting documentation. Provided in EAS		
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): 28,490		
○ 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?	☐	☒
○ If "yes," would the proposed project comply with the City's Solid Waste Management Plan?	☐	☒
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): 78,546,317		
(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 appropriate screening analyses, attach 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, 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) Provided in EAS	☒	☐
(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?	☐	☒
(f) If "yes" to any of the above, conduct the appropriate analyses and attach any supporting documentation. Provided in EAS		
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) Would the proposed project result in the development of 350,000 square feet or more?	☐	☒
(d) If "yes" to any of the above, would the project require a GHG emissions assessment based on guidance in Chapter 18?	☐	☒
○ If "yes," would the project result in inconsistencies with the City's GHG reduction goal? (See Local Law 22 of 2008; § 24-803 of the Administrative Code of the City of New York). Please attach supporting documentation.	☐	☒
16. *NOISE*: CEQR Technical Manual Chapter 19		
(a) Would the proposed project generate or reroute vehicular traffic?	☒	☐
(b) Would the proposed project introduce new or additional receptors (see Section 114 in Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed rail line with a direct line of site to that rail line?	☒	☐

	YES	NO
(c) Would the proposed project cause a stationary noise source to operate within 1,500 feet of a receptor with a direct line of sight to that receptor or introduce receptors into an area with high ambient stationary noise?	☐	☒
(d) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to noise that preclude the potential for significant adverse impacts?	☐	☒
(e) If "yes" to any of the above, conduct the appropriate analyses and attach any supporting documentation. Provided in EAS		
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. Provided in EAS		
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. Provided in EAS		
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. Provided in EAS		

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	SIGNATURE	DATE
David Velez, AICP		October 20, 2022

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

Part III: DETERMINATION OF SIGNIFICANCE (To Be Completed by Lead Agency)

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

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

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

2. Are there any aspects of the project relevant to the determination of whether the project may have a significant impact on the environment, such as combined or cumulative impacts, that were not fully covered by other responses and supporting materials? ☐ YES ☒ NO

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

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

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

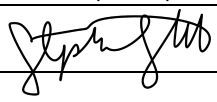
☐ **Conditional Negative Declaration:** A *Conditional Negative Declaration* (CND) may be appropriate if there is a private applicant for an Unlisted action AND when conditions imposed by the lead agency will modify the proposed project so that no significant adverse environmental impacts would result.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

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

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

TITLE	LEAD AGENCY
Director, Environmental Assessment and Review Division	Department of City Planning on behalf of the City Planning Commission
NAME	DATE
Stephanie Shellooe, AICP, Director	October 21, 2022

SIGNATURE



NEGATIVE DECLARATION

Statement of No Significant Effect

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

Reasons Supporting this Determination

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

Land Use, Zoning, and Public Policy

A detailed analysis of Land Use, Zoning, and Public Policy is included in the EAS. The Proposed Actions include a Zoning Map Amendment, a Zoning Text Amendment, and a Zoning Special Permit, affecting Queens Block 425, Lots 1 and 5 (the "Project Area"). The applicant is seeking a Zoning Map Amendment to rezone the Project Area from an M1-5/R9 zoning district to an M1-6/R9 zoning district. The Zoning Text Amendment to Zoning Resolution (ZR) Section 117-50 ("Queens Plaza Subdistrict") is to establish a new Area D (coterminous with the Project Area) within the Queens Plaza Subdistrict of the Special Long Island City Mixed Use District (LIC District), to make such Area D subject to the applicable bulk regulations of the Subdistrict, and to establish the maximum permitted floor area ratios permitted by use in Area D. The Special Permit pursuant to ZR Section 117-533 ("Special Permit to Modify Use or Bulk Regulations") to modify the distance-between buildings requirements of ZR 23-711(e) ("Standard Minimum Distance Between Buildings") and the street-wall-location requirements of ZR 117-531 ("Street Wall Location"). Collectively, the Proposed Actions would facilitate the reuse and 22-story enlargement of the existing four-story former Eagle Electric building (the "Proposed Project") located on the zoning lot consisting of Queens Block 425, Lots 1 and 5 in the Long Island City neighborhood, Queens Community District 2. The Proposed Project would be developed on Lot 5 at 23-10 Queens Plaza South and would result in a 383-foot tall, 26-story commercial building. The Proposed Development would have a total of 363,136 gross square feet (gsf) of commercial space, consisting primarily of commercial office, with local retail on the ground floor and cellar level, a restaurant, community meeting space and exhibit space documenting the former Eagle Electric manufacturing business. The Project Area is particularly well-suited to the increase office and other non-residential development given its proximity to a robust transit network. The Project Area is part of the LIC District, which was adopted by the City Planning Commission in 2001 to encourage the development and density of residential, commercial, industrial and cultural uses in the neighborhood. The Proposed Actions would result in the reuse and enlargement of a long-vacant formed manufacturing and industrial building that has been vacant since 2000. The Proposed Actions would result in an increase in commercial FAR to a level appropriate for the LIC District. While the Proposed Actions would result in a change to Land Use and Zoning, the Proposed Actions are not anticipated to result in a significant adverse impact on land use, zoning, or public policy.

Open Space

A detailed analysis related to Open Space (indirect non-residential effects) is included in this EAS. Under the With-Action condition, the passive open space ratio for Non-Residents would be .0070 acres per 1,000 non-residents (a 2.96 percent decrease as compared to the No-Action condition). The combined non-residents and residents passive open space ratio for the Proposed Project would be 0.051 acres per 1,000 non-residents and residents (a 2.15 percent decrease from the No-Action condition. Additional qualitative factors serve to offset the increased demand expected from the new non-residents introduced by the Proposed Project. Queensbridge Park is located just outside of the open Space Study Area. Further, the Proposed Project includes an accessory passive landscaped terrace on roof of the existing industrial building, designed to provide an open-air greenspace for office tenants. Provision of this 16,134-sf space is expected to reduce demand from office workers on open space resources in the surrounding area. Since it would not be publicly accessible, the proposed private open space has not been included in the quantitative analysis. Based on quantitative assessment with the qualitative consideration of the proposed rooftop terrace that is expected to be well used by office tenants, the Proposed Project under the With-Action condition is not expected to have significant adverse impact, and further analysis is not warranted.

Shadows

A detailed analysis related to Shadows is included in this EAS. No significant adverse shadow impacts to the four-sunlight sensitive open space resources analyzed would be expected as a result of the Proposed Actions. The duration and size of incremental shadow that would be cast by the Proposed Project on Queensbridge Park Greenway, Dutch Kills Green and Queensbridge Houses Open Space would not be sufficient to result in significant adverse impacts and therefore no further analysis of these three open spaces is warranted. Although Queens Plaza Medians would receive incremental shading on all four analysis days, the area that would be shaded is primarily limited to a narrow, planted strip across from the Development Site along Queens Plaza South. The north half of the resource, which is larger, more heavily used and contains a bicycle greenway would receive a limited amount of shading on only two of the four analysis days. Incremental shading would not substantially reduce the enjoyment of the resource by pedestrians, cyclists and parkgoers nor would it effect the photosynthesis and other biological properties of resident trees and other vegetation. Therefore, no significant adverse impacts are anticipated, and no further analysis is warranted.

Historic and Cultural Resources

A detailed analysis related to Historic and Cultural Resources is included in this EAS. As currently proposed, the Eagle Electric Building, which has been determined eligible for listing on the National Register of Historic Places would be expanded by a 22-story enlargement that would reflect the design of the existing industrial building. In the With-Action condition, the exterior of the Eagle Electric Building would be maintained in its entirety. In the No-Action condition, the site would continue to be overbuilt, necessitating the demolition of its top two floors. The With-Action condition allows for preservation of the existing Eagle Electric Building, including the façade, which would entail consistency with the existing condition of the Development Site. Additionally, the overall context of the building would be maintained and/or improved in the immediate vicinity of the Development Site, through the following measures: new transparency would be provided on the ground floor of the existing building to enhance the relationship of the building to the sidewalk and pedestrians; current sidewalk widths would be maintained; and finally, street trees would be provided on the sidewalk surrounding the Development Site in compliance with city regulations. In addition, Landmarks Preservation Commission (LPC) reviewed the Historic and Cultural Resources assessment and confirmed that no impacts would occur and that further analysis of Historic and Cultural Resources is not warranted.

Project Name: 23-10 Queens Plaza South Rezoning
CEQR # 22DCP136Q
SEQRA Classification: Type I

Urban Design and Visual Resources

A detailed analysis related to Urban Design and Visual Resources is included in this EAS. Overall, the With-Action condition would be compatible with the mixed-use character of the Study Area and would be consistent with the surrounding building forms and streetscape under future With-Action conditions. The Proposed Project, which includes a 22-story enlargement to an existing four-story industrial and manufacturing building, would allow for the preservation of the existing building and for its occupation for the first time since it was vacated in about 2000. This represents an improvement over the No-Action condition, which would involve the demolition of the top two floors of the Eagle Electric building with no enlargement. In addition, the With-Action condition would not result in any significant adverse impacts on publicly accessible views to and from the one visual resource in the Study Area, the Queensboro Bridge. The Project Area is surrounded on three sides by tall, elevated transportation structures, which obscure views from proximate sidewalks. The Project Area is already occupied by large towers that obstruct potential views from the southeast and east toward the bridge. Further there is an irregular street grid in the Study Area south and east of the Project Area. Therefore, the Proposed Actions would not result in a significant adverse impact on urban design and visual resources, and no further analysis is necessary.

Transportation

A detailed analysis related to Transportation (Traffic, Subway Transit, Pedestrians, Parking and Vehicular and Pedestrian Safety) is included in this EAS. Preliminary screening analysis demonstrated that Bus Transit analysis was not warranted. The following roadway and pedestrian improvements are proposed as part of the Proposed Project and will be reviewed for approval and installation by the New York City Department of Transportation (NYCDOT) prior to opening (as detailed in the EAS and its appendices and described in a Restrictive Declaration): at the intersection of Queens Boulevard and Jackson Avenue/Northern Boulevard, adjust the signal timing and restripe the northbound approach to include two through lanes and one shared through/right-turn lane; at the intersection of 42nd Road and 23rd Street, install a traffic signal; widen the south sidewalk on Queens Plaza South between Crescent Street and 27th Street approximately 11 feet into the roadway (east of the proposed subway elevator) and approximately 4 feet into the roadway (at and west of the proposed subway elevator). This sidewalk widening would be in addition to MTA's proposed sidewalk widening included in the No-Action Condition and will need to be coordinated with NYCDOT. Additionally, a post-opening traffic monitoring plan (TMP) will be conducted in coordination with NYCDOT to assess traffic operations within the study area once the Proposed Project is complete and before the above project-related improvements are implemented to determine if the project-related improvements are still the most appropriate treatments at that time. With the implementation of these components, the Proposed Actions are not anticipated to result in a significant adverse impact on traffic or pedestrian conditions, and no further analysis is necessary. The subway stairs, subway control area, parking occupancy and utilization analysis did not exceed the significant adverse impact criteria, and no further analysis is necessary.

Air Quality and Noise

An (E) designation (E-689) related to Air Quality and Noise would be established as part of the approval of the proposed actions. Refer to "Determination of Significance Appendix: (E) designation" for the applicable (E) designation requirements. The air quality and noise analyses conclude that with the (E) designation in place, the proposed actions would not result in a significant adverse impact related to air quality or noise.

No other significant effects upon the environment that would require the preparation of a Draft Environmental Impact Statement are foreseeable. This Negative Declaration has been prepared in accordance with Article 8 of the New York State Environmental Conservation Law (SEQRA). Should you have any questions pertaining to this Negative Declaration, you may contact Louise Cafiero at lcafiero@planning.nyc.gov.

TITLE	LEAD AGENCY
Director, Environmental Assessment and Review Division	Department of City Planning on behalf of the City Planning Commission 120 Broadway, 31st Fl. New York, NY 10271 | 212.720.3328
NAME Stephanie Shellooe, AICP	DATE October 21, 2022
SIGNATURE	

TITLE	
Chair, City Planning Commission	
NAME Daniel R. Garodnick	DATE October 24, 2022
SIGNATURE	

Project Name: 23-10 Queens Plaza South Rezoning
CEQR # 22DCP136Q
SEQRA Classification: Type I

Determination of Significance Appendix

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

Development Site	Borough	Block and Lot
Projected Development Site	Queens	Block 425, Lot 5

(E) Designation Requirements

To ensure that the proposed actions would not result in significant adverse impacts related to air quality and noise an (E) designation (**E-689**) would be established as part of approval of the proposed actions on the **Projected Development Site** as described below:

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

Air Quality

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

> ***Projected Development Site (Block 425, Lot 5):*** *Any new commercial development and/or enlargement on the above-referenced property, if using fossil-fuel fired heating, ventilation, and air conditioning (HVAC) or hot water systems, must exclusively use natural gas and be fitted with low-NO_x (up to 20 ppm) burners. Stacks must be located at the highest building tier and at least 406.83 feet above grade. Additionally, HVAC stacks must be located a minimum of 100 feet away from the Lot 5 lot line facing 42nd Road to avoid any potential significant adverse air quality impacts.*

Noise

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

> ***Projected Development Site (Block 425, Lot 5):*** *In order to ensure an acceptable interior noise environment, future commercial office/exhibit uses must provide a closed-window condition with a minimum attenuation as shown in Table 12-9 in order to maintain an interior L_{10} noise level not greater than 50 dBA and an interior L_{dn} noise level not greater than 45 dBA for commercial office and exhibit spaces as illustrated in Table 12-9, Figure 12-3 and 12-4 of the EAS. To achieve up to 45 dBA of building attenuation, special design features that go beyond the normal double-glazed windows are necessary and may include using specifically designed windows (i.e., windows with small sizes, windows with air gaps, windows with thicker glazing, etc.), and additional building attenuation. In order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.*

EAS Figures

Figure 1 Project Area Map

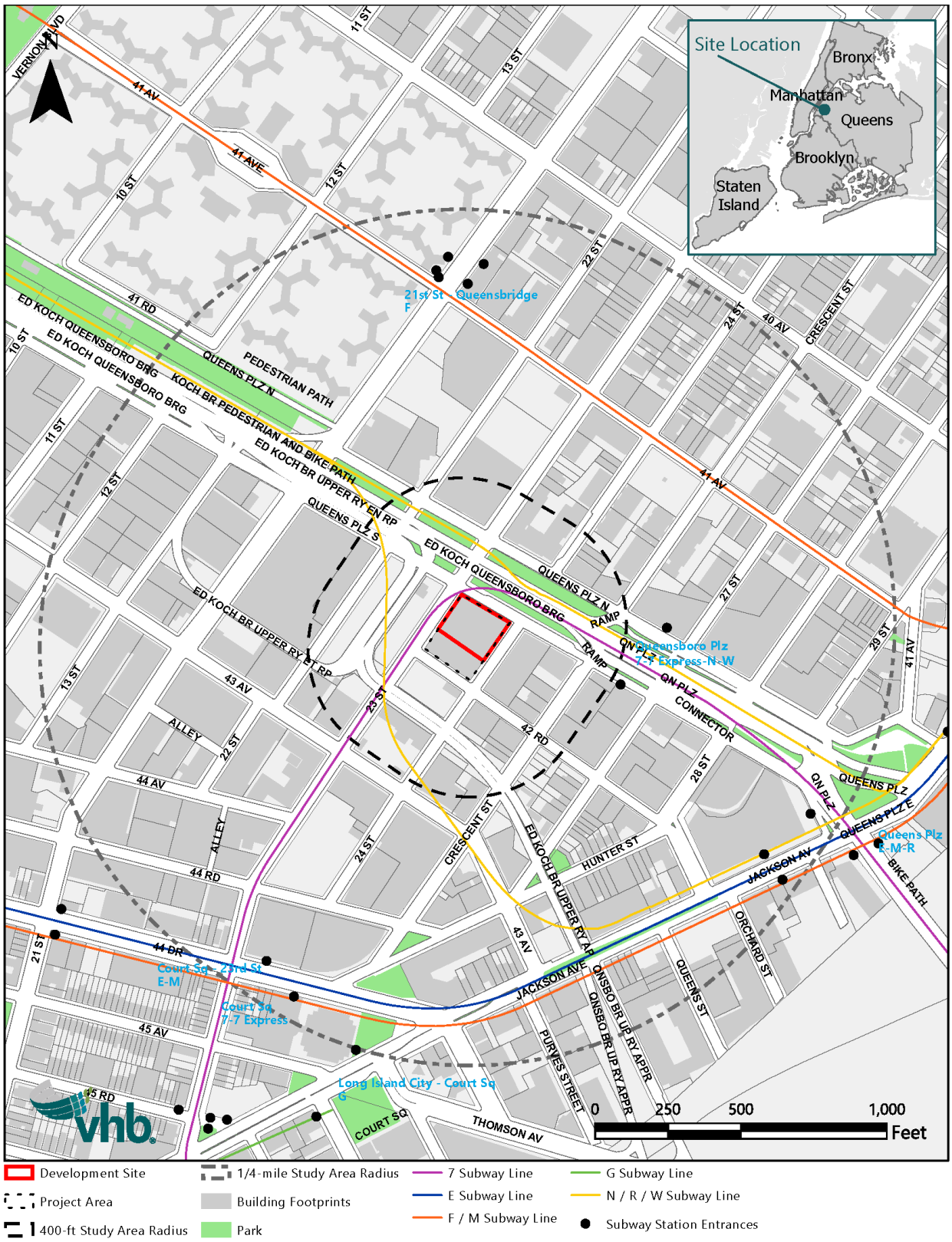


Figure 2 Tax Map

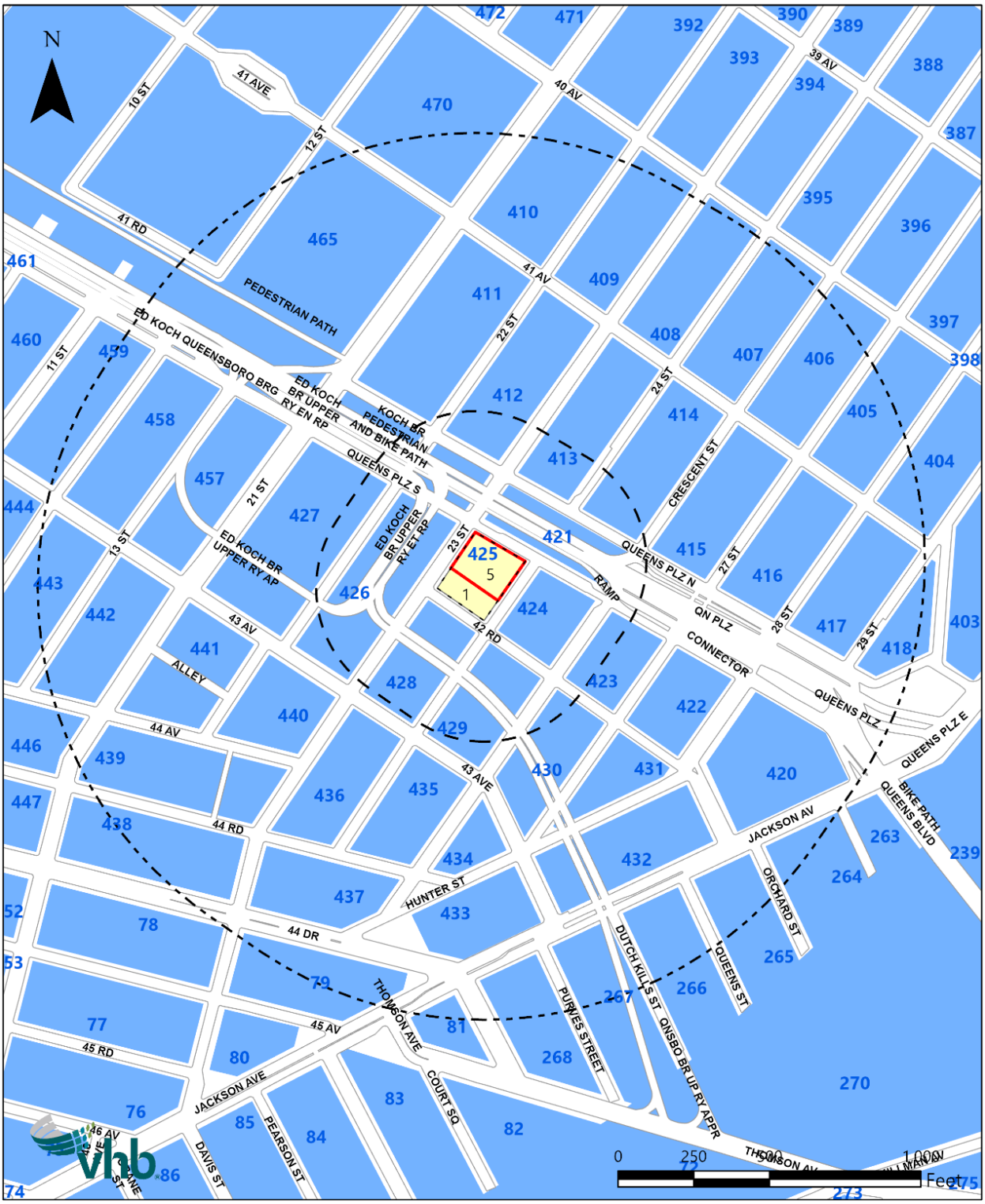


Figure 3 Existing Zoning Map

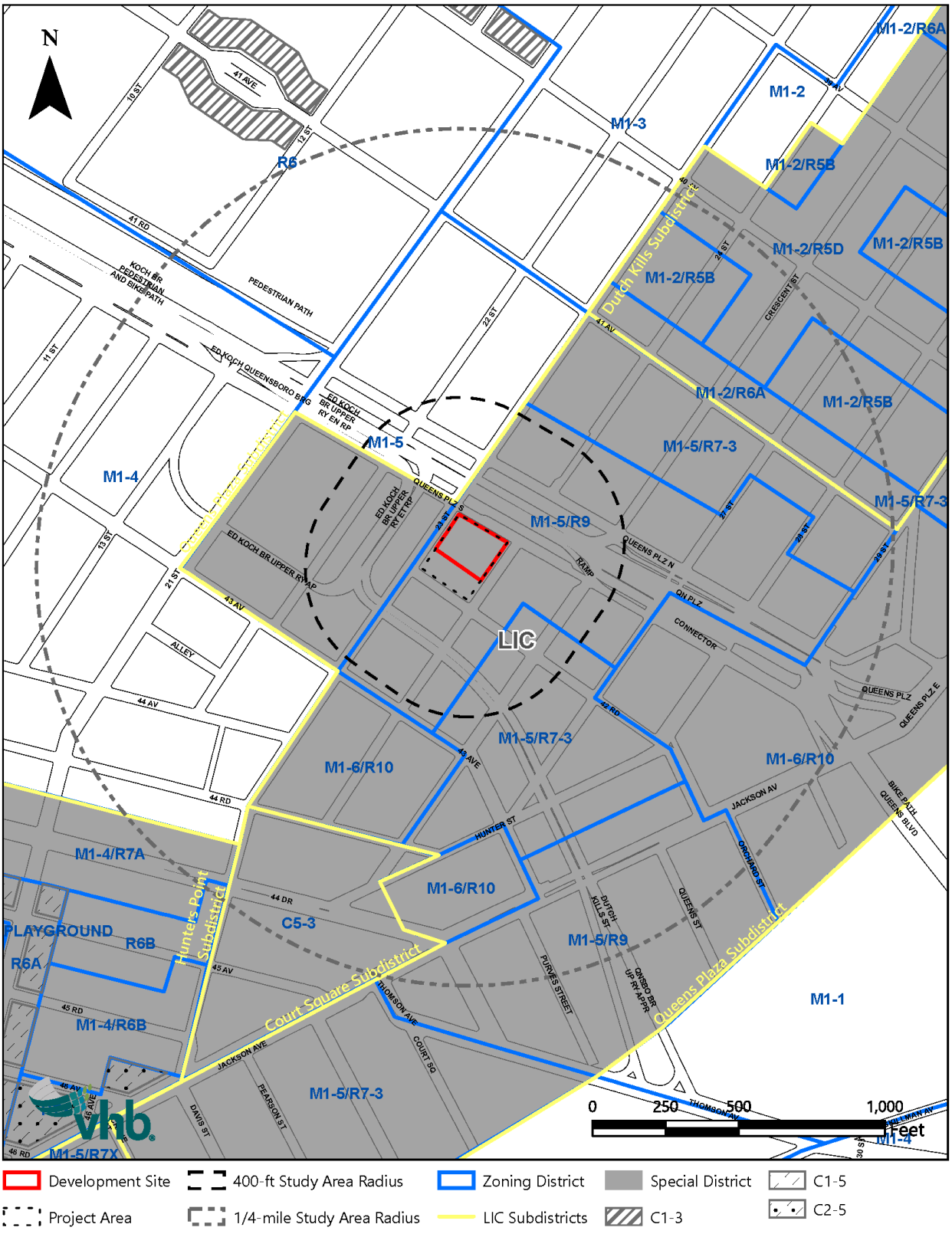


Figure 4 Proposed Zoning Map

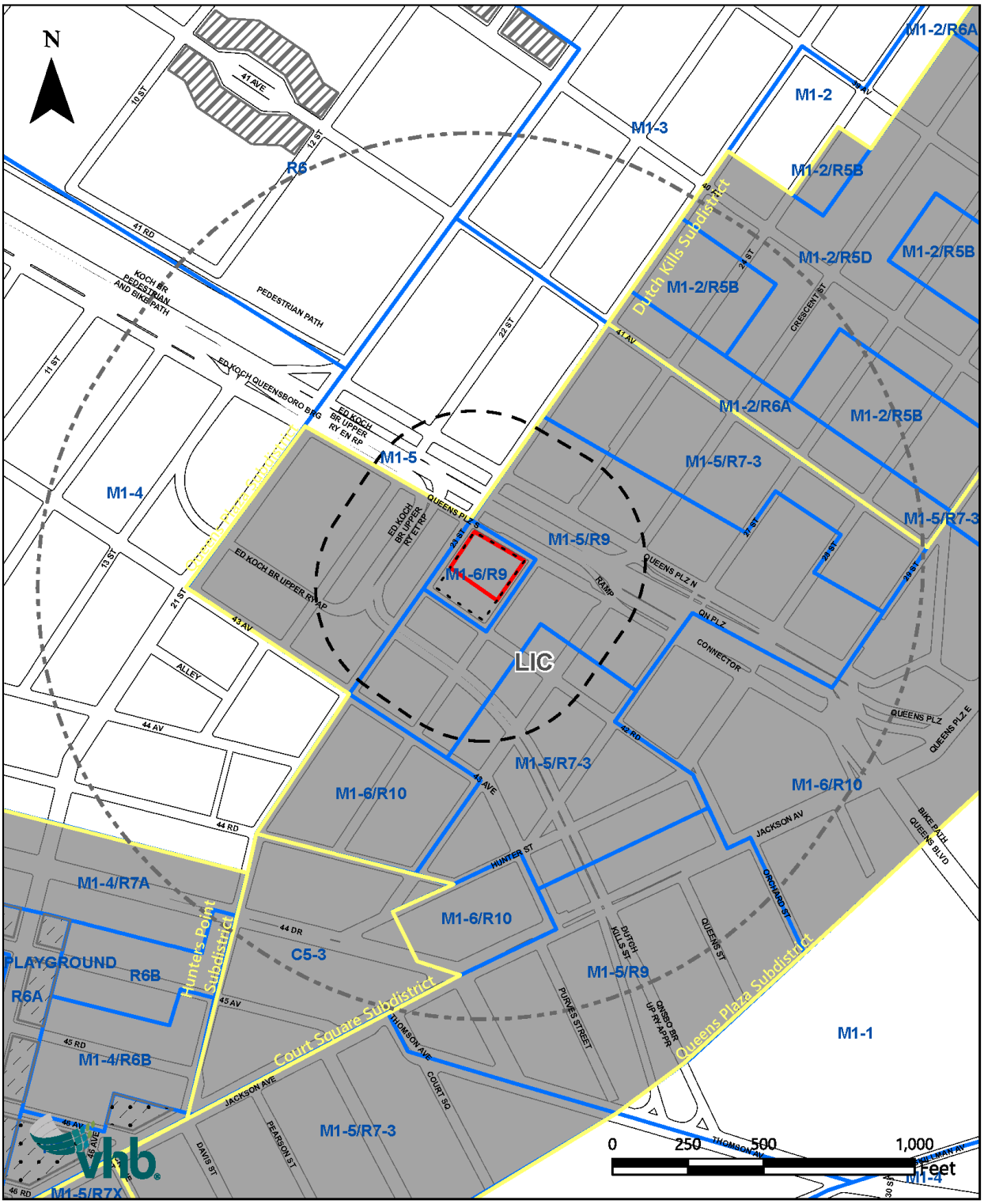


Figure 5 Land Use Map

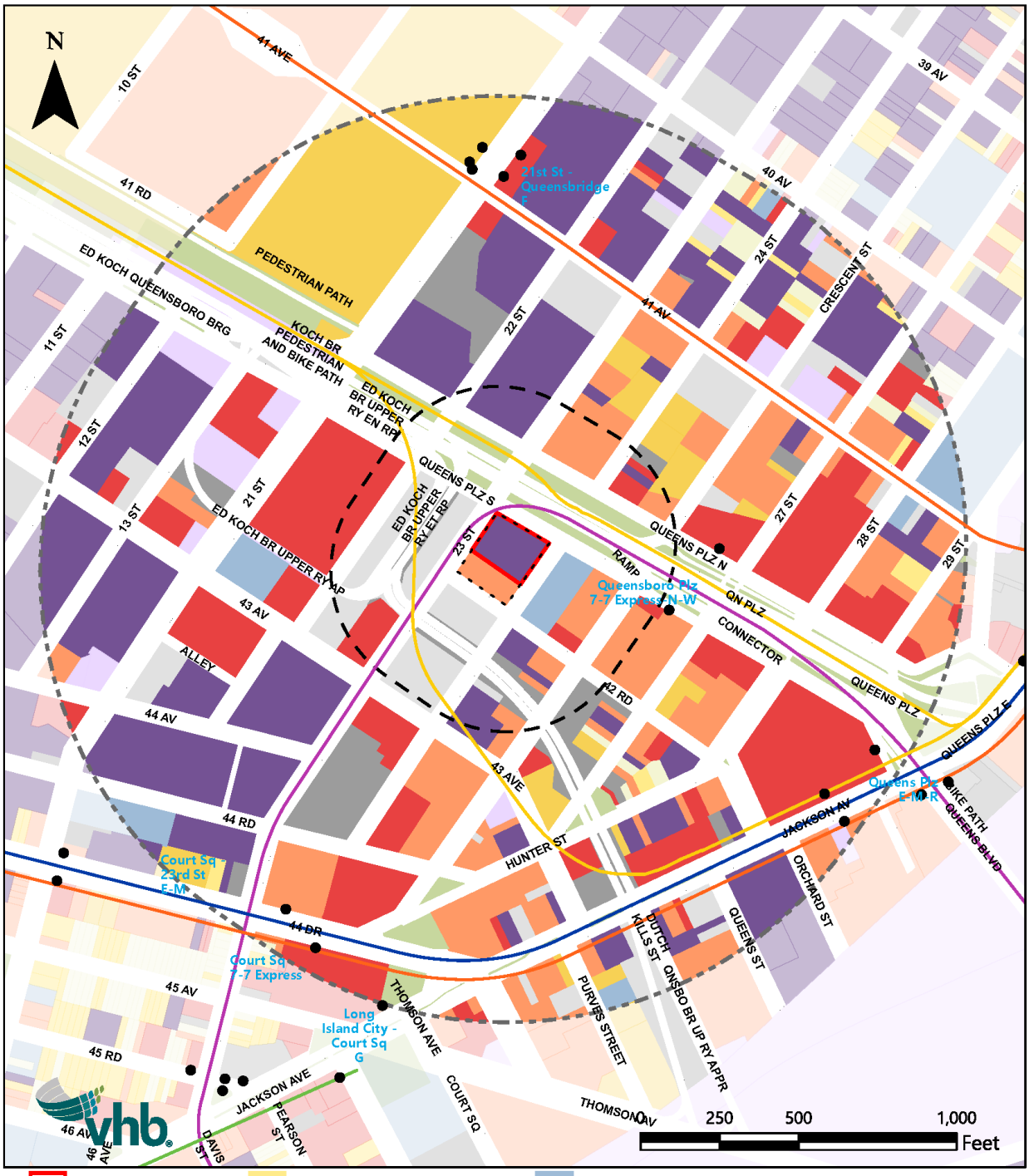


Figure 6 Photo Key Map

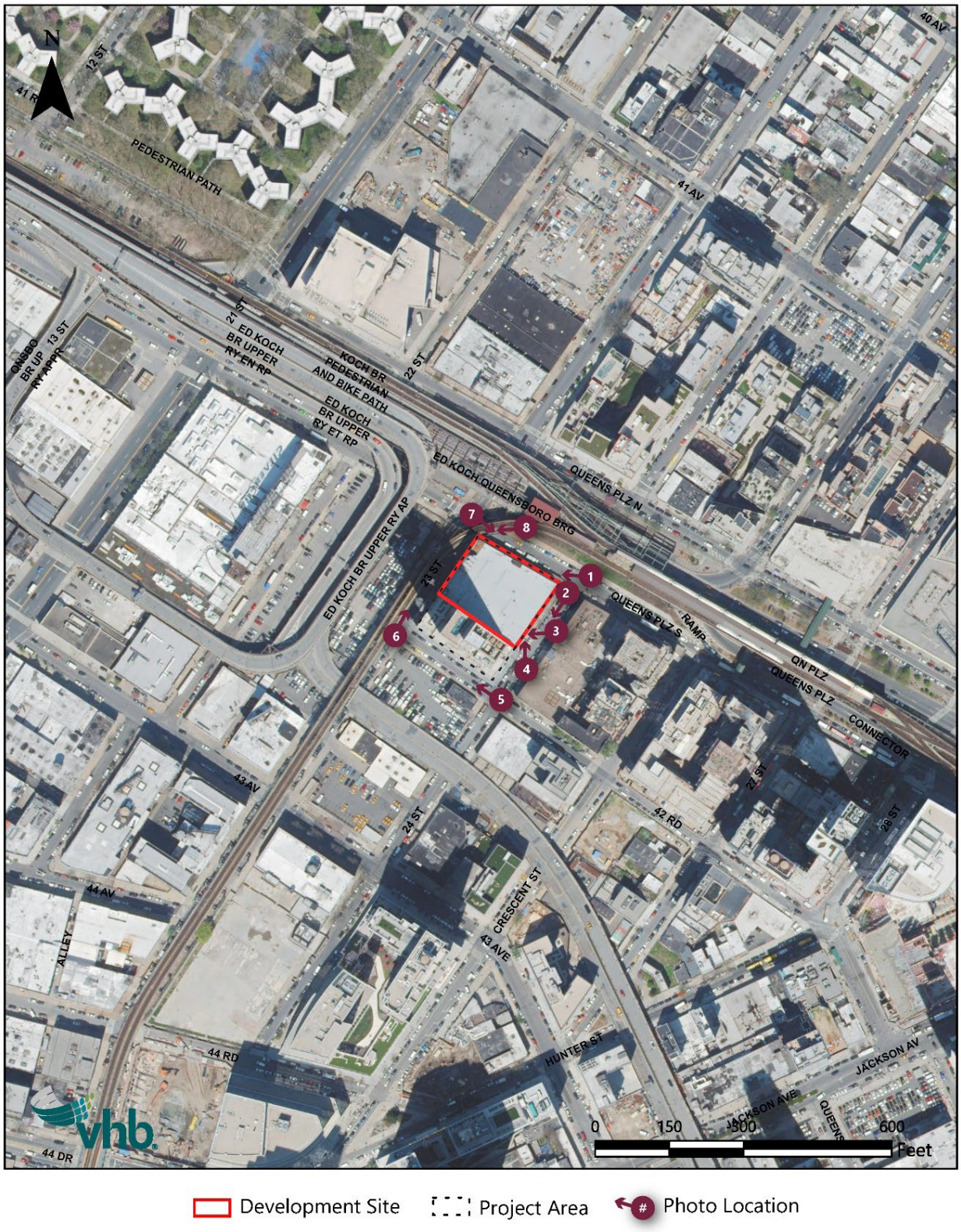


Photo 1 Queens Plaza South and 24th Street Looking West



6/30/20

Photo 2 Queens Plaza South and 24th Street Looking South



6/30/20

Photo 3 24th Street between 42nd Road and Queens Plaza South Looking Southwest



6/30/20

Photo 4 24th Street between 42nd Road and Queens Plaza South Looking North



6/30/20

Photo 5 24th Street and 42nd Road Looking West



6/30/20

Photo 6 23rd Street and 42nd Road Looking North



6/30/20

Photo 7 23rd Street and Queens Plaza South Looking East



6/30/20

Photo 8 23rd Street and Queens Plaza South Looking Southwest



6/30/20

Part I: Project Description

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

Introduction

The Applicant, AAGS Holdings LLC, requests a series of land use actions, including a zoning map amendment, zoning text amendment, and special permit, to facilitate the reuse and 22-story enlargement (the "Proposed Enlargement") of the existing four-story former Eagle Electric building (the "Existing Industrial Building") located on the zoning lot consisting of Queens Block 425, Lots 1 and 5 (the "Project Area") in the Long Island City neighborhood, Queens Community District 2 (see **Figure I-1**). The Proposed Enlargement would be developed on Tax Lot 5 at 23-10 Queens Plaza South (the "Development Site") and would consist of approximately 216,600 square feet (sf) of new commercial uses (the "Proposed Development"). The actions, collectively the "Proposed Actions," include:

- A Zoning Map Amendment to rezone the Project Area from an M1-5/R9 zoning district to an M1-6/R9 zoning district;
- Zoning Text Amendments to Zoning Resolution (ZR) Section 117-50 (Queens Plaza Subdistrict) et seq. to:
  - Establish a new Area D, coterminous with the Project Area, within the Queens Plaza Subdistrict (the "Subdistrict") of the Special Long Island City Mixed Use District (the "Special District"),
  - Make such Area D subject to the applicable bulk regulations of the Subdistrict, and
  - Establish the maximum permitted floor area ratios ("FAR") permitted by use in Area D; and
- A Special Permit pursuant to ZR Section 117-533 to modify the distance-between-buildings requirements of ZR 23-711(e) (Standard minimum distance between buildings) and the street-wall-location requirements of ZR 117-531.

The Proposed Actions would result in a 26-story commercial building. As described in detail below, the Proposed Development would have a total of 363,136 gross square feet (gsf) of commercial space, consisting primarily of commercial office, with local retail on the ground floor and cellar level, a restaurant, community meeting space and exhibit space documenting the former Eagle Electric manufacturing business.

Proposed Actions

To facilitate the Proposed Development, several land use actions are required, including:

- Zoning Map Amendment to rezone the Project Area from M1-5/R9 to M1-6/R9 (see **Figure I-2**) to M1-6/R9 (see **Figure I-3**);
- Zoning Text Amendments to Article 11 Chapter 7 (Special Long Island City Mixed Use District):
  - To establish Area D (coterminous with the Project Area) with designated paired districts M1-6/R9 in the Queens Plaza Subdistrict;
  - To make Area D subject to the Subdistrict Special Bulk Regulations and:
    - Add new floor area regulations applicable to Area D: a maximum commercial and manufacturing FAR of 15.0, community facility FAR of 10.0 and residential FAR of 8.0; and
  - Establish a minimum base height of 100 feet and a maximum base height of 150 feet for Area D; and
- Special Permit pursuant to ZR 117-533 to modify the distance between buildings requirements of ZR 23-711(e) and the street wall location requirements of ZR 117-531.

Figure I-1 Project Location Map

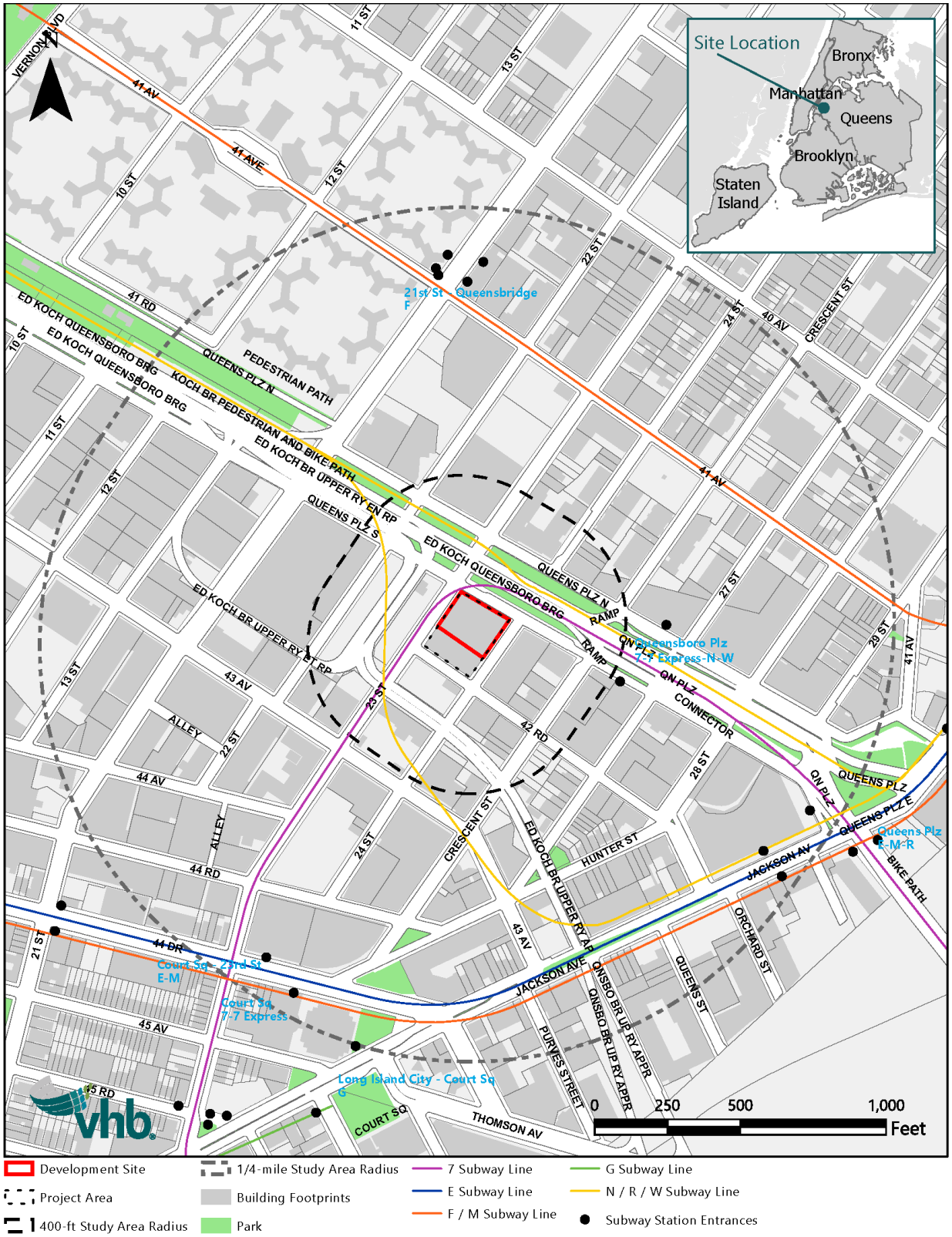


Figure I-2 Existing Zoning Map

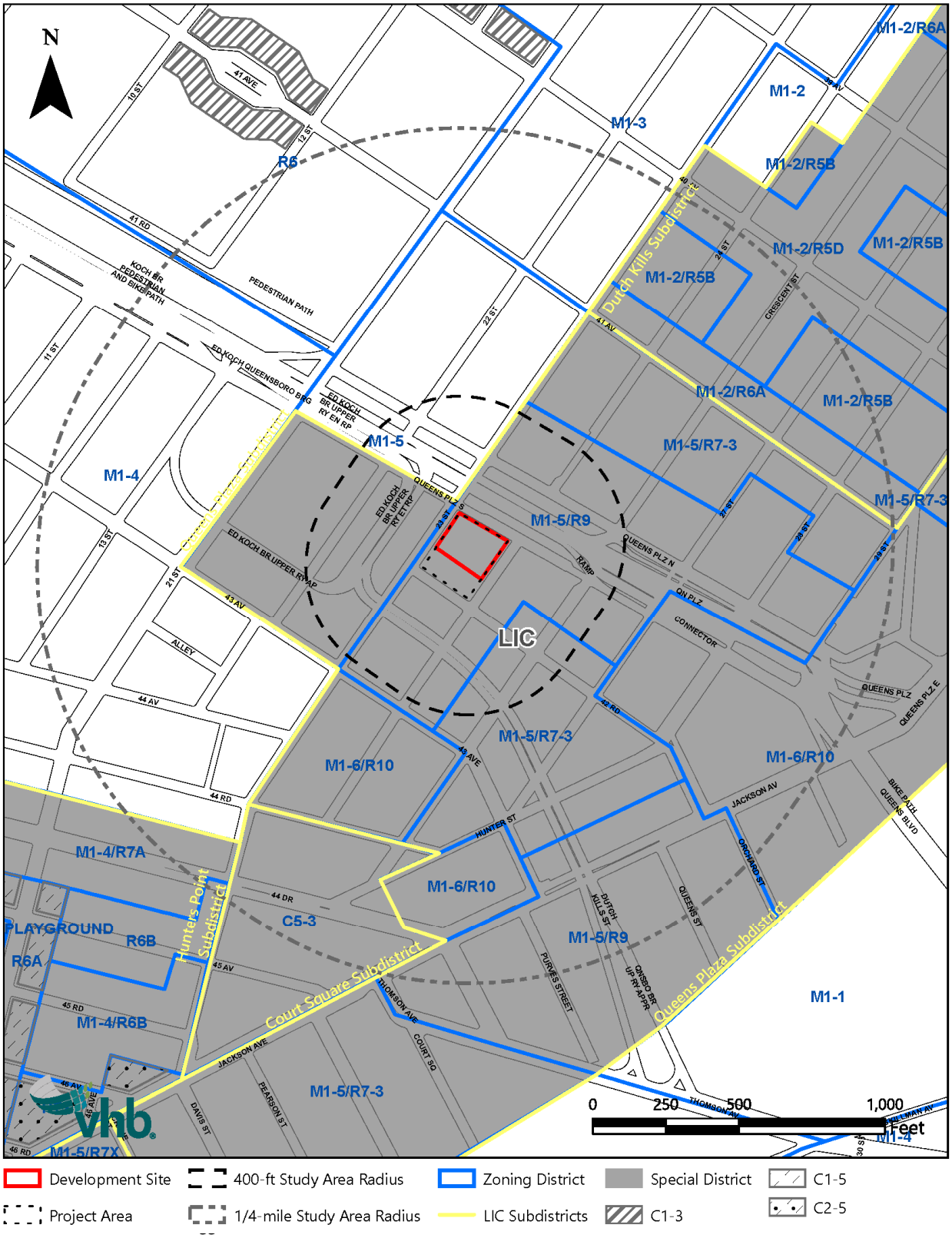
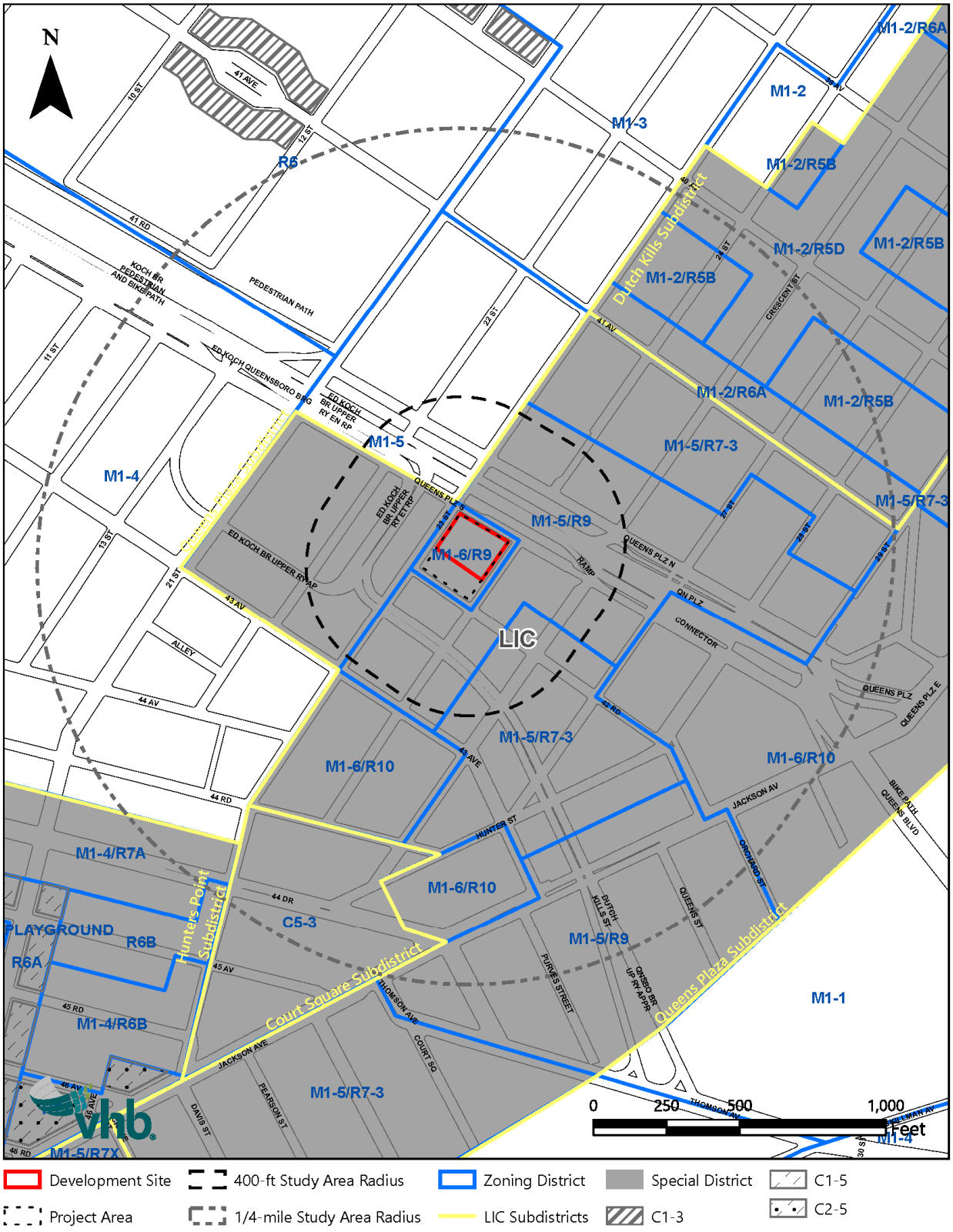


Figure I-3 Proposed Zoning Map



The proposed zoning map amendment to rezone the Project Area from the existing M1-5/R9 District to M1-6/R9, combined with the proposed zoning text amendment to modify the allowed FARs of the proposed M1-6/R9 District within the Subdistrict, would facilitate the reuse and enlargement of an existing vacant building for office, retail, and exhibit use.

The proposed application for a special permit pursuant to Section 117-533 (special permit to modify use or bulk provisions) to modify ZR 23-711(e) and ZR 117-531 would allow the envelope of the Proposed Development given the existing conditions on the Development Site. Specifically:

- ZR 23-711(e) (Standard minimum distance between buildings) would require the portion of the Proposed Development above a height of 125 feet to be located 80 feet from the Residential Building if the total lot coverage on the Development Site exceeds 40 percent. As described above, the Proposed Development would provide a minimum distance of 60 feet from the Residential Building, which is built to the shared lot line between Tax Lots 1 and 5, beginning at a height of approximately 108 feet, which is the first level at which dwelling units within the Residential Building would face the Proposed Development. The lot coverage of the Residential Building above 125 feet is 8,050 gsf, and the largest floorplates of the Proposed Development above 125 feet would be 16,078 gsf as described above, so the buildings' combined lot coverage above a height of 125 feet would be 24,128 sf (57 percent lot coverage). To comply with the requirements of ZR 23-711(e), floors 8 through 16 of the Proposed Development would each need to be reduced to 8,807 gsf from their proposed 16,078 to 11,653 gsf, resulting in an excess of floors with small floorplates and decreasing the efficiency of the Proposed Development. Accordingly, modification of ZR 23-711(e) is proposed to allow the portions of the Proposed Development above a height of 125 feet to be located 60 feet from the Residential Building rather than 80 feet to allow for the proposed 16,078 to 11,653 sf floorplates on floors 8 through 16 and to ensure a variety of floorplate sizes within the Proposed Building.
- ZR 117-531 requires, on a wide street, and on a narrow street within 50 feet of its intersection with a wide street, the street wall of a building to be located on the street line along the entire width of the street frontage of the zoning lot and to rise without setbacks up to at least the applicable minimum base height. On a narrow street between 50 and 100 feet of its intersection with a wide street, the street wall of a building must be located within eight feet of the street line, extend along the entire width of the narrow street frontage, and rise without setback up to at least the applicable minimum base height. On a narrow street beyond 100 feet of its intersection with a wide street, street walls shall extend along at least 70 percent of the width of the narrow street frontage of the zoning lot and rise without setbacks up to at least the applicable minimum base height. Beyond 50 feet of the intersection of a wide street, all required street walls shall be located within eight feet of the street line. The Proposed Development has three street frontages: 23rd Street and Queens Plaza South (wide streets), and 24th Street (narrow street).

The street walls of the Proposed Development would rise to a maximum base height of 150 feet, which is permitted under the current bulk regulations applicable to the Development Site and would comply with the proposed text amendments. However, at the fifth floor of the Proposed Development, which extends in height from approximately 68 feet to 92 feet

above the base plane, the street wall would be set back from the street line on all three street frontages to a maximum depth of approximately 40 feet from 23rd Street (a wide street), 33 feet from Queens Plaza South (a wide street), and 20 feet from 24th Street (a narrow street), in order to provide visual distinction between the Existing Industrial Building and the Proposed Development and allow for a landscaped passive recreation space accessory to the office uses, a complying accessory sign pursuant to ZR 117-514 (Special sign regulations), and a possible Use Group 6A eating or drinking establishment with outdoor table service. Accordingly, modification of ZR 117-531 is proposed to waive the street wall location provision at the level of the fifth floor for the entire street frontages of 23rd Street and Queens Plaza South (137.63 feet and 187.31 feet, respectively) and, on 24th Street, for the portion of the frontage within 100 feet of Queens Plaza South and for 70 percent of the remaining frontage (38.35 feet out of the 54.78 feet of frontage located beyond 100 feet of Queens Plaza South). Each of the Proposed Actions are also described in **Section 2, Land Use, Zoning and Public Policy**.

Development Site and Project Area

Development Site

The Development Site (Queens Block 425, Tax Lot 5) is located at 23-10 Queens Plaza South in Long Island City and is bounded by Queens Plaza South on the northeast, 24th Street on the southeast, 23rd Street on the northwest, and Tax Lot 1 of Block 425 to the south (See **Figure I-1**).

The Development Site has 27,222 sf of lot area, with approximately 137 feet of frontage on 23rd Street, approximately 187 feet of frontage on Queens Plaza South, and approximately 155 feet of frontage on 24th Street. It is currently improved with the Eagle Electric Building, an industrial and manufacturing building built in 1920 that has been unoccupied since 2000. The building contains 135,361-gsf spread over four floors and a cellar and is 68-feet tall.

Project Area

The Project Area contains the Development Site and the existing Residential Building on Tax Lot 1, the parcel located immediately to the south of the Development Site.

In 2013, Tax Lots 1 and 5 were declared to be a single zoning lot in connection with the construction of a 44-story residential building on Tax Lot 1 (the "Residential Building"), which was completed in 2016. The Residential Building's 310,696 sf of residential floor area (7.37 FAR) left approximately 26,500 sf of floor area (0.63 FAR) allowable on Tax Lot 5 out of the total 337,144 sf of floor area allowed on the Development Site. The Existing Industrial Building on Tax Lot 5 has approximately 105,000 sf of above-grade floor area in its existing four floors. The Department of Buildings ("DOB") allowed the developer to obtain its Certificate of Occupancy for the Residential Building without demolishing the upper stories of the Existing Industrial Building provided that until an upzoning was approved, the Existing Industrial Building could not be occupied with more than the allowable remaining 26,500 zsf of floor area. Because the anticipated upzoning has not yet occurred, the Development Site continues to be technically overbuilt, although all of the floor area of the Existing Industrial Building is vacant and has been since approximately 2000. Accordingly, to reduce the

Existing Industrial Building's floor area to the 26,500 zsf allowable under the current zoning, occupancy of only the first floor would be permitted and the balance of the building above the ceiling of the first floor would have to be demolished.

In 2019, the Applicant acquired the Existing Industrial Building and is now seeking the proposed zoning map and text amendments and special permit that are the subject of these applications to allow for the reuse and enlargement of the Existing Industrial Building for office, local retail, and exhibit use.

Description of Surrounding Area and Project Area History

Area Zoning

The Project Area is zoned M1-5/R9 and is within Area B of the Queens Plaza Subdistrict of the Special Long Island City Mixed Use District (LIC District), which was established in 2001.[1] A total FAR of 8.0 is allowed for all permitted uses

The LIC District covers a large area within Long Island City and promotes the development and expansion, at varying densities, of the longstanding mix of residential, commercial, industrial, and community facility uses found in its four subdistricts—Queens Plaza, Court Square, Hunters Point, and Dutch Kills. Within the Queens Plaza, Hunters Point, and Dutch Kills Subdistricts, paired districts combine a manufacturing and a residential district. The Queens Plaza Subdistrict, together with the Court Square Subdistrict, comprises a 37-block area mapped for moderate- to high-density, 24-hour, pedestrian- and transit-oriented development. The highest density is allowed near subway stations in the Queens Plaza Subdistrict, where special bulk provisions encourage tower development. The Queens Plaza Subdistrict is bound to the north by 41st Avenue and 40th Road, to the east by Sunnyside Yard, to the south by Crane Street, 44th Drive and 44th Road, and to the west by 23rd Street from 41st Avenue to Queens Plaza South and 21st Street between Queens Plaza South and 43rd Avenue and 23rd Street between 43rd Avenue and 44th Road.

In 2001, the City Planning Commission approved zoning map and text amendments (N 000407A ZRQ & C000406AZMQ) establishing the LIC District and creating the Subdistrict for a 34-block area located between 41st Avenue, the Sunnyside Yards, Crane Street, Jackson Avenue, and 23rd Street. Two zoning text amendments affecting the Subdistrict were subsequently approved in 2012 and in 2013. The Queens Plaza Subdistrict was established primarily to facilitate office development, in addition to the residential, community facility, and manufacturing uses also allowed by the Special District. While the majority of the resulting development within the Subdistrict has been residential, the zoning changes did facilitate the enlargement and conversion of the Brewster Building from an industrially occupied loft building to an office building, the redevelopment of the former Queens Plaza Municipal Garage site into two new office buildings totaling approximately 1.5 million sf, and the development of approximately five hotels.

[1] N 000407A ZRQ and C000406AZMQ

The 2012 amendment (N 110223 ZRQ) established special sign provisions to allow accessory business signs on the rooftops of buildings having roof heights between 70 and 150 feet and having frontage along Queens Plaza North, Queens Plaza South, Queens Plaza East, and Queens Boulevard, among other criteria. The elements of the 2013 amendment (N 130134 ZRQ) applicable to the Subdistrict established provisions allowing small sidewalk cafes on block fronts along Queens Plaza North, Queens Plaza South, and the west side of Jackson Avenue between 44th Drive and the prolongation of Dutch Kills Street, as well as allowing unenclosed sidewalk cafes on multiple block fronts of several streets within the Subdistrict. The 2013 amendment established minimum base height provisions for two blocks within Area C of the Subdistrict and amended Section 117-56 (Special Permit for Bulk Modifications on Blocks 86/72 and 403) to allow an already filed application for a special permit pursuant to this section to proceed into the public review process as designed even though the design did not comply with the proposed minimum base heights.

Like the Project Area, the blocks to the north, east, and south of the Project Area are within the Subdistrict and are zoned M1-5/R9 (Area B, 8.0 FAR) and M1-5/R7-3 (Area C, 5.0 FAR). The blocks to the west of the Project Area are within the Special District but not within any subdistrict and are zoned M1-5 (5.0 FAR).

Area Land Uses and Access to Transit

Immediately adjacent land uses to the Project Area include public parking lots, a trade school, and the Queensboro Bridge. To the north of the study area are large residential buildings with ground floor commercial uses such as QLIC, at 41-42 24th Street, and manufacturing and industrial land uses such as UOVO, an art storage facility at 41-54 22nd Street. Immediately south of the Project Area is a block containing parking facilities, which is bisected by one of the ramps to the upper deck of the Queensboro Bridge. The western portion of the study area is largely comprised of light industrial and manufacturing uses with some commercial and office uses, as well as Silvercup Studios, located two blocks to the west. Directly east of the Project Area, across 24th Street is APEX Technical School.

The area is well-served by transit. An entrance to the Queensboro Plaza subway station (No. 7, N, W) is located one and one-half blocks east of the Project Area, an entrance to the Queens Plaza subway station (E, M, R) is located approximately four blocks east of the Project Area, an entrance to the 21 Street/Queensbridge subway station (F) is located three blocks northwest of the Project Area, and an entrance to the Court Square subway station (E, G, M, No. 7) is located four blocks south of the Project Area. Several bus lines stop on Queens Plaza South, including the Q39 which stops at the intersection of Queens Plaza South and 23rd Street on which the Project Area fronts, and the Q66 and Q69 which stop within one-half block of the Project Area.

Project Area History

As noted above, the Project Area is zoned M1-5/R9 (see **Figure I-2**) and is located within the LIC District and within Area B of the Queens Plaza Subdistrict. The Subdistrict allows a maximum 8.0 FAR for any permitted use, resulting in 337,144 zsf of floor area currently allowed on the Project Area.

Prior to 2014, the Project Area was in single ownership and was occupied by a vacant building formerly used by Eagle Electric. Eagle Electric vacated the Existing Industrial Building in approximately 2000. The portion of the building on Tax Lot 1 was two stories and the portion of the building on Tax Lot 5 was four stories. In 2013, Tax Lots 1 and 5 were declared to be a single zoning lot in connection with the construction of a 44-story residential building on Tax Lot 1, which was completed in 2016. The Residential Building's 310,696 zsf of residential floor area (7.37 FAR) left approximately 26,500 zsf of floor area (0.63 FAR) allowable on Tax Lot 5 out of the allowed 337,144 sf. The Existing Industrial Building on Tax Lot 5 has approximately 105,000 sf of above-grade area in its existing four floors.

The Department of Buildings allowed the developer to obtain its Certificate of Occupancy for the Residential Building without demolishing the upper stories of the Existing Industrial Building provided that until the upzoning was approved, the Existing Industrial Building could not be occupied with more than the allowable remaining 26,500 zsf of floor area. Because the anticipated upzoning has not yet occurred, the Development Site continues to be technically overbuilt, although all of the floor area of the Existing Industrial Building is vacant and has been since approximately 2000. Therefore, occupancy of only the first floor would be permitted and the balance of the building above the ceiling of the first floor would have to be demolished under the current zoning. Local retail uses would occupy the remaining one-story building.

A Zoning Lot Development and Easement Agreement governing the Development Site was executed and recorded in 2018 (CRFN 2018000406484) (the "ZLDA"), allocating to Tax Lot 1 the existing floor area of the Residential Building, and allocating to Tax Lot 5 26,363 sf of floor area, which is 85 feet less than the 26,448 sf of remaining floor area permitted on the Development Site, plus any additional floor area obtained through an upzoning of the Development Site.

In 2019, the Applicant acquired the Existing Industrial Building and is now seeking the proposed zoning map and text amendments and special permit that are the subject of these applications to facilitate the reuse and enlargement of the Existing Industrial Building for office, local retail, and exhibit use.

Description of the Proposed Development

The Proposed Actions described above would facilitate the development of the Proposed Development. The proposed reuse and 22-story enlargement of the Existing Industrial Building would result in a 26-story, approximately 383-foot tall (approximately 404 feet to the top of the mechanical bulkhead), commercial building on Queens Block 425, Tax Lot 5 (see **Figure I-4**). The Proposed Development would consist of 363,136-gsf (321,449 zsf) of commercial space, with 135,361 gsf (104,849 zsf) within the envelope of the Existing Industrial Building and 227,775 gsf (216,600 zsf) of commercial space within the Proposed Enlargement. Of the total commercial space, approximately 21,505 gsf (13,102 zsf) would be local retail which is proposed on the ground floor and cellar level, 7,254 gsf (7,025 zsf) would be restaurant space which is proposed on the ground floor and fifth floor, 2,410 gsf (0 zsf) would be community meeting space within the cellar, 520 gsf (504 zsf) would be exhibit space documenting the former Eagle Electric manufacturing business on the ground floor, and approximately 331,447 gsf (300,818 zsf) would be commercial office on floors five

through 26. Accessory bicycle parking would also be provided on the ground floor. The roof of the Existing Industrial Building would include approximately 18,359 sf of landscaped passive recreation space accessory to the office uses and outdoor dining space for the proposed restaurant. The passive recreation space would be available for use by building tenants, whereas the outdoor dining space would be available for restaurant patrons.

No change is proposed to the Residential Building; accordingly, the Proposed Development, together with the 390,824 gsf (310,696 zsf) Residential Building, will result in the zoning lot having a total of 753,960 gsf (632,145 zsf or 15 FAR), 390,824 gsf (310,696 zsf or 7.37 FAR) of which would be in residential use within the Residential Building (no change) and 363,136 gsf (321,449 zsf or 7.63 FAR) of which would be in commercial use within the Proposed Development, consisting of new commercial occupancy within the long-vacant envelope of the Existing Industrial Building and new commercial floor area within the Proposed Enlargement. The Proposed Development includes no new parking, but the existing Residential Building contains a 62-space attended accessory parking garage.

The Proposed Development would rise to a maximum base height of 150 feet, which is permitted under the current bulk regulations applicable to the Development Site. However, the fifth floor of the Proposed Development, located directly above the Existing Industrial Building and extending from approximately 68 feet to 92 feet above the base plane, would be recessed from all three street frontages for 100 percent of its width, to a maximum depth of approximately 33 feet from Queens Plaza South, 40 feet from 23rd Street and 20 feet from 24th Street before reaching the minimum 100 foot base height, in order to provide visual distinction between the Existing Industrial Building and the Proposed Enlargement, allow for accessory passive recreation space and/or an eating or drinking establishment with outdoor table service on the roof of the Existing Industrial Building, and allow for the possibility of a complying accessory sign pursuant to ZR Section 117-514 (Special sign regulations). An application for a special permit pursuant to Section 117-533 (Special permit to modify use or bulk provisions) is proposed to allow for this proposed street wall location modification.

To allow the Proposed Development to have a variety of appropriately sized commercial floorplates, the special permit pursuant to Section 117-533 is also proposed to modify Section 23-711(e) (Standard minimum distance between buildings) of the Zoning Resolution to allow the portion of the Proposed Development above 125 feet that exceeds a lot coverage of 40 percent to be 60 feet apart from the adjacent Residential Building instead of the required 80 feet.

Project Purpose and Need

Beginning in 1993 with DCP's *Plan for Long Island City: A Framework for Development*, Long Island City has been poised to become a key player in New York City for providing additional office space outside of Manhattan. The zoning changes establishing the Queens Plaza Subdistrict in 2001 were intended to facilitate the establishment of the city's fourth central business district within its boundaries. Instead, economic factors resulted in a residential development boom beginning in 2007 and very little office development has been constructed to date.

As indicated above, the Residential Building used the available development rights on the zoning lot. The Proposed Actions would result in the rezoning of the Project Area, thereby

creating development capacity for the Proposed Development. The application also seeks bulk waivers pursuant to ZR 117-533 to (1) waive the applicability of ZR 23-711(e), which would require a separation of 80 feet between buildings above a height of 125 feet instead of the proposed 60 feet in order to accommodate the Proposed Enlargement together with the existing 44-story Residential Building (a 50-foot separation between the Proposed Enlargement and the Residential Building is required by other provisions of ZR 23-711) and (2) modify the street location provision to allow the fifth floor to be set back from the street line before reaching the required minimum base height of 100 feet to provide visual separation between the Existing Industrial Building and the Proposed Enlargement. The proposed zoning map and text amendments and special permit application would facilitate a new office building, consistent with the original intent of the subdistrict. The redevelopment of the long-vacant Existing Industrial Building would also enliven the building's Queens Plaza South, 24th Street, and 23rd Street frontages with new activity associated with the Proposed Development, including with new ground floor glazing, retail uses, and a lobby entrance.

The neighborhood's excellent mass transit and emerging bike network supports the proposed density increases. Four subway stations served by eight subway lines encircle the Development Site and are within a three- to 10-minute walk of the site: Queensboro Plaza (#7, N, W), 21st Street/Queensbridge (F), Court Square (#7, E, G, M) and Queens Plaza (E, M, R). Eight bus lines stop within a similar distance along Queens Plaza North and Queens Plaza South: Q32, Q39, Q60, Q67, Q100, Q101, Q102, and B62. Entrances to the existing bike lane and newly proposed pedestrian lane on the Queensboro Bridge are also between two and three blocks from the Development Site, and the shared bike lane along 23rd Street connects into the Hunters Point bike network and the Pulaski Bridge bike lane, affording additional transportation access. The proposed density increases, combined with the existing subway, bus, bike, and pedestrian network, is consistent with other central business districts such as Downtown Brooklyn and Lower and Midtown Manhattan. The intersection of 23rd Street and Queens Plaza South is challenging for traffic and pedestrians due to the shadows and noise generated by the elevated #7 tracks and the Queensboro Bridge and the structure of the elevated tracks itself.

The proposed building and ground floor retail uses would illuminate the street frontages of 23rd Street and Queens Plaza South. The higher-density office development and ground floor retail allowed by the proposed zoning map and text amendments would increase the number of pedestrians and visitors to the site compared with the number allowed under the current zoning, thereby enlivening the street and extending pedestrian activity along the full length of Queens Plaza South within the Subdistrict. The larger building allowed by the proposed FAR increase would help to "soften" the visual impact of the existing elevated transportation structures. The Proposed Development is consistent with the General Purposes of the LIC District and the City's goals of increasing outer borough employment opportunities in transit-rich neighborhoods and easing or reversing commuting patterns from the outer boroughs to Manhattan. The current M1-5/R9 District, as modified by the bulk regulations of the Subdistrict, permits 8.0 FAR for all uses, and therefore does not provide an incentive for commercial development over residential development. The existing FAR is also too low to allow the Existing Industrial Building to be fully reused or enlarged. Because the Subdistrict text modifies the underlying FARs of the existing M1-5/R9 District, the M1-5 District could have been retained and the applicable FARs could have been modified through the proposed text amendment. However, the 10.0 FAR permitted for

commercial and manufacturing uses in the proposed underlying M1-6 District is closer to the proposed 15.0 FAR than the 5.0 FAR permitted in the underlying M1-5 District so an M1-6 District is proposed as a more appropriate underlying Manufacturing District than the current M1-5 District. The paired R9 District is retained because no changes are proposed to the allowed residential FAR.

The proposed text amendments are needed to establish within the Subdistrict a new Area D, coterminous with the Project Area, to allow for the Proposed Development's 321,449 sf of commercial floor area.

In areas outside of the Subdistrict, the M1-6/R9 District would be subject to the provisions of Article XII, Chapter 3 (MX District). The MX District provisions would allow a maximum 421,430 sf of commercial floor area on the Development Site (10.0 FAR), leaving a balance of 110,774 sf of floor area for development on Tax Lot 5 given the existing floor area in the Residential Building. This amount of floor area would only allow for the reuse of the Existing Industrial Building; it would not allow for the Proposed Enlargement. The proposed text amendments are therefore needed to create Area D with designated paired districts M1-6/R9, to make such Area D subject to the Subdistrict's bulk regulations, and to establish the allowed FARs by use in Area D. The proposed Area D designation within the Subdistrict would increase the allowed commercial and manufacturing FAR to 15.0, the community facility FAR to 10.0 (consistent with the underlying R9 district) and maintain the allowed residential FAR at 8.0 (consistent with the Development Site's current Area B designation). As described above, the LIC District was adopted in 2001 in part to encourage office development and other non-residential development. The Project Area's location and approximate three- to 10-minute walk to four subway stations served by eight subway lines is particularly well-suited for new commercial development. The proposed increase in commercial density to 15.0 FAR pursuant to the proposed text amendments would allow the Existing Industrial Building to be reused and enlarged as an appropriately sized office building, consistent with the General Purposes of the LIC District.

The proposed minimum and maximum base heights of 100 feet and 150 feet, respectively, that would be established in proposed Area D are the same base heights as those in effect on the Project Area today. These base heights are consistent with the loft character of the Existing Industrial Building and the Proposed Enlargement and the maximum base height of 150 feet serves to maximize the floor plate size on floors six through nine to help ensure a viable commercial office building.

Figure I-4 Illustrative Rendering



Analysis Framework and Reasonable Worst-Case Development Scenario

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

Analysis Year

It is anticipated that the project will be certified into public review under the Uniform Land Use Review Procedure (ULURP) by September 2022 and that project approvals will be received by March 2023. A construction period of 18 months is anticipated. As the proposed building would be an expansion of the existing building, it would not involve a demolition or foundation phase. As such, construction activities would consist of superstructure and exterior cladding and interior finishes only. Given the foregoing, building occupancy is anticipated by the end of 2024.

Reasonable Worst-Case Development Scenario

The With-Action Scenario, described below, would maximize the building height and bulk available under the proposed rezoning. Given the specificity of the Proposed Actions, the Proposed Development represents the reasonable worst-case development (see "Future With-Action Condition," below).

Identification of Development Sites

As discussed above, the Proposed Actions would affect just the Project Area and allow for the Proposed Development to be realized on the Development Site. No other sites would be affected.

Future No-Action Condition

As discussed above, the Development Site is currently overbuilt. The ZLDA governing Block 425 that was executed and recorded in 2018 (CFRN 2108000406484) allocates to Tax Lot 1 the existing floor area of the Residential Building and to Tax Lot 5, 26,393 zsf/27,713 gsf of floor area, plus any additional floor area obtained through an upzoning of the Development Site. Because the anticipated upzoning has not yet occurred, the Development Site continues to be technically overbuilt, although all of the floor area of the Existing Industrial Building is vacant and has been since approximately 2000.

It should be noted that the 26,393 zsf of floor area allocated in the ZLDA to the Existing Industrial Building is less than the maximum amount of unbuilt floor area (26,448) on the site. The Development Site is part of a single zoning lot with Tax Lot 1 (combined lot area of 42,143 sf), which is improved with the Residential Building (310,696 zsf). At the existing 8.0 FAR, the total amount of allowed floor area on Block 425 is 337,144 sf. Subtracting the Residential Building floor area of 310,696 from the total amount of allowed floor area results

in 26,448 sf, which is 85 feet more than the 26,393 zsf allocated in the ZLDA to the Existing Industrial Building. However, as the ZLDA governs, use of the higher number would require the discretion of the NYC Department of Buildings and therefore could not be assumed. Therefore, it is conservatively assumed that the No-Action development would be limited to 26,393 zsf (approximately 27,713 gsf), consistent with the ZLDA.

It is anticipated that the available floor area on the first floor would be used for local retail uses and the upper floors would be demolished to bring the building into compliance with existing zoning. Therefore, the No-Action condition assumed for analysis purposes would include only ground floor retail.

Future With-Action Condition

The reuse and 22-story Proposed Enlargement of the four-story Existing Industrial Building would result in a 26-story commercial building on Tax Lot 5 (the "Proposed Development"). As described above, the Proposed Development would have retail, restaurant, community meeting space, accessory office, mechanical, and exhibit uses on its first floor and cellar, office use on floors two through four within the envelope of the Existing Industrial Building, and office use on new floors five through 26 (see **Table I-1**). The Proposed Development would rise approximately 383 feet (approximately 404 feet to the top of the mechanical bulkhead) from the average base plane under the With-Action Condition. The four-story Existing Industrial Building is approximately 68 feet tall, and the 22-story enlargement is an additional approximately 315 feet.

Table I-1 Increment Table

	No-Action Conditions	With-Action Conditions	Increment
Residential (Lot 1)			
GSF	390,824	390,824	--
DU	391	391	--
Commercial (Lot 5)			
Office (GSF)	--	331,447	331,447
Local Retail (GSF)	27,713	21,505	(6,208)
Restaurant (GSF)	--	7,254	7,254
Community Meeting Space (GSF)	--	2,410	2,410
Eagle Electric Facility Exhibit Space (GSF)	--	520	520
Parking (Lot 1)	62	62	--
Total FAR (Combined Tax Lot 1 and Lot 5)	9.87	15.00	5.13

Increment for Analysis

In total, the future With-Action condition would result in no changes to the residential or parking uses located on Tax Lot 1. The incremental development on Tax Lot 5 would be comprised of the following: increases of approximately 331,447 gsf of commercial office, approximately 7,254 gsf of restaurant space, approximately 2,410 gsf of community meeting space, and approximately 520 gsf of exhibit space over the future No-Action condition, with a reduction of approximately 6,208 gsf of local retail as compared to No-Action conditions. **Table I-1** provides the overall Project Increment on Lots 1 and 5.

Public Review Process

The Proposed Development described above is subject to public review under ULURP, Section 200 of the City Charter, as well as CEQR procedures.

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

Part II: Supplemental Analysis

Additional Technical Information for Full Environmental Assessment Statement (EAS) Form

Introduction

An analysis framework has been established to assess the potential for the Proposed Actions to result in significant adverse environmental impacts. The setting for the assessment of the impacts of the Proposed Actions is based on when the full effects of the Proposed Actions are expected to have occurred. As the proposed building would be an expansion of the existing building, it would not involve a demolition or foundation phase. As such, construction activities would consist of superstructure and exterior cladding and interior finishes only. Given the foregoing, building occupancy is anticipated in 2024.

Based on existing conditions, observed trends, and known and expected changes, a development scenario was prepared for the future without the Proposed Actions (No-Action condition) in the 2024 analysis year. The No-Action condition was used as a baseline to identify the potential impacts of the Proposed Actions. Given the specificity of the Proposed Actions, which include a Zoning Map Amendment, Zoning Text Amendment and Special Permit, the Proposed Project would represent the reasonable worst-case development scenario. As appropriate, the Proposed Development was analyzed based on worst-case assumptions specific to each technical area.

The potential impacts of the Proposed Actions on the environment are determined based on a comparison of the No-Action condition to the With-Action condition. A summary of the comparison, or analysis framework, is on Page 4 of the EAS Full Form. The overall increment between the No-Action condition and the With-Action condition resulting from the Proposed Actions is an increase of approximately 335,423 gsf of commercial use in the form of offices, local retail, restaurant, community meeting space, and exhibit space related to the former Eagle Electric building.

Based on the analysis framework, and as indicated in the EAS Full Form Part II, the following technical areas warrant additional discussion below and/or analysis in the EAS: land use, zoning, and public policy; socioeconomic conditions; open space; shadows; historic and cultural resources; urban design and visual resources; hazardous materials; water and sewer infrastructure; transportation; air quality; noise; public health; neighborhood character; and construction. These technical areas are discussed in more detail below.

The Proposed Actions would not have the potential to result in significant adverse impacts on community facilities; natural resources; solid waste and sanitation services; energy; and greenhouse gas emissions and climate change, therefore no further analysis of these technical areas is warranted.

Provided below are preliminary screening analyses, conducted based on guidelines presented in the *2021 CEQR Technical Manual*, to determine whether further analysis of a given technical area is necessary to determine the potential for significant adverse impacts to the environment in that area. If necessary, those topics that require further analysis will be evaluated in the subsequent sections of the EAS.

Land Use, Zoning, and Public Policy

According to the *CEQR Technical Manual*, an analysis of land use, zoning and public policy characterizes the uses and development trends in the area that may be affected by a project, describes the public policies that guide development, and determines whether a project is compatible with those conditions and policies or whether it may affect them. A detailed assessment of land use is appropriate if an action would result in a significant change in land use or would substantially affect regulation or policies governing land use. The analysis considers the action's compliance with, and effect on, the area's zoning and other applicable public policies, including the City's sustainability goals (PlaNYC/OneNYC), goals related to the City's Waterfront Revitalization Plan (WRP), and other relevant public policies.

A detailed assessment of land use conditions is necessary if a detailed assessment has been deemed appropriate for other technical areas, or for generic or area-wide zoning map amendments. The Proposed Actions would include a variety of discretionary actions, including a zoning map amendment, zoning text amendments and a special permit. As described in **Section 1, Project Description**, the Proposed Actions would result in changes to zoning on the Project Area. Therefore, the Proposed Actions may have the potential to result in significant adverse environmental impacts related to land use, zoning and public policy and a preliminary assessment has been prepared in **Section 2, Land Use, Zoning and Public Policy**.

Socioeconomic Conditions

The socioeconomic character of an area includes its population, housing, and economic activity. According to the *CEQR Technical Manual,* the issues of concern with respect to socioeconomic conditions are whether a proposed project would result in: (1) direct residential displacement; (2) direct business displacement; (3) indirect residential displacement; (4) indirect business displacement; and (5) adverse effects on a specific industry. The following describes whether each of these issues needs to be addressed in the EAS.

Direct Residential Displacement

There is an existing residential use located in the Project Area, which will not be modified. Therefore, the Proposed Actions would not result in significant adverse environmental impacts related to direct residential displacement and further assessment of this issue is not warranted.

Direct Business Displacement

An existing residential building is located on Lot 1 within the Project Area. A vacant four-story former industrial/manufacturing building is located on the Lot 5 portion of the Project Area and would be redeveloped through an enlargement of the existing building. As the existing building on Lot 5 has been vacant since 2000, no commercial uses are located in the Project Area. Therefore, the Proposed Development would not result in significant adverse environmental impacts related to direct business displacement and further assessment of this issue is not warranted.

Indirect Residential Displacement

The Proposed Actions do not include construction of any new residential units. Therefore, the Proposed Development would not result in significant adverse environmental impacts related to indirect residential displacement and further assessment of this issue is not warranted.

Indirect Business Displacement

The Proposed Actions would result in an incremental increase of approximately 335,423 gsf of commercial office, local retail, restaurant, and other commercial spaces on the Development Site over the No-Action condition which is above the 200,000-square-foot threshold for a preliminary assessment of indirect business displacement. Therefore, in accordance with *CEQR Technical Manual* guidelines, an analysis of the Proposed Action's potential to result in significant adverse impacts due to indirect business displacement has been prepared in **Section 3, Socioeconomic Conditions**.

Specific Industries

The Proposed Actions would not be expected to affect conditions within a specific industry, or substantially reduce employment or impair viability in a specific industry or category of businesses. Therefore, the Proposed Actions would not result in any significant adverse environmental impacts related to adverse effects on specific industries, and further assessment of this issue is not warranted.

Open Space

Introduction

The *CEQR Technical Manual* recommends performing an open space assessment if a project would result in either a direct or indirect effect on open space. A proposed action would have a direct effect on an open space if it causes the physical loss of public open space because of encroachment onto the space or displacement of the space; changes the use of an open space so that it no longer serves the same user population; limits public access to an open space; or results in increased noise or air pollutant emissions, odor, or shadows that would affect the usefulness of a public open space, whether on a permanent or temporary basis. A proposed project can also directly affect an open space by enhancing its design or increasing its accessibility to the public.

Indirect effects may occur when the population generated by the proposed project overtaxes the capacity of existing open spaces so that their service to the future population of the affected area would be substantially or noticeably diminished. The *CEQR Technical Manual* provides different thresholds for the assessment of indirect effects based on whether whether the project would introduce more than 200 residents or 500 non-residents to the area.

Direct Effects

The Proposed Action would not result in any direct effects to open space.

Indirect Effects

In terms of non-residential population, the Proposed Actions would result in an increase of more than 500 workers to the study area. Therefore, an open space analysis for the worker population is warranted, and a preliminary assessment of open space will be included in the EAS (see **Section 4, Open Space Resources**).

Shadows

The *CEQR Technical Manual* requires a shadows assessment for proposed actions that would result in new structures (or additions to existing structures) greater than 50 feet in height or located adjacent to, or across the street from, a sunlight-sensitive resource. Such resources include publicly accessible open spaces, sunlight-sensitive natural features, or historic resources with sun-sensitive features.

The Proposed Actions would result in an increase in building height in excess of 50 feet. Therefore, an assessment of shadows has been prepared in **Section 5, Shadows**.

Historic and Cultural Resources

According to the *CEQR Technical Manual,* a historic and cultural resources assessment is required if there is the potential to affect either archaeological or architectural resources. The New York City Landmarks Preservation Commission (LPC) has reviewed the project and found that there are no properties with archaeological significance within the Project Area. LPC advised that the Eagle Electric building on the Development Site is a S/NR eligible architectural resource, but did not identify any other designated or eligible architectural resources within 400 feet of the Project Area that would need to be considered for contextual effects. A preliminary assessment will be prepared to determine the potential for the project to result in significant adverse impacts to historic and cultural resources, in accordance with Chapter 9 of the *CEQR Technical Manual* (see **Section 6, Historic and Cultural Resources**).

Urban Design and Visual Resources

The *CEQR Technical Manual* outlines an assessment of urban design 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 include streets, buildings, visual resources, open spaces, natural

resources, wind, and sunlight. A preliminary assessment of urban design and visual resources is considered to be appropriate when there is the potential for a pedestrian to observe, from the street level, a physical alteration beyond that allowed by existing zoning, such as projects that permit the modification of yard, height, and setback requirements, and projects that result in an increase in built floor area beyond what would be allowed "as-of-right" or in the future without the Proposed Project. A detailed analysis of urban design and visual resources should be prepared if warranted based on the conclusions of the preliminary assessment.

As the Proposed Actions would facilitate the development of a new building that is not currently allowed by existing zoning due to its height and proximity to the existing residential building on the Development Site, a preliminary assessment has been prepared in **Section 7, Urban Design and Visual Resources**.

Hazardous Materials

According to the *CEQR Technical Manual,* a hazardous materials assessment is conducted when elevated levels of hazardous materials exist on a site, when an action would increase pathways to their exposure, either human or environmental, or when an action would introduce new activities or processes using hazardous materials, thereby increasing the risk of human or environmental exposure. Because the Proposed Development is located in a former manufacturing and industrial area, and would involve subsurface disturbance, an analysis of hazardous materials is provided in the EAS. Discussion of current site conditions, and subsurface investigations has been prepared in **Section 8, Hazardous Materials**.

Water and Sewer Infrastructure

According to the *CEQR Technical Manual,* a water and sewer infrastructure assessment analyzes whether a proposed project may adversely affect New York City's water distribution or sewer system and, if so, assesses the effects of the project to determine whether the impact is significant. Based on average water consumption levels, the Proposed Development is not expected to exceed the threshold of 1 million gallons per day that would require a preliminary infrastructure assessment. Therefore, the Proposed Development does not have the potential to result in significant adverse impacts on water supply, and further evaluation is not warranted.

With regard to wastewater and stormwater conveyance, the Project Area is within the service area of the Bowery Bay Waste Water Treatment Plant (WWTP), which is located approximately 3.1 miles to the northeast. The Proposed Project would exceed the 150,000 sf threshold for analysis in Queens as specified in the *CEQR Technical Manual*, therefore a preliminary infrastructure assessment for wastewater and stormwater conveyance and treatment is warranted. **Section 9, Water and Sewer Infrastructure** provides an assessment of the Proposed Project.

Transportation

According to the *CEQR Technical Manual,* detailed transportation analyses may be warranted if a proposed project results in 50 or more vehicle-trips and/or 200 or more transit/pedestrian trips during a given peak hour. The Proposed Project is expected to

exceed these thresholds, and therefore, detailed analyses of the Proposed Project's potential to result in significant adverse impacts is provided in the EAS.

Based on a preliminary assessment, it is expected the Proposed Project would generate 50 or more vehicles per hour during one or more of the peak hours through one or more intersections. Therefore, the Proposed Actions have the potential to result in significant adverse traffic impacts, and a detailed traffic analysis is provided in the EAS. Furthermore, the EAS documents changes in off-street parking utilization in the future No-Action and With-Action conditions, and includes a parking assessment to determine whether the Proposed Actions would result in excess parking demand, and whether there are enough off-street parking spaces in the study area to accommodate project-generated demand.

Based on the preliminary travel demand forecast, the Proposed Development is expected to generate more than 200 incremental subway trips at one or more stations. The Proposed Development is expected to generate more than 50 incremental bus passenger trips on a bus route. Therefore, the Proposed Actions have the potential to result in significant adverse impacts related to transit and, subway and bus transit analyses are provided in the EAS.

Based on the preliminary travel demand forecast, the Proposed Development is expected to generate more than 200 incremental pedestrian trips in one or more of the peak hours, including walk-only trips and the walk component of trips between the Development Site and other modes of travel, such as subway stations and bus stops. Although these pedestrian trips would be dispersed throughout the Project Area, some concentrations of incremental pedestrian trips exceeding the 200-trip *CEQR Technical Manual* threshold may occur during one or more peak hours along corridors in the immediate vicinity of the Development Site, and along corridors connecting the site to area transit services. Therefore, the Proposed Actions have the potential to result in significant adverse impacts pedestrian impacts and a detailed pedestrian analysis has been prepared in **Section 10, Transportation**.

Air Quality

Consistent with the *CEQR Technical Manual,* detailed air quality analysis may be warranted for projects that would result in stationary or mobile sources of pollutant emissions that could have a significant adverse impact on ambient air quality. This analysis also considers the potential of existing sources of air pollution to impact uses introduced by an action.

The Proposed Project would result in new development with fossil fuel-fired heating, ventilation, and air conditioning (HVAC) and hot water systems. The Proposed Project would also introduce new mobile sources in the form of project-related traffic that would exceed the analysis threshold established in the *CEQR Technical Manual* for particulate matter. The project could potentially be affected by emissions from the nearby industrial or manufacturing facilities and by vehicular emissions from the Queensboro Bridge and its ramps. As a result, the project would have the potential for significant adverse impacts on air quality. Therefore, the EAS air quality analysis assesses the following:

› The potential for changes in vehicular travel associated with the Proposed Project to result in significant mobile source (vehicle-related) air quality impacts;

- The potential for emissions from the HVAC and hot water systems of the Proposed Development to have significantly adverse impacts on existing land uses (project-on-existing impacts).
- The potential for significant air quality impacts on the project site from air toxic emissions generated by nearby existing industrial/commercial sources.
- The potential for significant air quality impacts from the HVAC systems of existing "large" or "major" emission sources on the Proposed Project.
- The potential for significant air quality impacts on the project from the traffic emissions on nearby elevated Queensboro Bridge and its ramps.

Noise

A noise analysis examines an action for its potential effects on sensitive noise receptors (which can be both indoors and outdoors), including the effects on the interior noise levels of residential, commercial, and certain community facility uses, such as hospitals, schools, and libraries. The principal types of noise sources affecting the City are mobile sources (primarily motor vehicles), stationary sources (typically machinery or mechanical equipment associated with manufacturing operations or building HVAC systems) and construction noise (e.g., trucks, bulldozers, power tools, etc.). An initial impact screening would consider whether a proposed action would generate any mobile or stationary source noise, or would be located in an area with high ambient noise levels. The Proposed Development would introduce new commercial office uses in an area that is located near heavily trafficked thoroughfares and near an elevated subway line. As such, a detailed noise analysis is provided in **Section 13, Noise**. A building attenuation analysis is also provided to determine the requirements to attain acceptable interior noise conditions.

Public Health

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

According to the guidance of the *2021 CEQR Technical Manual*, a public health assessment may be warranted if a project results in (a) increased vehicular traffic or emissions from stationary sources resulting in significant adverse air quality impacts; (b) increased exposure to heavy metals and other contaminants in soil/dust resulting in significant adverse impacts, or the presence of contamination from historic spills or releases of substances that might have affected or might affect groundwater to be used as a source of drinking water; (c) solid waste management practices that could attract vermin and result in an increase in pest populations; (d) potential significant adverse impacts to sensitive receptors from noise and odors; (e) vapor infiltration from contaminants within a building or underlying soil that may result in significant adverse hazardous materials or air quality impacts; (f) exceedances of accepted federal, state, or local standards; or (g) other actions that might not exceed the preceding thresholds but might, nonetheless, result in significant health concerns.

As detailed in the analyses provided in this EAS, the Proposed Actions would not result in significant adverse impacts in the areas of air quality, water quality, hazardous materials, or

noise. Therefore, the Proposed Actions would not have the potential to result in significant adverse public health impacts, and a further assessment is not warranted.

Neighborhood Character

As this EAS provides analyses of land use, zoning, and public policy, socioeconomic conditions; open space; historic and cultural resources; urban design and visual resources; shadows; transportation; and noise, a preliminary screening analysis is warranted to determine if a detailed neighborhood character analysis is needed.

Neighborhood character is an amalgam of various elements that give neighborhoods their distinct "personality." According to the *2021 CEQR Technical Manual*, a preliminary assessment may be appropriate if a project has the potential to result in significant adverse impacts on any of the following technical areas: land use, zoning, and public policy; socioeconomic conditions; open space; community facilities, historic and cultural resources; urban design and visual resources; shadows; transportation or noise. Per the analyses provided in this EAS, although the Proposed Actions required supplemental screening or detailed analyses of these technical areas, there would be no project-generated significant adverse impacts.

The *2021 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 *2021 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. The Proposed Actions would facilitate the redevelopment of a building that has been vacant since 2000 into a productive predominantly office development by 2024. The Proposed Actions would continue the existing trend in commercial office construction in this part of Long Island City stemming from zoning changes approved in 2001 and would be consistent with surrounding activities or land use patterns. In addition, as noted above, the Proposed Actions would not result in significant increases in traffic and noise levels in the area. As such, the Proposed Actions are intended to maintain the area's existing mixed-use character by providing new Class A office space, local retail, restaurant, community meeting space, and exhibit space related to the former Eagle Electric use of the site. Overall, the Proposed Actions would not result in any significant adverse impacts to neighborhood character and no further analysis is warranted.

Construction

Construction impacts, although temporary, can include disruptive and noticeable effects resulting from an action. Determination of their significance and need for mitigation is generally based on the duration and magnitude of the impacts. Construction impacts are

considered when construction activity could affect traffic conditions, archaeological resources, the integrity of historic resources, community noise levels, and area air quality conditions. In addition, because soils may be disturbed during construction, any action proposed for a site that has been found to have the potential to contain hazardous materials should also consider the potential construction impacts that could result from contamination.

A construction assessment is typically warranted for construction activities (a) lasting longer than two years; (b) located along an arterial highway or major thoroughfare; (c) involving the closing, narrowing, or otherwise impeding of traffic, transit, or pedestrian elements; (d) involving multiple buildings; (e) involving the operation of several pieces of diesel equipment in a single location; (f) resulting in the closure or disruption of a community facility service; (g) located within 400 feet of a historic or cultural resource; (h) disturbing a site containing or adjacent to a natural resources; and/or (i) occurring on multiple sites in the same geographic area.

The anticipated period of construction associated with the Proposed Project is less than 24 months. As the proposed building would be an expansion of the existing building, it would not involve a demolition or foundation phase. As such, construction activities would consist of superstructure and exterior cladding and interior finishes only.

Although the Proposed Project is located along Queens Plaza South, construction would be short-term and it is not anticipated that construction would impede traffic along Queens Plaza South. There is limited traffic at this location on Queens Plaza South because Queensboro Bridge traffic, which contributes to the majority of activity on the street, does not reach grade until Crescent Street, one block east of the Development Site. Further, no transit elements would be affected. While some sidewalk sheds would be erected to ensure pedestrian safety, pedestrian access would be maintained around the perimeter of the site. While there is no curbside parking allowed along Queens Plaza South, some curbside space would be used for deliveries and vehicle staging, the affects would be short-term. Therefore, a construction analysis is not warranted.

1

Introduction

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

- Land Use, Zoning, and Public Policy
- Socioeconomic Conditions
- Open Space
- Shadows
- Historic and Cultural Resources
- Urban Design and Visual Resources
- Hazardous Materials
- Water and Sewer Infrastructure
- Transportation
- Air Quality
- Noise

Analysis of these areas follow in **Section 2** through **Section 12**.

2

Land Use, Zoning, and Public Policy

This section considers the potential for the Proposed Development to result in significant adverse impacts to land use, zoning, and public policy. Under the guidelines of the *2021 City Environmental Quality Review (CEQR) Technical Manual*, this analysis evaluates the uses in the area that may be affected by the Proposed Development and determines whether the Proposed Development is compatible with land use, zoning, and public policy conditions, or may otherwise affect them. The analysis also considers the Proposed Development's compatibility with zoning regulations and other public policies applicable to the area.

Introduction

The Applicant, AAGS Holdings LLC, is seeking to increase the maximum permissible floor area ratio (FAR) on the Development Site as well as to modify street wall location and minimum distance between building provisions (see **Part I: Project Description**) in order to facilitate the reuse and 22-story enlargement of the vacant four-story former Eagle Electric Building (the "Existing Industrial Building"). As described below, the Applicant is seeking several discretionary actions, including a zoning map amendment, zoning text amendments to the Queens Plaza Subdistrict, and a special permit to modify street wall location and minimum distance between building provisions on Queens Block 425, Lots 1 and 5.

Methodology

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

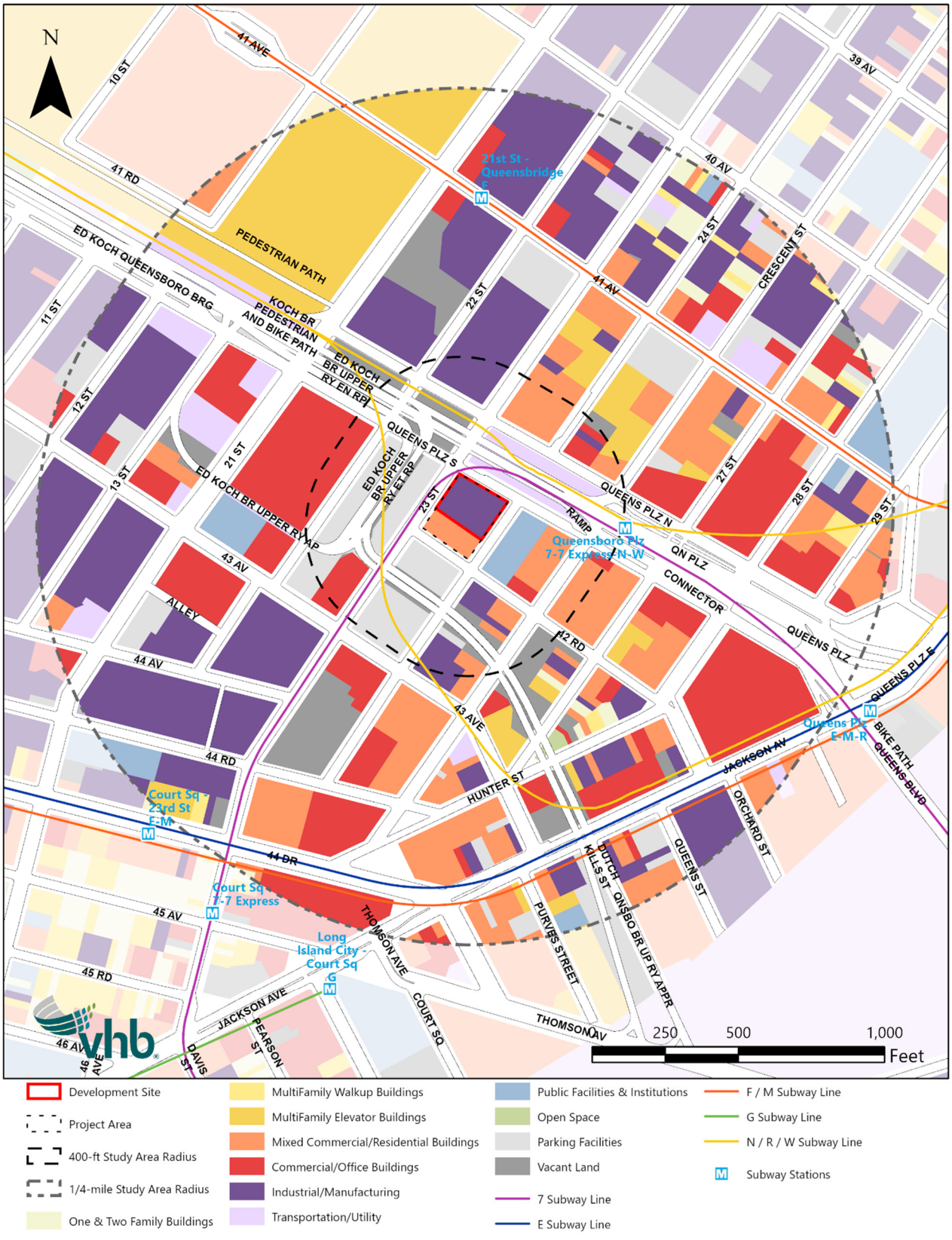
- Describes existing and future land uses and zoning information, and describes any changes in zoning that could cause changes in land use;
- Characterizes the land use development trends in the area surrounding the project site that might be affected by the proposed action; and,
- Determines whether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

The following assessment method was used to determine the potential for the proposed project to result in significant adverse impacts on Land Use, Zoning, and Public Policy:

1. Establish a "study area," a geographic area surrounding the Project Area to determine how the Proposed Development may affect the immediate surrounding area. For this assessment, a primary study area of 400 feet and a secondary study area of a quarter mile surrounding the Project Area was used.
2. Identify data sources, including any public policies (formal plans, published reports) to be used to describe the existing and No-Action conditions related to Land Use, Zoning, and/or Public Policy.
3. Assess the Proposed Development's potential effects on Land Use, Zoning and Public Policy to determine whether the Proposed Development is consistent with or conflicts with area land uses, zoning, or the identified policies.
    - If a proposed project could conflict with the identified policies, a detailed assessment would be conducted; or
    - If the proposed project is found to not conflict with the identified policies, no further assessment is needed.

As shown in **Figure 2-1**, the 400-foot study area extends to include the Queens Plaza North blockfronts between 22nd Street and Crescent Street to the north, Crescent Street to the east, 43rd Avenue to the south, and 22nd Street to the west. The quarter-mile study area extends north to 40th Avenue, east to Dutch Kills Green (a public open space located at the intersection of Queens Plaza North and Queens Plaza East), south to the intersection of Thomson Avenue and Jackson Avenue, and west to a point midblock between 11th Street and 12th Street.

Figure 2-1 Land Use Map



Assessment

Existing Conditions

Land Use

Development Site and Project Area

The Development Site (Queens Block 425, Lot 5) is located at 23-10 Queens Plaza South in Long Island City, and is bounded by Queens Plaza South on the northeast, 24th Street on the southeast, 23rd Street on the northwest, and Lot 1 of Block 425 to the south. The Development Site is currently improved with the four-story, former Eagle Electric building, a historically industrial/manufacturing use that has been vacant since 2000 (the "Existing Industrial Building").

The Project Area includes Block 425, Lot 1 in addition to the Development Site. Lot 1 is currently improved with a 44-story multifamily residential building (the 1 QPS Tower or "Residential Building") that was built in 2016.

Study Area

Both the 400-foot and quarter-mile study areas contain a variety of different land uses, including commercial uses, mixed residential and commercial uses, light industrial and manufacturing uses, and transportation and utility uses (see **Table 2-1** for an overview of study area land uses in the quarter-mile study area).

Closest to the Project Area, within the 400-foot study area, the block directly to the east of the Project Area across 24th Street contains a technical school (APEX Technical School), a mixed-use residential and commercial building (HERO LIC) currently under construction, two recently constructed residential buildings, and a hotel (Red Lion Inn and Suites). The remaining blocks within the 400-foot study area south of Queens Plaza South contain a mix of land uses that include public parking facilities directly west and south of the Project Area, light-manufacturing uses, and on Crescent Street, newly constructed residential buildings. Many of these blocks are bisected by ramps for the Queensboro Bridge.

Within the 400-foot study area, directly to the north of the Project Area is transportation infrastructure associated with both the subway and the Queensboro Bridge. Subway infrastructure includes the elevated viaduct of the No. 7 line, which curves from 23rd Street on its approach to the elevated Queensboro Plaza subway station, the Queensboro Plaza station itself, which extends from north of the Project Area east to between 27th and 28th Streets, and the elevated viaduct of the N and W lines. Roadway infrastructure includes the roadways of Queens Plaza South and Queens Plaza North, entry and exit roadways to the Queensboro Bridge at Crescent Street, and roadways to and from the Queensboro Bridge that extend under the subway infrastructure. A shared pedestrian and bicycle lane traverses a linear public open space in the medians along Queens Plaza North. Within the 400-foot study area, the blockfronts between 22nd Street and Crescent Street contain a warehouse building between 22nd and 23rd Streets, a residential building with ground-floor retail (QLIC) between 23rd and 24th Streets, and a one-story commercial building and residential building with ground-floor retail between 24th Street and Crescent Street.

As noted above, the quarter-mile study area contains a variety of different land uses. In general, the area east of 23rd Street (both south and north of Queens Plaza) contains a greater variety of uses, with more recent construction of commercial office, hotel, and residential uses, while the area west of 23rd Street contains manufacturing, industrial, and office uses.

Commercial office uses are located throughout the quarter-mile study area, with notable concentrations in the blocks north of Queens Plaza east of Crescent Street, south of Queens Plaza along Jackson Avenue, and at Court Square. North of Queens Plaza, commercial buildings include 28-11 Queens Plaza North and 27-01 Queens Plaza North (the Brewster Building), which are home to tenants such as the NYC Department of Education and JetBlue Airways, among other tenants. South of Queens Plaza, 42-01 28th Street and 28-10 Queens Plaza South are prominent commercial office buildings, home to the NYC Department of Health and Mental Hygiene, Macy's, Bloomingdale's and other office and retail tenants. At Court Square, which is toward the southern portion of the quarter-mile study area, notable commercial office buildings include One Court Square (the former Citibank Building), occupied by a mix of office and retail tenants, and 2 Court Square (occupied by CUNY School of Law).

Other commercial uses within the study area include Silvercup Studios, located to the west of the Project Area at 21st Street and Queens Plaza South, smaller commercial offices uses interspersed throughout the study area, and ground-floor retail uses with businesses that serve the area's worker and residential populations. The study area also includes a number of hotels, including the Hilton Garden Inn and the Courtyard by Marriott (both at Queens Plaza), and the Aloft and Hyatt Place Long Island City (both to the south along Jackson Avenue and 43rd Avenue, respectively).

As within the 400-foot study area, the quarter-mile study area includes a number of residential buildings that have been constructed in the last 15 years.

Smaller light manufacturing and industrial uses continue to occupy lots within the study area east of 23rd Street; these uses are more prevalent in the western portion of the study area.

Other notable uses in the quarter-mile study area include the UOVO: NYC, an art storage facility located along Queens Plaza North between 21st and 22nd Streets and the 3,100-unit NYCHA Queensbridge Houses development, a portion of which is located in the northwest portion of the study area.

The area is well-served by transit, with connections to the Long Island Rail Road and numerous subway and bus lines. An entrance to the Queensboro Plaza subway station (No. 7, N, W) is located one and one-half blocks east of the Development Site, an entrance to the Queens Plaza subway station (E, M, R) is located approximately four blocks east of the Development Site, an entrance to the 21 Street/Queensbridge subway station (F) is located three blocks northwest of the Development Site, and an entrance to the Court Square subway station (E, G, M, No. 7) is located four blocks south of the Development Site. Several bus lines stop on Queens Plaza South, including the Q39, which stops at the intersection of Queens Plaza South and 23rd Street on which the Development Site fronts, and the Q66 and Q69 which stop within one-half block of the Development Site. Additionally, LIRR service is available at the Hunterspoint Avenue station, near the Hunters Point Avenue stop on the No. 7 subway line, approximately 2/3 of a mile southeast of the Development Site.

Table 2-1 Study Area Generalized Land Uses (Quarter-Mile Study Area)

Land Use	Number of Tax Lots[2]	Percentage of Total Lots	Lot Area (sf)	Percentage of Total Lot Area
Residential-One & Two Family	23	6%	50,545	1%
Residential- Multifamily Walkup	15	4%	37,988	1%
Residential- Multifamily Elevator	17	4%	1,071,104	19%
Mixed Commercial/Residential	82	21%	1,088,819	19%
Commercial and Office	56	14%	907,333	16%
Industrial/Manufacturing	99	25%	1,252,345	22%
Transportation/Utility	17	4%	249,597	4%
Public Facilities and Institutions	7	2%	197,508	4%
Open Space	1	0%	4,330	0%
Parking Facilities	37	10%	403,164	7%
Vacant Land	35	9%	336,122	6%
Total	**389**	**100%[1]**	**5,598,855**	**100%[1]**

Source: Map PLUTO 19v1
[1] Numbers may not add up to 100% due to rounding
[2] All Lots intersecting the quarter mile study area were included in analysis

Zoning

Development Site and Project Area

As shown in **Figure 2-2**, the Development Site and Project Area are located in an M1-5/R9 zoning district, in Area B within the Queens Plaza Subdistrict of the Special Long Island City Mixed Use District (LIC District). The Queens Plaza Subdistrict pairs a light manufacturing district with a residence district and establishes special use and bulk provisions. The M1-5/R9 District allows most residential, commercial, manufacturing, and community facility uses at an FAR of 8.0. There are no height limits.

Study Area

The Project Area and much of the Study Area are located in the LIC District, which was adopted by the City Planning Commission in July 2001. The LIC District promotes the development and expansion, at varying densities, of the longstanding mix of residential, commercial, industrial and cultural uses. The LIC District is further divided into four subdistricts: Queens Plaza, Court Square, Hunters Point, and Dutch Kills. The Project Area is within the Queens Plaza Subdistrict. These subdistricts were developed around the following principles:

- Mixed-use development
- Strong relationship between density and transit
- Variety of building types
- Active ground floors
- New public open space

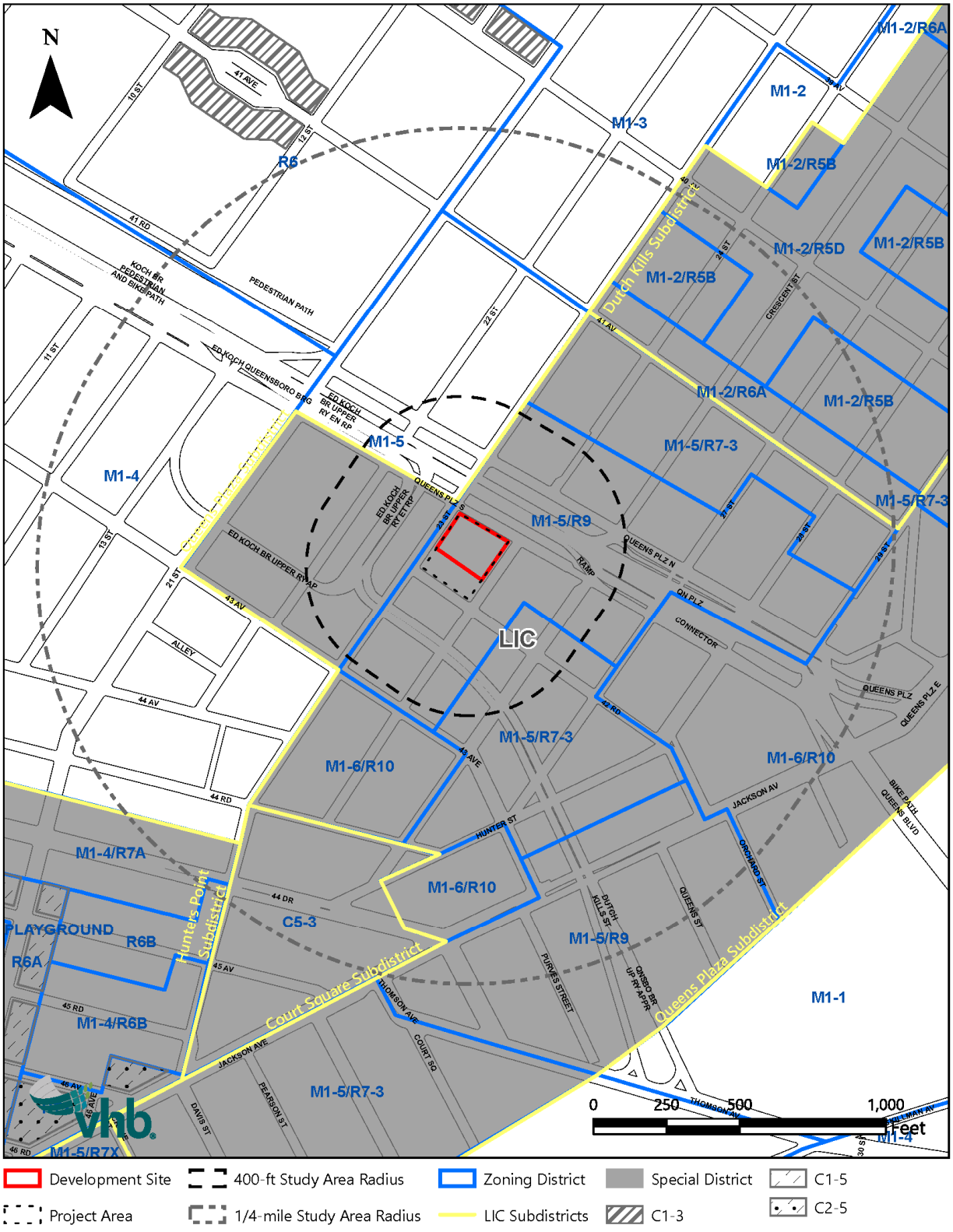
As with the Project Area, the Study Area is mapped with an M1-5/R9 zoning district, which extends two blocks to the south and northeast along Queens Plaza North to Dutch Kills Green. North of the M1-5/R9 zoning district at the northern edge of the Queens Plaza subdistrict is an M1-5/R7-3 district, which is Area C. Area C has an FAR of 5.0, which is the lowest of the three subdistricts.

South of the Project Area and 43rd Avenue is a small, two-block area that is zoned M1-6/R10, which is within Area A-2 of the Queens Plaza Subdistrict. Areas A-1 (which surrounds Dutch Kills Green to the east of the Project Area) and A-2 have an FAR of 12.0, which is the highest of the three subdistricts. The southeast portion of the Project Area is zoned M1-5/R7-3 and is within Area C of the Queens Plaza Subdistrict. Southwest of the Project Area, outside of the LIC District, is a large area zoned M1-4 (2.0 FAR) for manufacturing, industrial, and most commercial uses. M1 districts typically include light industrial uses, such as woodworking shops, repair shops, and wholesale service and storage facilities. Nearly all industrial uses are allowed in M1 districts if they meet the stringent M1 performance standards. Offices, hotels and most retail uses are also permitted. Floor area ratios in M1 districts range from 1.0 to 10.0, depending on location; building height and setbacks are controlled by a sky exposure plane which may be penetrated by a tower in certain districts.

Blocks to the east of 27th Street are zoned M1-6/R10 and are within Area A-1 of the Queens Plaza Subdistrict. These blocks surround Dutch Kills Green and are anchored by the Queens Plaza subway station. Some of the largest buildings constructed in LIC, both residential and commercial, are located in this area due to the 12.0 FAR in this zoning district.

Directly west and northwest of the Project Area is a manufacturing and industrial district zoned M1-5. Parking is not required in M1-5 Districts nor within the LIC District. Beyond the M1-5 district to the northwest of the Project Area is the Queensbridge Houses, which are zoned R6. A C1-3 commercial overlay is also mapped along 41st Avenue in the center of the development. Beyond the M1-5 district on the west side of 21st Street is the previously mentioned large M1-4 area, which extends west along the south side of the Queensboro Bridge.

Figure 2-2 Existing Zoning Map



Public Policy

The Long Island City neighborhood has been the subject of a number of different studies and plans over the last several decades. These studies included zoning, design, and public infrastructure recommendations intended to transform portions of the neighborhood, particularly the Queens Plaza and Court Square neighborhoods, into the City's fourth central business district.[1] Based on the policy and planning documents for the area, zoning changes have been implemented to support these goals (see "Zoning," above).

In 2017, the New York City Department of City Planning initiated the Long Island City Core Neighborhood Study, which aims to examine key land use and zoning issues in the neighborhood and to examine current and future community needs to identify a wide range of strategies and investments for LIC's growth and vitality. One of the goals for the plan is to include strategies related to economic development, specifically to promote jobs and economic opportunity.

Outside the 400-foot study area but within the quarter-mile study area, the study area contains a portion of the Long Island City Industrial Business Zone (IBZ). IBZs are geographic areas that were established to protect existing manufacturing districts and encourage industrial growth. This designation fosters high-performing business districts by creating competitive advantages over locating in areas outside of New York City.

No-Action Condition

Land Use

Development Site and Project Area

As discussed in **Part I: Project Description**, in the No-Action condition, it is assumed that the upper floors of the Existing Industrial Building would be demolished to bring the building into compliance with existing zoning, and the building would be reoccupied with local retail uses totaling approximately 27,713 gsf (26,393 zsf). No changes would occur to the Residential Building.

Study Area

Nine new developments are planned, under construction or have been recently completed within the quarter-mile study area by the 2024 analysis year that would add 1,470 residential units and 180 hotel rooms (see **Table 2-2**). They include a large residential building with ground floor retail at 23-15 44th Road that will contain 802 apartments when completed in 2021. Another smaller residential building with ground floor retail at 41-05 29th Street with

[1] *The Plan for Long Island City: A Framework for Development*, Department of City Planning, 1993. This plan articulated as one of its goals the creation of a vibrant, 24-hour pedestrian-oriented Central Business District with development capacity for 20 million square feet of new housing, offices, shops and community facilities.

Long Island City Vision, Department of City Planning and Economic Development Corporation, 2007. This document outlined measures to transform Queens Plaza into a dynamic and inviting gateway through new public open space and a redesigned roadway for improved traffic flow and bicycle and pedestrian movements. These improvements have been implemented.

Agency Strategic Plan, Department of City Planning, 2007. DCP's strategic plan included plans to strengthen regional business districts, including Queens Plaza.

87 apartments is also anticipated to be completed in 2021. 28-07 Jackson Avenue (also known as "The Jacx") is a large commercial office building with ground floor retail and a food court across nearly 1.5 million square feet which was completed in early 2021.

Table 2-2 No-Action Projects Within Quarter-Mile Study Area

No.	Location	Description	Commercial (SF)	Community Facility (SF)	Residential Units/Hotel Rooms	Build Year
1	23-15 44th Road	New residential building	17,453	0	802	2021
2	28-07 Jackson Avenue	New commercial building	1,453,101	0	0	2021
3	41-03 21st Street	New hotel	34,258	0	115	2020
4	41-05 29th Street	New residential building	2,375	0	87	2023
5	42-59 Crescent Street	New hotel	38,540	0	65	2020
6	43-12 Hunter Street	New residential building	4,038	0	123	2020
7	43-16 24th Street	New commercial building	3,092	0	0	2020
8	43-14 Queens Street	New residential building	28,387	0	301	2024
9	25-34 Jackson Avenue	New residential building	9,761	0	157	2024

Sources: NYC Department of City Planning; NYC Department of Buildings; Active Major Construction, 22-44 Jackson Avenue Revised EAS August 2013.

Zoning

In the future No-Action Condition, no changes are anticipated to the existing zoning in the Project Area. As described above, the Development Site is technically overbuilt, and the building would be brought into compliance under future No-Action conditions.

No changes are anticipated to the existing zoning in the 400-foot or quarter-mile study areas.

Public Policy

In the future No-Action Condition, no changes are anticipated to the public policies that pertain to the Project Area or 400-foot or quarter-mile study areas.

With-Action Condition

The Proposed Actions would facilitate the reuse of the four-story Existing Industrial Building and the proposed 22-story enlargement to it, which would result in a 26-story, approximately 383-foot tall (approximately 404 feet to the top of the mechanical bulkhead), commercial building on Lot 5. The Proposed Development would have local retail, restaurant, exhibit, accessory office, and mechanical uses on its ground floor and cellar, office use on floors two through four within the envelope of the existing building, and office use on new floors five through 26. The Proposed Development would consist of 363,136 gsf (321,449 zsf) of commercial, with approximately 135,361 gsf (104,849 zsf) within the envelope of the existing commercial building and 227,775 gsf (216,600 zsf) of commercial

office space within the proposed enlargement. Of the total commercial space, approximately 21,505 gsf (13,102 zsf) would be local retail which is proposed on the ground floor and cellar level, 7,254 gsf (7,025 zsf) would be restaurant space which is proposed on the ground floor and fifth floor, 2,410 gsf (0 zsf) of would-be community meeting space within the cellar, 520 gsf (504 zsf) would be exhibit space documenting the former Eagle Electric manufacturing business, and approximately 331,447 gsf (300,818 zsf) would be commercial office.

Land Use

Project Area and Study Area

The Proposed Actions would facilitate the introduction of new commercial uses to the Project Area over the No-Action condition by preserving and reusing the Existing Industrial Building. These include local retail, restaurant, office, and community meeting space. The proposed land uses would be consistent with the provisions of the LIC District and Queens Plaza Subdistrict as well as with the existing uses in the area, which, as described above, include a variety of other office and retail uses that are appropriate for a major transportation hub.

The Proposed Actions would not result in the introduction of new uses to either the 400-foot or quarter-mile study areas, which have numerous commercial uses, including a mix of retail and office spaces as well as public schools, training schools, and other institutional spaces.

Zoning

Project Area

As detailed in **Part I: Project Description**, the Applicant is requesting the following actions:

- A Zoning Map Amendment to rezone the Project Area from an M1-5/R9 zoning district to an M1-6/R9 zoning district;
- Zoning Text Amendments to Zoning Resolution (ZR) Section 117-50 (Queens Plaza Subdistrict) et seq. to:
  - Establish a new Area D, coterminous with the Project Area, within the Queens Plaza Subdistrict (the "Subdistrict") of the Special Long Island City Mixed Use District (the "Special District"),
  - Make such Area D subject to the applicable bulk regulations of the Subdistrict, and
  - Establish the maximum permitted floor area ratios ("FAR") permitted by use in Area D; and
- A Special Permit pursuant to ZR Section 117-533 to modify the distance-between-buildings requirements of ZR 23-711(e) (Standard minimum distance between buildings) and the street-wall-location requirements of ZR 117-531.

The proposed zoning map amendment to rezone the Project Area from the existing M1-5/R9 District to M1-6/R9, combined with the proposed zoning text amendment to modify the allowed FARs of the proposed M1-6/R9 District within the Subdistrict, is appropriate because it would facilitate the reuse and enlargement of the vacant Existing Industrial Building for office, retail, and exhibit use. The neighborhood's excellent mass transit and emerging bike network supports the proposed density increases. Four subway stations

served by eight subway lines encircle the Development Site and are within a three- to 10-minute walk of the site: Queensboro Plaza (#7, N, W), 21st Street/Queensbridge (F), Court Square (#7, E, G, M) and Queens Plaza (E, M, R). Eight bus lines stop within a similar distance along Queens Plaza North and Queens Plaza South: Q32, Q39, Q60, Q67, Q100, Q101, Q102, B62. Entrances to the existing bike lane and newly proposed pedestrian lane on the Queensboro Bridge are also between two and three blocks from the Development Site, and the shared bike lane along 23rd Street connects into the Hunters Point bike network and the Pulaski Bridge bike lane, affording additional transportation access.

The proposed density increase, combined with the existing subway, bus, bike, and pedestrian network, is consistent with other central business districts such as Downtown Brooklyn and Lower and Midtown Manhattan. The intersection of 23rd Street and Queens Plaza South is challenging for traffic and pedestrians due to the shadows and noise generating from the elevated #7 tracks and the Queensboro Bridge and the structure of the elevated tracks itself. The proposed building and ground floor retail uses would illuminate the street frontages of 23rd Street and Queens Plaza South. The higher-density office development and ground floor retail allowed by the proposed zoning map and text amendments would increase the number of pedestrians and visitors to the site compared with the number allowed under the current zoning, thereby enlivening the street and extending pedestrian activity along the full length of Queens Plaza South within the Subdistrict. The larger building allowed by the proposed FAR increase would help to "soften" the visual impact of the existing elevated transportation structures.

The proposed commercial development is consistent with the General Purposes of the LIC District and the City's goals of increasing outer borough employment opportunities in transit-rich neighborhoods and easing or reversing commuting patterns from the outer boroughs to Manhattan. The current M1-5/R9 District, as modified by the bulk regulations of the Subdistrict, permits 8.0 FAR for all uses, and therefore does not provide an incentive for commercial development over residential development. The existing FAR is also too low to allow the Existing Industrial Building to be fully reused or enlarged. Because the Subdistrict text modifies the underlying FARs of the existing M1-5/R9 District, the M1-5 District could have been retained and the applicable FARs could have been modified through the proposed text amendment. However, the 10.0 FAR permitted for commercial and manufacturing uses in the proposed underlying M1-6 District is closer to the proposed 15.0 FAR than the 5.0 FAR permitted in the underlying M1-5 District so an M1-6 District is proposed as a more appropriate underlying Manufacturing District than the current M1-5 District. The paired R9 District is retained because no changes are proposed to the allowed residential FAR.

The proposed text amendments are needed to establish within the Subdistrict a new Area D, coterminous with the Project Area, to allow for the Proposed Development's 321,449 sf of commercial floor area (see **Figure 2-3**).

In areas outside of the Subdistrict, the M1-6/R9 District would be subject to the provisions of Article XII, Chapter 3 (MX District). The MX District provisions would allow a maximum 421,430 sf of commercial floor area on the Development Site (10.0 FAR), leaving a balance of 110,774 sf of floor area for development on Lot 5 given the existing floor area in the Residential Building. This amount of floor area would only allow for the reuse of the Existing Industrial Building; it would not allow for the Proposed Enlargement. The proposed text

amendments are therefore needed to create Area D with designated paired districts M1-6/R9, to make such Area D subject to the Subdistrict's bulk regulations, and to establish the allowed FARs by use in Area D. The proposed Area D designation within the Subdistrict would increase the allowed commercial and manufacturing FAR to 15.0, the community facility FAR to 10.0 (consistent with the underlying R9 district) and maintain the allowed residential FAR at 8.0 (consistent with the Development Site's current Area B designation).

As described above, the LIC District was adopted in 2001 in part to encourage office development and other non-residential development. The Project Area's location and approximate three- to 10-minute walk to four subway stations served by eight subway lines is particularly well-suited for new commercial development. The proposed increase in commercial density to 15.0 FAR pursuant to the proposed text amendments would allow the Existing Industrial Building to be reused and enlarged as an appropriately sized office building, consistent with the General Purposes of the LIC District.

The proposed minimum and maximum base heights of 100 feet and 150 feet, respectively, that would be established in proposed Area D are the same base heights as those in effect on the Project Area today. These base heights are consistent with the loft character of the Existing Industrial Building and the Proposed Enlargement and the maximum base height of 150 feet serves to maximize the floor plate size on floors six through nine to help ensure a viable commercial office building.

The proposed application for a special permit pursuant to Section 117-533 (Special permit to modify use or bulk provisions) to modify ZR 23-711(e) and ZR 117-531 is needed to allow the envelope of the Proposed Development given the existing conditions on the Development Site. Specifically:

- ZR 23-711(e) (Standard minimum distance between buildings) would require the portion of the Proposed Development above a height of 125 feet to be located 80 feet from the Residential Building if the total lot coverage on the Development Site exceeds 40 percent. As described above, the Proposed Development would provide a minimum distance of 60 feet from the Residential Building, which is built to the shared lot line between Lots 1 and 5, beginning at a height of approximately 108 feet, which is the first level at which dwelling units within the Residential Building would face the Proposed Development. The lot coverage of the Residential Building above 125 feet is 8,050 gsf, and the largest floorplates of the Proposed Development above 125 feet would be 16,078 gsf as described above, so the buildings' combined lot coverage above a height of 125 feet would be 24,128 sf (57 percent lot coverage). To comply with the requirements of ZR 23-711(e), floors 8 through 16 of the Proposed Development would each need to be reduced to 8,807 gsf from their proposed 16,078 to 11,653 gsf, resulting in an excess of floors with small floorplates and decreasing the efficiency of the Proposed Development. Accordingly, modification of ZR 23-711(e) is proposed to allow the portions of the Proposed Development above a height of 125 feet to be located 60 feet from the Residential Building rather than 80 feet to allow for the proposed 16,078 to 11,653 sf floorplates on floors 8 through 16 and to ensure a variety of floorplate sizes within the Proposed Building.
- ZR 117-531 requires, on a wide street, and on a narrow street within 50 feet of its intersection with a wide street, the street wall of a building to be located on the street line along the entire width of the street frontage of the zoning lot and to rise without

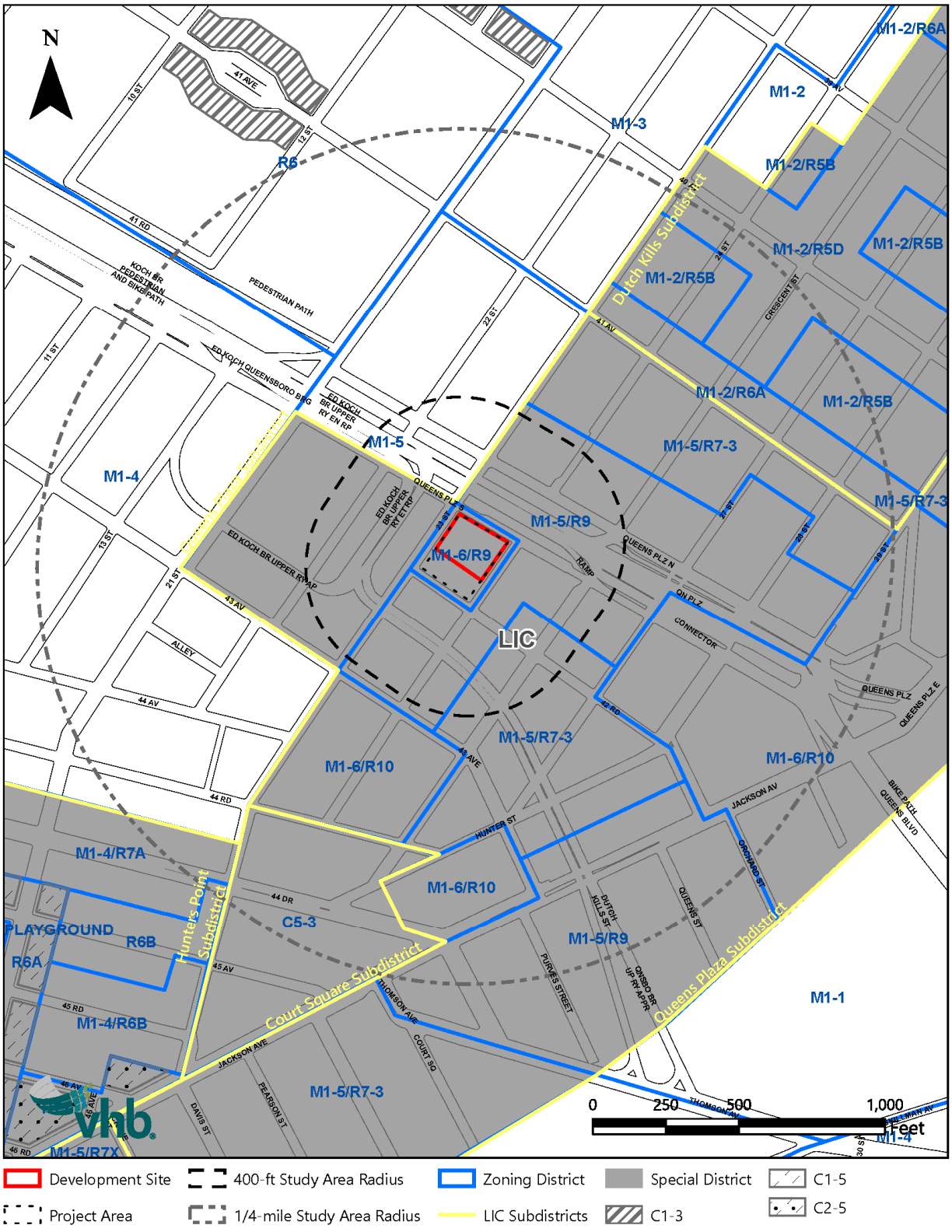
setbacks up to at least the applicable minimum base height. On a narrow street between 50 and 100 feet of its intersection with a wide street, the street wall of a building must be located within eight feet of the street line, extend along the entire width of the narrow street frontage, and rise without setback up to at least the applicable minimum base height. On a narrow street beyond 100 feet of its intersection with a wide street, street walls shall extend along at least 70 percent of the width of the narrow street frontage of the zoning lot and rise without setbacks up to at least the applicable minimum base height. Beyond 50 feet of the intersection of a wide street, all required street walls shall be located within eight feet of the street line. The Proposed Development has three street frontages: 23rd Street and Queens Plaza South (wide streets), and 24th Street (narrow street).

- The street walls of the Proposed Development would rise to a maximum base height of 150 feet, which is permitted under the current bulk regulations applicable to the Development Site and would comply with the proposed text amendments. However, at the fifth floor of the Proposed Development, which extends in height from approximately 68 feet to 92 feet above the base plane, the street wall would be set back from the street line on all three street frontages to a maximum depth of approximately 40 feet from 23rd Street (a wide street), 33 feet from Queens Plaza South (a wide street), and 20 feet from 24th Street (a narrow street), in order to provide visual distinction between the Existing Industrial Building and the Proposed Development and allow for a landscaped passive recreation space accessory to the office uses, a complying accessory sign pursuant to ZR 117-514 (Special sign regulations), and a possible Use Group 6A eating or drinking establishment with outdoor table service. Accordingly, modification of ZR 117-531 is proposed to waive the street wall location provision at the level of the fifth floor for the entire street frontages of 23rd Street and Queens Plaza South (137.63 feet and 187.31 feet, respectively) and, on 24th Street, for the portion of the frontage within 100 feet of Queens Plaza South and for 70 percent of the remaining frontage (38.35 feet out of the 54.78 feet of frontage located beyond 100 feet of Queens Plaza South).

Study Area

As described above, under the Future With-Action condition, the maximum residential FAR would remain at 8.0, the maximum community facility FAR would increase from 8.0 to 10.0 (consistent with the underlying R9 District), and the maximum manufacturing and commercial FARs would be increased to 15.0. While the proposed zoning would increase the FAR of the Project Area for community facility, manufacturing, and commercial uses, it would be consistent with other zoning in the study area. An M1-6/R10 zoning district is mapped in the area south of 43rd Avenue, east of 23rd Street, west of Crescent Street, and north of 44th Road. This zoning is characteristic of the neighborhood, which is zoned for the dense commercial and manufacturing uses that are appropriate for a major transportation hub and central business district such as Long Island City. Therefore, the Proposed Actions would be consistent with the zoning of the Study Area.

Figure 2-3 Proposed Zoning Map



Public Policy

The Proposed Actions would facilitate the reuse and enlargement of a vacant former industrial and manufacturing building as a multi-use commercial development and would introduce nearly 1,500 jobs to the Development Site. Overall, the Proposed Development would be consistent with public policies for the Long Island City neighborhood, including those for the Queens Plaza area, by introducing new commercial office, retail and restaurant space that would activate the ground floor of the Proposed Development and contribute to a vibrant 24-hour central business district.

While the Proposed Development would not introduce any industrial or manufacturing space, it would not conflict from the City's industrial policies, such as those associated with the nearby IBZ. Instead, the Proposed Development would preserve a former manufacturing and industrial building and reuse it to create a vibrant commercial hub reflective of a modern economy.

Conclusion

As described above, the Proposed Actions would result in the reuse and enlargement of a long-vacant former manufacturing and industrial building from four-stories to 26-stories of commercial uses including office, retail, a restaurant, community meeting space and an exhibit. The Proposed Actions would facilitate the construction of a building that is consistent with the goals of relevant public policies, the LIC District and the Queens Plaza Subdistrict more specifically. Further, the Proposed Development would preserve, reuse, and honor, through the design of the Proposed Development, the Existing Industrial Building, which has been vacant since approximately the year 2000.

3

Socioeconomic Conditions

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

Introduction

According to the *2021 CEQR Technical Manual*, an analysis of socioeconomic conditions may be necessary when a project would directly or indirectly change an area's socioeconomic character (population, housing, and economic activity); the assessment usually considers the socioeconomic conditions of area residents separately from those of area businesses, although projects may affect both in similar ways. An assessment of socioeconomic conditions is warranted when a project would result in:

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

For the Proposed Project, a preliminary analysis of indirect business displacement is warranted. As described below, the preliminary analysis determined the Proposed Development would not result in significant adverse impacts to socioeconomic conditions.

Methodology

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

Direct displacement is defined as the involuntary displacement of residents, businesses, or institutions from the actual site of (or sites directly affected by) a proposed project. Indirect or secondary displacement is defined as the involuntary displacement of residents, businesses, or employees in an area adjacent or close to a development site that results from changes in socioeconomic conditions created by a proposed project. Examples include direct displacement of residents or workers who form the customer base of existing businesses in an area, which would result in indirect impacts to those businesses.

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

Analysis Format

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

Initial Screening Assessment

According to the *CEQR Technical Manual*, a socioeconomic assessment should be conducted if a project may be reasonably expected to create substantial socioeconomic changes within the area affected by the project that would not be expected to occur without 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.

› *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.*

  The existing residential building located on the Development Site (Block 425, Lot 1) will not be modified and the existing former Eagle Electric building on the Development Site

(Block 425, Lot 5) is currently vacant. Therefore, assessment of direct residential displacement is not warranted.

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

The Proposed Development would not directly displace any employees or businesses. The existing former Eagle Electric building is currently vacant. Therefore, assessment of direct business displacement is not warranted.

› *Indirect Displacement due to Increased Rents: Would the project result in substantial new development that is markedly different from existing uses, development, and activities within the neighborhood? Residential development of 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 would result in the addition of more than 200,000 sf of commercial space. Therefore, a preliminary assessment of indirect business displacement is warranted.

The Proposed Development does not include new residential uses; therefore, assessment of indirect residential displacement is not warranted.

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

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

› *Adverse Effects on Specific Industries: Is the project expected to affect conditions within a specific industry?*

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

Based on the screening assessment presented above, the Proposed Actions warrant an analysis of indirect business displacement.

Preliminary Assessment

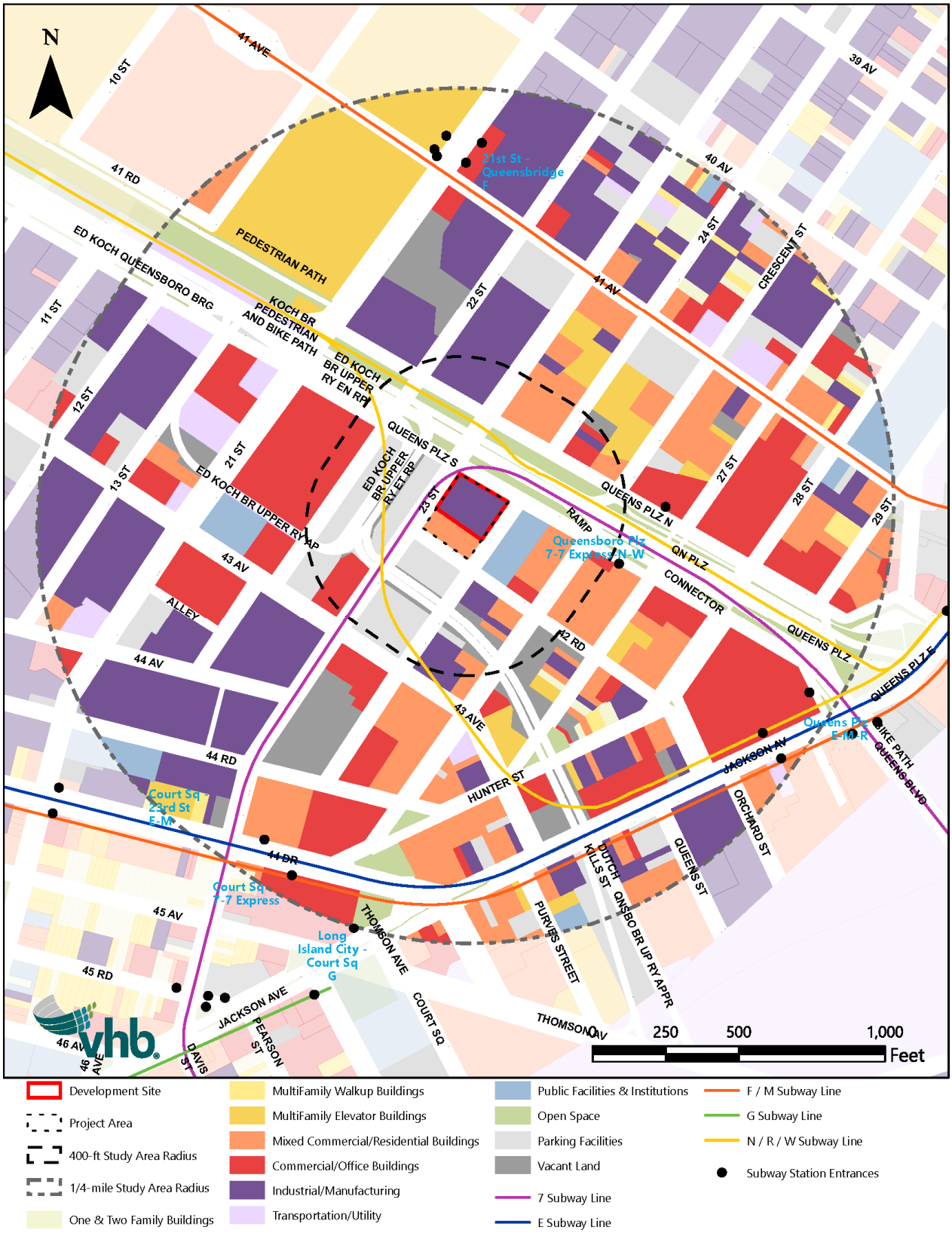
Indirect Business Displacement Methodology

Per *CEQR Technical Manual* guidelines, a preliminary assessment of a project's potential to cause indirect business displacement is necessary to determine whether the Proposed Project may introduce trends that would make it difficult for certain local businesses to remain in the area. Indirect displacement is typically caused by a marked increase in property values and rents or through direct displacement. Direct displacement will not occur with the Proposed Development because the existing Eagle Electric building to be reused and enlarged is currently vacant and has been vacant for approximately 20 years. Therefore, this assessment will focus on the potential for the Proposed Actions to result in an increase in area commercial rent or property value, often caused by the introduction of new economic trends.

Study Area Definition

The *CEQR Technical Manual* states that the socioeconomic study area boundaries are similar to those of the land use Study Area. As discussed in **Section 2, Land Use, Zoning, and Public Policy**, a quarter-mile area surrounding the Development Site was used for the land use Study Area. Therefore, the Study Area for the indirect business displacement assessment is a quarter mile surrounding the Development Site (see **Figure 3-1**).

Figure 3-1 Study Area Map



Data Sources

Information used in the assessment of indirect business displacement includes employment by industry sector data from ESRI Business Analyst, 2020. The assessment of indirect business displacement also includes analysis of land use patterns and trends as established in **Section 2, Land Use, Zoning, and Public Policy**.

Assessment

As detailed in **Section 2, Land Use, Zoning, and Public Policy**, the quarter-mile Study Area contains a variety of different land uses including transportation and utility uses, mixed residential and commercial buildings, industrial and manufacturing uses, and commercial uses. The commercial uses are diverse, encompassing retail uses, hotels, film studios, private offices, and government offices. The Study Area, and surrounding area, has recently seen significant investment, transforming the area into a dense, mixed-use neighborhood centered around Queens Plaza. **Section 2, Land Use, Zoning, and Public Policy** identifies 21 projects within the Study Area in the No-Action condition, including a mix of residential, commercial, hotel, and light manufacturing. Combined, these projects include over 3,500 residential units and approximately 1.98 million sf of commercial development.

As shown in **Table 3-1**, there are approximately 635 employees in the quarter-mile Study Area. Of the standard NAICS[1] categories, those with the most employees in the Study Area are Manufacturing; Construction; and Retail Trade. The industries with the most employees in Queens are Health Care and Social Assistance; Retail Trade; and Accommodation and Food Services, while the industries with the most employees in New York City as a whole are Health Care and Social Assistance; Professional, Scientific and Tech Services, and Retail Trade.

[1] North American Industry Classification System (NAICS)

Table 3-1 Employment by Industry Sector

	Quarter-Mile Study Area		Queens		New York City	
Type of Job (NAICS)	Employees	%	Employees	%	Employees	%
Agriculture, Forestry, Fishing & Hunting	0	0.0%	457	0.1%	1,239	0.0%
Mining	2	0.0%	88	0.0%	682	0.0%
Utilities	0	0.0%	550	0.1%	8,656	0.2%
Construction	568	9.6%	32,848	6.2%	111,102	3.1%
Manufacturing	630	10.7%	26,205	5.0%	108,102	3.0%
Wholesale Trade	254	4.3%	19,559	3.7%	83,825	2.3%
Retail Trade	505	8.6%	56,702	10.7%	359,283	10.1%
Transportation & Warehousing	386	6.5%	34,035	6.4%	91,171	2.6%
Information	367	6.2%	11,032	2.1%	180,962	5.1%
Finance & Insurance	238	4.0%	13,381	2.5%	323,744	9.1%
Real Estate, Rental & Leasing	217	3.7%	21,225	4.0%	163,176	4.6%
Professional, Scientific & Tech Services	476	8.1%	25,001	4.7%	405,950	11.4%
Management of Companies & Enterprises	6	0.1%	593	0.1%	25,008	0.7%
Administration & Support & Waste Management & Remediation	611	10.3%	16,982	3.2%	116,822	3.3%
Educational Services	438	7.4%	43,123	8.2%	255,295	7.2%
Health Care & Social Assistance	223	3.8%	99,797	18.9%	579,904	16.2%
Arts, Entertainment & Recreation	82]	1.4%	16,423	3.1%	96,071	2.7%
Accommodation & Food Services	371	6.3%	44,720	8.5%	298,292	8.4%
Other Services	458	7.8%	36,733	7.0%	226,193	6.3%
Public Administration	43	0.7%	26,615	5.0%	114,949	3.2%
Unclassified Establishments	32	0.5%	1,786	0.3%	19,577	0.5%
Total	635	100.0%	527,855	100.0%	3,570,213	100.0%

Source: ESRI Business Analyst, Business Summary Report, 2020

Based on conversations with local commercial real estate agents[2], the office market in Long Island City is primarily Class B space, with a current trend of new commercial development after a significant influx of recent residential development. Commercial rents in the neighborhood have stayed mostly flat over the past few years. The new Class A office development has commanded higher rents; however, this new development has not created an increase in rents for other existing types of office use. There has been, and continues to be, a sufficient variety in types of office space on the market to satisfy demand, and therefore, rents were not expected to increase significantly even before the pandemic.

According to the *CEQR Technical Manual*, an assessment of indirect business displacement seeks to determine whether a proposed project may introduce trends that would make

[2] Phone conversations with representatives at Pinnacle Realty of New York, LLC on September 24, 2020, and Sholom & Zuckerbrot Realty LLC on September 25, 2020.

conditions difficult for businesses that are essential to the local economy, or businesses that are the subject of regulations or publicly adopted plans to preserve, enhance, or otherwise protect them, to remain in the area.

The Proposed Development would result in a total of 363,136 gsf of commercial space consisting primarily of commercial office with local retail on the ground floor and cellar level, a restaurant, community meeting space, and an exhibit space documenting the former Eagle Electric manufacturing business. The Proposed Development would increase the number of commercial uses, especially office use, in the Study Area; however, it would not introduce a new use given the existing presence of office uses in the Study Area. Nor would the Proposed Development introduce a new trend. As evidenced by the projects that would occur in the No-Action condition within the Study Area and by conversations with local commercial real estate agents, there is already a trend of new development of a mix of uses, including commercial uses. The Proposed Development would be consistent with the existing mix of uses in the Study Area, would contribute to an established trend of new development of a mix of uses, including commercial uses, and as stated in **Section 2, Land Use, Zoning, and Public Policy**, would be consistent with the numerous public policies affecting the Study Area.

The manufacturing and industrial uses within the Study Area can be considered businesses that are subject to regulations or publicly adopted plans to preserve, enhance, or otherwise protect them, per the *CEQR Technical Manual*. The Development Site is located adjacent to, but outside of, the Long Island City Industrial Business Zone. Therefore, there is limited potential for adverse impact, such as increased rents, to the manufacturing and industrial uses in the Study Area which are protected to some extent through the New York City Industrial Policy. Although the Development Site itself contained a manufacturing business (Eagle Electric), the building has been vacant for approximately 20 years.

It is also not anticipated that the Proposed Development would adversely impact essential local businesses. Conversely, in the With-Action condition, businesses that are essential to the local economy, including retail and services, would potentially experience additional business due to a projected increase in daytime office workers resulting from the Proposed Development.

Conclusion

The Proposed Development would increase the number of commercial uses in the Study Area, which would be consistent with the established land use patterns and existing development trends. The Proposed Actions would not introduce new economic activities to the Study Area that would substantially alter existing economic patterns and trends. The Proposed Development would not result in direct displacement and would, thus, not result in displacement of any uses that may directly or indirectly support businesses in the Study Area. The Proposed Development would increase the number of workers in the area, which in turn, would likely benefit local retail and service businesses. Therefore, the Proposed Actions would not result in significant adverse impacts due to indirect business displacement.

4

Open Space

This chapter assesses the potential impacts to open space that could result from the Proposed Actions. The 2021 *City Environmental Quality Review (CEQR) Technical Manual* defines open space as publicly- or privately-owned land that is publicly accessible and available for leisure, play, or sport, or is set aside for the protection and/or enhancement of the natural environment. According to the 2021 *CEQR Technical Manual*, an analysis of open space is conducted to determine whether a proposed action would have a direct impact resulting from the elimination or alteration of open space and/or an indirect impact resulting from overtaxing available open space.

Introduction

The Applicant, AAGS Holdings LLC, requests a series of land use actions, including a zoning map amendment, zoning text amendment, and special permit, to facilitate the reuse and 22-story enlargement (the "Proposed Enlargement") of the existing four-story former Eagle Electric building (the "Existing Industrial Building") located on the zoning lot consisting of Queens Block 425, Lots 1 and 5 (the "Project Area") in the Long Island City neighborhood, Queens Community District 2. The Proposed Enlargement would be developed on Lot 5 at 23-10 Queens Plaza South (the "Development Site") and would consist of approximately 216,600 square feet (sf) of new commercial uses (the "Proposed Development"). The actions, collectively the "Proposed Actions", include:

- A Zoning Map Amendment to rezone the Project Area from an M1-5/R9 zoning district to an M1-6/R9 zoning district.
- Zoning Text Amendments to Zoning Resolution (ZR) Section 117-50 (Queens Plaza Subdistrict) et seq. to:
  - Establish a new Area D, coterminous with the Project Area, within the Queens Plaza Subdistrict (the "Subdistrict") of the Special Long Island City Mixed Use District (the "Special District"),
  - Make such Area D subject to the applicable bulk regulations of the Subdistrict, and
  - Establish the maximum permitted floor area ratios ("FAR") permitted by use in Area D.
- A Special Permit pursuant to ZR Section 117-533 (Special permit to modify use or bulk regulations) to modify the distance between buildings requirements of ZR 23-711(e) (Standard minimum distance between buildings) and the street wall location requirements of ZR 117-531 (Street wall location).

The Proposed Actions would result in a 26-story commercial building. As described in detail below, the Proposed Development would have a total of 363,136 gross square feet (gsf) of commercial space, consisting primarily of commercial office uses on floors two through 26, and local retail on the ground floor and cellar level, as well as a restaurant, community meeting space, accessory bicycle parking and exhibit space documenting the former Eagle Electric manufacturing business on the ground floor.

The Proposed Project would not introduce any new publicly accessible open space to the Study Area. However, an approximately 16,134 sf passive landscaped seating area that would be accessory to the office uses is proposed on the roof of the Eagle Electric building. The rooftop open space would offer an open-air respite for building occupants. The rooftop space is part of the Proposed Project but would not be guaranteed by an approved site plan. Therefore, it was not included in the quantitative analysis. Despite this, it is anticipated that the proposed accessory passive outdoor seating area would help to reduce some of the anticipated future demand from building tenants on local open space resources.

Compared to the No-Action condition, the RWCDS would result in a net increase in the number of employees that would exceed the CEQR threshold requiring analysis. Therefore, in accordance with CEQR guidelines, the open space analysis of the Proposed Actions evaluated the change in non-residential population relative to the total amount of passive open space in the Study Area; while active open spaces were identified, these open spaces were not included in the analysis because non-residents, specifically workers, tend to use passive open spaces. Open space that is used for sports, exercise, or active play is classified as active, while open space that is used for relaxation, such as sitting or strolling, is classified as passive. Since the Study Area's existing conditions are characterized by a low open space ratio (i.e., below the citywide average of 0.15 acres of passive open space per 1,000 non-residential users), the *CEQR Technical Manual* guidance indicates that the Study Area has a shortfall of open space. Per CEQR, if a Project would cause the non-residential open space ratio to cross the 0.15 acres of passive open space per 1,000 non-residential users threshold, a detailed analysis may be required. However, as described below, the anticipated decrease in the open space ratio resulting from the Proposed Actions would not cause that threshold to be crossed. Further, any decrease in open space ratio would be offset by planned accessory open space and

recreation amenities that would be provided on-site, thereby helping to minimize the demand from the future on-site population. As such, a preliminary analysis is provided below.

Methodology

Open Space Study Area

As described in the *CEQR Technical Manual*, an open space Study Area is defined by the reasonable walking distance users would travel to reach open spaces and recreational areas—typically a quarter mile for worker populations.

Typically, an open space Study Area for work populations includes all census tracts that have 50 percent or more of their area within a quarter-mile radius of the Development Site. In this instance, no single census tract, including the one in which the Development Site is located, has 50 percent or more of its area within the quarter-mile radius. To develop an appropriate Study Area, available data from the block group level was used, which is a smaller geographic unit. Three block groups were found to have more than 50 percent of their area within the quarter-mile radius. However, the block group (360810019001) where the Development Site is located has only 43 percent of its area within the quarter-mile radius due to an unusual shape and size of this particular block group. This is likely a consequence of the historic uses that characterized the area when the block groups were initially established, including manufacturing, industrial, and transportation uses. Despite having less than 50 percent of the total lot area within the quarter-mile radius, block group 360810019001 was included in the analysis because it contains the Development Site. Therefore, the Study Area is comprised of block groups 360810019001, 360810033001, 360810033002, and 360810025004. The boundaries of the Study Area are roughly 40th Avenue to the north, Vernon Boulevard to the west, 44th Drive and 49th Avenue to the south and Sunnyside Yard to the east (See **Figure 4-1**).

Direct Effects Analysis

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

As described in detail in the Project Description, the Proposed Project involves the redevelopment of a site that contains the existing four-story former Eagle Electric building. As such, the Proposed Project would not result in the physical loss or direct displacement of publicly accessible open space or increase access to open space, nor result in the physical loss or direct displacement of publicly accessible open space or shadows that would temporarily or permanently affect the usefulness of a public open space (see **Chapter 5, Shadows**). Therefore, no direct effects analysis is warranted.

Figure 4-1 Non-Residential Open Space Study Area Map



Indirect Analysis

An indirect effects analysis is performed where a project could add sufficient population, either residents or non-residents, such that capacity of the open space to serve the population would be noticeably diminished. The threshold for such an analysis is whether the project would introduce more than 200 residents or 500 non-residents to the area. The Proposed Project would result in a net increase of approximately 1,424 employees, and no change in residential population as compared to the future No-Action condition. Therefore, only a non-residential analysis of indirect effects was prepared, with a Study Area encompassing an approximately quarter-mile distance around the Project Site and adjusted as described above to include block groups that have 50 percent or more of their total area within the quarter-mile radius. The open space user population conservatively includes both non-residents and residents to capture the total user population. The purpose of the indirect effects analysis is to quantitatively assess the adequacy of open space in the Study Area for existing and potential future users based on an inventory of open space resources and the effect of the non-residential population increase anticipated with the Proposed Action.

Compared to the future No-Action condition, the Proposed Actions would add 1,424 workers to the area. This incremental increase in the worker population would exceed the *CEQR Technical Manual's* 500-worker analysis threshold. No residents would be added to the area by the Proposed Development. Following *CEQR Technical Manual* guidance, an indirect effects open space analysis was conducted for non-residential populations, consistent with the following methodology:

- Identification of the two open space user groups: residents and non-residents. To determine the number of residents to be included in the analysis, population data from the 2015-2019 five-year American Community Survey (ACS) were compiled for block groups comprising the Study Area. The number of workers in the Study Area was calculated based on reverse journey-to-work data from the 2019 Census Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employment Statistics (LODES) data via OnTheMap. In addition to workers, the non-residential population also includes the daytime student population of colleges and other post-secondary educational institutions in the Study Area, as well as visitors to the Study Area, which were estimated as part of the detailed analysis.
- An inventory of all publicly accessible open spaces in the Study Area, using secondary sources. No new field surveys were conducted due to atypical conditions related to COVID-19.
- A quantitative assessment of the open space ratio (OSR) in the Study Area—calculated as the ratio of open space acreage to user population—compared to benchmarks established in the *CEQR Technical Manual*. These include the optimal ratio for worker populations, which is 0.15 acres of passive open space per 1,000 non-residents. For the combined residential and non-residential populations, the benchmark is determined by creating a weighted average of 0.50 acres of passive open space per 1,000 residents and 0.15 acres of passive open space per 1,000 non-residents. This blended ratio changes depending on the proportion of residents and non-residents in the Study Area.

Walk-to-a-Park Initiative

New York City, as part of the OneNYC 2050 Building a Strong and Fair City plan, has put forth a goal for 85 percent of New York City residents living within a walking distance of a park by 2030. To help the City reach this goal, NYC Parks has a Walk-to-a-Park initiative that focuses on increasing access to parks and open space in areas of the City where residents live further than a walk to a park. While the focus of the Walk to a Park initiative is on residents living within walking distance to a park, projects that create a non-residential population (e.g., new workers) are also reviewed to determine whether a project is located within a known walk gap and assess if it would generate a new non-residential population within areas of the City with inadequate access to open space resources. According to Walk-to-a-Park service area geographic data provided by the City, the Project Area does not overlap with any known walk gap areas (see **Figure 4-2**). Therefore, a detailed assessment is not required based on the results of the Walk-to-a-Park analysis.

Figure 4-2 Walk to a Park Service Area



Impact Assessment

The determination of significant adverse impacts is based on how a project would change the open space ratios in the Study Area, as well as qualitative factors not reflected in the quantitative assessment. According to the *CEQR Technical Manual*, if a proposed project would reduce an open space ratio and consequently result in overburdening existing facilities, or if it would substantially exacerbate an existing deficiency in open space, it may result in a significant impact on open space resources. In general, if projects that lead the non-residential open space ratio to drop below the optimal ratio of 0.15 acres of passive open space per 1,000 non-residents may warrant a more detailed assessment. As described below, the Proposed Actions would not cause the study area to drop below the optimal ratio of 0.15 acres of passive open space per 1,000 non-residents and the quantitative assessment and supporting qualitative discussion concluded that there would be no significant adverse impacts on open space resources.

Preliminary Assessment

Existing Conditions

Study Area Population

Non-Residential Population

The existing non-residential or worker population in the Study Area is approximately 35,356 as shown in **Table 4-1**. In addition to workers, the non-residential population includes the daytime student population of colleges and other post-secondary educational institutions in the Study Area, as well as visitors to the Study Area.

Table 4-1 Existing Non-Residential Population within the Study Area

Block Group	Worker Population	College/Post-Secondary Student Population	Visitor Population	Total Non-Residential Population
360810033001	11,708	0	599	12,307
360810033002	1,468	0	372	1,840
360810025004	0	0	0	0
360810019001	18,217	1,866	1,126	21,209
Total	**31,393**	**1,866**	**2,097**	**35,356**

Source: 2019 LEHD LODES data via OnTheMap ; M1 Hotel FEIS, Administrative Offices

The number of existing college/post-secondary students in the Study Area was compiled from information obtained online or from the administrative offices of the educational institutions identified in the area. All students (100 percent of enrollment) at all of the schools were included in the analysis, even though they do not comprise a year-round population and only a portion of the entire student population visits the campuses in the Study Area on any given day. The Study Area contains two educational facilities with a total enrollment of approximately 1,866 (see **Table 4-2**). However, as APEX Technical School is

going to relocate from this area to a new location, the analysis is conservative by including the population related to this use.

An estimate of hotel occupancy was used as a proxy measure for the Study Area's average daily visitor population. In a review of Study Area hotels, 10 hotels were identified in the Study Area, which collectively have 1,201 rooms. According to research performed by STR[1] in 2018, the average daily hotel occupancy rate was 87.3 percent. Using the assumption of two people per occupied hotel room, hotel occupancy in the Study Area was estimated at approximately 2,097 persons. Therefore, as shown in **Table 4-4**, the total adjusted non-residential population in the quarter-mile Study Area—including workers, college/post-secondary students, and visitors—is estimated at 35,356 persons.

Table 4-2 Existing College/Post-Secondary Student Population within the Study Area

Block Group	College/Post-Secondary Educational Institution	Student Population
360810019001	CUNY Law School	583
	APEX Technical School	1,283
Total College/Post-Secondary Student Population		**1,866**

Source: US News World Report – Best Law Schools, Collegetuitioncompare.com

Residential Population

The existing estimated residential population in the Study Area is 7,499 residents, as shown in **Table 4-3**. This figure includes the 911 residents of the existing residential building on Block 425, Lot 1 (the property that shares Queens Block 425 with the Proposed Project).

Table 4-3 Existing Residential Population in the Study Area

Block Group	Residential Population
360810033001	1,877
360810033002	447
360810025004	817
360810019001	4,358
Total	**7,499**

Source: 2015-2019 ACS 5-year estimates.

Total User Population

As shown in **Table 4-4**, the total user population (i.e., residents and non-residents) within the Study Area is estimated at 42,855. The analysis conservatively assumes that residents and non-residents are separate populations, although it is possible that some of the employees and students counted among the non-residential population also reside in the Study Area. Consequently, there is likely some double counting of the daily user population in the Study Area, resulting in a more conservative analysis.

[1] STR provides data benchmarking, analytics and marketplace insights for global hospitality sectors.

Table 4-4 Summary of Open Space User Groups within Study Area

User Group	Study Area Population
Non-Residents	35,356
Residents	7,499
Total	**42,855**

Study Area Open Space Resources

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

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

In conducting the open space analysis of the Proposed Action, publicly accessible open spaces within the Study Area were inventoried. The open space resources were identified by their location, owner, features, hours of access, total acreage, percentage and acreage of passive and active areas, condition, and utilization. The secondary sources for this analysis included land use and geographic PLUTO data at the tax lot level and additional data provided by the New York City Department of Parks and Recreation (DPR).

Under normal circumstances, a survey of the open space resources in the Study Area would be conducted to determine their condition and utilization levels. However, due to the ongoing effects of the COVID-19 pandemic, including the shift to remote and/or hybrid work options for office workers, open space utilization levels may not reflect typical conditions. Therefore, while the condition of these open space resources can be observed and described, open space utilization levels are not considered as representative of typical levels at this time and consequently utilization observations were not documented.

According to the *CEQR Technical Manual*, public open space does not include Greenstreets or malls without seating, or sidewalks.

The Study Area includes a variety of parks, plazas and playgrounds that are accessible for use by the public, as shown in Error! Reference source not found. and as described in **Table 4-5**.

Figure 4-2 Non-Residential Study Area Open Space Inventory

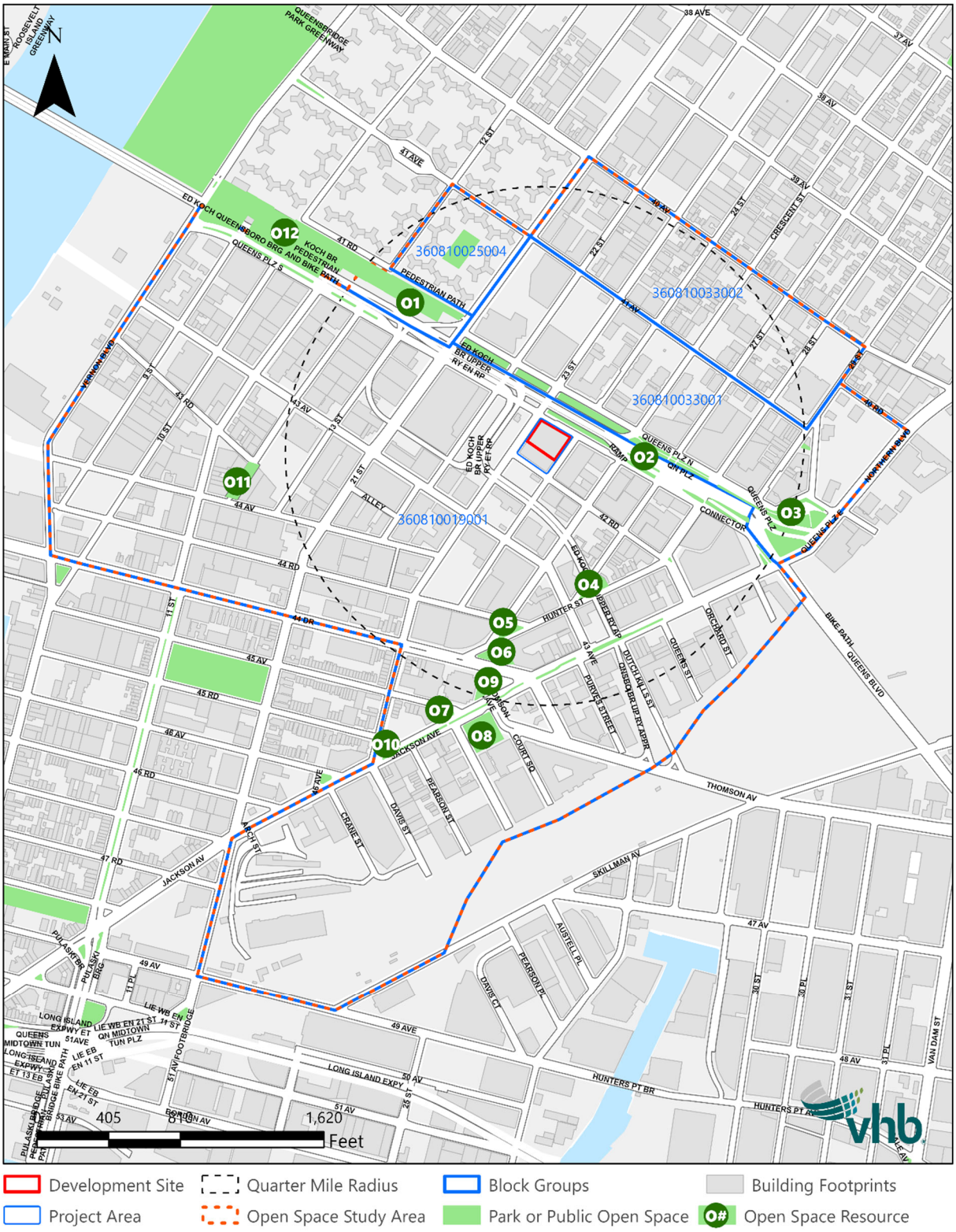


Table 4-5 Existing Study Area Open Spaces

Map No.	Name	Owner/ Agency	Features and Amenities	Total Acres	Active (Acres)	Passive (Acres)
O1	Queensbridge Park Greenway	NYC Parks	Shared use path, benches, vegetation	0.76*	0.67	0.09
O2	Queens Plaza Medians	NYC Parks	Shared use path, benches, vegetation	0.51	0.23	0.28
O3	Dutch Kills Green	NYC Parks	Vegetation, benches	1.01	0.05	0.96
O4	Hunter Street and 27th Street Greenstreet (Sundial)	NYC Parks	Benches and vegetation	0.07	0	0.07
O5	Hunter Street Greenstreet	NYC Parks	Benches and vegetation	0.04	0	0.04
O6	Rafferty Triangle	NYC Parks	Concession, tables, chairs and vegetation	0.1	0	0.1
O7	McKenna Triangle	NYC Parks	Benches and vegetation	0.01	0	0.01
O8	Court Square Park	NYC Parks	Benches, lawns, vegetation and fountain	0.49	0	0.49
O9	Citicorp at Court Square (POPS)	Citi Corp	Vegetation and benches installed during construction of adjacent Citicorp Tower	0.27	0	0.27
O10	Short Triangle	NYC Parks	Benches, Long Island City Partnership Information Kiosk, Vegetation	0.01	0	0.01
O11	12th Street Public Plaza	NYC DOT	Plaza, seating, tables, planters, glacial rock	0.32	0	0.32
O12	Queensbridge Baby Park	NYC Parks	Handball Court	0.27	0.27	0.0
			Non-Residential Study Area Total	**3.86**	**1.19**	**2.67**
			Percent of Study Area Open Space	**100%**	**30.8%**	**69.2%**

Source: NYC Department of Parks and Recreation

* Of the 20.34 acres in Queensbridge Park, only approximately 0.76 acres is within the quarter-mile radius. Although this open space resource is not located within the Study Area boundaries, it was included within the open space calculations because this linear resource is only approximately 700 feet/two blocks away from the site. This open space resource is accessible from the site by the Queensbridge Park Greenway, which is a protected bike/pedestrian path that runs east/west along Queens Plaza North from 23rd Street to 21st Street. At 21st Street, the greenway continues westward between the bridge and the NYCHA property for three blocks before connecting to Queensbridge Park and the East River waterfront. Given the proximity of Queensbridge Park and ease of connection via the protected bike/pedestrian path, this open space would be a likely destination for any workers looking to take a walk to a larger open space resource or waterfront destination on their lunch break.

As depicted in Error! Reference source not found. and described in **Table 4-5**, 12 publicly-accessible open space resources are included in the quantitative analysis. The Study Area contains a total of approximately 3.86 acres of publicly accessible open space. Approximately 31 percent of the total open space area (approximately 1.19 acres) is comprised of active open space and approximately 69 percent of the total open space area (approximately 2.67 acres) is comprised of passive open space.

Many of the publicly accessible open spaces located within the Study Area are part of the Greenstreet program and contain only passive recreational space. They range from spaces

such as Rafferty Triangle along 44th Drive, which has passive recreational amenities such as chairs, tables and a food and drink concessionaire, to Short Triangle along Jackson Avenue, which has a small planted area, benches and an information kiosk. These passive open spaces in the Study Area are geared primarily towards the weekday worker population in Long Island City, offering a place to sit and have lunch or coffee. These spaces also serve to improve the pedestrian experience in Long Island City, particularly along Jackson Avenue, where many of these Greenstreets are located.

The Citicorp at Court Square (Map No. 9), a Privately Owned Public Space (POPS) of approximately 0.27 acres, is one of a small number of POPS outside of Manhattan. This landscaped public open space contains metal benches and is open 24 hours.

Queensbridge Park (Map No. 1), as discussed above, was included because a portion of the open space is located within the quarter-mile radius. Although this open space is located in a block group that has less than 50 percent of its total area within the Study Area, it is located in close proximity to the Proposed Project. As shown in **Figure 4-2**, approximately 0.76 acres of the park's 20.34 total acres are located within the quarter-mile radius. The quantitative analysis below and the open space acreage in **Table 4-5** only reflects the portion of the open space area that falls within the quarter-mile radius. However, the entire park, which is by far the largest and best equipped park in the neighborhood, is just 1,000 feet outside of the western edge of the Study Area. As such, it is anticipated that residents and workers in the Study Area would make use of the amenities that are located in Queensbridge Park.

Adequacy of Open Spaces

The open space analysis focuses on passive open space that may be used by non-residential populations of workers and other daytime users. Consistent with *CEQR Technical Manual* guidance, the adequacy of open space was first analyzed quantitatively by comparing the ratio of existing passive open space acreage in the Study Area per 1,000 non-residents with the CEQR benchmark of 0.15 acres of passive open space per 1,000 non-residents. Additionally, the quantitative analysis compares the open space ratio for the combined non-residential and residential population in the Study Area to the CEQR benchmarks, based on the recommended weighted average of 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents.

The Study Area includes 3.86 acres of open space, including 1.19 acres of active open space and 2.67 acres of passive open space. The existing non-residential population in the Study Area was estimated at 35,356 and the combined residential and non-residential population was estimated at 42,855. As shown in **Table 4-6**, the Study Area has an existing open space ratio of 0.076 acres of passive open space per 1,000 non-residents, which is below the recommended weighted average of 0.15 acres. The open space ratio is 0.062 acres of passive open space per 1,000 non-residents and residents, which is lower than the weighted average benchmark of 0.21. Thus, based on the quantitative analysis, there is an existing deficiency in passive open space to serve the non-residential population, as well as the combined non-residential and residential population.

Table 4-6 Existing Conditions – Adequacy of Open Space Resources in Non-Residential Quarter-mile Study Area

	Population	Open Space Acreage[1]		Ratios[2]	DCP Guidelines
Non-Residents	35,356	Active	1.19	N/A	N/A
		Passive	2.67	0.076	0.15
		Total	**N/A**	**N/A**	**N/A**
Combined Non-Residents and Residents	42,855	Active	1.19	N/A	N/A
		Passive	2.67	0.062	0.21[2]
		Total	**N/A**	**N/A**	**N/A**

Notes:

[1] Acres per 1,000 people.

[2] Based on a target open space ratio established by creating a weighted average of the amount of open space necessary to meet the CEQR benchmark of 0.5 acres of passive open space per 1,000 residents and 0.15 acres of passive open space per 1,000 non-residents.

No-Action Condition

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

Study Area Population

In the Future No-Action condition, the former industrial building located on the Development Site would be partially demolished because the zoning lot would continue to be technically overbuilt in the absence of the Proposed Actions. Under future No-Action conditions it is anticipated that approximately 27,713 gross square feet of local retail space would remain on-site, which would introduce approximately 79 new employees to the Study Area. It is estimated that new development in the Study Area would result in an additional 7,670 employees. Approximately 1,720,101 sf of office space, 130,661 sf of retail, 451 hotel rooms and 4,061 dwelling units are projected to be developed in the open space Study Area by the 2024 Analysis Year, as shown in **Table 4-7** below. When 4,061 dwelling units are multiplied by the average household size in Queens Neighborhood Tabulation Area 41 (2.33 residents per unit), the result is a projected growth of approximately 9,462 new residents into the Study Area. The number of hotel rooms is anticipated to result in an additional 749 visitors to the Study Area in the No-Action Condition. There are 18 known or anticipated commercial, residential or mixed commercial and residential buildings within the open space study area. A list of No-Action developments within a quarter mile of the Study Area is found in **Section 2, Land Use, Zoning and Public Policy**.

Table 4-7 No-Action Development Program Summary

Office SF	Retail SF	Dwelling Units	Hotel Rooms
1,720,101	130,661	4,061	451

Source: New York City Department of Buildings, New York City Department of City Planning
Notes:
[1] This represents the expected development program at the time of the build year; however, workers, residents, and visitors were estimated based on the incremental development over the existing condition on these sites.
[2] When information on total GSF not available, it was estimated based on 1,000 sf per dwelling unit, 400 gsf per hotel room

In the Future-No Action condition, new commercial and residential development would yield an increase in the non-residential and residential populations as shown in **Table 4-8**. It is anticipated that the residential population would increase by approximately 9,462 people and the non-residential population would increase by approximately 7,670 people. The visitor population in the No-Action condition, which results from new hotel development, would increase by 749 people. The total No-Action non-residential population would increase to 43,775 people in the No-Action condition and the total combined non-residential and residential population would increase to 60,736 people.

Table 4-8 Estimated No-Action Residential and Non-Residential Populations

New Residential Population[1]	New Non-Residential Population[2]	Visitor Population[3]	Total No-Action Non-Residential Population	Total No-Action Population[4]
9,462	7,670	749	43,775	60,736

Source: New York City Department of Buildings, New York City Department of City Planning
Notes:
[1] Assumes 2.33 persons per DU (2018 5-year ACS average household size for the Study Area)
[2] Assumes 1 employee per 250 sf of office, 1 employee per 333.33 sf of retail, 1 hotel employee per 2.67 hotel rooms (400 gsf per hotel room), 1 residential building employee per 25 DUs (1,000 sf per DU unless specified),
[3] Visitor population represents an estimate of the number of hotel guests based on information from M1 Hotel FEIS (CEQR NO 18DCO042Y, 10/05/2018), multiplied by an 87.3 percent occupancy rate (from STV, 2018), multiplied by 2 people per occupied hotel room
[4] Workers, residents and visitors estimated based on the incremental development of these sites.

Study Area Open Spaces

22-44 Jackson Avenue, which is a large-scale residential development located at the southern end of the Study Area, is the only development to be completed in the Future No-Action condition, which includes new publicly accessible open space. The development, which is was completed at the end of 2020 introduced 0.74 acres of publicly accessible open space to the neighborhood, of which approximately 0.26 acres (35.2 percent) is active recreation space and 0.48 acres (64.8 percent) is passive recreation space.

Adequacy of Open Spaces

In the No-Action condition, the open space ratios in the non-residential Study Area would decrease slightly, even with the addition of the 0.74-acre publicly accessible open space at 22-44 Jackson Avenue project. This is due to an increase in both the worker and residential populations in the Study Area under the No-Action condition.

In the No-Action condition the Study Area would include 4.6 acres of open space, 1.45 acres of active open space and 3.15 acres of passive open space. The non-residential population in the No-Action condition in the Study Area is estimated at 43,775 and the combined

residential and non-residential population was estimated at 60,736. As shown in **Table 4-9**, in the No-Action condition, the Study Area would have an open space ratio of 0.072 acres of passive open space per 1,000 non-residents, which is below the recommended weighted average of 0.15 acres. The combined non-resident and resident open space ratio would be 0.052 acres of passive open space per 1,000 non-residents and residents, which is lower than the weighted average benchmark of 0.25. Thus, based on the quantitative analysis, there will continue to be a deficiency in passive open space to serve the non-residential population, as well as the combined non-residential and residential population in the future No-Action condition.

Table 4-9 No-Action Condition – Adequacy of Open Space Resources in Non-Residential Quarter-Mile Study Area

	Population	Open Space Acreage[1]		Ratios[2]	DCP Guidelines
Non-Residents	43,775	Active	1.45	N/A	N/A
		Passive	3.15	0.072	0.15
		Total	**N/A**	**N/A**	**N/A**
Combined Non-Residents and Residents	60,736	Active	1.45	N/A	N/A
		Passive	3.15	0.052	0.25[2]
		Total	**N/A**	**N/A**	**N/A**

Notes:

[1] Acres per 1,000 people.

[2] Based on a target open space ratio established by creating a weighted average of the amount of open space necessary to meet the CEQR benchmark of 0.5 acres of passive open space per 1,000 residents and 0.15 acres of passive open space per 1,000 non-residents.

With-Action Condition

Study Area Population

In the With-Action condition, the Proposed Project would result in the incremental increase of 335,423-gsf of commercial space, which is estimated to introduce approximately 1,421 workers (including 1,326 in commercial office, 22 in the restaurant, 73 in retail, exhibit and community meeting space), an increment of 1,338 workers as compared to the No-Action condition. This anticipated incremental increase in the worker population would result in a non-residential population of 45,112 in the open space Study Area.

Adequacy of Open Spaces

Under the With-Action condition, the non-residential population in the in the Study Area was estimated at 45,112 and the combined residential and non-residential population was estimated at 62,074. As shown in **Table 4-10**, in the With-Action condition, the Study Area would have an open space ratio of 0.070 acres of passive open space per 1,000 non-residents, which is below the recommended weighted average of 0.15 acres. This is approximately 0.002 acres less per 1,000 non-residents (or 2.96 percent less) than the ratio under the No-Action Condition.

The combined non-resident and resident open space ratio would be 0.051 acres of passive open space per 1,000 non-residents and residents, which is lower than the weighted average

benchmark of 0.25. This is approximately 0.001 acres per 1,000 combined non-residents and residents less (or 2.15 percent less) than the ratio under the No-Action Condition.

Thus, based on the quantitative analysis, a deficiency in passive open space to serve the non-residential population, as well as the combined non-residential and residential population is projected for the With-Action condition. However, the open space ratios would remain largely the same as in the No-Action condition. Further, a variety of qualitative factors positively impact users of passive open spaces in the study area beyond those reasonably included in the quantitative analysis as described in the next section.

Table 4-10 With-Action Condition – Adequacy of Open Space Resources in Non-Residential Quarter-Mile Study Area

	Population	Open Space Acreage[1]		Ratios[2]	DCP Guidelines
Non-Residents	45,112	Active	1.45	N/A	N/A
		Passive	3.15	0.070	0.15
		Total	**N/A**	**N/A**	**N/A**
Combined Non-Residents and Residents	62,074	Active	1.45	N/A	N/A
		Passive	3.15	0.051	0.25[2]
		Total	**N/A**	**N/A**	**N/A**

Notes:

[1] Acres per 1,000 people.

[2] Based on a target open space ratio established by creating a weighted average of the amount of open space necessary to meet the CEQR benchmark of 0.5 acres of passive open space per 1,000 residents and 0.15 acres of passive open space per 1,000 non-residents.

Determining Impact Significance

According to the *CEQR Technical Manual*, a proposed action may result in a significant adverse open space impact if there would be direct displacement/alteration of existing open space without a comparable replacement within the Study Area. Projects that would reduce the open space ratio for a nonresidential population would consider the project's effect on passive open space in the study area. The more the open space ratio falls below the optimal ratio of 0.15 acres of passive space per 1,000 population, the more likely the decrease would lead to a significant impact. As discussed previously, the Proposed Action would not have a direct impact on any open space resource in the Study Area.

As shown in **Table 4-11**, in the No-Action Condition, there would be a quantitative deficiency in passive open space – in comparison to the CEQR benchmark – to serve the non-residential and the combined non-residential and residential population. The Proposed Actions would result in similar open space ratios as in the No-Action Condition and would have a similar quantitative deficiency in comparison to CEQR recommended benchmarks. Under the With-Action condition, the passive open space ratio for the non-residential population would remain largely the same. The passive open space ratio would decrease by 2.96 percent compared to the No-Action condition open space ratio: 0.072 to 0.070 acres per 1,000 non-residents, (an absolute change of approximately -0.002 acres per 1,000 residents). Furthermore, the combined passive open space ratio for the Proposed Project would be 0.051 acres per 1,000 non-residents and residents, which is less than the recommended weighted average of 0.25 acres per 1,000 non-residents and residents and

represents a decrease of 2.15 percent (0.001 acres per 1,000 combined non-residents and residents) from the No-Action Condition.

As discussed previously, a portion of Queensbridge Park (not included in the quantitative assessment) occurs just outside of the open space Study Area. It offers sports fields, walkways, and seating that overlook the East River. It can be reasonably assumed that study area residents and non-residents would utilize this open space resource although they are just outside the reach of the quantitative analysis.

Further, the Proposed Project includes an accessory passive landscaped terrace on roof of the Existing Industrial Building that would be attractive to workers in the building. Though it would not be publicly accessible, it is being designed to provide an open-air greenspace for office tenants. Provision of this 16,134-sf space is expected to eliminate some demand from office workers on open space resources in the surrounding area. However, the proposed private open space is not guaranteed by an approved site plan, and therefore, has not been included in the quantitative analysis.

Based on the absolute change in passive open space ratio (0.002) and the percentage change (2.96 percent) for non-residents, which is below the five percent threshold, and with the qualitative consideration of the proposed rooftop terrace that is expected to be well-used by office tenants, the Proposed Project under the With-Action condition is not expected to have significant adverse impact, and further analysis is not warranted.

Table 4-11 Future with the Proposed Action: Passive Open Space Ratios Summary

		Ratios			Change from No-Action to With-Action	
	CEQR Open Space Ratio Benchmark	Existing	No-Action	With-Action	Absolute Change	Percentage Change
Non-Residents	0.15	0.076	0.072	0.070	-0.002	-2.96
Combined Non-Residents and Residents	Weighted 0.21/ 0.25/ 0.25 (Existing/ No-Action/ With-Action)[1]	0.062	0.052	0.051	-0.001	-2.15

Notes:

[1] Based on a target open space ratio established by creating a weighted average of the amount of open space necessary to meet the CEQR benchmark of 0.5 acres of passive open space per 1,000 residents and 0.15 acres of passive open space per 1,000 non-residents. Since this benchmark depends on the proportion of non-residents and residents in the Study Area's population, it is different for Existing, No-Action, and With-Action Conditions.

5

Shadows

A shadow is defined in the *2021 CEQR Technical Manual* as the condition that results when a building or other built structure blocks the sunlight that would otherwise directly reach a certain area, space, or feature. The purpose of this section is to assess whether new structures may cast shadows on sunlight sensitive publicly accessible resources or other resources of concern such as natural resources, and to assess the significance of their impact.

Introduction

According to the *2021 CEQR Technical Manual*, a shadows assessment is required for proposed actions that would result in new structures greater than 50 feet in height or located adjacent to, or across the street from, a sunlight-sensitive resource. Such resources include publicly-accessible open spaces, important sunlight-sensitive natural features, or historic resources with sun-sensitive features. A significant adverse shadow impact occurs when the incremental shadow added by a proposed development falls on a sunlight-sensitive resource and substantially reduces or completely eliminates direct sunlight exposure, thereby significantly altering the public's use of the resource or threatening the viability of vegetation or other resources.

As described in **Section 1, Project Description**, the Proposed Actions would facilitate the reuse and 22-story proposed enlargement of the existing Eagle Electric building. This would result in a 26-story, approximately 404-foot-tall (including bulkhead) commercial building on Queens Block 425, Lot 5. As explained in **Section 1, Project Description** the zoning lot is

currently overbuilt and exceeds the permitted FAR. As such, it is anticipated that the upper floors of the existing building on Lot 5 would be demolished in order to bring the building into compliance with existing zoning in the absence of the Proposed Actions. Therefore, the proposed 404-foot building is assessed below.

Per the *CEQR Technical Manual*, a shadow assessment is required only if the project would either (a) result in new structures (or additions to existing structures including the addition of rooftop mechanical equipment) of 50 feet or more or (b) be located adjacent to, or across the street from, a sunlight-sensitive resource. Based on the proposed building height of approximately 404 feet (including bulkhead), further assessment is warranted.

Methodology

According to the *CEQR Technical Manual*, the longest shadow a structure will cast in New York City, except for periods close to dawn or dusk, is 4.3 times its height. In accordance with the *CEQR Technical Manual*, a preliminary screening assessment is conducted to ascertain whether shadows resulting from a project could reach any sunlight-sensitive resource at any time of year; if the preliminary assessment indicates that, in the absence of intervening buildings, shadows from a project could reach sunlight-sensitive resources on any of the representative analysis days, a detailed analysis is typically warranted. The representative analysis days are December 21 (winter solstice), June 21 (summer solstice), March 21/September 21 (vernal/autumnal equinox), and May 6/August 6 (halfway between summer solstice and the equinoxes).

Sunlight-Sensitive Resources

The *CEQR Technical Manual* defines sunlight-sensitive resources as those resources that depend on sunlight or for which direct sunlight is necessary to maintain the resource's usability or architectural integrity. The following are considered to be sunlight-sensitive resources:[1]

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

[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.

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

Preliminary Assessment

The preliminary screening assessment consists of three tiers of analysis:

- **Tier 1 Screening**: The first tier determines a simple radius around the proposed building(s) representing the longest shadow that could be cast. If there are sunlight-sensitive resources within the radius, the analysis proceeds to the second tier;
- **Tier 2 Screening**: The second-tier analysis reduces the area that could be affected by project-generated shadows by accounting for a specific range of angles that can never receive shade in New York City due to the path of the sun in the northern hemisphere. According to the *CEQR Technical Manual*, shadows cannot be cast within New York City within +108 degrees and -108 degrees from True North. Topographic lines are included to demonstrate the terrain of the area;
- **Tier 3 Screening**: If the second tier of analysis does not eliminate the possibility of new shadows on sunlight-sensitive resources, a third tier of screening analysis further refines the area that could be reached by new shadows by looking at specific representative days of the year and determining the maximum extent of shadow over the course of each representative day. For the Tier 3 screening, three-dimensional modeling software with the capacity to model shadows is used, and the maximum building envelope that could be achieved as a result of the Proposed Development is modeled and geo-located within the program. Terrain, which has been included in the Tier 1 and Tier 2 screenings, is also incorporated into the model to account for how changes in elevation throughout the study area can influence shadows that could be cast by the Proposed Development. The representative days are December 21 (winter solstice), June 21 (summer solstice), March 21/September 21 (vernal/autumnal equinox), and May 6/August 6 (halfway between summer solstice and the equinoxes). The modeling software is also used to approximate times that shadows cast from the Proposed Development could enter and exit a resource.

Detailed Assessment

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

Determination of Significance

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

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

In general, a significant adverse shadow impact occurs when the incremental shadow added by a proposed action falls on a sunlight-sensitive resource and substantially reduces or completely eliminates direct sunlight exposure, thereby significantly altering the public's use of the resource or threatening the viability of vegetation or other resources.

Preliminary Assessment

Tier 1 and 2 Screening

The Proposed Development would consist of a building approximately 404-feet in height (including the bulkhead) which could cast a maximum shadow of approximately 1,737 feet. **Figure 5-1** shows the potential sunlight-sensitive resources identified in the Tier 1 and Tier 2 Screening Assessment. See **Table 5-1** for a summary of these resources.

A total of 14 publicly accessible open space resources are located wholly or partially within the shadow study area. Of these 14 resources, eight (open space resources O4 through O11) are located south of the Proposed Development, within the area that cannot be shaded by the Proposed Development. Therefore, no further shadows analysis is warranted for these open space resources. The Tier 1 and Tier 2 screening analyses could not rule out the potential for incremental shadows to reach the following five open space resources: Queensbridge Park (O1), Queens Plaza Medians (O2), Dutch Kills Green (O3), Queensbridge Houses Open Space (O12), the 12th Street Public Plaza (O13) and Queensbridge Baby Park (O14). Therefore, a Tier 3 screening is warranted and is provided below.

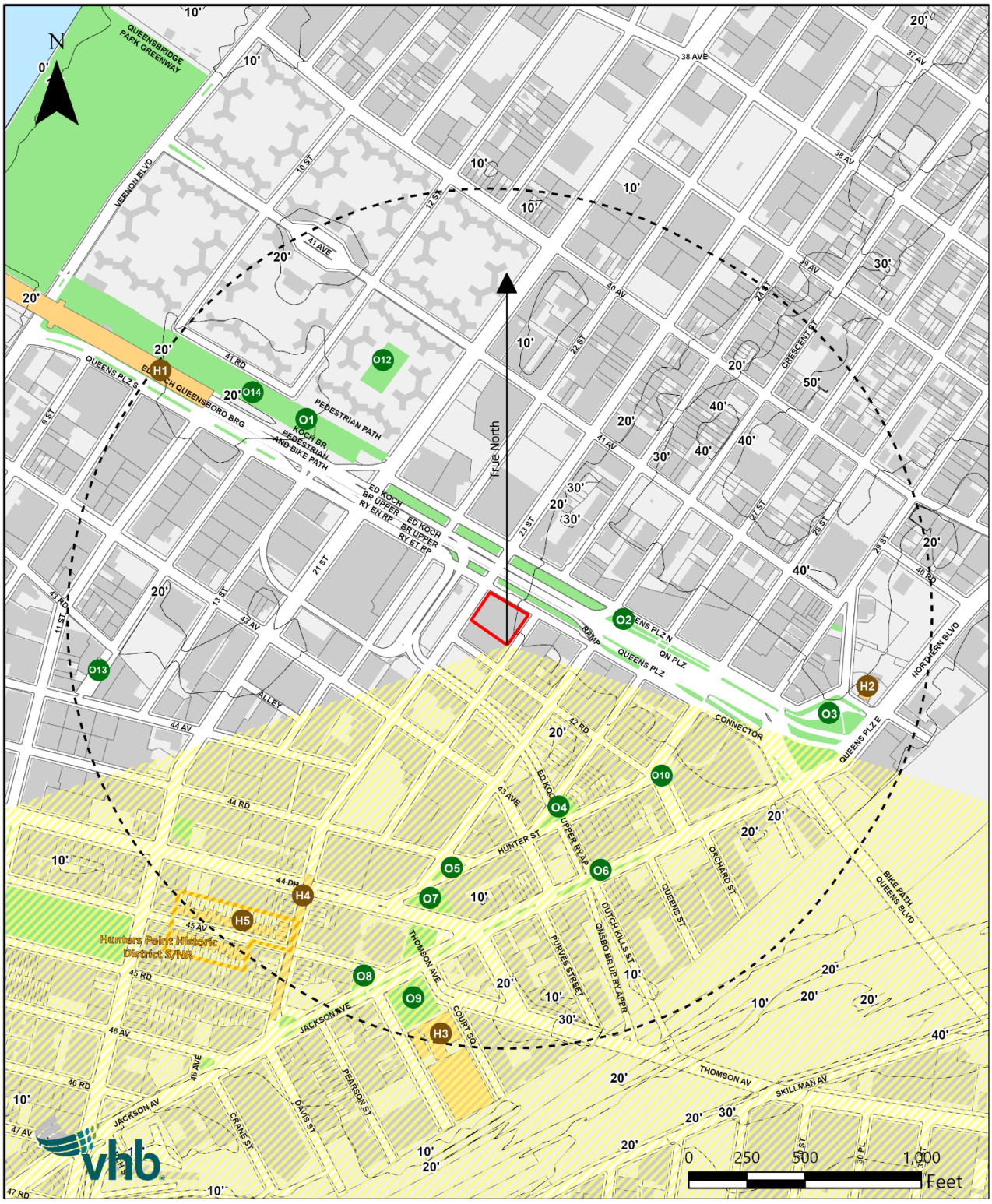
As also shown in **Figure 5-1**, there is one historic district within or intersecting with the shadow study area and there are four individual historic resources. Two individual historic resources, Long Island City Courthouse (H3) and 45th Road – Court House Square Station (H4), and one historic district, the Hunters Point Historic District (H5) are located entirely within the area that cannot be shaded by the Proposed Development. The Ed Koch Queensboro Bridge (H1) is partially within the shadow screening radius and the Chase Manhattan Bank Building (H2) is fully within the radius. However, it was found that neither of these historic resources have sunlight-sensitive features. Therefore, further assessment is not warranted on any of the five identified historic resources.

Table 5-1 Sunlight Sensitive Resources within the Area of Potential Shadow

Map ID	Name/Location	Resource Features	Sunlight Sensitive Elements
Open Space Resources			
O1	Queensbridge Park Greenway	Shared use path, benches, vegetation	Vegetation, passive recreation, active recreation
O2	Queens Plaza Medians	Shared use path, benches, vegetation	Vegetation, passive recreation, active recreation
O3	Dutch Kills Green	Vegetation, benches, walkways	Vegetation, passive recreation
O4	Hunter Street and 27th Street Greenstreet	3,100-square-foot greenstreet with benches and vegetation	Vegetation, passive recreation
O5	Hunter Street and Crescent Street Greenstreet	1,800-square-foot greenstreet with benches and vegetation	Vegetation, passive recreation
O6	Jackson Avenue Median	Planted median with public art	Vegetation, public art
O7	Rafferty Triangle	0.10-acre greenstreet with concession, tables, chairs, and vegetation	Vegetation, passive recreation
O8	McKenna Triangle	0.01-acre greenstreet with benches and vegetation	Vegetation, passive recreation
O9	Court Square Park	0.49-acre park with benches, lawns, vegetation, and fountain	Vegetation, passive recreation
O10	42nd Road Greenstreet	Greenstreet with vegetation	Vegetation
O11	Citicorp at Court Square POPS	Vegetation and benches installed during construction of adjacent Citicorp Tower	Vegetation, passive recreation
O12	Queensbridge Houses Open Space	Basketball courts, playgrounds, benches, and vegetation located within NYCHA Queensbridge Houses super blocks	Vegetation, active recreation, passive recreation
O13	12th Street Public Plaza	0.32-acre public plaza with benches, tables, and planters	Vegetation, passive recreation
O14	Queensbridge "Baby" Park	Handball Court	Active recreation
Historic Resources			
H1	Ed Koch Queensboro Bridge (S/NR)	Double-decked cantilever bridge connecting Manhattan to Queens completed in 1909	N/A
H2	Chase Manhattan Bank Building	11-story office building with three-story clocktower completed in 1927	N/A
H3	Long Island City Courthouse (S/NR)	Courthouse completed in 1874 and remodeled and enlarged in 1904	N/A
H4	45th Road - Court House Square Station (S/NR)	Elevated station part of IRT Flushing Line completed in 1916	N/A
H5	Hunters Point Historic District (S/NR)	Row of 47 townhouses completed between 1871 and 1890	N/A

Source: New York Cultural Resource Information System, New York City Landmarks Preservation Commission map, NYC Parks Department, NYC DOT

Figure 5-1 Tier 1 and Tier 2 Screening



Tier 3 Screening Assessment

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

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

Consistent with *CEQR Technical Manual* guidance, a model of the Proposed Development was developed in a three-dimensional computer program (ArcGIS Pro). The model was geo-located, and the surrounding terrain was imported into the model to account for differences in topography. As noted above, the Tier 3 shadow screening shows the shadows that could be cast as a result of the Proposed Development but does not account for existing buildings which may already cast shadows on the identified resources. **Figure 5-2** to **Figure 5-5** below show Tier 3 screening results.

The Tier 3 screening indicates that in the absence of intervening structures, shadows cast by the Proposed Project could reach four of six sunlight sensitive resources that were advanced past the Tier 1 and 2 screening, all open spaces. These resources were then considered further in the Detailed Assessment, which is described subsequently. Neither 12th Street Public Plaza (O13) nor Queensbridge "Baby" Park would receive shading on any of the four analysis days according to the Tier 3 screening results and therefore do not warrant further analysis. **Table 5-2** lists those resources that were screened at the Tier 3 Level and those advanced to the Detailed Assessment.

Table 5-2 Tier 1 through 3 Shadows Screening Results

Map ID	Resource Name	Tier 3 Screening Results
Open Space Resources		
O1	Queensbridge Park Greenway	Advanced to Detailed Assessment
O2	Queens Plaza Medians	
O3	Dutch Kills Green	
O12	Queensbridge Houses Open Space	
O13	12th Street Public Plaza	Screened at Tier 3
O14	Queensbridge "Baby" Park	

Figure 5-2 Tier 3 Screening: December 21 Analysis Day



Figure 5-3 Tier 3 Screening: March 21/September 21 Analysis Day

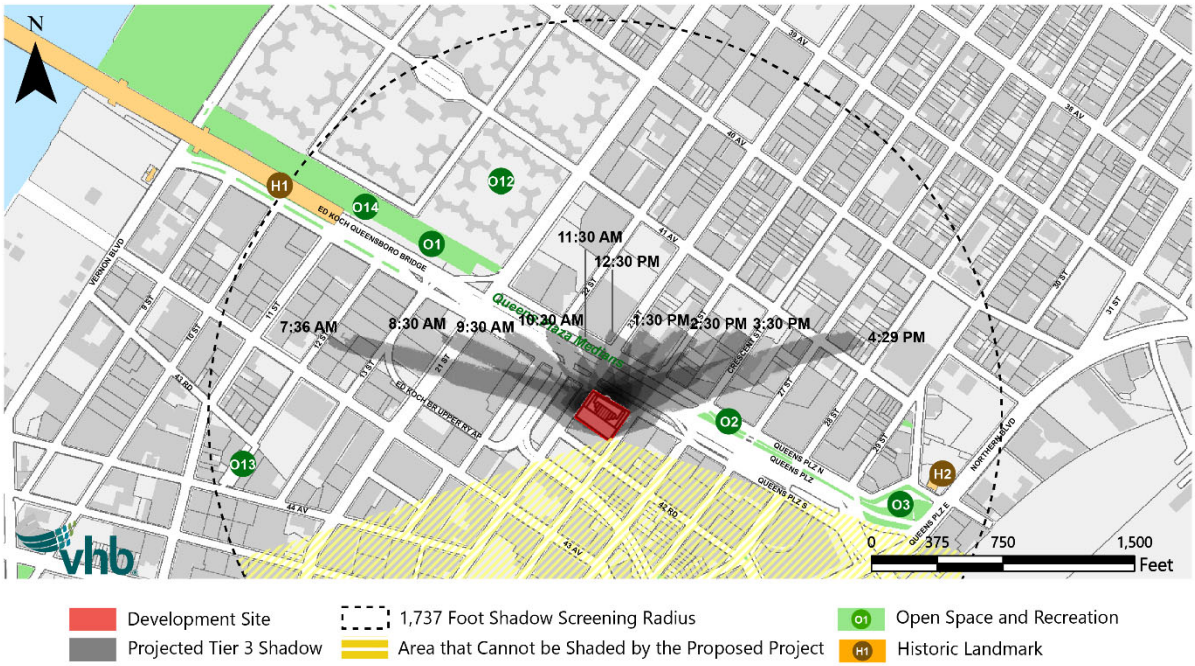


Figure 5-4 Tier 3 Screening: May 6/August Analysis Day



Development Site
Projected Tier 3 Shadow
1,737 Foot Shadow Screening Radius
Area that Cannot be Shaded by the Proposed Project
O1 Open Space and Recreation
H1 Historic Landmark

Figure 5-5 Tier 3 Screening: June 21 Analysis Day



Development Site
Projected Tier 3 Shadow
1,737 Foot Shadow Screening Radius
Area that Cannot be Shaded by the Proposed Project
O1 Open Space and Recreation
H1 Historic Landmark

Detailed Assessment

No-Action Condition

As described previously in **Part I, Project Description**, the zoning lot is currently overbuilt and exceeds the permitted FAR. As such, it is anticipated that the upper floors of the existing building on Lot 5 would be demolished in order to bring the building into compliance with existing zoning in the absence of the Proposed Actions. The No-Action building would, for analysis purposes, be reduced two stories or approximately 26-feet from its existing height.

With-Action Condition

As described previously in **Part I, Project Description**, the Proposed Actions would facilitate the reuse and 22-story proposed enlargement of the existing Eagle Electric building. This would result in a 26-story, approximately 404-foot-tall (including bulkhead) commercial building. The increment between the No-Action and With-Action buildings would therefore be 378-feet.

Modeling Results

The detailed shadow analysis compares the future condition resulting from the Proposed Actions (With-Action condition) to the baseline condition (No-Action condition) to illustrate the shadows cast by existing or future buildings and distinguish the increased (incremental) shadow cast by the Proposed Actions. Any new shadows projected to be cast onto the identified resources from the Proposed Actions that would not occur in the No-Action condition are considered "incremental shadows."

Table 5-3 provides the modeled incremental shadow entry/exit times for the sunlight sensitive resources. Queens Park Greenway (O1) and Queensbridge Houses Open Space (O12) would receive shading on the December 21 analysis day only. Dutch Kills Green (O3) would receive shading on the June 21 analysis day only. Queens Plaza Medians (O2) would receive incremental shading on all four analysis days: December 21, March 21/September 21, May 6/August 6, and June 21.

Table 5-3 Detailed Analysis Summary of Incremental Increased Shadow Entry/Exit Times

	Analysis Day			
Resource Analysis Timeframe	**Dec 21 8:51AM- 02:53PM**	**March 21/Sept 21 7:36AM-4:29PM**	**May 6/Aug 6 6:27AM-5:18PM**	**June 21 5:57AM-6:01PM**
O1 - Queensbridge Park Greenway	8:51 AM-9:36 AM (45 minutes)	--	--	--
O2 - Queens Plaza Medians	9:25 AM-12:45 PM (3 hours 20 minutes)	10:18 AM-4:29 PM (6 hours 11 minutes)	10:49 AM-5:18 PM (6 hours 29 minutes)	11:20 AM-6:01 PM (6 hours 41 minutes)
O3 - Dutch Kills Green	--	--	--	5:45 PM – 6:01 PM (16 minutes)
O12 - Queensbridge Houses Open Space	9:38 AM – 10:07 AM (29 minutes)	--	--	--

O1: Queensbridge Park Greenway

The Queensbridge Park Greenway is a narrow extension of larger Queensbridge Park containing dedicated two-way paved bicycle and pedestrian paths, trees, and other vegetation. The Greenway extends from eastern edge of Queensbridge Park at Vernon Boulevard between the Queensbridge Houses and the Queensboro Bridge connecting with the Queens Plaza Medians at 21st Street. No incremental shading from the Proposed Project would reach the greenway on the March 21/September 21, May 6/August 6, and June 21 analysis days. The resource would receive approximately 45 minutes of incremental shading from the start of the December 21 analysis period at 8:51 AM until 9:36 AM as shown in **Figure 5-6** and **Figure 5-7**. At no point would sunlight be eliminated from the entire open space resource by the Proposed Project.

Most park users pass though Queensbridge Park Greenway quickly on foot or by bicycle and would not be affected by incremental shadows as a result of the Proposed Project. Further, greenway usage would be relatively low due to the cold weather when incremental shading could occur on the December 21 analysis day. Given the limited spatial and temporal extent of the incremental shading, significant adverse impacts to photosynthesis and other biological properties of resident trees and other vegetation are not anticipated. Therefore, the effect of incremental shading from the Proposed Project is anticipated to be minimal and there would be no significant adverse impact to the park due to shadows.

O2: Queens Plaza Medians

The Queens Plaza Medians open space is an approximately 2,000-foot-long linear park that connects the Queensbridge Park Greenway to the west with Dutch Kills Green to the east. It is comprised of a two-way bicycle greenway, a series of walking paths and ribbons of planted areas that include trees and other vegetation. The widest section that includes the bicycle greenway is located along Queens Plaza North, north of the elevated Queensboro Plaza Station. Other planted sections and walking paths are interspersed between the roadways of Queens Plaza directly adjacent to and south of the elevated subway.

The Development Site is located on Queens Plaza South just south of the Queens Plaza Medians. Due to its proximity, this open space resource would receive shading from the Proposed Project on each of the four analysis days. On the December 21 analysis day, it would receive shading from the Proposed Project between 9:25 AM and 12:45 PM, a period of approximately 3 hours and 20 minutes (see **Figure 5-8** through **Figure 5-11**). On the March 21/September 21 analysis day, it would receive shading between 10:18 AM and 4:20 PM, a period of approximately 6 hours and 2 minutes (see **Figure 5-12** through **Figure 5-18**). On the May 6/August 6 analysis day, the resource would receive shading between 10:49 AM and the end of the analysis period at 5:18 PM, a period of approximately 6 hours and 29 minutes (see **Figure 5-19** through **Figure 5-25**). Lastly, on the June 21 analysis day, the resource would receive shading between 11:20 AM and the end of the analysis period at 6:01 PM, a period of approximately 6 hours and 41 minutes (see **Figure 5-26** through **Figure 5-32**). At no point would sunlight be eliminated from the entire resource by the Proposed Project.

The blocks north and south of Queens Plaza Medians have seen significant development of new buildings and the vertical enlargement of existing buildings in addition to the large subway and roadway structure that runs down the middle. As a result, there is significant shading on Queens Plaza Medians under existing conditions. Incremental shading caused by the Proposed Project would primarily affect a thin planted portion of the resource closest to the Development Site along Queens Plaza South. The area that would receive incremental shading as a result of the Proposed Actions is small compared to the overall size of the resource on each analysis day and would cover no more than 19 percent of its total area on any of the four analysis days. On the December 21 analysis day, the maximum incremental shading would cover only approximately 2.5 percent of the total area of the resource at 10:30 AM when the largest shadow would be cast (see **Figure 5-9**). On the March 21/September 21 analysis day, the largest incremental shadow would be cast at 11:25 AM, covering approximately 3.2 percent of the resource's total area (see **Figure 5-13**). On the May 6/August 6 analysis day, the largest incremental shadow would be cast at 4:00 PM covering approximately 10.4 percent of the resource's total area (see **Figure 5-24**). On the June 21 analysis day, the largest incremental shadow would be cast at 4:30 PM, covering approximately 18.9 percent of the resource's total area (see **Figure 5-31**).

Limited shading would occur on the north side of the resource, which contains the bicycle greenway and is more heavily used by cyclists, pedestrians and parkgoers. The vegetation in Queens Plaza Medians is also primarily located on the north side of Queens Plaza and includes deciduous trees and assorted flowers, grasses, and shrubs. Given the limited spatial and temporal extent of the incremental shading, significant adverse impacts to photosynthesis and other biological properties of resident trees and other vegetation are not anticipated. For instance, shading would occur on the December 21st analysis day, but this analysis period is the non-growing season. Due to the limited coverage areas of incremental shading and the availability of unshaded areas within this linear open space, park users would be able to avoid the areas of Queens Plaza Medians that would be in shadow. As such, incremental shading caused by the Proposed Project would not substantially detract from the enjoyment of Queens Plaza Medians by neighborhood resident, workers, and visitors. Therefore, there would be no significant adverse impacts to Queens Plaza Medians due to shadows.

O3: Dutch Kills Green

Dutch Kills Green is a 1.5-acre park located at the busy intersection in Long Island City where Queens Plaza becomes Northern Boulevard and Queens Boulevard. In contains passive recreational elements such as walking paths and benches and active recreational elements in the form of a bicycle greenway. Trees and other vegetation are planted throughout. Dutch Kills Green is not anticipated to receive any incremental shading from the Proposed Project on the December 21, March 21/September 21, and May 6/August 6 analysis days. The park would receive approximately 16 minutes of incremental shading at the end of the June 21 analysis day from 5:45 PM to 6:01 PM as shown in **Figure 5-33**. Effects of the Proposed Actions on this open space resource would be limited to a quarter-hour of shading at the end of an analysis period. At no point would sunlight be eliminated from the entire resource by the Proposed Project. Given the limited spatial and temporal extent of the incremental shading, significant adverse impacts to photosynthesis and other biological properties of resident trees and other vegetation are not anticipated. Therefore, there would be no significant adverse impact to the park due to shadows.

O12: Queensbridge Houses Open Space

The publicly accessible open space at the center of the southeastern-most block of the NYCHA Queensbridge Houses contains a playground, basketball court, benches, trees and other vegetation. It is surrounded on all sides by the uniform six-story buildings that comprise the NYCHA development. This open space resource would not receive any incremental shading as a result of the Proposed Actions on the March 21/September 21, May 6/August 6, and June 21 analysis days. The resource would receive approximately 29 minutes of shading in the morning of the December 21 analysis day as shown in **Figure 5-34**. At no point would sunlight be eliminated from the entire resource by the Proposed Project. The period during which the open space would receive incremental shading is not anticipated to significantly detract from the enjoyment of it by park users. Further, this is the analysis day during which usage of active recreational elements of open space resources is anticipated to be lowest due to cold weather. Given the limited spatial and temporal extent of the incremental shading, significant adverse impacts to photosynthesis and other biological properties of resident trees and other vegetation are not anticipated.

Conclusion

Based on the above discussion, no significant adverse shadow impacts to the four sunlight-sensitive open space resources analyzed would be expected as a result of the Proposed Actions. The duration and size of incremental shadow that would be cast by the Proposed Project on Queensbridge Park Greenway (O1), Dutch Kills Green (O3) and Queensbridge Houses Open Space (O12) would not be sufficient to result in significant adverse impacts and therefore no further analysis of these three open spaces is warranted. Although Queens Plaza Medians (O2) would receive incremental shading on all four analysis days, the area that would be shaded is primarily limited to a narrow, planted strip across from the Development Site along Queens Plaza South. The north half of the resource, which is larger, more heavily used and contains a bicycle greenway would receive a limited amount of shading on only two of the four analysis days. Incremental shading would not substantially reduce the enjoyment of the resource by pedestrians, cyclists and parkgoers nor would it effect the

photosynthesis and other biological properties of resident trees and other vegetation. Therefore, no significant adverse impacts are anticipated, and no further analysis is warranted.

Detailed Analysis Figures

Queensbridge Park Greenway (O1)

Figure 5-6 December 21 – 8:55 AM

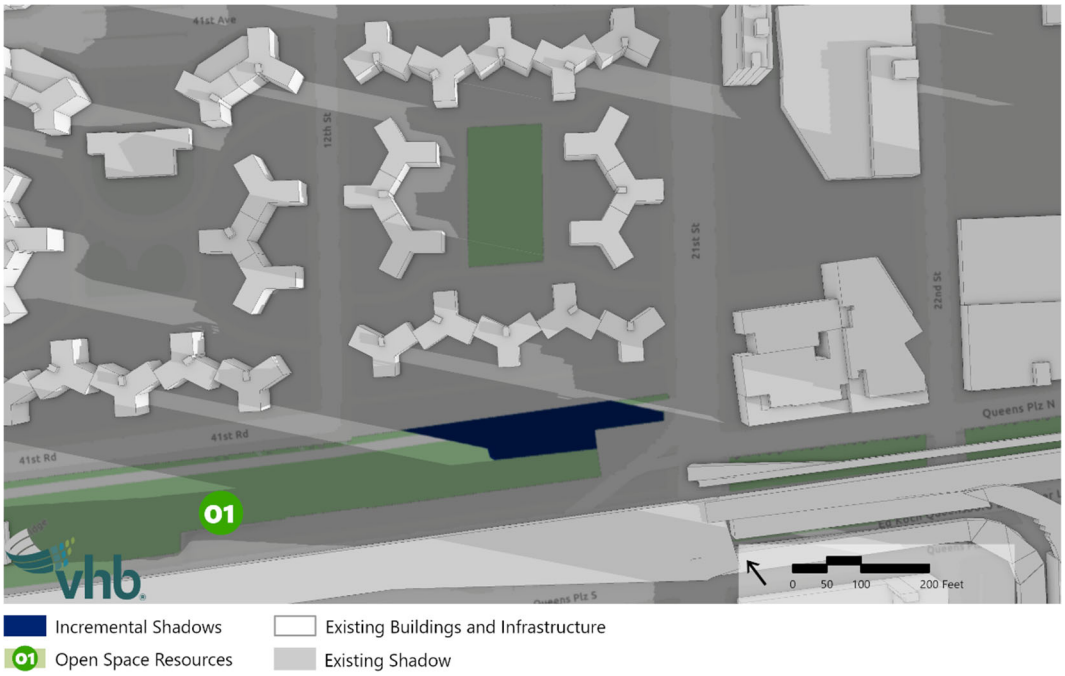
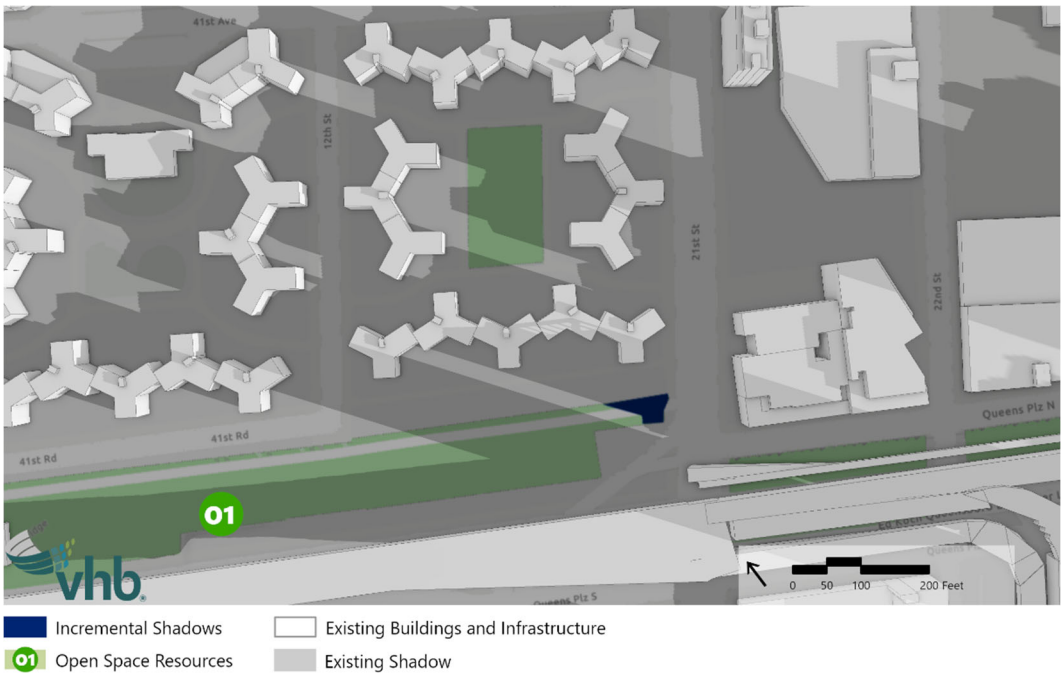


Figure 5-7 December 21 – 9:25 AM



Queens Plaza Medians (O2)

December 21

Figure 5-8 December 21 – 9:30 AM

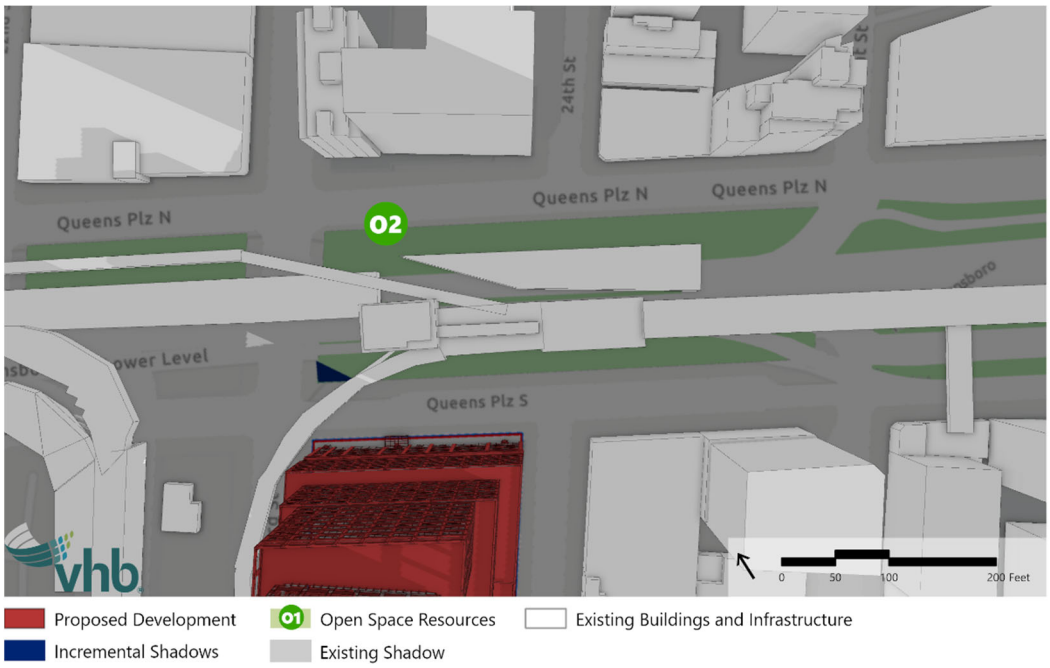


Figure 5-9 December 21 – 10:30 AM

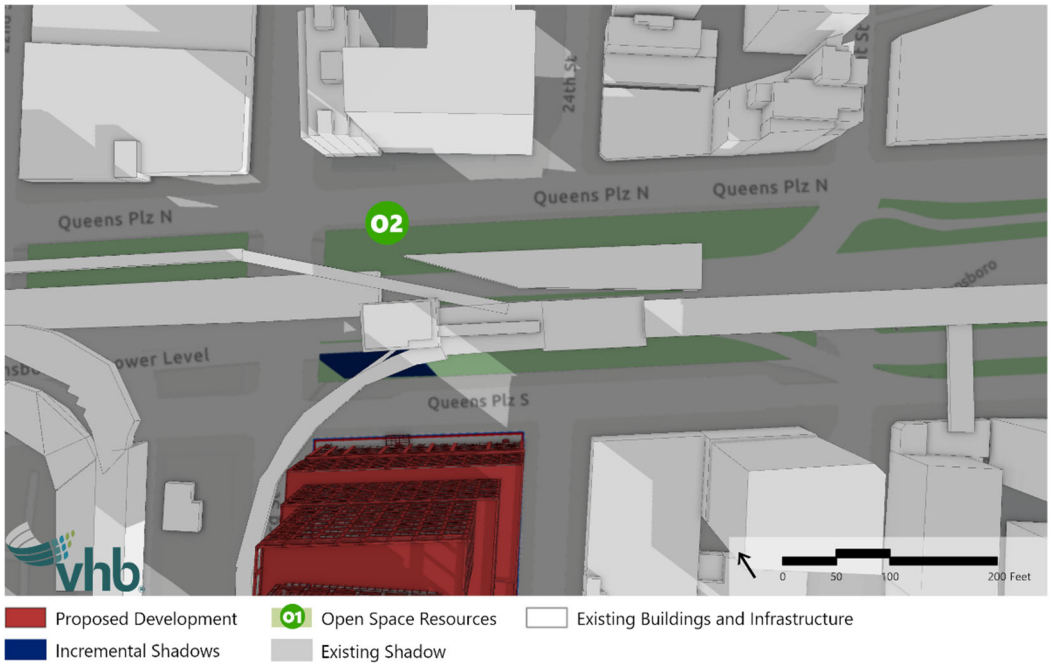


Figure 5-10 December 21 – 11:30 AM

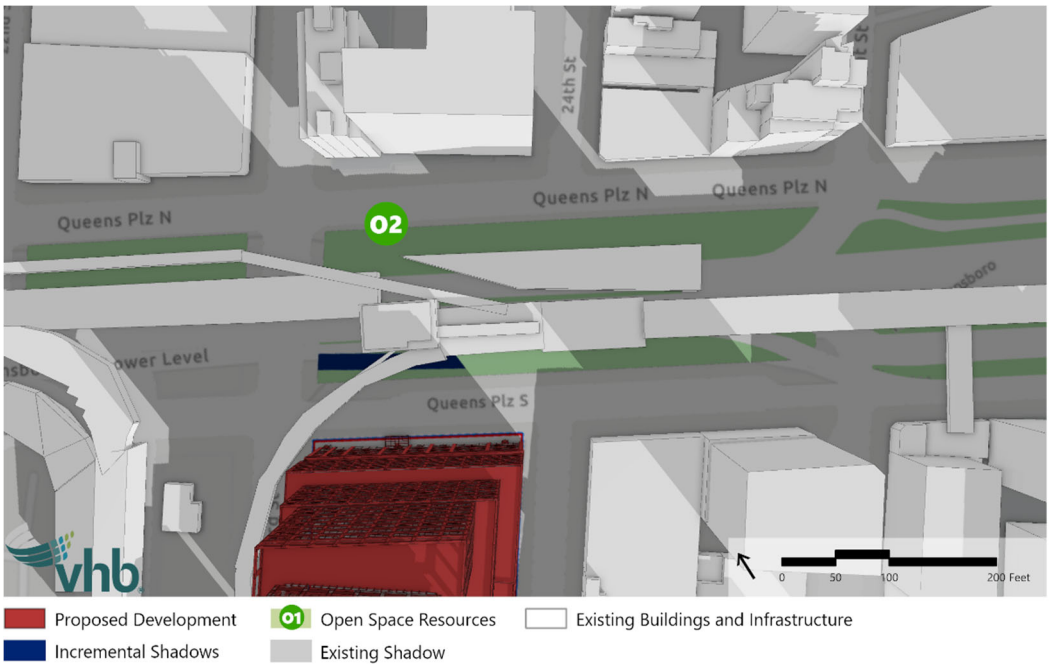
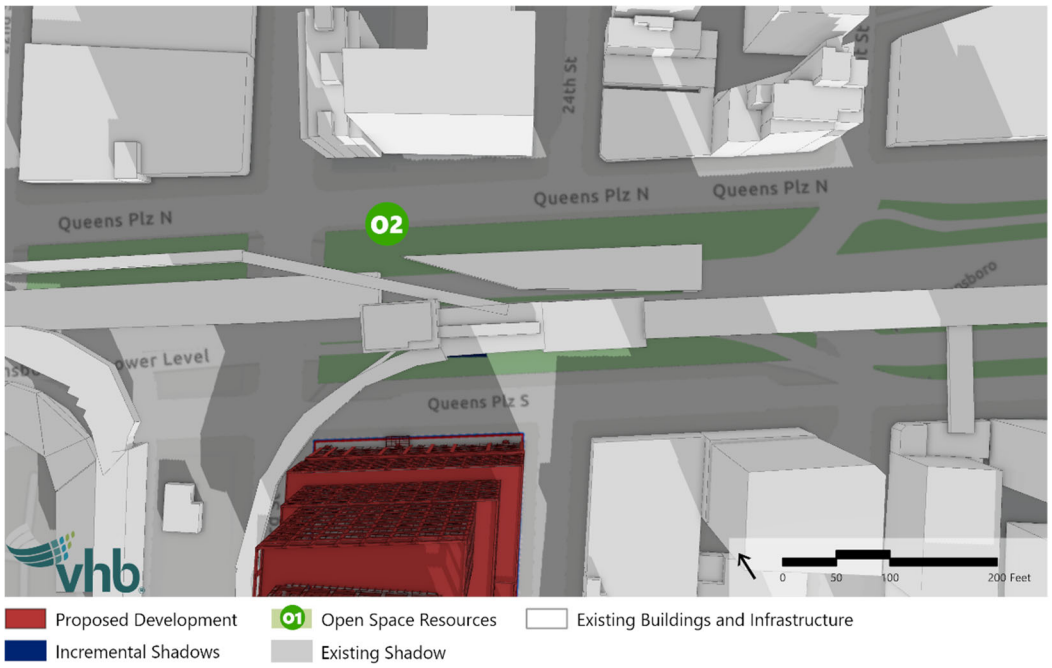


Figure 5-11 December 21 – 12:30 PM



March 21/September 21

Figure 5-12 March/September 21 – 10:25 AM

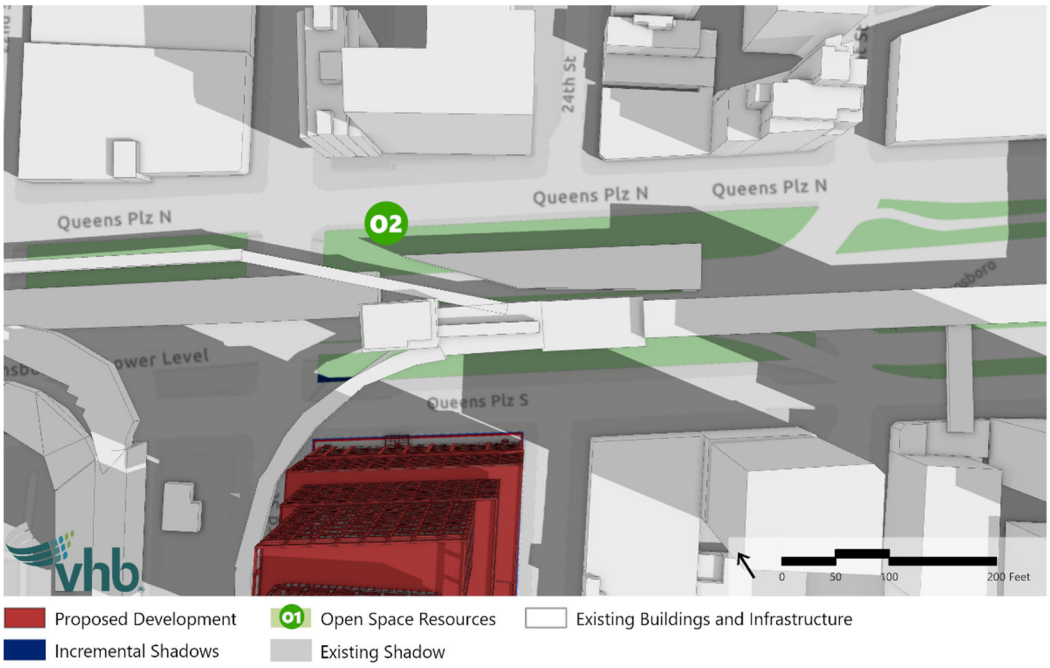


Figure 5-13 March/September 21 – 11:25 AM

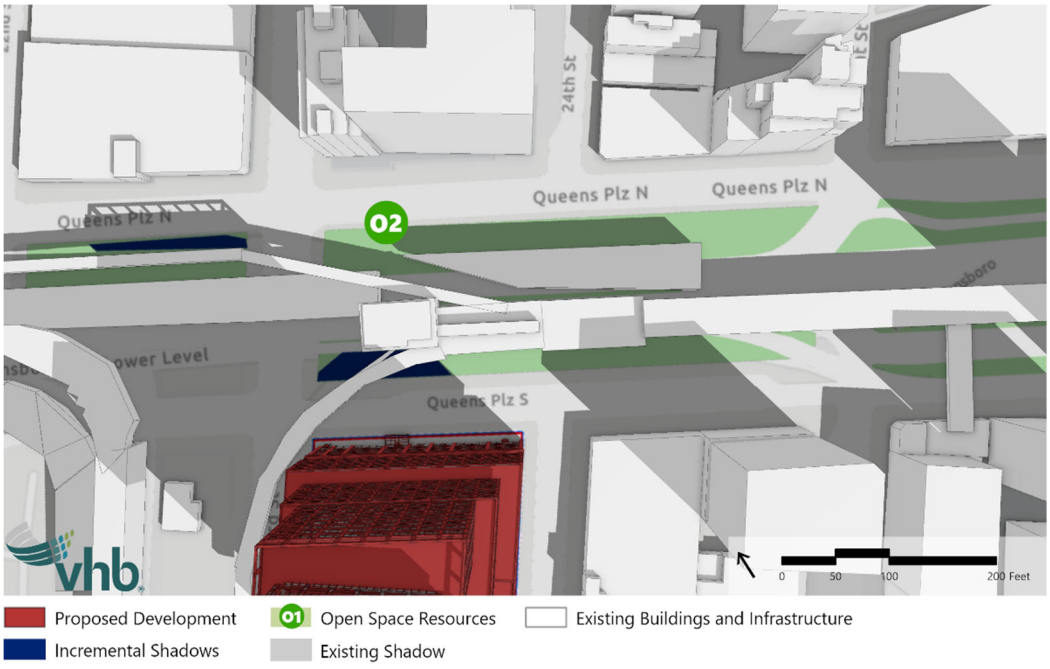


Figure 5-14 March 21/September 21 – 12:25 PM

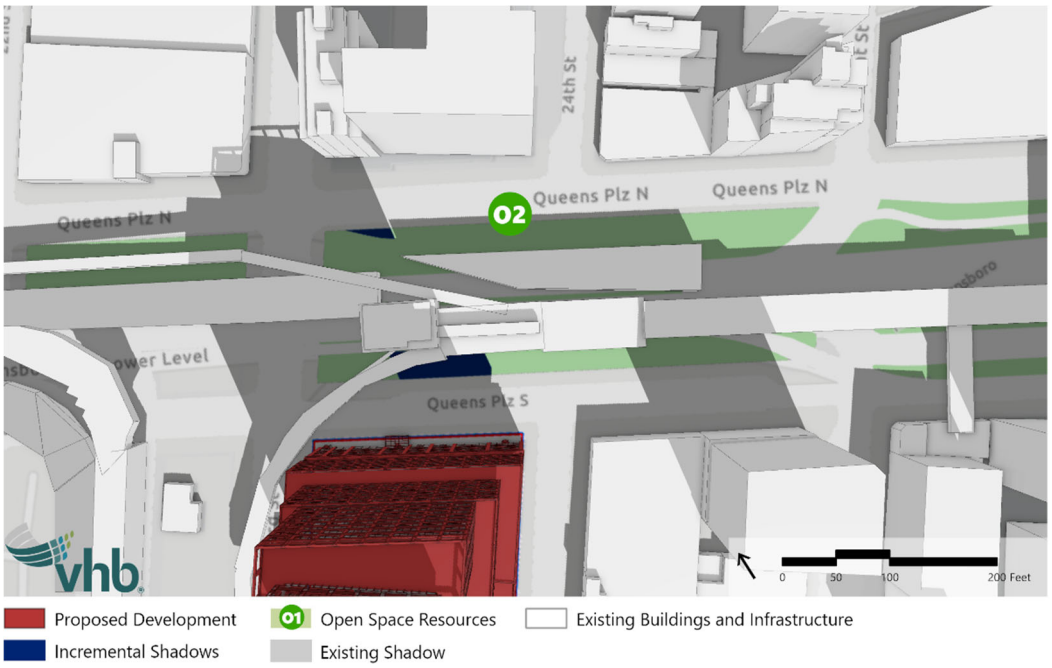
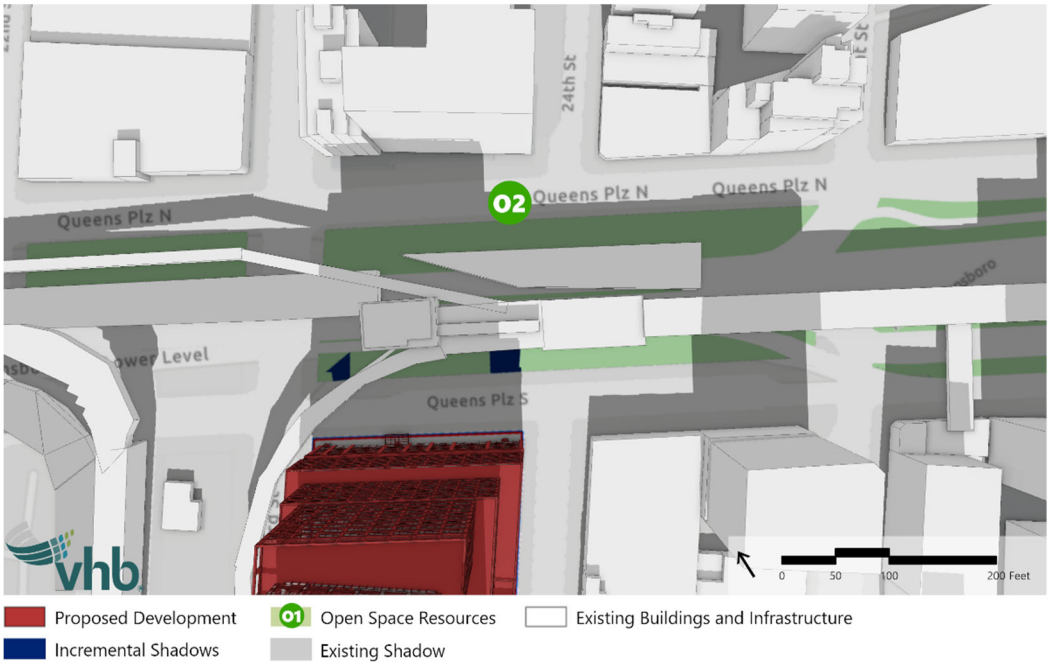


Figure 5-15 March 21/September 21 – 1:25 PM



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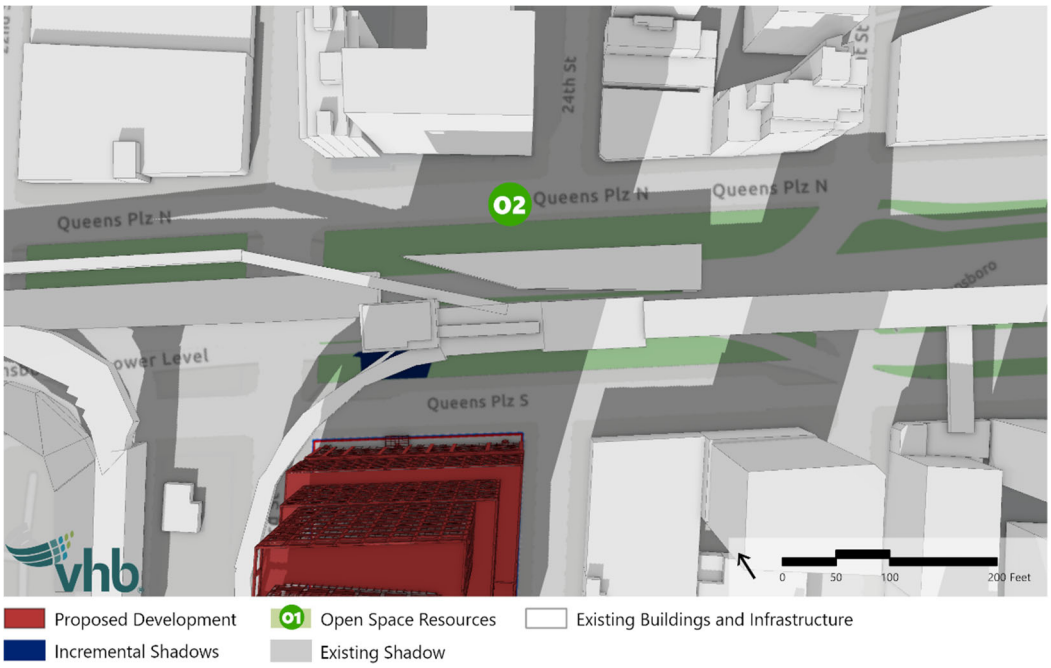

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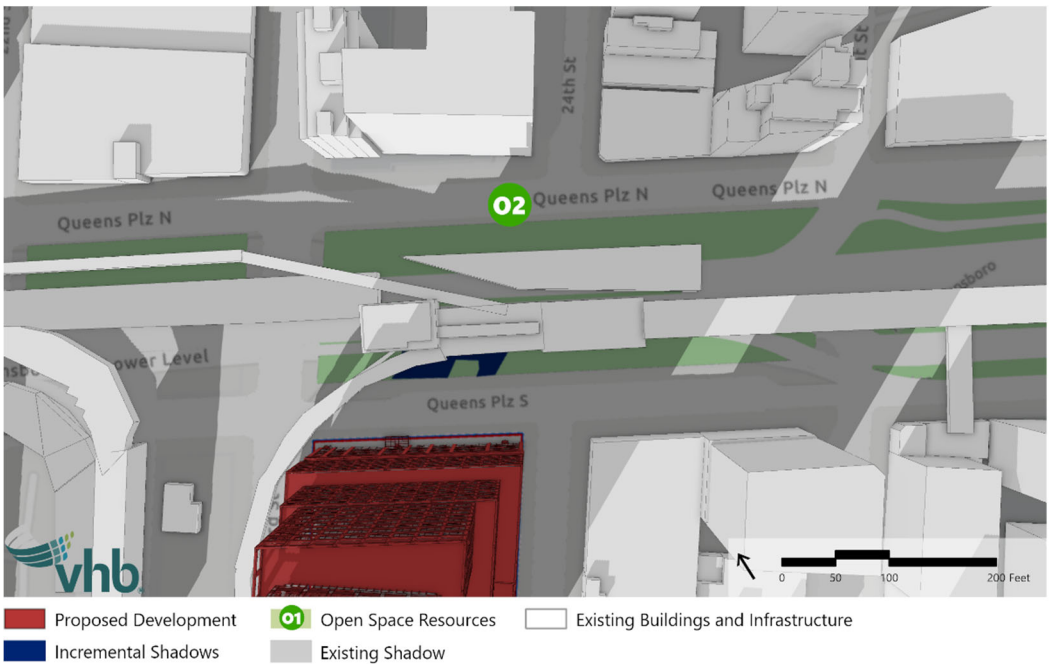

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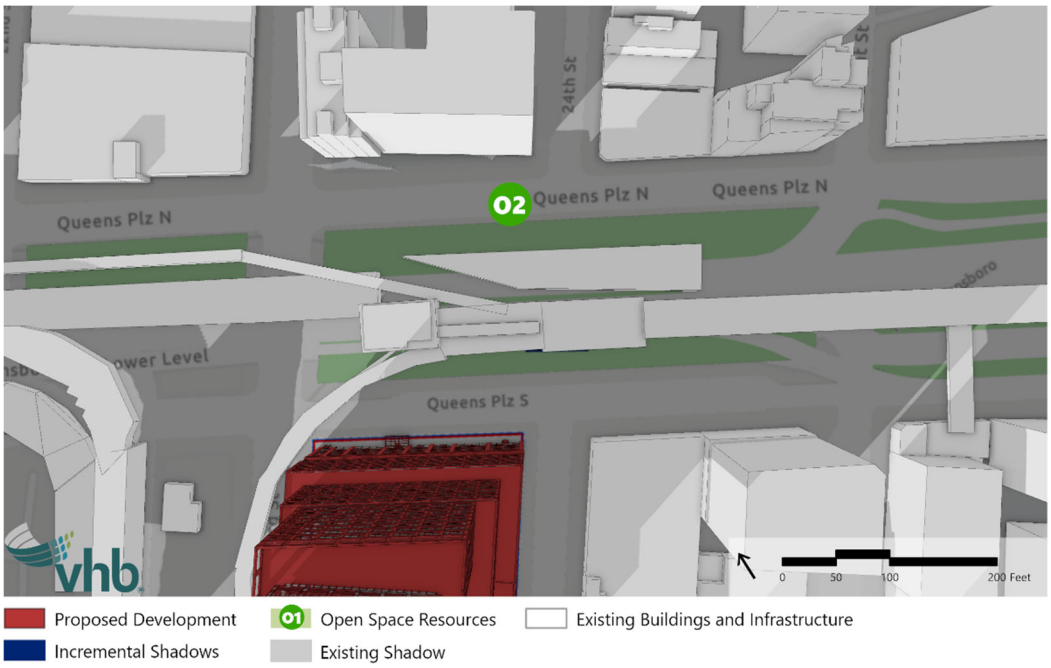
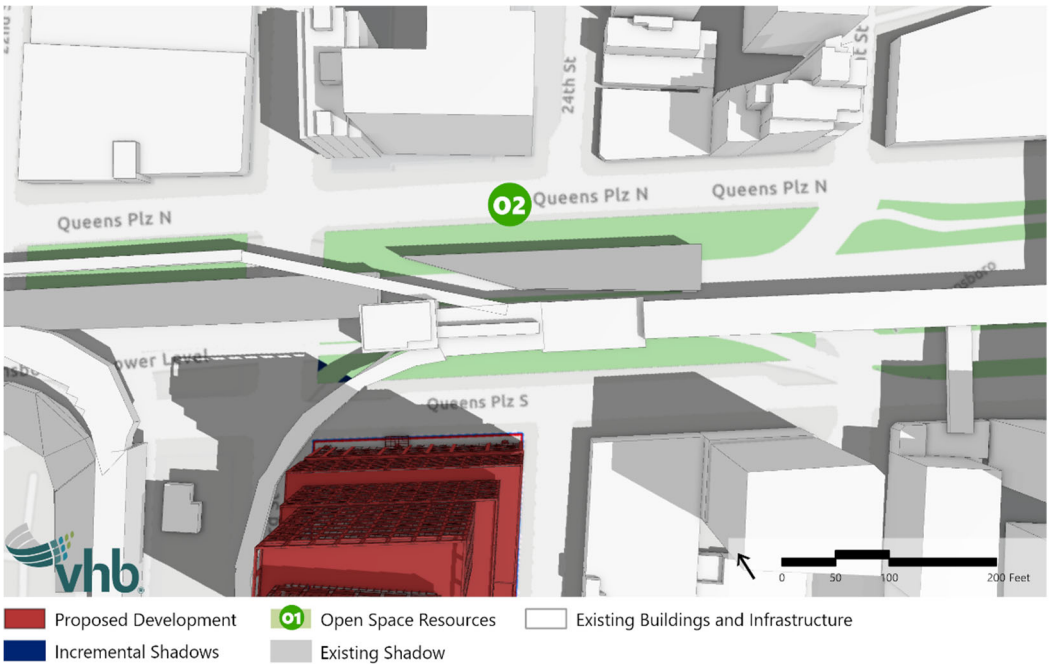


May 6/August 6

Figure 5-19 May 6/August 6 – 11:00 AM



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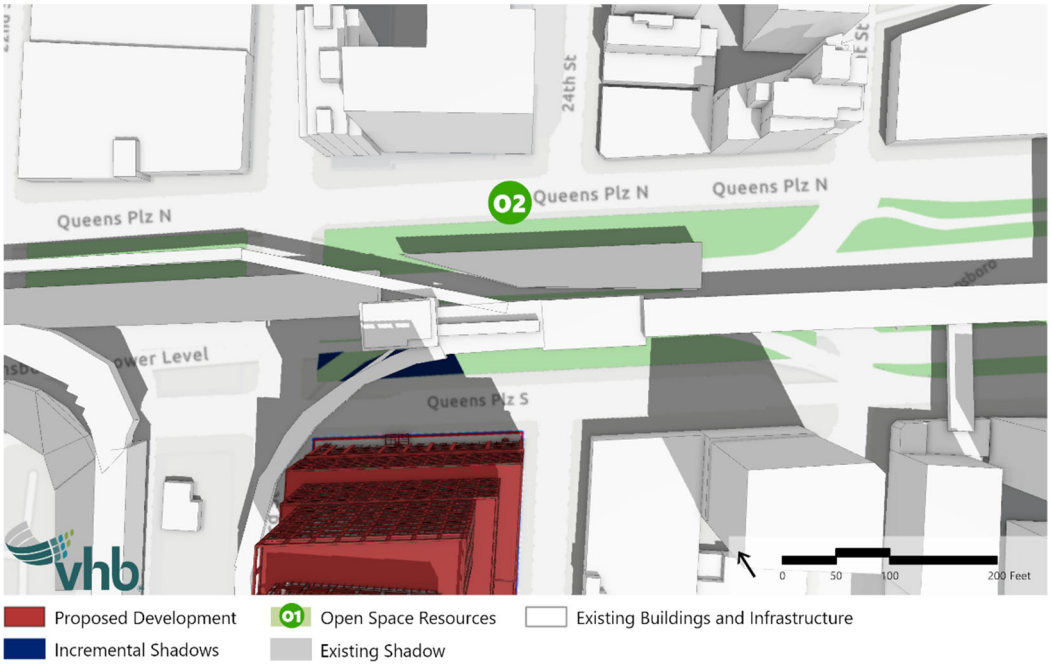

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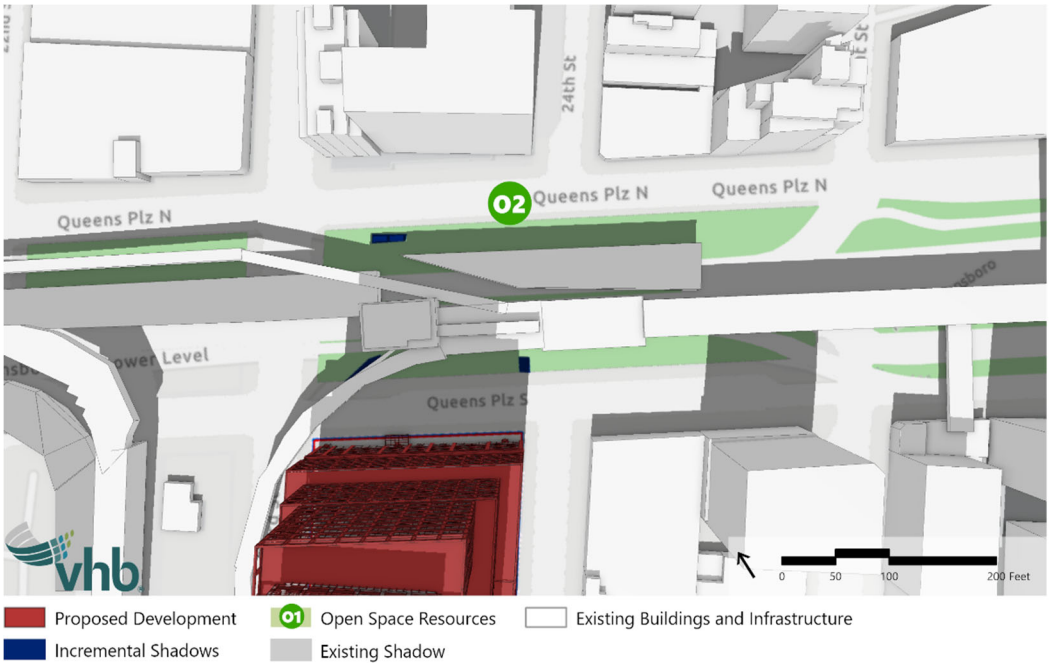

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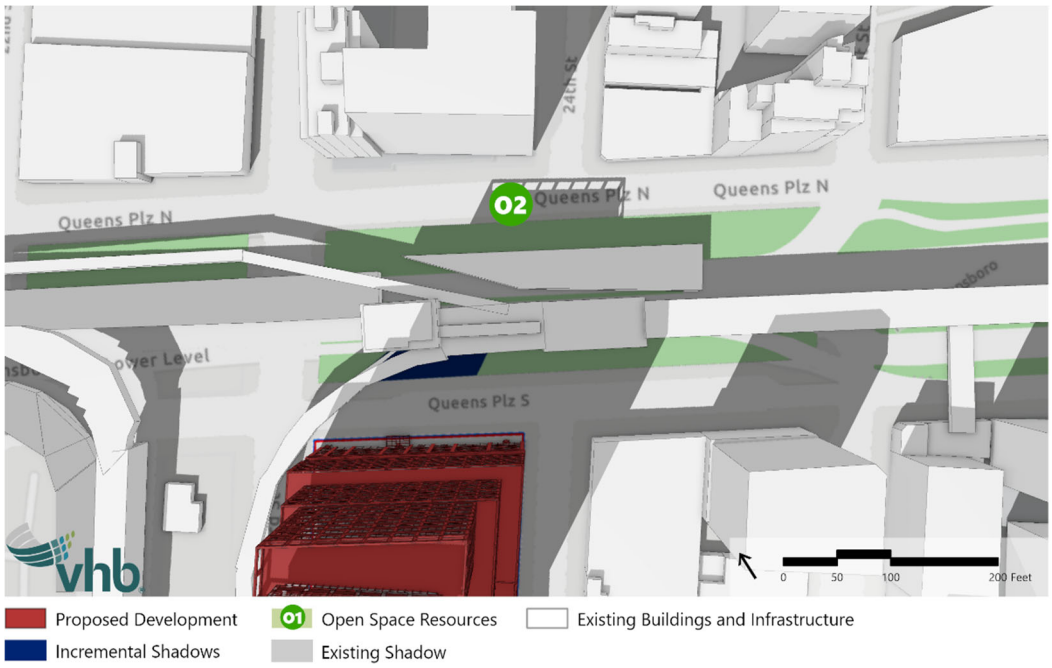

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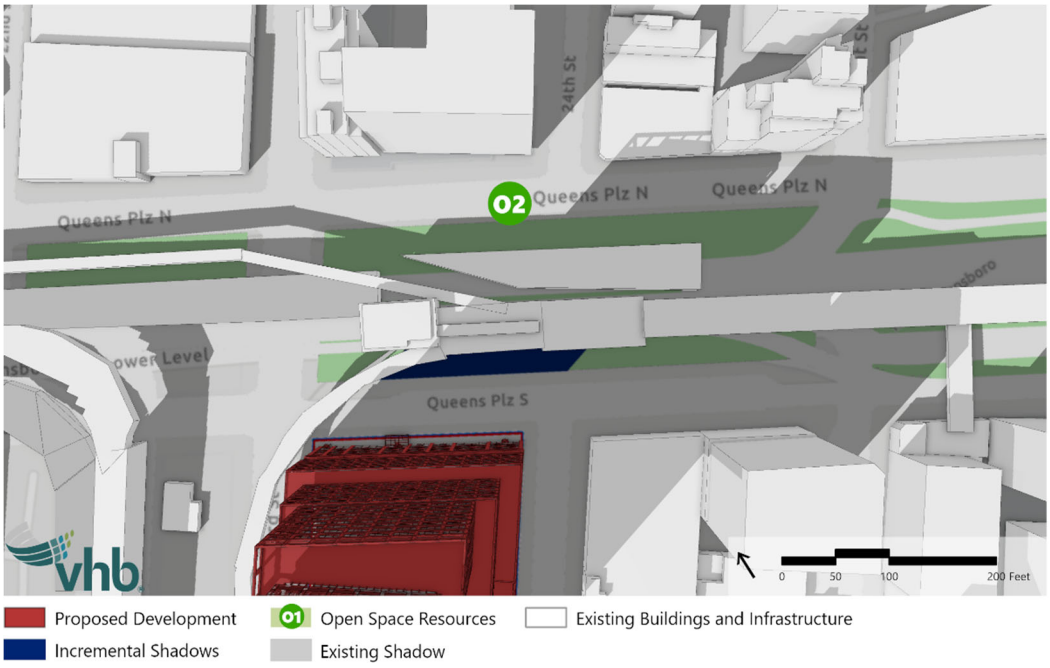

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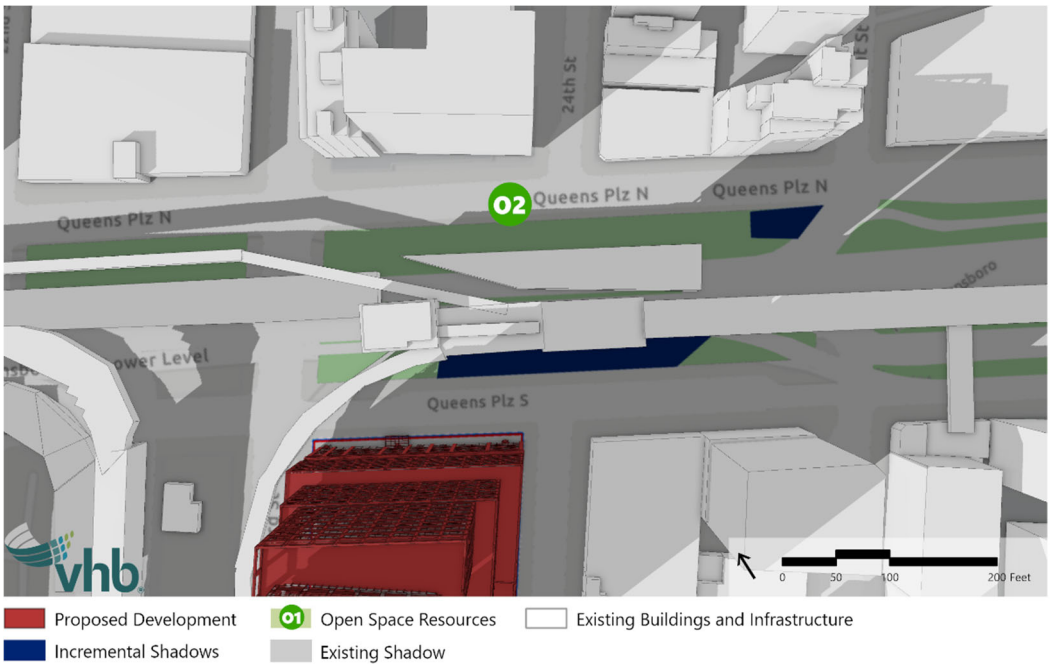

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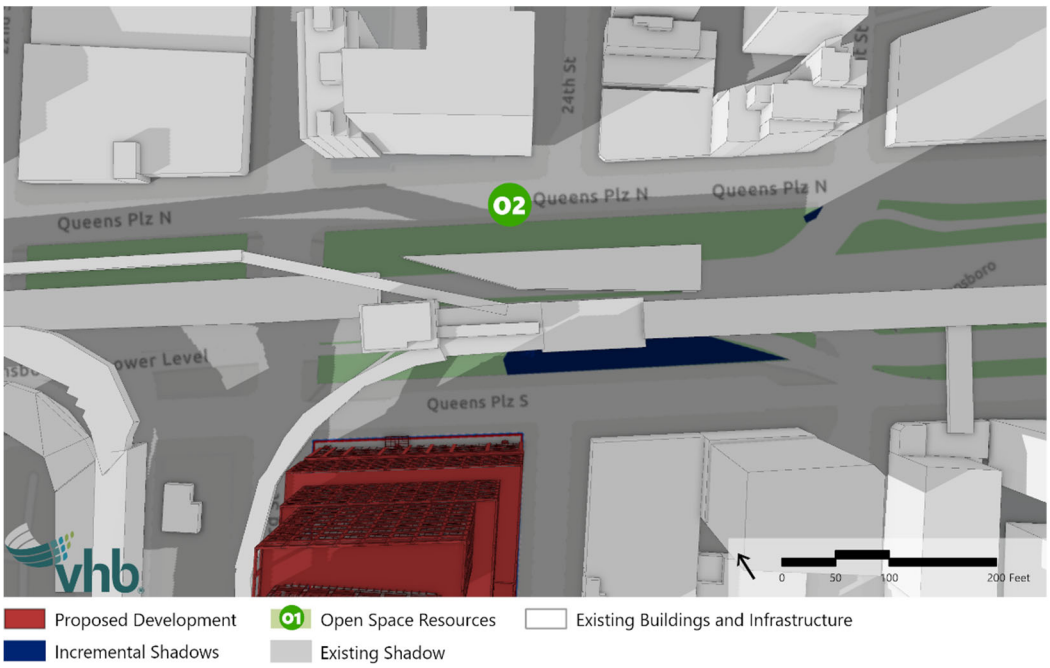
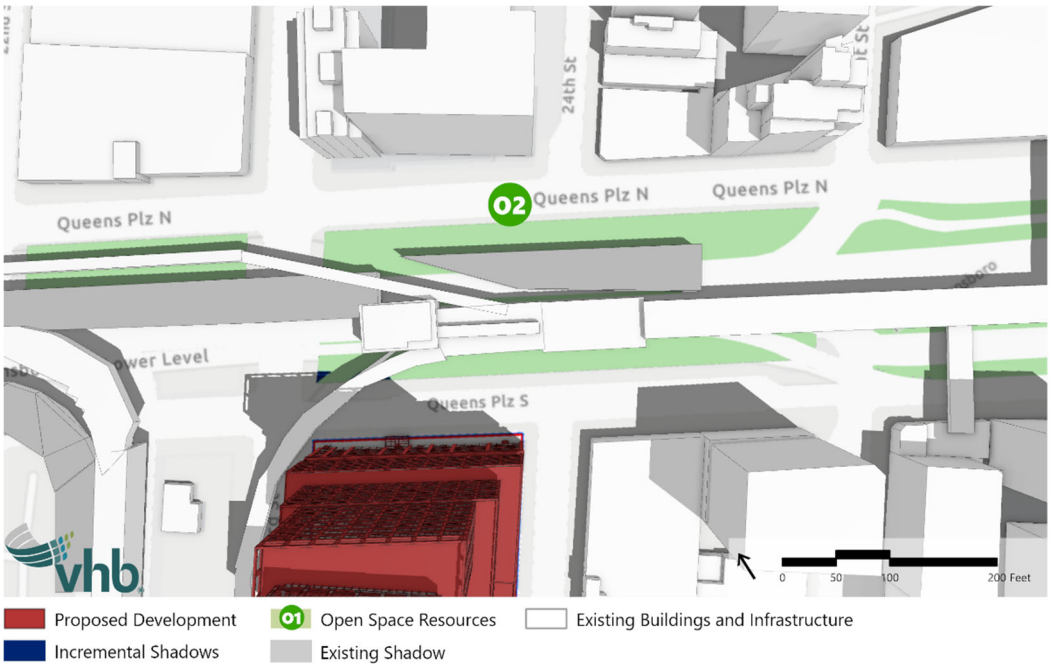


June 21

Figure 5-26 June 21 – 11:30 AM



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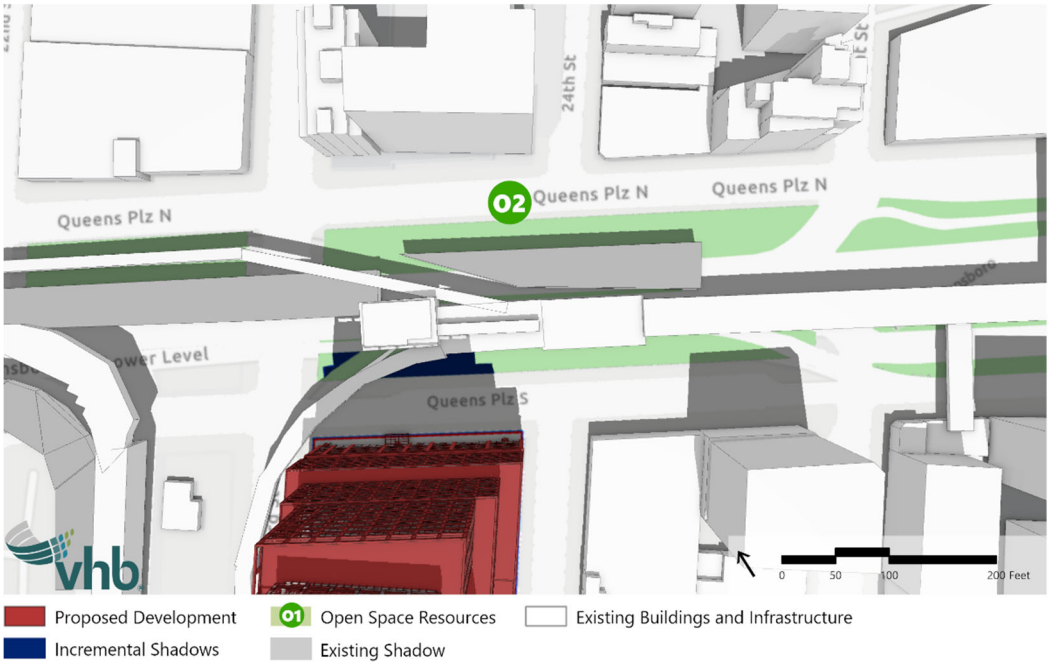

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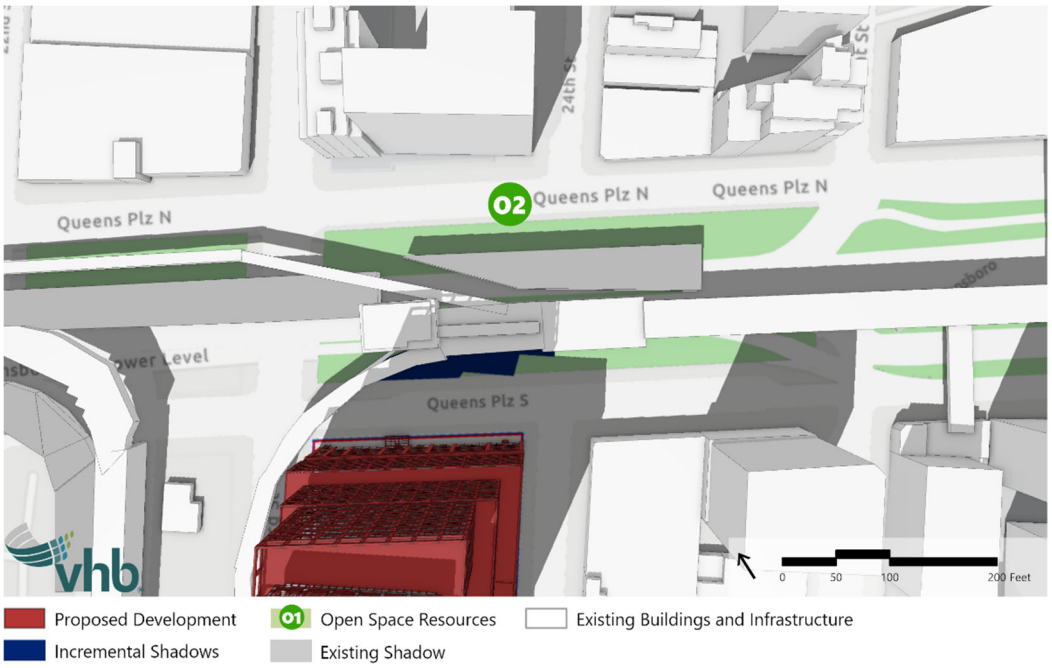

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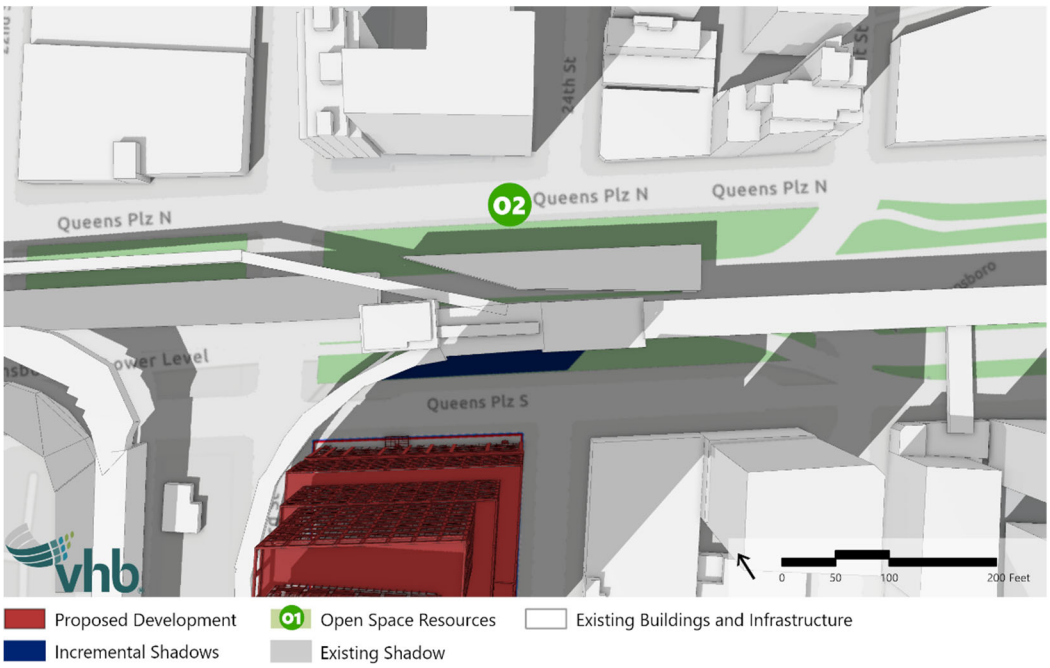

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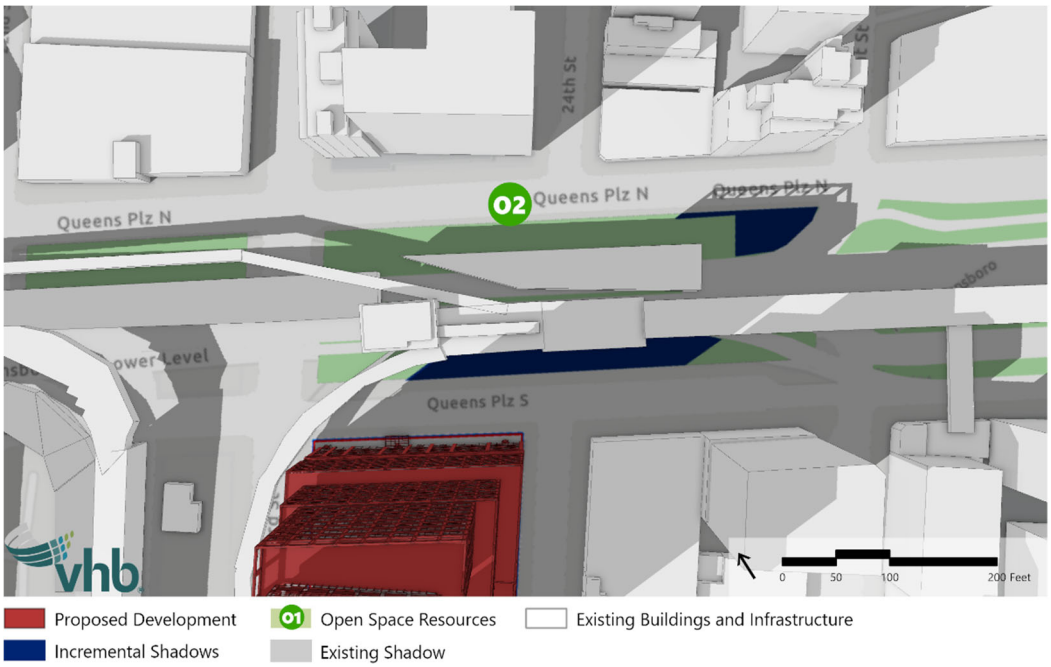

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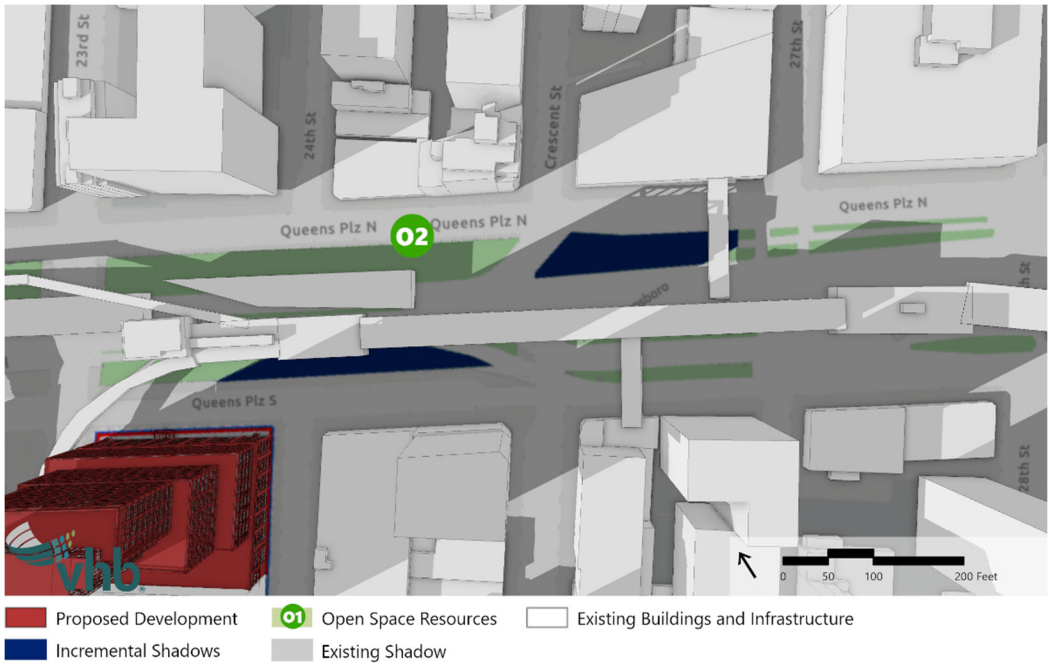

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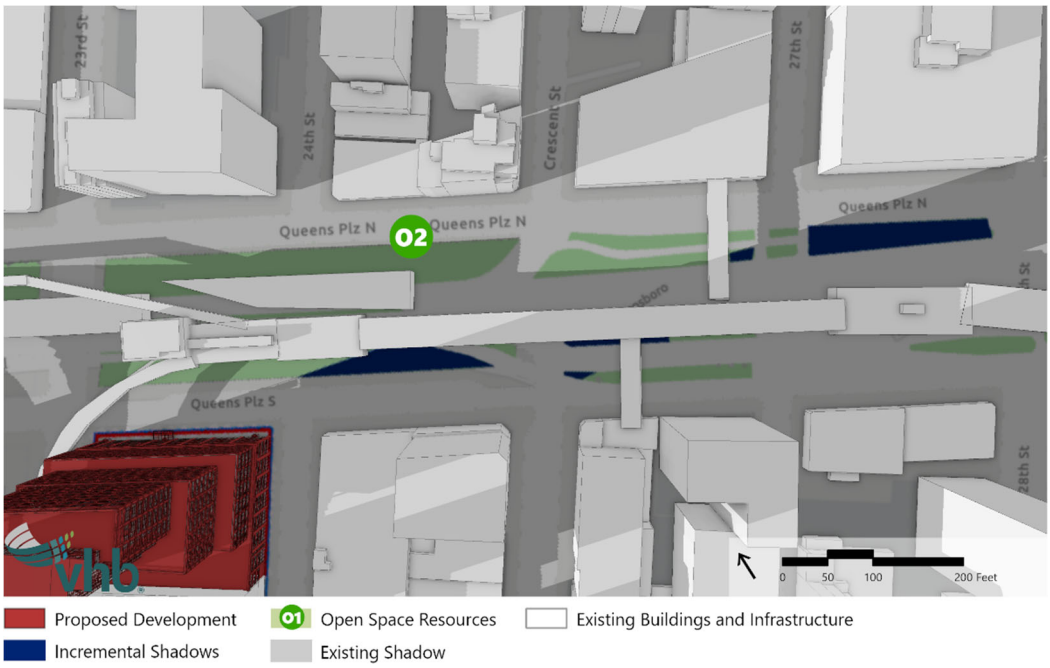
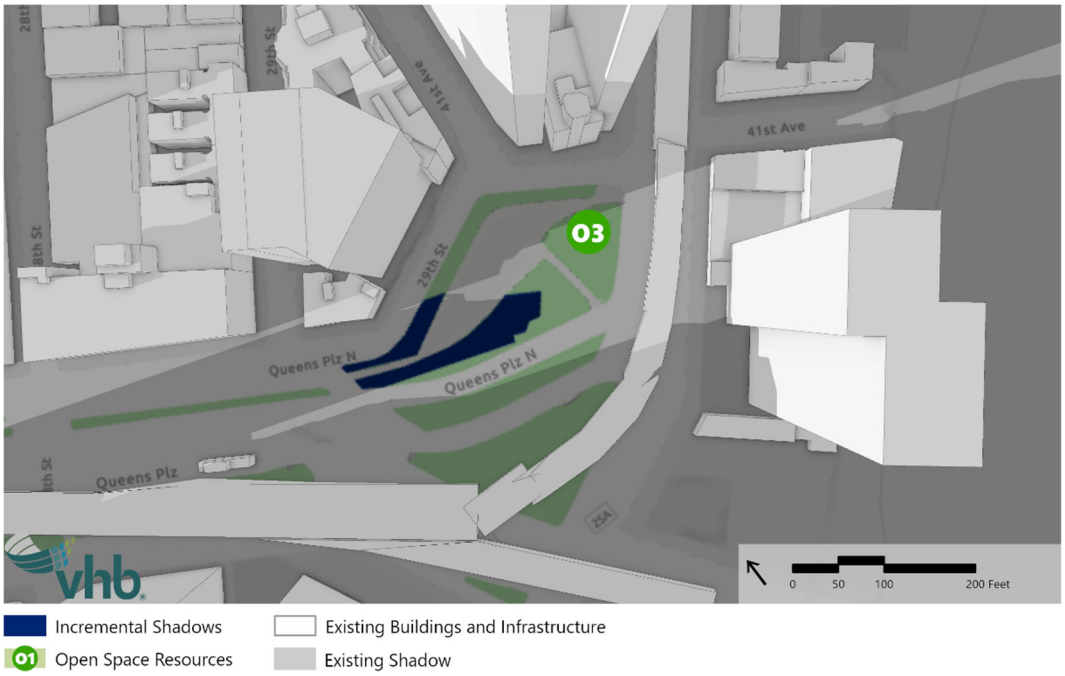


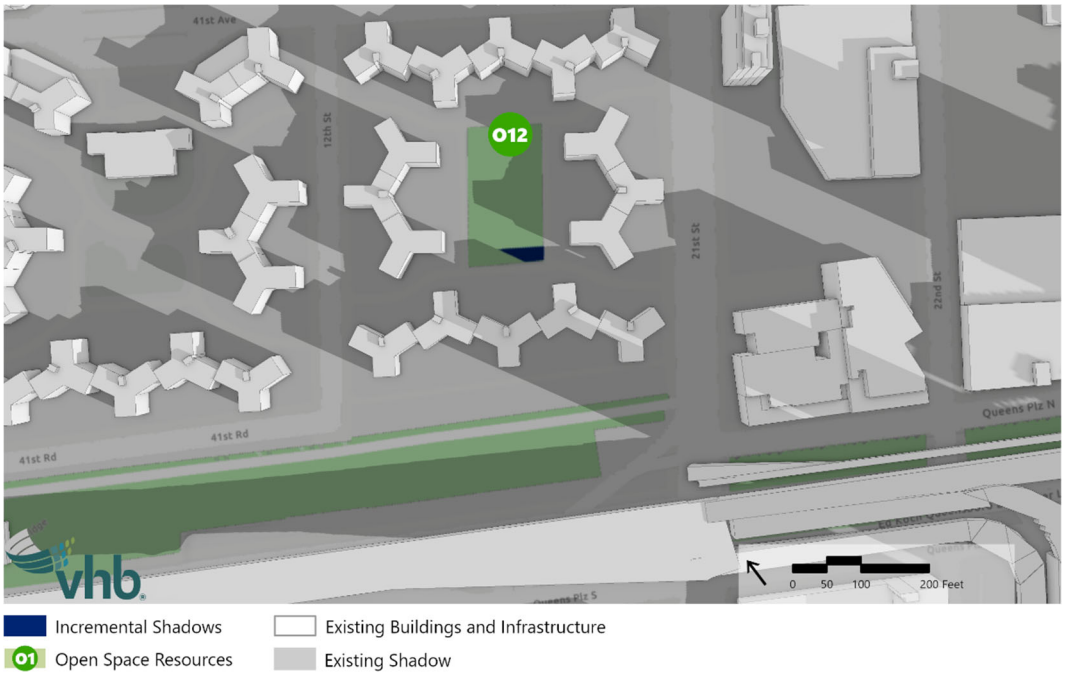
Dutch Kills Greens (O3)

Figure 5-33 June 21 – 5:55 PM



Queensbridge Houses Open Space (O12)

Figure 5-34 December 21 – 9:55 AM



6

Historic and Cultural Resources

This section assesses the potential for the Proposed Actions to result in significant adverse impacts on historic and cultural resources, including both archaeological and architectural resources. The analysis presented herein addresses existing conditions of the historic and cultural resources within the Development Site. The analysis considers the No-Action condition and the With-Action condition for the study area in the 2024 analysis year when the project is expected to be completed.

Introduction

Historical and cultural resources are defined as improvements or landscape features that could be or have been determined to have a special character, historical, or aesthetic interest or value. Historic or cultural resources comprise districts, buildings, structures, sites and objects of historical, aesthetic, cultural, and archaeological significance. According to the *2021 CEQR Technical Manual*, these resources include: properties that have been designated, or are under consideration for being designated, as New York City Landmarks or Scenic Landmarks, or are eligible for such designation; properties within New York City Historic Districts; properties listed in, or determined eligible for listing in, the State and/or National Register of Historic Places; and National Historic Landmarks.

This section assesses the potential for the Proposed Actions to affect architectural and archaeological resources located on the Development Site and in the surrounding area.

Methodology

The *CEQR Technical Manual* notes that environmental review for historic and cultural resources includes a survey and planning process that helps protect New York City cultural heritage from the potential impacts of projects undergoing CEQR. Historic and cultural resources include both archaeological and architectural resources.

Archaeological resources are physical remains, usually subsurface, of pre-contact, post-contact, and historic periods—such as burials, foundations, artifacts, wells, and privies. Archaeological resources are usually assessed for projects that would result in any in-ground disturbance. In-ground disturbance is any disturbance to an area not previously excavated, including new excavation deeper and/or wider than previous excavation on the same site.

Architectural resources include historically significant buildings, structures, objects, sites, and districts. Architectural resources include designated New York City landmarks, buildings within a designated New York City historic district, properties calendared for consideration by the New York City Landmarks Preservation Commission (LPC), properties listed on or determined to be eligible for listing on the State or National Register of Historic Places, National Historic Landmarks, and other properties that meet the eligibility criteria for such designations.

Generally, architectural resources should be surveyed and assessed if a proposed project would result in any of the following, whether or not any known historic resources are located near the site of the project:

- New construction, demolition, or significant physical alteration to any building, structure, or object;
- A change in scale, visual prominence, or visual context of any building, structure, object or landscape feature. Visual prominence is generally the way in which a building, structure, object, or landscape feature is viewed. For example, a building may be part of an open setting, such as a tower within a plaza, which is either conforming or non-conforming with the street wall in terms of its height, footprint, and/or setback. Visual context is the character of the surrounding built or natural environment. This may include the following: the architectural components of an area's buildings (e.g., height, scale, proportion, massing, fenestration, ground-floor configuration, style), streetscapes, skyline, landforms, vegetation, and openness to the sky;
- Construction, including but not limited to, excavating vibration, subsidence, dewatering, and the possibility of falling objects;
- Additions to or significant removal, grading, or replanting of significant historic landscape features;
- Screening or elimination of publicly accessible views;
- Introduction of significant new shadows or significant lengthening of the duration of existing shadows on an historic landscape or on an historic structure if the features that make the structure significant depend on sunlight. For example, stained glass windows

that cannot be seen without sunlight, or buildings containing design elements that are part of a recognized architectural style that depends on the contrast between light and dark design elements, such as deep window reveals and prominent rustication.

In accordance with CEQR, VHB has prepared this section to assess the potential for the Proposed Development to result in significant adverse impacts to historic resources.

Assessment

Existing Conditions

Development Site

The Development Site located at 23-10 Queens Plaza South is improved with a four-story building that occupies the entire northern portion of the block bounded by Queens Plaza South, 24th Street, 42nd Road, and 23rd Street **(Photo 6-1** and **Photo 6-2**). The building, which is remembered as the former Eagle Electric Building, was constructed between 1920 and 1921 for the Pittsburgh-based Standard Steel Car Company (Real Estate Record and Builder's Guide 1920a) by the Midwood Building Corporation and financed by the Roman-Callman Company and James I. Brokaw, who sold the property to the Standard Steel Car Company as the plans for the construction of the building were being finalized (ibid). The building was designed by architect J.J. Gloster of 44 Court Street in Brooklyn, who appears to have been employed by Midwood Building Corporation (which was based at 44 Court Street in Brooklyn). The building was initially intended as a five-story service station.

The Standard Steel Car Company was an early automobile manufacturer. In 1920, it was well-known for its "Standard Eight" model, which led to the company's expansion and increased production rates. At the time it was constructed, Queens Plaza South was known as South Jane Street. The company's occupation of the building was short-lived and by 1925 the building was sold. By 1947 the building was occupied by the Eagle Electric Manufacturing Company (as indicated on Sanborn maps published between 1947 and the present).

The four-story building displays elements of the Neoclassical style--including the symmetrical, pedimented parapet--and the Art Deco style--including the geometric tiles within each spandrel panel, the geometric tiles that create stylized capitals just below the cornice, and the stylized keystone cartouches in the pediments. The exterior is parged in stucco. The three visible elevations are similar, with large window openings and exposed framing of the building creating a grid-like appearance. The large window openings contain modern operable and fixed window sashes.

The building has been determined eligible for listing on the National Register of Historic Places (N/R) under Criterion C, as an intact early twentieth century industrial building and under Criterion A for its association with the industrial development of Long Island City.

Photo 6-1 Northwest view of the Eagle Electric Building



Photo 6-2 Eagle Electric Building 1939-1941



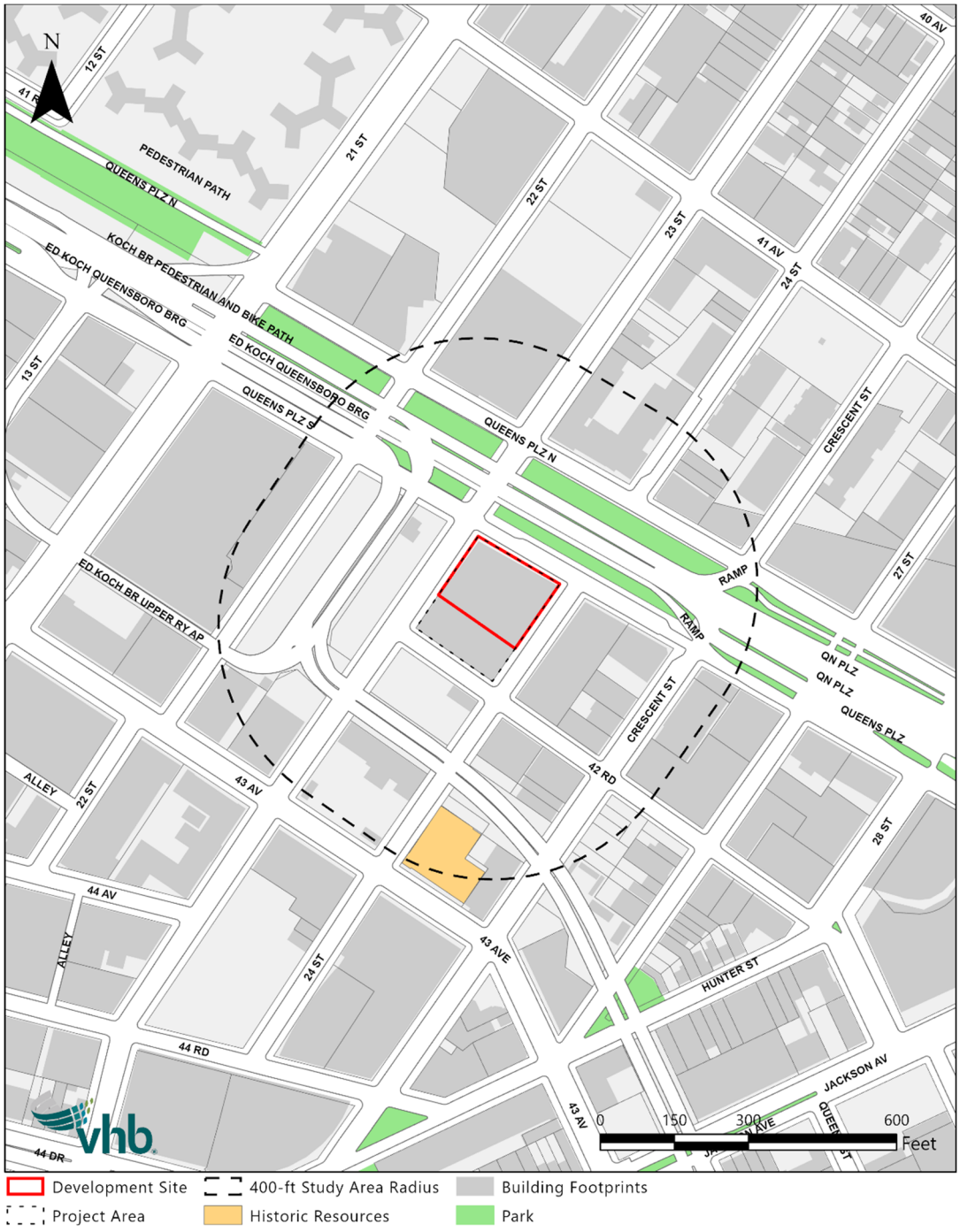
Source: NYC Department of Finance, Queens 1940 Tax Photos

A desktop review of the NYS Office of Parks, Recreation, and Historic Preservation (OPRHP) Cultural Resource Information System (CRIS) indicates that the Development Site is located within an Area of Archaeological Sensitivity. However, the site appears to have been disturbed by recent remedial work as a consequence of its enrollment in the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) (under a Brownfield Cleanup Agreement dated August 8, 2014 [Site No. C241160] to investigate and remediate releases associated with historical use of the Subject Property). The site is not considered archaeologically sensitive.

Study Area

There is one identified architectural resource within a 400-foot Study Area. Located at 42-61 24th Street, the former Silver Cup Bakery building is an S/NR-eligible resource (USN 08101.012811). The building was constructed around 1929 and appears to display elements of Neoclassical and Art Deco styles. No other National Register listed or previously determined eligible properties and no LPC-designated landmarks are documented within 400 feet of the Development Site (see **Figure 6-1**).

Figure 6-1 Development Site with 400-foot Study Radius



No-Action Condition

As described in **Part 1: Project Description**, the Development Site is currently overbuilt. The ZLDA governing Block 425 that was executed and recorded in 2018 (CRFN 2018000406484) allocates to Lot 1 the existing floor area of the Residential Building, and to Lot 5 the remaining floor area permitted on the Development Site (approximately 26,393 zsf / 27,713 gsf), plus any additional floor area obtained through an upzoning of the Development Site. Because the anticipated upzoning has not yet occurred, the Development Site continues to be technically overbuilt, although all of the floor area of the Existing Industrial Building is vacant and has been since approximately 2000.

As the Development Site is part of a single zoning lot with Lot 1, which is improved with the Residential Building, the remaining floor area available for use on the zoning lot is 26,393 zsf (approximately 27,713 gsf). It is anticipated that this floor area would be used for local retail uses. In order to comply with zoning, the upper floors would need to be removed. This would be done in such a way as to preserve, to the greatest extent possible, the remaining ground floor of the building new glazing would be consistent with the character of the historic loft structure. It should be noted that the total lot area of 42,143 sf and the maximum allowed FAR of 8.0 yields 337,144 zsf of total allowed floor area, less the existing 310,696 zsf Residential Building, yielding 26,448 zsf of unbuilt development potential. However, as the ZLDA governs, use of the higher number would require the discretion of the NYC Department of Buildings and therefore could not be assumed. Therefore, it is conservatively assumed that the No-Action development would be limited to 26,393 zsf (approximately 27,713 gsf), consistent with the ZLDA.

Future With-Action Condition

As described in **Part 1: Project Description**, in the future With-Action condition, the reuse and 22-story Proposed Enlargement of the four-story Existing Industrial Building would result in a 26-story commercial building on Lot 5 (the "Proposed Development"). The Proposed Development would have retail, restaurant, community meeting space, accessory office, mechanical, and exhibit uses on its first floor and cellar, office use on floors two through four within the envelope of the Existing Industrial Building, and office use on new floors five through 26 (the new construction).

The Proposed Development would consist of 363,136-gsf (321,449 zsf) of commercial space, with 135,361 gsf (104,849 zsf) within the envelope of the Existing Industrial Building and 227,775 gsf (216,600 zsf) of commercial space within the Proposed Enlargement. Of the total commercial space, approximately 21,505 gsf (13,102 zsf) would be local retail which is proposed on the ground floor and cellar level, 7,254 gsf (7,025 zsf) would be restaurant space which is proposed on the ground floor and fifth floor, 2,410 gsf (0 zsf) would be community meeting space within the cellar, 520 gsf (504 zsf) would be exhibit space documenting the former Eagle Electric manufacturing business on the ground floor, and approximately 331,447 gsf (300,818 zsf) would be commercial office on floors five through 26. The roof of the Existing Industrial Building would be used for landscaped passive recreation space accessory to the office uses and restaurant space.

As currently proposed, a 22-story Proposed Enlargement would be built over the existing four-story industrial building with cellar. The superstructure would consist of a steel and concrete construction, as the Proposed Enlargement would be supported on steel columns and reinforced concrete shear walls formed around the elevator shafts and staircases. The office floors would be composite steel framing with concrete on metal deck. The existing office concrete slabs would be saw-cut locally to allow for the new steel columns to pass uninterrupted to the new pile caps. No extensive demolition of the Existing Industrial Building is anticipated. A new foundation system would be constructed to support the proposed tower. The new columns and shear walls supporting the proposed tower (above the existing building) would be founded on new caissons drilled into bedrock and connected by caisson caps of different thicknesses. The existing office slab-on-grade would be saw-cut locally to allow for installation of the caissons and the excavation and pour of the new pile caps. No additional demolition or excavation is anticipated at the existing cellar level.

The With-Action Condition would maintain the exterior of the Eagle Electric building in its entirety. The proposed 22-story enlargement takes design cues from the Existing Industrial Building, resulting in visual consistency. The proposed concrete and large multi-pane windowed design is a tribute to the Eagle Electric Building.

The Proposed Development would create new commercial occupancy within the long-vacant envelope of the Existing Industrial Building and new commercial floor area within the Proposed Enlargement.

Conclusion

As currently proposed, the Eagle Electric Building, which has been determined eligible for listing on the National Register of Historic Places would be expanded by a 22-story enlargement that would take design cues from the Existing Industrial Building.

In the With-Action condition, the exterior of the Eagle Electric Building would be maintained in its entirety. In the No-Action condition, the site would continue to be overbuilt, necessitating the demolition of its top two floors. The With-Action condition allows for preservation of the existing Eagle Electric Building, including the façade, which would entail consistency with the existing condition of the Development Site. Additionally, the overall context of the building would be maintained and/or improved in the immediate vicinity of the Development Site, through the following measures: new transparency would be provided on the ground floor of the existing building to enhance the relationship of the building to the sidewalk and pedestrians; current sidewalk widths would be maintained; and finally, street trees would be provided on the sidewalk surrounding the Development Site in compliance with city regulations.

7

Urban Design and Visual Resources

An urban design assessment under CEQR considers whether and how a project may change the experience of a pedestrian in the study area. The assessment focuses on the components of a proposed project that may have the potential to alter the arrangement, appearance, and functionality of the built environment. In addition, the assessment considers the potential for the proposed actions to affect any view corridors associated with visual resources.

Introduction

This section considers the potential for the Proposed Project to result in significant adverse urban design and visual resources impacts. As defined in the *2021 City Environmental Quality Review (CEQR) Technical Manual*, urban design is the totality of components that may affect a pedestrian's experience of public space. A visual resource is the connection from the public realm to significant natural or built features, including views of the waterfront, public parks, landmark structures or districts, otherwise distinct buildings or groups of buildings, or natural resources.

Based on the *CEQR Technical Manual*, a preliminary assessment of urban design and visual resources is appropriate when there is the potential for a pedestrian to observe, from the street level, a physical alteration beyond that allowed by existing zoning. Examples include projects that permit the modification of yard, height, and setback requirements, and projects

that result in an increase in built floor area beyond what would be allowed "as-of-right," or in the future No-Action condition.

As described in **Part 1: Project Description**, the Applicant, is seeking to increase the maximum permissible floor area ratio (FAR) on the Development Site as well as to modify street wall location and minimum distance between building provisions in order to facilitate the reuse and 22-story enlargement of the vacant four-story former Eagle Electric Building (the "Existing Industrial Building"). The Applicant is seeking several discretionary actions, including a zoning map amendment, zoning text amendments to the Queens Plaza Subdistrict, and a special permit to modify street wall location and minimum distance between building provisions on Queens Block 425, Lots 1 and 5.

Methodology

In accordance with the *CEQR Technical Manual* guidelines, the following preliminary urban design and visual resources assessment considers a 400-foot radius study area where the proposed action would be most likely to influence the built environment. The preliminary assessment focuses on those project elements that have the potential to alter the built environment, or urban design, of the development site, which is collectively formed by the following components:

- **Street Pattern and Streetscape:** The arrangement and orientation of streets define location, flow of activity, street views, and create blocks on which buildings and open spaces are arranged. Other elements including sidewalks, plantings, streetlights, curb cuts, and street furniture also contribute to an area's streetscape.
- **Buildings:** A building's size, shape, setbacks, pedestrian and vehicular entrances, lot coverage, and orientation to the street are important urban design components that define the appearance of the built environment.
- **Open Space:** Open space includes public and private areas that do not contain structures, including parks and other landscaped areas, cemeteries, and parking lots.
- **Natural Features:** Natural features include vegetation and geologic and aquatic features that are natural to the area.
- **View Corridors and Visual Resources:** Visual resources include significant natural or built features, including important view corridors, public parks, landmark structures or districts, or otherwise distinct buildings.

The following information is included in a preliminary assessment:

- A concise narrative of the existing Project Area, and conditions under the future No-Action and With-Action conditions;
- An aerial photograph of the Study Area and ground-level photographs of the Development Site with immediate context;
- Zoning and floor area calculations of the existing, future No-Action, and future With-Action conditions;
- Lot and tower coverage, and building heights; and,
- A three-dimensional representation of the future No-Action (if relevant) and With-Action condition streetscape.

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

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

Study Area

The urban design and visual resources study area is typically defined as the area within a quarter-mile of the project site which, for this project extends north to 40th Avenue, east to Dutch Kills Green (a public open space located at the intersection of Queens Plaza North and Queens Plaza East), south to the intersection of Thomson Avenue and Jackson Avenue, and west to a point midblock between 11th Street and 12th Street (see **Figure 7-1**). This is the area in which the Proposed Project would be most likely to have effects in terms of urban design and visual resources. All photos for this assessment were taken on June 30th, 2020.

Figure 7-1 Study Area Photograph Location Map



Preliminary Assessment

Existing Conditions

Project Area

The Project Area contains the Development Site and an existing residential building on Lot 1, the parcel located immediately to the south of the Development Site. Tax lots 1 and 5 comprise a single zoning lot, totaling 42,143 sf. Lot 1 has 14,921 sf of lot area, with approximately 187 feet of frontage on 42nd Road, and approximately 80 feet of frontage on each 23rd and 24th Streets. Lot 1 is currently improved with the existing Residential Building (the 1 QPS Tower), built in 2016 (**Photo 7-1**). The building is 481 feet tall and contains 390,824-gsf spread over 44 floors, with an FAR of 7.37 FAR. The building has a nearly all-glass façade and rises to a seventh story before a setback on the east, west and south sides. From that setback the building rises the remaining 37 floors to its rooftop and bulkhead.

Lot 5 (the Development Site) is currently improved with the Existing Industrial Building, which is a four-story industrial/manufacturing building that has been vacant since approximately 2000. The façade of the Existing Industrial Building is a consistent concrete grid with large 12-pane rectangular windows on each floor. Below each window is a small, simple diamond-shaped mosaic comprised of four tiles **Photo 7-2**, **Photo 7-3**). The roof has three simple pediments on its east, west and north sides decorated with similar mosaic elements.

Study Area

As described above, the quarter-mile study area extends north to 40th Avenue, east to Dutch Kills Green (a public open space located at the intersection of Queens Plaza North and Queens Plaza East), south to the intersection of Thomson Avenue and Jackson Avenue, and west to a point midblock between 11th Street and 12th Street. See **Photo 7-4** to **Photo 7-24** for study area photographs.

Urban Design

The Study Area is bisected by the Queensboro Bridge and its direct approach road, Queens Plaza, and the elevated structure related to the No. 7, N and W Subway Lines. The Study Area is further divided by several looping and direct elevated approaches to the Queensboro Bridge **Photo 7-4**, **Photo 7-5**). The main bridge approach reaches street level at Crescent Street, just east of the Development Site. The bridge itself remains the most prominent built feature in the study area, even with the introduction of numerous large towers in the last 10 years. However, the iconic cantilever portion of the bridge spanning the East River and Roosevelt Island does not begin until just outside of the west side of the Study Area.

Within 400-feet of the Development Site, the ramps run above streets and through blocks. In the case of a loop just west of the Development Site, ramps are stacked approximately three-stories high (**Photo 7-6**). One access ramp cuts southeast through the Study Area all the way to Sunnyside Yard, connecting with Thompson Avenue at the edge of the neighborhood. The No. 7 Line runs on an elevated structure above 23rd Street from Jackson Avenue to Queens Plaza South, where it turns east, curving around from the west to the

north side of the Development Site (**Photo 7-7**). On Queens Plaza, the No. 7 Line joins the N and W Lines at the elevated Queensboro Plaza Station, one and one-half blocks east of the Development Site. The web of structural beams and columns for the subway and those that remain from now defunct trolley lines that used to cross the Queensboro Bridge create a canopy over Queens Plaza adjacent to the Development Site (**Photo 7-8**).

The land uses within 400-feet of the Development Site are varied. The block directly to the east of the Development Site, across 24th Street, contains a number of uses, including: APEX Technical School; a mixed-use residential and commercial building (HERO LIC) that is currently under construction; two recently-constructed residential buildings; and a hotel (Red Lion Inn and Suites). The APEX Technical School Building is three-stories tall with a façade comprised of alternating bands of orange brick and three-pained windows. The APEX building, like other buildings in the Study Area such as the Brewster Building, is a repurposed manufacturing and industrial building. HERO LIC also repurposes and enlarges an existing building to mixed residential and commercial with floors above the current roof. The Red Lion Inn and Suites Building is a simple seven-story brick structure with large windows on the first floor and an awning above the front door. Surface parking facilities are located directly west and south of the Project Area. A post office, commercial office spaces, light-manufacturing uses, and automobile-related uses are located along the north side of 43rd Avenue between 22nd Street and Crescent Street. Newly constructed residential buildings have been developed along the east side of Crescent Street south of 42nd Road. Graffiti and other street art adorn the sides of the light-manufacturing and automobile related buildings on 24th Street just south of the Development Site. Ground floor retail is limited to frontages on Queens Plaza North and South and to space in newly constructed residential buildings. However, some potential storefront spaces in these buildings are unrented. There are few street trees south of the Development Site, with the exception of young trees surrounding the APEX Building. On the north side of Queens Plaza is a greenway with shared pedestrian and bicycle facilities that traverse a planted median with benches (**Photo 7-9**). The greenway connects with the Queensboro Bridge pedestrian path and to the East River Greenway via Queensbridge Park.

East of the Development Site, the buildings along Queens Plaza North and South are characterized by new commercial and mixed commercial and residential buildings, which were constructed in the last five to ten years. There are also former industrial buildings that have been converted to commercial use, along Queens Plaza, such as the Brewster building between 27th and 28th streets, which contains the offices of the JetBlue Corporation, among other businesses **(Photo 7-10**). Midblock, just north of Queens Plaza, are recently constructed apartment buildings with primarily brick facades. These recently constructed apartment buildings range from 10- to 20-stories and feature ground floor retail; often restaurants and other food stores or neighborhood retail (**Photo 7-11**). There are a limited number of one- to two-story commercial buildings that also front Queens Plaza. Two such buildings, located off of Crescent Street, connect directly to the Queensboro Plaza station via overpasses on either side (**Photo 7-12**).

The largest concentration of new residential and commercial development is located south of Queens Plaza abutting Sunnyside Yard in the form of large glass towers. New commercial developments like The Jacx and residential developments like Jackson Park, located along Jackson Avenue just south of Queens Plaza, are characterized by multiple towers connected at a base **(Photo 7-13**). In the case of Jackson Park, three large glass towers face the street

and enclose a private courtyard. Directly across Orchard Street from this new development is a large public parking lot that has frontage along Jackson Avenue. As described above, the neighborhood exhibits a variety of uses and building types. This demonstrates the historical nature of the Study Area and Long Island City at large. Just north of the cluster of towers, at roughly the intersection of Queens Plaza North and Queens Plaza East, the No. 7 and N, W lines split off from one another, creating another green-painted steel beam canopy, which is particularly high above Queens Plaza. (**Photo 7-14**).

Photo 7-1 23rd Street and 42nd Road Looking East



6.30.20

Photo 7-2 Queens Plaza South and 24th Street Looking South



6.30.20

Photo 7-3 Queens Plaza South and 24th Street Looking West



6.30.20

Photo 7-4 21st Street and 43rd Avenue Looking North



6.30.20

Photo 7-5 Jackson Avenue and Purves Streets Looking Northeast



6.30.20

Photo 7-6 Queens Plaza South and 21st Street Looking West



6.30.20

Photo 7-7 23rd Street and 42nd Road Looking North



6.30.20

Photo 7-8 Queens Plaza and Crescent Street Looking East



6.30.20

Southwest of the Development Site, 43rd and 44th Avenues are primarily characterized by low-rise manufacturing and industrial buildings, automobile-related commercial uses, and a scarcity of ground level retail. The wide, short concrete and brick industrial buildings provide a canvas for street art, which is found at various scales throughout the study area. Notable examples include 43-01 21st Street, which is completely covered in graffiti-type murals (**Photo 7-15**). Uses related to taxis and for-hire vehicles are also found in Long Island City and the study area. These uses are generally located within one to two-story brick buildings, with garage doors, numerous curb cuts and limited windows located at street level (**Photo 7-16**). The Hunters Point Loft Precinct, which is bounded by 21st Street, 43rd Avenue, 23rd Street and 44th Road, Precinct is also located directly south and west of the Development

Site. This precinct contains nine loft buildings, which are three to six-story buildings primarily characterized by large multi-pane windows separated by concrete columns.

Outside of clusters of new residential and mixed residential and commercial buildings, the quarter-mile Study Area in Long Island City is comprised of low-rise commercial and industrial/manufacturing buildings. Notably among these low-rise commercial structures is Silvercup Studios, which occupies nearly an entire block that is surrounded on its north, south, and east sides by the Queensboro Bridge or its elevated ramps. Silvercup Studios displays its name on a large sign above the tallest portion of the facility facing west (**Photo 7-17**). These low-rise buildings are interrupted by smaller-scale new infill residential developments, which contain only four to eight units.

Approximately 15 new hotels, many sharing the height and design characteristics of new small and medium-sized residential developments, have been built in the study area over the past 10-years. These hotels, like The Vue Hotel on 22nd Street directly north of the Development Site, are primarily located adjacent to manufacturing and industrial buildings, which is allowed in M1 zoning districts **(Photo 7-18**). The largest of these hotels is the Marriott Courtyard, located at the east edge of the study area at 29-15 Queens Plaza North, which rises from a concrete base to a thin glass tower. There are also a large number of at-grade parking lots, both for private cars and for taxis and for-hire vehicles. These parking lots are interspersed throughout the Study Area, including on lots directly across 42nd Road and 23rd Street from the Development Site.

In the northwest portion of the Study Area, on Queens Plaza North is UOVO: NYC, a large windowless art-storage facility and the NYCHA Queensbridge Houses on the west side of 21st Street. The Queensbridge Houses are comprised of six super-blocks, which each contain nearly exclusively 6-story apartment buildings. The apartment buildings are red brick, which is typical of NYCHA developments, and are comprised of a string of three-pointed structures (**Photo 7-19**). The complex was opened in 1939 and contains 3,100 units set on 9.5 acres. The built environment of these blocks is substantially different from the rest of study area because of the tower-in-the-park character of the development. There are large spaces between buildings filled with landscaped areas and few streets. Uniform building character and mixed-use buildings are limited to a central circle along 41st Avenue. The Queensbridge Houses are bounded on the east by 21st Street, which is one of the primary north-south streets in Western Queens. It is the widest north-south street in the Study Area, containing two lanes and a parking lane in either direction north of 43rd Avenue (**Photo 7-20**). An entrance to the 21 Street/Queensbridge subway station (F) is located on 21st Street and 41st Avenue. North of the Development Site, a large parking lot at 41st Avenue and 24th Street is surrounded on all sides by new mixed commercial and residential development (**Photo 7-21**).

Photo 7-9 Queens Plaza North and 29th Street Looking West



6.30.20

Photo 7-10 Queens Plaza North and 27th Street Looking Northeast



6.30.20

Photo 7-11 Queens Plaza North and Crescent Street Looking North



6.30.20

Photo 7-12 Queens Plaza North and 27th Street Looking West



6.30.20

Photo 7-13 Jackson Avenue and Orchard Street Looking Northeast



6.30.20

Photo 7-14 Jackson Avenue and Queens Plaza East Looking Northeast



6.30.20

Photo 7-15 21st Street and 43rd Avenue Looking South



6.30.20

Photo 7-16 21st Street and 44th Avenue Looking East



6.30.20

The study area contains limited open space resources but does contain a large number of greenstreet plazas and medians, particularly along Jackson Avenue and Queens Plaza. The Jackson Avenue median features planted areas with trees and public art, such as "The Sunbather," located at 43rd Avenue (**Photo 7-22**). On Jackson Avenue, greenstreets take the form of planted plazas with benches and tables adjacent to newly constructed towers. Rafferty Triangle, located at the foot of the newly constructed apartment building at 43-25 Hunter Street, is an example of this type of open space carved from the northeast to southwest path that Jackson Avenue cuts through the neighborhood. Directly across 44th Drive from Rafferty Triangle near Court Square is a similar space at the foot of the Citicorp Tower, which is a Privately Owned Public Space or "POPS." This triangular seating and planted area was built by Citibank when it developed its building in the late 1980s. It is one of a handful of POPs in Queens (**Photo 7-23**). The adjacent Citicorp Tower was the tallest

building in Queens from is completion in 1990 until it was surpassed in 2019 by the Skyline Tower across the street. However, its geometric green-glass façade remains a defining feature of the Long Island City skyline.

Visual Resources

One visual resource, the Ed Koch Queensboro Bridge, can be seen from the publicly accessible sidewalks adjacent to the Development Site. The approach structure for the bridge is located directly across Queens Plaza South from the Development Site, rising towards the west before spanning the East River. The base of the bridge structure across from the Development Site between 23rd Street and 24th features detailed, decorative stonework Street is separated from the sidewalk by a planted strip. From the east side of the Development Site, this view is already obstructed by the existing manufacturing and industrial building. From the north and west sides, the view is already partially obstructed by the elevated structure for the 7 Line Subway and a double-decked access ramp to the bridge (**Photo 7-24**).

Photo 7-17 22nd Street and Queens Plaza South Looking South



6.30.20

Photo 7-18 Photo 22nd Street and 41st Avenue Looking Northeast



6.30.20

Photo 7-19 21st Street and 41st Avenue Looking Northwest



6.30.20

Photo 7-20 21st Street and 41st Avenue Looking North



6.30.20

Photo 7-21 24th Street and 41st Avenue Looking Southeast



6.30.20

Photo 7-22 Jackson Avenue and Dutch Kills Street Looking Northeast



6.30.20

Photo 7-23 Jackson Avenue and 44th Drive Looking West



6.30.20

Photo 7-24 Queens Plaza South and Crescent Street Looking West Towards Queensboro Bridge



6.30.20

No-Action Condition

Project Area

As described in **Part 1: Project Description**, the Development Site is currently overbuilt. The ZLDA governing Block 425 that was executed and recorded in 2018 (CRFN 2018000406484) allocates to Lot 1 the existing floor area of the Residential Building, and to Lot 5 the remaining floor area permitted on the Development Site (approximately 26,393 zsf / 27,713 gsf), plus any additional floor area obtained through an upzoning of the Development Site. Because the anticipated upzoning has not yet occurred, the Development Site continues to be technically overbuilt, although all of the floor area of the Existing Industrial Building is vacant and has been since approximately 2000.

As the Development Site is part of a single zoning lot with Lot 1, which is improved with the Residential Building, the remaining floor area available for use on the zoning lot is 26,393 zsf (approximately 27,713 gsf). It is anticipated that the floor area would be used for local retail uses. The upper floors would be demolished to bring the building into compliance with existing zoning. Therefore, the No-Action condition assumed for analysis purposes would include only ground-floor retail. The balance of the building would be demolished to eliminate the non-complying condition.

It should be noted that the total lot area of 42,143 sf and the maximum allowed FAR of 8.0 yields 337,144 zsf of total allowed floor area, less the existing 310,696 zsf Residential Building, yielding 26,448 zsf of unbuilt development potential. However, as the ZLDA governs, use of the higher number would require the discretion of the NYC Department of Buildings and therefore could not be assumed. Therefore, it is conservatively assumed that the No-Action development would be limited to 26,393 zsf (approximately 27,713 gsf), consistent with the ZLDA.

Study Area

As described in **Section 2, Land Use, Zoning and Public Policy**, it is anticipated that seven new developments will be constructed within the quarter-mile Study Area by the analysis year.

Urban Design

The majority of the No-Action developments within the Study Area are new construction hotels and residential buildings with ground floor retail commercial spaces.

One block east of the Development Site is HERO LIC, located at 24-16 Queens Plaza south, which is a project that enlarges and converts an existing commercial building to residential. The enlargement would begin at the roof of the existing building and be set back from the existing footprint. The façade and footprint of the existing portion of the building would not be modified, helping to maintain the current pedestrian experience in the area.

28-07 Jackson Avenue or The Jacx is the largest No-Action development by total square footage and one of few new office developments. The building consists of a single large four-story pedestal with two towers rising from the base. The towers are supported by exposed angled concrete beams. The base of the building provides a consistent street wall along Jackson Avenue, one of the busiest streets in the study area, with significant space for ground-floor retail.

The tallest No-Action development is 23-15 44th Road or Skyline Tower with a proposed height of 778-feet. Like existing large residential buildings and other large No-Action Developments such as The Jacx, Skyline Tower is comprised of a tower on a base. The base of the building occupies the entire lot, providing a street wall that is consistent with adjacent buildings.

Visual Resources

There is one visual resource, the Ed Koch Queensboro Bridge, in the quarter-mile Study Area. As mentioned above, there are eight new developments anticipated to be completed in the Study Area by the analysis year. However, no publicly accessible views of this visual resource

would be obstructed by the planned No-Action developments. Therefore, existing views of the Queensboro Bridge would remain unchanged under the future No-Action condition.

With-Action Condition

Project Area

As described in **Part 1: Project Description**, the reuse and 22-story Proposed Enlargement of the four-story Existing Industrial Building would result in a 26-story commercial building on Lot 5 (see **Figure 7-2**). The Proposed Project would have retail, restaurant, community meeting space, accessory office, accessory bicycle parking, mechanical, and exhibit uses on its first floor and cellar, office use on floors two through four within the envelope of the Existing Industrial Building, and office use on new floors five through 26. The Proposed Development would rise approximately 383 feet from the average base plane (approximately 404 feet to the top of the mechanical bulkhead). The four-story Existing Industrial Building is approximately 68-feet tall and the 22-story enlargement is an additional approximately 315 feet.

Figure 7-2 Illustrative Rendering



In total, the future With-Action condition would result in no changes to the residential or parking uses located on Lot 1. The incremental development on Lot 5 would be comprised of the following: increases of approximately 331,447 gsf of commercial office, approximately 7,254 gsf of restaurant space, approximately 2,410 gsf of community meeting space, and approximately 520 gsf of exhibit space over the future No-Action condition, with a reduction of approximately 6,208 gsf of local retail as compared to No-Action conditions.

Study Area

Urban Design

The Proposed Actions would allow for more floor area and greater height compared to the future No-Action condition. The With-Action condition would be shorter than the adjacent 44-story residential building located on Lot 1.

Figure 7-3 View Facing Northwest Along Queens Plaza South

Existing Conditions



Illustrative With-Action Massing



The With-Action condition would be consistent with both the urban design character of the project site and the Study Area. The 22-story enlargement takes design cues from the existing industrial building, which would provide visual consistency. The concrete and large multi-pane windowed design, which is taken from the Existing Industrial Building, is consistent and connected to both the converted industrial buildings in the Study Area, like the Brewster Building, and the recently constructed glass-clad towers. The concrete portions of the façade of the Existing Industrial Building and the expansion would be painted the same dark gray color (see **Figure 7-3** and **Figure 7-4**).

Figure 7-4 View Facing Northwest Along Queens Plaza South from Crescent Street

Existing Conditions



Illustrative With-Action Massing



In the With-Action condition, the Existing Industrial Building would be maintained in its entirety. In the No-Action condition, the site would continue to be overbuilt, necessitating the demolition of its top two floors, which is not a desirable outcome. The With-Action condition allows for preservation of the entire Existing Industrial Building, including the façade, which would provide consistency with the existing condition of the Development Site. The current sidewalk widths would be maintained. New windows would be added to the ground floor of the existing building to enhance the relationship of the building to the sidewalk and pedestrians (see **Figure 7-5**). Street trees would be provided on the sidewalk surrounding the Project Area in compliance with city regulations.

The Project Area currently does not have any ground floor retail. Buildings within 400-feet of the Project Area are similarly limited in ground floor retail offerings. In the With-Action condition, the ground floor and cellar would contain local retail and restaurant space, which would help to activate and enliven the Project Area. The current ground level frontage to Queens Plaza South is comprised of a concrete façade with two roll-gates and a shaftway. The existing Residential Building similarly has no ground floor retail but has large windows facing the street, with its main entrance and lobby located on 24th Street just north of 42nd Road. In the With-Action condition, the ground floor façade would be activated with large windows, providing transparency where none currently exists. These proposed changes to the ground floor would improve the building's relationship to sidewalk by creating an active and transparent ground floor.

The design of the Proposed Project would be an improvement over No-Action conditions on the site and would be consistent with recent developments in the Study Area. The Proposed Project shares many design characteristics with HERO LIC at 24-16 Queens Plaza South, described in the **No-Action Condition** above. Both repurpose existing four to five story buildings and enlarge them, while also implementing changes to the ground floor that would ultimately improve the character of the area.

Therefore, the Proposed Actions would not result in any adverse impacts to the character of the study area.

Figure 7-5 View North Along 24th Street from 42nd Road

Existing Conditions



Illustrative With-Action Massing



Visual Resources

As mentioned previously, the Ed Koch Queensboro Bridge is the only visual resource in the quarter-mile Study Area with the potential to be impacted by the Proposed Project. As described in the "Existing Conditions" and shown in **Photo 7-2** and **Photo 7-5**, views towards the Queensboro Bridge from the north and west sidewalks of the Project Area are currently obscured by access roadways for the bridge itself and by the elevated structure for the No. 7, N and W lines. **Photo 7-23** further demonstrates that the view towards the bridge from Queens Plaza South one block east of the Project Area is already blocked by the multi-tiered elevated structures.

Although the With-Action condition represents a significant increase in height over the No-Action condition, the Proposed Project is located in an area that contains other buildings of similar size. Further, the Long Island City street grid is irregular, particularly in the area southeast of the Project Area that has the potential for its views of the Queensboro Bridge to be obscured. Due to this irregular street grid and the presence of numerous overpasses and existing towers and planned No-Action developments in the Project Area, no existing views of this visual resource would be obscured by the Proposed Project.

Therefore, the Proposed Project does not have the potential to obstruct views to this visual resource and no further analysis is warranted.

Conclusion

Overall, the With-Action condition would be compatible with the mixed-use character of the Study Area and would be consistent with the surrounding building forms and streetscape under future With-Action conditions. The Proposed Project, which includes a 22-story enlargement to an existing four-story industrial and manufacturing building, would allow for the preservation of the existing building and for its occupation for the first time since it was vacated in about 2000. This represents an improvement over the No-Action condition, which would involve the demolition of the top two floors of the Eagle Electric building with no enlargement.

In addition, the With-Action condition would not result in any significant adverse impacts on publicly accessible views to and from the one visual resource in the Study Area, the Queensboro Bridge. The Project Area is surrounded on three sides by tall, elevated transportation structures, which obscure views from proximate sidewalks. The Project Area is already occupied by large towers that obstruct potential views from the southeast and east toward the bridge. Further there is an irregular street grid in the Study Area south and east of the Project Area. Therefore, the Proposed Actions would not result in a significant adverse impact on urban design and visual resources, and no further analysis is necessary.

8

Hazardous Materials

The goal of this section is to determine whether a proposed action may increase the exposure of people or the environment to hazardous materials, and, if so, whether this increased exposure would result in potential significant public health or environmental impacts.

Introduction

As described 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 semi-volatile organic compounds (VOCs and SVOCs), methane, polychlorinated biphenyls (PCBs), and hazardous wastes (defined as substances that are chemically reactive, ignitable, corrosive or toxic).

The potential for significant impacts from hazardous materials can occur when:

- elevated levels of hazardous materials exist on a site and an action would increase pathways to their exposure;
- an action would introduce new activities or processes using hazardous materials; or
- the action would introduce a population to potential human or environmental exposure from off-site sources.

This section presents the methods and findings of the hazardous materials assessment and identified potential for significant adverse impacts (as defined by the *CEQR Technical*

Manual) with respect to workers, the community and/or the environment that could result during construction and after implementation of the proposed development

Methodology

The potential for hazardous materials was evaluated in a Phase I Environmental Site Assessment (ESA) prepared by Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. (Langan), dated December 30, 2019. The Phase I ESA was prepared in accordance with the American Society for Testing and Materials (ASTM) Practice E1527-13, inclusive of the "All Appropriate Inquiry" requirement amended in the Federal Register on December 30, 2013. The United States Environmental Protection Agency (USEPA) "All Appropriate Inquiry" requirement establishes specific regulatory requirements for conducting appropriate inquiries into the previous ownership, uses, and environmental conditions of a property for the purposes of qualifying for certain landowner liability protections under Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

The goal of a Phase I ESA process is to identify "Recognized Environmental Conditions" (RECs), which means the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property. Per the ASTM Standard, a Phase I ESA reviews a variety of information sources, including current and historic Sanborn Fire Insurance Maps and aerial photographs; state and federal environmental regulatory databases identifying listed sites; and local environmental records. The Phase I ESA summarized herein also included reconnaissance of the Development Site and surrounding neighborhood and interviews with the building manager.

As stated in Practice E1527-13, there may be environmental issues or conditions at the site, which may be requested by the user to be addressed as part of the Phase I ESA, which are not covered within the scope of ASTM Practice E1527-13. These additional environmental issues (or non-scope considerations) could evaluate for the potential present of radon, lead-based paint (LBP), asbestos-containing materials (ACM), wetlands, and mold and water damage.

Preliminary Assessment

Existing Conditions

The Development Site consists of Queens Block 425, Lot 5 and is located on the northern portion of the block bounded by Queens Plaza South, 24th Street, 42nd Road and 23rd Street in the Long Island City neighborhood of Queens. Lot 5 is occupied by the Eagle Electric Building (the "Existing Industrial Building"), which is an industrial and manufacturing building that has been unoccupied since 2000. The building contains 135,361-gross square feet (gsf) spread over four floors.

Phase I Environmental Site Assessment

As indicated above, a Phase I ESA, dated December 30, 2019, was completed by Langan for the Development Site and includes all analyses as specified in ASTM Practice E1527-13.

Based upon information provided in the Phase I ESA, at the time of the Phase I ESA site reconnaissance, the Development Site was improved with a vacant four-story building with a cellar. The vacant building was constructed between 1920 and 1921 and was previously utilized as a garage on the first floor with lacquer spraying on the floors above. Gasoline tanks were also present between 1936 and 1937. According to historical resources, the building was subsequently occupied by an industrial manufacturer that included metal stamping and metals parts manufacturing that occurred between 1947 and 2013. Although, as described above, the building has been vacant since 2000.

The following relevant Development Site information was provided in the Phase I ESA:

- The Development Site is situated at a topographic elevation of approximately 18-feet above mean sea level (amsl). Surrounding topography slopes generally to the west, toward the East River.
- Site-specific groundwater measurements collected at the Development Site ranged from four-to-eight feet below the cellar slab (bcs). The highest recorded groundwater elevations were located on the eastern portions of the Development Site.
- Localized groundwater flow beneath the Development Site is expected to flow west, toward the East River.
- Groundwater in New York City is not used as a potable water source. Potable water is provided to the Development Site by the City of New York.
- Storm drains were observed at the Development Site. No potable wells and/or cisterns were observed.
- Sanitary wastes generated discharge to the municipal sewer system.
- No transformers were observed at the Development Site.
- No storage containers, drums or chemical storage areas were observed at the Development Site.
- A sump is present in the northeastern portion of the building cellar. No sewer ejector pits are present.
- There was no visual evidence of underground or aboveground storage tanks (USTs/ASTs) during the Phase I ESA site reconnaissance. All previous tanks were removed under previous investigation/remediation activities (see below).
- Components of a sub-slab depressurization system (SSDS) is present at the Development site, including two stub-up riser pipes and seven monitoring points in the building cellar. The SSDS was installed as part of ongoing environmental monitoring associated with the Development Site's participation in the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP).
- Two monitoring wells and two soil vapor points are present in the sidewalk fronting along Queens Plaza South. These features were installed as part of investigations associated with the Development Site's participation in the NYSDEC BCP.

- No staining or discolored soils, evidence of leachate or seeps were identified at the Development Site as part of the Phase I ESA site reconnaissance.
- The Development Site is listed as a Resource Conservation and Recovery Act (RCRA) Large Quantity Generator (LQG) under the name "Queens Plaza S Development" associated with off-site transport and disposal of drums of soil generated during a tank decommissioning. Given the listing on the RCRA-LQG, the Development Site was also listed on the Facility Index System (FINDS) database under this name.
- The Development Site is listed as a RCRA LQG in 2006, and a Small Quantity Generator (SQG) in 2007, 2006 and 2004, and a RCRA No Longer Regulated Hazardous Waste Generator (NonGen) in 2006 under the name "Cooper Wiring Devices." These RCRA listings were associated with D-coded ignitable, corrosive, metals and F-coded solvents as well as U-coded wastes. Given the former RCRA listings, the Development Site was also listed on the FINDS database under this name.
- The following NYSDEC spill incidents were identified for the Development Site:
  - Former Metal Manufacturer/Possible Future BCP - Spill No. 13-02812, reported June 14, 2013 following petroleum impacts observed during a subsurface investigation. This spill was remediated under the BCP program (see below) and was closed by the NYSDEC on July 8, 2019.
  - Commercial – Spill No. 16-10898, reported March 6, 2017 following a petroleum release identified following decommissioning and removal of USTs under the BCP. The NYSDEC closed the spill on June 10, 2019.
- The Development Site was listed on the NYSDEC Petroleum Bulk Storage (PBS) under the following listing.
  - 23-10 Queens Plaza South (PBS No. 2-017345) is registered with an inactive status for four (4) 550-gallon USTs and one (1) 10,000-gallon No. 6 fuel oil AST. These tanks were decommissioned in association with NYSDEC BCP activities. An additional three (3) 275-gallon USTs were also decommissioned and removed as part of the NYSDEC BCP activities. The PBS listing was unregulated and closed following tank removal/closure.
- Based upon the age of the building, asbestos-containing material (ACM), lead-based paint (LBP) and polychlorinated biphenyls (PCBs) may be present in building materials.

The site history provided in the Phase I ESA indicates the existing building on the Development Site was formerly utilized for manufacturing purposes. Based on the manufacturing history of the Development Site, several previous environmental studies were conducted on the site that were summarized in Langan's Phase I ESA. Furthermore, the Development Site was enrolled in the NYSDEC BCP to address on-site contamination. These documents are listed as follows:

- Phase I ESA, prepared by ATC Associates, Inc. (ATC), dated August 29, 2012.
- Phase II Environmental Site Investigation, prepared by Cardno ATC, dated November 8, 2012
- Phase I ESA, prepared by Langan, dated February 2014
- Remedial Investigation Report, prepared by Langan, dated June 2015
- Interim Remedial Measure Work Plan, prepared by Langan, dated August 14, 2015

- NYSDEC Spill No. 1610898 Closure Request Letter, prepared by Langan, dated August 2, 2018
- Construction Completion Report, prepared by Langan, dated July 29, 2019
- Remedial Action Work Plan/Alternative Analysis Report, prepared by Langan, dated September 2019
- Site Management Plan, prepared by Langan, dated September 2019

The Development Site is enrolled in the NYSDEC BCP under a Brownfield Cleanup Agreement August 8, 2014 (Site No. C241160) to investigate and remediate releases associated with historical use of the Development Site. Interim Remedial Measures (IRMs) were implemented at the Development Site between April 2016 and July 2019 and included demolishing and removing the cellar slab and former fuel dispenser island, excavating soil to approximately 2.5 feet below the cellar slab, removing petroleum storage tanks and associated piping and soil in the area of the tanks, in-situ treatment of groundwater, constructing a composite cover system composed of a four-inch concrete cellar slab, and installing below grade components of an SSDS. A Remedial Action Work Plan (RAWP)/Alternatives Analysis Report (AAR) proposing a no Furth Action remedy for the Development Site was approved by the NYSDEC in September 2019. A Site Management Plan (SMP) describing engineering and institutional controls implements at the Development Site to manage contamination (i.e., chlorinated volatile organic compounds [CVOCs] in soil vapor and historic fill) remaining at the site was submitted to the NYSDEC in September 2019 and approved in October 2019. A draft Final Engineering Report (FER) was submitted to NYSDEC for review on October 1, 2019. The Phase I ESA indicates the draft FER and Certificate of Completion (CoC) will be issued based on November 2019 consultation with NYSDEC once the final Environmental Easement is executed.

Based upon the results of the Phase I ESA, the following RECs, Historic Recognized Environmental Conditions (HRECs) and Business Environmental Risks (BERs) were identified:

- **REC 1** – Historical Use of and Documented Subsurface Impacts at the Development Site

  Historical Use of the Development Site included a garage with gasoline tanks, lacquer spraying, petroleum storage and industrial manufacturing. Hazardous wastes were generated including various heavy metals (cadmium, lead, barium and mercury) and ignitable wastes. The Development Site was identified on various federal RCRA and FINDS databases. Additionally, the Development Site was identified on the PBS database for previously removed USTs and a No. 6 fuel oil AST. Previous environmental investigations at the Development Site identified petroleum-like impacts to soil and CVOC-impacts to groundwater and soil vapor at the Development Site. However, given the implementation of an approved SMP under the NYSDEC BCP, and the issuance and pending approval of the FER, REC 1 was classified as a Controlled Recognized Environmental Condition (CREC) under the ASTM standard.
- **HREC 1** – Closed Petroleum Spills at the Development Site

  NYSDEC Spill No. 13-02812 was reported on June 14, 2013 following observation of petroleum impacts during subsurface investigations. NYSDEC Spill No. 16-10898 was reported on March6, 2018 following a petroleum release identified following decommissioning and removal of the USTs. These spills were remediated under NYSDEC BCP protocols and are therefore considered HRECs.

› **BER 1** – Historic Fill Material

Historic fill material is present at the Development Site. Engineering controls consisting of a composite cover and institutional controls consisting of an Environmental Easement and requirement for future disturbing remaining contaminated material be conducted in accordance with the SMP were implemented/established for the Development Site. These requirements are summarized in the SMP. Historic fill material is considered a regulated solid waste in New York State.

Based on the Development Site's enrollment in the BCP and the presence of an SMP with Engineering/Institutional Controls (ECs/ICs), all future development at the Site would be subject to the SMP and ECs/ICs.

Future No-Action Condition

The Development Site is currently overbuilt. The Zoning Lot Development and Easement Agreement (ZLDA) governing Block 425 was executed and recorded in 2018 (CRFN 2018000406484), allocates to Lot 1 the existing floor area of the Residential Building, and to Lot 5 the remaining floor area permitted on the Development Site (approximately 26,393 zsf/ 27,713 gsf), plus any additional floor area obtained through an upzoning of the Development Site. Because the anticipated upzoning has not yet occurred, the Development Site continues to be technically overbuilt, although all of the floor area of the Existing Industrial Building is vacant and has been since approximately 2000.

As the Development Site is part of a single zoning lot with Lot 1, which is improved with the Residential Building, the remaining floor area available for use on the zoning lot is 26,393 zsf (approximately 27,713 gsf). It is anticipated that the floor area would be used for local retail uses. The upper floors would be demolished to bring the building into compliance with existing zoning. Therefore, the No-Action condition assumed for analysis purposes would include only ground-floor retail. The balance of the building would be demolished to eliminate the non-complying condition.

It should be noted that the total lot area of 42,143 sf and the maximum allowed FAR of 8.0 yields 337,144 zsf of total allowed floor area, less the existing 310,696 zsf Residential Building, yielding 26,448 zsf of unbuilt development potential. However, as the ZLDA governs, use of the higher number would require the discretion of the NYC Department of Buildings and therefore could not be assumed. Therefore, it is conservatively assumed that the No-Action development would be limited to 26,393 zsf (approximately 27,713 gsf), consistent with the ZLDA.

Based upon the previous remedial measures implemented and requirements of the SMP under the NYSDEC BCP agreements, any future buildout of the Development Site would be subject to the requirements stipulated in the SMP, including the ECs and ICs placed on the site requiring proper site management should any remaining contaminants be disturbed at the Development Site. Therefore, compliance with the SMP would be followed for the future No-Action development.

In addition to the above, regulatory requirements pertaining to building materials containing ACM, LBP and/or polychlorinated biphenyls (PCBs) would be addressed under standard demolition procedures. With the implementation of the above measures, the With-Action

condition would not result in any significant adverse impacts with respect to hazardous materials.

Future With-Action Condition

Under the future With-Action condition, a 22-story enlargement and adaptive reuse of the four-story Existing Industrial Building would result in a 26-story commercial building on the Development Site. The future buildout would have retail, restaurant, community meeting space, accessory office, accessory bike parking space, mechanical, and exhibit uses on its first floor and cellar, office use on floors two through four within the envelope of the Existing Industrial Building, and office use on new floors five through 26. Based upon the previous remedial measures implemented and requirements of the SMP under the NYSDEC BCP agreements, any future buildout of the Development Site would be subject to the requirements stipulated in the SMP, including the ECs and ICs placed on the site requiring proper site management should any remaining contaminants be disturbed at the Development Site. Therefore, compliance with the SMP would be followed for the future development. Furthermore, on November 3, 2020, NYSDEC issued a Certificate of Completion for satisfactory completion of the remedial program (see **Appendix C**).

In addition to the above, regulatory requirements pertaining to building materials containing ACM, LBP and/or PCBs would be addressed under standard demolition procedures. With the implementation of the above measures, the With-Action condition would not result in any significant adverse impacts with respect to hazardous materials.

Conclusion

To reduce the potential for exposure to future site occupants under the Proposed Actions, any future buildout of the Development Site would be subject to the requirements stipulated in the NYSDEC BCP approved SMP, including the ECs and ICs placed on the site requiring proper site management should any remaining contaminants be disturbed at the Development Site. Therefore, compliance with the SMP would be followed for the future development.

In addition to the above, regulatory requirements pertaining to building materials containing ACM, LBP and/or PCBs would be addressed under standard demolition/renovation procedures. With the implementation of the above measures, there would be no significant adverse impacts with respect to hazardous materials.

9

Water and Sewer Infrastructure

This chapter evaluates the potential for the Proposed Actions in connection with the Proposed Project to result in significant adverse impacts on the City's water supply, as well as its wastewater and stormwater conveyance and treatment infrastructure.

Introduction

The Applicant proposes to redevelop the Development Site with a 22-story enlargement of the existing Eagle Electric manufacturing building, resulting in a 26-story commercial office building with ground- and cellar-level retail spaces, a restaurant, community meeting space, and exhibit space. The proposed building enlargement would provide the building with approximately 363,136[1] gross-square-feet (gsf) of commercial space. Of the total commercial space, approximately 21,505 gsf would be local retail which is proposed on the ground floor and cellar level, 7,254 gsf would be restaurant space which is proposed on the ground floor and fifth floor, 2,410 gsf would be community meeting space, 520 gsf would be exhibit space documenting the former Eagle Electric manufacturing business, and approximately 331,447 gsf would be commercial office.

According to the *CEQR Technical Manual*, discretionary actions that would increase density or change drainage conditions may warrant a water and sewer infrastructure analysis. Specifically, development that would result in an exceptionally large demand for water (more than a million gallons per day (mgd)) or that is located in an area that experiences low water

[1] For analysis purposes community space and exhibit space were not included in the calculations for water consumption and wastewater generation.

pressure require an analysis of potential impacts on the water supply system. Additionally, development located in a combined sewer area exceeding incremental development thresholds (above the predicted No-Action condition) of 400 residential units or 150,000 square feet (sf) of commercial, public facility, and institution and/or community facility space or more in Queens.

The Proposed Actions would result in a total daily water demand of approximately 0.19 mgd; therefore, no water supply system analysis is warranted. The Proposed Actions would result in an incremental net increase of 335,423 gsf of commercial space in a combined sewer area as compared with the No-Action condition. Therefore, an analysis of the Proposed Actions' potential impacts on the City's wastewater and stormwater conveyance and treatment system is provided in this chapter.

Methodology

This analysis follows the *CEQR Technical Manual* guidelines that recommend a preliminary water analysis be completed if a project would result in an exceptionally large demand of water (over one million gpd) or is located in an area that experiences low water pressure (i.e., in an area at the end of the water supply distribution system such as the Rockaway Peninsula or Coney Island). The Development Site is not located in an area that experiences low water pressure, and the Proposed Project would generate a water demand of 192,385 gpd (an increase of 89,920 gpd compared with the No-Action condition). Therefore, the Proposed Project does not meet the *CEQR Technical Manual* threshold requiring a detailed analysis. It is expected that there would be adequate water service to meet the incremental water demand and that there would be no significant adverse impacts on the City's water supply.

As described above, the Development Site is located in a combined sewer area and the Proposed Project would represent an increase of approximately 335,423 gsf of commercial space as compared to the No-Action condition, which exceeds the *CEQR Technical Manual* threshold of 150,000 square feet. Therefore, following the guidelines of the *CEQR Technical Manual*, an analysis of the Proposed Project's potential impacts on the wastewater and stormwater conveyance and treatments system was performed. Existing and future water demand and sanitary sewage generation are calculated based on use rates set by the *CEQR Technical Manual*. The DEP Flow Volume Calculation Matrix is then used to calculate the overall combined sanitary sewage and stormwater runoff volume discharged to the combined sewer system for four rainfall volume scenarios with varying durations. The ability of the City's sewer infrastructure to handle the anticipated demand from the Proposed Project is assessed by estimating existing sewage generation rates, and then comparing these existing rates with the No-Action and With-Action conditions, per *CEQR Technical Manual* methodology.

Existing Conditions

The Project Area consists of Queens Block 425, Lots 1 and 5 and is bounded by Queens Plaza South to the north, 42nd Road to the south, 24th Street to the east and 23rd Street to the west. Lot 1 has approximately 187 feet of frontage on 42nd Road and 80 feet of frontage on each of 23rd and 24th Streets. Lot 5 (the Development Site) has approximately 137 feet of frontage on 23rd Street, 187 feet of frontage on Queens Plaza South and 155 feet of frontage on 24th Street. Lot 1 is currently improved with a 44-story residential building and

Lot 5 is currently occupied by the four-story former Eagle Electric Building, which has been vacant since 2000.

Water Supply

The New York City water supply system consists of a network of reservoirs, lakes, and aqueducts extending north into the Catskill region, and a grid of underground distribution mains that distributes water within the City. As mentioned earlier, approximately 1.3 billion gpd of water are consumed by New York City through this water supply system.

Most of New York City obtains water from three surface water supply systems operated by DEP – Delaware, Catskill, and Croton. The watersheds of the three systems cover almost 2,000 square miles, with 19 reservoirs and three control lakes, which have a combined storage capacity of approximately 550 billion gallons.

Two of the three surface water systems, the Delaware and Catskill systems, collect water from watershed areas in the Catskill Mountains and deliver it to the Hillview Reservoir in Yonkers. From there, it is distributed to the City through three tunnels: City Tunnel 1, which runs through the Bronx and Manhattan to Brooklyn; City Tunnel 2, which goes through the Bronx, Queens, and Brooklyn (and from there through the Richmond Tunnel to Staten Island); and City Tunnel 3 (Stage 1), which goes through the Bronx and Manhattan and ends in Queens. Stage 2 of City Tunnel 3 is currently under construction in Queens and Brooklyn.

The third surface water system, the Croton system, collects water from watershed areas in Dutchess, Putnam, and Westchester Counties and delivers it to the Jerome Park Reservoir in the Bronx. From there, it is distributed to the Bronx and Manhattan through the New Croton Aqueduct.

Once in the City, the aqueducts distribute water into a network of water mains. Water mains up to 96 inches in diameter feed smaller mains, such as 20, 12, and 8-inch mains, which deliver water to their final destination, including to fire hydrants along many of the City's streets. Nearly all the water reaches consumers by gravity alone, with roughly four percent (generally located at the outer limits of the system where in-line pressure is lowest, at high elevations, or at pressure extremity such as Far Rockaway) being pumped to its final destination. Water pressure throughout the City's water supply system is monitored and controlled by pressure regulators.

It is estimated that the existing uses on the Development Site consume approximately 91,103 gpd as shown in **Table 9-1**.

Table 9-1 Existing Water Consumption and Sewage Generation in the Project Area

Land Use	Area (sf)	Dwelling Units	Domestic Water/Wastewater Generation (gpd)	Air Conditioning (gpd)
Residential (Lot 1)	390,824	391	91,103	0
Vacant Building (Lot 5)	135,361	0	0	0
Water Consumption Subtotals			91,103	0
Sewage Generation Subtotal			91,103	
Total Water Consumption			91,103	
Total Wastewater Generation			91,103	

Water consumption and wastewater generation rates were derived from the *CEQR Technical Manual* and are provided in **Table 9-2**.

Table 9-2 Water Consumption and Wastewater Generation Rates

	Rate			
Land Use	Domestic	Units	Air Conditioning	Units
Residential	100	gpd/person	0.00	gpd/sf
Retail	0.24	gpd/sf	0.17	gpd/sf
Commercial Office	0.10	gpd/sf	0.17	gpd/sf

Notes: Consumption rates obtained from the *2021 CEQR Technical Manual* Table 13-2 "Water Usage and Sewage Generation Rates for Use in Impact Assessment"

Conveyance System

The Development Site is located in a part of New York City served by a combined sewer system that collects both sanitary sewage and stormwater. In periods of dry weather, the combined sewers (sized to convey an amount of sanitary sewage that is based on density levels according to zoning regulations) located in the adjacent streets convey only sanitary sewage. An existing 12-inch diameter sewer line begins in front of the Development Site on Queens Plaza South and runs westbound. This line feeds into an 18-inch diameter sewer line on 23rd and runs south past 42nd Road. At the Queensboro Bridge Ramp overpass, the 18-inch sewer line redirects towards 24th Street and merges with an 18-inch sewer line that runs down 24th Street in a southbound direction. After the two sewer lines intersect, the pipe increases to 24-inches in diameter.

At the Bowery Bay WWTP, wastewater is fully treated by physical and biological processes before it is discharged into the East River. 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). Since the volume of flow to a WWTP affects the level of treatment a plant can provide, the maximum permitted capacity for the Bowery Bay WWTP is 150 million gallons per day (mgd). During and immediately after wet weather, combined sewers can experience a much larger flow due to stormwater runoff collection. To control flooding at the Bowery

Bay WWTP, the regulators built into the system allow only approximately two times the amount of design dry weather flow into the interceptors. The interceptor then takes the allowable flow to the WWTP, while the excess flow is discharged to the nearest waterbody as Combined Sewer Outflow (CSO). As shown in Error! Reference source not found., the Development Site is located within one CSO drainage area: in wet weather, sanitary flow and stormwater runoff is conveyed to CSO outfall BB-024, located in Long Island City.

Sanitary Flows

For purposes of analysis, the amount of sanitary sewage is estimated as all water demand generated by the existing uses on the Development Site except water used by air conditioning, which is typically not discharged to the sewer system. The existing on-site buildings generate an estimated 91,103 gpd of daily sanitary sewage with a total water demand of 91,103 gpd, as shown in **Table 9-1**.

Stormwater Flows

The Project Area consists of a 44-story residential building (1 QPS Tower) and an unoccupied four-story 135,361-gsf industrial and manufacturing building. The surface cover type on the Development Site in the Existing Condition consists entirely of building rooftop. **Table 9-3** summarizes the surfaces and surface areas, as well as the weighted runoff coefficient (the fraction of precipitation that becomes surface runoff for each surface type).

Table 9-3 Existing Surface Coverage

Affected CSO Outfall	Surface Type	Roof	Pavement and Walkways	Other	Grass and Soft Scope	Total
BB-024	Area (%)	100%	0%	0%	0%	100%
	Surface Area (sf)	42,143	0	0	0	42,143
	Runoff Coefficient[1]	1.00	0.85	0.85	0.20	-

Source: DCP Building Footprint; aerial photographs
Notes:
[1] Runoff coefficients for each surface type as per DEP

No-Action Condition

As described in **Section 1, Project Description**, absent the Proposed Actions, the top two floors of the existing building would be demolished so that the Development Site would comply with the available FAR under existing zoning. This would result in a No-Action development consisting of 390,824 gsf of residential space on Lot 1 and 27,713 gsf of retail space remaining in the Eagle Electric manufacturing building on the Development Site (Lot 5).

Sanitary Flows

Table 9-4 summarizes the water and sewage generation in the Project Area under future No-Action conditions. The on-site buildings are expected to generate an estimated 97,754

Figure 9-1 DEP Subcatchment Areas



gpd of daily sanitary sewage with a total water demand of 102,465 gpd under future No-Action conditions, based on CEQR rates for wastewater generation and water consumption from **Table 9-2**.

Table 9-4 No-Action Water Consumption and Sewage Generation

Land Use	Area (sf)	Dwelling Units	Domestic Water/Wastewater Generation (gpd)	Air Conditioning (gpd)
Residential (Lot 1)	390,824	391	91,103	-
Retail (Lot 5)	27,713	-	6,651	4,711
Water Consumption Subtotals			97,754	4,711
Sewage Generation Subtotal			97,754	
Total Water Consumption			102,465	
Total Wastewater Consumption			97,754	

When compared to the existing conditions (shown in **Table 9-1**) where the Lot 5 building is assumed to be vacant, the total water consumption is expected to increase from 91,103 gpd to 102,465 gpd, an increase of 11,362 gpd (assumes re-activation of Lot 5 with local retail uses). Wastewater consumption is expected to increase from 91,103 gpd to 97,754 gpd, an increase of about 6,651 gpd.

Stormwater Flows

Since the No-Action building would occupy the full Development Site, the surface areas and the weighted runoff coefficient would remain as shown in **Table 9-3.**

With-Action Condition

The With-Action condition would contain 331,447 gsf more office space, 6,208 gsf less retail space, 7,254 gsf more restaurant space, 2,410 gsf more community meeting space, and 520 gsf more of exhibit space than the No-Action condition and would therefore consume more water and generate more sewage. The results of the analysis of the With-Action condition on water and sewer infrastructure is described below.

Sanitary Flows

As shown on **Table 9-5**, the With-Action condition is expected to generate 131,150 gpd of daily sanitary sewage with a total water demand of 192,385 gpd.

Table 9-5 With-Action Water Consumption and Sewage Generation

Land Use	Area (sf)	Dwelling Units	Domestic Water/Wastewater Generation (gpd)	Air Conditioning (gpd)
Residential (Lot 1)	390,824	391	91,103	-
Retail (Lot 5)	28,759[1]	-	6,902	4,889
Commercial Office (Lot 5)	331,447	-	33,145	56,346
Water Consumption Subtotals			131,150	61,235
Sewage Generation Subtotal			131,150	
Total Water Consumption			192,385	
Total Wastewater Consumption			131,150	

Notes:

[1] Includes 7,254 sf of restaurant

The incremental sanitary sewage generated by the With-Action condition, as compared with the No-Action development, would be 33,396 gpd. This incremental increase in sewage generation would be approximately 0.02 percent of the Bowery Bay WWTP capacity of 150 mgd. In addition, in accordance with the New York City Plumbing Code (Local Law 33 of 2007), the Proposed Project would be required to utilize low-flow plumbing fixtures, which would reduce sanitary flows to the plant. Therefore, the With-Action condition would not result in a significant adverse impact to the City's sanitary sewage conveyance and treatment system.

Stormwater Flows

The With-Action condition would not feature any adjustments to the sidewalk pavements or overall building footprint; therefore, the surface coverage from **Table 9-3** would remain the same as No-Action conditions.

The DEP Flow Volume Calculation Matrix was completed for the existing conditions and the With-Action condition. The calculations from the Flow Volume Calculation Matrix help to determine the change in wastewater flow volumes to the combined sewer system from existing With-Action conditions and include four rainfall volume scenarios with varying durations. The summary tables of the Flow Volume Calculation Matrix are included in **Table 9-6** and **Table 9-7** for Subcatchment Area BB-024.

Table 9-6 DEP Flow Volume Matrix – Existing Conditions for BB-024

Rainfall (inches)[1]	Duration (hours)	Total Area (acres)[2]	Weighted Runoff Coefficient[3]	Stormwater Runoff (MG)[4]	Sanitary to CSS (MG)[5]	Total Volume to CSS (MG)
0.00	3.80	0.97	1.0	0.000	0.014	0.014
0.40	3.80	0.97	1.0	0.010	0.014	0.024
1.20	11.30	0.97	1.0	0.030	0.043	0.073
2.50	19.50	0.97	1.0	0.070	0.074	0.144

Notes:
[1] Storm event rainfalls per NYCDEP Volume Calculation Matrix.
[2] Total surface area onsite for Projected Development sites within subcatchment area.
[3] Runoff coefficients for surface type area as per NYCDEP.
[4] Stormwater runoff derived from NYCDEP Volume Calculation Matrix.
[5] Sanitary volumes derived using methodology and consumption rates per the *2021 CEQR Technical Manual*.
CSS = Combined Sewer System
MG = million gallons

Table 9-7 DEP Flow Volume Matrix – With-Action Condition for BB-024

Rainfall (inches)[1]	Duration (hours)	Total Area (acres)[2]	Weighted Runoff Coefficient[3]	Stormwater Runoff (MG)[4]	Sanitary to CSS (MG)[5]	Total Volume to CSS (MG)[6]
0.00	3.80	0.97	1.0	0.000	0.021	0.021
0.40	3.80	0.97	1.0	0.010	0.021	0.031
1.20	11.30	0.97	1.0	0.030	0.062	0.092
2.50	19.50	0.97	1.0	0.070	0.107	0.177

Notes:
[1] Storm event rainfalls per NYCDEP Volume Calculation Matrix.
[2] Total surface area onsite for Projected Development sites within subcatchment area.
[3] Runoff coefficients for surface type area as per NYCDEP.
[4] Stormwater runoff derived from NYCDEP Volume Calculation Matrix.
[5] Sanitary volumes derived using methodology and consumption rates per the *2021 CEQR Technical Manual*.
CSS = Combined Sewer System
MG = million gallons

As shown in **Table 9-6**, depending on the rainfall volume and duration, the total volume to the combined sewer system from the Project Area under existing conditions could be between approximately 0.014 and 0.144 mgd. As shown in **Table 9-7**, for the With-Action condition, the total combined sewer system could be between approximately 0.021 and 0.177 mgd to Bowery Bay subcatchment area BB-024.

Table 9-8 compares the estimated combined flows (stormwater runoff and sanitary flows) to the combined sewer system under existing and With-Action conditions using the DEP Flow Volume Calculation Matrix. As shown in the table, depending on the rainfall volume and duration, the With-Action increment to the combined sewer system could be between 0.007 and 0.033 mgd, a range of approximately 22.9 percent to 50 percent. Typically, an increase of 5.0 percent or more at the site over existing conditions would warrant further review by DEP, in which the implementation of BMPs would help mitigate that increase.

Table 9-8 Existing and With-Action Combined Stormwater Runoff and Wastewater Generation

Rainfall (inches)[1]	Duration (hours)	Total Volume to Combined Sewer System (MG)			Percentage Change (%)
		Existing Conditions	With-Action Condition	Increment	
0.00	3.80	0.014	0.021	0.007	50.0%
0.40	3.80	0.024	0.031	0.007	29.2%
1.20	11.30	0.073	0.092	0.019	26.0%
2.50	19.50	0.144	0.177	0.033	22.9%

The Flow Volume Matrix calculations do not reflect the use of any sanitary and stormwater source control BMPs to reduce sanitary flow and stormwater runoff volumes to the combined sewer system. As noted above, the Proposed Project would incorporate low-flow plumbing fixtures to reduce sanitary flow in accordance with the New York City Plumbing Code. In addition, stormwater BMPs would be required as part of the DEP site connection approval process in order to bring the building into compliance with the required stormwater release rate. Based on the DEP Guidelines for the Criteria for Detention Facility Design, dated November 19, 2012, for new developments, the required stormwater release rate for the Proposed Project would be the greater of 0.25 cubic feet per second (cfs) or 10 percent of the allowable flow, unless the allowable flow is less than 0.25 cfs, in which case the stormwater release rate is equal to the allowable flow.[2] To achieve this release rate, stormwater could be managed by utilizing one or a combination of detention or infiltration techniques identified in the *NYC Green Infrastructure Plan*. Green technologies, such as green and blue roofs, subsurface detention and infiltration, and permeable pavement, could be implemented to retain or release stormwater with slowed discharge rates to control peak runoff rates. Specific BMP methods will be determined with further refinement of the building design and in consultation with DEP.

The incorporation of the appropriate sanitary flow and stormwater source control BMPs that would be required as part of the site connection approval process, with the review and approval of DEP, would reduce the overall volume of sanitary sewer discharge and stormwater runoff as well as the peak stormwater runoff rate from the Development Site. Sewer conveyance near the Development Site and the treatment capacity at the Bowery Bay WWTP is enough to handle wastewater flow resulting from the Proposed Project. Therefore, there would be no significant adverse impacts on wastewater treatment or stormwater conveyance infrastructure.

Conclusions

The Proposed Actions would not result in a significant adverse impact on the City's water and sewer infrastructure. Based on the methodology set forth in the *CEQR Technical Manual*, although the Proposed Actions would create new demand for water and treatment of sewage, in comparison to the No-Action condition, the incremental increases would be well

[2] Source: https://www1.nyc.gov/assets/dep/downloads/pdf/about/water-and-sewer-forms/criteria-determination-detention-facility-volume.pdf

within the capacity of the City's systems, and the impacts would not be considered significant or adverse.

Water Supply

New York City consumes approximately 1.3 billion gallons of water per day from a reservoir system with a total storage capacity of approximately 550 billion gallons.[3, 4] The total water usage as a result of the Proposed Actions is calculated to equal approximately 0.19 mgd, which is an increment of approximately 0.09 mgd (or 88 percent), compared to the No-Action condition projected demand of approximately 0.10 mgd. The total water usage would result in less than 1 mgd, therefore the Proposed Actions would not have a significant adverse impact on the City's water supply or system water pressure.

Sanitary Sewage

Sanitary sewage generated by the Proposed Actions would discharge to the Bowery Bay wastewater treatment plant (WWTP), which has a State Pollutant Discharge Elimination System (SPDES)-permitted dry weather flow capacity of 150 mgd.[5] The average monthly flow to Bowery Bay WWTP over a 12-month period is 104 mgd.[6] The Proposed Actions have the potential to result in a total generation of 0.13 mgd of sanitary sewage discharge, an increment of 0.03 mgd (or 34 percent) over the No-Action total sewage generation, which is estimated at 0.10 mgd. This incremental increase in sanitary flow would represent approximately 0.02 percent of the Bowery Bay WWTP's SPDES-permitted capacity. As the projected increase in sanitary sewage would not cause the Bowery Bay WWTP to exceed its operational capacity or SPDES-permitted capacity, the Proposed Actions would not result in significant adverse impacts to sanitary sewage conveyance and treatment.

Stormwater Drainage and Management

The Project Area is served by a combined sewer system, collecting both dry-weather wastewater and stormwater. The Proposed Actions would not result in an increase in impervious surfaces as compared to Existing Conditions and therefore is not expected to generate additional stormwater runoff. As noted previously, the incremental increase in sanitary flow is well within the capacity of the existing system and would not result in significant adverse impacts to the City's sewer infrastructure. Additionally, due to the New York City Department of Environmental Protection (DEP)'s current stormwater management requirements, stormwater runoff from new developments is expected to substantially decrease as compared to Existing Conditions. Based on the analysis pursuant to the *CEQR Technical Manual*, with stormwater Best Management Practices (BMPs) implemented on the Project Site by the Applicant to reduce runoff, it is anticipated that the Proposed Actions would not result in significant adverse impacts on stormwater conveyance and treatment infrastructure.

[3] Source: New York City's Wastewater Treatment System, New York City Department of Environmental Protection; https://www1.nyc.gov/site/dep/water/

[4] Source: *2021 CEQR Technical Manual.*

[5] Source: New York City's Wastewater Treatment System, New York City Department of Environmental Protection.

[6] 12-month period through February 2020 (represents the latest 12 months of data pre-COVID-19).

10

Transportation

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

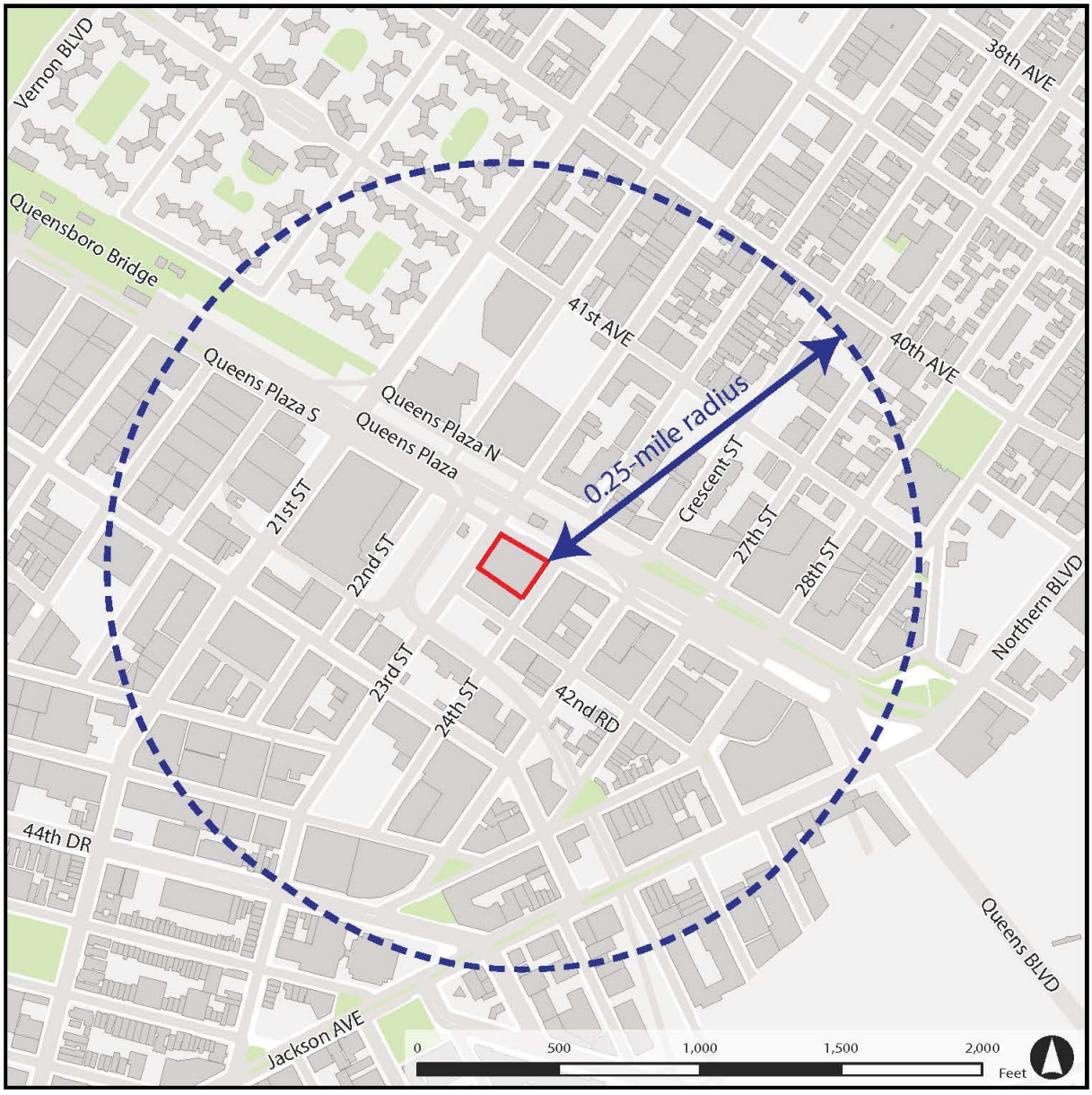
Introduction

This chapter examines the potential traffic, transit, pedestrian, safety, and parking impacts associated with the proposed redevelopment of a site located at 23-10 Queens Plaza South (Block 425, Lots 1 & 5) in Queens Community District (CD) 2 (the "Project Site"), based on guidelines provided in the *City Environmental Quality Review (CEQR) Technical Manual*.

As described in **Part I: Project Description**, the Proposed Actions would facilitate a commercial development comprised of approximately 333,857 gross square feet (gsf) of office use (includes commercial office and community meeting space for conservative analysis purposes), approximately 21,505 gsf of local retail space, approximately 520 gsf of exhibit space, and approximately 7,254 gsf of restaurant space ("Proposed Project"). It is anticipated that the Proposed Project would be completed by 2024.

The Project Site is bounded by Queens Plaza South to the north, 23rd Street to the west, 42nd Road to the south, and 24th Street to the east, as shown in **Figure 10-1**. The study area includes six intersections (three signalized and three unsignalized), ten subway elements, and 11 pedestrian elements. Three peak hours were considered for the transportation analysis: Weekday AM, Weekday Midday (MD), and Weekday PM.

Figure 10-1 Site Location Map



Source: 2020 PLUTO, NYCDCP

Project Site

0.25-Mile Radius

SITE LOCATION MAP

Figure 10-1

23-10 Queens Plaza South Rezoning EAS

Source: 2020 PLUTO, NYCDCP

Screening Methodology

Transportation impact analysis methodologies for proposed projects in New York City (NYC) are defined in the *CEQR Technical Manual*, which outlines a two-tiered screening process. The Level 1 screening assessment includes a trip generation analysis to determine whether the Proposed Project would result in more than 50 vehicle trips, 200 subway/rail or bus riders, or 200 pedestrian trips in a peak hour. The Level 2 screening is a trip assignment review that identifies intersections with 50 or more vehicle trips, pedestrian elements with 200 or more pedestrian trips, 50 bus trips in a single direction on a single route, or 200 passengers at a subway station or line during any analysis peak hour which would require detailed analyses. The results of the screening analysis are described below.

Traffic

According to the criteria specified in the *CEQR Technical Manual*, traffic analyses are generally required at intersections where more than 50 new vehicle trips would be generated by a proposed project during an individual peak hour based on the results of the vehicle trip assignment. It was determined that six individual intersections exceed this threshold during the following three critical vehicular peak hours, determined based on a review of turning movement counts and vehicle classification counts collected in November 2019, November 2020, and January 2021:

- Weekday AM peak hour: 7:00 AM to 8:00 AM
- Weekday MD peak hour: 12:00 PM to 1:00 PM
- Weekday PM peak hour: 4:30 PM to 5:30 PM

Transit

The transit criteria specified in the *CEQR Technical Manual* and thresholds established by NYC Transit/ Metropolitan Transportation Authority (NYCT/MTA) were used to determine which subway/rail and bus routes in the study area would be analyzed. According to the criteria, if a proposed project is projected to result in fewer than 200 peak hour subway/rail passengers assigned to a single subway station or on a single subway line or 50 bus passengers assigned to a single bus line (in one direction), further transit analyses are not typically required as a proposed project is considered unlikely to create a significant transit impact.

Subway Transit

It was determined that the number of new subway trips generated by the Proposed Project would exceed the *CEQR Technical Manual* thresholds at Queensboro Plaza Station during the Weekday AM and Weekday PM peak hours; therefore, analyses of subway station elements were conducted. Based on information provided by NYCT for the station element assignment, a detailed subway analysis was performed for ten subway elements during the Weekday AM and Weekday PM peak hours.

Bus Transit

It was determined that the number of new bus trips generated by the Proposed Project would not exceed the *CEQR Technical Manual* thresholds during any of the peak hours; therefore, analyses of bus routes were not conducted.

Pedestrians

Based on criteria specified in the *CEQR Technical Manual*, projected pedestrian volume increases of more than 200 pedestrians per hour at any sidewalk, crosswalk, or intersection corner would be considered a location with potential for significant impacts and would require a detailed analysis. As the Proposed Project would generate more than 200 pedestrians per hour at 11 locations within the study area during any of the peak hours based on a combination of walk, subway, and bus trips, a detailed pedestrian analysis was conducted for those locations during the following three pedestrian peak hours:

- Weekday AM (8:00 AM to 9:00 AM)
- Weekday MD (12:00 PM to 1:00 PM)
- Weekday PM (5:00 PM to 6:00 PM)

Parking Conditions

According to the *CEQR Technical Manual*, if the threshold for a detailed traffic analysis is met, it is likely that a parking assessment is warranted. As the Proposed Project is expected to generate more than 50 new vehicle trips at an individual intersection during any of the peak hours, a detailed traffic analysis was conducted, and, as such, a parking assessment was conducted. A parking analysis identifies the extent to which on-street and off-street parking is available and utilized under the Existing, No-Action, and With-Action conditions.

Vehicular and Pedestrian Safety Assessment

An evaluation of traffic safety is necessary for locations within the study area that have been identified as high-crash locations as specified in the *CEQR Technical Manual*. These locations are defined as a location along a Vision Zero priority corridor/intersection or those with more than 48 total reportable and non-reportable crashes or five or more pedestrian/bicycle injury crashes that occur during any consecutive 12 months of the most recent three-year period for which data is available. Crash histories are reviewed to determine whether projected vehicular and pedestrian traffic would further impact safety as these locations or whether existing unsafety conditions could adversely impact the flow of the projected new vehicular or pedestrian/bicycle trips.

Study Area

To assess the potential transportation impacts associated with the Proposed Project, the study area was defined based on principal access routes to and from the Project Site, traffic conditions in the surrounding area, and key intersections and pedestrian elements likely to be affected by trips generated by the Proposed Project. In total, three signalized intersections and three unsignalized intersections were identified for detailed vehicular analyses, ten

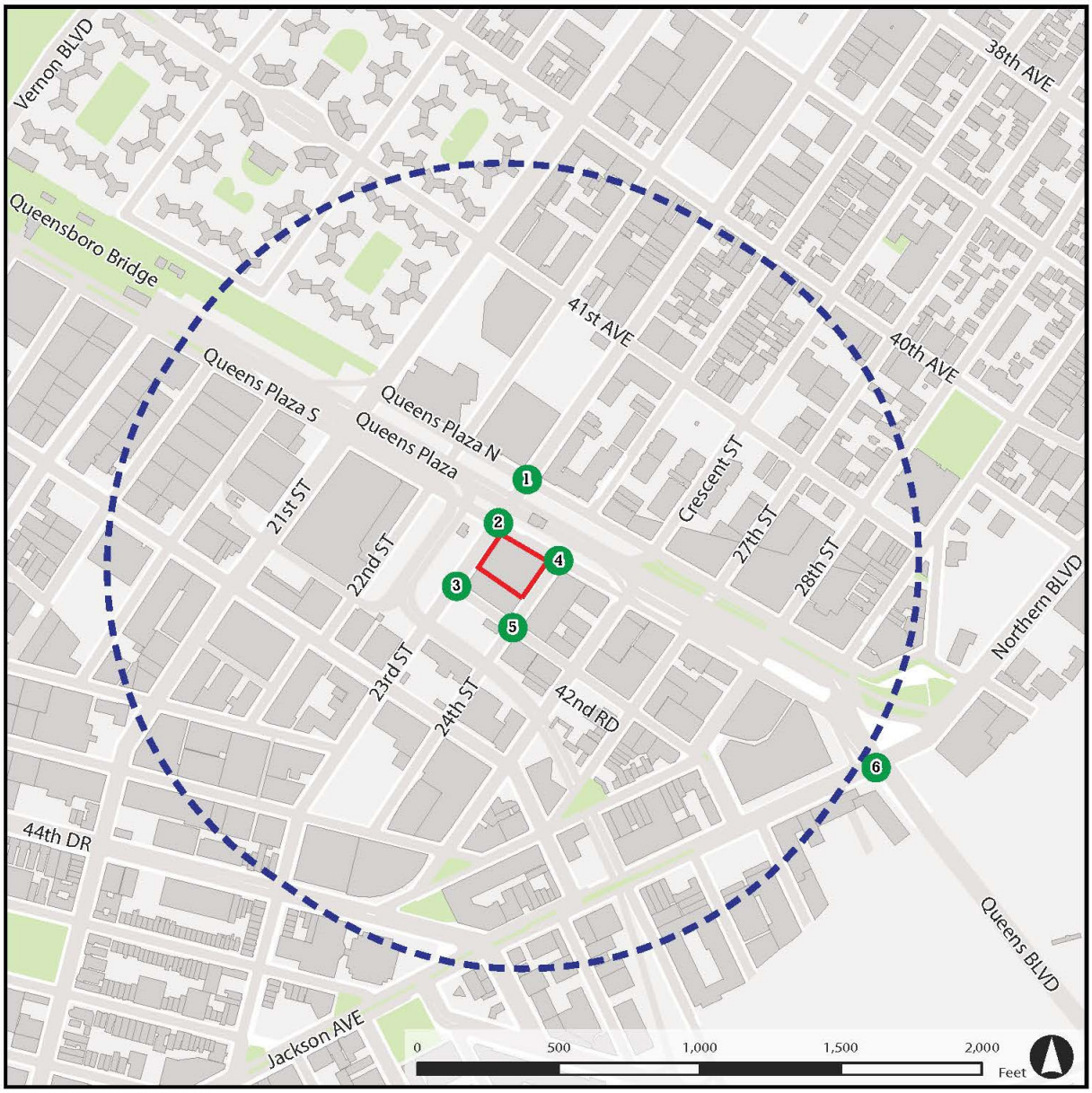
subway elements were identified for detailed transit analysis, and 11 pedestrian elements were identified for detailed pedestrian analysis. The safety assessment was conducted for all vehicular and pedestrian study locations.

Study Area Intersection and Roadway Characteristics

As shown in **Figure 10-2**, the study area consists of the following three signalized intersections and three unsignalized intersections:

1. Queens Plaza North and 23rd Street (signalized)
2. Queens Plaza South and 23rd Street (signalized)
3. 42nd Road and 23rd Street (unsignalized)
4. Queens Plaza South and 24th Street (unsignalized)
5. 42nd Road and 24th Street (unsignalized)
6. Queens Boulevard and Jackson Avenue/Northern Boulevard (signalized)

Figure 10-2 Proposed Actions Vehicular Study Location



Source: 2020 PLUTO, NYCDCP

Project Site

0.25-Mile Radius

1 Study location

PROPOSED ACTIONS VEHICULAR STUDY LOCATIONS

Figure 10-2

23-10 Queens Plaza South Rezoning EAS

Source: 2020 PLUTO, NYCDCP

The physical and operational characteristics of the major roadways in the study area are as follows:

- Queens Plaza North is a one-way westbound roadway with one travel lane and parking on both curbs that runs along the north side of Queens Boulevard on the approach to the Queensboro Bridge. Local traffic can use Queens Plaza North to access the Queensboro Bridge to Manhattan or continue westerly towards 21st Street, where the roadway ends. The Q66 and Q102 bus routes travel on Queens Plaza North in the study area.
- Queens Plaza South is a one-way eastbound roadway that runs along the south side of Queens Boulevard between Vernon Boulevard and Jackson Avenue. In the vicinity of the study area, it consists of one travel lane in the eastbound direction and generally has parking on one or both curbs west of 24th Street. East of 24th Street, curb use is generally restricted to bus stops for the bus lines noted below. Many vehicles exit the Queensboro Bridge directly onto Queens Plaza South to access local destinations. The Q39, Q60, Q66, Q69, Q100 LTD, Q101, and Q102 bus routes travel on Queens Plaza South in the study area.
- Queens Boulevard is a two-way east/west roadway in the vicinity of the study area. West of the intersection with Jackson Avenue/Northern Boulevard, Queens Boulevard serves as an access to and egress from the Queensboro Bridge. East of the intersection with Jackson Avenue/Northern Boulevard, it generally has three travel lanes in each direction and is a major corridor through Queens. The Q32 and Q60 buses travel in both directions in the study area.
- 23rd Street is a two-way north/south roadway with one lane in each direction south of Queens Plaza South and is a one-way northbound roadway with two lanes north of Queens Plaza South. Parking exists on both curbs. The Q66 travels northbound on 23rd Street in the study area.
- Jackson Avenue/Northern Boulevard is a north/south roadway generally consisting of two travel lanes in each direction and parking on both curbs. The Q39, Q60, Q67, Q69, Q102, and various express buses travel on Jackson Avenue and Northern Boulevard in the study area.

Transit Service

Transit service in the study area includes eight subway lines and nine local bus routes.

Subway Lines

The N, R, W, M, F, E, G, and 7 lines operate within the study area and serve the Queensboro Plaza, Queens Plaza, Court Square – 23 St/Court Square, and 21 St – Queensbridge subway stations located within a 0.25-mile radius of the Proposed Project, as shown in **Figure 10-3**.

Queensboro Plaza station, closest to the project site, serves the N, W, and 7 subway lines. The entrance stairs to the elevated Queensboro Plaza subway station are located on Queens Plaza North and Queens Plaza South between Crescent Street and 27th Street.

The Queens Plaza subway station serves the E, M, and R lines. The station entrances are located on the northeast, southeast, southwest corners of the intersection of Queens Boulevard and Jackson Avenue/Northern Boulevard and on both sides of Jackson Avenue

midblock between Queens Plaza South and Orchard Street/42nd Road. This is an accessible station with elevator access on the southwest corner of Queens Boulevard and Jackson Avenue/Northern Boulevard.

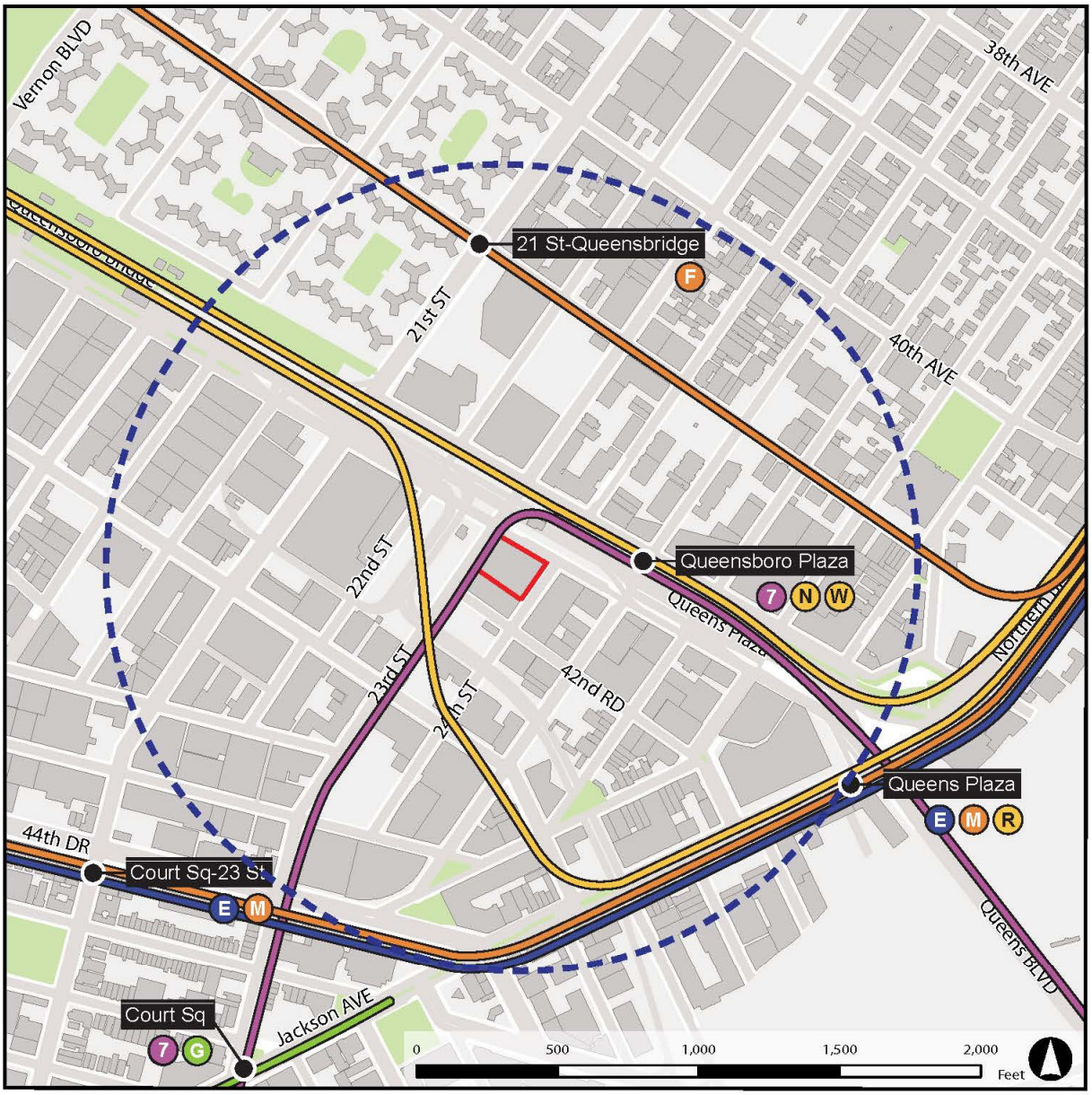
The Court Square – 23 St/Court Square subway stations serve the E, M, G, and 7 lines. The two stations are connected with free transfer service between all lines and are comprised of two underground platform areas and one elevated platform area. There are numerous entrances to the station in the vicinity of 44th Drive and 23rd Street. At this station, the 7 train and the Manhattan-bound E and M trains are accessible via elevators.

The 21 St-Queensbridge subway station serves the F line, with station entrances located on the east and west sides of 21st Street north of 41st Avenue, including an elevator.

Bus Routes

Nine NYCT/MTA local bus routes, Q32, Q39, Q60, Q66, Q67, Q69, Q100, Q101, and Q102, provide regular bus service to the study area, as shown in **Figure 10-4**. Additionally, there are numerous express NYCT/MTA buses that travel through the study area traveling to/from the Queensboro Bridge but do not make stops in the study area. Each bus route with local stops is summarized in **Table 10-1**.

Figure 10-3 Subway Transit Map



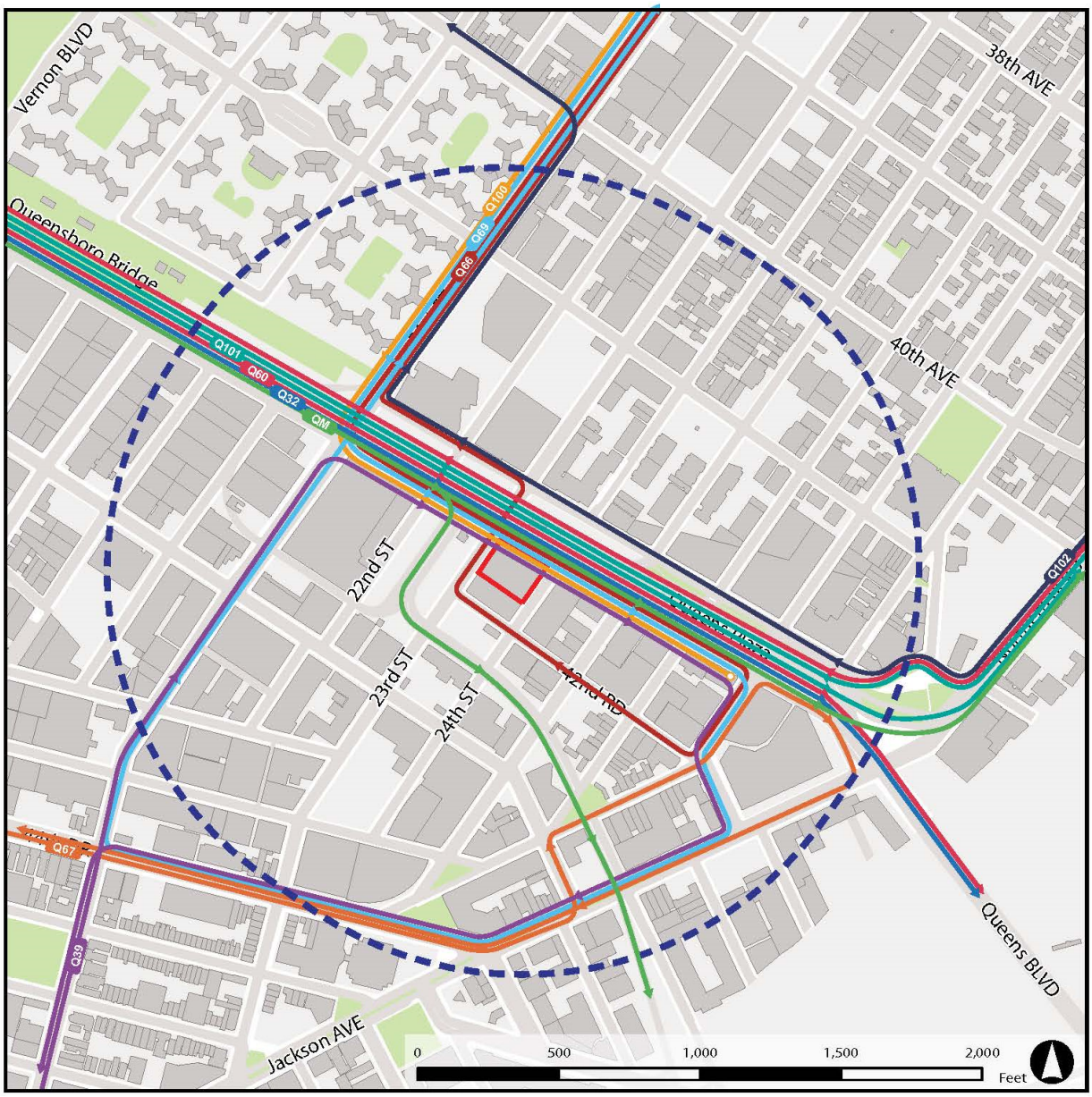
Source: 2020 PLUTO, NYCDCP

Figure 10-3

23-10 Queens Plaza South Rezoning EAS

Source: 2020 PLUTO, NYCDCP

Figure 10-4 Bus Transit Map



Source: 2020 PLUTO, NYCDCP

Project Site

0.25-Mile Radius

Q39 Bus Route

BUS TRANSIT MAP

Figure 10-4

23-10 Queens Plaza South Rezoning EAS

Source: 2020 PLUTO, NYCDCP

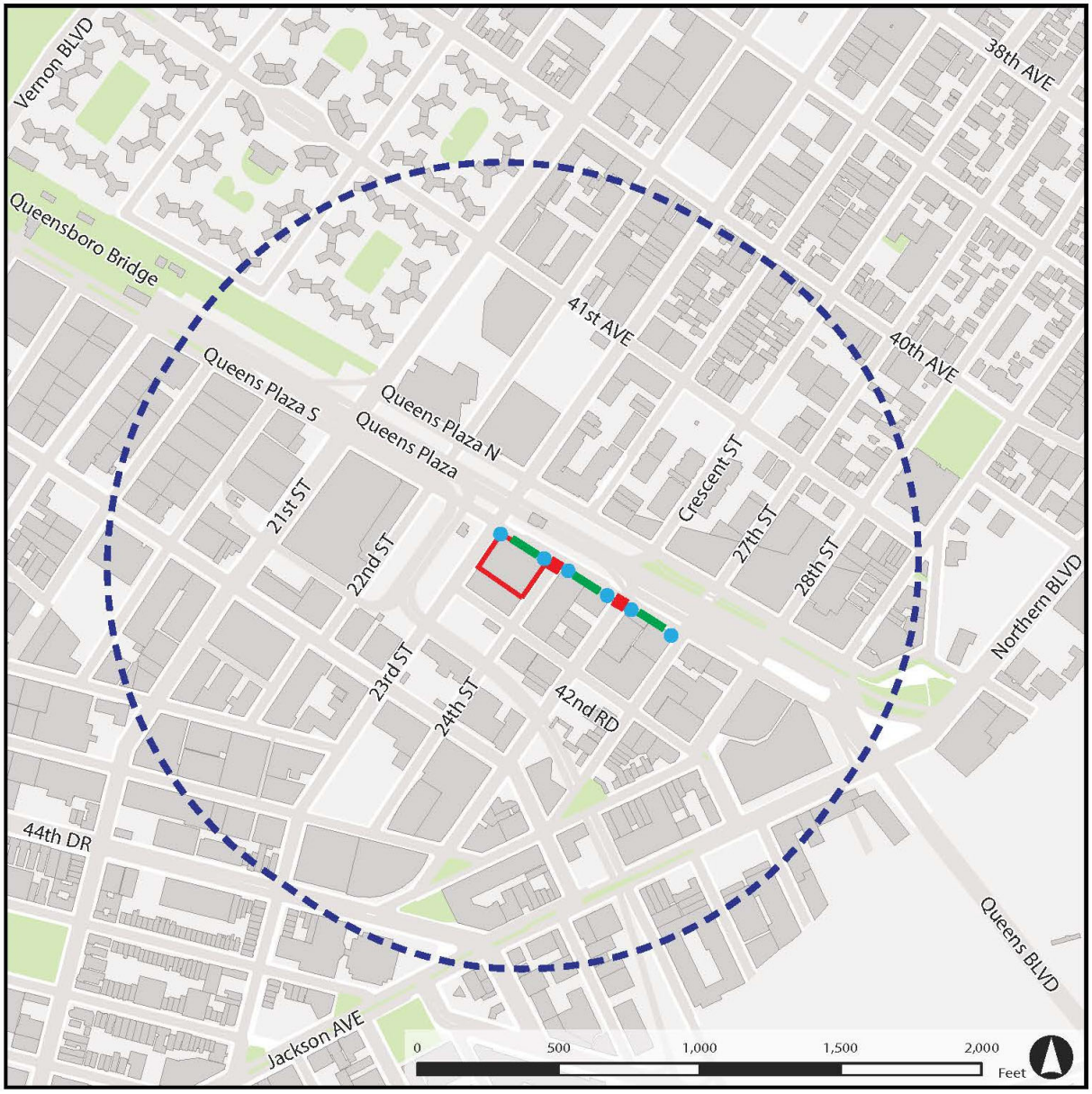
Table 10-1 Existing Bus Transit Service

Route	Direction	Route Start Point	Route End Point	Operating Hours	Peak Period Headway (mins)		
					AM	MD	PM
Q32	WB	Jackson Heights	Penn Station	6:00 AM - 2:00 AM	10	12	9
	EB	Penn Station	Jackson Heights	5:00 AM - 1:30 AM	15	12	10
Q39	NB	Ridgewood	Long Island City	1:30 AM - 12:45 AM	8	20	12
	SB	Long Island City	Ridgewood	12:15 AM - 11:45 PM	10	20	8
Q60	WB	South Jamaica	East Midtown	1:25 AM - 1:00 AM	10	10	8
	EB	East Midtown	South Jamaica	1:25 AM - 1:00 AM	15	9	9
Q66	WB	Flushing	Long Island City	12:30 AM - 12:15 AM	12	12	12
	EB	Long Island City	Flushing	4:40 AM - 1:20 AM	9	12	15
Q67	NB	Ridgewood	Long Island City	4:00 AM - 10:35 PM	12	30	15
	SB	Long Island City	Ridgewood	4:40 AM - 1:20 AM	15	30	12
Q69	WB	Jackson Heights	Long Island City	5:35 AM - 1:10 AM	20	10	9
	EB	Long Island City	Jackson Heights	5:40 AM - 1:15 AM	8	10	9
Q100	NB	Long Island City	Ricker's Island	12:20 AM - 11:55 PM	12	15	15
	SB	Ricker's Island	Long Island City	12:40 AM - 12:15 AM	12	15	12
Q101	WB	Steinway	East Midtown	12:20 AM - 11:55 PM	15	20	12
	EB	East Midtown	Steinway	12:40 AM - 12:15 AM	N/A	20	15
Q102	WB	Astoria	Roosevelt Island	5:55 AM - 12:20 AM	15	30	20
	EB	Roosevelt Island	Astoria	5:15 AM - 1:15 AM	20	30	20

Pedestrian Elements

Pedestrian elements, including three sidewalks, two crosswalks, and six corner reservoirs, were assessed at key intersections in the vicinity of the Proposed Project. The pedestrian elements are located along key routes to and from the Project Site entrances and represent locations where most of the pedestrian trips generated by the Proposed Project are anticipated. These locations are shown in **Figure 10-5**.

Figure 10-5 Proposed Actions Pedestrian Study Locations



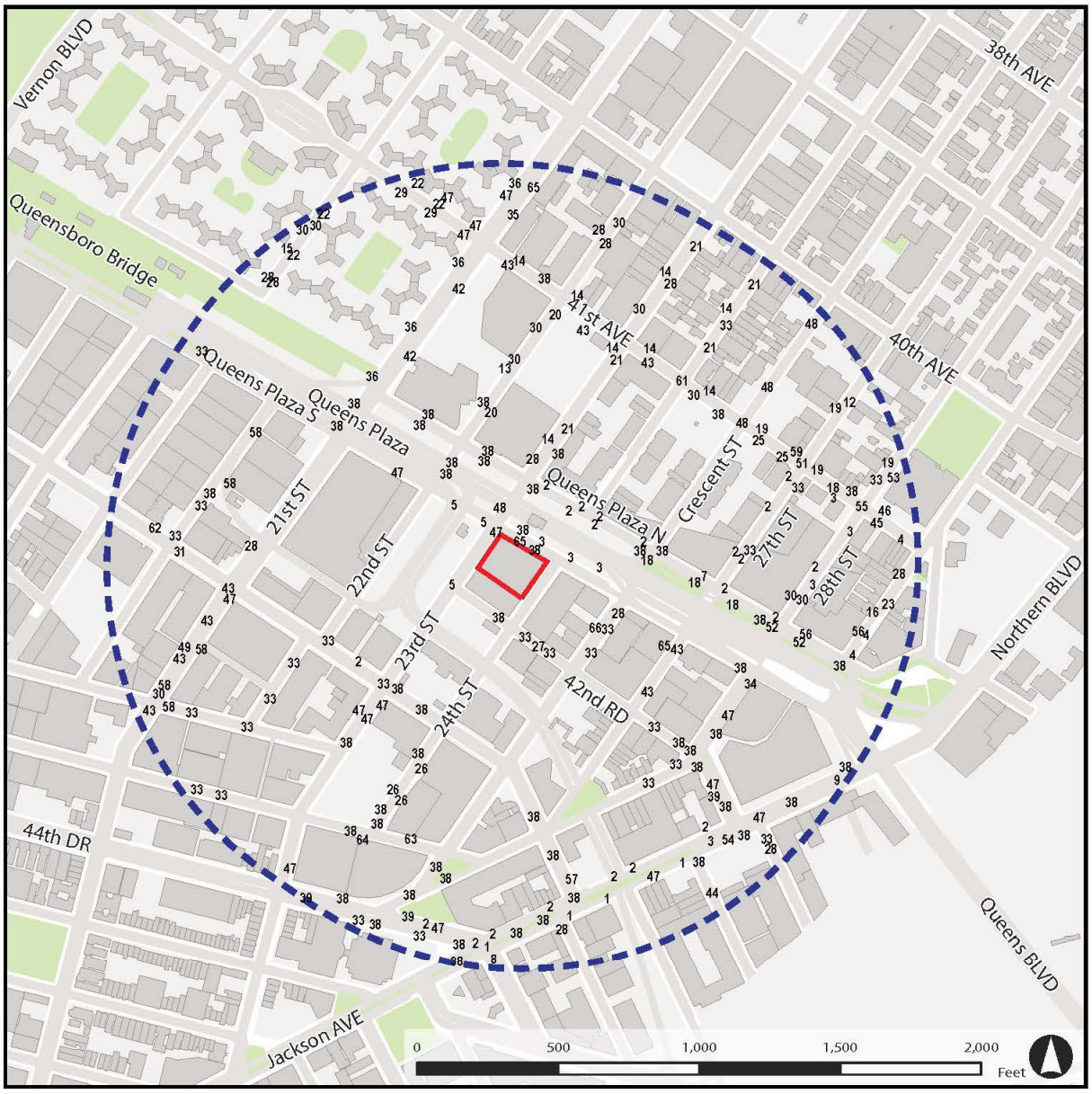
Source: 2020 PLUTO, NYCDCP

Source: 2020 PLUTO, NYCDCP

Parking Supply and Inventory

Existing study area parking conditions for on-street and off-street parking were evaluated through field visits. On-street parking regulations are shown in **Figure 10-6** and summarized in **Table 10-2**. Parking utilization surveys were conducted for on- and off-street parking facilities within a 0.25-mile radius of the Project Site. There are 10 off-street parking facilities located within a 0.25-mile radius of the Project Site, as shown in **Figure 10-7**.

Figure 10-6 On-Street Parking Regulation Map



Source: 2020 PLUTO, NYCDCP

Project Site

0.25-Mile Radius

1 Parking Signs

PARKING REGULATIONS

Figure 10-6

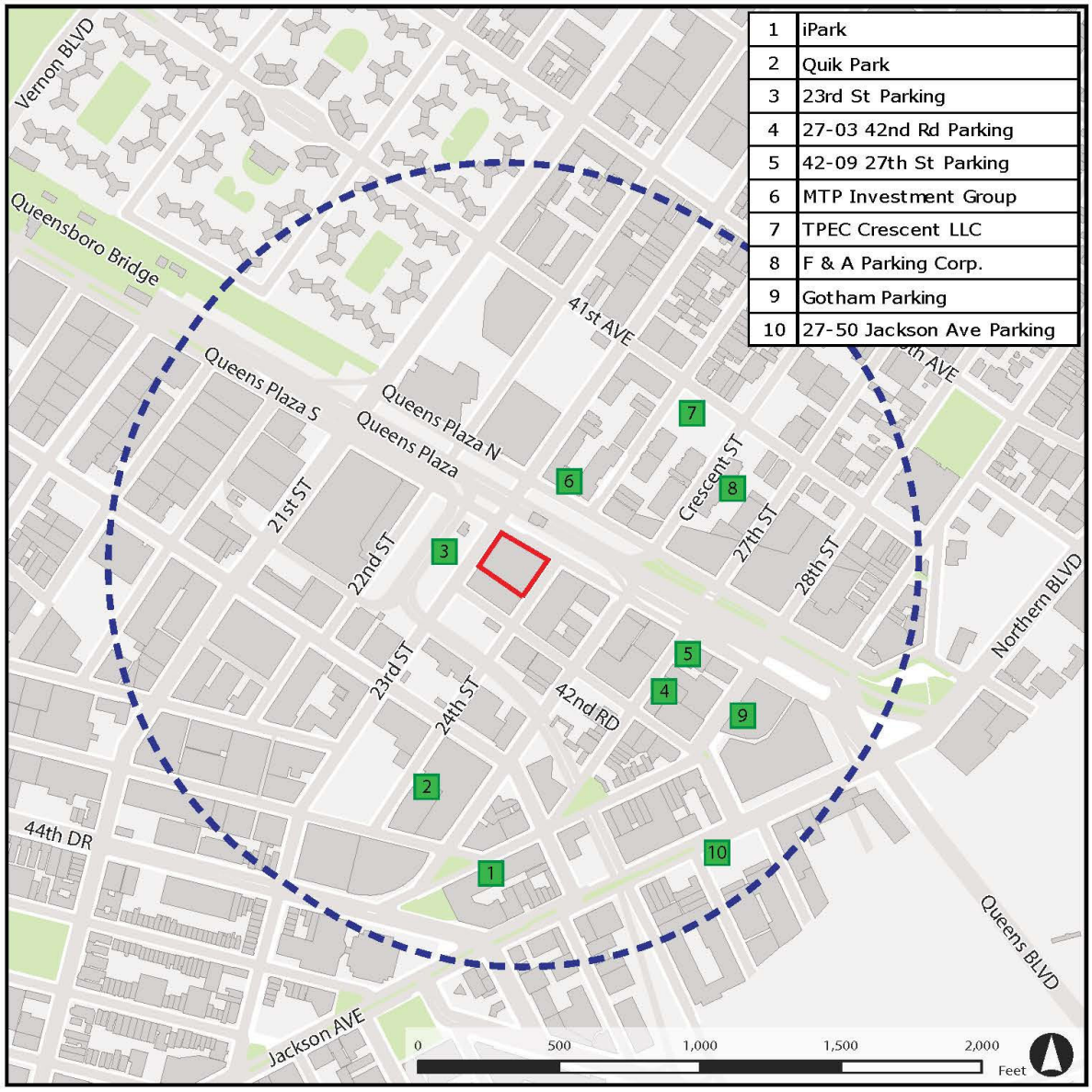
23-10 Queens Plaza South Rezoning EAS

Source: 2020 PLUTO, NYCDCP

Table 10-2 On-Street Parking Regulations Legend

Map #	Regulation
1	1 HOUR METERED PARKING 10AM-4PM EXCEPT SUNDAY
2	1 HOUR METERED PARKING 9AM-7PM EXCEPT SUNDAY
3	2 HOUR METERED PARKING 9AM-7PM EXCEPT SUNDAY
4	2 HOUR METERED PARKING MONDAY-FRIDAY 9AM-7PM
5	BUS (SYMBOL) MTA BUS LAYOVER ONLY NO ENGINE IDLING MAX FINE $2000
6	BUS LAYOVER AREA NO STANDING ANYTIME (NO ENGINE IDLING SYMBOL) NO ENGINE IDLING MAX FINE $XXXX
7	BUS STOP SIGN (BUS & HANDICAP SYMBOLS) NO STANDING
8	HARD HAT (SYMBOL) TEMPORARY CONSTRUCTION REGULATION (RIDER)
9	MOON & STARS (SYMBOLS) NO STANDING 10PM-6AM ALL DAYS
10	NO PARKING (SANITATION BROOM SYMBOL) (MOON/STARS SYMBOLS) MONDAY THURSDAY 3AM-6AM
11	NO PARKING (SANITATION BROOM SYMBOL) 8AM-9AM EXCEPT SUNDAY
12	NO PARKING (SANITATION BROOM SYMBOL) FRIDAY 8:30AM-10AM
13	NO PARKING (SANITATION BROOM SYMBOL) MONDAY 8:30AM-10AM
14	NO PARKING (SANITATION BROOM SYMBOL) MONDAY 9:30AM-11AM
15	NO PARKING (SANITATION BROOM SYMBOL) MONDAY THURSDAY 8:30AM-10AM
16	NO PARKING (SANITATION BROOM SYMBOL) MONDAY THURSDAY 8:30AM-9AM
17	NO PARKING (SANITATION BROOM SYMBOL) MOON & STARS (SYMBOLS) MONDAY THURSDAY 3AM-6AM
18	NO PARKING (SANITATION BROOM SYMBOL) MOON & STARS (SYMBOLS) TUESDAY FRIDAY 3AM-6AM
19	NO PARKING (SANITATION BROOM SYMBOL) THURSDAY 8:30AM-10AM
20	NO PARKING (SANITATION BROOM SYMBOL) TUESDAY 8:30AM-10AM
21	NO PARKING (SANITATION BROOM SYMBOL) TUESDAY 9:30AM-11AM
22	NO PARKING (SANITATION BROOM SYMBOL) TUESDAY FRIDAY 8:30AM-10AM
23	NO PARKING (SANITATION BROOM SYMBOL) TUESDAY FRIDAY 8:30AM-9AM
24	NO PARKING (SANITATION BROOM SYMBOL) TUESDAY FRIDAY 8AM-9:30AM
25	NO PARKING 7AM-7PM EXCEPT SUNDAY
26	NO PARKING 8AM-6PM EXCEPT SUNDAY (SINGLE ARROW)
27	NO PARKING 8AM-6PM MON THRU FRI
28	NO PARKING ANYTIME
29	NO PARKING MONDAY-FRIDAY 7AM-6PM
30	NO PARKING MONDAY-FRIDAY 7AM-7PM
31	NO PARKING MONDAY-FRIDAY 8AM-4PM
32	NO PARKING MONDAY-FRIDAY 8AM-5PM
33	NO PARKING MONDAY-FRIDAY 8AM-6PM
34	NO STANDING <--/BUS & HANDICAP(SYMBOL) HARDHAT (SYMBOL) TEMPORARY CONSTRUCTION REGULATION (FU
35	NO STANDING 4PM-7PM EXCEPT SUNDAY
36	NO STANDING 7AM-10AM 4PM-7PM EXCEPT SUNDAY
37	NO STANDING 7AM-7PM MON THRU FRI EXCEPT AUTHORIZED VEHICLES (SINGLE ARROW)
39	NO STANDING ANYTIME <- HARD HAT (SYMBOL) TEMPORARY CONSTRUCTION REGULATION (FUTURE PHONE)
40	NO STANDING ANYTIME EXCEPT AUTHORIZED VEHICLES (SINGLE ARROW)
41	NO STANDING HOTEL LOADING ZONE
42	NO STANDING MONDAY-FRIDAY 3PM-7PM
43	NO STANDING MONDAY-FRIDAY 7AM-10AM 4PM-7PM
44	NO STANDING MONDAY-FRIDAY 8AM-6PM
45	NO STANDING SCHOOL DAYS 7AM-4PM
46	NO STANDING SCHOOL DAYS 7AM-5PM
47	NO STANDING(SINGLE ARROW)HANDICAP BUS(SYMBOL)W/4 ROUTES
48	NO STANDING ANYTIME
49	OTHER TIMES
50	PAY-BY-CELL LOCATOR NUMBER
51	PRESS (SYMBOL) NYP LICENSE PLATES ONLY
52	STAR (SYMBOL) AUTHORIZED VEHICLES ONLY POLICE DEPARTMENT MONDAY-FRIDAY 6AM-8PM
53	STAR (SYMBOL) AVO DEPT OF EDUCATION SCHOOL DAYS 7AM-5PM
54	STAR (SYMBOL) AVO MTA
55	STAR (SYMBOL) AVO NYC DEPT OF TRANSPORTATION MONDAY-FRIDAY 9AM-6PM
56	STAR (SYMBOL) AVO POLICE DEPARTMENT
57	T. A. OFFICIAL VEHICLES ONLY
58	TAXI (SYMBOL) TAXI RELIEF STAND 1 HOUR LIMIT
59	TAXI HAILING (SYMBOL) TAXI STAND
61	TRUCK (SYMBOL) TRUCK LOADING ONLY 7AM-6PM ALL DAYS
62	TRUCK (SYMBOL) TRUCK LOADING ONLY 7AM-7PM EXCEPT SUNDAY
63	TRUCK (SYMBOL) TRUCK LOADING ONLY 6AM-10PM ALL DAYS
64	TRUCK (SYMBOL) TRUCK LOADING ONLY MONDAY-FRIDAY 7AM-5PM
65	TRUCK (SYMBOL) TRUCK LOADING ONLY MONDAY-FRIDAY 7AM-7PM
66	U S MAIL

Figure 10-7 Off-Street Parking Facilities



Source: 2020 PLUTO, NYCDCP

Project Site

0.25-Mile Radius

1 Off-Street Parking Location

OFF-STREET PARKING FACILITIES

Figure 10-7

23-10 Queens Plaza South Rezoning EAS

Source: 2020 PLUTO, NYCDCP

Operational Analysis Methodology

The following sections summarize the operational analysis methodologies and significant impact criteria in accordance with the *CEQR Technical Manual* guidelines for traffic, transit, pedestrians, parking, and safety.

Traffic Operations

The operations of the study area intersections were analyzed in accordance with the *CEQR Technical Manual* guidelines by applying the methodologies presented in the *2000 Highway Capacity Manual* (HCM 2000) using Highway Capacity Software (HCS+ 5.5) software. A description of these methodologies is provided below.

Signalized Intersections

The Level of Service (LOS) of a signalized intersection is defined in terms of control delay per vehicle (seconds per vehicle). Control delay is the portion of total delay experienced by a motorist that is attributed to the traffic signal. Several factors contribute to the delay at a signalized intersection including cycle length, pedestrian crossing times, progression/signal coordination, and volume to capacity (v/c) ratios. For signalized intersections, LOS A describes operations with minimal delays, up to 10 seconds per vehicle, while LOS F describes operations with delays in excess of 80 seconds per vehicle. Delays experienced at LOS A, B, C or D (less than 55 seconds per vehicle) are generally considered "acceptable" operating conditions according to the CEQR Technical Manual. Conversely, LOS E and F are generally considered "unacceptable" operating conditions. The LOS criteria for signalized intersections, as defined in the HCM 2000, are provided in **Table 10-3**.

Table 10-3 LOS Criteria for Signalized Intersections

Level of Service (LOS)	Average Delay
A	≤ 10.0 seconds
B	> 10.0 and ≤ 20.0 seconds
C	> 20.0 and ≤ 35.0 seconds
D	> 35.0 and ≤ 55.0 seconds
E	> 55.0 and ≤ 80.0 seconds
F	> 80.0 seconds

Source: Transportation Research Board, *Highway Capacity Manual*, 2000

Unsignalized Intersections

For unsignalized intersections, the total delay is defined as the total elapsed time from which a vehicle stops at the end of the queue until the vehicle departs from the stop line. This includes the time required for the vehicle to travel from the last-in-queue to the first-in-queue position. The average control total delay for any particular minor movement is a function of the service rate or capacity of the approach and the degree of saturation. The LOS thresholds for unsignalized intersections are different from those for signalized intersections and are summarized in **Table 10-4**, as follows:

Table 10-4 LOS Criteria for Unsignalized Intersections

Level of Service (LOS)	Average Delay
A	≤ 10.0 seconds
B	> 10.0 and ≤ 15.0 seconds
C	> 15.0 and ≤ 25.0 seconds
D	> 25.0 and ≤ 35.0 seconds
E	> 35.0 and ≤ 50.0 seconds
F	> 50.0 seconds

Source: Transportation Research Board, *Highway Capacity Manual*, 2000

Significant Impact Criteria: Traffic Operations

According to the criteria presented in the *CEQR Technical Manual* for signalized intersections, a lane group under the With-Action condition operating within LOS A, B, or C, or LOS D up to a maximum average control delay of 55.0 seconds/vehicle is not considered significant.

For lane groups operating at LOS E or F under the No-Action condition, then deterioration under the With-Action condition that meet the following criteria are considered significant impacts:

- For a lane group operating at LOS E under the No-Action condition, an increase in projected average control delay of five or more seconds is considered significant when compared with the With-Action condition delay.
- For a lane group operating at LOS F under the No-Action condition, an increase in projected average control delay of four or more seconds is considered significant when compared with the With-Action condition delay.

The same criteria for signalized intersections apply to unsignalized intersections (LOS D or better for unsignalized intersections is less than a 35-second delay); however, for the minor approach to trigger a significant impact, 90 passenger-car-equivalents (PCEs) must be identified in the With-Action condition in any peak hour.

Transit Operations

Subway station elements were analyzed in accordance with the *CEQR Technical Manual* guidelines. A description of these methodologies is provided below.

Subway station elements including stairs and control areas were considered for this analysis. A platform analysis was not performed, as they are typically not conducted for existing stations. As described in the *CEQR Technical Manual*, platform analyses are conducted for projects such as the design of new stations or large station renovations.

Subway Stairs

The v/c ratio and LOS for stairs are based on the peak 15-minute passenger volume divided by the capacity. The NYCT guideline capacity for stairs is 10 PFM. This rate is based on the Volume/SVCD (Service Volume between LOS C and D) capacity ratio. The breakpoint between LOS C and LOS D at a v/c ratio of 1.00 has been established by NYCT as the minimum

acceptable standard for pedestrian conditions. Therefore, the v/c ratio is used to determine the design capacity of the critical stair locations in a station during each peak 15-minute period.

To calculate the service level of a stair, the v/c ratio of the entering flow is calculated separately from the v/c ratio of the exiting flow. These ratios are added together to generate the overall v/c ratio of the stair. The data needed to derive the capacity of a stair include the effective width of the stair, 15-minute passenger volumes, SVCD (based on NYCT capacity guidelines), surge factor, and friction factor. The effective width of a stair is adjusted by reducing its width at the narrowest point by six inches on each side of the stair and three inches if a center handrail is present. Exiting passenger flows within subway stations can be "surged" which reduces the calculated capacity because there is a disproportionate number of pedestrians concentrated within portions of the 15-minute period. Circulation elements closest to the platform level have the highest reduction in capacity (25%) due to surging. Surging factors decrease for each level above the platform level as a result of passenger volumes dissipating each level towards the street. The effect of surging is also less for elements that serve three or more tracks. It is estimated by NYCT that the capacity on stairs is reduced by 10% due to friction if opposing flows are less than 95% in one direction. The LOS criteria for subway stairs and control area elements (see next section) are defined in **Table 10-5**.

Table 10-5 LOS Criteria for Subway Station Stairs and Control Areas

LOS	Description	Volume/ SVCD Ratio
A	Free Flow	0.00 to 0.45
B	Fluid Flow	0.45 to 0.70
C	Fluid, somewhat restricted	0.70 to 1.00
D	Crowded, walking speed restricted	1.00 to 1.33
E	Congested, some shuffling and queuing	1.33 to 1.67
F	Severely congested, queued	> 1.67

Source: CEQR Technical Manual (2021).

Control Areas

Station control areas separate the unpaid and paid areas of the station and are comprised of regular (low) turnstiles, High Entrance/Exit Turnstiles (HEETs), High Exit Turnstiles (HXT), and Emergency Gates. Regular and HEET turnstiles and Emergency Gates are bi-directional, where HXT turnstiles only serve exiting passengers. The v/c ratios of these fare control elements providing access to the station are based on the peak 15-minute passenger volume divided by the 15-minute capacity. The NYCT guideline capacities are 420 entries and 645 exits at regular turnstiles, 255 entries and 540 exits at HEETs, and 555 exits at HXTs. Emergency Gates are not included in control area capacity calculations as although passengers may make use of these gates, these passengers for analysis purposes are assigned to turnstiles. For these control area elements, overall capacity is measured by the number of elements, the NYCT guideline capacity per element, surging factors, and friction factors. The application of

surging and friction factors to calculate capacity is the same as for stairs. The LOS criteria for control area elements are defined in **Table 10-5**.

Significant Impact Criteria: Transit Operations

NYCT has defined significant stair impacts in terms of the width increment threshold (WIT). The WIT is used only to determine significant impact and is not the actual widening that would be required to mitigate a significant impact. For stairs, the WIT is calculated using the formulas provided in the *CEQR Technical Manual* if the With-Action condition v/c ratio is greater than 1.00. Significant impacts are typically considered to occur once the WIT levels for stairs have reached or exceeded the thresholds provided in the *CEQR Technical Manual*.

For regular turnstiles, HEETs, and HXTs, if the No-Action condition v/c ratio is less than 1.00 but the With-Action condition v/c ratio increases to 1.00 or greater, the impact is considered significant. If both the No-Action and With-Action condition v/c ratios are 1.00 or greater, a 0.01 change in v/c ratio is considered significant.

Pedestrian Operations

The pedestrian crosswalk, corner, and sidewalk elements were analyzed in accordance with the *CEQR Technical Manual* guidelines. A description of these methodologies is provided below.

Crosswalk/Corner

Crosswalk and corner analyses are conducted at signalized intersections using the analytical procedures described in the *2010 Highway Capacity Manual* (*HCM 2010*). The capacity of crosswalks and corners are evaluated based on pedestrian space measured in terms of square feet (sf) per pedestrian (ft^2/p). To calculate pedestrian space, effective crosswalk widths and corner areas, hourly pedestrian volumes (crosswalk, corner, and sidewalk), conflicting hourly turning vehicles, average walking speed (3.5 feet/second or 3.0 feet/second if 20% of pedestrians are seniors and/or school children or the intersection is in a Senior Pedestrian Focus Area), and signal timing are required. **Table 10-6** shows the LOS criteria for crosswalks and corners based on pedestrian space.

Table 10-6 LOS Criteria for Crosswalks and Corners (Signalized Intersections)

LOS	Pedestrian Space (ft^2/p)
A	> 60
B	60 to > 40
C	40 to > 24
D	24 to > 15
E	15 to > 8
F	≤ 8

Source: Transportation Research Board. Highway Capacity Manual, 2010.

Crosswalk analyses are conducted at unsignalized intersections using the analytical procedures described in the *HCM 2000*. The capacity of crosswalks at unsignalized intersections are evaluated based on the average delay per pedestrian in terms of seconds. To

calculate average delay per pedestrian, effective crosswalk widths, crosswalk lengths, hourly pedestrian volumes, conflicting hourly vehicles, average walking speed (3.5 feet/second), and pedestrian start-up and end clearance time (3.0 seconds) are required. **Table 10-7** shows the LOS criteria for crosswalks at unsignalized intersections based on average pedestrian delay.

Table 10-7 LOS Criteria for Crosswalks and Corners (Unsignalized Intersections)

LOS	Pedestrian Space (ft^2/p)
A	< 5
B	5 to < 10
C	10 to < 20
D	20 to < 30
E	30 to ≤ 45
F	> 45

Source: Transportation Research Board. Highway Capacity Manual, 2010.

Sidewalk

As identified in the HCM 2010, pedestrian unit flow rate is the primary performance measure used to evaluate sidewalks. This measure is based on PFM which is calculated by dividing the average per minute two-way pedestrian volume (during the peak hour) by the effective sidewalk width in feet (taking into account a buffer between walls, curbs, and obstructions). To accurately calculate sidewalk LOS, it is important to determine whether the pedestrian flow is generally "platoon" (with surges from a bus stop, subway station, or a crosswalk) or "non-platoon" (uniform) within the peak period being analyzed. Accounting for platoons generally results in a poorer LOS. **Table 10-8** shows the non-platoon and platoon LOS criteria for sidewalks based on PFM.

Table 10-8 LOS Criteria for Sidewalks

Level of Service (LOS)	Non-Platoon Flow (ft^2/p)	Platoon Flow (ft^2/p)
A	> 60	> 530
B	> 40 to 60	> 90 to 530
C	> 24 to 40	> 40 to 90
D	> 15 to 24	> 23 to 40
E	> 8 to 15	> 11 to 23
F	≤ 8	≤ 11

Source: Transportation Research Board. Highway Capacity Manual, 2010.

Significant Impact Criteria: Pedestrian Operations

The *CEQR Technical Manual* provides guidance on the impact criteria for pedestrian facilities based on the general comfort and convenience levels of pedestrians, according to the location of the study area. Pedestrians in central business district (CBD) areas have become accustomed to higher pedestrian volumes and generally are more tolerant of restricted LOS

conditions that might not be acceptable in other less congested (non-CBD) locations. An acceptable LOS for CBD areas is generally a mid-LOS D or better while an acceptable LOS for non-CBD areas is generally the upper limit of LOS C or better. For purposes of the pedestrian operations analysis, the pedestrian elements in the study area were considered to be part of a CBD area.

For corners and crosswalks at signalized intersections in CBD areas, the average pedestrian space that is considered acceptable ranges from LOS A to mid-LOS D. If the pedestrian space deteriorates to mid-LOS D or worse (less than 19.5 ft^2/p), significant impacts are determined based on a sliding scale, as follows:

- If the average pedestrian space under the No-Action condition is greater than 21.5 ft^2/p, then a decrease to 19.5 ft^2/p or less under the With-Action condition is considered a significant impact.
- If the average pedestrian space under the No-Action condition is between 5.1 and 21.5 ft^2/p, a decrease in space under the With-Action condition should be considered significant if it is greater than or equal to ((No-Action pedestrian space ft^2/p / 9.0) – 0.31). The With-Action condition increments are provided in Table 16-13 in the *CEQR Technical Manual*.
- If the average pedestrian space under the No-Action condition is less than 5.1 ft^2/p, then a decrease in pedestrian space greater than or equal to 0.2 ft^2/p under the With-Action condition is considered a significant impact.

For crosswalks at unsignalized intersections in CBD areas, the average pedestrian delay that is considered acceptable is to be determined in coordination with the New York City Department of Transportation (NYCDOT).

For sidewalks in CBD areas, the average pedestrian space that is considered acceptable ranges from LOS A to mid-LOS D. If the pedestrian space deteriorates to mid-LOS D or worse (less than 19.5 ft^2/p for non-platoon flow and less than 31.5 ft^2/p for platoon flow), significant impacts are determined based on a sliding scale, as follows:

Non-platoon flow

- If the average pedestrian space under the No-Action condition is greater than 21.5 ft^2/p, then a decrease to 19.5 ft^2/p or less under the With-Action condition is considered a significant impact.
- If the average pedestrian space under the No-Action condition is between 5.1 and 21.5 ft^2/p, a decrease in space under the With-Action condition should be considered significant if it is greater than or equal to ((No-Action pedestrian space ft^2/p / 9.0) – 0.31). The With-Action condition increments are provided in Table 16-15 in the *CEQR Technical Manual*.
- If the average pedestrian space under the No-Action condition is less than 5.1 ft^2/p, then a decrease in pedestrian space greater than or equal to 0.2 ft^2/p under the With-Action condition is considered a significant impact.

Platoon flow

- If the average pedestrian space under the No-Action condition is greater than 39.2 ft^2/p, then a decrease to 31.5 ft^2/p or less under the With-Action condition is considered a significant impact.
- If the average pedestrian space under the No-Action condition is between 6.4 and 39.2 ft^2/p, a decrease in space under the With-Action condition should be considered significant if it is greater than or equal to (No-Action pedestrian space ft^2/p / (9.5 – 0.321)). The With-Action condition increments are provided in Table 16-17 in the *CEQR Technical Manual*.
- If the average pedestrian space under the No-Action condition is less than 6.4 ft^2/p, then a decrease in pedestrian space greater than or equal to 0.3 ft^2/p under the With-Action condition is considered a significant impact.

Parking Conditions Assessment

A parking analysis identifies the extent to which on-street and off-street parking is available and utilized under existing, No-Action, and With-Action conditions. Typically, this analysis encompasses a study area within 0.25-mile of a proposed development. If the analysis identifies a shortfall in parking in the 0.25-mile study area, the study area could be extended to 0.5-mile to identify additional parking supply. The analysis, which takes into consideration anticipated changes in area parking supply, provides a comparison of parking needs versus availability to determine if a parking shortfall is likely to result from additional demand generated by the Proposed Project.

Determination of Significant Parking Shortfalls

According to the *CEQR Technical Manual*, if the Proposed Project generates more parking demand than it supplies, this shortfall may be considered significant. However, the available parking supply should consider the parking spaces within a 0.25-mile of the Project Site. If the project generated parking demand can be accommodated with the on-site project parking supply and/or on-street/off-street parking spaces within a 0.25-mile radius of the Project Site, then the shortfall would not be considered significant depending on the location of the project. For projects in locations within the *CEQR Technical Manual* parking zones one and two, a parking shortfall is generally not considered to be considered significant due to the magnitude of available alternative modes of transportation. For projects in locations outside the *CEQR Technical Manual* parking zones one and two, a parking shortfall may be considered significant. The Proposed Project is located within Parking Zone 2.

Vehicular and Pedestrian Safety Assessment

Crash data is collected for the most recent three-year period from the NYCDOT and classified as Reportable, Non-Reportable, or Property Damage Only. For locations that are identified as a high-crash location, the safety assessment should include accident type and severity (including pedestrian and bicycle crashes), type of intersection control, and any discernible patterns of crashes. Other factors should be also considered, such as high volumes of at-risk pedestrian age groups (children or the elderly), crossing locations with difficult sight lines, or uncontrolled locations. High-crash locations are defined as locations identified along a Vision

Zero priority corridor/intersection or those with more than 48 total reportable and non-reportable crashes or five or more pedestrian/bicycle injury crashes during any consecutive 12 months of the most recent three-year period for which data is available.

Assessment of Vehicular and Safety Issues

The assessment of safety impacts is often subjective and depends largely on the location of the proposed project and the circumstances under which historic crashes took place. It is the goal of this analysis to determine whether the Proposed Project would increase the potential for pedestrian and bicycle crashes at study intersections that are considered high-crash locations. In cases where this determination is made, measures to improve pedestrian and bicycle safety should be identified and coordinated with NYCDOT.

Existing Conditions

Once the project characteristics have been defined, baseline conditions (the "Existing Conditions") are established for traffic, pedestrian, parking, and other physical and operational characteristics.

Traffic Conditions

Existing study area traffic volumes were based on traffic data collected in November 2019, November 2020, and January 2021 during peak periods when background traffic is typically greatest and/or when the Proposed Project is projected to generate the greatest number of trips that would be added to the roadway network. Since the November 2020 and January 2021 count data were collected during pandemic conditions, the counts were adjusted based on historical traffic data provided by NYCDOT. Using this data, adjustment factors were developed in consultation with NYCDOT and applied to the 2020 and 2021 data to represent the non-pandemic baseline conditions for the Existing Conditions analyses. The counts collected in 2019 were grown to reflect the 2020 Existing Condition analysis year, based on applicable *CEQR Technical Manual* growth rates.

The field programs included manual turning movement counts and crosswalk counts at study area intersections during the Weekday AM, Weekday MD, and Weekday PM peak periods.

An inventory of the study intersections was performed to determine traffic signal timing, phasing, and cycle length; street and curbside signage; pavement markings; and lane dimensions to be used in the calculation of street capacities. Official signal timing plans were obtained from NYCDOT to confirm field observations and for incorporation into the capacity analysis. **Figure 10-8** through **Figure 10-10** show the Existing Conditions traffic volumes for the three peak hours.

The three vehicular peak hours are:

- Weekday AM peak hour: 7:00 AM to 8:00 AM
- Weekday MD peak hour: 12:00 PM to 1:00 PM
- Weekday PM peak hour: 4:30 PM to 5:30 PM

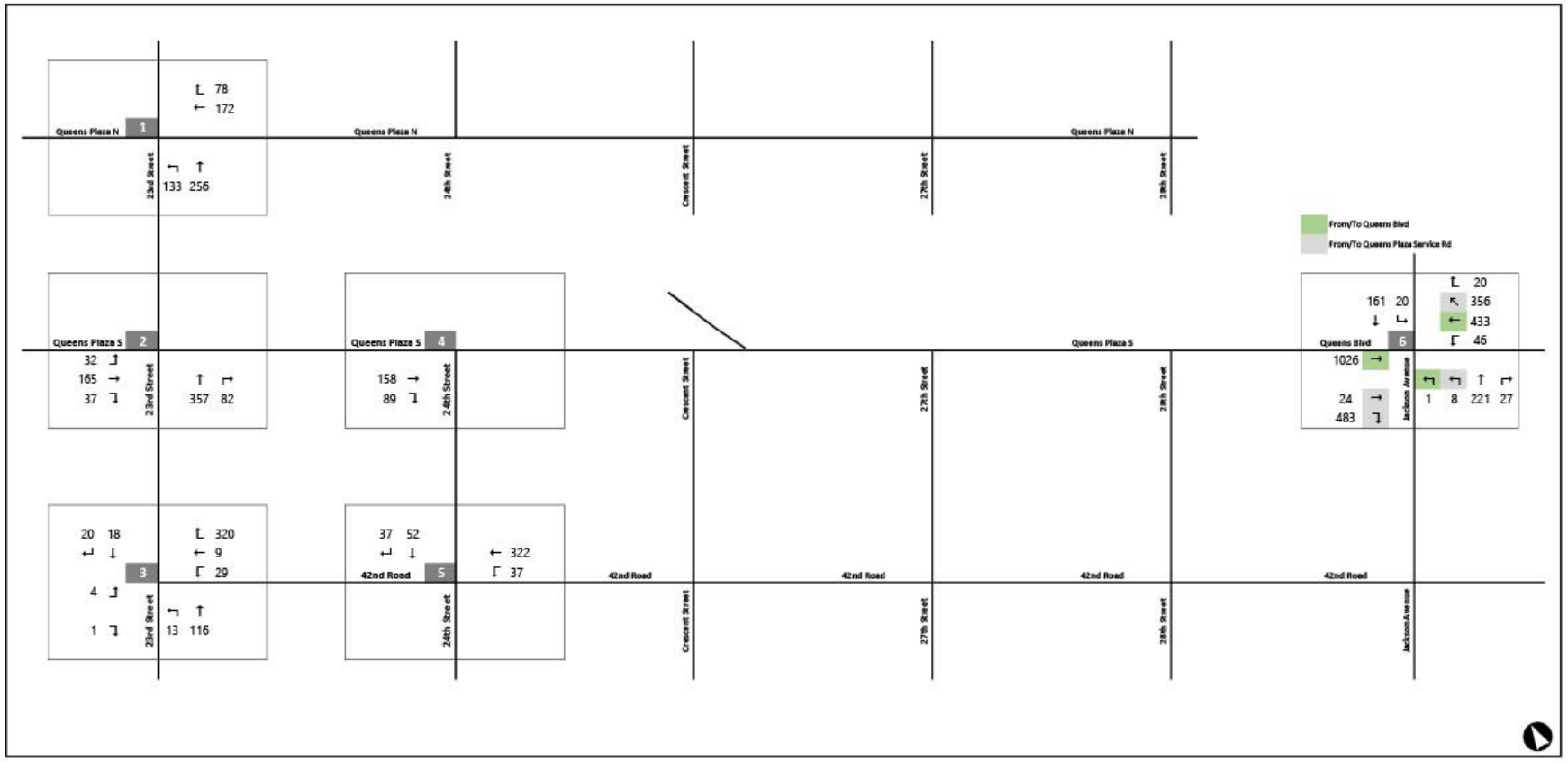
Table 10-9 and **Table 10-10** present the capacity analysis results for the Existing Conditions for the signalized and unsignalized study intersections, respectively. The analysis results show

that all analyzed intersection approaches and lane groups operate at LOS D or better during all three peak hours, with the exception for the following locations:

Queens Boulevard & Jackson Avenue/Northern Boulevard

- During the **Weekday AM** peak hour, the westbound approach operates at LOS E with an average delay of 61.9 seconds and a v/c ratio of 1.03.
- During the **Weekday MD** peak hour, the westbound approach operates at LOS E with an average delay of 61.1 seconds and a v/c ratio of 1.02.
- During the **Weekday PM** peak hour, the westbound approach operates at LOS E with an average delay of 69.2 seconds and a v/c ratio of 1.05. The northbound left-turn/through lane group operates at LOS F with an average delay of 95.6 seconds and a v/c ratio of 1.04.

Figure 10-8 2020 Existing Condition Traffic Volumes – Weekday AM Peak Hour



Project Site

Peak Hour Volume

2020 EXISTING CONDTION TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR

Figure 10-8
23-10 Queens Plaza South Rezoning EAS

Figure 10-9 2020 Existing Condition Traffic Volumes – Weekday MD Peak Hour

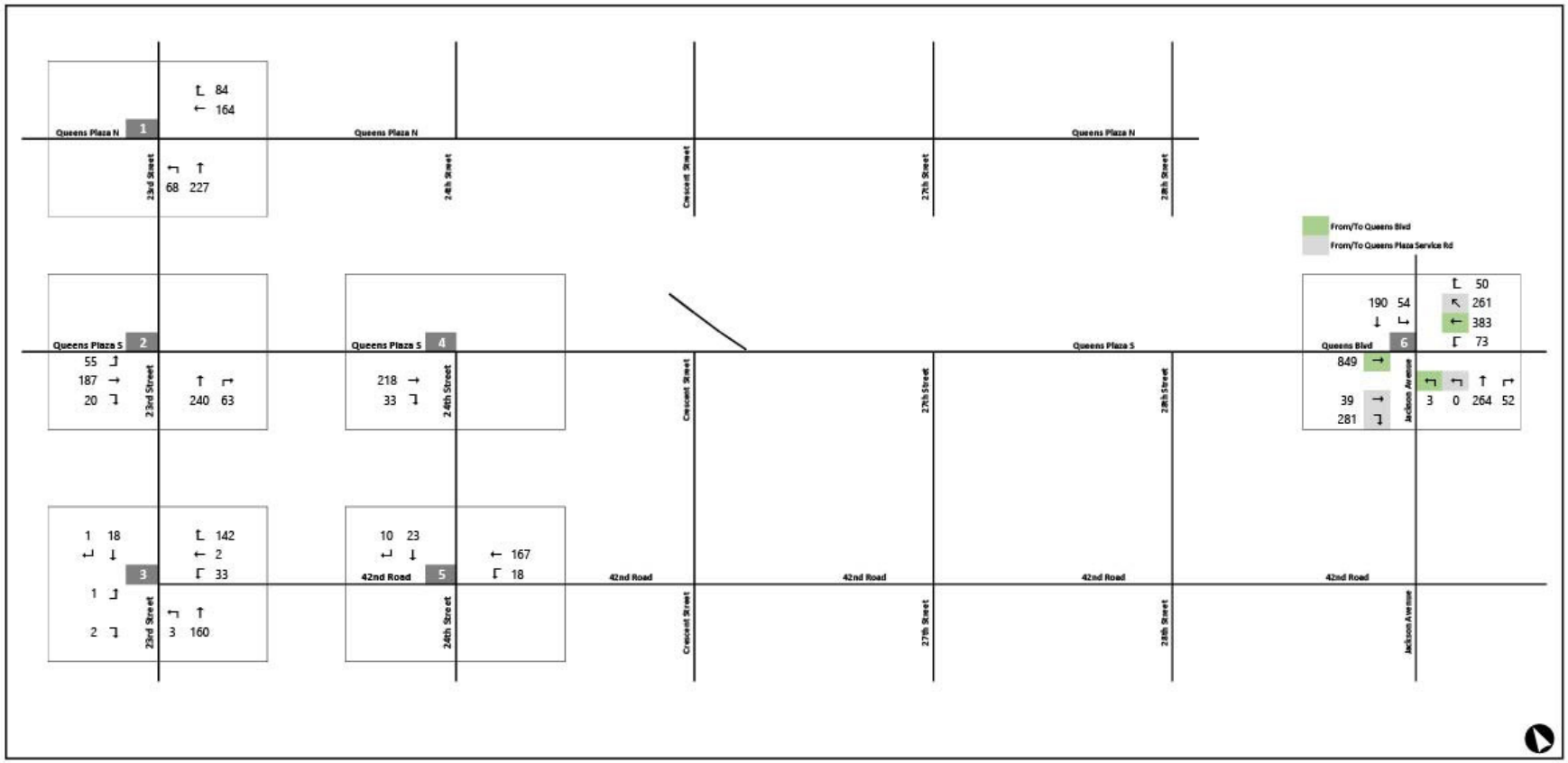


Figure 10-9
23-10 Queens Plaza South Rezoning EAS

Figure 10-10 2020 Existing Condition Traffic Volumes – Weekday PM Peak Hour

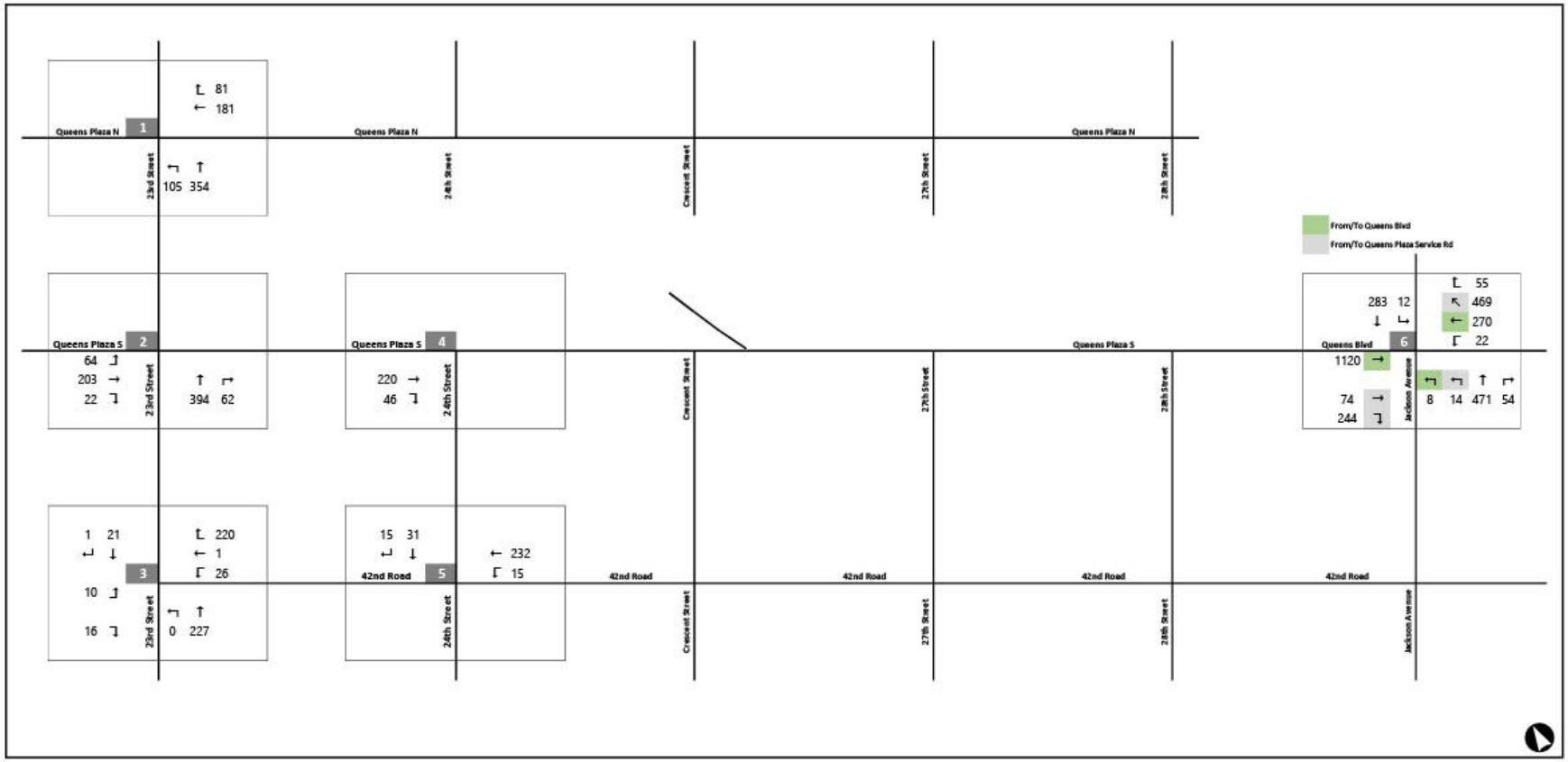


Figure 10-10
23-10 Queens Plaza South Rezoning EAS

Table 10-9 2020 Existing Conditions Level of Service Analysis – Signalized Intersections

#	Intersection & Approach	Weekday AM Peak Hour				Weekday MD Peak Hour				Weekday PM Peak Hour			
		Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
1	**Queens Plaza North and 23rd Street**												
	Westbound	TR	0.59	23.6	C	TR	0.56	22.9	C	TR	0.60	23.8	C
	Northbound	LT	0.38	17.6	B	LT	0.26	16.2	B	LT	0.40	17.8	B
		Intersection		20.0	C	Intersection		19.4	B	Intersection		20.1	C
2	**Queens Plaza South and 23rd Street**												
	Eastbound	LTR	0.50	21.1	C	LTR	0.55	21.9	C	LTR	0.56	22.2	C
	Northbound	T	0.62	23.8	C	T	0.42	19.2	B	T	0.71	26.9	C
		R	0.26	17.4	B	R	0.18	15.9	B	R	0.19	16.3	B
		Intersection		22.0	C	Intersection		20.1	C	Intersection		24.2	C
6	**Jackson Ave/Northern Blvd & Queens Blvd**												
	Northbound	LT	0.60	50.6	D	LT	0.64	51.6	D	LT	1.04	95.6	F
		R	0.18	43.7	D	R	0.43	53.6	D	R	0.40	50.8	D
	Southbound	LT	0.29	34.9	C	LT	0.44	38.2	D	LT	0.43	37.1	D
	Eastbound (from Queens Blvd)	T	0.82	33.8	C	T	0.69	27.9	C	T	0.90	38.9	D
	Eastbound (from Queens Plaza South)	T	0.05	17.8	B	T	0.07	17.6	B	T	0.14	18.4	B
		R	0.45	1.3	A	R	0.33	0.8	A	R	0.26	0.6	A
	Westbound	LTR	1.03	61.9	E	LTR	1.02	61.1	E	LTR	1.05	69.2	E
		Intersection		38.3	D	Intersection		39.1	D	Intersection		52.3	D
	Notes: L = Left Turn, T= Through, R = Right Turn, DefL = Defacto Left Turn; LOS = Level of Service. The Jackson Avenue/Northern Boulevard and Queens Boulevard intersection (intersection #6) was analyzed using Synchro 11 software)												

Table 10-10 2020 Existing Conditions Level of Service Analysis – Unsignalized Intersections

#	Intersection & Approach	Weekday AM Peak Hour				Weekday MD Peak Hour				Weekday PM Peak Hour			
		Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
3	**42nd Road and 23rd Street**												
	Eastbound	LTR	0.02	23.2	C	LTR	0.01	12.6	B	LTR	0.09	16.4	C
	Westbound	LTR	0.64	19.4	C	LTR	0.41	16.6	C	LTR	0.57	20.7	C
	Northbound	LT	0.01	7.7	A	LT	0.00	7.7	A	LT	0.00	7.7	A
5	**42nd Road and 24th Street**												
	Westbound	LT	0.03	7.7	A	LT	0.02	8.0	A	LT	0.01	7.9	A
	Southbound	TR	0.35	23.5	C	TR	0.11	16.0	C	TR	0.18	19.5	C
	Notes: L = Left Turn, T= Through, R = Right Turn, DefL = Defacto Left Turn; LOS = Level of Service. The Queens Plaza South and 24th Street intersection (intersection #4) has no turning movements with conflicts; therefore, it cannot be analyzed and can be assumed to operate at LOS A with negligible delays.												

Transit Operations

The transit elements within the study area were assessed for the Weekday AM and PM peak hours. A total of nine stairs (one street-level stair and eight platform stairs) and one control area were included in the transit analysis.

Subway Stairs

Stairway analyses were conducted for one street-level stair and eight platform stairs at the Queensboro Plaza station. Counts of the vertical elements from 2016 and 2017 were provided by New York City Transit (NYCT) for the Weekday AM and Weekday PM peak transit periods and were then adjusted and grown in consultation with NYCT to reflect 2020 Existing Conditions. Measurements were taken of the total width at the street-level and platform

stairways, and the effective stairway widths were calculated in accordance with *CEQR Technical Manual* guidelines.

As shown in **Table 10-11**, the street-level and platform stairs at the station operate at LOS C or better during both peak hours in the 2020 Existing Conditions.

Table 10-11 2020 Existing Conditions Level of Service Analysis – Stairs

Station	Vertical Element	ID	15-Minute Entering Volume [1]	15-Minute Exiting Volume [1]	Total Stair (feet) [2]	Number of Intermediate Handrails	Effective Width (feet)	Friction Factor [3]	Surge Factor (onto platform level) [3]	Surge Factor (off of platform level) [3]	15-Minute Entering Capacity [4]	15-Minute Exiting Capacity [4]	V/C [5]	LOS [5]
Weekday AM														
Queensboro Plaza Subway Station	S Street Level	S1, M1	297	320	7.5	0	6.5	0.9	1	0.9	878	790	0.74	C
	Lower Platform Stair	PL1, PL2	0	234	7.0	0	6.0	1.0	1	0.8	900	720	0.32	A
	Lower Platform Stair	PL3, PL4	0	145	7.0	0	6.0	1.0	1	0.8	900	720	0.20	A
	Lower Platform Stair	PL5, PL6	506	166	7.0	0	6.0	0.9	1	0.8	810	648	0.88	C
	Lower Platform Stair	PL7,PL8	46	184	7.5	0	6.5	0.9	1	0.8	878	702	0.32	A
	Upper Platform Stair	P1, P2	251	60	7.25	0	6.3	0.9	1	0.8	844	675	0.39	A
	Upper Platform Stair	P3, P4	108	93	7.0	0	6.0	0.9	1	0.8	810	648	0.28	A
	Upper Platform Stair	P5, P6	156	136	7.3	0	6.3	0.9	1	0.8	855	684	0.38	A
	Upper Platform Stair	P7, P8	105	128	7.0	0	6.0	0.9	1	0.8	810	648	0.33	A
Weekday PM														
Queensboro Plaza Subway Station	S Street Level Stair	S1, M1	321	211	7.5	0	6.5	0.9	1	0.9	878	790	0.63	B
	Lower Platform Stair	PL1, PL2	0	81	7.0	0	6.0	1.0	1	0.8	900	720	0.11	A
	Lower Platform Stair	PL3, PL4	0	103	7.0	0	6.0	1.0	1	0.8	900	720	0.14	A
	Lower Platform Stair	PL5, PL6	585	91	7.0	0	6.0	0.9	1	0.8	810	648	0.86	C
	Lower Platform Stair	PL7,PL8	74	129	7.5	0	6.5	0.9	1	0.8	878	702	0.27	A
	Upper Platform Stair	P1, P2	170	99	7.3	0	6.3	0.9	1	0.8	844	675	0.35	A
	Upper Platform Stair	P3, P4	88	56	7.0	0	6.0	0.9	1	0.8	810	648	0.20	A
	Upper Platform Stair	P5, P6	293	88	7.3	0	6.3	0.9	1	0.8	855	684	0.47	B
	Upper Platform Stair	P7, P8	64	163	7.0	0	6.0	0.9	1	0.8	810	648	0.33	A

Notes:
(1) Source: NYCT field counts collected in 2016 and adjusted by NYCT to represent 2019 volumes. Sam Schwartz then grew volumes to 2020.
(2) Vertical elements measured at the narrowest location.
(3) Friction and surge factors based on NYCT guidelines in accordance with the 2021 CEQR Technical Manual.
(4) Stair capacity based on NYCT guidelines in accordance with the 2021 CEQR Technical Manual.
(5) v/c ratios and LOS ratings were calculated based on rates presented in the 2021 CEQR Technical Manual.

Control Areas

One subway control area at the Queensboro Plaza station was analyzed. The turnstile counts for the control area analysis were calculated based on the platform stair counts at the station. In conformance to the *CEQR Technical Manual*, control array capacity was based on NYCT guidelines.

For the control area elements, the quantity, volume, friction and surge factors, capacity, and calculated v/c and LOS results are shown in **Table 10-12**. The control area elements operate at LOS A during both peak hours in the 2020 Existing Conditions.

Table 10-12 2020 Existing Conditions Level of Service Analysis – Control Areas

Station	Station Elements	Quantity (Entry)	Quantity (Exit)	15-Minute Entering Volume [1]	15-Minute Exiting Volume [1]	Friction Factor [2]	Surge Factor (onto platform)[2]	Surge Factor (off of platform)[2]	15 Minute Entering Capacity [3]	15 Minute Exiting Capacity [3]	V/C [4]	LOS [4]
Weekday AM												
Queensboro Plaza Subway Station	Turnstile	6	6	552	731	0.9	0.9	0.9	2520	6090	**0.42**	**A**
	HEET	0	0									
	HXT	0	4									
Weekday PM												
Queensboro Plaza Subway Station	Turnstile	6	6	660	405	0.9	0.9	0.9	2520	6090	**0.41**	**A**
	HEET	0	0									
	HXT	0	4									

Notes:
(1) Source: NYCT field counts collected in 2016 and adjusted by NYCT to represent 2019 volumes. Sam Schwartz then grew volumes to 2020.
(2) Friction and Surge factors based on NYCT guidelines in accordance with the 2021 CEQR Technical Manual.
(3) Fare array capacity based on NYCT guidelines in accordance with the 2021 CEQR Technical Manual.
(4) v/c ratios and LOS ratings were calculated based on rates presented in the 2021 CEQR Technical Manual.

Pedestrian Conditions

The existing operations of the study area's sidewalks, corner reservoirs, and crosswalks were assessed during the three peak hours (Weekday AM, Weekday MD, and Weekday PM). The specific elements analyzed were selected based on meeting the criteria of a projected pedestrian volume increase of more than 200 pedestrians per hour at any sidewalk, crosswalk, or corner reservoir during at least one of the three peak hours. The analyses were performed at a total of 11 locations within the study area, including three sidewalks, two crosswalks, and six corner reservoirs.

Pedestrian (sidewalk, crosswalk, and corner reservoir) counts were conducted within the study area in November 2020 and January 2021 during the three peak periods. This count data was adjusted to non-pandemic conditions using adjustment factors provided by the NYCDOT. These counts were summarized into one-hour intervals.

Sidewalks

Three sidewalk locations within the study area were analyzed using the collected pedestrian data. The south sidewalk on Queens Plaza South between Crescent Street and 27th Street was split into two analysis locations in order to analyze the sections on either side of the Queensboro Plaza subway stairs separately (west of the stairs and at the stairs). As presented in **Table 10-13**, the sidewalk locations included in the transportation analysis operate at mid-LOS D or better for the non-platoon conditions and at mid-LOS D or better for the platoon conditions during the three peak hours, except for the following location:

› Platoon Conditions
  - The south sidewalk on the east leg of Crescent Street and Queens Plaza South (at the subway stairs) would operate at worse than mid-LOS D during all peak hours.

› Non-Platoon Conditions
  - The south sidewalk on the east leg of Crescent Street and Queens Plaza South (at the subway stairs) would operate at worse than mid-LOS D during the AM and MD peak hours.

Table 10-13 2020 Existing Conditions Level of Service Analysis – Sidewalks

Location	Width at Narrowest Point (ft)	Obstruction Width (ft)	Effective Width (ft)	Available Circulation Space (ft^2/p) Weekday			Non-Platoon Conditions LOS Weekday			Platoon Conditions LOS Weekday		
				AM	MD	PM	AM	MD	PM	AM	MD	PM
23rd Street and Queens Plaza South (E leg, S sidewalk)	7.5	3.0	4.5	91	178	99	A	A	A	B	B	B
24th Street and Queens Plaza South (E leg, S sidewalk)	10.3	2.5	7.8	89	93	149	A	A	A	C	B	B
Crescent Street and Queens Plaza South (E leg, S sidewalk)[1] - at subway stairs	6.0	3.5	2.5	13	16	20	E	D	D	E	E	E
27th Street and Queens Plaza South (W leg, S sidewalk)[1]	12.0	3.0	9.0	58	67	77	B	A	A	C	C	C

Note: (1) South sidewalk on Queens Plaza South between Crescent Street and 27th Street was split into two sidewalk analysis locations to analyze the sections at the Queensboro Plaza Station subway stairs (E leg, S sidewalk) and west of the stairs (W leg, S sidewalk) separately.

Crosswalks

Two crosswalk locations within the study area were analyzed using the collected pedestrian data. As presented in **Table 10-14**, the crosswalk locations included in the transportation analysis operate at LOS A during the three peak hours in the 2020 Existing Condition.

Table 10-14 2020 Existing Conditions Level of Service Analysis – Crosswalks

Location	Length (ft)	Width (ft)	Average Pedestrian Delay (s) Weekday			Crosswalk Circulation LOS Weekday		
			AM	MD	PM	AM	MD	PM
24th Street and Queens Plaza South (S leg)	30.2	13.6	2.4	0.8	1.2	A	A	A
Crescent Street and Queens Plaza South (S leg)	30.0	12.0	1.1	1.3	1.3	A	A	A

Corners

Six corner reservoir locations were analyzed using pedestrian data within the study area. As presented in **Table 10-15**, the corner reservoirs included in the transportation analysis operate at LOS C or better during all three peak hours in the 2020 Existing Condition.

Table 10-15 2020 Existing Conditions Level of Service Analysis – Corners

Location	Available Circulation Space (ft^2/p) Weekday			Corner Circulation LOS Weekday		
	AM	MD	PM	AM	MD	PM
23rd Street and Queens Plaza South (SE corner)	129	231	147	A	A	A
24th Street and Queens Plaza South (SE corner)	109	143	222	A	A	A
24th Street and Queens Plaza South (SW corner)	158	380	253	A	A	A
Crescent Street and Queens Plaza South (SE corner)	66	77	92	A	A	A
Crescent Street and Queens Plaza South (SW corner)	175	207	255	A	A	A
27th Street and Queens Plaza South (SW corner)	37	76	64	C	A	A

Parking Conditions

On-Street Parking

Existing study area on-street parking conditions were evaluated by performing a field inventory of parking regulations and utilization within a 0.25-mile radius of the Project Site. On-street parking regulations within 0.25-mile of the study area are summarized in **Figure 10-6** and in **Table 10-2**.

On-street parking utilization surveys were conducted in the study area under typical weekday conditions on Thursday, November 19, 2020, during the Weekday AM, MD, and PM peak periods, when parking demand is expected to be the greatest. Individual street capacities and an hourly assessment of on-street parking utilization were collected for each street in the study area. **Table 10-16** presents a summary of the survey results in terms of the average percentage of available on-street spaces utilized during each peak hour.

The results indicate that within 0.25-mile of the Project Site, on-street parking utilization is 125, 123, and 106% of available spaces during the Weekday AM, MD, and PM peak periods, respectively. Frequent illegal parking was observed in the 0.25-mile area, resulting in utilization over 100% of the on-street spaces during all three analysis periods.

Table 10-16 2020 Existing Conditions On-Street Parking Utilization Summary

2020 Existing	Weekday AM	Weekday MD	Weekday PM
Capacity	1,386	1,483	1,394
Demand	1,739	1,817	1,473
Available Spaces	-353	-334	-79
Utilization	**125%**	**123%**	**106%**

Off-Street Parking

Existing study area off-street parking conditions were evaluated by performing a field inventory/survey of parking facilities within a 0.25-mile radius of the Project Site, shown on **Table 10-17**.

Off-street parking utilization surveys were conducted in the study area under typical weekday conditions using a combination of site visits (on Wednesday, January 27, 2021) and surveys of parking attendants and operators, where they were asked about their typical, non-pandemic utilizations during the Weekday AM, MD, and PM peak periods. Existing capacities and an hourly assessment of parking utilization were collected for each off-street parking facility in the study area, as summarized in **Table 10-17.** These results are included in the overall existing conditions parking utilization assessment shown in **Table 10-16**.

The results indicate that within 0.25-mile of the Project Site, off-street parking utilization is 63, 68, and 68% of available spaces during the Weekday AM, MD, and PM peak periods, respectively.

Table 10-17 Off-Street Parking Facilities Within a 0.25-Mile Radius of the Study Area

	Off-Street Parking Facility	Address	License #	Licensed Capacity	Existing Parking Utilization			Utilized Spaces			Available Spaces		
					AM	MD	PM	AM	MD	PM	AM	MD	PM
1	iPark	43-25 Hunter St	2051385	49	75%	90%	75%	37	44	37	12	5	12
2	Quik Park[1]	43-08 Crescent St	2004674	202									
3	23rd St Parking	42-02 23rd St	949204	100	60%	70%	60%	60	70	60	40	30	40
4	27-03 42nd Rd Parking	27-03 42nd Rd	2081963	42	50%	75%	75%	21	32	32	21	10	10
5	42-09 27th St Parking	42-09 27th St	2064520	71	75%	75%	75%	53	53	53	18	18	18
6	MTP Investment Group	41-42 24th St	20366350	108	50%	75%	70%	54	81	76	54	27	32
7	TPEC Crescent LLC	41-10 Crescent St	2011234	125	50%	50%	50%	63	63	63	62	62	62
8	F & A Parking Corp.	41-23 Crescent St	2047816	29	75%	10%	75%	22	3	22	7	26	7
9	Gotham Parking[1]	42-09 28th St	2003571	162									
10	27-50 Jackson Ave Parking	27-50 Jackson Ave	926484	150	75%	75%	75%	113	113	113	37	37	37
Total Existing				**674**	**63%**	**68%**	**68%**	**423**	**459**	**456**	**251**	**215**	**218**

[1]Utilization rate for these garages were not available; therefore no available capacity was included in the analysis.

Future without the Proposed Project

The future without the Proposed Actions (the "No-Action condition") builds on the Existing Conditions analysis by incorporating background growth, other nearby projects expected to be completed by the analysis year (2024), potential trips generated by the Project Site under the current zoning, and anticipated changes in the transportation network. The No-Action condition analysis focuses on conditions in 2024, when the Proposed Project is expected to be complete. The analysis of the No-Action condition serves as the baseline to which the future condition with the project (the "With-Action Condition") will be compared to identify potential impacts.

The *CEQR Technical Manual* guidelines (Table 16-4) provide an annual background growth rate for Long Island City of 0.25 percent for the first five years and 0.125 percent for the years beyond. The annual growth rates were applied, for four years, to the 2020 Existing Conditions volumes to develop the 2024 No-Action condition background traffic, transit, pedestrian, and parking volumes.

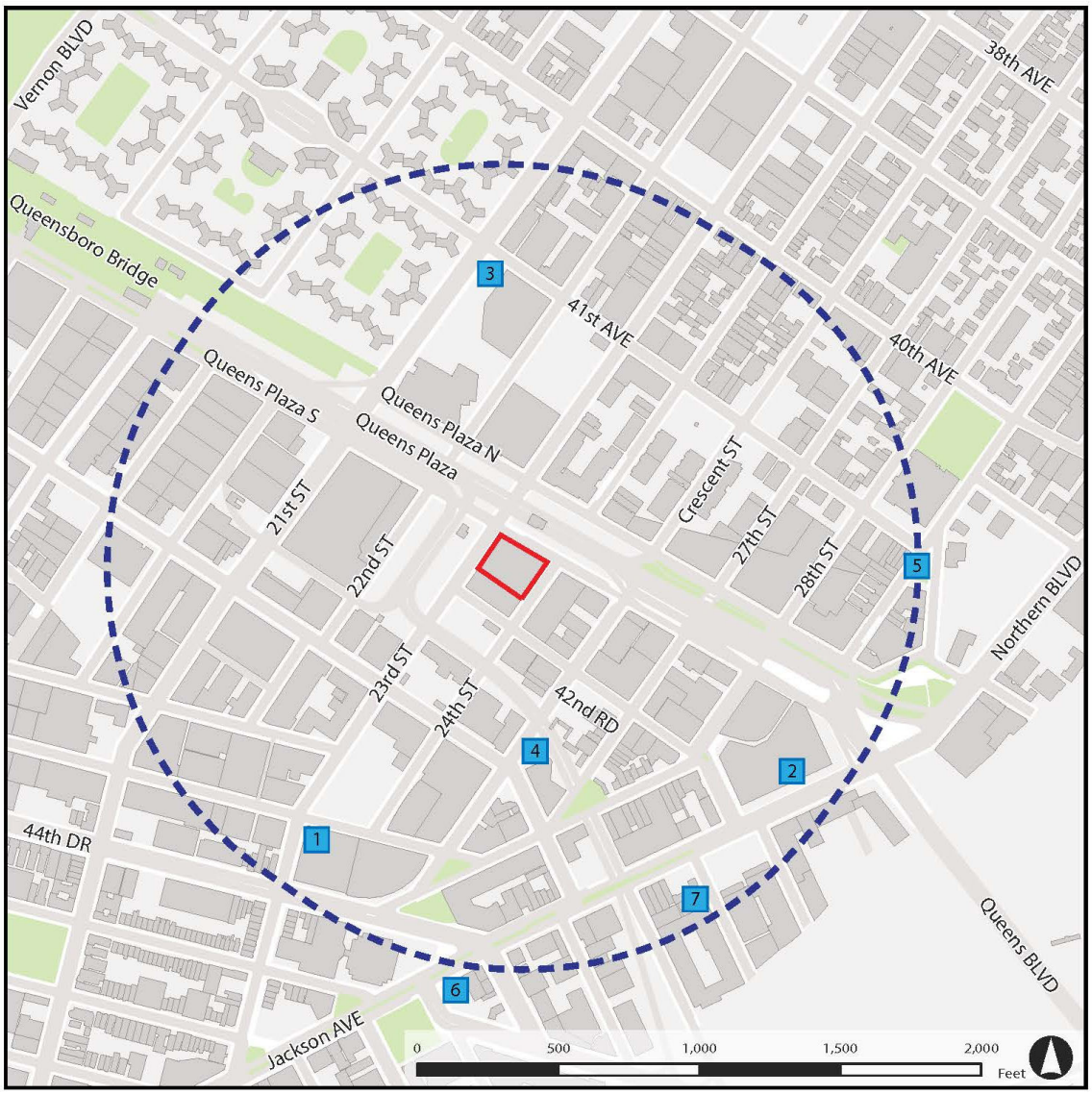
Under the No-Action condition, the Project site would remain under the existing zoning designations. Local retail would be feasible on the Project Site and would be constructed as-of-right in conformance to existing zoning designations. Absent the Proposed Actions, development on the Project Site would include 27,713 gsf of local retail space.

In addition to the background growth and the No-Action development on the Project Site, the development projects expected to be completed by 2024 located within or adjacent to a 0.25-mile radius of the Project Site were considered when projecting the No-Action condition volumes, as shown in **Figure 10-11** and summarized in **Table 10-18**.

Table 10-18 No-Action Projects

Map No.	Project Name	Block- Lot	Future Use	Build Year
1	23-15 44th Road	436-1	802 residential units	2021
2	28-07 Jackson Avenue	420-1	Mixed-use commercial building with 1,403,101 gsf of office space and 50,000 gsf of local retail and restaurant space. At the time of the Existing Condition, 435,930 gsf of office space was unleased and unoccupied	2021
3	41-03 21st Street	411-25	115 hotel rooms	2020
4	42-59 Crescent Street	430-37	65 hotel rooms and 8,832 gsf of restaurant space	2020
5	The Sven, 29-55 Northern Boulevard	403-3	Mixed-use commercial and residential building with 958 residential units, 37,000 gsf of office space and 13,000 gsf of local retail space	2022
6	25-34 Jackson Avenue	81-5	Mixed-use commercial and residential building with 157 residential units and 9,761 gsf of commercial space	2024
7	43-14 Queens Street	266-27	Mixed-use commercial building with 301 residential units and 28,387 gsf of commercial space	2024

Figure 10-11 No-Action Development Projects



Source: 2020 PLUTO, NYCDCP

The background growth and trips generated by the development projects were added to the Existing Conditions volumes to develop the No-Action volumes.

No-Action Study Area Improvements

In addition to the development projects noted above, the following roadway improvements are expected to be implemented by 2024 in the study area:

- It was assumed that any current construction work impacting pedestrian elements would be completed by 2024.
- The Metropolitan Transportation Authority (MTA) will be making improvements to the Queensboro Plaza subway station, which will include the construction of an elevator and associated sidewalk widening on the south sidewalk of Queens Plaza South between Crescent Street and 27th Street. See **Appendix B-4** for more detail.
- The New York City Department of Transportation (NYC DOT) will be converting the south outer roadway, which currently carries eastbound traffic over the Queensboro Bridge, into a pedestrian-only walkway, while the north outer roadway—which is already closed to traffic and operates as a shared bicycle and pedestrian path—will restrict pedestrian traffic. Therefore, pedestrians currently using the north outer roadway were assumed to divert to the south outer roadway, while bicyclists would remain on the north outer roadway. Vehicles currently using this lane were assumed to divert to the eastbound lower-level roadway. See **Appendix B-4** for more detail.

Traffic Conditions

Figure 10-12 through **Figure 10-14** show the 2024 No-Action traffic volumes for the three peak hours, and **Table 10-19** and **Table 10-19** present the capacity analysis results for the 2024 No-Action conditions for the signalized and unsignalized study intersections, respectively. The analysis results show that all analyzed intersection approaches and lane groups operate at LOS D or better during all peak hours, with the exception for the following locations:

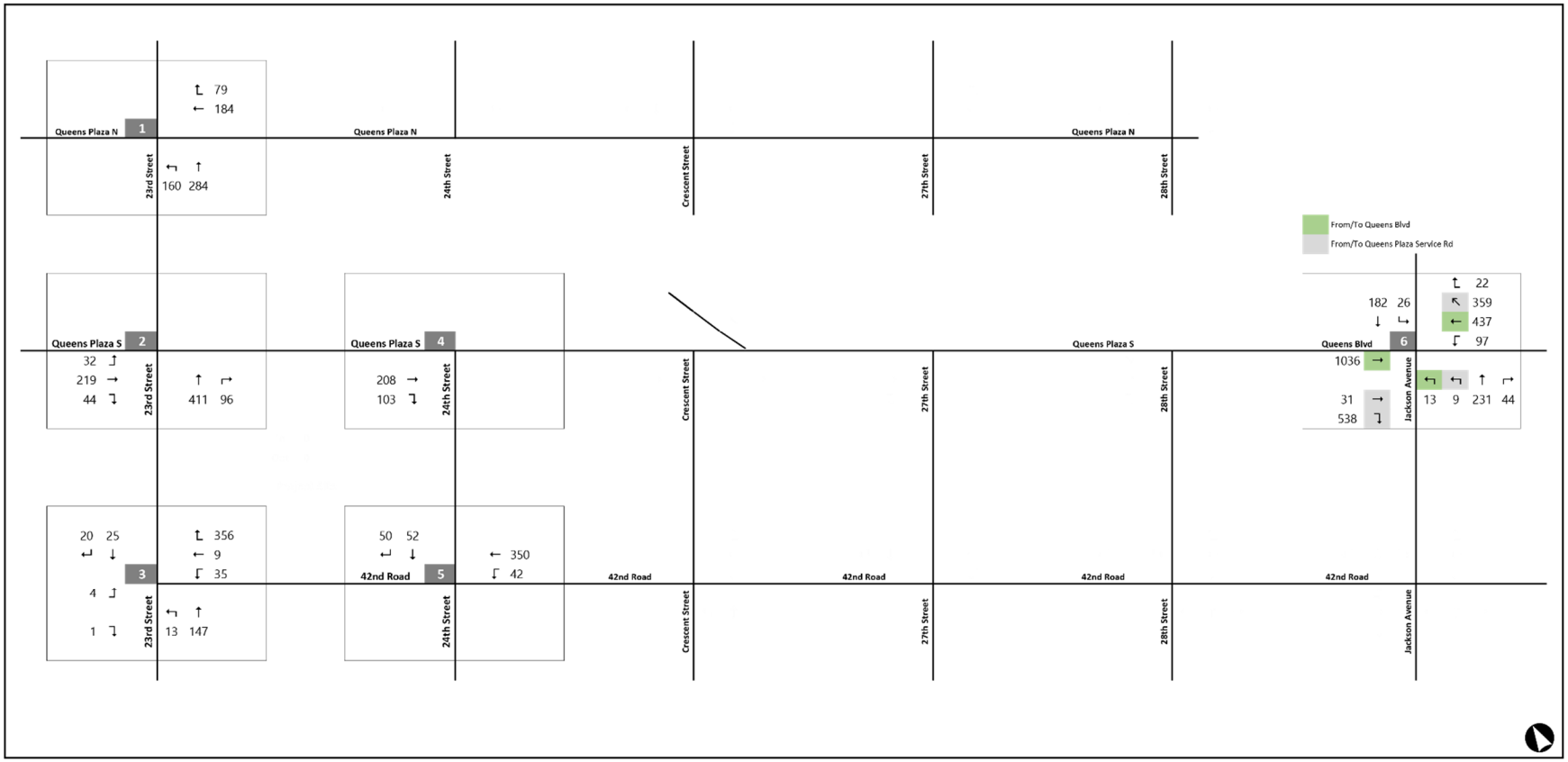
Queens Boulevard & Jackson Avenue/Northern Boulevard

- During the **Weekday AM** peak hour, the westbound approach would operate at LOS F with an average delay of 142.9 seconds and a v/c ratio of 1.35.
- During the **Weekday MD** peak hour, the westbound approach would operate at LOS F with an average delay of 83.8 seconds and a v/c ratio of 1.09. The northbound right-turn lane group would operate at LOS E with an average delay of 60.3 seconds and a v/c ratio of 0.55.
- During the **Weekday PM** peak hour, the westbound approach would operate at LOS F with an average delay of 137.6 seconds and a v/c ratio of 1.22. The northbound left-turn/through lane group would operate at LOS F with an average delay of 146.8 seconds and a v/c ratio of 1.19. The northbound right-turn lane group would operate at LOS E with an average delay of 70.1 seconds and a v/c ratio of 0.71.

42nd Road & 23rd Street (Unsignalized)

- During the **Weekday AM** peak hour, the eastbound approach would operate at LOS F with a delay of 67.0 seconds and a v/c ratio of 0.08. The westbound approach would operate at LOS F with a delay of 73.7 seconds and v/c ratio of 1.01.
- During the **Weekday MD** peak hour, the westbound approach would operate at LOS F with a delay of 52.0 seconds and a v/c ratio of 0.83.
- During the **Weekday PM** peak hour, the eastbound approach would operate at LOS F with a delay that exceeds the maximum reportable delay, but it is expected that the delay would exceed what was reported for the Existing Condition weekday PM peak hour. The westbound approach would operate at LOS F with a delay of 271.3 seconds and v/c ratio of 1.49.

Figure 10-12 2024 No-Action Condition Traffic Volumes – Weekday AM Peak Hour



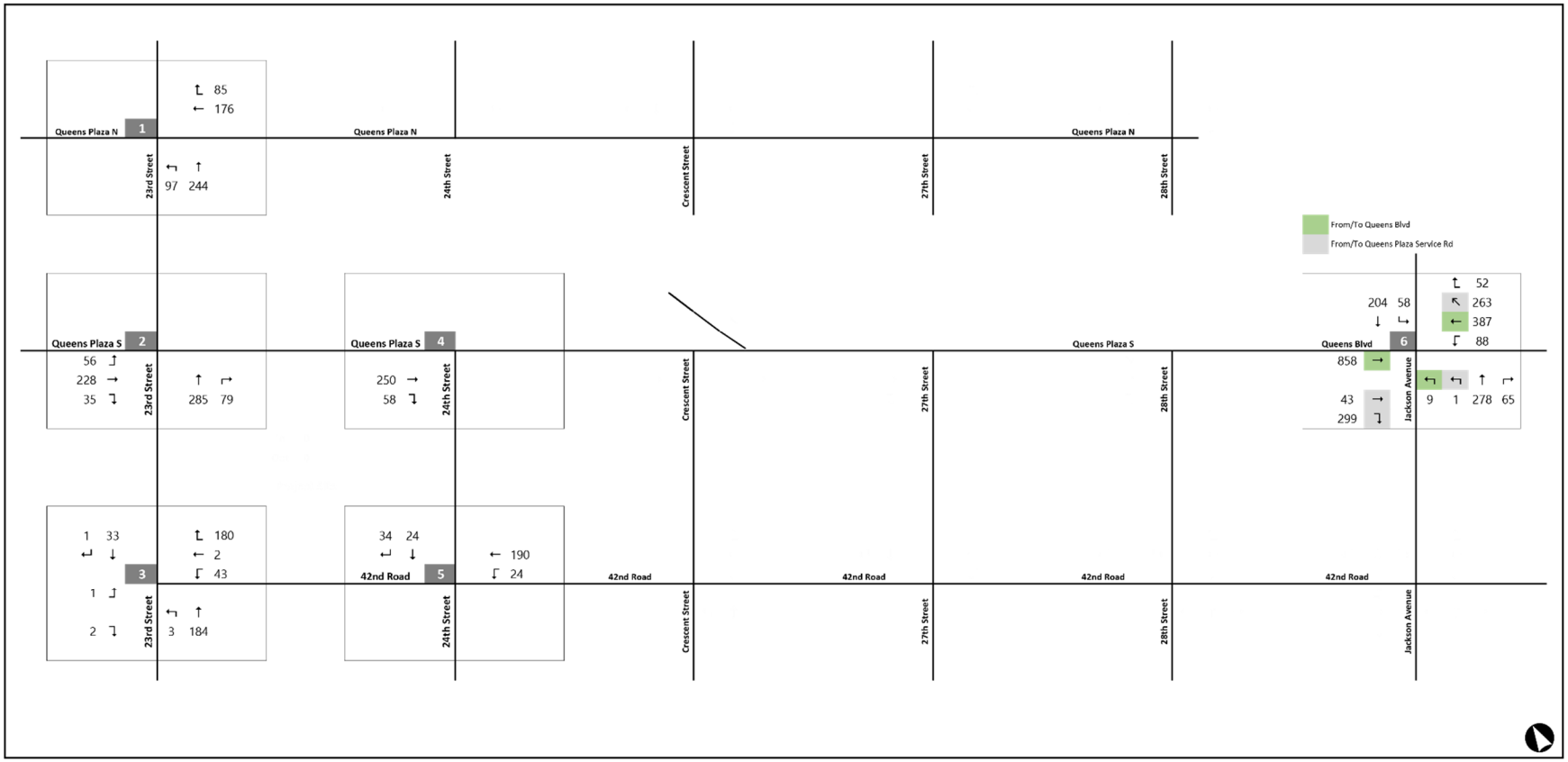
Project Site

Peak Hour Volume

2024 NO-ACTION CONDTION TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR

Figure 10-12
23-10 Queens Plaza South Rezoning EAS

Figure 10-13 2024 No-Action Condition Traffic Volumes – Weekday MD Peak Hour



Project Site

Peak Hour Volume

2024 NO-ACTION CONDTION TRAFFIC VOLUMES
WEEKDAY MD PEAK HOUR

Figure 10-13
23-10 Queens Plaza South Rezoning EAS

Figure 10-14 2024 No-Action Condition Traffic Volumes – Weekday PM Peak Hour

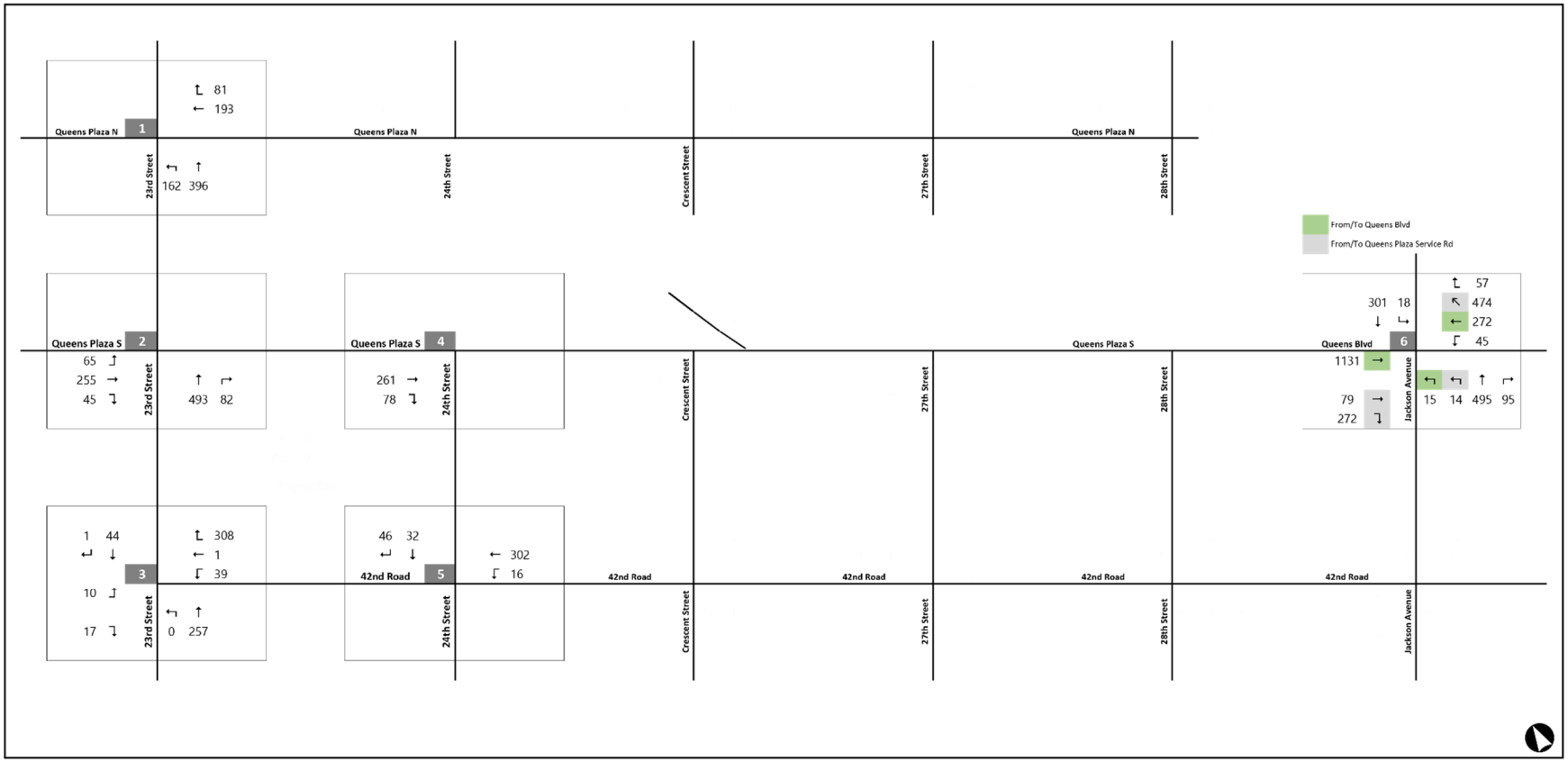


Table 10-19 2024 No-Action Condition – Signalized Intersection Level of Service Analysis

#	Intersection & Approach	Weekday AM Peak Hour				Weekday MD Peak Hour				Weekday PM Peak Hour			
		Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
1	**Queens Plaza North and 23rd Street**												
	Westbound	TR	0.62	24.5	C	TR	0.62	24.7	C	TR	0.63	24.7	C
	Northbound	LT	0.40	17.9	B	LT	0.29	16.6	B	LT	0.46	18.7	B
		Intersection		20.4	C	Intersection		20.3	C	Intersection		20.8	C
2	**Queens Plaza South and 23rd Street**												
	Eastbound	LTR	0.63	25.0	C	LTR	0.69	26.8	C	LTR	0.75	29.7	C
	Northbound	T	0.72	27.3	C	T	0.50	20.7	C	T	0.89	39.8	D
		R	0.41	21.7	C	R	0.36	20.1	C	R	0.41	21.9	C
		Intersection		25.7	C	Intersection		23.6	C	Intersection		34.2	C
6	**Jackson Ave/Northern Blvd & Queens Blvd**												
	Northbound	LT	0.68	54.1	D	LT	0.70	54.4	D	LT	1.19	146.8	F
		R	0.29	46.9	D	R	0.55	60.3	E	R	0.71	70.1	E
	Southbound	LT	0.34	35.8	D	LT	0.49	39.4	D	LT	0.51	39.0	D
	Eastbound (from Queens Blvd)	T	0.83	34.3	C	T	0.70	28.1	C	T	0.91	39.8	D
	Eastbound (from Queens Plaza South)	T	0.06	18.0	B	T	0.07	17.7	B	T	0.15	18.6	B
		R	0.50	1.6	A	R	0.35	0.9	A	R	0.29	0.7	A
	Westbound	LTR	1.35dl	142.9	F	LTR	1.09	83.8	F	LTR	1.22	137.6	F
		Intersection		63.1	E	Intersection		46.8	D	Intersection		78.7	E
	Notes: L = Left Turn, T= Through, R = Right Turn, DefL = Defacto Left Turn; LOS = Level of Service. The Jackson Avenue/Northern Boulevard and Queens Boulevard intersection (intersection #6) was analyzed using Synchro 11 software.												

Table 10-20 2024 No-Action Condition – Unsignalized Intersection Level of Service Analysis

#	Intersection & Approach	Weekday AM Peak Hour				Weekday MD Peak Hour				Weekday PM Peak Hour			
		Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
3	**42nd Road and 23rd Street**												
	Eastbound	LTR	0.08	67.0	F	LTR	0.01	18.8	C	LTR	~~	~~	F
	Westbound	LTR	1.01	73.7	F	LTR	0.83	52.0	F	LTR	1.49	271.3	F
	Northbound	LT	0.01	7.9	A	LT	0.00	7.8	A	LT	0.00	7.9	A
5	**42nd Road and 24th Street**												
	Westbound	LT	0.04	7.7	A	LT	0.02	8.1	A	LT	0.02	8.0	A
	Southbound	TR	0.43	27.2	D	TR	0.19	16.6	C	TR	0.33	23.3	C
	Notes: ~ = No Results Available, L = Left Turn, T= Through, R = Right Turn, DefL = Defacto Left Turn; LOS = Level of Service. The Queens Plaza South and 24th Street intersection (intersection #4) has no turning movements with conflicts; therefore, it cannot be analyzed and can be assumed to operate at LOS A with negligible delays.												

Transit Conditions

The future No-Action subway and bus volumes reflect annual background growth rates of 0.25% per year from 2020, as recommended in the *CEQR Technical Manual*, as well as increases in volumes associated with No-Action projects and the as-of-right development plan for the Project Site under current zoning.

Subway Stairs

As shown in **Table 10-21**, the street-level and platform stairs are projected to operate at LOS C or better during both peak hours in the No-Action condition.

Table 10-21 2024 No-Action Condition Level of Service Analysis – Stairs

Station	Vertical Element	ID	15-Minute Entering Volume [1]	15-Minute Exiting Volume [1]	Total Stair (feet) [2]	Number of Intermediate Handrails	Effective Width (feet)	Friction Factor [3]	Surge Factor (onto platform level) [3]	Surge Factor (off of platform level) [3]	15-Minute Entering Capacity [4]	15-Minute Exiting Capacity [4]	V/C [5]	LOS [5]
Weekday AM														
Queensboro Plaza Subway Station	S Street Level Stair	S1, M1	339	407	7.5	0	6.5	0.9	1	0.9	878	790	0.90	C
	Lower Platform Stair	PL1, PL2	0	265	7.0	0	6.0	1.0	1	0.8	900	720	0.37	A
	Lower Platform Stair	PL3, PL4	0	165	7.0	0	6.0	1.0	1	0.8	900	720	0.23	A
	Lower Platform Stair	PL5, PL6	562	189	7.0	0	6.0	0.9	1	0.8	810	648	0.99	C
	Lower Platform Stair	PL7,PL8	51	209	7.5	0	6.5	0.9	1	0.8	878	702	0.36	A
	Upper Platform Stair	P1, P2	255	68	7.3	0	6.3	0.9	1	0.8	844	675	0.40	A
	Upper Platform Stair	P3, P4	110	105	7.0	0	6.0	0.9	1	0.8	810	648	0.30	A
	Upper Platform Stair	P5, P6	159	154	7.3	0	6.3	0.9	1	0.8	855	684	0.41	A
	Upper Platform Stair	P7, P8	107	145	7.0	0	6.0	0.9	1	0.8	810	648	0.36	A
Weekday PM														
Queensboro Plaza Subway Station	S Street Level Stair	S1, M1	396	252	7.5	0	6.5	0.9	1	0.9	878	790	0.77	C
	Lower Platform Stair	PL1, PL2	0	93	7.0	0	6.0	1.0	1	0.8	900	720	0.13	A
	Lower Platform Stair	PL3, PL4	0	118	7.0	0	6.0	1.0	1	0.8	900	720	0.16	A
	Lower Platform Stair	PL5, PL6	664	104	7.0	0	6.0	0.9	1	0.8	810	648	0.98	C
	Lower Platform Stair	PL7,PL8	84	147	7.5	0	6.5	0.9	1	0.8	878	702	0.31	A
	Upper Platform Stair	P1, P2	180	111	7.3	0	6.3	0.9	1	0.8	844	675	0.38	A
	Upper Platform Stair	P3, P4	93	63	7.0	0	6.0	0.9	1	0.8	810	648	0.21	A
	Upper Platform Stair	P5, P6	308	99	7.3	0	6.3	0.9	1	0.8	855	684	0.51	B
	Upper Platform Stair	P7, P8	68	183	7.0	0	6.0	0.9	1	0.8	810	648	0.37	A

Notes:
(1) New stairway volumes associated with general background growth were distributed based on existing counts.
(2) Vertical elements measured at the narrowest location.
(3) Friction and surge factors based on NYCT guidelines in accordance with the 2020 CEQR Technical Manual.
(4) Stair capacity based on NYCT guidelines in accordance with the 2020 CEQR Technical Manual.
(5) v/c ratios and LOS ratings were calculated based on rates presented in the 2021 CEQR Technical Manual.

Control Areas

For the control area elements, the quantity, volume, friction and surge factors, capacity, and calculated v/c and LOS results under No-Action condition are shown in **Table 10-22**. All control area elements are projected to operate at LOS B during both peak hours in the No-Action condition.

Table 10-22 2024 No-Action Condition Level of Service Analysis – Control Areas

Station	Station Elements	Quantity (Entry)	Quantity (Exit)	15-Minute Entering Volume [1]	15-Minute Exiting Volume [1]	Friction Factor [2]	Surge Factor (onto platform)	Surge Factor (off of platform)	15 Minute Entering Capacity [3]	15 Minute Exiting Capacity [3]	V/C [4]	LOS [4]
Weekday AM												
Queensboro Plaza Subway Station	Turnstile	6	6	613	829	0.9	0.9	0.9	2520	6090	**0.47**	**B**
	HEET	0	0									
	HXT	0	4									
Weekday PM												
Queensboro Plaza Subway Station	Turnstile	6	6	748	461	0.9	0.9	0.9	2520	6090	**0.46**	**B**
	HEET	0	0									
	HXT	0	4									

Notes:
(1) New turnstile volumes associated with the general background growth were distributed based on the existing counts.
(2) Friction and Surge factors based on NYCT guidelines in accordance with the 2021 CEQR Technical Manual.
(3) Fare array capacity based on NYCT guidelines in accordance with the 2021 CEQR Technical Manual.
(4) v/c ratios and LOS ratings were calculated based on rates presented in the 2021 CEQR Technical Manual.

Pedestrian Operations

Pedestrian trips associated with general annual background growth of 0.25 percent for pedestrian elements in Long Island City and with the development projects planned for 2024 were superimposed onto the existing pedestrian elements (sidewalks, crosswalks, and corner reservoirs) to generate No-Action condition peak period volumes for analysis during the three peak hours.

Sidewalks

The MTA will be constructing a subway elevator on the south sidewalk on the east leg of Crescent Street and Queens Plaza South by 2024. After the elevator and associated sidewalk widening is completed, the sidewalk adjacent to the proposed subway elevator (i.e., between the elevator and the building) will be the narrowest effective sidewalk width under the With-Action Condition; therefore, this location was included in the No-Action and With-Action analyses and the associated LOS tables. As presented in **Table 10-23**, the majority of sidewalk locations included in the transportation analysis are projected to operate at mid-LOS D or better for the non-platoon conditions and at mid-LOS D or better for the platoon conditions during the three peak hours for the No-Action condition, with the exception of the following location:

› Platoon and Non-Platoon Conditions

- The south sidewalk on the east leg of Crescent Street and Queens Plaza South (at the subway stairs) would operate at worse than mid-LOS D during all peak hours.

Table 10-23 2024 No-Action Condition Level of Service Analysis – Sidewalks

Location	Width at Narrowest Point (ft)	Obstruc-tion Width (ft)	Effective Width (ft)	Available Circulation Space (ft^2/p) Weekday			Non-Platoon Conditions LOS Weekday			Platoon Conditions LOS Weekday		
				AM	MD	PM	AM	MD	PM	AM	MD	PM
23rd Street and Queens Plaza South (E leg, S sidewalk)	8.5	2.5	6.0	76	82	47	A	A	B	C	C	C
24th Street and Queens Plaza South (E leg, S sidewalk)	10.3	2.5	7.8	74	65	88	A	A	A	C	C	C
Crescent Street and Queens Plaza South (E leg, S sidewalk)[1] - at subway stairs	6.0	3.5	2.5	11	11	13	E	E	E	F	E	E
Crescent Street and Queens Plaza South (E leg, S sidewalk)[2] - at subway elevator	10.0	3.5	6.5	35	37	40	C	C	C	D	D	D
27th Street and Queens Plaza South (W leg, S sidewalk)[1]	12.0	3.0	9.0	44	51	50	B	B	B	C	C	C

Note: (1) South sidewalk on Queens Plaza South between Crescent Street and 27th Street was split into two sidewalk analysis locations to analyze the sections at the Queensboro Plaza Station subway stairs (E leg, S sidewalk) and west of the stairs (W leg, S sidewalk) separately.
(2) South sidewalk on Queens Plaza South between Crescent Street and 27th Street at the proposed subway elevator was also analyzed (same pedestrian volumes as at the existing subway stairs; different effective width).

Crosswalks

As presented in **Table 10-24**, both crosswalk locations included in the transportation analysis are projected to operate at LOS A during the three peak hours during the No-Action condition.

Table 10-24 2024 No-Action Condition Level of Service Analysis – Crosswalks

Location	Length (ft)	Width (ft)	Average Pedestrian Delay (s) Weekday			Crosswalk Circulation LOS Weekday		
			AM	MD	PM	AM	MD	PM
24th Street and Queens Plaza South (S leg)	30.2	13.6	2.8	1.5	2.0	A	A	A
Crescent Street and Queens Plaza South (S leg)	30.0	12.0	1.2	1.3	1.3	A	A	A

Corners

As presented in **Table 10-25**, all corner reservoirs included in the transportation analysis are projected to operate at LOS C or better during the three peak hours during the No-Action condition.

Table 10-25 2024 No-Action Condition Level of Service Analysis – Corners

Location	Available Circulation Space (ft^2/p) Weekday			Corner Circulation LOS Weekday		
	AM	MD	PM	AM	MD	PM
23rd Street and Queens Plaza South (SE corner)	86	86	57	A	A	B
24th Street and Queens Plaza South (SE corner)	93	106	133	A	A	A
24th Street and Queens Plaza South (SW corner)	126	195	140	A	A	A
Crescent Street and Queens Plaza South (SE corner)	55	57	64	B	B	A
Crescent Street and Queens Plaza South (SW corner)	157	158	188	A	A	A
27th Street and Queens Plaza South (SW corner)	28	56	44	C	B	B

Parking Supply and Utilization

The utilization of on- and off-street parking facilities in the study area are expected to increase due to the area's background growth by an annual growth rate of 0.25 percent. The parking demands from the No-Action development sites were estimated based on parking

accumulation characteristics from the *Domino Sugar Rezoning FEIS* and *Hudson Yards FGEIS*. No-Action Development Sites 1 and 2 would have on-site parking facilities, but there would be no on-site parking provided at No-Action Development Sites 3, 4, 5, 6, and 7 or for the as-of-right development that could be built on the Project Site. The excess parking demand at sites 1 and 2 that would not be accommodated in the on-site facilities, and the parking demand at sites 3, 4, 5, 6, and 7 and from the as-of-right development were included as additional demands for on- and off-street parking spaces in the No-Action parking utilization.

Table 10-26 presents the expected off-street parking utilization in the 2024 No-Action condition. The results indicate that within a 0.25-mile radius of the Project Site, the on- and off-street parking utilization is expected to increase to 127, 123, and 111% during the Weekday AM, Weekday MD, and Weekday PM peak periods, respectively, in the 2024 No-Action condition.

Table 10-26 2024 No-Action Parking Utilization Summary

2024 No-Action	Weekday AM	Weekday MD	Weekday PM
Capacity			
Existing On-Street Capacity	1,386	1,483	1,394
Existing Off-Street Capacity	674	674	674
Total No-Action Capacity	2,060	2,157	2,068
Demand			
2020 Existing On-Street Demand	1,739	1,817	1,473
2020 Existing Off-Street Demand	423	459	456
Background Growth Increment [1]	22	23	19
No-Action Demand from Development Sites [2]	429	345	357
Total No-Action Demand	2,613	2,644	2,305
Utilization			
Available Spaces	-553	-487	-237
No-Action Utilization	**127%**	**123%**	**111%**

1. Reflects an annual background growth rate of 0.25 percent per year for four years (2021 CEQR Technical Manual, Table 16-4).
2. Represents parking demand generated by the No-Action sites that would not be accommodated on-site.

Description of the Proposed Project

The Proposed Project would result in the redevelopment a site located at 23-10 Queens Plaza South in the Long Island City neighborhood of Queens, New York. The Proposed Project is bounded by Queens Plaza South to the north, 42nd Road to the south, 24th Street to the east, and 23rd Street to the right, as shown in **Figure 10-1**. The study area includes three signalized intersections, three unsignalized intersections, and 11 pedestrian elements.

The analyzed With-Action scenario includes the following land uses:

› 333,857 gsf of office space

› 21,505 gsf of local retail space

- 520 gsf of exhibit space
- 7,254 gsf of restaurant space

In the absence of the Proposed Project, 27,713 gsf of local retail space can be built as-of-right under existing zoning for the Project Site. Therefore, the total increment analyzed for the Proposed Project would include:

- 333,857 gsf of office space
- -6,208 gsf of local retail space
- 520 gsf of exhibit space
- 7,254 gsf of restaurant space

Analysis Scenarios

The trip generation and assignment estimates were prepared for the Weekday AM, Weekday MD, Weekday PM, and Saturday MD peak hours. Note that the Saturday MD peak hour was not included in the detailed analysis as the Proposed Project is primarily office space and background traffic on a Saturday is generally lower than on a weekday in this area.

Trip Generation

The following section describes the assumptions used to develop the trip generation and trip distribution characteristics of the Proposed Project, which are described in greater detail in the Transportation Demand Factors Memo, included in **Appendix 10-1.**

Office

The Proposed Project would consist of approximately 333,857 gsf of office space. The daily trip generation rates, temporal distribution, daily truck trip generation rates, truck temporal distribution, and truck directional distribution were obtained from the *2021 CEQR Technical Manual*, Table 16-2. Modal splits for the weekday AM, weekday PM, and Saturday MD peak hours were based on office modal split survey results provided by NYCDOT for 41-21 27th Street. Modal splits for the weekday MD peak hour, and taxi vehicle occupancy were based on the *Dutch Kills Rezoning FEIS*, Table 15-7. Directional distribution was obtained in the *2021 CEQR Technical Manual*, Appendix: Transportation; Land Use Directional Splits. Auto vehicle occupancy was based on Reverse Journey to Work census data for census tracts 19, 25, 31, 33, 43, 47, 51, 53, 85, and 171 in Queens County, NY.

Local Retail

The Proposed Project would include -6,208 gsf of local retail use. The daily trip generation rates, temporal distribution, daily truck generation rates, truck temporal distribution, and truck directional distribution were obtained from the *2021 CEQR Technical Manual*, Table 16-2. Modal split percentages and vehicle occupancy were provided by NYCDOT for local retail land uses in Queens in a transit zone. Directional distribution was obtained from the *2021 CEQR Technical Manual*, Appendix: Transportation; Land Use Directional Splits, for the Local Retail land use.

Exhibit Space

The Proposed Project would include 520 gsf of exhibit space use. The daily trip generation rates, daily truck generation rates, modal split percentages, auto and taxi vehicle occupancy, temporal distribution, directional distribution, truck temporal distribution, and truck directional distribution were obtained from the *Pier 57 Redevelopment FEIS*, Table 14-23, for the Rooftop Exhibit Museum land use.

Restaurant

The Proposed Project would include 7,254 gsf of quality restaurant use (table service with typical duration of stays greater than one hour). The daily trip generation rates, daily truck generation rates, modal split percentages, auto and taxi vehicle occupancy, temporal distribution, truck temporal distribution, and truck directional distribution were obtained from *East New York Rezoning FEIS*, Table 13-8. The directional distribution was obtained from *2021 CEQR Technical Manual*, Appendix: Transportation; Land Use Directional Splits, for the Restaurant land use.

Linked Trips

Linked trips are those that have multiple destinations within the Project Site and are typical for multi-use sites. To be conservative, no linked trip credit was taken for this analysis.

Trip Generation Results

The trip generation estimates for the three peak hours are summarized in **Table 10-27** for the Proposed Project. Complete transportation demand factors are shown in **Table 10-28**, with detailed trip generation estimates shown in **Table 10-29**.

Table 10-27 Proposed Project Trip Generation Estimate Summary

Peak Hour	Vehicle (Auto + Taxi + Truck)	Subway	Bus	Walk/Other	Total Pedestrian
Weekday AM	137	517	26	-5	538
Weekday MD	55	69	71	481	621
Weekday PM	126	460	44	-57	447
Saturday MD	78	160	46	-74	132

Table 10-28 Transportation Demand Factors

	Land Use:	Office		Local Retail		Exhibit Space		Restaurant	
Program Size	**Size**	333,857		-6,208		520		7,254	
	Unit	gsf		gsf		gsf		gsf	
Daily Person Trip Generation		(1)		(1)		(5)		(1)	
	Weekday	18.000		329		27		246	
	Saturday	3.900		358		20.6		358	
	Unit	per 1,000 gsf		per 1,000 gsf		per 1,000 gsf		per 1,000 gsf	
Daily Truck Trip Generation		(1)		(1)		(5)		(6)	
	Weekday	0.32		0.35		0.05		3.60	
	Saturday	0.01		0.04		0.00		3.60	
	Unit	per 1,000 gsf		per 1,000 gsf		per 1,000 gsf		per 1,000 gsf	
Modal Split		**AM/PM/Sat**	**MD**	**Weekday**	**Saturday**	**Weekday**	**Saturday**	**Weekday**	**Saturday**
		(7,2)		(3)		(5)		(6)	
	Auto	14.4%	2.0%	11.0%	8.0%	19.5%	19.5%	30.0%	30.0%
	Taxi	3.1%	1.0%	0.0%	0.0%	10.0%	10.0%	5.0%	5.0%
	Bus	3.5%	7.0%	3.0%	4.0%	7.0%	7.0%	15.0%	15.0%
	Subway	69.6%	7.0%	4.0%	7.0%	33.0%	33.0%	15.0%	15.0%
	Walk/Other	9.4%	83.0%	82.0%	81.0%	30.5%	30.5%	35.0%	35.0%
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Vehicle Occupancy		(8,2)		(3)		(5)		(6)	
	Auto	1.11	1.11	1.40	1.40	2.67	2.67	2.20	2.20
	Taxi	1.42	1.42	1.40	1.40	2.08	2.08	2.30	2.30
Linked Trips		0%	0%	0%	0%	0%	0%	0%	0%
Temporal Distribution		(1)		(1)		(5)		(1)	
	AM	12.4%		4.8%		1.0%		1.0%	
	MD	11.0%		8.0%		16.0%		10.8%	
	PM	10.5%		10.9%		13.0%		10.6%	
	Sat MD	14.1%		11.7%		17.0%		13.0%	
Truck Temporal Distribution		(1)		(1)		(5)		(6)	
	AM	10.0%		8.0%		7.9%		6.0%	
	MD	11.0%		11.0%		14.7%		6.0%	
	PM	2.0%		2.0%		1.1%		1.0%	
	Sat MD	11.0%		11.0%		14.7%		0.0%	
Directional Distribution		**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**
		(9)		(9)		(5)		(9)	
	AM	89.0%	11.0%	53.0%	47.0%	50.0%	50.0%	64.0%	36.0%
	MD	48.0%	52.0%	50.0%	50.0%	63.0%	37.0%	54.0%	46.0%
	PM	17.0%	83.0%	50.0%	50.0%	52.0%	48.0%	53.0%	47.0%
	Sat MD	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	56.0%	44.0%
Truck Directional Distribution		(1)		(1)		(5)		(6)	
	AM	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
	MD	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
	PM	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
	Sat MD	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%

Notes
(1) *2021 CEQR Technical Manual*, Table 16-2.
(2) *Dutch Kills Rezoning,* Table 15-7. Weekday MD modal split; taxi occupancy
(3) NYCDOT Local Retail Survey in Queens Transit Zone
(4) Special Flushing Waterfront District EAS, Table M-4
(5) Pier 57 FEIS Tech Memo, Table 8. Rooftop Exhibit Museum space
(6) East New York FEIS, Table 13-8.
(7) Weekday AM and PM, Saturday MD peaks: Office modal survey at 41-21 27th St. Rail combined with subway and bike combined with walk
(8) Auto vehicle occupancy: 2012-2016 American Community Survey 5-year RJTW census data for census tracts 19, 25, 31, 33, 43, 47, 51, 53, 85, and 171 in Queens County, NY
(9) CEQR Technical Manual, Appendix: Transportation; Land Use Directional Splits

Table 10-29 Proposed Project Detailed Trip Generation Estimates

Travel Demand Forecast (Person Trips)

		Office		Local Retail		Exhibit Space		Restaurant		TOTAL		
Daily Trips	Weekday	6,009		-2,042		14		1,784		**5,765**		
	Saturday	1,302		-2,222		11		2,597		**1,688**		
Peak Hour Trips	AM	745		-98		0		18		**665**		
	MD	661		-163		2		193		**693**		
	PM	631		-223		2		189		**599**		
	Sat MD	184		-260		2		338		**264**		
		In	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**TOTAL**
Weekday AM	Auto	95	12	-6	-5	0	0	3	2	**92**	**9**	**101**
	Taxi	21	3	0	0	0	0	1	0	**22**	**3**	**25**
	Bus	23	3	-2	-1	0	0	2	1	**23**	**3**	**26**
	Subway	461	57	-2	-2	0	0	2	1	**461**	**56**	**517**
	Walk/Other	62	8	-43	-38	0	0	4	2	**23**	**-28**	**-5**
	Total	662	83	-53	-46	0	0	12	6	**621**	**43**	**664**
Weekday MD	Auto	6	7	-9	-9	0	0	31	27	**28**	**25**	**53**
	Taxi	3	3	0	0	0	0	5	4	**8**	**7**	**15**
	Bus	22	24	-2	-2	0	0	16	13	**36**	**35**	**71**
	Subway	22	24	-3	-3	0	0	16	13	**35**	**34**	**69**
	Walk/Other	263	285	-67	-67	0	0	36	31	**232**	**249**	**481**
	Total	316	343	-81	-81	0	0	104	88	**339**	**350**	**689**
Weekday PM	Auto	15	75	-12	-12	0	0	30	27	**33**	**90**	**123**
	Taxi	3	16	0	0	0	0	5	4	**8**	**20**	**28**
	Bus	4	18	-3	-3	0	0	15	13	**16**	**28**	**44**
	Subway	75	365	-4	-4	0	0	15	13	**86**	**374**	**460**
	Walk/Other	10	49	-91	-91	0	0	35	31	**-46**	**-11**	**-57**
	Total	107	523	-110	-110	0	0	100	88	**97**	**501**	**598**
Saturday MD	Auto	13	13	-10	-10	0	0	57	45	**60**	**48**	**108**
	Taxi	3	3	0	0	0	0	9	7	**12**	**10**	**22**
	Bus	3	3	-5	-5	0	0	28	22	**26**	**20**	**46**
	Subway	64	64	-9	-9	0	0	28	22	**83**	**77**	**160**
	Walk/Other	9	9	-105	-105	0	0	66	52	**-30**	**-44**	**-74**
	Total	92	92	-129	-129	0	0	188	148	**151**	**111**	**262**

Travel Demand Forecast (Vehicle Trips)

Taxi Overlap Rate 0%		Office		Local Retail		Exhibit Space		Restaurant		TOTAL		
		In	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**TOTAL**
Weekday AM	Auto	86	11	-4	-4	0	0	1	1	**83**	**8**	**91**
	Taxi	15	2	0	0	0	0	0	0	15	2	17
	Taxi (Balanced)[1]	17	17	0	0	0	0	0	0	**17**	**17**	**34**
	Truck	5	5	0	0	0	0	1	1	**6**	**6**	**12**
	Total	108	33	-4	-4	0	0	2	2	**106**	**31**	**137**
Weekday MD	Auto	5	6	-6	-6	0	0	14	12	**13**	**12**	**25**
	Taxi	2	2	0	0	0	0	2	2	4	4	8
	Taxi (Balanced)[1]	4	4	0	0	0	0	4	4	**8**	**8**	**16**
	Truck	6	6	0	0	0	0	1	1	**7**	**7**	**14**
	Total	15	16	-6	-6	0	0	19	17	**28**	**27**	**55**
Weekday PM	Auto	14	68	-9	-9	0	0	14	12	**19**	**71**	**90**
	Taxi	2	11	0	0	0	0	2	2	4	13	17
	Taxi (Balanced)[1]	13	13	0	0	0	0	4	4	**17**	**17**	**34**
	Truck	1	1	0	0	0	0	0	0	**1**	**1**	**2**
	Total	28	82	-9	-9	0	0	18	16	**37**	**89**	**126**
Saturday MD	Auto	12	12	-7	-7	0	0	26	20	**31**	**25**	**56**
	Taxi	2	2	0	0	0	0	4	3	6	5	11
	Taxi (Balanced)[1]	4	4	0	0	0	0	7	7	**11**	**11**	**22**
	Truck	0	0	0	0	0	0	0	0	**0**	**0**	**0**
	Total	16	16	-7	-7	0	0	33	27	**42**	**36**	**78**

Notes
(1) A 0% taxi overlap rate was assumed (i.e., 0% of inbound full taxis are assumed to be available for outbound demand), based on the *2021 CEQR Technical Manual*.

Travel Demand Forecast (Total Walk Trips)

		Office		Local Retail		Exhibit Space		Restaurant		TOTAL		
		In	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**TOTAL**
Weekday AM	Total Walk Trips[1]	546	68	-47	-41	0	0	8	4	**507**	**31**	**538**
Weekday MD	Total Walk Trips[1]	307	333	-72	-72	0	0	68	57	**303**	**318**	**621**
Weekday PM	Total Walk Trips[1]	89	432	-98	-98	0	0	65	57	**56**	**391**	**447**
Saturday MD	Total Walk Trips[1]	76	76	-119	-119	0	0	122	96	**79**	**53**	**132**

Notes
(1) Total walk trips includes all trips via transit plus walk only trips.

Trip Assignment

Trips were assigned to the study area along logical and reasonable arrival and departure routes by land use type and expected origins and destinations. Additional detail regarding the vehicular trip assignments is provided in the Transportation Demand Factors Memo, included in **Appendix 10-1**. **Figure 10-15** through **Figure 10-17** show the resulting trip increments generated by the Proposed Project for each peak hour.

Parking Accumulation

Table 10-30 shows the parking accumulation for a typical Weekday for the Proposed Project. The total parking demand during a typical weekday would peak at 311 spaces between 1:00 PM and 2:00 PM.

Figure 10-15 Project Generated Traffic Volumes – Weekday AM Peak Hour

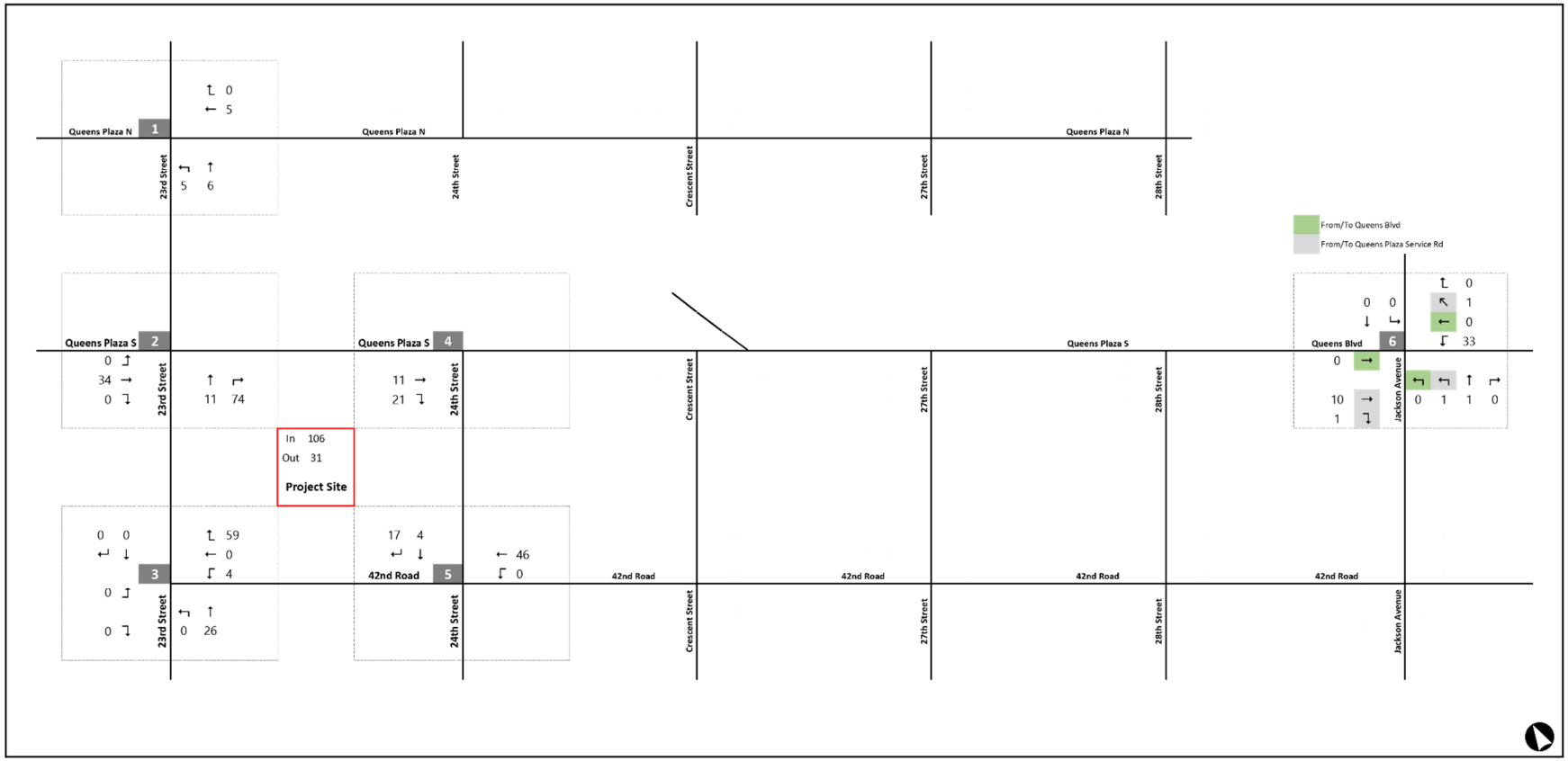


Figure 10-15
23-10 Queens Plaza South Rezoning EAS

Figure 10-16 Project Generated Traffic Volumes – Weekday MD Peak Hour

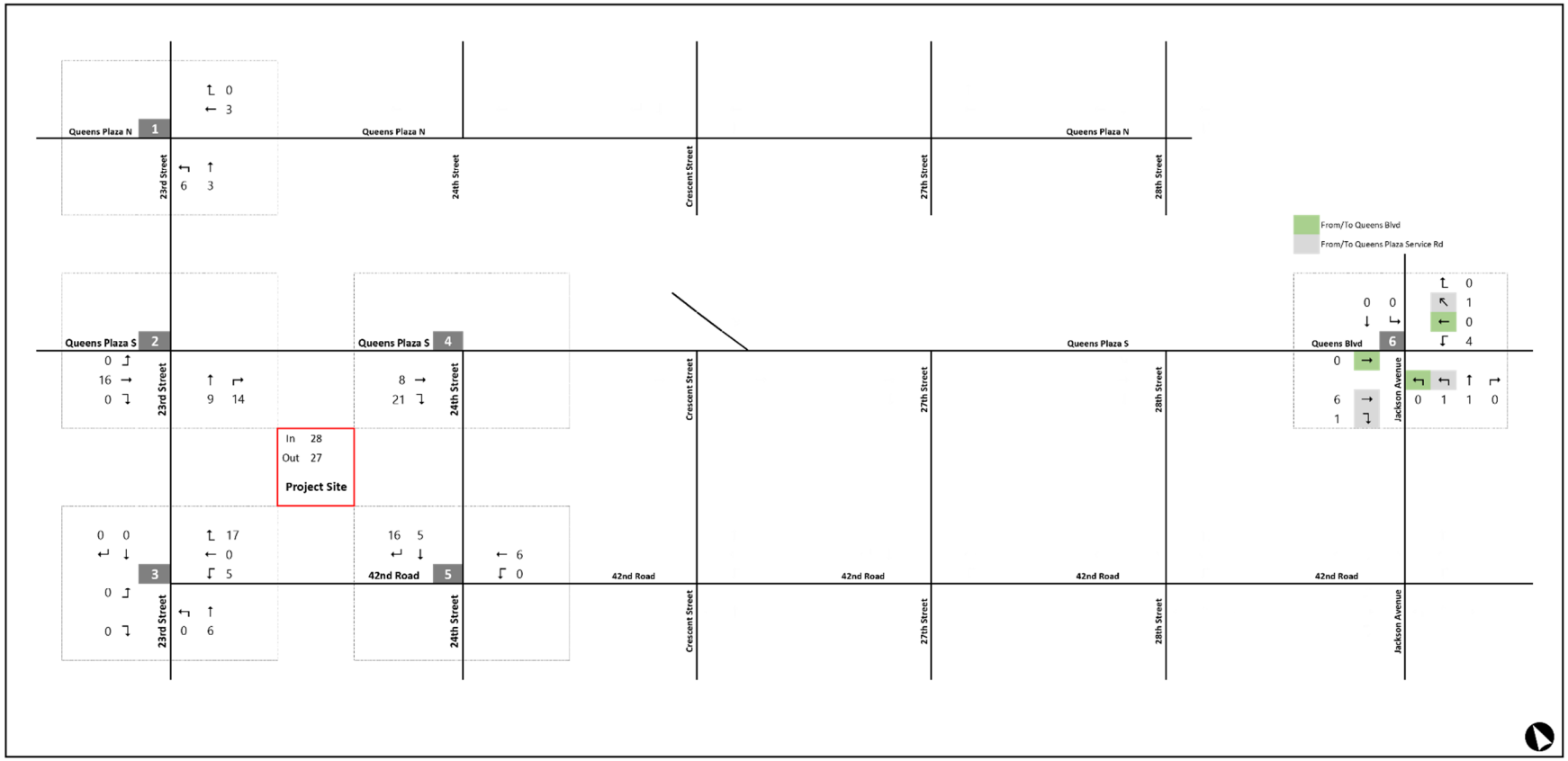


Figure 10-16
23-10 Queens Plaza South Rezoning EAS

Figure 10-17 Project Generated Traffic Volumes – Weekday PM Peak Hour

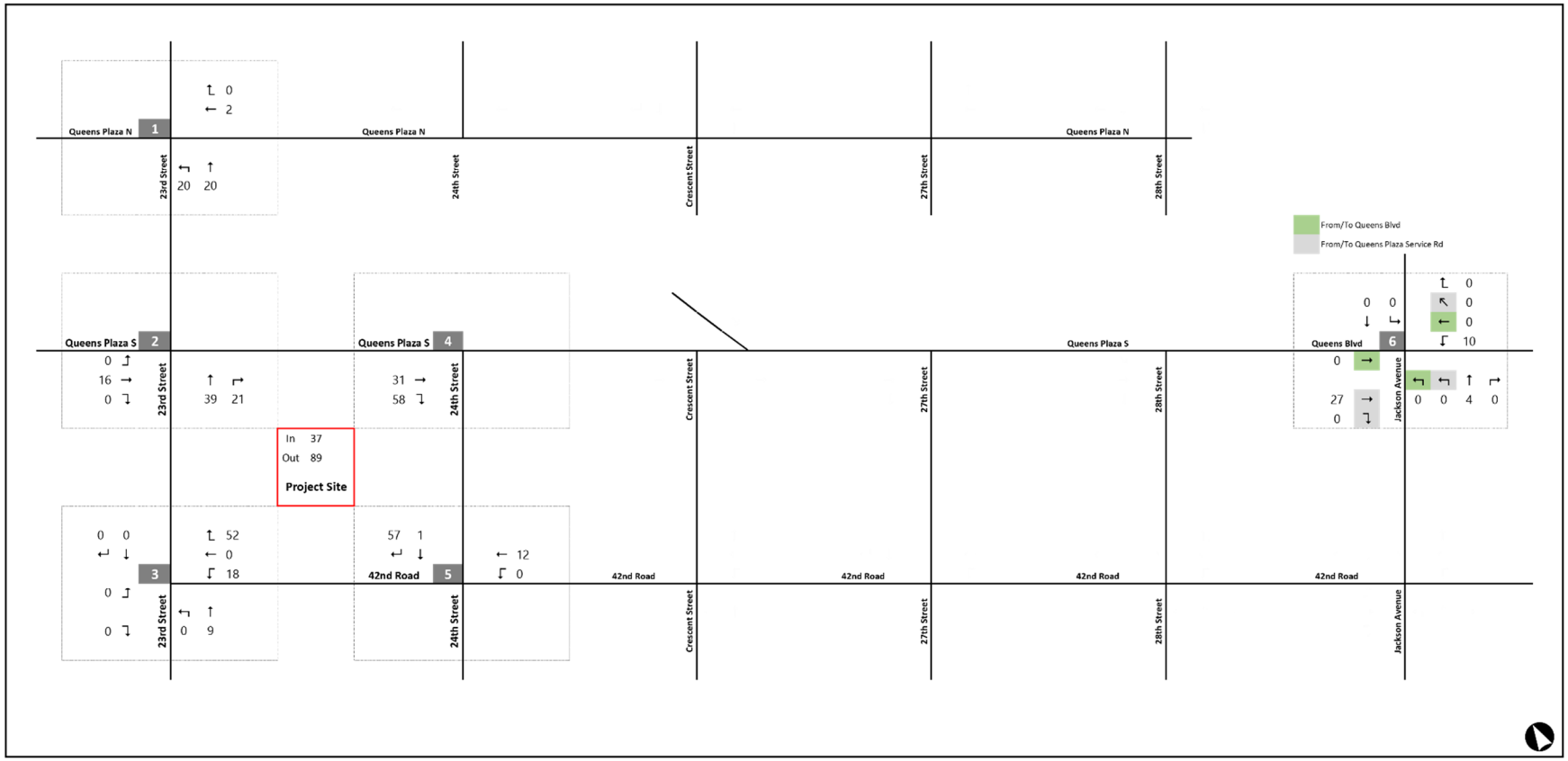


Figure 10-17
23-10 Queens Plaza South Rezoning EAS

Table 10-30 2024 With-Action Condition Weekday Project Parking Accumulation

Hour	Restaurant			Local Retail			Exhibit Space			Office			Total		
	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation
Before 12													0	0	0
12-1 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-2 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2-3 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-4 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4-5 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5-6 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6-7 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7-8 AM	1	1	0	-4	-4	0	0	0	0	86	11	76	83	8	76
8-9 AM	1	0	1	-2	-2	0	0	0	0	121	9	188	120	6	189
9-10 AM	1	0	2	-4	-3	-1	0	0	0	114	16	286	111	13	287
10-11 AM	7	4	5	-6	-4	-3	0	0	0	25	21	290	26	21	293
11-12 PM	10	1	15	-7	-7	-3	0	0	0	2	2	290	5	-4	302
12-1 PM	14	12	17	-6	-6	-2	0	0	0	5	6	290	14	11	305
1-2 PM	11	4	24	-8	-7	-3	0	0	0	1	0	290	4	-2	311
2-3 PM	3	15	12	-7	-7	-3	0	0	0	2	7	285	-2	15	294
3-4 PM	6	11	7	-6	-6	-3	0	0	0	21	33	273	22	38	278
4-5 PM	14	12	10	-9	-9	-3	0	0	0	14	68	219	19	71	226
5-6 PM	9	7	12	-5	-7	-1	0	0	0	9	181	47	13	182	57
6-7 PM	15	3	23	-7	-7	-1	0	0	0	5	42	10	13	38	32
7-8 PM	15	10	29	-6	-6	-1	0	0	0	2	12	0	11	16	28
8-9 PM	5	18	16	-4	-4	-1	0	0	0	0	0	0	1	14	16
9-10 PM	8	19	5	-1	-2	0	0	0	0	0	0	0	7	17	5
10-11 PM	1	5	1	0	0	0	0	0	0	0	0	0	1	5	1
11-12 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	**122**	**122**		**-80**	**-80**		**1**	**1**		**407**	**407**		**449**	**449**	

Note: Individual numbers may not add up to total due to rounding. Peak hour in/outs adjusted to match trip generation peak hour in/outs.

Project-Related Improvements

The Applicant will implement, at its own expense and as part of the Proposed Project, certain Project Components Related to the Environment (PCRE) that were materials to the analysis of environmental impacts conducted in this EAS. A Restrictive Declaration (i.e., a legally binding mechanism) will be recorded at the time of approval of Proposed Actions to ensure the implementation and funding of the PCREs. The PCREs include roadway and pedestrian improvements and are summarized below:

- At the intersection of 42nd Road and 23rd Street, install a traffic signal (see **Appendix B-2** for the traffic signal warrant anlaysis results).
- At the intersection of Queens Boulevard and Jackson Avenue/Northern Boulevard, re-stripe the northbound approach to include two through lanes and one shared through/right-turn lane (see **Appendix B-3**).
- Widen the south sidewalk on Queens Plaza South between Crescent Street and 27th Street approximately 11 feet into the roadway (east of the proposed subway elevator) and approximately 4 feet into the roadway (at and west of the proposed subway elevator). See **Appendix B-4** for more detail. Note this sidewalk widening would be in addition to the MTA's proposed sidewalk widening included in the No-Action Condition and will need to be coordinated with NYCDOT.

Additionally, the following signal timing improvements are recommended as part of the Proposed Project:

Queens Boulevard and Jackson Avenue/Northern Boulevard

- During the AM peak hour, shift 3 seconds of green time from the eastbound/westbound phase to the westbound lead phase.
- During the MD peak hour, shift 1 second from the eastbound/westbound phase to the westbound lead phase.
- During the PM peak hour, shift 2 seconds from the northbound/southbound through phase to the westbound lead phase. Future with the Proposed Project

Depending on the final plans for the Central Business District (CBD) Tolling Program, there may be changes to traffic conditions in the project study area. Therefore, a post-opening traffic monitoring plan will be conducted in coordination with NYCDOT to assess traffic operations at the intersection of 42nd Road and 23rd Street and at the intersection of Queens Boulevard and Jackson Avenue/Northern Boulevard once the Proposed Project is complete. The purpose of the monitoring plan is to determine if the above project-related improvements are still the most appropriate treatments at these two intersections at that time or if they should be modified based on actual conditions at that time.

Costs associated with implementing project related improvements outlined in this section will be assumed by the applicant. The applicant will submit all required drawings to NYCDOT for review and approval prior to implementation.

The No-Action condition analysis forms the future baseline to which projected trip increments associated with the Proposed Project are added to formulate the "With-Action condition." The

CEQR Technical Manual defines how impacts to traffic, transit, pedestrians, safety, and parking are to be determined.

Traffic Conditions

The project-generated trips were added to the 2024 No-Action condition traffic volumes to estimate the 2024 With-Action condition traffic volumes, which are shown in **Figure 10-18** through **Figure 10-20**. **Table 10-31** and **Table 10-32** present a comparison of No-Action and With-Action conditions for the signalized and unsignalized study intersections, respectively. Based on the significance criteria described in the *CEQR Technical Manual*, the Proposed Project would not result in any significant adverse traffic impacts during any peak hour.

Figure 10-18 2024 With-Action Condition Traffic Volumes Weekday AM Peak Hour

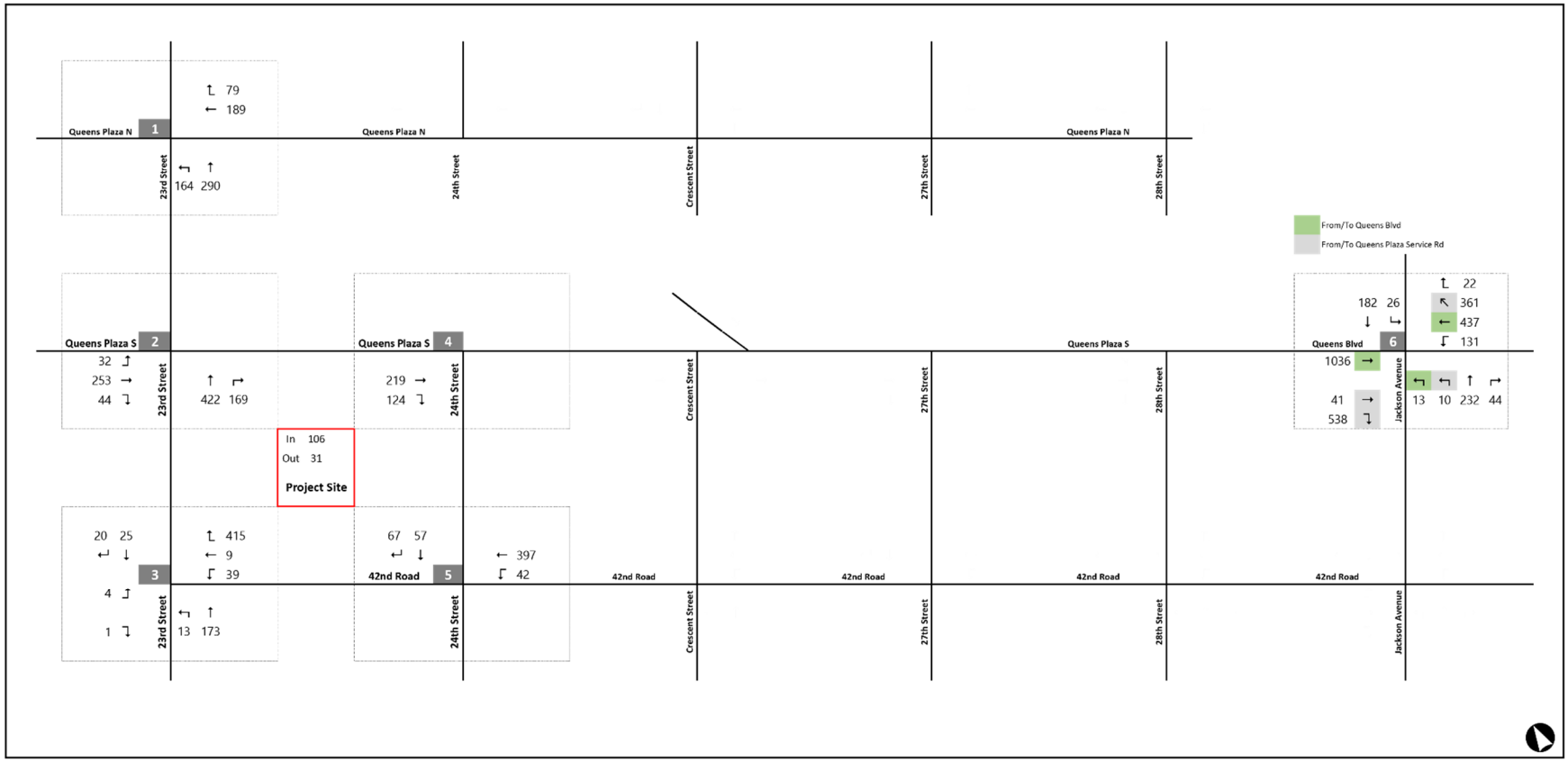
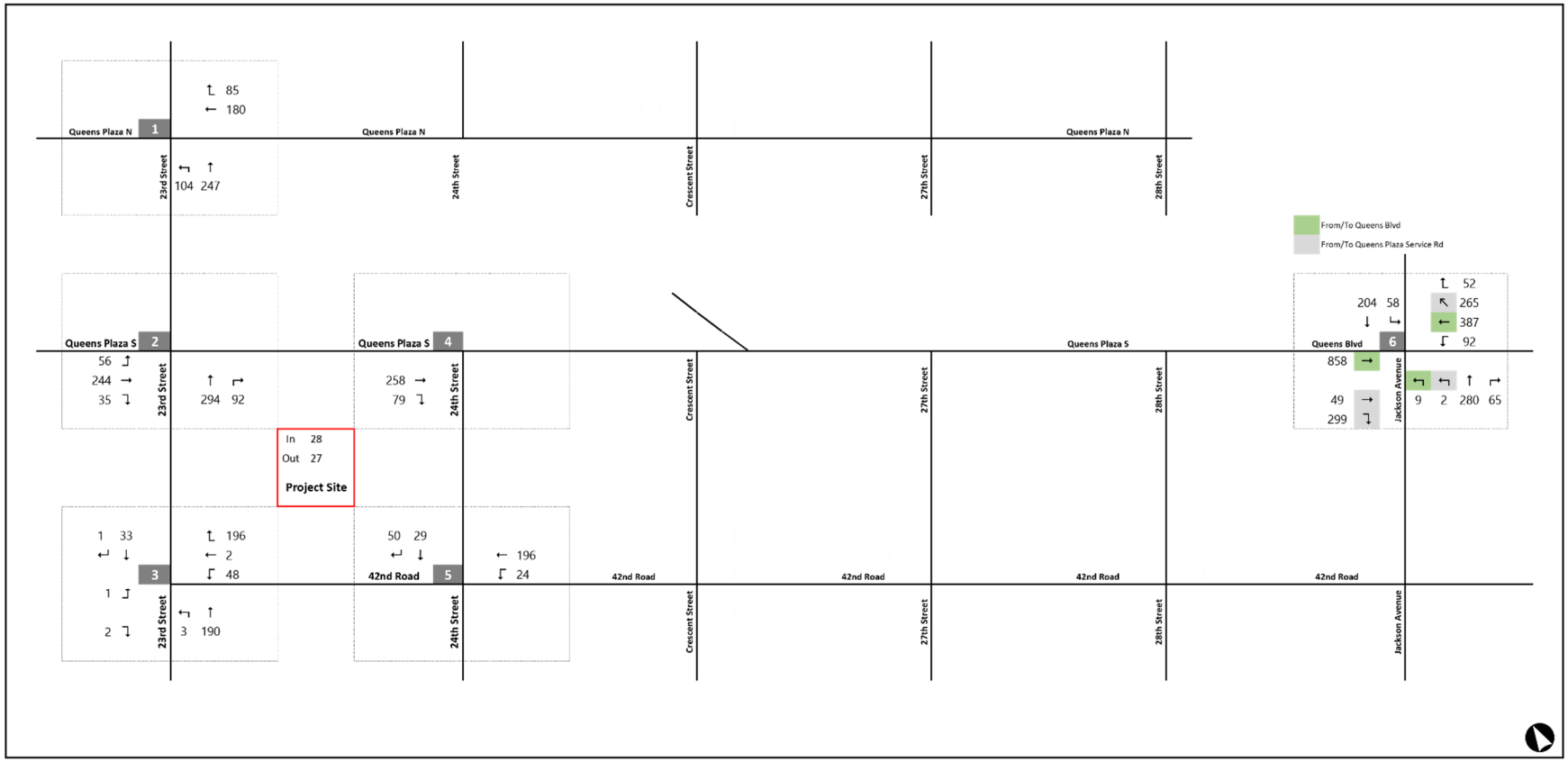


Figure 10-19 2024 With-Action Condition Traffic Volumes Weekday MD Peak Hour



Project Site

Peak Hour Volume

2024 WITH-ACTION CONDITION TRAFFIC VOLUMES WEEKDAY MD PEAK HOUR

Figure 10-19
23-10 Queens Plaza South Rezoning EAS

Figure 10-20 2024 With-Action Condition Traffic Volumes Weekday PM Peak Hour

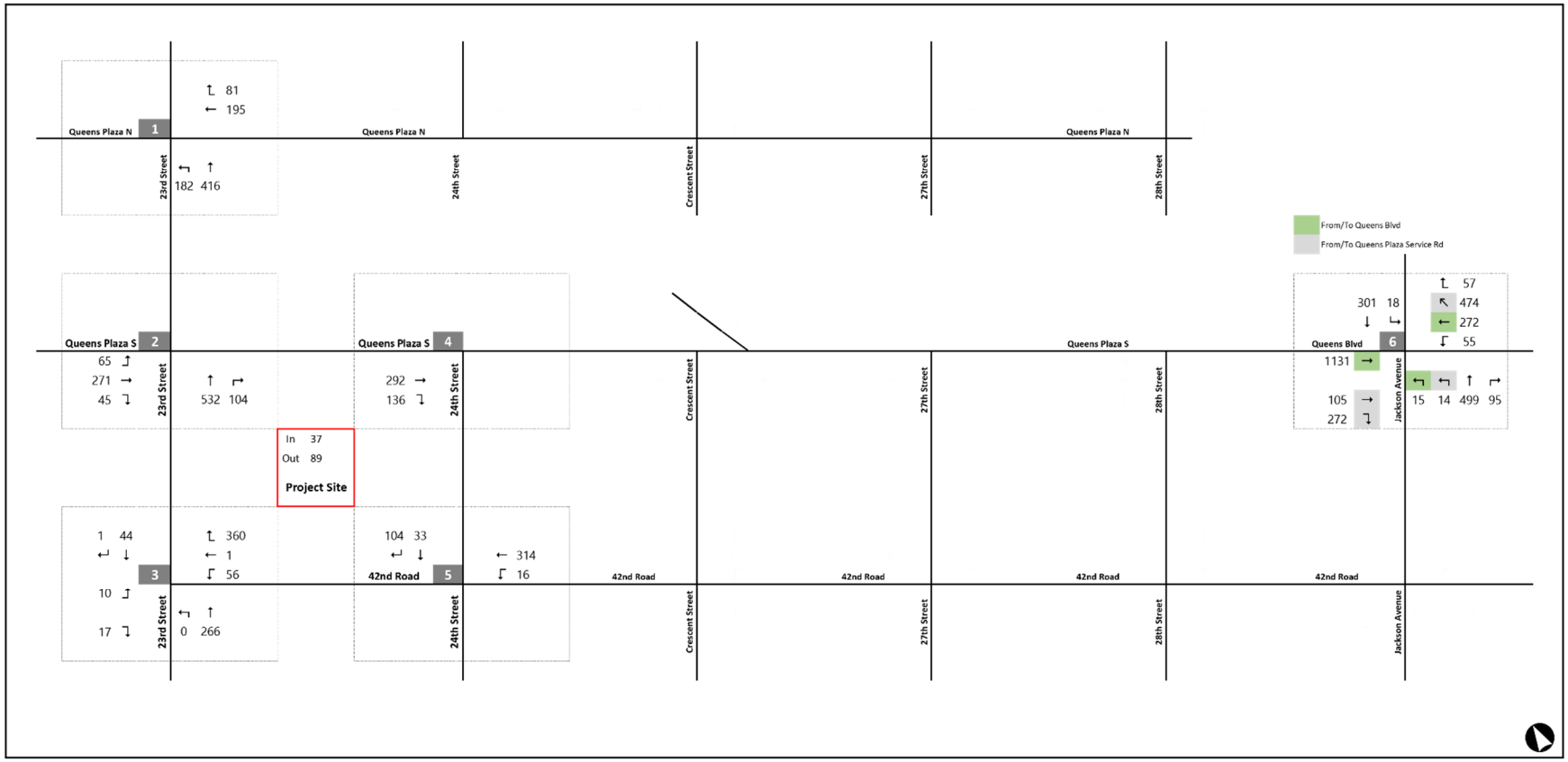


Figure 10-20
23-10 Queens Plaza South Rezoning EAS

Table 10-31 2024 No-Action and With-Action with Improvements Condition Level of Service Analysis – Signalized Intersections

#	Intersection & Approach	Weekday AM Peak Hour								Weekday MD Peak Hour								Weekday PM Peak Hour							
		2024 No Action Condition				2024 With Action Improvements Condition				2024 No Action Condition				2024 With Action Improvements Condition				2024 No Action Condition				2024 With Action Improvements Condition			
		Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
1	**Queens Plaza North and 23rd Street**																								
	Westbound	TR	0.62	24.5	C	TR	0.63	24.8	C	TR	0.62	24.7	C	TR	0.62	24.9	C	TR	0.63	24.7	C	TR	0.63	24.8	C
	Northbound	LT	0.40	17.9	B	LT	0.41	18.0	B	LT	0.29	16.6	B	LT	0.30	16.7	B	LT	0.46	18.7	B	LT	0.50	19.2	B
		Intersection		20.4	C	Intersection		20.6	C	Intersection		20.3	C	Intersection		20.4	C	Intersection		20.8	C	Intersection		21.1	C
2	**Queens Plaza South and 23rd Street**																								
	Eastbound	LTR	0.63	25.0	C	LTR	0.70	27.6	C	LTR	0.69	26.8	C	LTR	0.73	28.9	C	LTR	0.75	29.7	C	LTR	0.78	31.4	C
	Northbound	T	0.72	27.3	C	T	0.74	28.2	C	T	0.50	20.7	C	T	0.52	21.0	C	T	0.89	39.8	D	T	0.96	51.6	D
		R	0.41	21.7	C	R	0.77	40.8	D	R	0.36	20.1	C	R	0.45	23.1	C	R	0.41	21.9	C	R	0.52	25.5	C
		Intersection		25.7	C	Intersection		30.4	C	Intersection		23.6	C	Intersection		25.1	C	Intersection		34.2	C	Intersection		41.3	D
6	**Jackson Ave/Northern Blvd & Queens Blvd**																								
	Northbound	LT	0.68	54.1	D	LTR	0.58	48.6	D	LT	0.70	54.4	D	LTR	0.67	51.0	D	LT	1.19	146.8	F	LTR	1.18	139.2	F
		R	0.29	46.9	D	R	0.00	0.0	0.0	R	0.55	60.3	E	R	0.00	0.0	0.0	R	0.71	70.1	E	R	0.00	0.0	0.0
	Southbound	LT	0.34	35.8	D	LT	0.34	35.9	D	LT	0.49	39.4	D	LT	0.49	39.4	D	LT	0.51	39.0	D	LT	0.52	40.7	D
	Eastbound (from Queens Blvd)	T	0.83	34.3	C	T	0.88	39.6	D	T	0.70	28.1	C	T	0.71	29.2	C	T	0.91	39.8	D	T	0.91	39.8	D
	Eastbound (from Queens Plaza South)	T	0.06	18.0	B	T	0.08	20.0	C	T	0.07	17.7	B	T	0.09	18.3	B	T	0.15	18.6	B	T	0.19	19.2	B
		R	0.50	1.6	A	R	0.50	1.6	A	R	0.35	0.9	A	R	0.35	0.9	A	R	0.29	0.7	A	R	0.29	0.7	A
	Westbound	LTR	1.35dl	142.9	F	LTR	1.60dl	146.4	F	LTR	1.09	83.8	F	LTR	1.10	86.2	F	LTR	1.22	137.6	F	LTR	1.23	139.0	F
		Intersection		63.1	E	Intersection		66.4	E	Intersection		46.8	D	Intersection		47.3	D	Intersection		78.7	E	Intersection		80.0	E

Notes: L = Left Turn, T= Through, R = Right Turn, DefL = Defacto Left Turn; LOS = Level of Service.
The Jackson Avenue/Noorthern Boulevard and Queens Boulevard intersection (intersection #6) was analyzed using Synchro 11 software

Table 10-32 2024 No-Action and With-Action with Improvements Condition Level of Service Analysis – Unsignalized Intersections

#	Intersection & Approach	Weekday AM Peak Hour								Weekday MD Peak Hour								Weekday PM Peak Hour							
		2024 No Action Condition				2024 With Action Improvements Condition				2024 No Action Condition				2024 With Action Improvements Condition				2024 No Action Condition				2024 With Action Improvements Condition			
		Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
3	**42nd Road and 23rd Street**																								
	Eastbound	LTR	0.08	67.0	F	LR	0.00	8.4	A	LTR	0.01	18.8	C	LR	0.00	7.7	A	LTR	~~	~~	F	LR	0.00	8.6	A
	Westbound	LTR	1.01	73.7	F	LTR	0.00	14.6	B	LTR	0.83	52.0	F	LTR	0.00	9.9	A	LTR	1.49	271.3	F	LTR	0.00	15.7	C
	Northbound	LT	0.01	7.9	A	LT	0.00	10.8	B	LT	0.00	7.8	A	LT	0.00	10.1	B	LT	0.00	7.9	A	LT	0.00	13.0	B
	Southbound					TR	0.00	8.8	A					TR	0.00	8.6	A					TR	0.00	9.5	A
5	**42nd Road and 24th Street**																								
	Westbound	LT	0.04	7.7	A	LT	0.04	7.7	A	LT	0.02	8.1	A	LT	0.02	8.1	A	LT	0.02	8.0	A	LT	0.02	8.0	A
	Southbound	TR	0.43	27.2	D	TR	0.55	33.6	D	TR	0.19	16.6	C	TR	0.26	17.6	C	TR	0.33	23.3	C	TR	0.55	30.0	D

Notes: L = Left Turn, T= Through, R = Right Turn, DefL = Defacto Left Turn; LOS = Level of Service.
The Queens Plaza South and 24th Street intersection (intersection #4) has no turning movements with conflicts; therefore, it cannot be analyzed and can be assumed to operate at LOS A with negligible delays.

Transit Conditions

Transit trips associated with the Proposed Project were added to the No-Action condition transit volumes to generate With-Action condition peak hour volumes for the two transit peak hours.

Subway Stairs

As shown in **Table 10-33**, the street-level and platform stairs would operate at mid-LOS D (v/c ratio of 1.165) or better during both peak hours in the 2024 With-Action condition. Therefore, according to the significant adverse impact criteria defined for subway stairs in the *CEQR Technical Manual*, the Proposed Project would not result in any significant adverse impacts during either peak hour.

Table 10-33 2024 With-Action Condition Level of Service Analysis – Stairs

Station	Vertical Element	ID	15-Minute Entering Volume [1]	15-Minute Exiting Volume [1]	Total Stair (feet) [2]	Number of Intermediate Handrails	Effective Width (feet)	Friction Factor [3]	Surge Factor (onto platform level) [3]	Surge Factor (off of platform level) [3]	15-Minute Entering Capacity [4]	15-Minute Exiting Capacity [4]	V/C [5]	LOS [5]	Impact [6]
Weekday AM															
Queensboro Plaza Subway Station	S Street Level Stair	S1, M1	351	508	7.5	0	6.5	0.9	1	0.9	878	790	1.04	D	No
	Lower Platform Stair	PL1, PL2	0	297	7.0	0	6.0	1.0	1	0.8	900	720	0.41	A	No
	Lower Platform Stair	PL3, PL4	0	185	7.0	0	6.0	1.0	1	0.8	900	720	0.26	A	No
	Lower Platform Stair	PL5, PL6	573	212	7.0	0	6.0	0.9	1	0.8	810	648	1.03	D	No
	Lower Platform Stair	PL7,PL8	52	235	7.5	0	6.5	0.9	1	0.8	878	702	0.39	A	No
	Upper Platform Stair	P1, P2	255	76	7.3	0	6.3	0.9	1	0.8	844	675	0.42	A	No
	Upper Platform Stair	P3, P4	110	118	7.0	0	6.0	0.9	1	0.8	810	648	0.32	A	No
	Upper Platform Stair	P5, P6	159	173	7.3	0	6.3	0.9	1	0.8	855	684	0.44	A	No
	Upper Platform Stair	P7, P8	107	162	7.0	0	6.0	0.9	1	0.8	810	648	0.38	A	No
Weekday PM															
Queensboro Plaza Subway Station	S Street Level Stair	S1, M1	477	270	7.5	0	6.5	0.9	1	0.9	878	790	0.89	C	No
	Lower Platform Stair	PL1, PL2	0	96	7.0	0	6.0	1.0	1	0.8	900	720	0.13	A	No
	Lower Platform Stair	PL3, PL4	0	122	7.0	0	6.0	1.0	1	0.8	900	720	0.17	A	No
	Lower Platform Stair	PL5, PL6	736	108	7.0	0	6.0	0.9	1	0.8	810	648	1.08	D	No
	Lower Platform Stair	PL7,PL8	93	153	7.5	0	6.5	0.9	1	0.8	878	702	0.32	A	No
	Upper Platform Stair	P1, P2	187	115	7.3	0	6.3	0.9	1	0.8	844	675	0.39	A	No
	Upper Platform Stair	P3, P4	97	65	7.0	0	6.0	0.9	1	0.8	810	648	0.22	A	No
	Upper Platform Stair	P5, P6	321	102	7.3	0	6.3	0.9	1	0.8	855	684	0.53	B	No
	Upper Platform Stair	P7, P8	70	190	7.0	0	6.0	0.9	1	0.8	810	648	0.38	A	No

Notes:
(1) Volumes associated with the Proposed Project were distributed based on trip assignment assumptions described in the TDF Memorandum.
(2) Vertical elements measured at the narrowest location.
(3) Friction and surge factors based on NYCT guidelines in accordance with the 2021 CEQR Technical Manual.
(4) Stair capacity based on NYCT guidelines in accordance with the 2021 CEQR Technical Manual.
(5) v/c ratios and LOS ratings were calculated based on rates presented in the 2021 CEQR Technical Manual.
(6) Determination of significant impacts based on NYCT guidelines in accordance with the 2021 CEQR Technical Manual.

Control Areas

For the control area elements, the quantity, volume, friction and surge factors, capacity, and calculated v/c and LOS results in the 2024 With-Action condition are shown in **Table 10-34**. As shown in the table, all control area elements would operate at LOS B during both peak hours. Therefore, according to the significant adverse impact criteria defined for subway control areas

in the *CEQR Technical Manual*, the Proposed Project would not result in any significant adverse impacts during either peak hour.

Table 10-34 2024 With-Action Condition Level of Service Analysis – Control Areas

Station	Station Elements	Quantity (Entry)	Quantity (Exit)	15-Minute Entering Volume [1]	15-Minute Exiting Volume [1]	Friction Factor [2]	Surge Factor (onto platform)	Surge Factor (off of platform)	15 Minute Entering Capacity [3]	15 Minute Exiting Capacity [3]	V/C [4]	LOS [4]	Impact [5]
Weekday AM													
Queensboro Plaza Subway Station	Turnstile	6	6	626	930	0.9	0.9	0.9	2520	6090	**0.50**	**B**	No
	HEET	0	0										
	HXT	0	4										
Weekday PM													
Queensboro Plaza Subway Station	Turnstile	6	6	829	479	0.9	0.9	0.9	2520	6090	**0.50**	**B**	No
	HEET	0	0										
	HXT	0	4										

Notes:
(1) Turnstiles volumes associated with the Proposed Project were distributed based trip assignement assumptions decribed in the TDF Memorandum.
(2) Friction and Surge factors based on NYCT guidelines in accordance with the 2021 CEQR Technical Manual.
(3) Fare array capacity based on NYCT guidelines in accordance with the 2021 CEQR Technical Manual.
(4) v/c ratios and LOS ratings were calculated based on rates presented in the 2021 CEQR Technical Manual.
(5) Determination of significant impacts based on NYCT guidelines in accordance with the 2021 CEQR Technical Manual.

Pedestrian Operations

Trips associated with the Proposed Project were added to the 2024 No-Action condition pedestrian network to generate 2024 With-Action condition peak hour volumes for the three peak hours.

Sidewalks

The 2024 With-Action condition results for the sidewalk locations were compared with the No-Action condition results for all three peak hours. As shown in **Table 10-35**, all sidewalks are projected to operate at LOS C or better for the non-platoon conditions and at mid-LOS D or better for the platoon conditions during the three peak hours. Therefore, according to the significant adverse impact criteria defined for pedestrian elements in the *CEQR Technical Manual*, the Proposed Project would not result in any significant adverse sidewalk impacts during any peak hour.

Table 10-35 With-Action Condition Level of Service Analysis – Sidewalk

Location	Width at Narrowest Point (ft)	Obstruction Width (ft)	Effective Width (ft)	Available Circulation Space (ft^2/p) Weekday AM	Available Circulation Space (ft^2/p) Weekday MD	Available Circulation Space (ft^2/p) Weekday PM	Non-Platoon Conditions LOS Weekday AM	Non-Platoon Conditions LOS Weekday MD	Non-Platoon Conditions LOS Weekday PM	Platoon Conditions LOS Weekday AM	Platoon Conditions LOS Weekday MD	Platoon Conditions LOS Weekday PM PM
23rd Street and Queens Plaza South (E leg, S sidewalk)	8.5	2.5	6.0	46	57	33	B	B	C	C	C	D
24th Street and Queens Plaza South (E leg, S sidewalk)	10.3	2.5	7.8	54	54	62	B	B	A	C	C	C
Crescent Street and Queens Plaza South (E leg, S sidewalk)[1] - at subway stairs	17.0	6.5	10.5	48	54	54	B	B	B	C	C	C
Crescent Street and Queens Plaza South (E leg, S sidewalk)[2] - at subway elevator	16.0	6.5	9.5	43	49	48	B	B	B	C	C	C
27th Street and Queens Plaza South (W leg, S sidewalk)[1]	12.0	3.0	9.0	43	47	49	B	B	B	C	C	C

Note: (1) South sidewalk on Queens Plaza South between Crescent Street and 27th Street was split into two sidewalk analysis locations to analyze the sections at the Queensboro Plaza Station subway stairs (E leg, S sidewalk) and west of the stairs (W leg, S sidewalk) separately.
(2) South sidewalk on Queens Plaza South between Crescent Street and 27th Street at the proposed subway elevator was also analyzed (same pedestrian volumes as at the existing subway stairs; different effective width).

Crosswalks

The 2024 With-Action condition results for the two crosswalk locations were compared with the No-Action condition results for all three peak hours. As shown in **Table 10-36,** both crosswalks are projected to operate at LOS A during the three peak hours. Therefore, according to the significant adverse impact criteria defined for pedestrian elements in the *CEQR Technical Manual*, the Proposed Project would not result in any significant adverse crosswalk impacts during any peak hour.

Table 10-36 2024 With-Action Condition Level of Service Analysis – Crosswalks

Location	Length (ft)	Width (ft)	Average Pedestrian Delay (s)			Crosswalk Circulation LOS					
			Weekday			Weekday					
			AM	MD	PM	AM		MD		PM	
24th Street and Queens Plaza South (S leg)	30.2	13.6	3.4	2.1	3.8	A		A		A	
Crescent Street and Queens Plaza South (S leg)	30.0	12.0	1.2	1.3	1.3	A		A		A	

Corners

The 2024 With-Action condition results for the six corner reservoir locations were compared with the No-Action condition results for all three peak hours. As shown in **Table 10-37,** the corners are projected to operate at LOS C or better during the three peak hours. Therefore, according to the significant adverse impact criteria defined for pedestrian elements in the *CEQR Technical Manual*, the Proposed Project would not result in any significant adverse corner impacts during any peak hour.

Table 10-37 2024 With-Action Condition Level of Service Analysis - Corners

Location	Available Circulation Space (ft^2/p)			Corner Circulation LOS					
	Weekday			Weekday					
	AM	MD	PM	AM		MD		PM	
23rd Street and Queens Plaza South (SE corner)	80	60	55	A		A		B	
24th Street and Queens Plaza South (SE corner)	69	90	93	A		A		A	
24th Street and Queens Plaza South (SW corner)	84	144	95	A		A		A	
Crescent Street and Queens Plaza South (SE corner)	47	50	53	B		B		B	
Crescent Street and Queens Plaza South (SW corner	133	138	152	A		A		A	
27th Street and Queens Plaza South (SW corner)	27	50	42	C		B		B	

Parking Occupancy and Utilization

The utilization of on-street parking spaces in the study area is expected to increase due to the parking demand generated by the Proposed Project, as the Proposed Project would not provide on-site parking. While the project trips were conservatively assigned the project site for the vehicle analysis, for the parking analysis, they were assumed to park on- or off-street within a 0.25-mile radius of the Project Site. As a result, the utilization of on-street parking spaces in the study area is expected to increase due to the auto trips generated by the Proposed Project.

Table 10-38 shows the results of the 2024 With-Action condition parking utilization analysis. The parking utilization is expected to increase to 131 percent, 137 percent, and 122 percent during the Weekday AM, Weekday MD, and Weekday PM peak hours, respectively. There would be an on-street shortfall of 629, 792, and 463 parking spaces during the Weekday AM, MD, and PM peak hours, respectively. However, since the Proposed Project is located in Parking Zone 2, according to the *2021 CEQR Technical Manual*, the parking shortfall would not be considered a significant adverse impact.

Table 10-38 2024 With-Action Condition Parking Utilization Summary

2024 With-Action	Weekday AM	Weekday MD	Weekday PM
Capacity			
No Action Capacity	2,060	2,157	2,068
Total With-Action Capacity	2,060	2,157	2,068
Demand			
Total No Action Demand	2,613	2,644	2,305
Project Demand Increment	76	305	226
Total With-Action Demand	2,689	2,949	2,531
Utilization			
Available Spaces	-629	-792	-463
With-Action Utilization	**131%**	**137%**	**122%**

Safety Assessment

Crash data for the study area intersections and pedestrian element locations were obtained from NYCDOT for the most recent three-year time period available (January 1, 2018 through December 31, 2020) to quantify the total number of reportable crashes (involving fatality, injury, or more than $1,000 in property damage), fatalities, and injuries during the study period, as well as a yearly breakdown of pedestrian- and bicycle-related crashes at each location. According to the *CEQR Technical Manual*, a high-crash location is one that is identified along a Vision Zero priority corridor/intersection or with five or more pedestrian/bicycle injury crashes during any consecutive 12 months of the most recent three-year period for which data is available.

Table 10-39 depicts total crashes by intersection during the three-year period, as well as a breakdown of pedestrian and bicycle crashes by year and location. During this three-year period, 358 total crashes, including 23 pedestrian-related crashes and 9 bicycle-related crashes, occurred at the study area intersections.

Table 10-39 Crash Data

	Total Crashes			Pedestrian			Bicycle			Combined Ped/Bike		
Intersection	**2018**	**2019**	**2020**	**2018**	**2019**	**2020**	**2018**	**2019**	**2020**	**2018**	**2019**	**2020**
Queens Plaza & 23rd Street	4	4	2	0	0	0	0	1	0	0	1	0
42nd Road & 23rd Street	0	3	0	0	1	0	0	0	0	0	0	0
Queens Plaza & 24th Street	1	4	0	0	0	0	0	0	0	0	0	0
42nd Road & 24th Street	0	2	2	0	0	0	0	0	0	0	0	0
Queens Boulevard & Jackson Avenue/Northern Boulevard	69	93	49	1	3	4	3	1	3	4	4	7
Queens Plaza & 27th Street	22	17	7	5	3	2	0	0	0	5	3	2
Queens Plaza & Crescent Street	35	26	8	3	1	0	1	0	0	4	1	0
Total	131	149	68	9	8	6	4	2	3	13	9	9
Grand Total	348			23			9			31		

Notes:
(1) Intersections that are bolded reflect the occurrence of five or more pedestrian/bicyclists injury crashes in a twelve-month period.
(2) Locations on Queens Plaza North and South are combined into one intersection in the crash reporting data system.
Source: NYSDMV/DOT January 1, 2018 to December 31, 2020 crash data.

Based on crash data, the following two intersections would be classified as high-crash locations per the *CEQR Technical Manual,* as there were five or more pedestrian/bicycle injury crashes within a consecutive 12-month period at each intersection:

- Queens Plaza and 27th Street
- Queens Boulevard and Jackson Avenue/Northern Boulevard

At Queens Plaza and 27th Street, Queens Plaza operates as five separate roadways–Queens Plaza South, two Queensboro Bridge exit ramps, Queensboro Bridge entrance ramp, and Queens Plaza North–which are each separated by a median. The crash data provide by NYCDOT combines all crashes at any of the five roadways, and the crashes that only occurred at the study intersection of Queens Plaza South and 27th Street cannot be isolated. Crashes that involved vehicles traveling in the westbound direction could be filtered out, as they must have occurred on the north side of the Queensboro Bridge. The 5 pedestrian/bicycle crashes identified in 2018 did not include data that could place them in exact locations; therefore, all of these crashes were conservatively assumed to occur at the Queens Plaza South and 27th Street intersection. Therefore, this intersection was included as a high-crash location for further review.

While the addition of vehicle and pedestrian trips at high-crash locations could exacerbate unsafe conditions, the anticipated vehicle and pedestrian project increments at both high-crash intersections would only represent a small portion of the total trips at either of these intersections.

At Queens Boulevard and Jackson Avenue/Northern Boulevard, the Proposed Project would contribute a maximum of approximately 47 vehicle trips in any peak hour, which would represent a minimal increase in vehicular traffic at the intersection (fewer than 2% in any peak hour). Additionally, it is expected that very few, if any, pedestrian trips would be added to this intersection due to the Proposed Project, as transit users would not travel through this intersection to reach their subway entrances or bus stops, and it is outside of the typical walk-only range (0.25-mile radius).

At Queens Plaza and 27th Street, the Queensboro Bridge entrance and exit ramps carry a significant amount of background traffic, but the Proposed Project would contribute minimal vehicular and pedestrian traffic to these roadways. The Proposed Project would contribute a maximum of approximately 31 vehicle trips in any peak hour to Queens Plaza South, which would represent between 3% and 15% of the total future trips on Queens Plaza South. In terms of pedestrian trips, the Proposed Project would add trips only to the south crosswalk at Queens Plaza South and 27th Street and not to any of the other crosswalks at the intersection.

Even though the project increments at both high-crash intersections would represent a small portion of the total trips, and therefore, are not expected to aggravate unsafe conditions, both intersections were further evaluated to determine if additional safety improvements could be recommended at this time.

Queens Boulevard and Jackson Avenue/Northern Boulevard

Based on the data presented in **Table 10-39**, the intersection of Queens Boulevard and Jackson Avenue/Northern Boulevard has been identified as a high crash location due to the number of pedestrian/bike crashes occurring in 2020. A total of four, four, and seven pedestrian/bike crashes occurred at this intersection in 2018, 2019, and 2020 respectively.

Queens Boulevard and Jackson Avenue/Northern Boulevard are both major corridors in this area. Queens Boulevard provides direct access to and from the Queensboro Bridge directly west of this intersection. Jackson Avenue/Northern Boulevard transverses the entirety of Queens, from Long Island City to Long Island. The subway tracks above Queens Boulevard result in vehicles maneuvering around structural columns in the intersection and results in geometric constraints. One Traffic Enforcement Agent (TEA) is typically stationed at the intersection during the peak periods to direct vehicles through or to hold vehicles during periods of high congestion. The intersection is also in close proximity to several subway station entrances and bus stops, and therefore experiences a high volume of pedestrians.

Both Queens Boulevard and Northern Boulevard were identified as Priority Corridors in the *2015 Vision Zero Queens Pedestrian Safety Action Plan* and again in the 2019 updated plan. Additionally, Queens Boulevard was designated as a Vision Zero Great Street in 2015, and ten safety engineering projects were installed on Queens Boulevard between 2009 and 2018. In the area of the Queens Boulevard Bridge, a two-way protected bike lane was installed in 2012 on the north side of the bridge. A bus lane is planned to be introduced along portions of Northern Boulevard in both directions. Along both priority corridors, the KSIs per mile have decreased 13% from 2009-2013 to 2012-2016.[1] There is a Leading Pedestrian Interval (LPI) for pedestrians on the north crosswalk across Northern Boulevard, which provides pedestrians in the crosswalks a head start before vehicles on the adjacent approach receive a green light. This helps minimize the overall number of pedestrian-vehicle conflicts and improve safety conditions.

The specific causes of the crashes at this intersection are unknown; however, the following potential safety improvements have been identified:

› Due to the large size of the intersection and presence of multiple departing roadways, providing a second TEA at the intersection during peak periods of congestion could help

[1] 2019 Vision Zero Queens Pedestrian Safety Action Plan

reduce driver confusion, prevent illegal turns, and minimize conflicts and intersection/crosswalk blockages.

- Due to the abundance of visual clutter at this intersection because of bridge structures and columns, a more visible and/or larger signal head should be considered. Additionally, adding signal backplates could improve visibility of the signal heads.
- The northbound left-turn from Jackson Avenue to Queens Boulevard is prohibited; however, vehicles are frequently observed performing this maneuver illegally. It is recommended to improve the visibility of "No Left Turn" arrow signs either with larger signs or relocating signs to increase driver's awareness that this movement is prohibited.
- Installing flashing yellow arrow turn signals for left and/or right turn movements would emphasize the requirement for turning vehicles to yield to through vehicles and/or pedestrians/bicycles.
- Installing additional lighting beyond minimum lighting standard could help driver, cyclist, and pedestrian visibility, as the bridge structure above Queens Boulevard blocks direct natural light to the intersection.

With these improvements, it is expected that safety conditions would improve at this intersection.

Queens Plaza and 27th Street

Based on the data presented in **Table 10-39**, the intersection of Queens Plaza and 27th Street has been identified as a high crash location due to the number of pedestrian/bike crashes occurring in 2018. A total of five, three, and two pedestrian/bike crashes occurred at this intersection in 2018, 2019, and 2020, respectively.

The intersection of Queens Plaza and 27th Street was identified as a Priority Intersection in the 2015 Vision Zero Queens Pedestrian Safety Action Plan and again in the 2019 updated plan. No recent or planned improvements have been identified at this location. The intersection currently has a protected pedestrian-only phase, which allows pedestrians to cross without any concurrent vehicle conflicts. The pedestrian timing plan is based on a walking speed of 3 feet/second, countdown signals are present, and the west, east, and south crosswalks are already short crossings. To improve safety at this intersection, a gateway treatment, as presented in section 2.3.3 of the NYC Street Design Manual, or a raised crosswalk (with or without minor curb extensions), as presented in section 2.3.4 of the NYC Street Design Manual, could be considered for implementation for the south crossing. A raised treatment for the south crosswalk could slow turning speeds and improve visibility of pedestrians for drivers.

Additionally, since some of these crashes could have occurred at the two-way bike lane along Queens Plaza North, signage could be installed alerting pedestrians to two-way bike traffic and signage and/or rumble strips could be installed to better alert cyclists of the pedestrian conflict points at the crosswalks.

Additionally, it was identified that three of the five pedestrian crashes at this intersection occurred outside of daylight hours. Therefore, it is recommended that existing intersection lighting be reviewed to see if it meets the minimum standards and if lighting should be upgraded.

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Air Quality

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

Introduction

The Proposed Actions would facilitate the proposed reuse and 22-story enlargement of the existing industrial building that would result in a 26-story, approximately 383-foot tall (approximately 404 feet to the top of the mechanical bulkhead) commercial building (Proposed Development) in the Long Island City neighborhood of Queens. Direct impacts result from emissions generated by stationary sources, such as exhaust emissions from on-site fuel burned for hot-water boilers and heating, ventilation, and air conditioning (HVAC) systems. Indirect effects are caused by off-site emissions associated with a project, such as emissions from on-road motor vehicles ("mobile sources") traveling to and from a development site.

Consistent with the *CEQR Technical Manual*, air quality analyses for a proposed project focus on the following main areas of potential concern:

› Potential impacts from mobile sources introduced by a project.

- Potential impacts from emissions of a project's enclosed parking garage.
- Potential impacts from emissions of an atypical sources that affect a project.
- Potential impacts from HVAC and hot-water systems.
- Potential impacts on the proposed project from either manufacturing/processing facilities or large/major sources that are located near the project site.

The Proposed Development would not introduce new parking spaces, and thus a parking facility analysis is not required.

No large or major sources were identified within 1,000 feet of the Proposed Development, and thus further analysis is not required for large or major sources.

Therefore, this project focuses on the following:

- An assessment of impacts from the mobile sources at the intersections affected by the project-generated trips;
- An assessment of vehicular emissions from the Queensboro Bridge and its ramps (atypical source) to significantly impact air quality on the Proposed Development;
- An assessment of the project's HVAC systems to affect the uses in the surrounding area ("project on existing");
- An assessment of the potential for manufacturing/processing facilities that are located near the project block to affect the Proposed Development.

Pollutants of Concern

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

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

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

Nitrogen oxides (NO_X), the most significant of which are nitric oxide (NO) and nitrogen dioxide (NO_2), can occur when combustion temperatures are extremely high (such as in engines) and atmosphere nitrogen gas combines with oxygen gas. NO is relatively harmless to humans but quickly converts to NO_2. Nitrogen dioxide has been found to be a lung

irritant and can lead to respiratory illnesses. Nitrogen oxides, along with VOCs, are also precursors to ozone formation.

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

Non-criteria pollutants may be of concern in addition to the criteria pollutants discussed above. Non-criteria pollutants are emitted by a wide range of man-made and naturally occurring sources. These pollutants are sometimes referred to as hazardous air pollutants (HAP) and when emitted from mobile sources, as Mobile Source Air Toxics (MSATs). Emissions of non-criteria pollutants from industrial sources are regulated by the U.S. Environmental Protection Agency (EPA).

Federal ambient air quality standards do not exist for non-criteria pollutants; however, the New York State Department of Environmental Conservation (NYSDEC) has issued standards for certain non-criteria compounds, including beryllium, gaseous fluorides, and hydrogen sulfide. NYSDEC has also developed guidance document DAR-1 (February 2021)[1], which contains a compilation of annual and short term (1-hour) guideline concentration thresholds for these compounds. The NYSDEC's DAR-1 guidance thresholds represent ambient levels that are considered safe for public exposure. EPA has also developed guidelines for assessing exposure to non-criteria pollutants. These exposure guidelines are used in health risk assessments to determine the potential effects to the public.

Air Quality Standards

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

The EPA Office of Air Quality Planning and Standards (OAQPS) has set NAAQS for six principal pollutants, which are called "criteria" pollutants. These six pollutants are ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter less than 10 microns in diameter (PM_{10}) and less than 2.5 microns in diameter ($PM_{2.5}$), and lead (Pb). These standards are reviewed from time to time and may be revised. The NAAQS are presented in **Table 11-1**.

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

Table 11-1 National Ambient Air Quality Standards

Pollutant		Primary/ Secondary	Averaging Time	Level	Form
Carbon Monoxide (CO)		Primary	8 hours	9 ppm	Not to be exceeded more than once per year
			1 hour	35 ppm	
Lead (Pb)		Primary and secondary	Rolling 3-month average	0.15 µg/m^3 (1)	Not to be exceeded
Nitrogen Dioxide (NO_2)		Primary	1 hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		Primary and secondary	1 year	53 ppb (2)	Annual mean
Ozone		Primary and secondary	8 hours	0.070 ppm (3)	Annual fourth-highest daily maximum concentration, averaged over 3 years
Particulate Matter	Particulate Matter ($PM_{2.5}$)	Primary	1 year	12.0 µg/m^3	Annual mean, averaged over 3 years
		Secondary	1 year	15.0 µg/m^3	Annual mean, averaged over 3 years
		Primary and secondary	24 hours	35 µg/m^3	98th percentile, averaged over 3 years
	Particulate Matter (PM_{10})	Primary and secondary	24 hours	150 µg/m^3	Not to be exceeded more than once per year on average over 3 years
Sulfur Oxides		Primary	1 hour	75 ppb(4)	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		Secondary	3 hours	0.5 ppm	Not to be exceeded more than once per year

Notes:

[1] In areas designated nonattainment for the Pb standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 µg/m^3 as a calendar quarter average) also remain in effect.

[2] The level of the annual NO_2 standard is 0.053 ppm. It is shown here in terms of ppb for comparison with the 1-hour standard.

[3] Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) O_3 standards additionally remain in effect in some areas. Revocation of the previous (2008) O_3 standards and transitioning to the current (2015) standards will be addressed in the implementation rule for the current standards.

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

Source: EPA NAAQS Table, https://www.epa.gov/criteria-air-pollutants/naaqs-table, accessed November 2021.

Regulatory Context

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

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

Impact Criteria

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

The NYSDEC DAR-1 guidance document presents guideline concentrations in micrograms per cubic meter ($\mu g/m^3$) for the one-hour (SGC) and annual average time (AGC) periods for various air toxic compounds[2]. To evaluate residual risk of non-carcinogenic toxic air emissions, hazard index is calculated based on annual exposure limits. If the combined ratio of pollutant concentration divided by its annual exposure threshold for each of the toxic pollutants is found to be less than 2.0, according to DAR-1, the residual risk is deemed acceptable. In addition, the potential cancer risk associated with each carcinogenic pollutant, as well as the total cancer risk of the releases of all the carcinogenic pollutants combined, can be estimated. If the total incremental cancer risk of all the carcinogenic pollutants combined is less than ten-in-one million, the residual risk is deemed acceptable.

CO De Minimis Criteria

New York City has developed de minimis criteria to assess the significance of the increase in CO concentrations that would result from the impact of project-generated mobile sources,

[2] NYSDEC DAR-1 - http://www.dec.ny.gov/docs/air_pdf/dar1.pdf.

as set forth in the *CEQR Technical Manual*. These criteria set the minimum change in CO concentration that defines a significant adverse environmental impact. Significant increases of CO concentrations in New York City are defined as:

- An increase of 0.5 ppm or more in the maximum eight-hour average CO concentration at a location where the predicted No-Action eight-hour concentration is equal to or between 8.0 and 9.0 ppm; or
- An increase of more than half the difference between baseline (i.e., No-Action) concentrations and the eight-hour standard, when No-Action concentrations are below 8.0 ppm.

$PM_{2.5}$ *De Minimis* Criteria

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

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

Background Concentrations

Background concentrations are ambient pollution levels associated with existing stationary, mobile, and other emission sources from the area and not associated with the Proposed Actions. For criteria pollutants included in the refined stationary source analyses, **Table 11-2** shows the applicable background values used. Queens College monitoring station data were used to develop concentrations, with $PM_{2.5}$ backgrounds calculated using 2018-2020 monitored values and NO_2 backgrounds calculated using 2017-2019 monitored values, following NYCDEP and NYCDCP guidance. The background form for each pollutant is consistent with NYSDEC guidance.[3]

[3] NYSDEC, DAR-10 NYSDEC Guidelines on Dispersion Modeling Procedures for Air Quality Impact Analysis, Table 3; issued September 2020.

Table 11-2 Background Concentrations

Pollutant	Averaging Time	Monitoring Location	Background Concentration
Carbon Monoxide	1-Hour	Queens College	2.1 ppm
	8-Hour		1.6 ppm
Nitrogen Dioxide	1-Hour	Queens College	104.0 µg/m^3
	Annual		27.5 µg/m^3
Particulate Matter ($PM_{2.5}$)	24-Hour	Queens College	16.7 µg/m^3
	Annual		5.8 µg/m^3
Particulate Matter (PM_{10})	24-Hour	Queens College	34 µg/m^3

Source: U.S. EPA Monitor Values Report at https://www.epa.gov/outdoor-air-quality-data/monitor-values-report
Notes:
[1] 1-hour NO_2 background concentration is based on three-year average (2017-2019) of the 98th percentile of daily maximum 1-hour concentrations from available monitoring data from the EPA.
[2] Annual NO_2 background concentration is based on the maximum annual average from the latest three years of available monitoring data from the EPA (2017-2019).
[3] The 24-hour $PM_{2.5}$ background concentration is based on 98th percentile concentration averaged over three years of data from the EPA (2018-2020).

The 24-hour $PM_{2.5}$ CEQR threshold was calculated using the 24-hour $PM_{2.5}$ background concentration from the above table, in accordance with *CEQR Technical Manual* 24-hour *de minimis* criterion. The calculated 24-hour $PM_{2.5}$ threshold based on 2018-2020 ambient data from Queens College is 9.2 µg/m^3.

Methodology

Mobile Sources

Mobile Source Screening Analysis

A screening analysis of mobile source emissions of Carbon Monoxide (CO) and Particulate Matter (PM) on ambient pollutant levels in the study area was conducted pursuant to guidance in the *2021 CEQR Technical Manual*. For the project's study area, as described in Chapter 17, Sections 210 and 311 of the *CEQR Technical Manual*, the threshold for conducting an analysis of CO emissions corresponds to 160 project-generated vehicles at a given intersection in the peak hour. The need for conducting an analysis of PM emissions is based on road type and the number of project-generated peak hour heavy-duty diesel vehicles or its equivalency (HDDVs) in vehicular $PM_{2.5}$ emissions as determined using the worksheet provided on page 17-12 of the *2021 CEQR Technical Manual*.

Detailed Mobile Source Intersection Analysis

CO CEQR thresholds were not exceeded at any intersection at any time period, but the CEQR threshold for $PM_{2.5}$ was exceeded at a couple of intersections affected by the project-generated trips. Two intersections, 23rd Street and 42nd Road and 24th Street and 42nd Road, were selected for detailed modeling in consultation with the lead agency, NYC DCP.

Detailed microscale analysis of particulate matter ($PM_{2.5}$ and PM_{10}) was conducted for these intersections.

Vehicle Emissions

Vehicular PM emission factors utilized in the dispersion modeling were computed using the latest version of the EPA's Motor Vehicle Emission Simulator, MOVES3. This emissions model is capable of calculating engine emission factors for various vehicle types, based on the fuel type (gasoline, diesel, or compressed natural gas), meteorological conditions, vehicle speeds, vehicle age, roadway types, number of starts per day, engine soak time, and various other factors that influence emissions, such as an inspection maintenance program.

MOVES input files (i.e., fuel data, county-specific hourly temperature and relative humidity data, inspection/maintenance coverage, etc.) for Queens County were obtained from NYSDEC. Source type age distribution data were obtained from NYSDEC and processed using the EPA's *Age Distribution Projection Tool for MOVES3*.[4]

Traffic Data

Traffic information provided by the SSE traffic team included vehicle speeds, which were developed specifically for this analysis on the basis of travel time runs and link dimensions from the traffic data collected specifically for the air quality analysis, volumes, and classes.

PM Emissions

Following the EPA's *Transportation Conformity Guidance for Quantitative Hot-spot Analyses in $PM_{2.5}$ and PM_{10} Non-attainment and Maintenance Areas*,[5] particulate matter MOVES runs were conducted for January, and for the peak AM, midday, PM, and overnight time periods. For peak AM, midday, PM and overnight analyses, traffic volumes were based on volumes computed by SSE traffic team. The intersection model runs were made for the No-Action and With-Action conditions for each link utilizing link-specific parameters and data.

Fugitive Dust

In addition to exhaust, tire and brake-wear emission factors estimated by MOVES3 for particulate matter, fugitive dust emissions were estimated using EPA's Compilation of Air Emissions Factors (AP-42)[6] guidance for paved roads. Fugitive dust emissions were used in the short-term, 24-hour modeling of $PM_{2.5}$ and PM_{10}. Consistent with NYCDEP's conclusion that fugitive dust has insignificant contribution on the neighborhood scale, fugitive dust emissions were not used in the annual $PM_{2.5}$ modeling (i.e., neighborhood scale analysis).

Dispersion Model

The EPA AERMOD model (version 21112) was used in the analyses of $PM_{2.5}$ and PM_{10} at the selected intersections. The intersection links were modeled using the line source option in the model and following the EPA's PM Transportation Conformity Guidance. Initial vertical dimensions and source release heights were determined based on the source types in the

[4] EPA. Age Distribution Projection Tool for MOVES3.xlsx <Tools to Develop or Convert MOVES Inputs | US EPA>

[5] https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100NMXM.pdf

[6] EPA. AP-42, chapter 13.2.1 Paved Roads. https://www.epa.gov/sites/production/files/2020-10/documents/13.2.1_paved_roads.pdf

fleet as described in Appendix J.3 to the EPA PM Guidance. Horizontal dimensions were determined based on roadway geometries. Variable hourly emission rates were utilized for this analysis.

Receptor Placement

Sensitive receptors were placed at the existing sidewalks near the two modeled intersections and the two intersections at the other corners of the Proposed Development at 1.8 meters above grade for both the No-Action and With-Action conditions. For the assessment of short-term impacts, receptors were placed at the sidewalks around the intersection at approximately 10 feet from the curb. For compliance with the annual neighborhood $PM_{2.5}$ criterion, receptors were placed at 15 meters away from the curb.

Analysis Year

The mobile sources analyses were performed for the No-Action and With-Action conditions of 2024, which is the analysis year for this EAS.

Meteorological Data

The dispersion analysis used the latest available five years (2016-2020) of hourly meteorological observations from LaGuardia Airport National Weather Service station and upper air data obtained from the Brookhaven station, New York. This meteorological data for the AERMOD model was obtained from the NYSDEC.

Detailed Analysis from Atypical Sources on the Proposed Development

Section 210 of the *2021 CEQR Technical Manual* requires the analysis of vehicular emissions from atypical sources within 200 feet of sensitive uses introduced by a proposed project. The Proposed Development would introduce a rooftop terrace within 200 feet of the Queensboro Bridge upper-level ramps and lower-level roadways. As such, a dispersion analysis was conducted to assess potential impact of emissions from the ramps onto the proposed sensitive use.

Traffic Data and Vehicle Emissions

Truck traffic is not permitted on the upper level of the Queensboro Bridge and the associated ramps, nor are there buses travelling on the ramps in the vicinity of the Development Site. Traffic data was collected on the ramps located closest to the proposed outdoor terrace. No diesel vehicles were encountered in either of the four time periods (AM, midday, or PM peak hours, or during the overnight hours) for the upper-level ramps. In contrast, the lower-level roadways included diesel vehicles. Traffic for the Queensboro bridge was developed by the SSE traffic team on an hourly basis for a full day (24 hours of data).

Modeling assumptions for the atypical source analysis were the same as the assumptions made for the intersection analysis. The particulate matter (PM) analysis was conducted using hourly inputs for 24 hours while the CO analysis used the PM peak hour, which was the hour with the highest emissions.

For this analysis, since all vehicles on the ramp are in free flow pattern, idling emissions were not considered.

Receptor Placement

Discrete receptors (i.e., locations at which concentrations are calculated) were placed at the proposed terrace and on the façade of the proposed building.

Analysis Year

The elevated mobile sources analyses were performed for the 2024 analysis year—the year by which the Proposed Development is likely to be completed. The future analysis was performed for the With-Action condition only.

Stationary Sources

HVAC Analysis

As described in **Section 1, Project Description**, the Proposed Actions would facilitate the proposed reuse and 22-story enlargement of the Existing Industrial Building would result in a 26-story commercial building. The building HVAC system would be fueled by natural gas. Due to the proximity of an existing taller residential building immediately to the south of the Proposed Development, a refined analysis using the USEPA AERMOD model was warranted. NO_2 and $PM_{2.5}$ are the critical pollutants of concern from natural gas combustion and were analyzed in the refined HVAC analysis.

Refined Dispersion Modeling

The refined analysis of the effect of the HVAC systems that would serve the Proposed Development was performed using EPA's AERMOD model (version 21112). The AERMOD model calculates pollutant concentrations from one or more points (e.g., exhaust stacks). AERMOD is a state-of-the-art dispersion model, applicable to rural and urban areas, flat and complex terrain, surface and elevated releases, and multiple sources (including point, area, and volume sources). AERMOD is a steady-state plume model that incorporates current concepts about flow and dispersion in complex terrain, including updated treatments of the boundary layer theory, understanding of turbulence and dispersion, and includes handling of terrain interactions. The model uses hourly meteorological data and has the capability to calculate pollutant concentrations at locations where the plume from the exhaust stack is affected by the aerodynamic wakes and eddies (downwash) produced by nearby structures.

The analysis assumed stack tip downwash, urban dispersion and surface roughness length, and elimination of calms. Both with and without building downwash options were used to assess the maximum impact from these sources. The following sections further summarize the methodology used for this analysis.

Emission Rates and Stack Parameters

The mechanical engineer (MEP) for the project provided information on HVAC equipment, which would use natural gas as fuel. Two high-efficiency low-emission boilers with capacity of 6 million British Thermal Units per hour (MMBtu/hr) each are proposed. Short-term (1-hr

NO_x and 24-hr $PM_{2.5}$) emission rates were calculated assuming the operation of both boilers according to the load profile provided by the MEP. Annual emission rates were based on the maximum development size, energy consumption data from the Energy Information Administration (EIA)[7]. Annual emission rates were calculated by averaging annual fuel use over 24 hours per day and 365 days per year. NO_x emission rates are based on data from the boiler manufacturer (NO_x limit of 20 ppm). $PM_{2.5}$ emissions are based on EPA's AP-42.[8]

The boiler exhaust stacks would be located at the top of the mechanical roof, with the exhaust release height assumed to be three feet above the mechanical rooftop. Stack parameters, such as stack diameter, stack exhaust temperature, and exhaust velocity, were modeled based on information provided by the MEP and the equipment manufacturer. Emission rates and stack parameters used in the model are provided in **Table 11-3**.

The boiler exhaust stacks were initially modeled to be located 10 feet away from the edge of roof closest to receptors per New York City Fuel Gas Code §503.5.4. However, the initially predicted concentrations of $PM_{2.5}$ indicated the potential to exceed *de minimis* thresholds. The modeled stack was then placed away from the existing taller residential building on Lot 1. The stack placement and low-NOx unit requirements are included in a proposed (E) Designation for the site.

Table 11-3 HVAC Emission Rates and Stack Parameters (for Each HVAC Unit)

Building	Building Size (gsf)	Release Height (m)[1]	Exhaust Temperature (K)[2]	Exhaust Velocity (m/s)[2]	Stack Diameter (m)[2]	1-hr NO_x (g/s)[3,4]	Annual NO_x (g/s)[5]	24-hr $PM_{2.5}$ (g/s)[3]	Annual $PM_{2.5}$ (g/s)[5]
23-10 Queens Plaza South	363,136	124	355	2.53	0.356	1.61×10^{-2}	2.50×10^{-3}	5.63×10^{-3}	8.73×10^{-4}

Notes:

1 Exhaust stacks were assumed to be located at the top of the bulkhead of the highest building tier. Stacks were assumed to be 3 ft tall, with the exhaust release height modeled 3 feet above the top of the bulkhead.

2 Stack diameter and temperature are based on the boiler manufacturer's data and MEP input. The exhaust velocity was calculated based on flowrate data provided by the manufacturer, stack diameter, and average boiler load.

3 NO_x hourly and 24-hour $PM_{2.5}$ emissions shown are based on boiler operation at full load. Within the AERMOD model, these emissions were scaled to account for diurnal load variability. The associated exhaust velocities were varied accordingly.

4 Low-NO_x emissions (up to 20 ppm) are assumed, based on boiler manufacturer's data.

5 Annual emission rates are based on the EIA factor for commercial building annual energy use.

Methodology for Modeling NO_2 Concentrations

The 1-hour NO_2 concentrations associated with HVAC units for the proposed buildings were modeled using the AERMOD Plume Volume Molar Ratio Method (PVMRM) module. The PVMRM module limits the NO_x to NO_2 conversion by considering NO_2 formation based on the amount of ozone within the plume volume. Hourly background ozone concentrations for this analysis were obtained from the Queens College ambient monitoring station, which is the nearest monitoring station that has the latest five years (2016-2020) of hourly data available. An in-stack NO_2 to NO_x ratio was assumed based on EPA's "alpha" version of the in-stack ratio database, which indicates that the in-stack ratio for boilers is approximately

[7] Energy Information Administration (EIA) 2012 Commercial Buildings Energy Consumption Survey (CBECS), Table C25.

[8] Environmental Protection Agency, AP-42, Compilation of Air Pollutant Emissions Factors, AP 42, Fifth Edition, Volume I Chapter 1: External Combustion Sources | US EPA

0.1[9], and the NO_2/NO_x equilibrium ratio set to 0.9 (the recommended default value). Three years (2017 to 2019) of hourly background NO_2 concentrations from the Queens College monitoring station were used to develop seasonal hourly background concentrations that were added within AERMOD to the hourly NO_2 concentrations resulting from the boiler emissions. The design NO_2 value was estimated within the AERMOD model using five years of ozone and seasonal hourly NO_2 background.[10] Annual NO_2 concentrations were estimated using a NO_2/NO_x conversion ratio of 0.75, as described in EPA's Guideline on Air Quality Models at 40 CFR part 51 Appendix W, Section 5.2.4.10.7.

Meteorological Data

All analyses were conducted using the same five consecutive years of meteorological data from LaGuardia Airport and upper air data were obtained from Brookhaven station provided by the NYSDEC as in the mobile source analysis.

Receptor Locations

Receptors (i.e., locations at which concentrations are calculated) were modeled on the existing residential building on Queens Block 425, Lot 1 (the parcel located immediately to the south of the Development Site). This is the only building within a 400-ft radius of the Proposed Development that has a height that is similar or greater to that of the Proposed Development.

Receptors were modeled at heights representing each floor of the nearby buildings and proposed sensitive uses, along each building façade where operable windows, open space, and air intakes could be exposed to the plume from the HVAC system serving the Proposed Development.

Industrial Sources

As described in Section 220 and Section 322 in Chapter 17 of the *2021 CEQR Technical Manual,* an air quality assessment is required to evaluate the potential impacts of air toxics emissions from ventilation exhaust systems of manufacturing or processing facilities within a 400-foot radius of a project site when a project would result in new sensitive uses (particularly residences, schools, hospitals, or parks). If any sources are identified, a screening analysis is performed based on Table 17-3 in Chapter 17 of the *CEQR Technical Manual*. The screening table provides the maximum 1-hour, 8-hour, 24-hour and annual average modeled values based on a generic emission rate of 1 gram per second of a pollutant from a 20-foot-tall point source for distances between 30 feet and 400 feet from the receptor of same height. Potential impacts predicted from the industrial source of concern are then compared with the short-term and annual guideline concentrations recommended in NYSDEC's DAR-1 AGC/SGC Tables. If a proposed project fails this screening analysis, or the screening analysis methodology is not applicable to the project, further analysis using AERSCREEN and/or AERMOD is warranted to determine any potential for significant adverse impacts.

[9] http://www.epa.gov/ttn/scram/no2_isr_database.htm

[10] https://www.epa.gov/sites/production/files/2015-07/documents/appwno2_2.pdf

Assessment

Mobile Sources

Detailed Mobile Source Intersection Analysis

Microscale analysis of the impacts of the project-generated trips was conducted for the future conditions With and Without the Proposed Development at the intersections selected for analysis. Since only PM CEQR screening threshold was exceeded, only PM analysis was performed.

Two intersections were selected for the microscale analysis: 23rd and 24th Streets with 42nd Road. The links associated with these two intersections included links at the intersections of 23rd and 24th Streets along Queens Plaza South. Emissions at all links were estimated using MOVES3 in conjunction with traffic data provided by SSE traffic engineers and the NYSDEC inputs for Queens County. The intersections of 23rd and 24th Streets with Queens Plaza South are located at the two northern corners of the Proposed Development block and are within 1,000 feet of the modeled intersections of the 23rd and 24th Streets with 42nd Road.

The particulate matter analysis estimated 24-hour PM_{10} and $PM_{2.5}$ and annual $PM_{2.5}$ concentrations to compare with the CEQR de minimis threshold and PM_{10} NAAQS. Traffic information for this analysis was available only for the AM, midday, PM, and nighttime peak hours. These data were distributed to the 24 hours in accordance with the duration of each peak period derived by the traffic team from the collected traffic data.

The PM intersection analysis was conducted using the latest version of the AERMOD dispersion model and incorporating microscale receptors for the 24-hour impacts and neighborhood scale receptors for the annual impacts. The results of this analysis are presented in **Table 11-4** through **Table 11-6**.

Table 11-4 Highest 24-Hour $PM_{2.5}$ Concentrations for No-Action and With-Action Conditions ($\mu g/m^3$)

Intersection	No-Action Impact	No-Action Total	With-Action Impact	With-Action Total	Increment
23rd St and 42nd Road	8.3	25.0	8.9	25.6	0.63
24th St and 42nd Road	2.5	19.2	3.0	19.7	0.49
PM2.5 NAAQS/ CEQR *de minimis*		35		35	9.2

Source: VHB, Inc. September 2022

Table 11-5 Highest Annual $PM_{2.5}$ Concentrations for No-Action and With-Action Conditions ($\mu g/m^3$)

Intersection	No-Action Impact	No-Action Total	With-Action Impact	With-Action Total	Increment
23rd St and 42nd Road	0.26	6.06	0.28	6.08	0.023
24th St and 42nd Road	0.24	6.04	0.25	6.05	0.014
$PM_{2.5}$ NAAQS/ CEQR *de minimis*	--	12.0	--	12.0	0.1

Source: VHB, Inc. September 2022

As **Table 11-4** and **Table 11-6** demonstrate, $PM_{2.5}$ short-term and long-term impacts at the selected intersections are below the appropriate CEQR *de minimis* thresholds.

Table 11-6 Highest 24-Hour PM_{10} Concentrations for No-Action and With-Action Conditions ($\mu g/m^3$)

Intersection	With-Action Impact	With-Action Total
23rd St and 42nd Road	28.6	62.9
24th St and 42nd Road	20.2	54.5
PM_{10} NAAQS	--	150

Source: VHB, Inc. September 2022

PM_{10} concentrations with the Proposed Project are below the PM_{10} NAAQS. As such, no significant adverse air quality impacts are expected from emissions generated by the project's mobile sources.

Detailed Analysis from Atypical Sources on the Proposed Development

An analysis was performed to determine if pollutant concentrations related to emissions from vehicular traffic on the Queensboro Bridge and its ramps could potentially result in adverse impacts at the proposed rooftop terrace and operable windows along the façade facing 23rd Street and Queens Plaza South. No heavy-duty diesel traffic enters the Queensboro Bridge ramps as the counts conducted for this project confirmed as no trucks or buses are allowed on the upper level of the bridge. However, the lower level of the Queensboro Bridge accepts trucks and buses. Therefore, pollutants of concern from the traffic emissions on the bridge and ramps were CO and PM (PM_{10} and $PM_{2.5}$).

2024 vehicular CO and PM emission rates were estimated using MOVES3 and the NYSDEC inputs for Queens. The AERMOD run followed the EPA's Transportation Conformity Guidance for PM Nonattainment and Maintenance Areas to estimate maximum impacts from the Queensboro Bridge upper-level ramps and lower-level traffic emissions on the Proposed Project. The results of this analysis are presented in **Table 11-7** through **Table 11-9**.

Table 11-7 Highest Predicted CO Concentration from the Elevated Source (ppm)

Time Period	Highest Impact	Background Concentration	Total Concentration	NAAQS
1 hour	0.66	2.1	2.8	35
8 hours	0.45	1.6	2.1	9

Source: VHB Inc, September 2022

Table 11-8 Highest Predicted PM_{10} Concentration from the Elevated Source ($\mu g/m^3$)

Time Period	Highest Impact	Background Concentration	Total Concentration	NAAQS
24 hours	12.1	34.3	46.4	150

Source: VHB Inc, September 2022

Table 11-9 Highest Predicted $PM_{2.5}$ Concentration from the Elevated Source ($\mu g/m^3$)

Time Period	Highest Impact	Background Concentration	Total Concentration	NAAQS
24 hours	2.8	16.7	19.5	35
Annual	0.8	5.8	6.6	12

Source: VHB Inc, September 2022

The results indicate that the highest CO and PM concentrations at the proposed terrace and facades of the Proposed building facing the ramps and the bridge would be well below the applicable national ambient air quality standards. As such, no adverse air quality impacts are expected from the ramp traffic emissions on the Proposed Project.

HVAC Refined Analysis

As discussed, a refined HVAC analysis was conducted following the *2021 CEQR Technical Manual* procedures to evaluate the effects on air quality from the Proposed Development's HVAC systems emissions.

The results of the refined modeling analysis are presented in **Table 11-10**. The refined HVAC analysis was performed in AERMOD using with and without building downwash options. The higher concentration is presented in this table.

When the exhaust stacks for the Proposed Development were modeled closer to the existing residential building on Lot 1, predicted concentrations above applicable thresholds resulted. Control measures needed to avoid these impacts were identified and documented in the proposed (E) Designation. The concentrations shown in **Table 11-10** represent results modeled with stack placement and NO_x control requirements that would be set forth in the (E) Designation.

For 1-hour NO_2, the highest predicted daily 1-hour NO_2 concentration was determined at each receptor location and the 98th percentile daily 1-hour maximum concentration for each modeled year was calculated within the AERMOD model. The 98th percentile concentrations were averaged over the latest five years and added to the hourly background.

Table 11-10 Maximum Modeled Pollutant Concentrations from HVAC Systems

Pollutant	Averaging Time	Predicted Concentration (µg/m³)	Background (µg/m³)	Total (µg/m³)	Impact Criterion (µg/m³)	Criterion Type
NO_2	1-Hour	158.0	-	158.0	188	NAAQS
	Annual	0.60	28.7	29.3	100	
$PM_{2.5}$	24-Hour	5.5	16.7	N/A	9.2	CEQR *de minimis*
	Annual	0.28	5.8	N/A	0.3	

Notes:

1 The refined HVAC analysis was performed in AERMOD using with and without building downwash options, and the higher concentration is presented in this table.

2 The 1-hour NO_2 modeled concentration includes the seasonal-hourly background and represents the maximum of the total 98th percentile 1-hour NO_2 concentration predicted at any receptor.

3 Annual NO_2 concentrations were estimated using a NO_2/NO_x conversion ratio of 0.75.

4 The predicted 24-hour and annual $PM_{2.5}$ concentrations are directly compared to the *de minimis* thresholds of 9.2 µg/m³ and 0.3 µg/m³, respectively, without considering background concentrations.

As shown in **Table 11-10**, with the implementation of (E) Designation requirements, the maximum 1-hour and annal NO_2 concentrations are below their respective NAAQS. The maximum 24-hour $PM_{2.5}$ concentrations shown are below the *de minimis* threshold of 9.2 µg/m³, and the annual $PM_{2.5}$ concentrations are below the *de minimis* threshold of 0.3 µg/m³. Therefore, there would be no potential for significant adverse impacts from the HVAC systems for the Proposed Development, with the requirements specified in the (E) Designations. The text for the (E) Designations would be as follows:

Block 425, Lot 5 – 23-10 Queens Plaza South

Any new commercial development and/or enlargement on the above-referenced property, if using fossil-fuel fired heating, ventilation, and air conditioning (HVAC) or hot water systems, must exclusively use natural gas and be fitted with low-NO_x (up to 20 ppm) burners. Stacks must be located at the highest building tier and at least 406.83 feet above grade. Additionally, HVAC stacks must be located a minimum of 100 feet away from the Lot 5 lot line facing 42nd Road to avoid any potential significant adverse air quality impacts.

Industrial Source Analysis

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

Land use maps, available aerial images and the NYCDEP's Clean Air Tracking System (NYCDEP CATS) were reviewed to identify surrounding land uses that could have NYCDEP-issued industrial permits (i.e., sites classified as Industrial/Manufacturing, Transportation/Utility, or Public Facilities/Institutions). Fifteen active permits were identified from the NYCDEP CATS online database: 11 are associated with the Apex Technical School, and 2 are associated with France Furniture, Inc. as shown in **Table 11-11**.

Table 11-11 Industrial Sources within 400 Feet of the Proposed Development

Address	Block, Lot	Land Use[1]	Facility Type	Lot Owner Name[1]	DEP CATS
24-02 Queens Plaza South	424, 1	8	Welding	APEX Technical School	PB015213
			Welding		PB015313
			Welding		PB015413
			Welding		PB015513
			Carpentry		PB015613
			Autobody		PB015713
			Paint Spraying		PB015813
			Paint Spraying		PB015913
			Welding		PB016013
			Welding		PB016113
			Auto Repair		PB016213
42-61 24th Street	429,3	6	Woodworking	France Furniture Inc.	PW004620
			Wood painting		PW004520

Notes:

[1] As per MapPluto

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

The property on which the Apex Technical School is located was recently sold and a new commercial development is planned for the site. It is anticipated that the Apex Technical School will relocate from the site by the end of 2022 to facilitate construction of a new building. As operations of the Apex Technical school at this location would cease prior to the completion and occupancy of the Proposed Development, no further analysis is warranted and there would be no potential for an adverse impact from existing industrial sources on the Proposed Development.

Industrial permit applications PW004620 and PW004520 are associated with France Furniture, a woodworking business. France Furniture is approximately 350 feet away from the Proposed Development. The CEQR *Technical Manual* industrial screening analysis was performed to assess the potential for impacts of emissions from the furniture business on the Proposed Development. Emission rates for each pollutant were calculated using information from the permit application. Particulate matter sizes for solids emissions were not specified in the permit and were assumed to be PM_{10} for sawdust, and both PM_{10} and $PM_{2.5}$ for spray painting of wood. Total PM_{10} concentrations include the ambient background of 34 µg/m^3. Total 24-hour and annual $PM_{2.5}$ concentrations include the ambient backgrounds of 16.7 µg/m^3 and 5.8 µg/m^3, respectively. These ambient backgrounds are based on data collected at the Queens College monitoring station (2018-2020). The results of this analysis are presented in **Table 11-12**. The results show that individual contaminant concentrations are below their respective short and long-term guideline levels.

Table 11-12 Results of Industrial Source Analysis

Chemical Name	CAS	Total Short-term Concentration (µg/m³)	SGC (µg/m³)	Total Annual Concentration (µg/m³)	AGC (µg/m³)
Butyl Acetate	00123-86-4	100.10	71,300	1.063	565
Xylene	01330-20-7	1.56	22,000	0.017	100
1-Methoxy-2-Propanol	00107-98-2	17.69	36,850	0.188	2,000
1-Butanol	00071-36-3	12.69	-	0.135	1,500
Ethanol	00064-17-5	12.65	-	0.135	45,000
2-Propanol	00067-63-0	5.53	98,000	0.059	7,000
Dibutyl Phthalate	00084-74-2	1.95	-	0.021	12
2-Methyl-1-Propanol	00078-83-1	3.20	-	0.034	360
Methyl-N-Amyl Ketone	00110-43-0	2.60	-	0.028	550
Dimethyl Carbonate	00616-38-6	1.56	-	-	-
2-Methoxy-1-Methylethyl Acetate	00108-65-6	2.09	36,850	0.022	2,000
Total Solids (PM_{10})[1,2]	NY075-00-0	34.78	150	-	-
Total Solids ($PM_{2.5}$)[1,2]	NY075-00-0	16.7	35	5.8	12

Notes: 1. Permit applications did not specify total solids size. For sawdust, PM_{10} was assumed. For spray painting of wood, the analysis was conservatively performed assuming that all solids are PM_{10}, as well as that all solids are $PM_{2.5}$.
2. Total $PM_{2.5}$ and PM_{10} concentrations include ambient backgrounds.

Health risk is characterized using a hazard index for non-carcinogens. Non-cancer health risk was estimated using procedures from the NYSDEC DAR-1 based on the annual concentrations and AGC levels. As shown in **Table 11-13**, none of the chemicals included in the permit application for the woodworking business are known carcinogens, according to DAR-1.

Table 11-13 Hazard Index Assessment

Chemical Name	CAS	DAR1 Classification	Hazard quotient
Butyl Acetate	00123-86-4	Low toxicity	1.88×10^{-3}
Xylene	01330-20-7	Medium toxicity	1.66×10^{-4}
1-Methoxy-2- Propanol	00107-98-2	Medium toxicity	-
1-Butanol	00071-36-3	Medium toxicity	8.97×10^{-5}
Ethanol	00064-17-5	Low toxicity	2.99×10^{-6}
2-Propanol	00067-63-0	Low toxicity	8.41×10^{-6}
Dibutyl Phthalate	00084-74-2	Medium toxicity	1.74×10^{-3}
2-Methyl-1-Propanol	00078-83-1	-	9.47×10^{-5}
Methyl-N-Amyl Ketone	00110-43-0	-	5.02×10^{-5}
Dimethyl Carbonate	00616-38-6	-	-
2-Methoxy-1-Methylethyl Acetate	00108-65-6	-	-
Solids (PM_{10})	NY075-00-0		
Solids ($PM_{2.5}$)	NY075-00-0	-	0.544
Hazard Index:			**0.55**

The hazard index was compared to the DAR-1 threshold of non-cancer hazard index threshold of 2. The hazard index at the Proposed Development is below the threshold. Therefore, no significant adverse air quality impacts from the woodworking business are anticipated at the Proposed Development.

Conclusion

No significant adverse air quality impacts are anticipated from the project-generated mobile sources at the study area intersections, which are expected to be the worst-case locations for analysis purposes for this project. Air quality impacts from traffic on the Queensboro Bridge ramps, which are atypical sources, on the proposed open space terrace are also not expected to be significant.

The HVAC analysis conducted for the site indicates that with the requirements set forth in the (E) Designation there would be no potential for significant adverse air quality impacts from the HVAC systems associated with the Proposed Development.

As no existing industrial, large, or major sources of concern would operate within study area for the Proposed Development, there would be no potential for any significant adverse impact on air quality.

As a result, no significant adverse air quality impacts are expected from the Proposed Development.

12

Noise

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

Introduction

The Applicant is seeking a series of land use actions to facilitate the reuse and 22-story enlargement (the "Proposed Enlargement") of the existing four-story former Eagle Electric building (the "Existing Industrial Building") located on Queens Block 425 Lot 5 (the "Development Site") in the Long Island City neighborhood, Queens Community District 2. The Proposed Actions would result in a 26-story building consisting primarily of commercial office, with local retail on the ground floor and cellar level, a restaurant, community meeting space and exhibit space documenting the former Eagle Electric manufacturing business.

Therefore, the Proposed Actions would introduce new noise-sensitive receptors to the Development Site. The purpose of the noise assessment under *City Environmental Quality Review (CEQR)* is to determine if:

- The Proposed Project would significantly increase sound levels from mobile and stationary sources at existing noise receptors adjacent to the Development Site, including residential, schools, and office spaces; and
- New noise receptors introduced at the Development Site would be in an acceptable ambient sound level environment.

Per the *2021 CEQR Technical Manual*, a noise analysis is appropriate if an action would generate mobile or stationary sources of noise or would be located in an area with high ambient noise levels. Mobile sources include vehicular traffic; stationary sources include rooftop equipment such as emergency generators, cooling towers, and other mechanical equipment.

Noise assessment includes the following:

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

Noise Background

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

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

Audible sound is comprised of acoustic energy over a range of frequencies typically from 20 to 20,000 Hz. The human ear does not perceive sound levels at each frequency as equally loud. To compensate for this phenomenon in perception, a frequency filter known as A-weighting (dBA) is used to evaluate environmental noise levels. **Table 12-1** presents a list of common outdoor and indoor sound levels.

Table 12-1 Common Indoor and Outdoor Sound Levels

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

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

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

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

a proposed development at existing receptors in the study area and to assess noise exposure for new receptors.

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

Assessment Methodology

This noise analysis considers two receptor types when evaluating noise for the Proposed Development; existing and new receptor(s). The Proposed Development would introduce new commercial office spaces, which are considered "new receptors."

The analysis also considers "existing receptors," which are the current noise-sensitive uses, including the surrounding residences, office space, and schools. The following describes the results of the noise assessment for these two types of receptors.

Noise Assessment for Existing Receptors

Noise impact at existing nearby sensitive receptors is assessed according to the relative increase between No-Action and With-Action sound levels. Noise impact is assessed according to the increase in the L_{eq} sound level in accordance with the *2021 CEQR Technical Manual*. If mobile or stationary sources associated with the Proposed Development would increase L_{eq} sound levels by 3 dB or more and absolute levels would exceed 65 dBA L_{eq}, the Proposed Development would cause a significant adverse impact prior to mitigation. Additionally, if No-Action condition noise levels are 60 dBA L_{eq} or less, a 5-dB increase would be considered a significant adverse noise impact.

Mobile Sources

As described in **Section 10, Transportation**, a detailed traffic analysis has been conducted at three signalized and three unsignalized intersections to evaluate Existing, No-Action, and With-Action traffic volumes near the Development Site including the following:

› Queens Plaza North and 23rd Street (signalized)
› Queens Plaza South and 23rd Street (signalized)
› 42nd Road and 23rd Street (unsignalized)
› Queens Plaza South and 24th Street (unsignalized)
› 42nd Road and 24th Street (unsignalized)
› Queens Boulevard and Jackson Avenue/Northern Boulevard (signalized)

These peak hours at these intersections, determined based on turning movement counts and vehicle classification counts collected in November 2019, November 2020, and January 2021, included the following:

› Weekday AM peak hour: 7:00 AM to 8:00 AM
› Weekday MD peak hour: 12:00 PM to 1:00 PM
› Weekday PM peak hour: 4:30 PM to 5:30 PM

The increase in noise at existing receptors has been determined based on proportional modeling of noise passenger-car equivalents (PCEs) for the No-Action and With-Action conditions. The mobile source noise analysis has been conducted for each of the six intersections and for three roadway segments where noise measurements were conducted mid-block.

If a proposed project would result in a doubling or more of PCEs, it would result in a 3 dBA or greater increase in noise levels. If PCEs would not double due to a proposed project, there would not be a significant adverse vehicular noise impact, and no further mobile source noise analysis is warranted. The *2021 CEQR Technical Manual* describes the process to determine PCEs. Vehicle classes are defined to have the following PCEs based on typical vehicles speeds:

- Each automobile or light truck: 1 noise PCE
- Each medium truck: 13 noise PCEs
- Each bus: 18 noise PCEs
- Each heavy truck: 47 noise PCEs
- Future With-Action noise increases are calculated using the following equation:

$$With\ Action\ L_{eq}\ Increase = 10 * \log\left(\frac{With\ Action\ PCE}{No\ Action\ PCE}\right)$$

Table 12-2 presents the Existing, No-Action, and With-Action PCE values at study area intersections and the sound increment between conditions. At all six intersections, traffic noise would increase by up to 1.7 dBA in the No-Action condition compared to the Existing condition, by up to 0.9 dBA in the With-Action condition compared to the No-Action condition, and by up to 1.8 dBA in the With-Action condition compared to the Existing condition. Since traffic noise levels would not increase by more than 3 dBA at any intersection in With-Action condition compared to the No-Action condition, there would not be a significant adverse traffic noise impact at existing receptors near these intersections.

At the roadway segments where the noise measurements were conducted at the Proposed Development, traffic noise would increase by up to 2.4 dBA in the No-Action condition compared to the Existing condition during the afternoon on the segment of 24th Street between intersections 4 and 5 where noise measurements were conducted at Site 3. Traffic noise would increase by up to 3.4 dBA in the With-Action condition compared to the No-Action condition on 24th Street in the evening peak period. Traffic noise would increase by up to 5.7 dBA in the With-Action condition compared to the Existing condition during the evening period on 24th Street. Traffic noise increases on all other roadway segments would be 2.4 dBA or less.

The increases in traffic noise along 24th Street is due primarily to the relatively low volume of existing traffic (i.e., generally less than 100 vehicles during the peak hours). At all noise measurement locations, the predominant source of noise is associated with passing subway traffic (the 7 train) on the elevated tracks, which are generally located at a distance of up to 50 feet from the Proposed Development. As described in the following section, maximum sound levels from train passbys ranged from 89.2 to 101.6 dBA. There would be no changes in train operations in the No-Action or With-Action conditions. Therefore, increases in noise

associated with vehicular traffic will not substantially affect the overall ambient noise condition and the Existing condition is representative of the With-Action noise condition.

Table 12-2 Noise Passenger Car Equivalents (Noise PCEs) Analysis

Intersection/ Segment	Period	Existing PCEs	No-Action PCEs	No-Action Sound Increment (dBA)	With-Action PCEs	With-Action minus No-Action Sound Increment[1] (dBA)	With-Action minus Existing Sound Increment[2] (dBA)
Intersection 1: Queens Plaza North and 23rd Street	Morning	1,661	1,803	0.4	1,844	0.1	0.5
	Afternoon	1,514	1,749	0.6	1,793	0.1	0.7
	Evening	1,054	1,541	1.7	1,603	0.2	1.8
Intersection 2: Queens Plaza South and 23rd Street	Morning	1,223	1,477	0.8	1,692	0.6	1.4
	Afternoon	1,936	2,316	0.8	2,465	0.3	1.1
	Evening	1,970	2,492	1.0	2,595	0.2	1.2
Intersection 3: 42nd Road and 23rd Street	Morning	756	878	0.6	993	0.5	1.2
	Afternoon	940	1,175	1.0	1,235	0.2	1.2
	Evening	1,085	1,422	1.2	1,525	0.3	1.5
Intersection 4: Queens Plaza South and 24th Street	Morning	527	680	1.1	800	0.7	1.8
	Afternoon	953	1,129	0.7	1,266	0.5	1.2
	Evening	1,006	1,214	0.8	1,356	0.5	1.3
Intersection 5: 42nd Road and 24th Street	Morning	596	655	0.4	799	0.9	1.3
	Afternoon	629	744	0.7	862	0.6	1.4
	Evening	598	789	1.2	894	0.5	1.7
Intersection 6: Queens Boulevard and Jackson Avenue/Northern Boulevard	Morning	6,402	6,764	0.2	6,851	0.1	0.3
	Afternoon	6,742	6,985	0.2	7,050	0.0	0.2
	Evening	6,064	6,347	0.2	6,408	0.0	0.2
23rd Street Segment Between Intersections 2 & 3: Noise Sites 1 & 4	Morning	688	801	0.7	913	0.6	1.2
	Afternoon	855	1,061	0.9	1,117	0.2	1.2
	Evening	1,017	1,330	1.2	1,408	0.2	1.4
Queens Plaza South Segment Between Intersections 2 & 4: Noise Sites 2 & 5	Morning	525	681	1.1	886	1.1	2.3
	Afternoon	274	336	0.9	476	1.5	2.4
	Evening	318	404	1.0	451	0.5	1.5
24th Street Segment Between Intersections 4 & 5: Noise Site 3	Morning	89	103	0.6	193	2.7	3.4
	Afternoon	60	105	2.4	209	3.0	5.4
	Evening	46	78	2.3	171	3.4	5.7

[1] Sound increment represents No-Action sound levels minus Existing sound levels.

[2] Sound increment represents With-Action sound levels minus No-Action sound levels

[3] Sound increment represents With-Action sound levels minus Existing sound levels

Source: VHB, 2021.

Stationary Sources

The Proposed Development is not anticipated to include any substantial stationary source noise generators, such as unenclosed cooling or ventilation equipment, loudspeaker systems, stationary diesel engines, car washes, or other similar types of uses. The design and specifications for the mechanical equipment, such as heating, ventilation, and air conditioning (HVAC), are not known at this time. As the project design advances, mechanical equipment would be selected that incorporates sufficient noise reduction to comply with applicable noise regulations and standards, including the standards contained in the revised New York City Noise Code. This would ensure that mechanical equipment does not result in any significant increases in noise levels by itself or cumulatively with other project noise sources.

Noise Assessment for New Receptors

With-Action noise conditions at new sensitive receptors that would be introduced by the Proposed Development are evaluated according to absolute exterior sound level. The noise exposure guidelines for acceptable ambient conditions depend on the type of land use; for commercial office spaces, the goal is to maintain interior L_{10} noise levels of 50 dBA or lower and interior L_{dn} noise levels of 45 dBA or lower. With-Action exterior sound levels are evaluated to determine if receptors would be in an acceptable ambient sound level environment. Exterior ambient sound levels exceeding 70 dBA (L_{10}) or 65 dBA (L_{dn}) at commercial office spaces are considered to be Marginally Unacceptable. Exterior sound levels exceeding 80 dBA (L_{10}) or 75 dBA (L_{dn}) are considered Clearly Unacceptable. If there would be Marginally Unacceptable or Clearly Unacceptable ambient noise conditions, there is a need to provide window/wall sound attenuation that is sufficient to reduce interior sound levels to acceptable levels.

Since the Proposed Development would introduce commercial office space, the highest L_{10} or L_{dn} sound level is used to evaluate whether the Proposed Development would introduce new receptors into an acceptable noise environment. The analysis presents the results of ambient noise monitoring that was conducted at the Development Site and the assessment of whether new receptors would be in a high ambient noise environment.

Noise Exposure Guidelines

The *2021 CEQR Technical Manual* provides noise exposure guidelines for assessing ambient noise conditions at new noise sensitive receptors, as shown in **Table 12-3**.

Table 12-3 Noise Exposure Guidelines for Use in City Environmental Impact Review

Receptor Type	Time Period	Acceptable External Exposure	Marginally Acceptable External Exposure	Marginally Unacceptable External Exposure	Clearly Unacceptable External Exposure
Commercial Office	All Times	$L_{10} \leq 65$ dBA	$65 < L_{10} \leq 70$ dBA	$70 < L_{10} \leq 80$ dBA	$L_{10} > 80$ dBA
		$L_{dn} \leq 60$ dBA	$60 < L_{dn} \leq 65$ dBA	$65 < L_{dn} \leq 75$ dBA	$L_{dn} > 75$ dBA

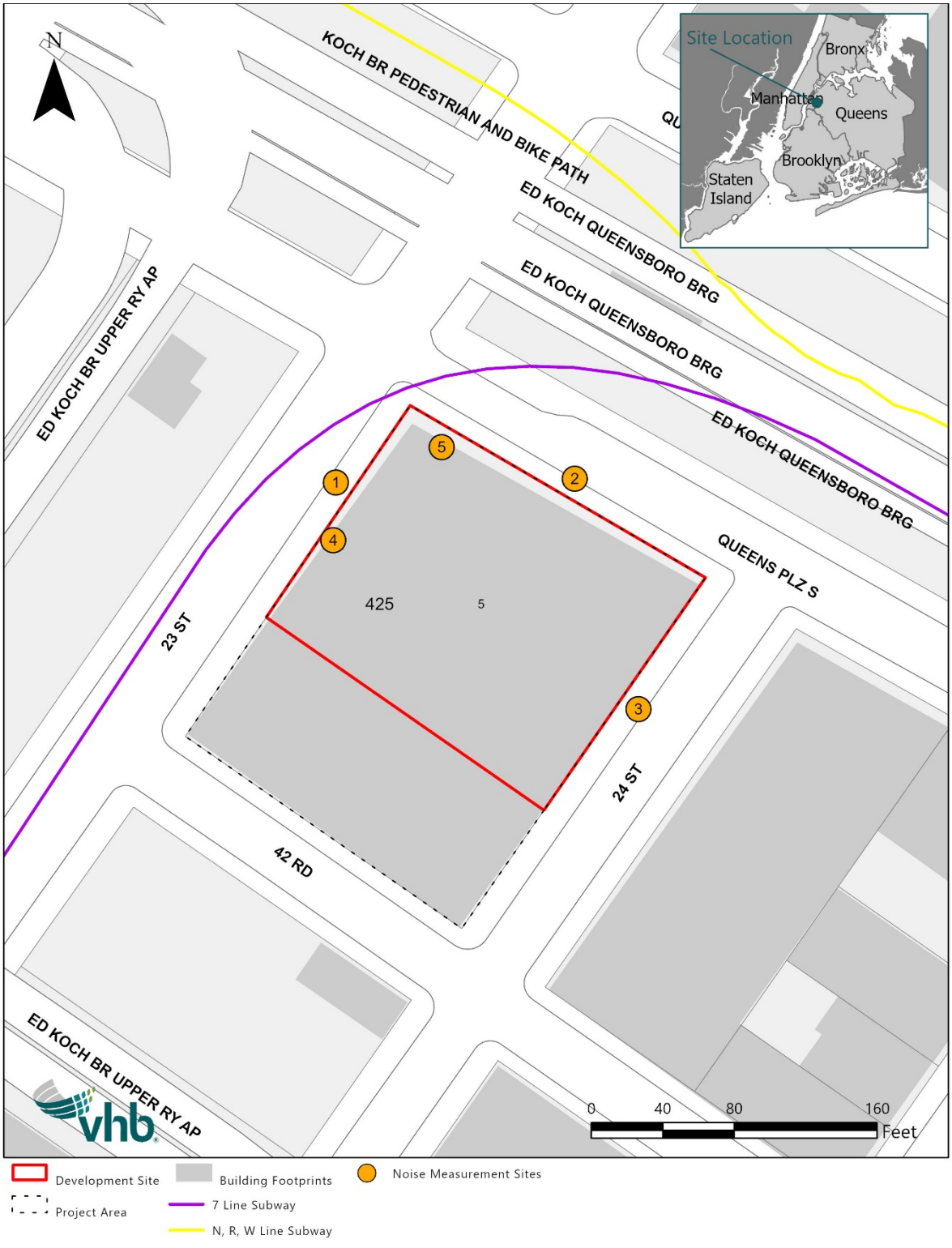
Source: Table 19-2, *2021 CEQR Technical Manual*.

Existing Sound Levels

Noise monitoring was conducted at five sites on November 4 and 5, 2020 in accordance with the *CEQR Technical Manual* as shown in **Figure 12-1**. Noise monitors at ground level (Sites 1, 2, and 3) were placed with a minimum of four feet between the microphone and nearby reflecting surfaces. Noise monitors at the roof level (Sites 4 and 5) were placed so that the microphone extended out from the building façade. With train activity dominating the overall noise environment, 1-hour noise measurements were conducted during morning peak periods (7:00 – 9:00 AM), midday period (12:00 – 2:00 PM) and evening peak period (4:00 – 6:00 PM) at the ground level. Noise measurements were conducted for 24-hours at the rooftop measurement locations. Measurements were conducted using Type I sound level meters and were calibrated in the field and by a laboratory traceable to the National Institute of Standards and Technology.

Table 12-4 summarizes the ground-level measurement results. The maximum noise levels from trains were up to 101.6 dBA at Site 1 on 23rd Street, 98.9 dBA at Site 2 on Queens Plaza South, and 95.7 dBA at Site 3 on 24th Street. The ambient L_{eq} sound levels ranged from 73.5 to 88.6 dBA and the L_{10} sound levels ranged from 76.96 to 94.4 dBA. There were approximately 35 trains per hour during the morning and evening peak periods. **Table 12-5, Table 12-6**, and **Figure 12-2** present the results of the long-term (24-hour) noise measurements on the rooftop. The maximum L_{eq} sound level ranged from 87.0 to 87.6 dBA and the L_{10} sound level ranged from 92.3 to 93.5 dBA on the rooftop. Since the train operations are the predominant source of noise at the Proposed Development, future changes in vehicular traffic noise due to the No-Action or With-Action conditions would not have a substantial effect on the ambient noise conditions. Therefore, the existing ambient noise measurements are representative of the With-Action conditions.

Figure 12-1 Noise Monitoring Locations



Source: VHB, 2021.

Table 12-4 Ambient Sound Level Measurements (Ground Level)

Site	Monitoring Location	Period	Duration	L_{eq}	L_{min}	L_{max}	L_1	L_{10}	L_{50}	L_{90}
1	23rd Street (Ground)	Morning	1 hour	88.6	67.7	101.6	98.4	94.4	77.8	71.7
		Midday	1 hour	85.4	65.7	101.3	97.0	89.3	73.7	69.7
		Evening	1 hour	87.9	65.5	100.9	98.0	94.2	74.1	69.1
2	Queens Plaza South (Ground)	Morning	1 hour	85.1	65.1	98.9	93.9	89.7	77.6	70.7
		Midday	1 hour	83.5	65.6	98.3	93.7	88.8	74.4	70.9
		Evening	1 hour	85.3	64.9	97.1	93.9	90.4	76.3	68.7
3	24th Street (Ground)	Morning	1 hour	75.6	62.7	89.2	82.3	79.2	73.2	67.0
		Midday	1 hour	74.3	60.4	91.6	82.7	78.5	69.6	65.9
		Evening	1 hour	73.5	60.7	95.7	80.6	76.9	69.8	64.1

Source: Measurements conducted by VHB on November 4, 2020.

Table 12-5 Ambient Sound Level Measurements (Site 4 Roof)

Site	Monitoring Location	Start	Stop	L_{eq}	L_{min}	L_{max}	L_1	L_{10}	L_{50}	L_{90}
4	23rd Street (Roof)	0:00:00	1:00:00	79.6	61.0	94.5	92.0	81.6	67.8	64.7
		1:00:00	2:00:00	79.4	60.8	96.8	92.9	74.9	67.1	63.4
		2:00:00	3:00:00	77.2	60.1	95.2	92.2	71.2	66.8	62.9
		3:00:00	4:00:00	77.5	60.5	95.6	91.7	72.5	67.0	63.2
		4:00:00	5:00:00	76.5	62.0	94.3	89.8	73.1	68.6	64.9
		5:00:00	6:00:00	80.3	64.2	97.1	94.1	74.4	70.1	67.5
		6:00:00	7:00:00	83.8	66.5	96.5	94.0	89.8	71.5	69.1
		7:00:00	8:00:00	85.8	66.4	96.7	94.6	91.4	73.6	69.2
		8:00:00	9:00:00	86.9	65.6	99.6	95.4	92.5	74.0	68.6
		9:00:00	10:00:00	85.2	65.1	97.5	94.4	90.5	72.7	68.5
		10:00:00	11:00:00	84.2	65.4	96.8	94.9	89.4	71.1	68.4
		11:00:00	12:00:00	83.8	65.7	98.5	94.5	89.0	70.7	68.4
		12:00:00	13:00:00	83.6	65.0	96.0	94.4	89.1	70.3	67.8
		13:00:00	14:00:00	84.4	65.4	98.5	95.1	89.7	70.7	68.2
		14:00:00	15:00:00	84.4	64.7	96.8	95.0	89.9	70.5	67.9
		15:00:00	16:00:00	85.2	65.2	98.4	96.0	90.5	70.8	68.0
		16:00:00	17:00:00	86.6	64.9	98.4	96.1	92.9	71.3	67.5
		17:00:00	18:00:00	87.6	65.0	98.2	96.1	93.5	73.3	67.7
		18:00:00	19:00:00	86.7	65.5	98.1	95.9	92.7	72.0	67.6
		19:00:00	20:00:00	86.5	63.9	99.1	96.1	92.4	71.0	67.7
		20:00:00	21:00:00	86.1	63.9	98.1	95.9	92.4	70.1	67.5
		21:00:00	22:00:00	85.0	63.9	98.6	95.6	90.8	70.5	67.6
		22:00:00	23:00:00	84.7	63.4	98.6	95.5	90.0	70.2	67.4
		23:00:00	0:00:00	83.5	62.8	99.0	95.1	87.9	69.2	66.6

Source: Measurements conducted by VHB on November 5 to 6, 2020.

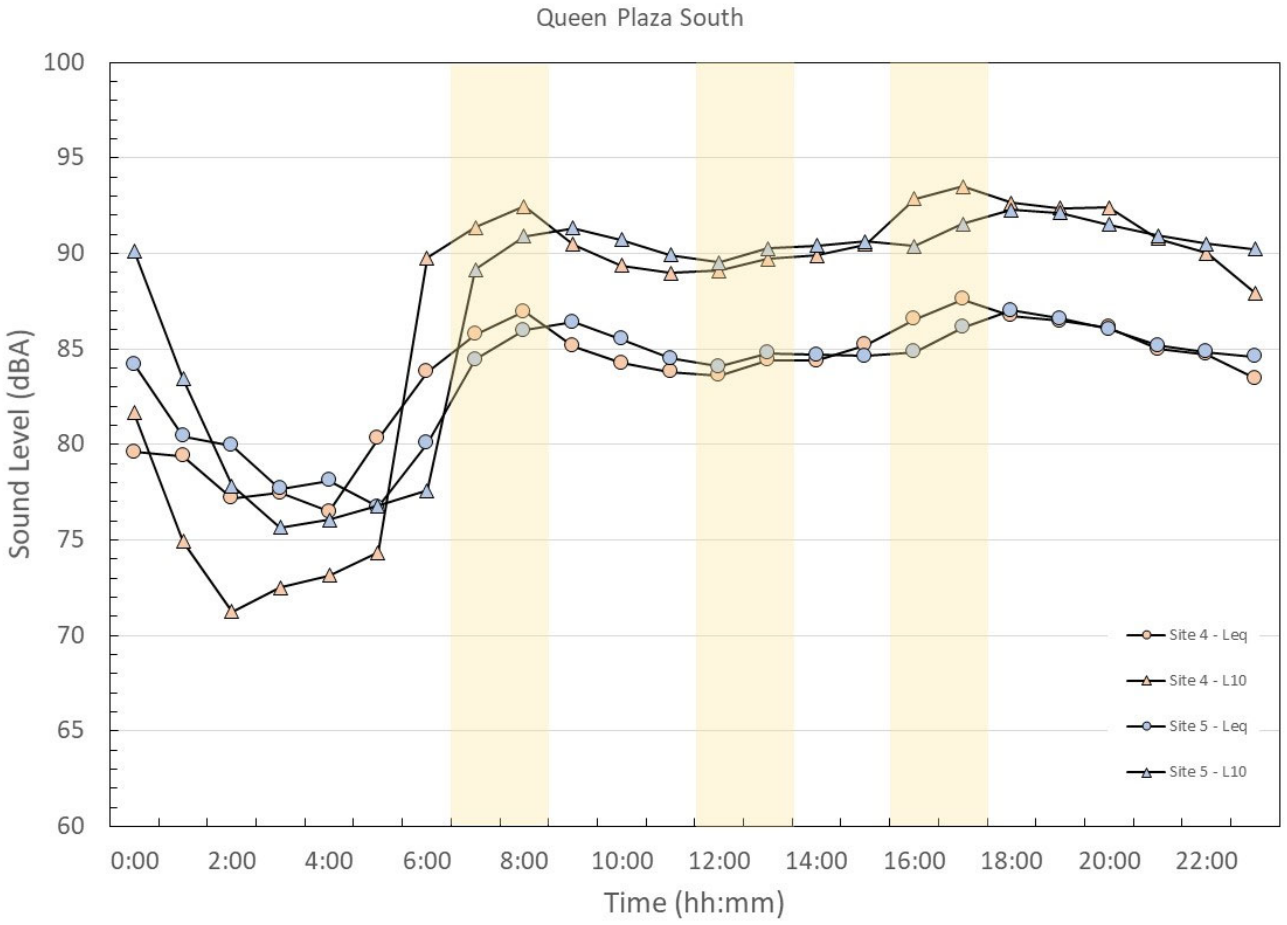
#

Table 12-6 Ambient Sound Level Measurements (Site 5 Roof)

Site	Monitoring Location	Start	Stop	L_{eq}	L_{min}	L_{max}	L_1	L_{10}	L_{50}	L_{90}
5	Queens Plaza South (Roof)	0:00:00	1:00:00	84.2	61.3	97.8	95.2	90.1	72.5	67.9
		1:00:00	2:00:00	80.4	59.0	95.5	91.9	83.4	71.3	67.3
		2:00:00	3:00:00	79.9	57.8	98.8	92.8	77.8	70.2	65.0
		3:00:00	4:00:00	77.7	56.6	95.6	91.0	75.7	70.5	63.9
		4:00:00	5:00:00	78.1	58.9	96.1	91.7	76.1	70.3	64.2
		5:00:00	6:00:00	76.7	58.7	95.7	89.3	76.8	71.7	66.1
		6:00:00	7:00:00	80.1	60.3	98.0	93.2	77.6	73.0	69.8
		7:00:00	8:00:00	84.4	68.1	100.1	96.2	89.1	74.2	71.8
		8:00:00	9:00:00	86.0	67.1	99.3	95.3	90.9	76.3	71.3
		9:00:00	10:00:00	86.4	66.3	98.4	95.3	91.3	76.8	70.9
		10:00:00	11:00:00	85.5	66.6	99.7	95.0	90.7	75.5	70.7
		11:00:00	12:00:00	84.5	64.8	98.1	95.0	89.9	73.6	70.5
		12:00:00	13:00:00	84.1	67.0	98.9	94.8	89.5	73.5	70.7
		13:00:00	14:00:00	84.8	64.3	100.2	95.5	90.3	72.7	69.8
		14:00:00	15:00:00	84.7	65.7	97.4	95.3	90.4	73.7	70.5
		15:00:00	16:00:00	84.6	64.6	98.6	94.9	90.6	72.9	69.7
		16:00:00	17:00:00	84.9	64.8	98.8	95.6	90.4	73.2	69.9
		17:00:00	18:00:00	86.1	64.2	98.6	96.3	91.5	72.9	68.5
		18:00:00	19:00:00	87.0	65.3	99.1	95.6	92.3	75.8	68.9
		19:00:00	20:00:00	86.6	67.1	98.9	95.6	92.1	74.2	69.6
		20:00:00	21:00:00	86.0	64.6	98.3	95.6	91.5	73.5	70.0
		21:00:00	22:00:00	85.2	64.4	98.0	95.1	90.9	73.1	69.8
		22:00:00	23:00:00	84.9	64.9	98.0	94.7	90.5	73.6	69.8
		23:00:00	0:00:00	84.6	63.9	98.1	95.1	90.2	72.9	69.8

Source: Measurements conducted by VHB on November 5 to 6, 2020.

Figure 12-2 Long-Term Noise Monitoring Results



Source: VHB, 2020.

Acceptability Assessment

The *2021 CEQR Technical Manual* provides noise exposure guidelines for assessing ambient sound levels, as shown in **Table 12-3**. Based on these noise exposure guidelines, noise impact has been assessed to determine the level of acceptability for new sensitive receptors at the Development Site. **Table 12-7** summarizes the max of the L_{10} and L_{dn} sound levels at each measurement location. The table indicates whether the existing sound levels are considered to be acceptable according to the *2021 CEQR Technical Manual*.

Table 12-7 Sound Level Acceptability

Site	Monitoring Location	Period	With-Action Sound Level (dBA)	Acceptability
1	23rd Street (Ground)	Morning	**94.4 (L_{10})**	Clearly Unacceptable
		Midday	89.3 (L_{10})	Clearly Unacceptable
		Evening	94.2 (L_{10})	Clearly Unacceptable
2	Queens Plaza South (Ground)	Morning	89.7 (L_{10})	Clearly Unacceptable
		Midday	88.8 (L_{10})	Clearly Unacceptable
		Evening	**90.4 (L_{10})**	Clearly Unacceptable
3	24th Street (Ground)	Morning	**79.2 (L_{10})**	Marginally Unacceptable
		Midday	78.5 (L_{10})	Marginally Unacceptable
		Evening	76.9 (L_{10})	Marginally Unacceptable
4	23rd Street (Roof)	Morning	92.5 (L_{10})	Clearly Unacceptable
		Midday	89.7 (L_{10})	Clearly Unacceptable
		Evening	93.5 (L_{10})	Clearly Unacceptable
		5:00 – 6:00 PM	93.5 (L_{10})	Clearly Unacceptable
		Day and Night	**88.6 (L_{dn})**	Clearly Unacceptable
5	Queens Plaza South (Roof)	Morning	90.9 (L_{10})	Clearly Unacceptable
		Midday	90.3 (L_{10})	Clearly Unacceptable
		Evening	91.5 (L_{10})	Clearly Unacceptable
		6:00 – 7:00 PM	92.3 (L_{10})	Clearly Unacceptable
		Day and Night	**88.9 (L_{dn})**	Clearly Unacceptable

Bold values are highest

Source: VHB, 2021.

According to the noise exposure guidelines in the *CEQR Technical Manual*, With-Action sound levels are Clearly Unacceptable on the west façade of the Proposed Development for floors below the elevated train on 23rd Street with sound levels up to 94.4 dBA (L_{10}) based on the morning peak period measurements at ground-level at Site 1. On the west facade of the Proposed Development for floors at or above the elevated train on 23rd Street, sound levels are Clearly Unacceptable with sound levels up to 88.6 dBA (L_{dn}) based on the day and night 24-hour measurement on the roof at Site 4. On the north facade of the Proposed Development for floors below the elevated train on Queens Plaza South, sound levels are Clearly Unacceptable with sound levels up to 90.4 dBA (L_{10}) based on the evening peak period measurement at ground-level at Site 2. On the north façade of the Proposed Development for floors at or above the elevated train on Queens Plaza South, sound levels are Clearly Unacceptable with sound levels up to 88.9 dBA (L_{dn}) based on the day and night 24-hour measurement on the roof at Site 5. On the east and south facades of the Proposed Development on 24th Street and 42nd Road, sound levels are Marginally Unacceptable with sound levels up to 79.2 dBA (L_{10}) based on the morning peak period measurements at ground level at Site 3. Based on the finding of Marginally Unacceptable and Clearly Unacceptable sound levels, sufficient outdoor-to-indoor sound attenuation of the window/wall must be specified to provide acceptable sound attenuation from the window/wall materials of the Proposed Development.

Noise Attenuation Measures

The most common measure for reducing interior noise from ambient sources is to specify sufficient outdoor-to-indoor sound attenuation for a proposed building. As shown in **Table 12-8**, the required level of attenuation varies based on the exterior sound levels and type of receptor. For facades adjacent to other facades with greater composite window/wall sound attenuation requirements, the greater attenuation requirement would extend up to 50 feet along the adjacent facades.

Table 12-8 Required Attenuation Values to Achieve Acceptable Interior Noise Levels

	Marginally Unacceptable				Clearly Unacceptable
With-Action Sound Level	$70<L_{10}\leq73$	$73<L_{10}\leq76$	$76<L_{10}\leq78$	$78<L_{10}\leq80$	$80<L_{10}$
	$65<L_{dn}\leq68$	$68<L_{dn}\leq71$	$71<L_{dn}\leq73$	$73<L_{dn}\leq75$	$75<L_{dn}$
Attenuation for Commercial Office Space [A]	(I) 23 dBA	(II) 26 dBA	(III) 28 dBA	(IV) 30 dBA	See Note[B]

Note: [A] The above composite window-wall attenuation values are for commercial office uses and exhibit spaces. The above category requires a closed window situation and hence an alternate means of ventilation.

[B] The required attenuation value is the difference between L_{build} and $L_{interior,}$, using the appropriate noise descriptor

Where: L_{build} is the projected noise level under the build condition rounded up to the whole number

$L_{interior}$ is the designed interior noise level (50 dB(A) for L_{10} noise, 45 dB(A) for L_{dn} noise)

Source**:** New York City Department of Environmental Protection (*2021 CEQR Technical Manual*, Table 19-3)

The composite outdoor-to-indoor transmission classification (OITC) value of the window-wall structure is used to determine the necessary sound attenuation. Sound attenuation measures would be achieved through new construction materials and techniques with sufficient OITC-rated windows and walls. To maintain a closed-window condition, central air-conditioning would be provided to allow for an alternate means of ventilation.

The following (E) Designation commitment (E-689) is proposed to be assigned to the Development Site (see **Table 12-9**, **Figure 12-3**, and **Figure 12-4**):

> ***Queens Block 425, Lot 5***
>
> *In order to ensure an acceptable interior noise environment, future commercial office/exhibit uses must provide a closed-window condition with a minimum attenuation as shown in Table 12-9 in order to maintain an interior L_{10} noise level not greater than 50 dBA and an interior L_{dn} noise level not greater than 45 dBA for commercial office and exhibit spaces as illustrated in the EAS. To achieve up to 45 dBA of building attenuation, special design features that go beyond the normal double-glazed windows are necessary and may include using specifically designed windows (i.e., windows with small sizes, windows with air gaps, windows with thicker glazing, etc.), and additional building attenuation. In order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.*

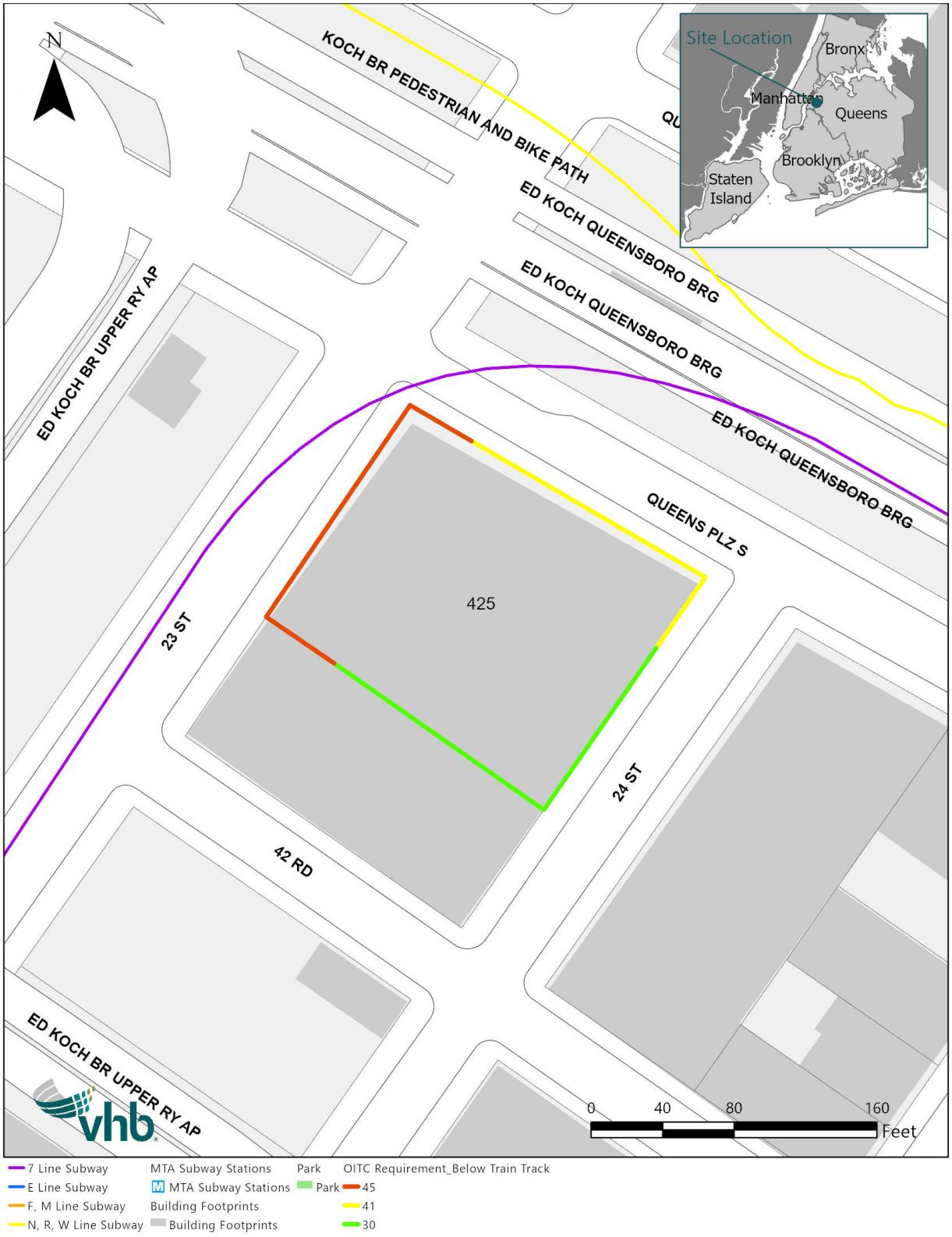
With these commitments, no significant adverse impacts related to noise are expected and no further analysis is warranted.

Table 12-9 Required Attenuation at Projected Development Sites (in dBA)

evelopment Site	Affected Floors	Facades	Minimum Required Attenuation[1,2]
Block 425, Lot 5	Floors below the elevated train	West (facing 23rd Street)	45
		North (facing Queens Plaza South within 50 ft of 23rd Street)	
		South (facing 42nd Road within 50 ft of 23rd Street)	
		North (facing Queens Plaza south beyond 50 ft of 23rd Street)	41
		East (facing 24th Street within 50 ft of Queens Plaza South)	
		East (facing 24th Street beyond 50 ft of Queens Plaza South)	30
		South (facing 42nd Road beyond 50 ft of 23rd Street)	
	Floors at or above the elevated train	West (facing 23rd Street)	44
		North (facing Queens Plaza South)	
		East (facing 24th Street within 50 ft of Queens Plaza South)	
		South (facing 42nd Road within 50 ft of 23rd Street)	
		East (facing 24th Street beyond 50 ft of Queens Plaza South)	30
		South (facing 42nd Road beyond 50 ft of 23rd Street)	

Notes:
[1] Attenuation values are shown for commercial office and exhibit spaces; residential and community facility uses would require 5 dBA more attenuation.
[2] Required attenuation levels are shown in Figure 12-3 and Figure 12-4

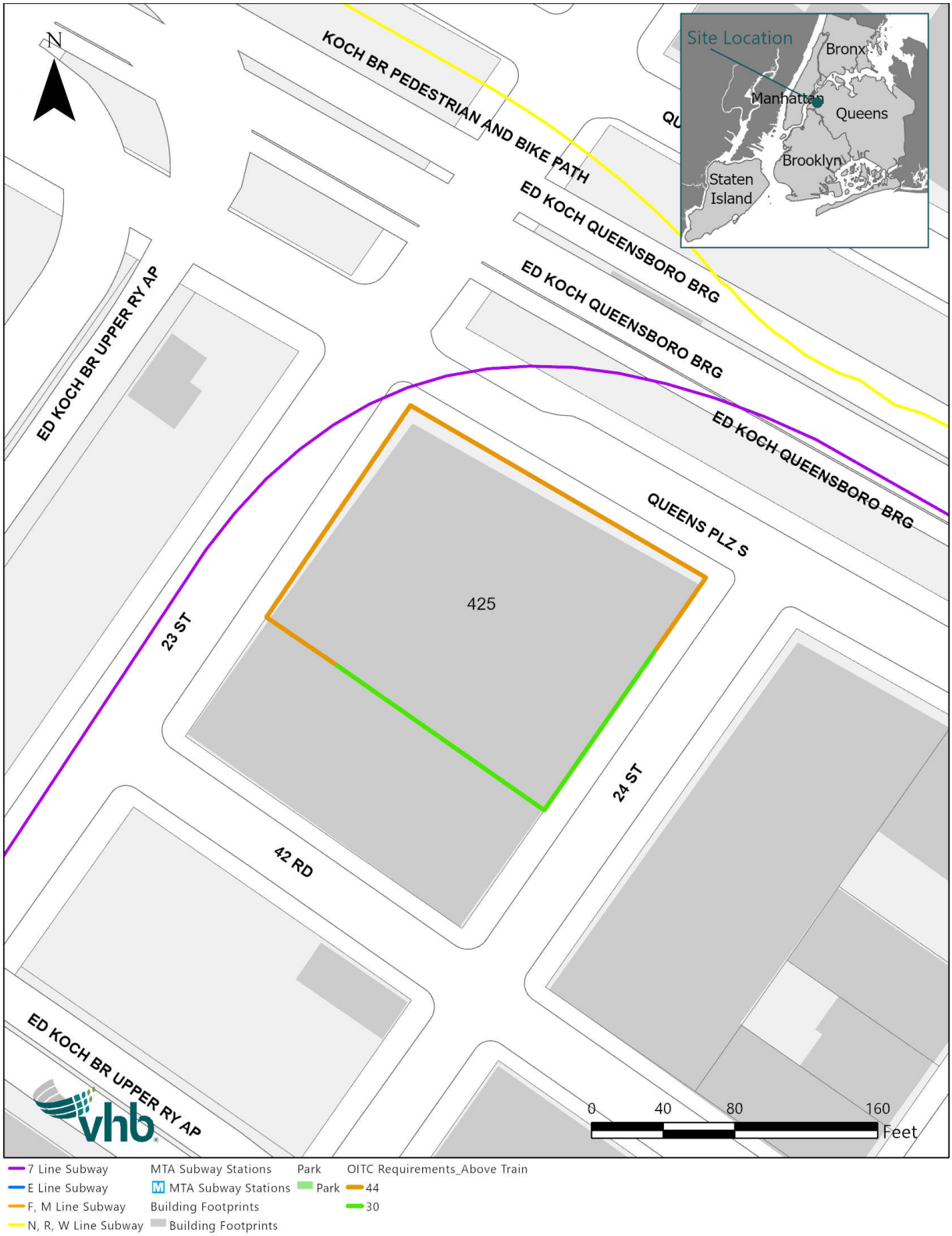
Figure 12-3 OITC Requirements for All Facades below Elevated Train



Note: Above attenuation values are for commercial office and exhibit spaces. Residential and community facility uses would require attenuation 5 dBA more.

Source: VHB, 2021.

Figure 12-4 OITC Requirements for All Facades above Elevated Train



Note: Above attenuation values are for commercial office and exhibit spaces. Residential and community facility uses would require attenuation 5 dBA more.

Source: VHB, 2021.

Conclusion

A noise assessment was conducted to determine whether the Proposed Development would significantly increase sound levels from mobile and stationary sources at existing noise receptors adjacent to the Development Site and if new noise receptors that would be introduced at the Proposed Building would be in an acceptable ambient sound level environment.

Since ambient noise levels would not increase by more than 3 dBA at any existing receptors in the With-Action condition compared to the No-Action condition, there would not be a significant adverse noise impact at existing receptors. As the predominant noise source is elevated train noise, which would remain the same as existing in the future conditions, existing noise measurement results are representative of the With-Action noise conditions. While traffic noise would increase by up to 3.4 dBA in the With-Action condition compared to the No-Action condition and by up to 5.7 dBA in the With-Action condition compared to the Existing condition during the evening period on 24th Street, the increases in traffic noise along 24th Street is due primarily the relatively low volume of existing traffic (i.e., generally less than 100 vehicles during the peak hours). As mentioned previously, at all noise measurement locations, the predominant sources of noise are the Number 7 trains on the elevated tracks which are generally 50 feet or closer to the Proposed Development. There are no expected changes in train operations in the No-Action or With-Action conditions. Therefore, increases in traffic noise will not substantially affect the overall ambient noise condition and the Existing condition is representative of the With-Action noise condition.

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

Based on a maximum sound level of 94.4 dBA (L_{10}) below the elevated train, and 88.6 dBA (L_{dn}) above the elevated train on 23rd Street; 90.4 dBA (L_{10}) below the elevated train, and 88.9 dBA (L_{dn}) above the elevated train on Queens Plaza South, and 79.2 dBA (L_{10}) on 24th Street, a composite outdoor-to-indoor window/wall sound attenuation of 45 dBA below the elevated train and 44 dBA above the elevated train for the west façade; 41 dBA below the elevated train, and 44 dBA above the elevated train for the north façade; and 30 dBA for both east and south facades or more, are required to obtain acceptable interior noise conditions in commercial office spaces as well as alternate means of ventilation such as central air conditioning. An (E) Designation (E-689) would be used at the Development Site to commit to these noise requirements. With these commitments, no significant adverse impacts related to noise are expected and no further analysis is warranted.

Appendix A: Hazardous Materials

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Office of the Director
625 Broadway, 12th Floor, Albany, New York 12233-7011
P: (518) 402-9706 | F: (518) 402-9020
www.dec.ny.gov

November 3, 2020

QPS 23-10 Development LLC
Attn: Mr. Ned White
c/o Property Markets Group
220 Fifth Avenue, 9th Floor
New York, NY 10001

AAGS Holdings LLC
Attn: Mr. Gary Segal
c/o Russ & Russ P.C.
543 Broadway
Massapequa, NY 11758

Re: Certificate of Completion
23-10 Queens Plaza South
Long Island City, Queens County
Site No. C241160

Dear Messrs. White and Segal:

Congratulations on having satisfactorily completed the remedial program at the 23-10 Queens Plaza South site. Enclosed please find an original, signed Certificate of Completion (COC). The New York State Department of Environmental Conservation (Department) is pleased to inform you that the Final Engineering Report is hereby approved, allowing the COC to be issued for the above-referenced site.

Please note that you are required to perform the following tasks:

- If you are the site owner, you must record the Notice of Certificate of Completion in the recording office for the county (or counties) where any portion of the site is located within 30 days of issuance of the COC; or if you are a prospective purchaser of the site, you must record the Notice within 30 days of the date that you acquire the site. If you are a non-owner, you must work with the owner to assure the Notice is recorded within the time frame specified. A standard Notice of Certificate of Completion form is attached to this letter.

- Provide electronic copies of the recorded Notice and proof of recording to the Department's project manager. Please return the hard copy of the proof of recording to:

  Ronnie Lee, Remedial Bureau B
  New York State Department of Environmental Conservation
  Division of Environmental Remediation
  625 Broadway
  Albany, NY 12233

- Provide the Notice of Certificate of Completion to the Document Repositories within 10 days of issuance of the COC. The Department will develop a fact sheet announcing the issuance of the COC and describing the institutional and engineering controls (IC/ECs), if any, that are required at the site and distribute it to the County Listserv within 10 days;

- Implement the Department-approved Site Management Plan (SMP) which details the activities necessary to assure the performance, effectiveness, and protectiveness of the remedial program; and you must report the results of these activities to the Department in a Periodic Review Report (PRR) which also includes any required IC/EC Certifications. The site IC/ECs are identified on the attached Site Management Form. The first PRR including the certification of the IC/ECs is due to the Department in February 2022.

If you have any questions regarding any of these items, please contact Ronnie Lee at (518) 708-3418.

Sincerely,

Michael J. Ryan, P.E.
Director
Division of Environmental Remediation

Enclosure

ec w/ enclosure:
C. Vooris – NYSDOH, Christine.Vooris@health.ny.gov
S. McLaughlin – NYSDOH, Scarlett.McLaughlin@health.ny.gov
J. Kenney – NYSDOH, Julia.Kenney@health.ny.gov
Matt Gokey, matthew.gokey@tax.ny.gov
Paul Takac, paul.takac@tax.ny.gov
David Yudelson, dyudelson@sprlaw.com
Paul McMahon, PMcMahon@Langan.com
Gerald Nicholls, gnicholls@Langan.com

ec w/o enc.:

R. Lee
S. Quandt
G. Burke
J. O'Connell
J. Simpson
J. Andaloro
K. Lewandowski

NYSDEC BROWNFIELD CLEANUP PROGRAM (BCP)

CERTIFICATE OF COMPLETION

CERTIFICATE HOLDER(S):

Name	**Address**
QPS 23-10 Development LLC	220 Fifth Avenue, 9th Floor, New York, NY 10001

BROWNFIELD CLEANUP AGREEMENT:

Application Approval: 5/9/14 **Agreement Execution:** 8/8/14

Agreement Index No.:C241160-05-14

Application Approval Amendment: none **Agreement Execution Amendment:** none

SITE INFORMATION:

Site No.: C241160 **Site Name:** 23-10 Queens Plaza South

Site Owner: AAGS Holdings LLC

Street Address: 23-10 Queens Plaza South

Municipality: Long Island City **County:** Queens **DEC Region:** 2

Site Size: 0.626 Acres

Tax Map Identification Number(s): 425-5

Percentage of site located in an EnZone: 0 - 49 %

A description of the property subject to this Certificate is attached as Exhibit A and a site survey is attached as Exhibit B.

CERTIFICATE ISSUANCE

This Certificate of Completion, hereinafter referred to as the "Certificate," is issued pursuant to Article 27, Title 14 of the New York State Environmental Conservation Law ("ECL").

This Certificate has been issued upon satisfaction of the Commissioner, following review by the Department of the final engineering report and data submitted pursuant to the Brownfield Site Cleanup Agreement, as well as any other relevant information regarding the Site, that the applicable remediation requirements set forth in the ECL have been or will be achieved in accordance with the time frames, if any, established in the remedial work plan.

The remedial program for the Site has achieved a cleanup level that would be consistent with the following categories of uses (actual site use is subject to local zoning requirements):

Allowable Uses under the BCP: Commercial and Industrial

Cleanup Track: Track 4: Restricted use with site-specific soil cleanup objectives

Tax Credit Provisions:

Site Preparation and On-Site Groundwater Remediation Credit Component Rate is 25 %.

Tangible Property Credit at the time of this COC issuance is 0%.

The Remedial Program includes use restrictions or reliance on the long term employment of institutional or engineering controls which are contained in the approved Site Management Plan and an Environmental Easement granted pursuant to ECL Article 71, Title 36 which has been duly recorded in the Recording Office for Queens County as 2020000243221.

LIABILITY LIMITATION

Upon issuance of this Certificate of Completion, and subject to the terms and conditions set forth herein, the Certificate holder(s) shall be entitled to the liability limitation provided in ECL Section 27-1421. The liability limitation shall run with the land, extending to the Certificate holder's successors or assigns through acquisition of title to the Site and to a person who develops or otherwise occupies the Site, subject to certain limitations as set forth in ECL Section 27-1421. The liability limitation shall be subject to all rights reserved to the State by ECL Section 27-1421.2 and any other applicable provision of law.

CERTIFICATE TRANSFERABILITY

This Certificate may be transferred to the Certificate holder's successors or assigns upon transfer or sale of the Site as provided by ECL Section 27-1419.5 and 6NYCRR Part 375-1.9.

CERTIFICATE MODIFICATION/REVOCATION

This Certificate of Completion may be modified or revoked by the Commissioner following notice and an opportunity for a hearing in accordance with ECL Section 27-1419 and 6NYCRR Part 375-1.9(e) upon a finding that:

(1) either the Applicant or the Applicant's successors or assigns have failed to comply with the terms and conditions of the Brownfield Site Cleanup Agreement;

(2) the Applicant made a misrepresentation of a material fact tending to demonstrate that it was qualified as a Volunteer;

(3) either the Applicant or the Applicant's successors or assigns made a misrepresentation of a material fact tending to demonstrate that the cleanup levels identified in the Brownfield Site Cleanup Agreement were reached;

(4) there is good cause for such modification or revocation;

(5) either the Applicant or the Applicant's successors or assigns failed to manage the controls or monitoring in full compliance with the terms of the remedial program;

(6) the terms and conditions of the environmental easement have been intentionally violated or found to be not protective or enforceable.

The Certificate holder(s) (including its successors or assigns) shall have thirty (30) days within which to cure any deficiency or to seek a hearing. If the deficiency is not cured or a request for a hearing is not received within such 30-day period, the Certificate shall be deemed modified or vacated on the 31st day after the Department's notice.

Basil Seggos
Commissioner
New York State Department of Environmental Conservation

By: _____ Date: 11/03/2020

Michael J. Ryan, P.E., Director
Division of Environmental Remediation

NOTICE OF CERTIFICATE OF COMPLETION
Brownfield Cleanup Program
6 NYCRR Part 375-1.9(d)

23-10 Queens Plaza South, Site ID No. C241160
23-10 Queens Plaza South, Long Island City, New York, 11101
Long Island City, Queens County, Tax Map Identification Number 425-5

PLEASE TAKE NOTICE, the New York State Department of Environmental Conservation (Department) has issued a Certificate of Completion (Certificate) pursuant to Article 27, Title 14 of the New York State Environmental Conservation Law (ECL) to QPS 23-10 Development LLC for a parcel approximately 0.626 acres located at 23-10 Queens Plaza South in Long Island City, Queens County.

PLEASE TAKE NOTICE, the Certificate was issued upon satisfaction of the Commissioner, following review by the Department of the final engineering report and data submitted pursuant to the Brownfield Site Cleanup Agreement, as well as any other relevant information regarding the Site, that the remediation requirements set forth in ECL Article 27, Title 14 have been or will be achieved in accordance with the time frames, if any, established in the remedial work plan.

PLEASE TAKE NOTICE, the remedial program for the Site has achieved a cleanup level that would be consistent with the following categories of uses (actual site use is subject to local zoning requirements):

- ☐ Unrestricted Use, as set forth in 6 NYCRR 375-1.8(g)(1)i
- ☐ Residential Use, as set forth in 6 NYCRR 375-1.8(g)(2)i.
- ☐ Restricted Residential Use, as set forth in 6 NYCRR 375-1.8(g)(2)ii.
- ☒ Commercial Use, as set forth in 6 NYCRR 375-1.8(g)(2)iii.
- ☒ Industrial Use, as set forth in 6 NYCRR 375-1.8(g)(2)iv.

Further, the use of groundwater is restricted and may not be used, unless treated in accordance with the requirements provided by the New York State Department of Health, or a local County Health Department with jurisdiction in such matters and such is approved by the Department as not inconsistent with the remedy.

PLEASE TAKE NOTICE, since the remedial program relies upon use restrictions or the long term employment of institutional or engineering controls; such institutional or engineering controls are contained in an Environmental Easement granted pursuant to ECL Article 71, Title 36 which has been duly recorded in the Recording Office for Queens County as 2020000243221.

PLEASE TAKE NOTICE, the Environmental Easement requires that the approved site management plan (SMP) for this property be adhered to. The SMP, which may be amended from time to time, may include sampling, monitoring, and/or operating a treatment system on the property, providing certified reports to the NYSDEC, and generally provides for the management of any and all plans and limitations on the property. A copy of the SMP is available upon request by writing to the Department's Division of Environmental Remediation, Site Control Section, 625 Broadway, Albany, New York 12233.

PLEASE TAKE NOTICE, provided that the Environmental Easement, SMP and Certificate are complied with, the Certificate holder(s) shall be entitled to the liability limitation provided in ECL Section 27-1421. The liability limitation shall run with the land, extending to the Certificate holder's successors or assigns through acquisition of title to the Site and to a person who develops or otherwise occupies the Site, subject to certain limitations as set forth in ECL Section 27-1421. The liability limitation shall be subject to all rights reserved to the State by ECL Section 27-1421.2 and any other applicable provision of law.

23-10 Queens Plaza South, C241160
23-10 Queens Plaza South, Long Island City, NY 11101

PLEASE TAKE NOTICE, any change of use of the site, as defined in 6 NYCRR 375, must be preceded by notice to the Department in accordance with 6 NYCRR 375-1.11(d). A transfer of any or all of the property constitutes a change of use.

PLEASE TAKE NOTICE, the Certificate may be revoked if the Environmental Easement as implemented, if applicable, is not protective or enforceable.

PLEASE TAKE NOTICE, the Certificate may entitle the Certificate holder(s) to tax credits in accordance with Tax Law Sections 21, 22 and 23.

PLEASE TAKE NOTICE, the Certificate may only be transferred to the Certificate holder's successors or assigns upon transfer or sale of the Site as provided by ECL Section 27-1419.5 and 6 NYCRR Part 375-1.9. Failure to comply with the regulatory requirements for transfer **WILL** bar the successors and assigns from the benefits of the Certificate.

PLEASE TAKE NOTICE, the Certificate may be modified or revoked by the Commissioner as set forth in the applicable regulations.

PLEASE TAKE NOTICE, a copy of the Certificate can be reviewed at the NYSDEC's Region 2 office located at 47-40 21st Street, Long Island City, NY 11101, by contacting the Regional Environmental Remediation Engineer, or at https://www.dec.ny.gov/data/DecDocs/C241160/.

WHEREFORE, the undersigned has signed this Notice of Certificate

AAGS Holdings LLC_____

By: _____

Title: _____

Date: _____

STATE OF NEW YORK) SS:
COUNTY OF)

On the _____ day of _____, in the year 20__, before me, the undersigned, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

_____
Signature and Office of individual
taking acknowledgment

Please record and return to:
QPS 23-10 Development LLC
Attn: Mr. Ned White
c/o Property Markets Group
220 Fifth Avenue, 9th Floor
New York, NY 10001

4/20/2020

Exhibit A

Site Description

SCHEDULE "A" PROPERTY DESCRIPTION
23-10 Queens Plaza South
Legal Description - Environmental Easement

All that certain plot, piece, or parcel of land, situate, lying, and being in the borough of Queens, Queens County, City and State of New York, bounded and described as follows:

BEGINNING at the intersection of the southerly side of Queens Plaza South (a.k.a. South Jane Street) (50 feet wide) with the easterly side of 23rd Street (a.k.a. Ely Avenue) (75 feet wide); and

RUNNING THENCE easterly, along said southerly side of Queens Plaza South, a distance of 187.29 feet to a point, said point being the intersection of said southerly side of Queens Plaza South with the westerly side of 24th Street (a.k.a. William Street) (60 feet wide);

THENCE southerly, along said westerly side of 24th Street, forming an interior angle of 84°44'50" with the previous course, a distance of 154.78 feet to a point;

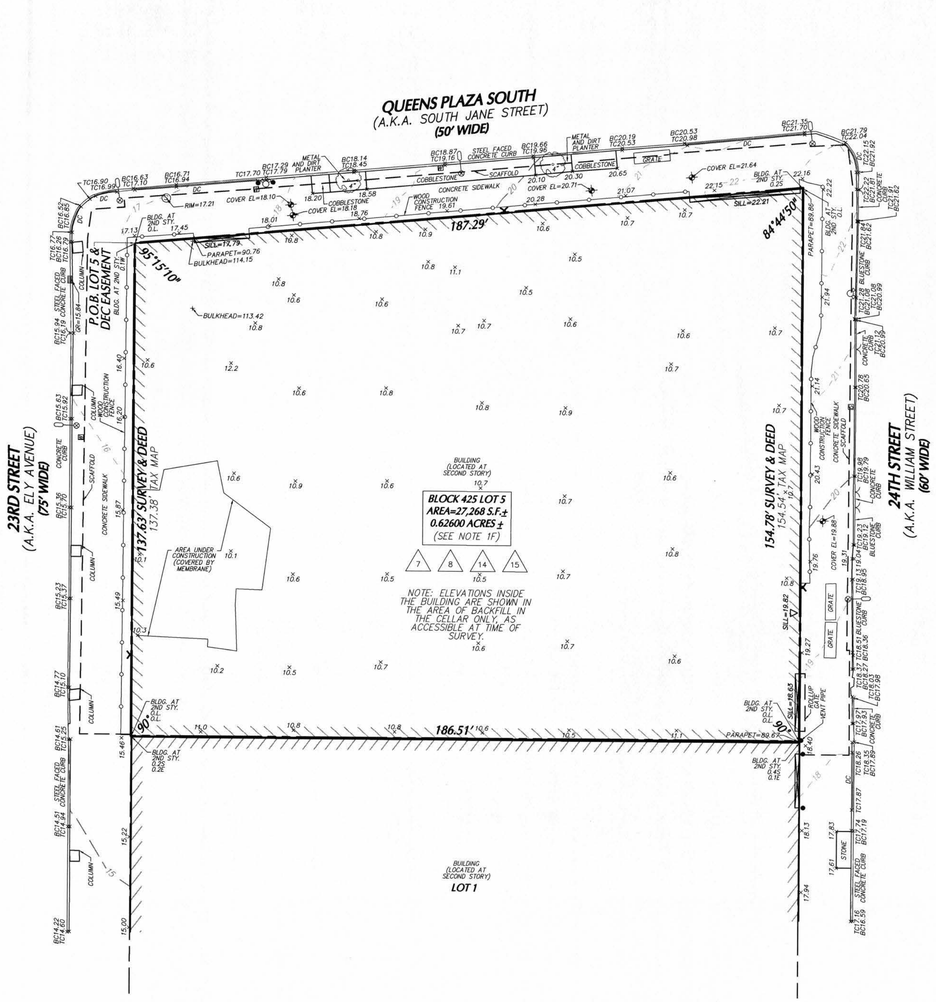
THENCE westerly, forming an interior angle of 90°00'00" with the previous course, a distance of 186.51 feet to a point, said point being on said easterly side of 23rd Street;

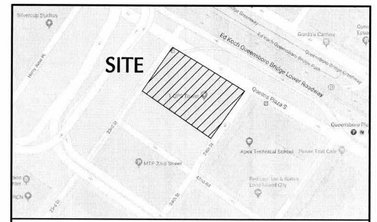
THENCE northerly, along said easterly side of 23rd Street, a distance of 137.63 feet to the POINT OR PLACE OF BEGINNING.

Encompassing an area of 27,268 square feet or 0.626 acres, more or less.

Exhibit B

Site Survey





PROJECT LOCATION MAP

SCALE: N.T.S.

SOURCE: GOOGLE

NOTES

1. THIS SURVEY IS BASED UPON EXISTING PHYSICAL CONDITIONS FOUND AT THE SUBJECT SITE, AND THE FOLLOWING REFERENCES:
   - A. BOROUGH OF QUEENS, LONG ISLAND CITY ATLAS MAP NO. 15.
   - B. CURRENT NYC TAX MAP.
   - C. SURVEY OF BLOCK 425, LOTS 1 AND 5, BY EARL B. LOVELL–S.P. BELCHER, INC., PROJECT NO. 311429, LAST REVISED 05/09/13.
   - D. SURVEY OF 23–10 42ND ROAD, BLOCK 425, LOT 1, BY EARL B. LOVELL–S.P. BELCHER, INC., PROJECT NO. 315457, SURVEYED 12/15/14.
   - E. TITLE NO.: 18–7406–52217–Q, BY FIDELITY NATIONAL TITLE INSURANCE COMPANY, EFFECTIVE 9:00AM ON 05/29/18.
   - F. CRFN: 2013000012248, RECORDED/FILED: 01/10/13 11:38 [DEED– INCLUDES LOTS 1 AND 5] (LOT 5 (AKA "PARCEL 1")– PLOTTED)
   - G. "TOPOGRAPHIC AND BOUNDARY SURVEY, 23–10 QUEENS PLAZA SOUTH", BY LANGAN, PROJECT NO. 170244603, DRAWING NO. VT101, LAST REVISED 10/23/18.
2. THE SURVEYED PROPERTY IS SUBJECT BUT NOT LIMITED TO THE FOLLOWING FACTS AS REVEALED BY THE HEREON REFERENCED INFORMATION. THE INFORMATION SHOWN HEREON DOES NOT CONSTITUTE A TITLE SEARCH BY THE SURVEYOR. ALL INFORMATION THAT MAY AFFECT THE QUALITY OF TITLE TO BOTH THE SUBJECT AND ADJOINING PARCELS SHOULD BE VERIFIED BY AN ACCURATE AND CURRENT TITLE REPORT.

   EXCEPTIONS AS NOTED FROM TITLE NO.: 18–7406–52217–Q, BY FIDELITY NATIONAL TITLE INSURANCE COMPANY (SEE NOTE 1E):

   7 CRFN: 2014000093715, RECORDED/FILED: 03/18/14 15:17 [PARKING RESTRICTIVE DECLARATION– INCLUDES LOT 5] (CANNOT PLOT)

   8 CRFN: 2014000205030, RECORDED/FILED: 06/16/14 11:47 [PARKING RESTRICTIVE DECLARATION– INCLUDES LOT 5] (CANNOT PLOT)

   9 CRFN: 2015000302414, RECORDED/FILED: 08/31/18 13:31 [ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL LAW] (NOT PLOTTED– OFFSITE)

   14 CRFN: 2017000136970, RECORDED/FILED: 04/07/17 16:13 [ASSIGNMENT OF LEASES AND RENTS– INCLUDES LOT 5] (CANNOT PLOT)

   15 CRFN: 2017000136435, RECORDED/FILED: 04/07/17 13:12 [UCC FINANCING STATEMENT– INCLUDES LOT 5] (CANNOT PLOT)
3. THE MERIDIAN OF THIS SURVEY IS REFERENCED TO THE NEW YORK STATE PLANE COORDINATE SYSTEM NYLI NAD 83 AS ESTABLISHED BY GPS METHODS.
4. ELEVATIONS SHOWN ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) ESTABLISHED BY GPS METHODS.
5. STREET NAMES AS PER MAPS REFERENCED IN NOTES 1A AND 1B. R.O.W. WIDTHS AS PER MAP REFERENCED IN NOTE 1A. BLOCK AND LOT NUMBERS AS PER MAPS REFERENCED IN NOTE 1B.
6. PLANIMETRIC INFORMATION SHOWN HEREON HAS BEEN OBTAINED FROM GROUND SURVEYS BY LANGAN ENGINEERING, ENVIRONMENTAL, SURVEYING, LANDSCAPE ARCHITECTURE AND GEOLOGY, D.P.C. DURING AUGUST, SEPTEMBER, AND OCTOBER OF 2018.
7. FEMA INFORMATION:

   CURRENT:
   AS PER THE NATIONAL FLOOD INSURANCE PROGRAM FIRM MAP TITLED "CITY OF NEW YORK, NEW YORK, BRONX, RICHMOND, NEW YORK, QUEENS, AND KINGS COUNTIES, PANEL 0B9 OF 457, MAP NUMBER 36047O089F, REVISED 09/05/07", THE ENTIRE SUBJECT PROPERTY LIES WITHIN ZONE X (NOT SHADED), AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

   PRELIMINARY:
   AS PER THE NATIONAL FLOOD INSURANCE PROGRAM FIRM MAP TITLED "CITY OF NEW YORK, NEW YORK, BRONX, RICHMOND, NEW YORK, QUEENS, AND KINGS COUNTIES, PANEL 0B9 OF 457, MAP NUMBER 36047O089G, PRELIMINARY DATED 12/05/13", THE ENTIRE SUBJECT PROPERTY LIES WITHIN ZONE X (NOT SHADED), AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.
8. OFFSETS (IF SHOWN) ARE FOR SURVEY REFERENCES ONLY AND ARE NOT TO BE USED IN CONSTRUCTION OF ANY TYPE.
9. WETLANDS, ENVIRONMENTAL AND/OR HAZARDOUS MATERIALS LOCATION, IF ANY, NOT COVERED UNDER THIS CONTRACT.
10. UNLESS SPECIFICALLY NOTED HEREON, STORM AND SANITARY SEWER INFORMATION (INCLUDING PIPE INVERT, PIPE MATERIAL, AND PIPE SIZE) WAS OBSERVED AND MEASURED AT FIELD LOCATED STRUCTURES (MANHOLES/CATCH BASINS, ETC.). CONDITIONS CAN VARY FROM THOSE ENCOUNTERED AT THE TIMES WHEN AND THE LOCATIONS WHERE DATA WAS OBTAINED, DESPITE MEETING THE REQUIRED STANDARD OF CARE. THE SURVEYOR CANNOT AND DOES NOT WARRANT THAT PIPE MATERIAL AND/OR PIPE SIZE THROUGHOUT THE PIPE RUN ARE THE SAME AS THOSE OBSERVED AT EACH STRUCTURE, OR THAT THE PIPE RUN IS STRAIGHT BETWEEN THE LOCATED STRUCTURES.

    ADDITIONAL UTILITY (WATER, GAS, ELECTRIC ETC...) DATA MAY BE SHOWN FROM FIELD LOCATED SURFACE MARKINGS (BY OTHERS), EXISTING STRUCTURES, AND/OR FROM EXISTING DRAWINGS.

    UNLESS SPECIFICALLY NOTED HEREON THE SURVEYOR HAS NOT EXCAVATED TO PHYSICALLY LOCATE THE UNDERGROUND UTILITIES. THE SURVEYOR MAKES NO GUARANTEES THAT THE SHOWN UNDERGROUND UTILITIES ARE EITHER IN SERVICE, ABANDONED OR SUITABLE FOR USE, NOR ARE IN THE EXACT LOCATION OR CONFIGURATION INDICATED HEREON.

    PRIOR TO ANY DESIGN OR CONSTRUCTION THE PROPER UTILITY AGENCIES MUST BE CONTACTED FOR VERIFICATION OF UTILITY TYPE AND FOR FIELD LOCATIONS.

    UNLESS NOTED BELOW SUPPLEMENTAL DOCUMENTS WERE NOT USED TO COMPILE THE SUBSURFACE UTILITY INFORMATION SHOWN HEREON.
11. THIS IS TO CERTIFY THAT THERE ARE NO STREAMS NOR NATURAL WATERCOURSES ON THE PROPERTY AS SHOWN ON THIS SURVEY.
12. THERE WAS LIMITED ACCESS TO THE BUILDING CORNERS AT THE GROUND LEVEL FOR THE BUILDINGS ON THE SUBJECT AND ADJOINING PROPERTIES DUE TO CONSTRUCTION FENCING AND CAPPING COVERING THEM AT THE TIME OF THE SURVEY.
13. UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUB–DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.
14. THIS PLAN NOT VALID UNLESS EMBOSSED OR BLUE INK STAMPED WITH THE SEAL OF THE PROFESSIONAL.

SURVEY DESCRIPTION

ALL THAT CERTAIN PLOT, PIECE, OR PARCEL OF LAND, SITUATE, LYING, AND BEING IN THE BOROUGH OF QUEENS, QUEENS COUNTY, CITY AND STATE OF NEW YORK, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE SOUTHERLY SIDE OF QUEENS PLAZA SOUTH (A.K.A. SOUTH JANE STREET) (50 FEET WIDE) WITH THE EASTERLY SIDE OF 23RD STREET (A.K.A. ELY AVENUE) (75 FEET WIDE); AND RUNNING THENCE

EASTERLY, ALONG SAID SOUTHERLY SIDE OF QUEENS PLAZA SOUTH, A DISTANCE OF 187.29 FEET TO A POINT, SAID POINT BEING THE INTERSECTION OF SAID SOUTHERLY SIDE OF QUEENS PLAZA SOUTH WITH THE WESTERLY SIDE OF 24TH STREET (A.K.A. WILLIAM STREET) (60 FEET WIDE); THENCE

SOUTHERLY, ALONG SAID WESTERLY SIDE OF 24TH STREET, FORMING AN INTERIOR ANGLE OF 84°44'50" WITH THE PREVIOUS COURSE, A DISTANCE OF 154.78 FEET TO A POINT; THENCE

WESTERLY, FORMING AN INTERIOR ANGLE OF 90°00'00" WITH THE PREVIOUS COURSE, A DISTANCE OF 186.51 FEET TO A POINT, SAID POINT BEING ON SAID EASTERLY SIDE OF 23RD STREET; THENCE

NORTHERLY, ALONG SAID EASTERLY SIDE OF 23RD STREET, A DISTANCE OF 137.63 FEET TO THE POINT OR PLACE OF BEGINNING.

ENCOMPASSING AN AREA OF 27,268 SQUARE FEET OR 0.62600 ACRES, MORE OR LESS.

DEED DESCRIPTION
(SEE NOTE 1F- "PARCEL 1" ONLY)

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND, WITH THE BUILDINGS AND IMPROVEMENTS THEREON ERECTED, SITUATE, LYING AND BEING IN THE FIRST WARD OF THE BOROUGH OF QUEENS, CITY OF NEW YORK, COUNTY OF QUEENS AND STATE OF NEW YORK, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE CORNER FORMED BY THE INTERSECTION OF THE SOUTHEASTERLY SIDE OF ELY AVENUE (NOW TWENTY–THIRD STREET) WITH THE SOUTHWESTERLY SIDE OF SOUTH JANE STREET, AS SAID STREETS ARE NOW LAID OUT AND OPENED AND;

RUNNING THENCE SOUTHWESTERLY ALONG THE SOUTHEASTERLY SIDE OF ELY AVENUE (NOW TWENTY–THIRD STREET) 137.63 FEET AND;

THENCE SOUTHEASTERLY AT RIGHT ANGLES TO ELY AVENUE (NOW TWENTY–THIRD STREET) 186.51 FEET TO THE NORTHWESTERLY SIDE OF WILLIAM STREET (NOW TWENTY–FOURTH STREET) AND;

THENCE NORTHEASTERLY ALONG THE NORTHWESTERLY SIDE OF WILLIAM STREET (NOW TWENTY–FOURTH STREET) 154.78 FEET TO THE SOUTHWESTERLY SIDE OF SOUTH JANE STREET;

THENCE NORTHWESTERLY ALONG THE SOUTHWESTERLY SIDE OF SOUTH JANE STREET, 187.29 FEET TO THE POINT OR PLACE OF BEGINNING.

LEGEND (NOT SHOWN TO SCALE)

	HYDRANT		SIGN	BLDG.	BUILDING	322	CONTOUR LINE
	STAND PIPE		BOLLARD	O.L.	ON LINE	G	GAS MARK OUT LINE
	ROOF DRAIN		ELECTRIC BOX	N	NORTH	W	WATER MARK OUT LINE
	FLAG POLE		ELECTRIC METER	S	SOUTH	E	ELECTRIC MARK OUT LINE
	PEDESTAL LIGHT		GAS METER	W	WEST	T	COMMUNICATION MARK OUT LINE
	STREET LIGHT		WATER METER	E	EAST	S	SANITARY MARK OUT LINE
	AREA LIGHT		TELEPHONE BOX	STY.	STORY	D	DRAINAGE MARK OUT LINE
	SIGNAL POLE		TRAFFIC SIGNAL POLE	GR	GRATE	UNK	UNKNOWN UTILITY MARK OUT LINE
	POWER POLE		MONITOR WELL	EL	ELEVATION	*R	REFERENCE UTILITY LINE (TYPE AS NOTED) – PLOTTED FROM EXISTING MAPPING
	GUY WIRE		BENCH	FF=322.35	FINISHED FLOOR	7	EXCEPTION AS NOTED FROM TITLE REPORT (TYPICAL) (SEE NOTE 1E)
	ANCHOR POLE		DOOR		OVERHEAD WIRE		
	MANHOLE (TYPE AS LABELED)		DOUBLE DOOR		GUIDE RAIL WOOD		
	WATER VALVE		ROLL UP DOOR		GUIDE RAIL METAL		
	GAS VALVE		YARD DRAIN		TREE LINE		
	UNKNOWN VALVE		MAILBOX		CHAINLINK FENCE		
	CATCH BASIN	BW	BOTTOM OF WALL		STOCKADE FENCE		
x322.35	SPOT ELEVATION	TW	TOP OF WALL		IRON FENCE		
	CLEAN OUT	BC	BOTTOM OF CURB		EASEMENT LINE		
	TREE	TC	TOP OF CURB		PROPERTY LINE		
		DC	DROP CURB		RIGHT–OF–WAY LINE		
		P.O.B.	POINT OF BEGINNING				

NOTE: AT THE TIME OF THE LAST FIELD VISIT DURING OCTOBER OF 2018, THE SITE WAS STILL IN THE PROCESS OF BEING REMEDIATED.

4.82 0 1.20241 4.82 SCALE IN METERS

20 0 5 10 20 SCALE IN FEET

THIS PROPERTY IS SUBJECT TO AN ENVIRONMENTAL EASEMENT HELD BY THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION PURSUANT TO TITLE 36 OF ARTICLE 71 OF THE NEW YORK ENVIRONMENTAL CONSERVATION LAW. THE ENGINEERING AND INSTITUTIONAL CONTROLS FOR THIS EASEMENT ARE SET FORTH IN MORE DETAIL IN THE SITE MANAGEMENT PLAN (SMP). A COPY OF THE SMP MUST BE OBTAINED BY ANY PARTY WITH AN INTEREST IN THE PROPERTY. THE SMP CAN BE OBTAINED FROM NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION, DIVISION OF ENVIRONMENTAL REMEDIATION, SITE CONTROL SECTION, 625 BROADWAY, ALBANY, NY 12233 OR AT derweb@dec.ny.gov.

No.	Description	Date
1	Deed Description Only	06/18/19

REVISIONS

"I hereby state that this plan is based on a field survey made by me or under my immediate supervision in accordance with NYSPLS Code of Practice for Land Surveys and to the best of my professional knowledge, information and belief, and in my professional opinion, correctly represents the conditions found on the date of the field survey at the subject property."

SIGNATURE — 6/18/2019 DATE SIGNED

PAUL FISHER, 050784 — PROFESSIONAL LAND SURVEYOR — NY Lic. No. 050784–1

LANGAN

Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.

21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001

T: 212.479.5400 F: 212.479.5444 www.langan.com

Project: 23-10 QUEENS PLAZA SOUTH
BLOCK No. 425, LOT No. 5
BOROUGH OF QUEENS
CITY OF NEW YORK
QUEENS COUNTY NEW YORK

Drawing Title: DEC EASEMENT SURVEY

Project No.	170244603
Date	04/17/19
Scale	1"=20'
Drawn By	LB
Checked By	PDF

Drawing No.: DEC101

Sheet 001 of 001

PROJECT NO. 170244603

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Filename: \\langan.com\data\NY\Cdata\6\170244603\Survey Data - 170244603\Cartison\Existing\170244603-V-EX0101-DEC ESMT.dwg Date: 6/18/2019 Time: 16:12 User: lbertiner Style Table: Langan.stb Layout: ARCH-D-BL

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Form
10/7/2020

SITE DESCRIPTION

SITE NO. C241160

SITE NAME 23-10 Queens Plaza South

SITE ADDRESS: 23-10 Queens Plaza South ZIP CODE: 11101

CITY/TOWN: Long Island City

COUNTY: Queens

ALLOWABLE USE: Commercial and Industrial

SITE MANAGEMENT DESCRIPTION

SITE MANAGEMENT PLAN INCLUDES:	YES	NO
IC/EC Certification Plan	■	□
Monitoring Plan	□	■
Operation and Maintenance (O&M) Plan	■	□

Periodic Review Frequency:

Periodic Review Report Submitted Date: 02/15/2022

Description of Institutional Control

AAGS Holdings LLC
c/o Russ & Russ, P.C., 543 Broadway
23-10 Queens Plaza South
Environmental Easement
Block: 425
Lot: 5
Sublot:
Section:
Subsection:
S_B_L Image: 425-5
Ground Water Use Restriction
IC/EC Plan
Landuse Restriction
O&M Plan
Site Management Plan
Soil Management Plan

Description of Engineering Control

AAGS Holdings LLC

c/o Russ & Russ, P.C., 543 Broadway

23-10 Queens Plaza South

Environmental Easement

Block: 425

Lot: 5

Sublot:

Section:

Subsection:

S_B_L Image: 425-5

Cover System

Vapor Mitigation

Appendix B-1
Transportation Demand Factors Memo

Sam Schwartz
322 Eighth Avenue, 5th Floor
New York, NY 10001
phone: (212) 598-9010
samschwartz.com

Sam Schwartz

Memorandum

To: Evan Lemonides, NYCDCP and Jeremy Parnes, MTA-NYCT
From: Jeff Smithline, PE, PTOE
Date: August 15, 2021
Re: 23-10 Queens Plaza South Travel Demand Factors (TDF) Memo
Project No: 20-01-0010

Introduction

Sam Schwartz Engineering, DPC (Sam Schwartz) has prepared a preliminary transportation screening for the proposed redevelopment of a site located at 23-10 Queens Plaza South (Block 425, Lots 1 & 5) in Queens Community District 2 (the "Proposed Project"). The Project Site is bounded Queens Plaza South to the north, 42nd Road to the south, 24th Street to the east, and 23rd Street to the west**. Figure 1** shows the Site Location Map.

In accordance with the *2021 City Environmental Quality Review Technical Manual (2021 CEQR Technical Manual)*, this Travel Demand Factors (TDF) Memorandum estimates the projected trips from the Proposed Project following a two-tiered screening process. The Level 1 screening assessment includes a trip generation analysis to determine whether the Proposed Project would result in more than 50 vehicle trips, 200 subway/rail riders, 50 bus riders, or 200 pedestrian trips in a peak hour. The Level 2 screening is a trip assignment review that identifies intersections with 50 or more vehicle trips, pedestrian elements with 200 or more pedestrian trips, 50 bus trips in a single direction on a single route, or 200 passengers at a subway station or line during any analysis peak hour which would require detailed analyses.

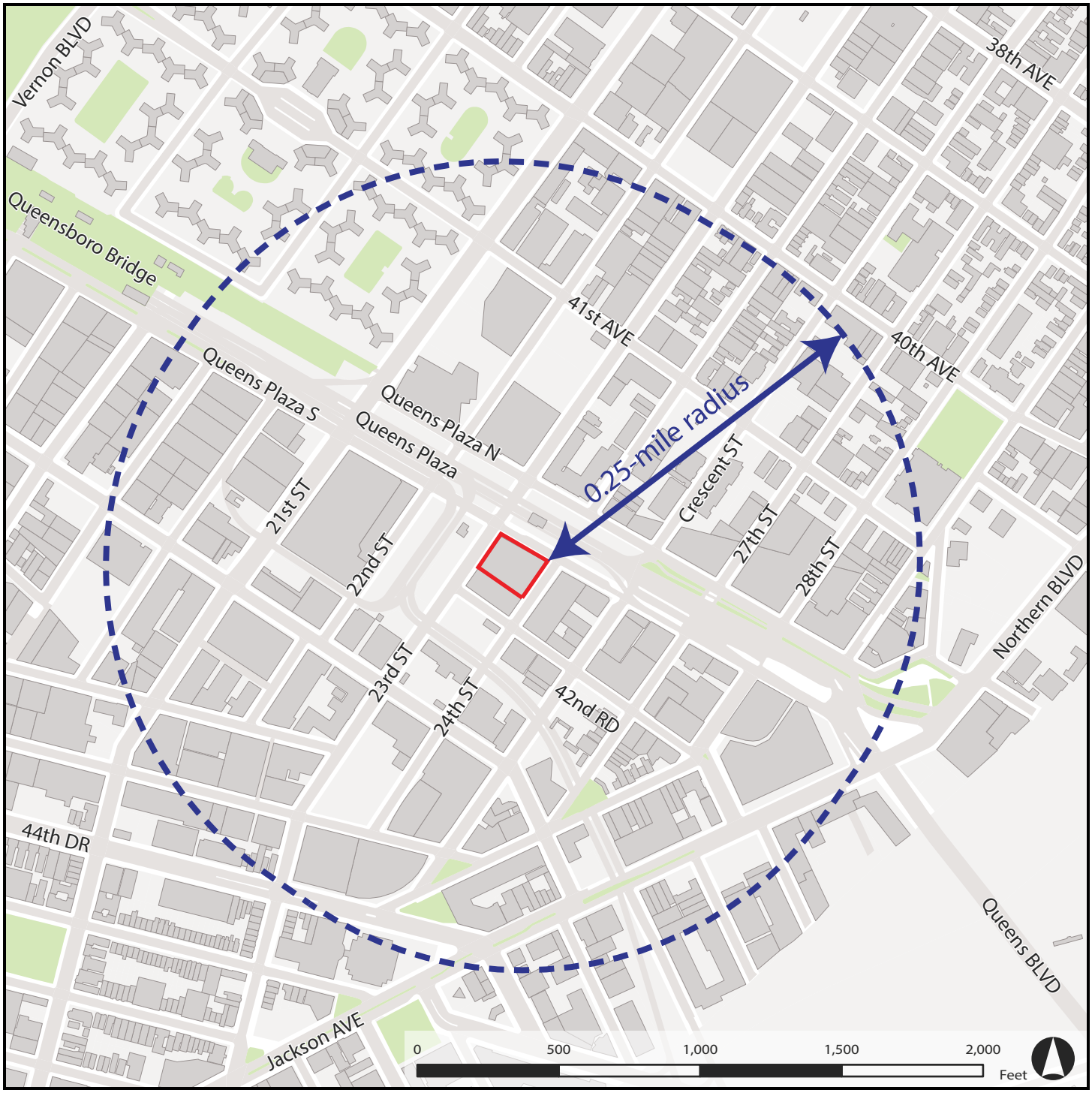
Reasonable Worse Case Development Scenario Program

For the purposes of this TDF Memo, the horizon year for the Proposed Project is 2024. Based on the Reasonable Worst Case Development Scenario (RWCDS), the Proposed Project would include the following land uses:

- 333,857 gsf of office space (includes 331,447 gsf office + 2,410 gsf community meeting space)
- 21,505 gsf of local retail space
- 520 gsf of exhibit space
- 7,254 gsf of restaurant space

In the absence of the Proposed Project, 27,713 gsf of local retail space can be built as-of-right under existing zoning for the Project Site. Therefore, the total increment analyzed for the Proposed Project would include:

- 333,857 gsf of office space
- -6,208 gsf of local retail space
- 520 gsf of exhibit space
- 7,254 gsf of restaurant space



Source: 2020 PLUTO, NYCDCP

Project Site

0.25-Mile Radius

SITE LOCATION MAP

Figure 1

23-10 Queens Plaza South

Preliminary Transportation Planning Factors

The transportation planning factors used in forecasting travel demand for the Proposed Project are shown in **Table 1** and the trip generation results are shown in **Table 2**. Trip generation estimates were prepared for the following critical peak periods:

- Weekday Morning (AM)
- Weekday Midday (MD)
- Weekday Afternoon (PM)
- Saturday MD

The transportation planning factors for each individual use are described below.

Office

The Proposed Project would consist of approximately 333,857 gsf of office space. The daily trip generation rates, temporal distribution, daily truck trip generation rates, truck temporal distribution, and truck directional distribution were obtained from the *2021 CEQR Technical Manual*, Table 16-2. Modal splits for the weekday AM, weekday PM, and Saturday MD peak hours were based on office modal split survey results provided by the New York City Department of Transportation (NYCDOT) for 41-21 27th Street. Modal splits for the weekday MD peak hour, and taxi vehicle occupancy were based on the *Dutch Kills Rezoning FEIS*, Table 15-7. Directional distribution was obtained from the *2021 CEQR Technical Manual*, Appendix: Transportation; Lane Use Directional Splits. Auto vehicle occupancy was based on Reverse Journey to Work census data for census tracts 19, 25, 31, 33, 43, 47, 51, 53, 85, and 171 in Queens County, NY.

Local Retail

The Proposed Project would include -6,206 gsf of local retail use. The daily trip generation rates, temporal distribution, daily truck generation rates, truck temporal distribution, and truck directional distribution were obtained from the *2021 CEQR Technical Manual*, Table 16-2. Modal split percentages and vehicle occupancy were provided by (NYCDOT for local retail land uses in Queens in a transit zone. Directional distribution was obtained from the *2021 CEQR Technical Manual*, Appendix: Transportation; Lane Use Directional Splits, for the Local Retail land use.

Exhibit Space

The Proposed Project would include 520 gsf of exhibit space use. The daily trip generation rates, daily truck generation rates, modal split percentages, auto and taxi vehicle occupancy, temporal distribution, directional distribution, truck temporal distribution, and truck directional distribution were obtained from the *Pier 57 Redevelopment FEIS*, Table 14-23, for the Rooftop Exhibit Museum land use.

Restaurant

The Proposed Project would include 7,254 gsf of quality restaurant use (table service with typical duration of stays greater than one hour). The daily truck generation rates, modal split percentages, auto and taxi vehicle occupancy, truck temporal distribution, and truck directional distribution were obtained from *East New York Rezoning FEIS*, Table 13-8. The daily trip generation rates and temporal distribution were obtained from the *2021 CEQR Technical Manual*, Table 16-2. The directional distribution was obtained from the *2021 CEQR Technical Manual*, Appendix: Transportation, for the Restaurant land use.

Table 1: Travel Demand Factors

	Land Use:	Office		Local Retail		Exhibit Space		Restaurant	
Program Size	**Size**	333,857		-6,208		520		7,254	
	Unit	gsf		gsf		gsf		gsf	
Daily Person Trip Generation		(1)		(1)		(5)		(1)	
	Weekday	18.000		329		27		246	
	Saturday	3.900		358		20.6		358	
	Unit	per 1,000 gsf		per 1,000 gsf		per 1,000 gsf		per 1,000 gsf	
Daily Truck Trip Generation		(1)		(1)		(5)		(6)	
	Weekday	0.32		0.35		0.05		3.60	
	Saturday	0.01		0.04		0.00		3.60	
	Unit	per 1,000 gsf		per 1,000 gsf		per 1,000 gsf		per 1,000 gsf	
Modal Split		**AM/PM/Sat**	**MD**	**Weekday**	**Saturday**	**Weekday**	**Saturday**	**Weekday**	**Saturday**
		(7,2)		(3)		(5)		(6)	
	Auto	14.4%	2.0%	11.0%	8.0%	19.5%	19.5%	30.0%	30.0%
	Taxi	3.1%	1.0%	0.0%	0.0%	10.0%	10.0%	5.0%	5.0%
	Bus	3.5%	7.0%	3.0%	4.0%	7.0%	7.0%	15.0%	15.0%
	Subway	69.6%	7.0%	4.0%	7.0%	33.0%	33.0%	15.0%	15.0%
	Walk/Other	9.4%	83.0%	82.0%	81.0%	30.5%	30.5%	35.0%	35.0%
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Vehicle Occupancy		(8,2)		(3)		(5)		(6)	
	Auto	1.11	1.11	1.40	1.40	2.67	2.67	2.20	2.20
	Taxi	1.42	1.42	1.40	1.40	2.08	2.08	2.30	2.30
Linked Trips		0%	0%	0%	0%	0%	0%	0%	0%
Temporal Distribution		(1)		(1)		(5)		(1)	
	AM	12.4%		4.8%		1.0%		1.0%	
	MD	11.0%		8.0%		16.0%		10.8%	
	PM	10.5%		10.9%		13.0%		10.6%	
	Sat MD	14.1%		11.7%		17.0%		13.0%	
Truck Temporal Distribution		(1)		(1)		(5)		(6)	
	AM	10.0%		8.0%		7.9%		6.0%	
	MD	11.0%		11.0%		14.7%		6.0%	
	PM	2.0%		2.0%		1.1%		1.0%	
	Sat MD	11.0%		11.0%		14.7%		0.0%	
Directional Distribution		**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**
		(9)		(9)		(5)		(9)	
	AM	89.0%	11.0%	53.0%	47.0%	50.0%	50.0%	64.0%	36.0%
	MD	48.0%	52.0%	50.0%	50.0%	63.0%	37.0%	54.0%	46.0%
	PM	17.0%	83.0%	50.0%	50.0%	52.0%	48.0%	53.0%	47.0%
	Sat MD	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	56.0%	44.0%
Truck Directional Distribution		(1)		(1)		(5)		(6)	
	AM	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
	MD	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
	PM	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
	Sat MD	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%

Notes
(1) *2021 CEQR Technical Manual* , Table 16-2.
(2) *Dutch Kills Rezoning,* Table 15-7. Weekday MD modal split; taxi occupancy
(3) NYCDOT Local Retail Survey in Queens Transit Zone
(4) Special Flushing Waterfront District EAS, Table M-4
(5) Pier 57 FEIS Tech Memo, Table 8. Rooftop Exhibit Museum space
(6) East New York FEIS, Table 13-8.
(7) Weekday AM and PM, Saturday MD peaks: Office modal survey at 41-21 27th St. Rail combined with subway and bike combined with walk
(8) Auto vehicle occupancy: 2012-2016 American Community Survey 5-year RJTW census data for census tracts 19, 25, 31, 33, 43, 47, 51, 53, 85, and 171 in Queens County, NY
(9) CEQR Technical Manual, Appendix: Transportation; Land Use Directional Splits

Table 2: Project Increment Trip Generation Estimates

Travel Demand Forecast (Person Trips)

		Office		Local Retail		Exhibit Space		Restaurant		TOTAL		
Daily Trips	**Weekday**	6,009		-2,042		14		1,784		**5,765**		
	Saturday	1,302		-2,222		11		2,597		**1,688**		
Peak Hour Trips	**AM**	745		-98		0		18		**665**		
	MD	661		-163		2		193		**693**		
	PM	631		-223		2		189		**599**		
	Sat MD	184		-260		2		338		**264**		
		In	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**TOTAL**
Weekday AM	**Auto**	95	12	-6	-5	0	0	3	2	**92**	**9**	**101**
	Taxi	21	3	0	0	0	0	1	0	**22**	**3**	**25**
	Bus	23	3	-2	-1	0	0	2	1	**23**	**3**	**26**
	Subway	461	57	-2	-2	0	0	2	1	**461**	**56**	**517**
	Walk/Other	62	8	-43	-38	0	0	4	2	**23**	**-28**	**-5**
	Total	662	83	-53	-46	0	0	12	6	**621**	**43**	**664**
Weekday MD	**Auto**	6	7	-9	-9	0	0	31	27	**28**	**25**	**53**
	Taxi	3	3	0	0	0	0	5	4	**8**	**7**	**15**
	Bus	22	24	-2	-2	0	0	16	13	**36**	**35**	**71**
	Subway	22	24	-3	-3	0	0	16	13	**35**	**34**	**69**
	Walk/Other	263	285	-67	-67	0	0	36	31	**232**	**249**	**481**
	Total	316	343	-81	-81	0	0	104	88	**339**	**350**	**689**
Weekday PM	**Auto**	15	75	-12	-12	0	0	30	27	**33**	**90**	**123**
	Taxi	3	16	0	0	0	0	5	4	**8**	**20**	**28**
	Bus	4	18	-3	-3	0	0	15	13	**16**	**28**	**44**
	Subway	75	365	-4	-4	0	0	15	13	**86**	**374**	**460**
	Walk/Other	10	49	-91	-91	0	0	35	31	**-46**	**-11**	**-57**
	Total	107	523	-110	-110	0	0	100	88	**97**	**501**	**598**
Saturday MD	**Auto**	13	13	-10	-10	0	0	57	45	**60**	**48**	**108**
	Taxi	3	3	0	0	0	0	9	7	**12**	**10**	**22**
	Bus	3	3	-5	-5	0	0	28	22	**26**	**20**	**46**
	Subway	64	64	-9	-9	0	0	28	22	**83**	**77**	**160**
	Walk/Other	9	9	-105	-105	0	0	66	52	**-30**	**-44**	**-74**
	Total	92	92	-129	-129	0	0	188	148	**151**	**111**	**262**

Travel Demand Forecast (Vehicle Trips)

Taxi Overlap Rate 0%		Office		Local Retail		Exhibit Space		Restaurant		TOTAL		
		In	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**TOTAL**
Weekday AM	**Auto**	86	11	-4	-4	0	0	1	1	**83**	**8**	**91**
	Taxi	15	2	0	0	0	0	0	0	15	2	17
	Taxi (Balanced)[1]	17	17	0	0	0	0	0	0	**17**	**17**	**34**
	Truck	5	5	0	0	0	0	1	1	**6**	**6**	**12**
	Total	108	33	-4	-4	0	0	2	2	**106**	**31**	**137**
Weekday MD	**Auto**	5	6	-6	-6	0	0	14	12	**13**	**12**	**25**
	Taxi	2	2	0	0	0	0	2	2	4	4	8
	Taxi (Balanced)[1]	4	4	0	0	0	0	4	4	**8**	**8**	**16**
	Truck	6	6	0	0	0	0	1	1	**7**	**7**	**14**
	Total	15	16	-6	-6	0	0	19	17	**28**	**27**	**55**
Weekday PM	**Auto**	14	68	-9	-9	0	0	14	12	**19**	**71**	**90**
	Taxi	2	11	0	0	0	0	2	2	4	13	17
	Taxi (Balanced)[1]	13	13	0	0	0	0	4	4	**17**	**17**	**34**
	Truck	1	1	0	0	0	0	0	0	**1**	**1**	**2**
	Total	28	82	-9	-9	0	0	18	16	**37**	**89**	**126**
Saturday MD	**Auto**	12	12	-7	-7	0	0	26	20	**31**	**25**	**56**
	Taxi	2	2	0	0	0	0	4	3	6	5	11
	Taxi (Balanced)[1]	4	4	0	0	0	0	7	7	**11**	**11**	**22**
	Truck	0	0	0	0	0	0	0	0	**0**	**0**	**0**
	Total	16	16	-7	-7	0	0	33	27	**42**	**36**	**78**

Notes
(1) A 0% taxi overlap rate was assumed (i.e., 0% of inbound full taxis are assumed to be available for outbound demand), based on the *2021 CEQR Technical Manual*.

Travel Demand Forecast (Total Walk Trips)

		Office		Local Retail		Exhibit Space		Restaurant		TOTAL		
		In	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**TOTAL**
Weekday AM	**Total Walk Trips[1]**	546	68	-47	-41	0	0	8	4	**507**	**31**	**538**
Weekday MD	**Total Walk Trips[1]**	307	333	-72	-72	0	0	68	57	**303**	**318**	**621**
Weekday PM	**Total Walk Trips[1]**	89	432	-98	-98	0	0	65	57	**56**	**391**	**447**
Saturday MD	**Total Walk Trips[1]**	76	76	-119	-119	0	0	122	96	**79**	**53**	**132**

Notes
(1) Total walk trips includes all trips via transit plus walk only trips.

Trip Generation Results

The estimates of the trip generation for the Proposed Project are shown in **Table 3.**

Table 3: Project Increment Trip Generation Estimate Summary

Peak Hour	Vehicle (Auto + Taxi + Truck)	Subway	Bus	Walk/Other	Total Pedestrian
Weekday AM	137	517	26	-5	538
Weekday MD	55	69	71	481	621
Weekday PM	126	460	44	-57	447
Saturday MD	78	160	46	-74	132

The results show that the Proposed Project would generate more than 50 vehicle trips in a peak hour (a maximum of 137 trips during the Weekday AM peak hour). Therefore, in accordance with the *2021 CEQR Technical Manual*, a Level 2 screening was performed to distribute the new vehicular trips to the surrounding roadway network and identify potential study locations for quantitative analyses.

The results show that the Proposed Project would generate more than 200 subway trips in a peak hour (a maximum of 517 trips during the Weekday AM peak hour). Therefore, in accordance with the *2021 CEQR Technical Manual*, a Level 2 screening was performed to distribute the new subway trips to the surrounding transit network and identify potential subway elements for quantitative analyses.

The results show that the Proposed Project would not generate more than 50 bus trips in a typical commuter peak hour (26 trips in the Weekday AM peak hour and 44 trips in the Weekday PM peak hour).

The results show that the Proposed Project would generate more than 200 pedestrians in a peak hour (a maximum of 621 trips during the Weekday MD peak hour). Therefore, in accordance with the *2021 CEQR Technical Manual*, a Level 2 screening was performed to distribute the new pedestrian trips to the surrounding pedestrian network and identify potential study locations for quantitative analyses.

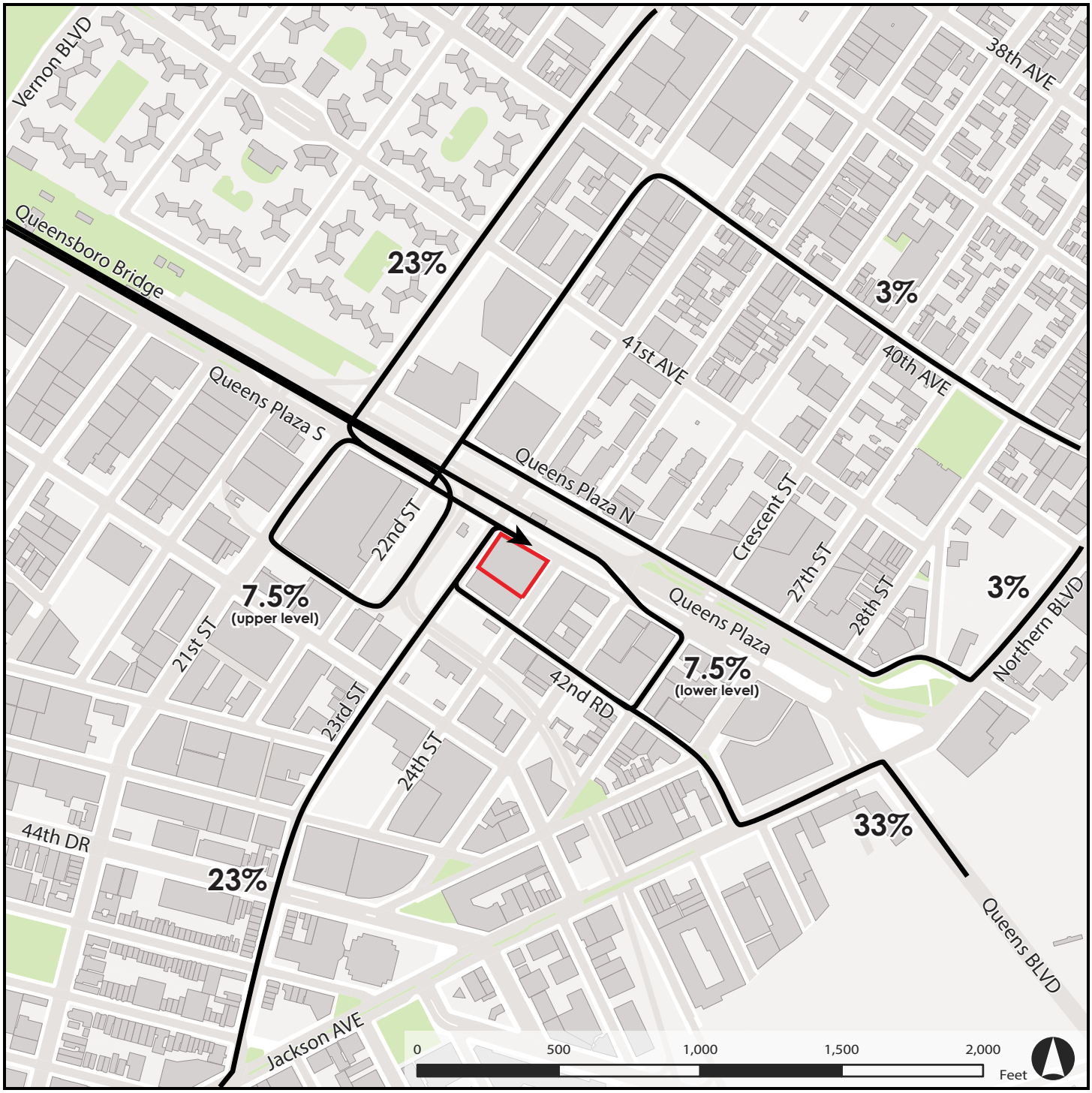
Trip Assignment

Vehicle

Vehicle assignment for trips generated by the Proposed Project considered the location of the two entrances to the Project Site: the main entrance on Queens Plaza South between 23rd Street and 24th Street and the loading dock entrance on 24th Street between Queens Plaza South and 42nd Road. Auto and taxi trips were assigned to the Queens Plaza South entrance. Truck trips were assigned to proposed loading dock on 24th Street.

Auto/Taxi Trip Assignment Assumptions – Office Land Use

Trip assignment for the office use considered the Proposed Project's geographic location relative to major arterials and commuter routes for workers of the area based on available Census data. Although no parking would be provided on-site for this project, all trips were conservatively assigned to the project frontages. The inbound and outbound trip assignment percentages for the office use are shown on **Figure 2** and **Figure 3** and summarized in **Table 4**.



Source: 2020 PLUTO, NYCDCP

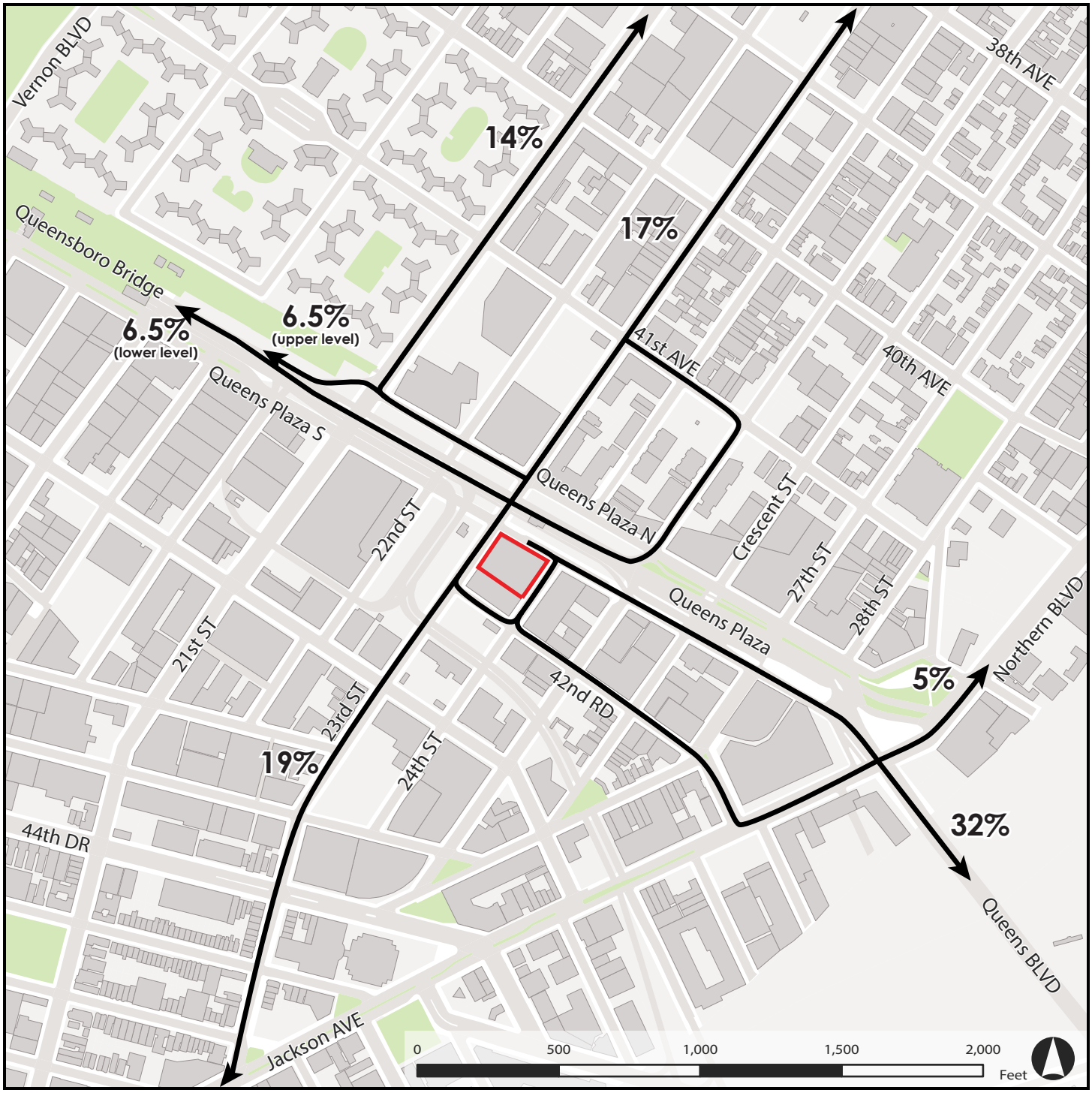
Project Site

20% → Trip Assignment %

OFFICE LAND USE INBOUND TRIP ASSIGNMENT PERCENTAGES (AUTO/TAXI)

Figure 2

23-10 Queens Plaza South



Source: 2020 PLUTO, NYCDCP

Project Site

20% → Trip Assignment %

OFFICE LAND USE OUTBOUND TRIP ASSIGNMENT PERCENTAGES (AUTO/TAXI)

Figure 3

23-10 Queens Plaza South

Table 4: Auto/Taxi Trip Assignment Assumptions - Office Land Use

Inbound Trip Assignment								
From West			From North	From North/East		From East	From South	
Queens Midtown Tunnel	**Queensboro Bridge**	**Queens Plaza South (EB)**	**21st St (SB)**	**Northern Blvd via 22nd St (SB)**	**Northern Blvd via Queens Plazza N**	**Queens Blvd (WB)**	**23rd St (NB)**	**Total**
5%	15%	0%	23%	3%	3%	33%	18%	100%
Outbound Trip Assignment								
To West			To North		To North/East	To East	To South	
Queens Midtown Tunnel via 23rd St (SB)	**Queensboro Bridge**	**Queens Plaza North (WB)**	**21st St (NB)**	**23rd St (NB)**	**Northern Blvd**	**Queens Blvd (EB)**	**Jackson Ave via 23rd St (SB)**	**Total**
6%	13%	0%	14%	17%	5%	32%	13%	100%

Auto/Taxi Trip Assignment Assumptions – Local Retail, Restaurant, and Exhibit Land Uses

Trip assignment for the local retail, restaurant, and exhibit uses considered the Proposed Project's geographic location relative to major arterials and the population density of the surrounding neighborhoods. Although no parking would be provided on-site for this project, all trips were conservatively assigned to the project frontages.

The inbound and outbound trip assignment percentages for the local retail use are shown on **Figure 4** and **Figure 5** and summarized in **Table 5**.

Table 5: Auto/Taxi Trip Assignment Assumptions – Local Retail, Restaurant, and Exhibit Land Uses

Inbound Trip Assignment								
From West			From North	From North/East		From East	From South	
Queens Midtown Tunnel	**Queensboro Bridge**	**Queens Plaza South (EB)**	**21st St (SB)**	**Northern Blvd via 22nd St (SB)**	**Northern Blvd via Queens Plazza N**	**Queens Blvd (WB)**	**23rd St (NB)**	**Total**
2.5%	2.5%	25%	20%	5.0%	5.0%	10%	30%	100%
Outbound Trip Assignment								
To West			To North		To North/East	To East	To South	
Queens Midtown Tunnel via 23rd St (SB)	**Queensboro Bridge**	**Queens Plaza North (WB)**	**21st St (NB)**	**23rd St (NB)**	**Northern Blvd**	**Queens Blvd (EB)**	**Jackson Ave via 23rd St (SB)**	**Total**
2.5%	2.5%	25%	15%	5%	10%	10%	30%	100%

Truck Trip Assignment Assumptions

Truck trips for the Proposed Project are expected to travel on designated truck routes for as much of their route as possible. Truck trips were assigned to and from the Queensboro Bridge lower level (the upper level prohibits trucks), Jackson Avenue/Northern Boulevard, 21st Street, and Queens Boulevard, as those are major truck routes in the vicinity of the Project Site. All truck trips were assigned to and from the proposed loading docks on 24th Street.

The inbound and outbound trip assignment percentages for the truck trips for each use are shown on **Figure 6** and **Figure 7** and summarized in **Table 6.**



Source: 2020 PLUTO, NYCDCP

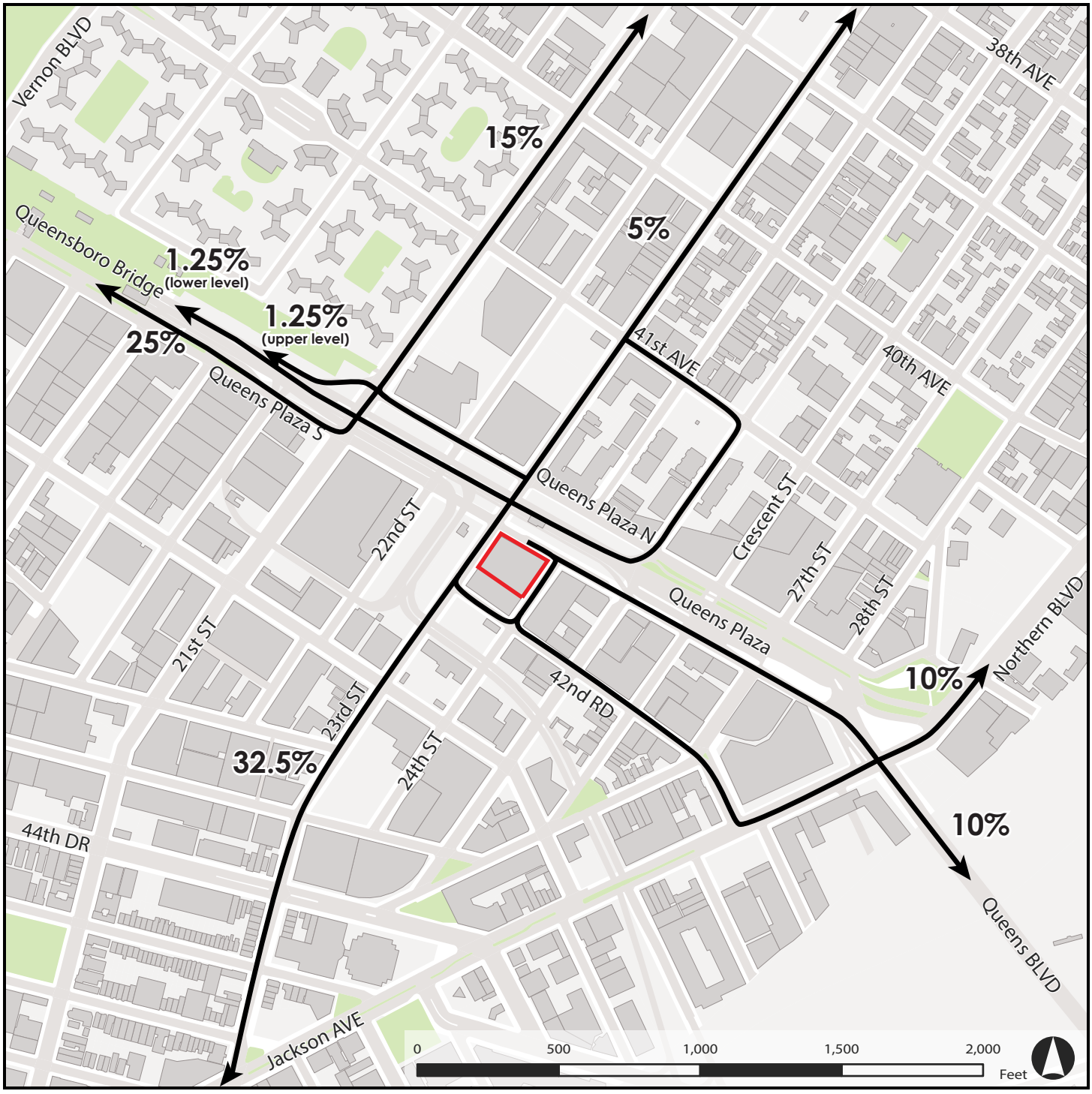
Project Site

20% → Trip Assignment %

LOCAL RETAIL/RESTAURANT/EXHIBIT LAND USE INBOUND TRIP ASSIGNMENT PERCENTAGES (AUTO/TAXI)

Figure 4

23-10 Queens Plaza South



Source: 2020 PLUTO, NYCDCP

Project Site

20% → Trip Assignment %

LOCAL RETAIL/RESTAURANT/EXHIBIT LAND USE OUTBOUND TRIP ASSIGNMENT PERCENTAGES (AUTO/TAXI)

Figure 5

23-10 Queens Plaza South



Source: 2020 PLUTO, NYCDCP

Project Site

20% → Trip Assignment %

ALL LAND USES INBOUND TRIP ASSIGNMENT PERCENTAGES (TRUCK)

Figure 6

23-10 Queens Plaza South



Source: 2020 PLUTO, NYCDCP

Project Site

20% → Trip Assignment %

ALL LAND USES OUTBOUND TRIP ASSIGNMENT PERCENTAGES (TRUCK)

Figure 7

23-10 Queens Plaza South

Table 6: Truck Trip Assignment Assumptions: All Land Uses

Inbound Trip Assignment						
From West	From North	From East	From East/West/South	From East/South	From West	**Total**
Queensboro Bridge	**21st St (SB)**	**Northern Blvd**	**21st St (NB)**	**Queens Blvd**	**Jackson Ave**	
8.3%	25.0%	8.3%	29.2%	20.8%	8.3%	100%
Outbound Trip Assignment						
To West	To North	Froim East	To East/West/South	To East/South	To West	**Total**
Queensboro Bridge	**21st St (NB)**	**Northern Blvd**	**21st St (SB)**	**Queens Blvd**	**Jackson Ave**	
8.3%	25.0%	8.3%	29.2%	20.8%	8.3%	100%

Note: numbers may not sum to 100% due to rounding.

Transit and Pedestrian

Pedestrian trips (subway, bus, and walk-only) were assigned to/from the subway entrances, bus stops, and walk-only portals to the main entrance to the Project Site on Queens Plaza South. The transit analyses consider the Weekday AM and Weekday PM commuter peak hours, when background commuter traffic is expected to be the greatest.

Subway Trip Assignment Assumptions

The assignment of subway trips generated by the office land use was developed based on the results of a survey of office workers conducted at a similar office building in the vicinity to the Project Site[1]. The assignment of subway trips generated by the local retail, restaurant, and exhibit land uses were developed based on population density. Assignment of project-generated trips by subway station is shown in **Table 7** and **Table 8**, respectively. Trips were typically assigned from the closest subway stations exits to the Project Site.

Table 7: Subway Trip Assignment Assumptions - Office Land Use

			Station Entrance Split		Overall Entrance Split		Weekday AM			Weekday PM		
Subway Stations	**%**	**Entrances**	**Project In / Subway Out**	**Project Out / Subway In**	**Project In / Subway Out**	**Project Out / Subway In**	**Project In / Subway Out**	**Project Out / Subway In**	**Total**	**Project In / Subway Out**	**Project Out / Subway In**	**Total**
Queensboro Plaza - 7/N/W	70%	South Side	100%	100%	70%	70%	323	40	363	53	256	308
		Station Subtotal	100%	100%	70%	70%	323	40	363	53	256	308
Queens Plaza - E/M/R	15%	Northern Blvd / Queens Plaza - SW Corner (stairs + elevator)	100%	100%	15%	15%	69	9	78	11	55	66
		Station Subtotal	100%	100%	15%	15%	69	9	78	11	55	66
21 St / Queensbridge - F	5%	21st St / 41st Ave - NW Corner (escelator & elevator)	15%	15%	0.75%	0.75%	3	0	4	1	3	3
		21st St / 41st Ave - NE Corner	85%	85%	4.25%	4.25%	20	2	22	3	16	19
		Station Subtotal	100%	100%	5%	5%	23	3	26	4	18	22
Court Square / 23 St - E/M	2%	23rd St / 44th Dr - SE Corner	100%	100%	2%	2%	9	1	10	2	7	9
		Station Subtotal	100%	100%	2%	2%	9	1	10	2	7	9
Court Square - 7/G	8%	Citibank building - south side of 44th Dr	90%	90%	7.2%	7.2%	33	4	37	5	26	32
		Jackson Ave / Thomson Ave - NW Corner	10%	10%	0.8%	0.8%	4	0	4	1	3	4
		Station Subtotal	100%	100%	8%	8%	37	5	41	6	29	35
		Total			**100%**	**100%**	**461**	**57**	**518**	**75**	**365**	**440**

[1] A travel mode survey was distributed (via email) to office workers at 27-01 Queens Plaza North in January/February. Responses for those that commuted by subway were used to determine the assignment to the various nearby subway stations.

Table 8: Subway Trip Assignment Assumptions - Local Retail, Restaurant, and Exhibit Land Uses

			Station Entrance Split		Overall Entrance Split		Weekday AM			Weekday PM		
Subway Stations	**%**	**Entrances**	**Project In / Subway Out**	**Project Out / Subway In**	**Project In / Subway Out**	**Project Out / Subway In**	**Project In / Subway Out**	**Project Out / Subway In**	**Total**	**Project In / Subway Out**	**Project Out / Subway In**	**Total**
Queensboro Plaza - 7/N/W	50%	South Side	100%	100%	50%	50%	0	-1	-1	6	5	10
		Station Subtotal	100%	100%	50%	50%	0	-1	-1	6	5	10
Queens Plaza - E/M/R	25%	Northern Blvd / Queens Plaza - SW Corner (stairs + elevator)	100%	100%	25%	25%	0	0	0	3	2	5
		Station Subtotal	100%	100%	25%	25%	0	0	0	3	2	5
21 St / Queensbridge - F	10%	21st St / 41st Ave - NW Corner (escelator & elevator)	15%	15%	1.5%	1.5%	0	0	0	0	0	0
		21st St / 41st Ave - NE Corner	85%	85%	8.5%	8.5%	0	0	0	1	1	2
		Station Subtotal	100%	100%	10%	10%	0	0	0	1	1	2
Court Square / 23 St - E/M	5%	23rd St / 44th Dr - SE Corner	100%	100%	5%	5%	0	0	0	1	0	1
		Station Subtotal	100%	100%	5%	5%	0	0	0	1	0	1
Court Square - 7/G	10%	Citibank building - south side of 44th Dr	90%	90%	9%	9%	0	0	0	1	1	2
		Jackson Ave / Thomson Ave - NW Corner	10%	10%	1.0%	1.0%	0	0	0	0	0	0
		Station Subtotal	100%	100%	10%	10%	0	0	0	1	1	2
		Total			**100%**	**100%**	**0**	**-1**	**-1**	**11**	**9**	**20**

The resulting subway trips are summarized in **Table 9**, which shows that the Queensboro Plaza subway station would exceed the 200-trip threshold during the Weekday AM and Weekday PM peak hours. Therefore, a detailed Level 2 screening for the subway analysis was performed for the Queensboro Plaza subway station during the Weekday AM and Weekday PM peak hours.

Table 9: Total Subway Trips

			Weekday AM			Weekday PM		
Subway Stations	**%**	**Entrances**	**Project In / Subway Out**	**Project Out / Subway In**	**Total**	**Project In / Subway Out**	**Project Out / Subway In**	**Total**
Queensboro Plaza - 7/N/W		South Side	323	39	362	58	260	318
		Station Subtotal	323	39	362	58	260	318
Queens Plaza - E/M/R		Northern Blvd / Queens Plaza - SW Corner (stairs + elevator)	69	8	77	14	57	71
		Station Subtotal	69	8	77	14	57	71
21 St / Queensbridge - F		21st St / 41st Ave - NW Corner (escelator & elevator)	3	0	4	1	3	4
		21st St / 41st Ave - NE Corner	20	2	22	4	16	20
		Station Subtotal	23	3	26	5	19	24
Court Square/23 St - E/M		23rd St / 44th Dr - SE Corner	9	1	10	2	8	10
		Station Subtotal	9	1	10	2	8	10
Court Square - 7/G		Citibank building - south side of 44th Dr	33	4	37	6	27	33
		Jackson Ave / Thomson Ave - NW Corner	4	0	4	1	3	4
		Station Subtotal	37	4	41	7	30	37
		Total	**461**	**56**	**517**	**86**	**374**	**460**

Bus Trip Assignment Assumptions

The assignment of bus trips generated by the Proposed Project considers the office and local retail/restaurant/exhibit trips separately, as shown in **Table 10** and **Table 11**, respectively. Trips were assigned from the various bus stops to the Project Site.

Table 10: Bus Trip Assignment Assumptions – Office Land Use

Route	Stop Location	Project In / Bus Out				Project Out / Bus In				Total	
		Direction	%	AM	PM	Direction	%	AM	PM	AM	PM
Q32	Queens Plaza North - 27th St	WB	12%	3	0	WB	1%	0	0	3	1
	Queens Plaza South - 28th St	EB	1%	0	0	EB	12%	0	2	1	2
Q39	23rd St - Queens Plaza South	NB	10%	2	0	NB	0%	0	0	2	0
	Queens Plaza South - 24th St	SB	0%	0	0	SB	10%	0	2	0	2
Q60	Queens Plaza North - 27th St	WB	10%	2	0	WB	1%	0	0	2	1
	Queens Plaza South - 28th St	EB	1%	0	0	EB	10%	0	2	1	2
Q66	Queens Plaza South - 24th St	WB	15%	3	1	EB	15%	0	3	4	3
Q67	28th St - Queens Plaza South	WB	10%	2	0	EB	10%	0	2	3	2
Q69	Queens Plaza South - 24th St	SB	12%	3	0	NB	12%	0	2	3	3
Q100	Queens Plaza South - 27th St	SB	5%	1	0	SB	0%	0	0	1	0
	21st St - 41st Ave	NB	0%	0	0	NB	5%	0	1	0	1
Q101	Queens Plaza North - 27th St	WB (from Astoria)	5%	1	0	WB (to Manhattan)	1%	0	0	1	0
	Queens Plaza South - 27th St	EB/NB	1%	0	0	EB/NB	5%	0	1	0	1
Q102	Queens Plaza South - 22nd St	EB/NB (from Roosevelt Island)	1%	0	0	EB/NB (to Astoria)	5%	0	1	0	1
	Queens Plaza North - 27th St	WB (from Astoria)	5%	1	0	WB (to Roosevelt Island)	1%	0	0	1	0
B62	28th St - Queens Plaza South	NB	12%	3	0	NB	0%	0	0	3	0
	Jackson Ave - Queens Plaza South	SB	0%	0	0	SB	12%	0	2	0	2
Total			**100%**	**23**	**4**		**100%**	**3**	**18**	**26**	**22**

Table 11: Bus Trip Assignment Assumptions – Local Retail, Restaurant, and Exhibit Land Uses

Route	Stop Location	Project In / Bus Out				Project Out / Bus In				Total	
		Direction	%	AM	PM	Direction	%	AM	PM	AM	PM
Q32	Queens Plaza North - 27th St	WB	9%	0	1	WB	1%	0	0	0	1
	Queens Plaza South - 28th St	EB	1%	0	0	EB	9%	0	1	0	1
Q39	23rd St - Queens Plaza South	NB	9%	0	1	NB	0%	0	0	0	1
	Queens Plaza South - 24th St	SB	0%	0	0	SB	9%	0	1	0	1
Q60	Queens Plaza North - 27th St	WB	9%	0	1	WB	1%	0	0	0	1
	Queens Plaza South - 28th St	EB	1%	0	0	EB	9%	0	1	0	1
Q66	Queens Plaza South - 24th St	WB	9%	0	1	EB	9%	0	1	0	2
Q67	28th St - Queens Plaza South	WB	9%	0	1	EB	9%	0	1	0	2
Q69	Queens Plaza South - 24th St	SB	8%	0	1	NB	8%	0	1	0	2
Q100	Queens Plaza South - 27th St	SB	8%	0	1	SB	0%	0	0	0	1
	21st St - 41st Ave	NB	0%	0	0	NB	8%	0	1	0	1
Q101	Queens Plaza North - 27th St	WB (from Astoria)	9%	0	1	WB (to Manhattan)	1%	0	0	0	1
	Queens Plaza South - 27th St	EB/NB	1%	0	0	EB/NB	9%	0	1	0	1
Q102	Queens Plaza South - 22nd St	EB/NB (from Roosevelt Island)	10%	0	1	EB/NB (to Astoria)	9%	0	1	0	2
	Queens Plaza North - 27th St	WB (from Astoria)	9%	0	1	WB (to Roosevelt Island)	10%	0	1	0	2
B62	28th St - Queens Plaza South	NB	8%	0	1	NB	0%	0	0	0	1
	Jackson Ave - Queens Plaza South	SB	0%	0	0	SB	8%	0	1	0	1
Total			**100%**	**0**	**12**		**100%**	**0**	**10**	**0**	**22**

The resulting bus trips are summarized in **Table 12**, which shows that no bus lines would exceed the 50-trip threshold on a bus line in a single direction during either the Weekday AM or Weekday PM peak hour. Therefore, in accordance with the *2021 CEQR Technical Manual*, a detailed bus line haul analysis will not be performed.

Table 12: Total Bus Trips

Route	Stop Location	Project In / Bus Out			Project Out / Bus In			Total	
		Direction	AM	PM	Direction	AM	PM	AM	PM
Q32	Queens Plaza North - 27th St	WB	3	2	WB	0	0	3	2
	Queens Plaza South - 28th St	EB	0	0	EB	0	3	1	3
Q39	23rd St - Queens Plaza South	NB	2	1	NB	0	0	2	1
	Queens Plaza South - 24th St	SB	0	0	SB	0	3	0	3
Q60	Queens Plaza North - 27th St	WB	2	1	WB	0	0	2	2
	Queens Plaza South - 28th St	EB	0	0	EB	0	3	1	3
Q66	Queens Plaza South - 24th St	WB	3	2	EB	0	4	4	5
Q67	28th St - Queens Plaza South	WB	2	1	EB	0	3	3	4
Q69	Queens Plaza South - 24th St	SB	3	1	NB	0	3	3	4
Q100	Queens Plaza South - 27th St	SB	1	1	SB	0	0	1	1
	21st St - 41st Ave	NB	0	0	NB	0	2	0	2
Q101	Queens Plaza North - 27th St	WB (from Astoria)	1	1	WB (to Manhattan)	0	0	1	2
	Queens Plaza South - 27th St	EB/NB	0	0	EB/NB	0	2	0	2
Q102	Queens Plaza South - 22nd St	EB/NB (from Roosevelt Island)	0	1	EB/NB (to Astoria)	0	2	0	3
	Queens Plaza North - 27th St	WB (from Astoria)	1	1	WB (to Roosevelt Island)	0	1	1	2
B62	28th St - Queens Plaza South	NB	3	1	NB	0	0	3	1
	Jackson Ave - Queens Plaza South	SB	0	0	SB	0	3	0	3
Total			**23**	**16**		**3**	**28**	**26**	**44**

Walk Trip Assignment Assumptions

Walk trips generated by the Proposed Project were assigned based on the local pedestrian network and population density of the surrounding Census Tracts. Walk trips generated by the Proposed Project were assigned as follows:

- 25% to/from the north
- 25% to/from the south
- 25% to/from the east
- 25% to/from the west

Level 2 Screening Results

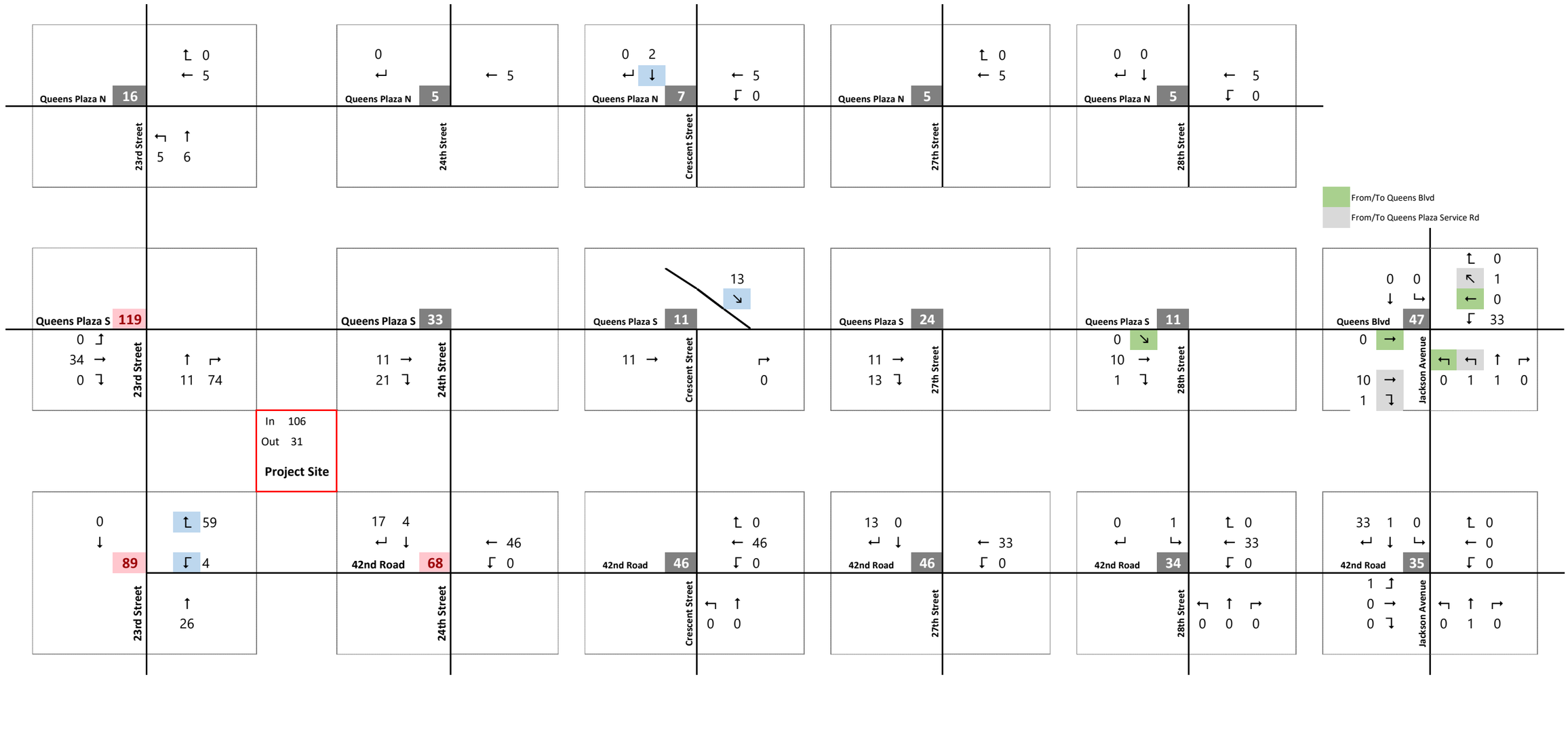
Vehicle

The results of the Level 2 screening analysis for vehicle traffic show that the Proposed Project would generate greater than 50 vehicle trips at five intersections in the study area during at least one of the study peak hours, as shown in **Figure 8** through **Figure 11**. While the intersection of Queens Boulevard and Jackson Avenue would experience a project increment lower than 50 vehicle trips in a peak hour (maximum of 47 vehicle trips during the Weekday AM peak hour), it was included in the traffic analysis study area because there is known congestion during the weekday peak hours under existing conditions.

Therefore, the following six intersections, shown on **Figure 12,** were included in the study area:

1. Queens Plaza North and 23rd Street
2. Queens Plaza South and 23rd Street
3. 42nd Road and 23rd Street
4. Queens Plaza South and 24th Street
5. 42nd Road and 24th Street
6. Queens Boulevard and Jackson Avenue/Northern Boulevard

In accordance with the *2021 CEQR Technical Manual*, detailed quantitative analyses will be performed at these six intersections during the Weekday AM, Weekday MD, and Weekday PM peak hours. The Saturday MD peak hour was not included in the detailed analysis, as the Proposed Project is primarily office space and would generate significantly fewer trips on a Saturday when compared to a weekday. Furthermore, background traffic on a Saturday is generally lower than on a weekday in this area.



Project Site

Peak Hour Volume

XX Total Intersection Increment

TOTAL PROJECT GENERATED VEHICLE TRIPS
WEEKDAY AM PEAK HOUR

Figure 8

23-10 Queens Plaza South



Project Site

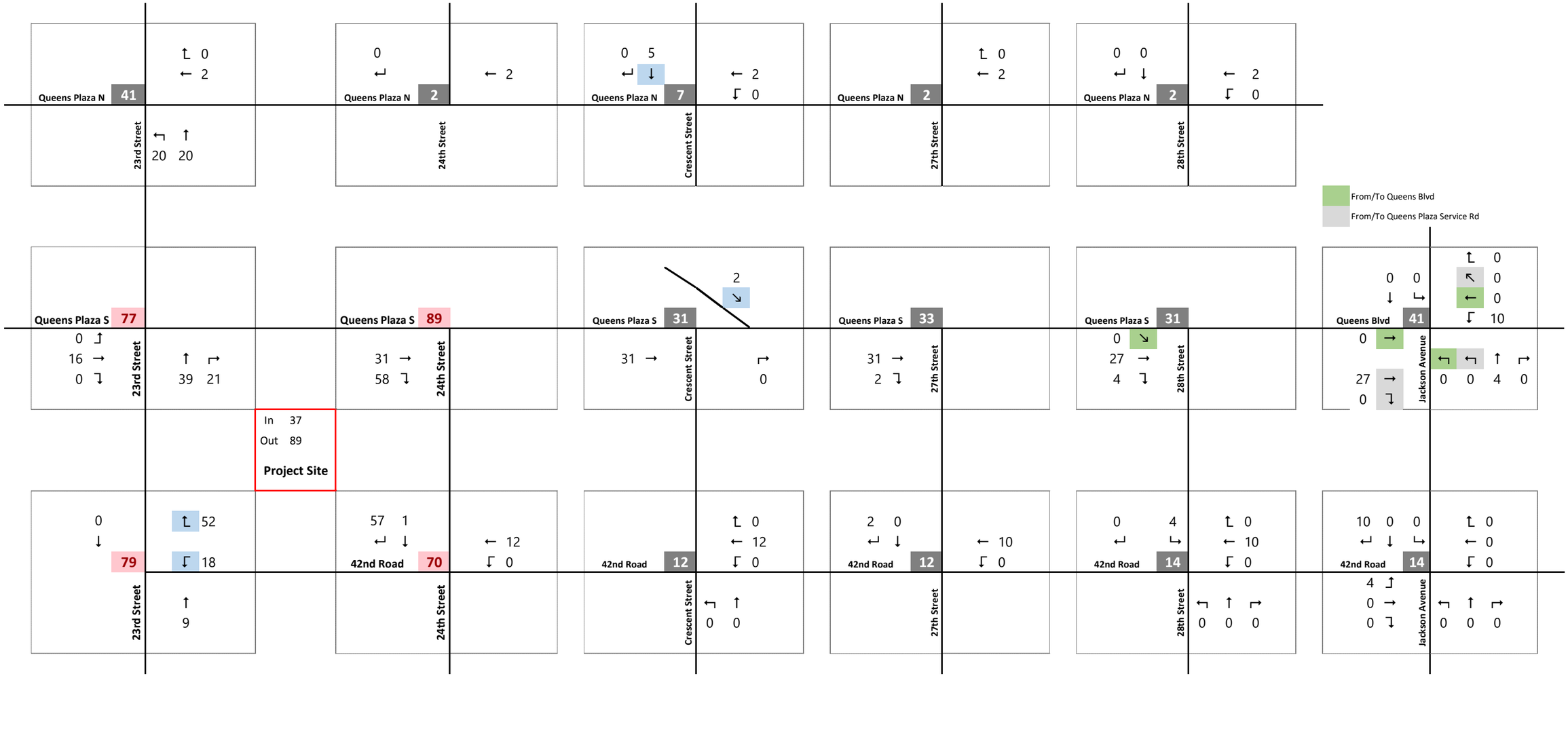
Peak Hour Volume

XX Total Intersection Increment

TOTAL PROJECT GENERATED VEHICLE TRIPS
WEEKDAY MD PEAK HOUR

Figure 9

23-10 Queens Plaza South



Project Site

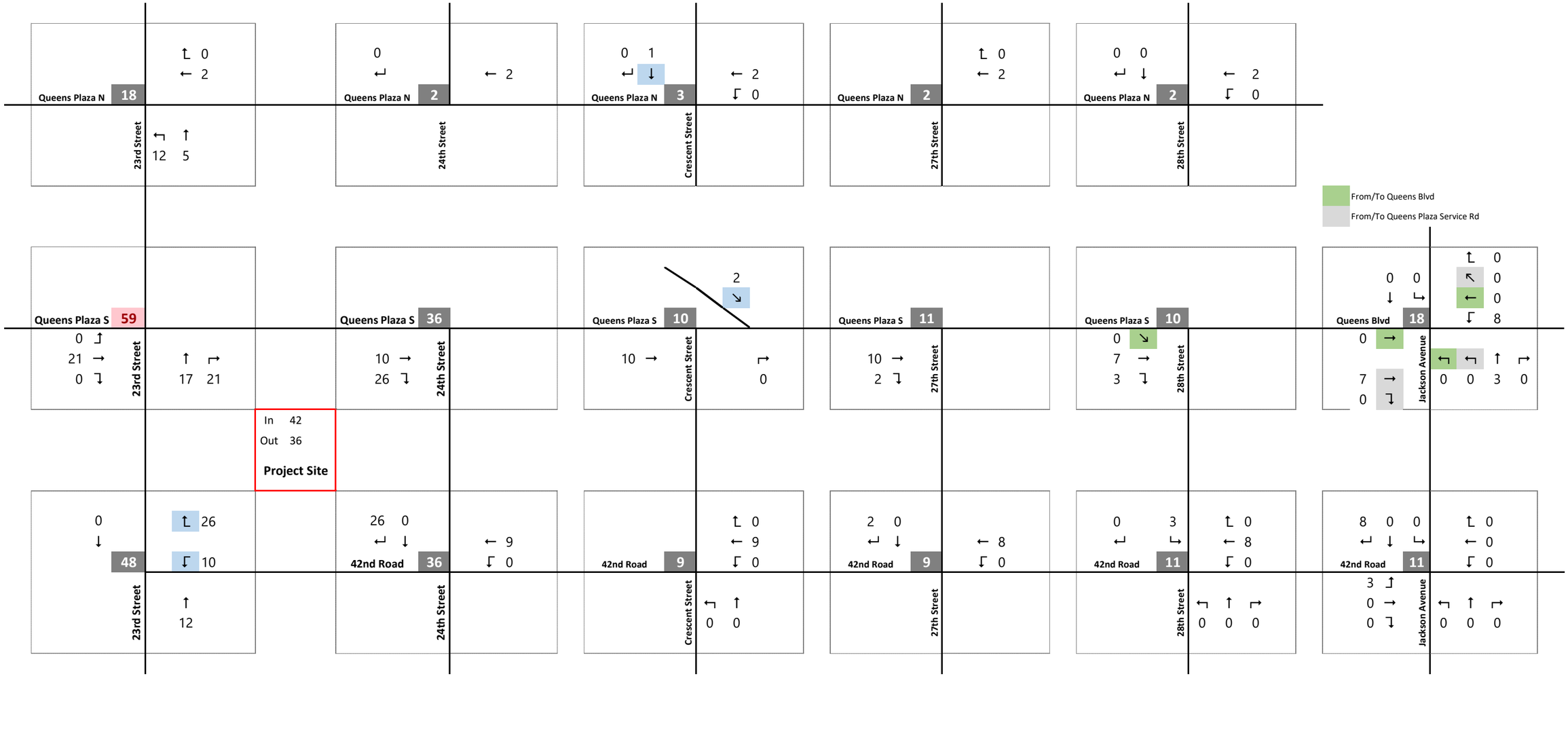
Peak Hour Volume

XX Total Intersection Increment

TOTAL PROJECT GENERATED VEHICLE TRIPS
WEEKDAY PM PEAK HOUR

Figure 10

23-10 Queens Plaza South



Project Site

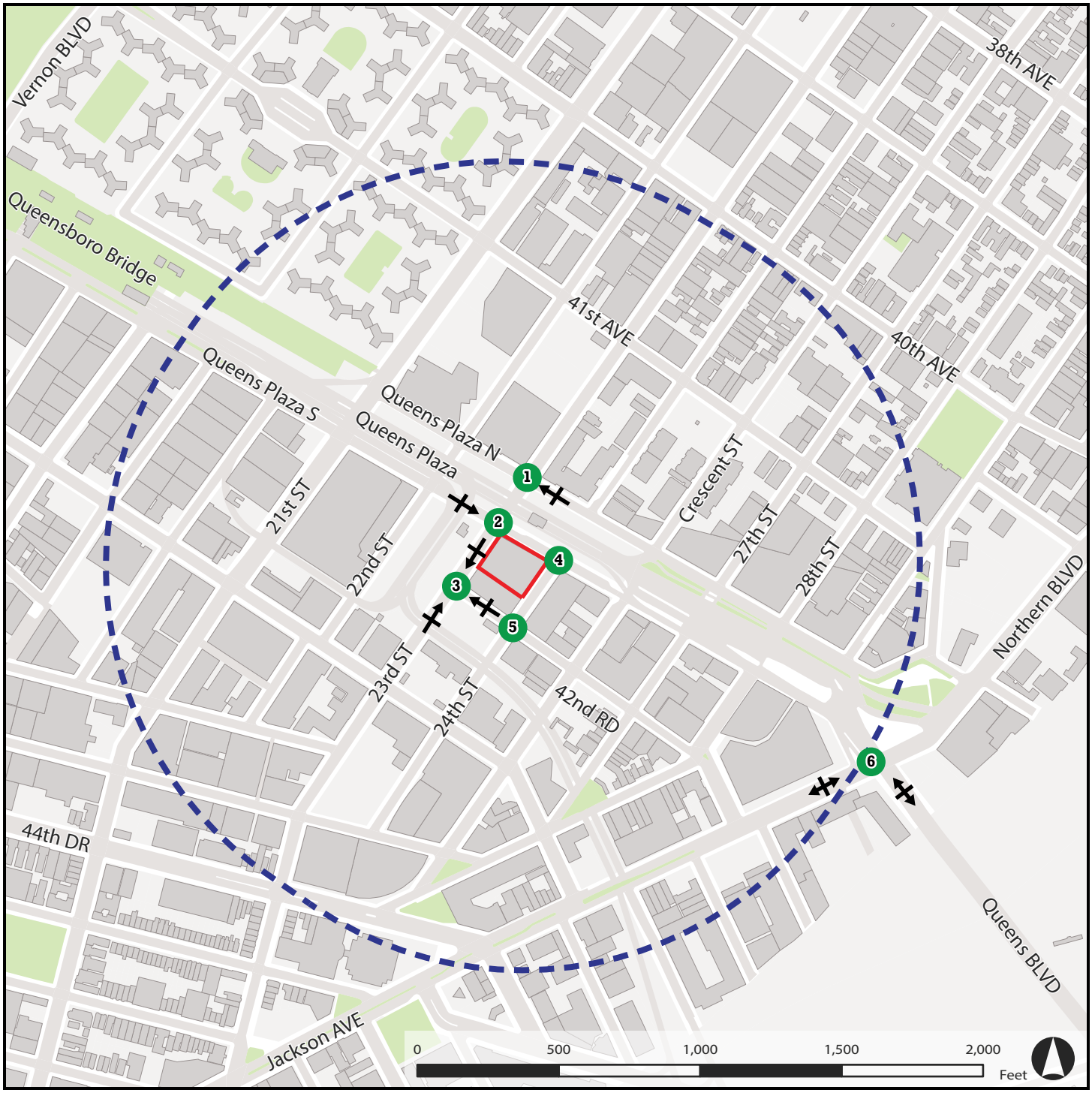
Peak Hour Volume

XX Total Intersection Increment

TOTAL PROJECT GENERATED VEHICLE TRIPS
SATURDAY MD PEAK HOUR

Figure 11

23-10 Queens Plaza South



Source: 2020 PLUTO, NYCDCP

Project Site

0.25-Mile Radius

Study location

Automatic Traffic Recorder (ATR) Location

PROPOSED ACTIONS VEHICULAR STUDY LOCATIONS AND ATR LOCATIONS

Figure 12

23-10 Queens Plaza South

Subway

The results of the Level 2 screening analysis for subway trips show that the Proposed Project would generate greater than 200 subway trips at the Queensboro Plaza station during the Weekday AM and Weekday PM commuter peak hours. Based on the location of the project site in relation to the subway station entrances, fare control areas, and internal station circulation elements, as well as US Census Reverse Journey to Work data and population density data described in the Level 1 screening, subway trips were assigned to internal station elements as described below:

- The Queensboro Plaza station is served by the N, W, and 7 lines. The station is above ground between Queens Plaza North and Queens Plaza South, with entrances at street level on the north side of Queens Plaza North and on the south side of Queens Plaza South, between Crescent Street and 27th Street.
- A total of 362 and 318 project-generated trips are expected to use the Queensboro Plaza station during the Weekday AM and Weekday PM peak hours, respectively. Given the location of the project site on the south side of Queens Plaza South, it was assumed 100% of subway trips generated by the Proposed Project would exit and enter at the subway stairs on the south side of Queens Plaza South. **Table 13** summarizes the total project-generated trips at the Queensboro Plaza station by peak hour, by station entrance, and by direction (in and out of the Proposed Project).
- Both street-level stairways lead to one central fare control area within the station. Past the fare control area, four stairways serve the Manhattan-bound train platform. From the Manhattan-bound platform, another set of four stairways serves Queens-bound train platform. The assignment to each platform stair is based on data provided by New York City Transit (NYCT) from stair counts collected in October 2016 and February 2017.
- Data provided by NYCT from MetroCard Model data at the station was used to determine the percentage of trips that would travel in each direction on the N, W, and 7 lines, as shown in **Table 14. Table 15** summarizes the total project-generated trips at the Queensboro Plaza station by peak hour, subway line, and direction (Manhattan-bound and Queens-bound).
- **Table 16** summarizes the assignment between internal stairways in the Queensboro Plaza Subway Station.

Table 13: Queensboro Plaza Subway Station – Entrance Stair Subway Trips

		Weekday AM			Weekday PM		
Subway Stations	**Entrances**	**Project In / Subway Out**	**Project Out / Subway In**	**Total**	**Project In / Subway Out**	**Project Out / Subway In**	**Total**
Queensboro Plaza - 7/N/W	North Side	0	0	0	0	0	0
	South Side	323	39	362	58	260	318
	Total	**323**	**39**	**362**	**58**	**260**	**318**

Table 14: Queensboro Plaza Subway Station – Manhattan-bound and Queens-bound Distribution

		Route Split			
		Weekday AM		Weekday PM	
Direction	**Route**	**Project In / Subway Out**	**Project Out / Subway In**	**Project In / Subway Out**	**Project Out / Subway In**
Manhattan / Brooklyn-bound Trains	34th St - Hudson Yards (7)	36%	49%	9%	34%
	Whitehall St South Ferry (W) / 86th St (N)	9%	43%	4%	34%
	Total Manhattan/Brooklyn-bound Trains	**45%**	**92%**	**13%**	**67%**
Queens-bound Trains	Flushing Main St (7)	27%	6%	45%	23%
	Astoria Ditmas Blvd (N/W)	29%	2%	42%	10%
	Total Queens-bound Trains	**56%**	**8%**	**87%**	**33%**

Note: numbers may not match due to rounding.

Table 15: Queensboro Plaza Subway Station – Manhattan-bound and Queens-bound Subway Trips

Direction	Route	Weekday AM			Weekday PM		
		Project In / Subway Out	Project Out / Subway In	Total	Project In / Subway Out	Project Out / Subway In	Total
Manhattan / Brooklyn-bound Trains	34th St - Hudson Yards (7)	115	19	134	5	87	92
	Whitehall St South Ferry (W) / 86th St (N)	29	17	46	2	87	89
Total Manhattan/Brooklyn-bound Platform Trips*		**323**	**39**	**362**	**58**	**260**	**318**
Queens-bound Trains	Flushing Main St (7)	87	2	89	26	60	86
	Astoria Ditmas Blvd (N/W)	92	1	93	24	26	50
Total Queens-bound Platform Trips		**179**	**3**	**182**	**50**	**86**	**136**

Note: numbers may not match due to rounding.

** Includes passenger trips for Manhattan/Brooklyn-bound trains and through trips to the Queens-bound platform.*

Table 16: Queensboro Plaza Subway Station – Internal Stairways Trips

Internal Stairway	VCE ID	Weekday AM					Weekday PM				
		Assignment Splits[1]		Project Trips			Assignment Splits[1]		Project Trips		
		Project In / Subway Out	Project Out / Subway In	Project In / Subway Out	Project Out / Subway In	Total	Project In / Subway Out	Project Out / Subway In	Project In / Subway Out	Project Out / Subway In	Total
Stair (from control area to Manhattan-bound platform)*	PL1-PL2	32%	0%	103	0	103	20%	0%	12	0	12
Stair (from control area to Manhattan-bound platform)*	PL3-PL4	20%	0%	64	0	64	25%	0%	15	0	15
Stair (from control area to Manhattan-bound platform)*	PL5-PL6	23%	92%	74	36	110	23%	89%	13	231	244
Stair (from control area to Manhattan-bound platform)*	PL7-PL8	25%	8%	81	3	85	32%	11%	19	29	48
Stair (from Manhattan-bound platform to Queens-bound platform)	P1-P2	14%	40%	26	1	27	24%	28%	12	24	36
Stair (from Manhattan-bound platform to Queens-bound platform)	P3-P4	22%	18%	40	1	40	14%	14%	7	12	19
Stair (from Manhattan-bound platform to Queens-bound platform)	P5-P6	33%	25%	58	1	59	22%	48%	11	41	52
Stair (from Manhattan-bound platform to Queens-bound platform)	P7-P8	31%	17%	55	1	55	40%	10%	20	9	29

Note: numbers may not match due to rounding.

** Includes passenger trips for Manhattan-bound trains and through trips to the Queens-bound platform.*

1. Assignment splits were based on the existing volumes on the platform stairs provided by NYCT.

The Proposed Project would generate greater than 200 subway trips at the Queensboro Plaza station elements, and therefore a detailed transit analysis will be performed during the Weekday AM and Weekday PM peak hours at the Queensboro Plaza station. In consultation with NYCT, the following station elements within the Queensboro Plaza station were selected:

- The entry/exit stairway on the south side of Queens Plaza South between Crescent Street and 27th Street (M1-S1)
- The fare control area
- The four platform level stairs from the control area to the Manhattan-bound platform (PL1-PL2, PL3-PL4, PL5-PL6, PL7-PL8)
- The four platform level stairs from the Manhattan-bound platform to the Queens-bound platform (P1-P2, P3-P4, P5-P6, P7-P8)

Bus

The Proposed Project would generate fewer than 50 bus trips on a bus line in a single direction in a typical commuter peak hour (a maximum of five trips on the EB Q66 in the Weekday PM peak hour). Therefore, in accordance with the *2021 CEQR Technical Manual*, detailed bus line haul analyses will not be performed.

Pedestrian

The results of the Level 2 screening analysis for pedestrians show that the Proposed Project would generate more than 200 pedestrian trips at the following critical pedestrian elements (crosswalks, sidewalks, and corners) during at least one of the study peak hours, as shown in **Figures 13** through **15**. The pedestrian study locations are shown on **Figure 16**. In accordance with the *2021 CEQR Technical Manual*, a detailed quantitative analysis will be performed at the following 11 pedestrian elements during the Weekday AM, Weekday MD, and Weekday PM peak hours.

Sidewalks (three elements)

- Queens Plaza South between 23rd Street and 24th Street, south sidewalk
- Queens Plaza South between 24th Street and Crescent Street, south sidewalk
- Queens Plaza South between Crescent Street and 27th Street, south sidewalk

Corners (six elements)

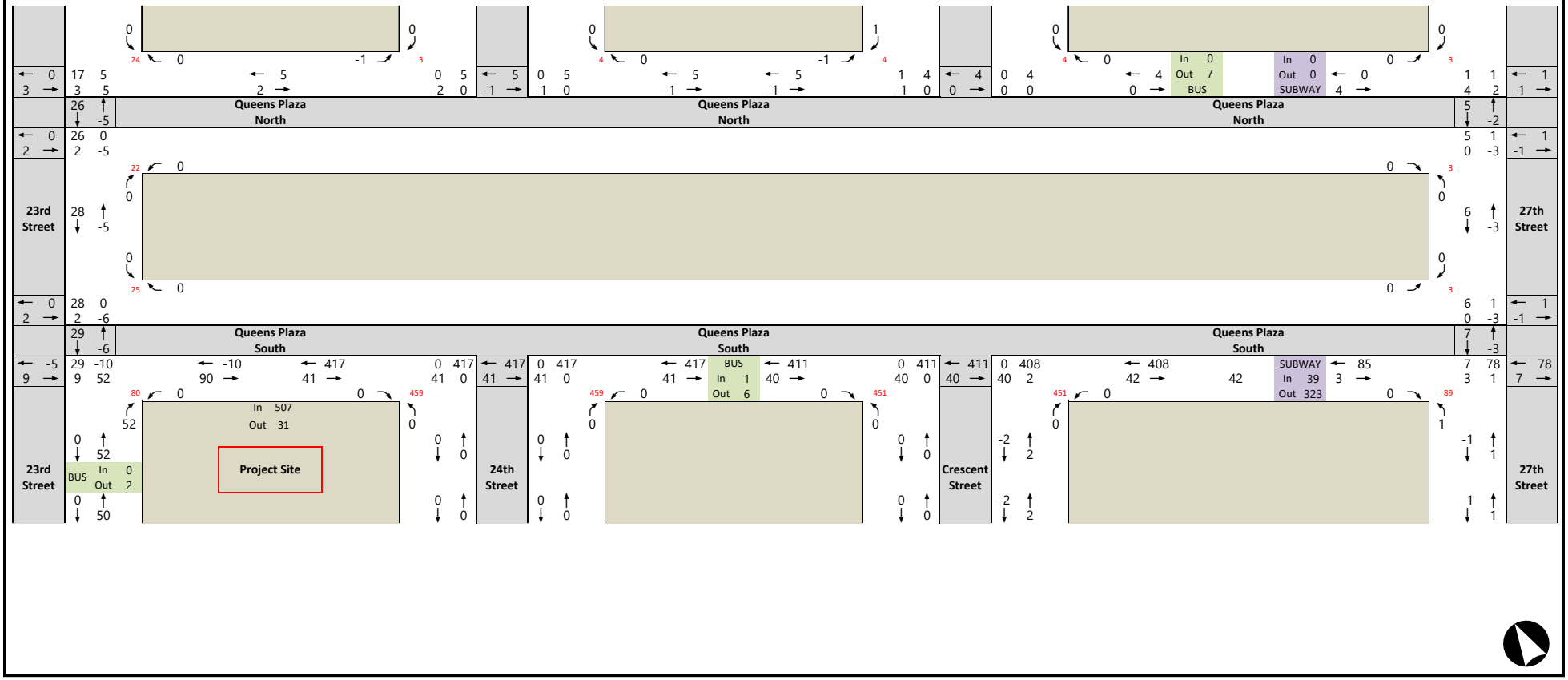
- 23rd Street and Queens Plaza South, southeast corner
- 24th Street and Queens Plaza South, southwest and southeast corners
- Crescent Street and Queens Plaza South, southwest and southeast corners
- 27th Street and Queens Plaza South, southwest corner

Crosswalks (two elements)

- 24th Street and Queens Plaza South, south crosswalk
- Crescent Street and Queens Plaza South, south crosswalk

Conclusion

Based on the Level 1 and Level 2 screening analyses, the Proposed Project would meet or exceed the *2021 CEQR Technical Manual* thresholds at six intersections, ten subway elements, and 11 pedestrian elements. At these locations, detailed transportation analyses will be performed to identify any potential significant adverse impacts as a result of the proposed development.



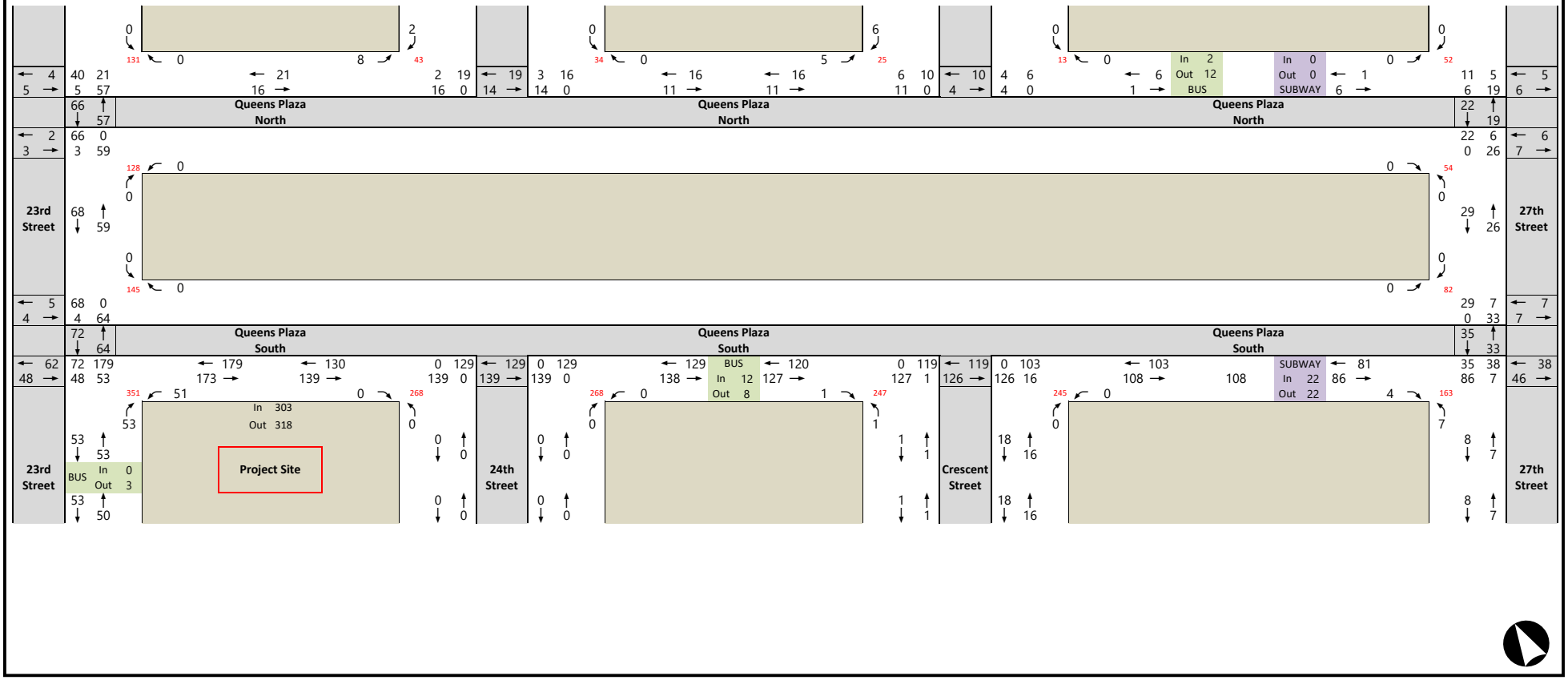
Project Site

Peak Hour Volume

TOTAL PROJECT GENERATED PEDESTRIAN TRIPS
WEEKDAY AM PEAK HOUR

Figure 13

23-10 Queens Plaza South



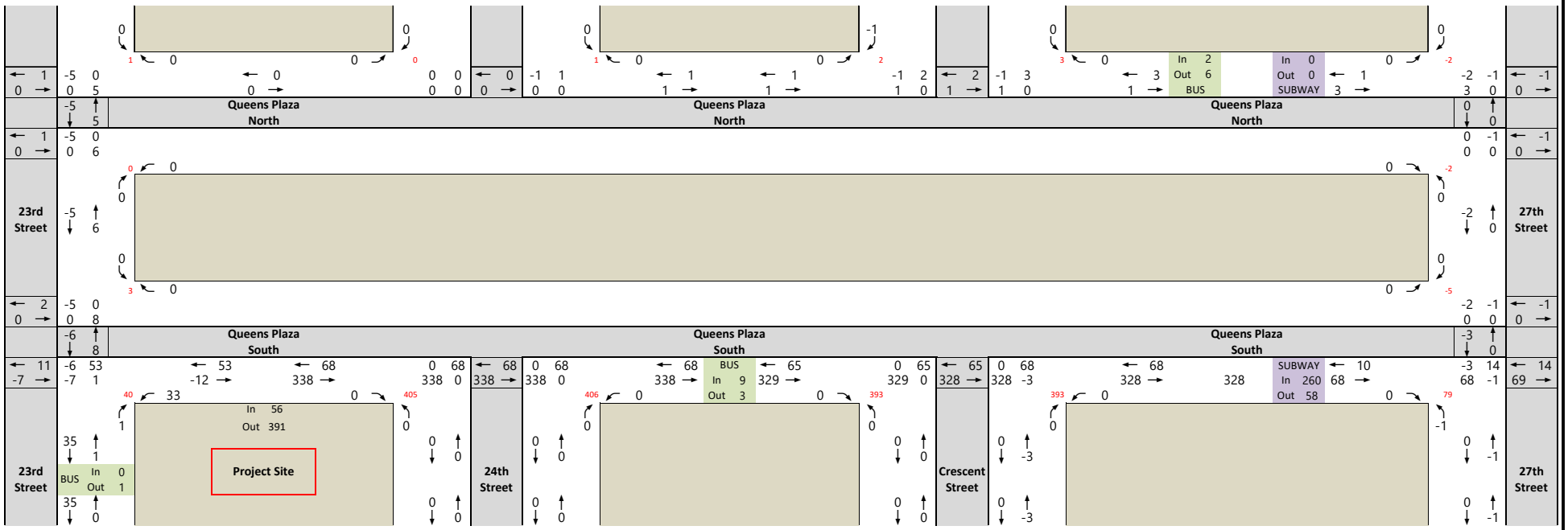
Project Site

Peak Hour Volume

TOTAL PROJECT GENERATED PEDESTRIAN TRIPS
WEEKDAY MD PEAK HOUR

Figure 14

23-10 Queens Plaza South



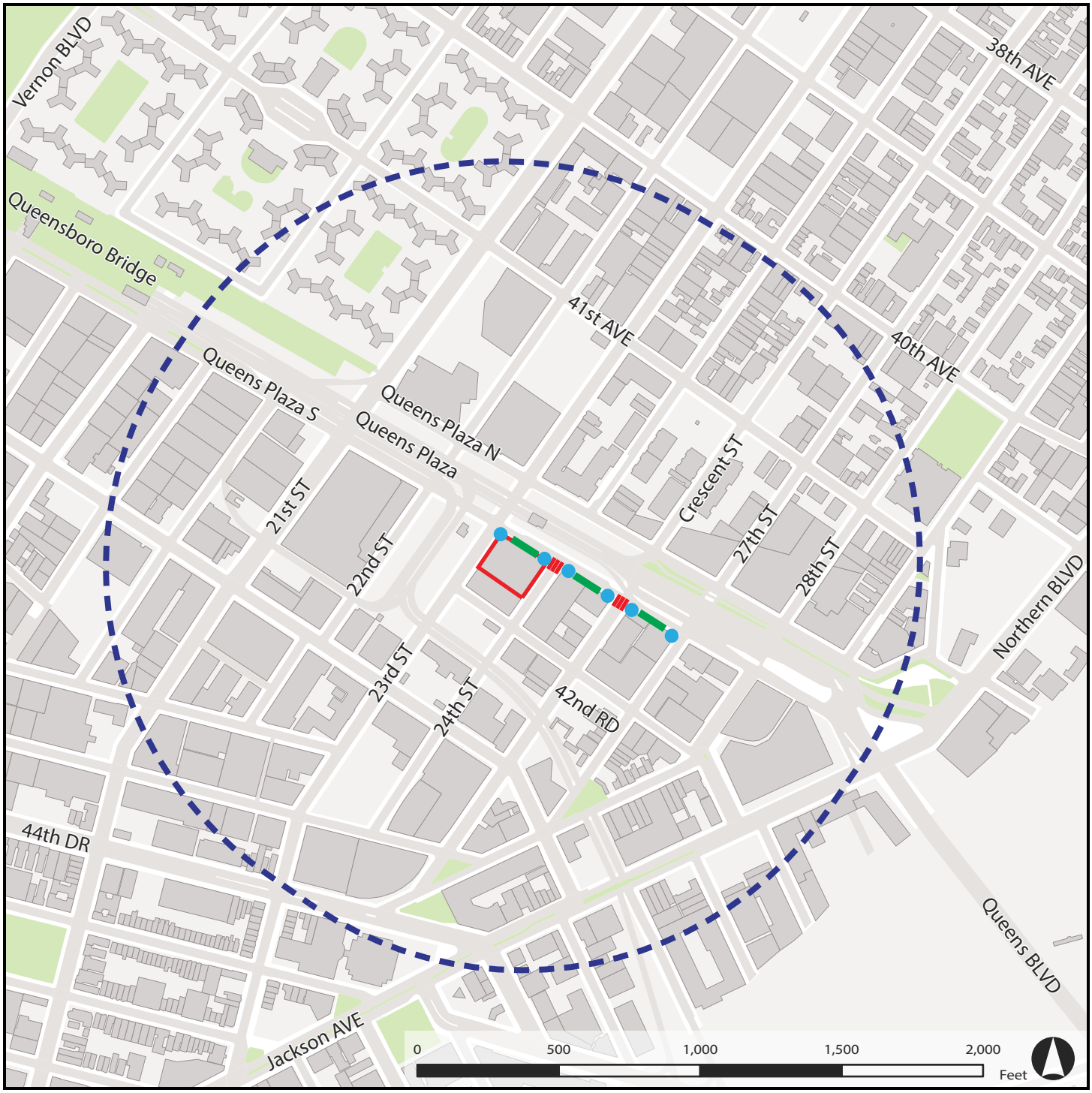
Project Site

Peak Hour Volume

TOTAL PROJECT GENERATED PEDESTRIAN TRIPS
WEEKDAY PM PEAK HOUR

Figure 15

23-10 Queens Plaza South



Source: 2020 PLUTO, NYCDCP

Project Site

0.25-Mile Radius

Sidewalk

Corner

Crosswalk

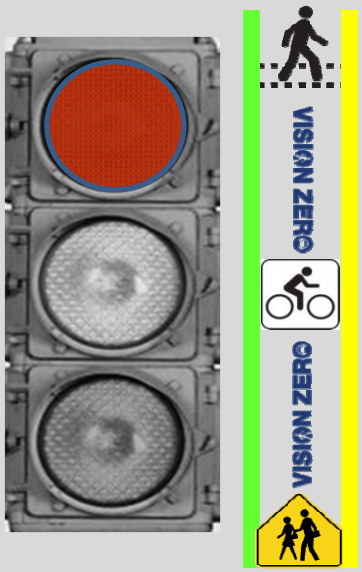
PROPOSED ACTIONS
PEDESTRIAN STUDY LOCATIONS

Figure 16

23-10 Queens Plaza South

Appendix B-2
Signal Warrant Study Booklet

New York City
Department of Transportation



INTERSECTION
CONTROL ANALYSIS

23rd St & 42nd Road, Queens

LOCATION

REF#:

NEW YORK CITY DOT

I.C.U.



ELECTED OFFICIAL ACKNOWLEDGEMENTS

Location: _____

Borough: _____ **Reference #:** _____ **CB#:** _____

DOT Case #: _____

Date notification was Sent out _____

BOROUGH PRESIDENT _____

CONGRESS MEMBER _____

STATE SENATOR _____

ASSEMBLY MEMBER _____

COUNCIL MEMBER _____

C.B. MANAGER _____

REQUESTOR

_____

Traffic Signal Approval

Location

☐ **APPROVAL**

☐ **DENIAL**

Emily Zhang
Signals Reviewer

Date

☐ **APPROVAL**

☐ **DENIAL**

Roumany Wasef, P.E., PMP
Director - ICU

Date

Intersection Control Unit

Location: _____

File#: _____

DOT Case#: _____

Request: _____

Requestor: _____

Determination Date: _____

Determination: _____

Comments: **Based upon our evaluation of data collected, it is our judgment that a traffic signal be approved under Warrant.** _____

_____

WASEF, ROUMANY, P.E.

REF#: _____

THE STUDY SHOULD INCLUDE THE FOLLOWING:

CHECK LIST

- ☐ **Data Warehouse map with legend & measurements**
  (Location of required Traffic Control Device to be highlighted with a red circle.)
- ☐ **School Map (if required)**
  (Location of required Traffic Control Device to be highlighted with a red circle.)
- ☐ **Condition diagram** *(and proposed mitigations,markings, etc.)*
- ☐ **Block Front Survey. (if required)**
- ☐ **Field observation report**
- ☐ **Volume counts**
- ☐ **Gap** *(if required)*
- ☐ **Speed** *(& memorandums in speed enforcement- if required)*
- ☐ **Analysis Factor Sheet**
- ☐ **Memorandums (on proposed mitigations, pavement markings)**

FIELD OBSERVATION REPORT

LOCATION : 23rd Street and 42nd Road

BOROUGH: Queens **REF:**

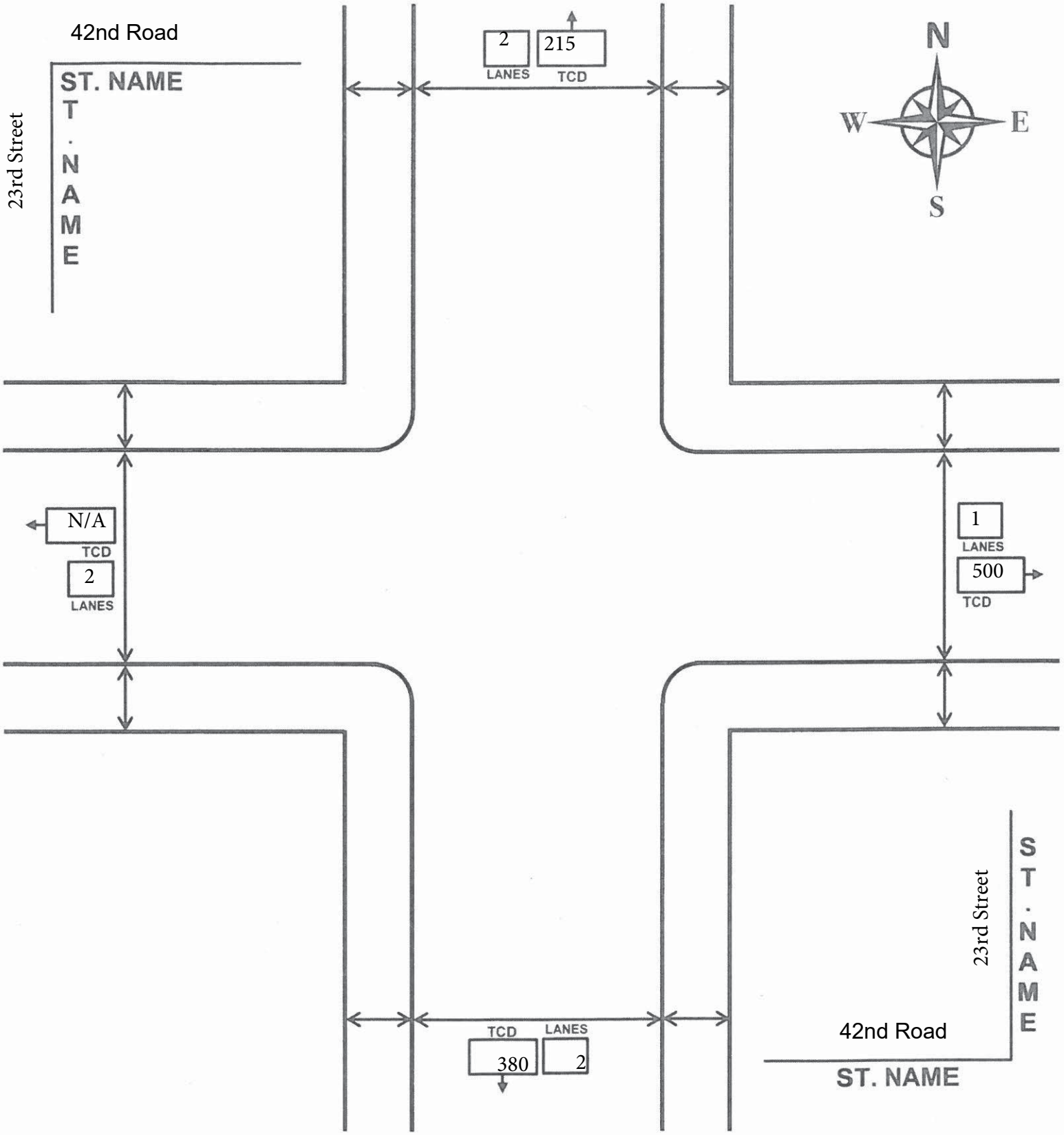
DATE: November 2020 **OBSERVER:** Sam Schwartz Engineering

OPERATIONAL CHECKLIST:	**NO / YES**	**WHERE AND WHAT ?**
1. Are there any obstructions blocking the view of opposing or conflicting vehicles?	Y	NB approach elevated rail column partially obstructs view of WB traffic
2. Are drivers complying with intersection controls?		not observed
3. Are Speed limit signs posted?	N	
4. Is vehicle delay causing a safety problem?	N	
5. Is the approach grade causing safety problems?	N	
6. Do you recommend more stringent enforcement?	N	
7. Are signs faded, turned or defaced?	N	
8. Do pavement markings have to be refurbished? (e.g.: STOP Messages, STOP lines, Lane lines, Crosswalks, etc.)	N/A	
9. Is there a need to install channelization to reduce conflict areas?	N	
10. Do signs existing in field match current C-order?	Y	
11. Do signs existing in field match current SC-order?	Y	
12. Other		

NOTE: **(N/A) NOT APPLICABLE**

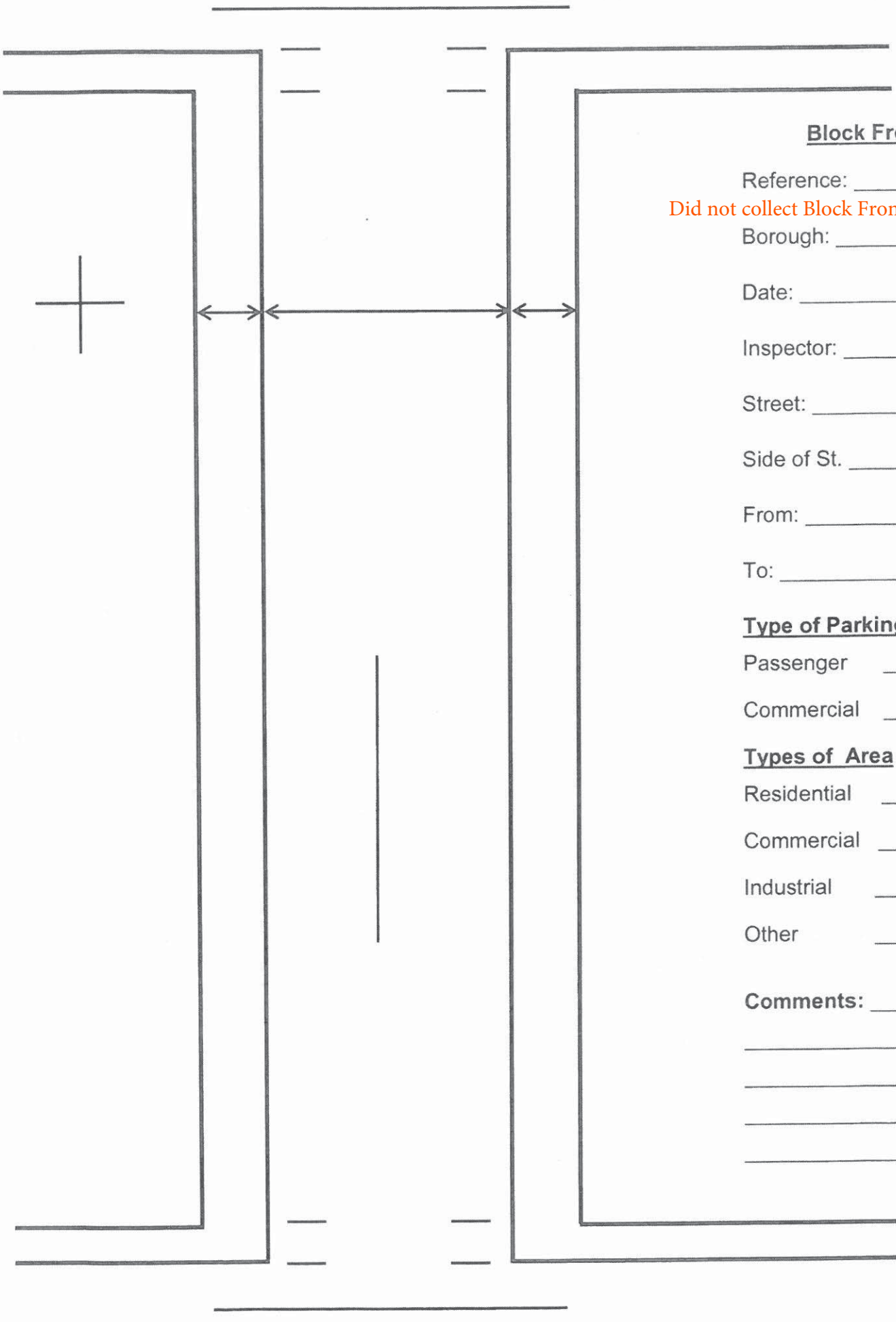
CONDITION DIAGRAM

Ref#_____ Date: Nov 2020 Day: Weekday Inspector: Sam Schwartz Engineering



TCD = DISTANCE TO NEAREST TRAFFIC CONTROL DEVICE (Feet)
LANES = NUMBER OF MOVING LANES

NOTE: Indicate all curb regulations, street furniture, curb cuts, and all pavement markings related to the intersection. The # of lanes observed are the traveled lanes for each approach; parking lanes are not included. Show street direction by placing an arrow(s), indicating direction on all legs of the intersection.



Block Front Survey

Reference: _____

Did not collect Block Front Survey

Borough: _____

Date: _____

Inspector: _____

Street: _____

Side of St. _____

From: _____

To: _____

Type of Parking

Passenger _____%

Commercial _____%

Types of Area

Residential _____%

Commercial _____%

Industrial _____%

Other _____%

Comments: _____

_____

_____

_____

_____

Type text here

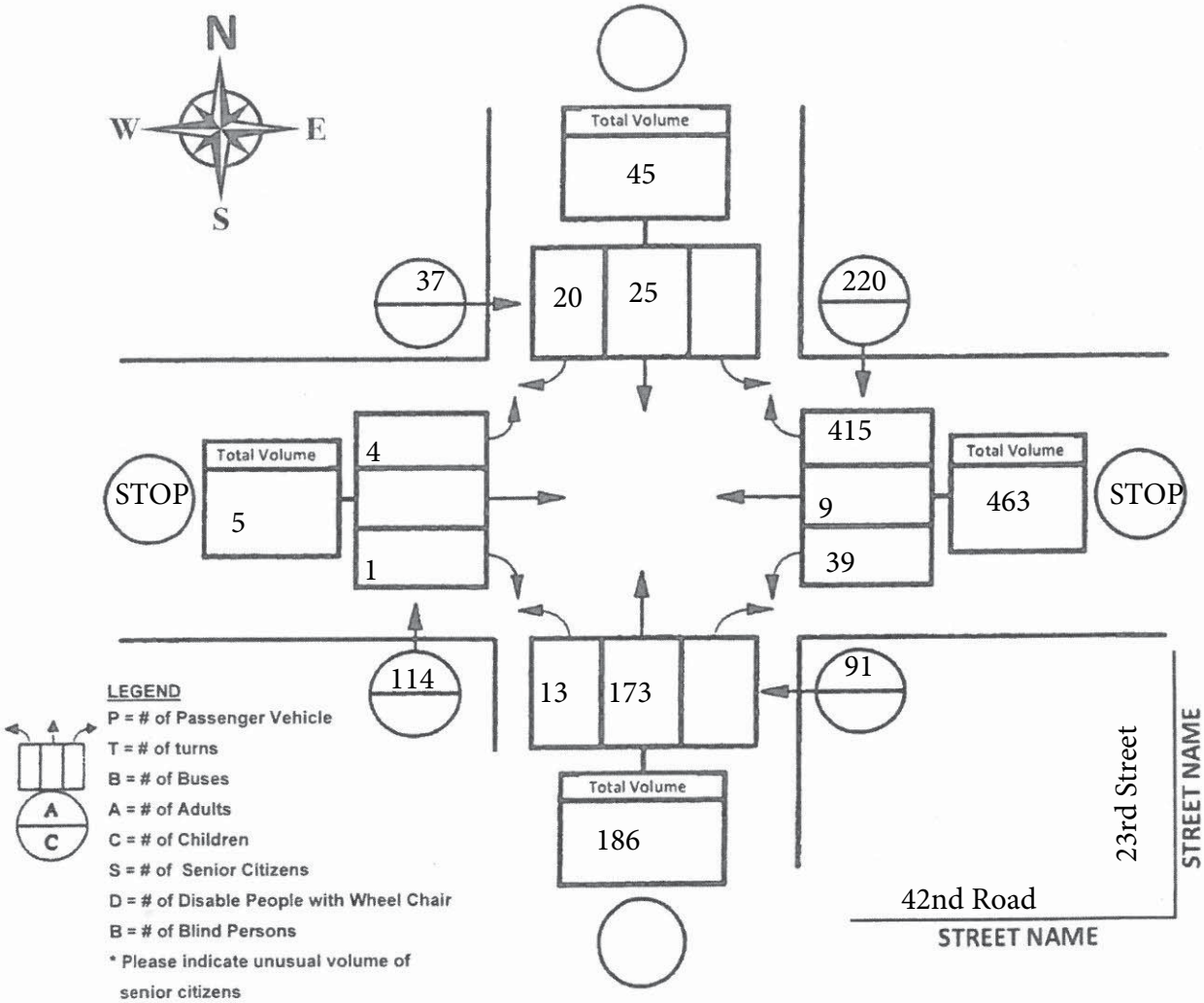
VOLUME CLASSIFICATION AND TURNING COUNTS

DATE: 2024 With Action

TIME: 7-8am

DAY : Weekday

INSPECTOR: Sam Schwartz Engineering



COMMENTS:

MAJOR	231
MINOR	468
PEDS	128 crossing main street
SC	
Other	

Note: *Bikes in Crosswalks are assumed as pedestrians, While Bikes in roads and in bike-lanes are assumed as Vehicles*

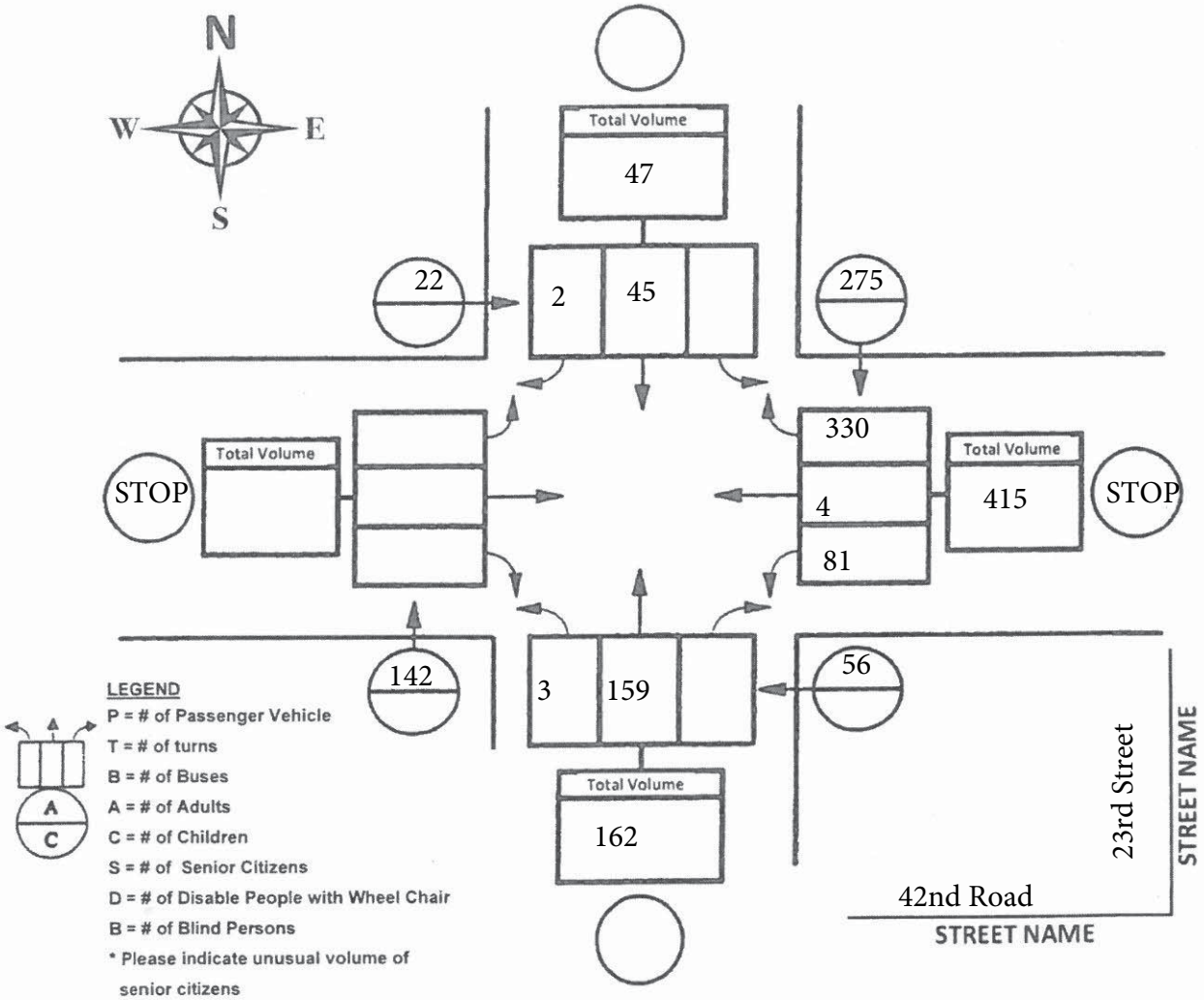
VOLUME CLASSIFICATION AND TURNING COUNTS

DATE: 2024 With Action

TIME: 8-9am

DAY : Weekday

INSPECTOR: Sam Schwartz Engineering



COMMENTS:

Vehicle volumes from the eastbound (driveway) approach are not available for this time period

MAJOR	209
MINOR	415
PEDS	78 crossing main street
SC	
Other	

Note: *Bikes in Crosswalks are assumed as pedestrians, While Bikes in roads and in bike-lanes are assumed as Vehicles*

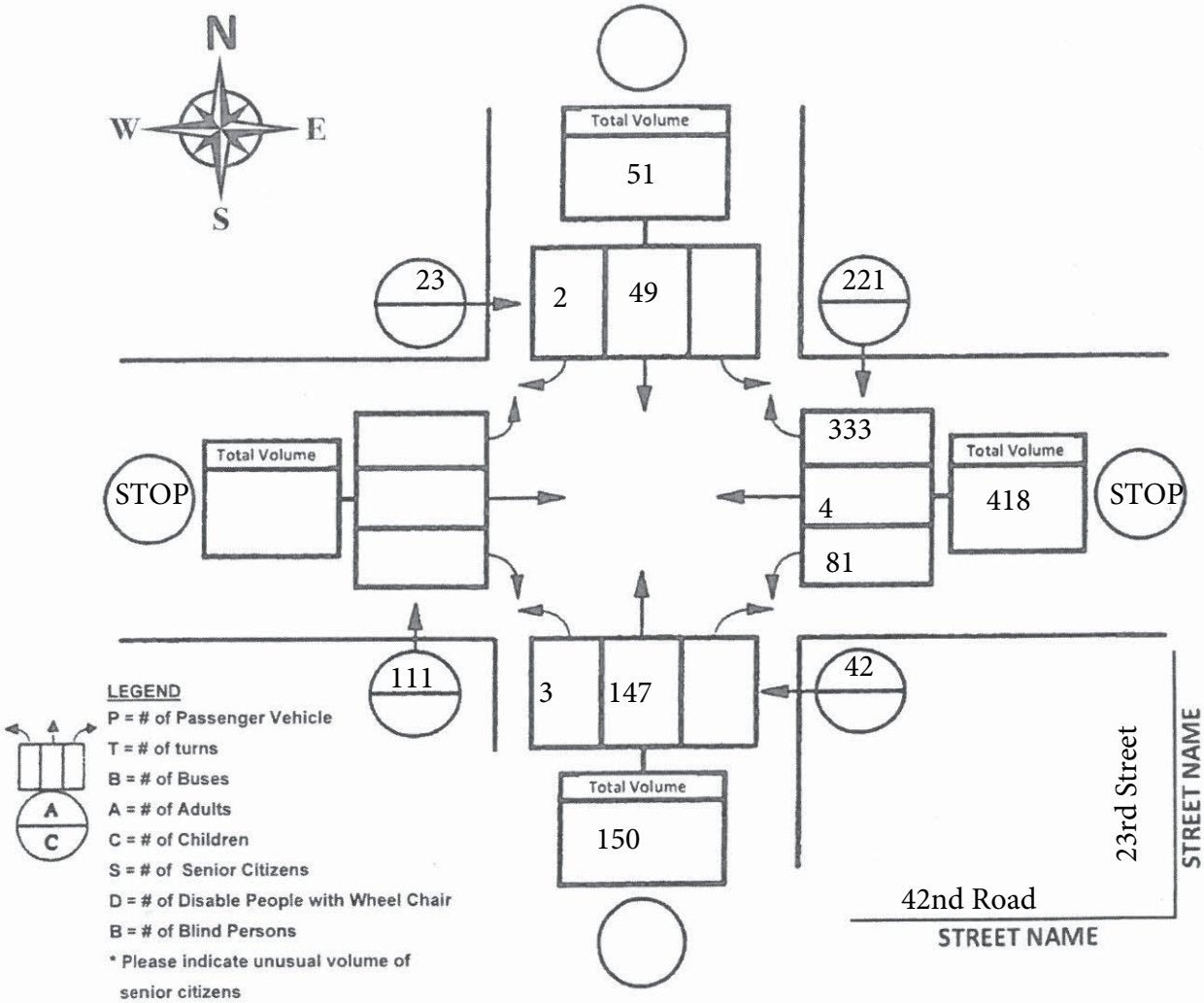
VOLUME CLASSIFICATION AND TURNING COUNTS

DATE: 2024 With Action

TIME: 9-10am

DAY : Weekday

INSPECTOR: Sam Schwartz Engineering



COMMENTS:

Vehicle volumes from the eastbound (driveway) approach are not available for this time period

MAJOR	201
MINOR	418
PEDS	65 crossing main street
SC	
Other	

Note: *Bikes in Crosswalks are assumed as pedestrians, While Bikes in roads and in bike-lanes are assumed as Vehicles*

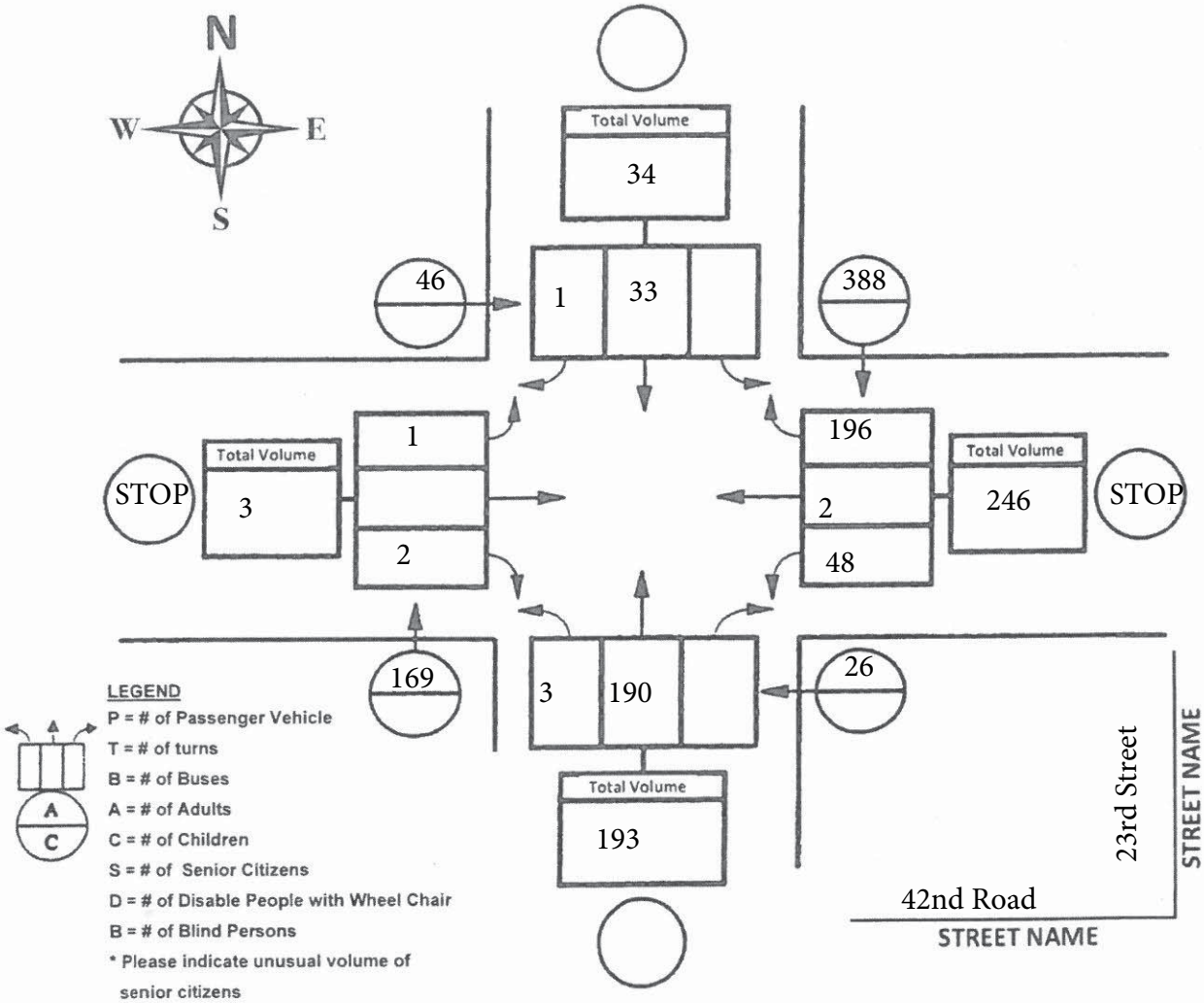
VOLUME CLASSIFICATION AND TURNING COUNTS

DATE: 2024 With Action

TIME: 12-1pm

DAY : Weekday

INSPECTOR: Sam Schwartz Engineering



COMMENTS:

MAJOR	227
MINOR	249
PEDS	72 crossing main street
SC	
Other	

Note: *Bikes in Crosswalks are assumed as pedestrians, While Bikes in roads and in bike-lanes are assumed as Vehicles*

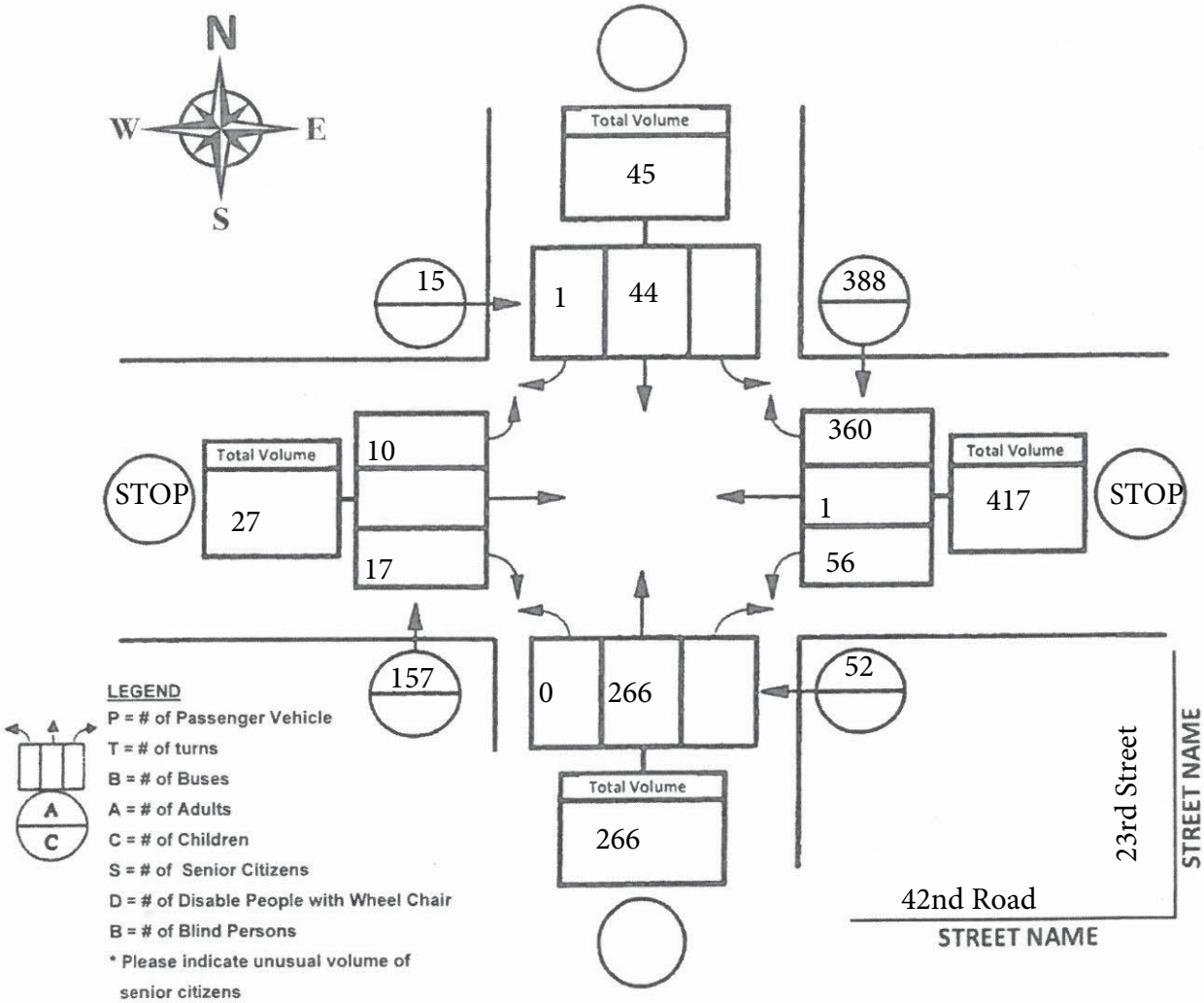
VOLUME CLASSIFICATION AND TURNING COUNTS

DATE: 2024 With Action

TIME: 4:30-5:30pm

DAY : Weekday

INSPECTOR: Sam Schwartz Engineering



COMMENTS:

Pedestrian volumes for 4:30 - 5:30 PM vehicular peak hour are from the pedestrian peak hour of 5:00 - 6:00 PM consistent with the EAS

MAJOR	311
MINOR	444
PEDS	67 crossing main street
SC	
Other	

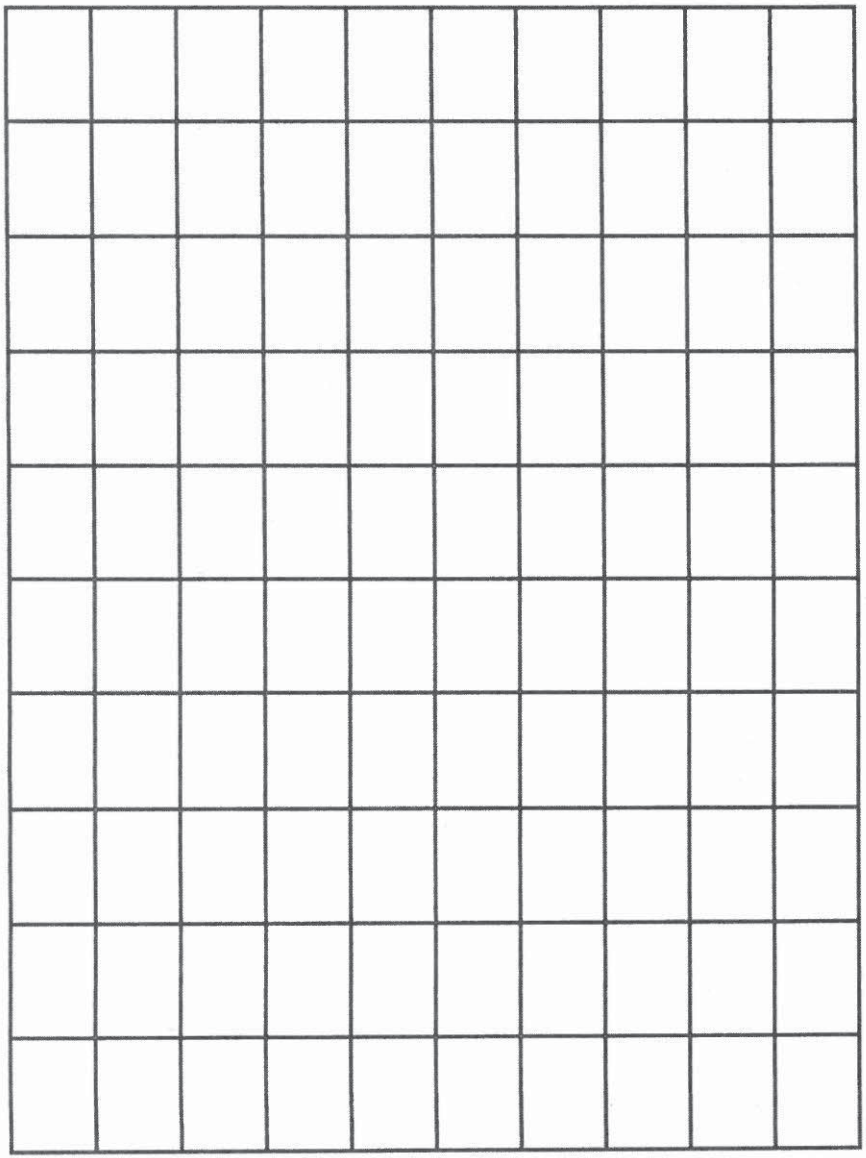
Note: *Bikes in Crosswalks are assumed as pedestrians, While Bikes in roads and in bike-lanes are assumed as Vehicles*

REF# _____ START: _____ END: _____

WEATHER: _____ DIRECTION: _____

MPH SPEED LIMIT: _____ POSTED: _____

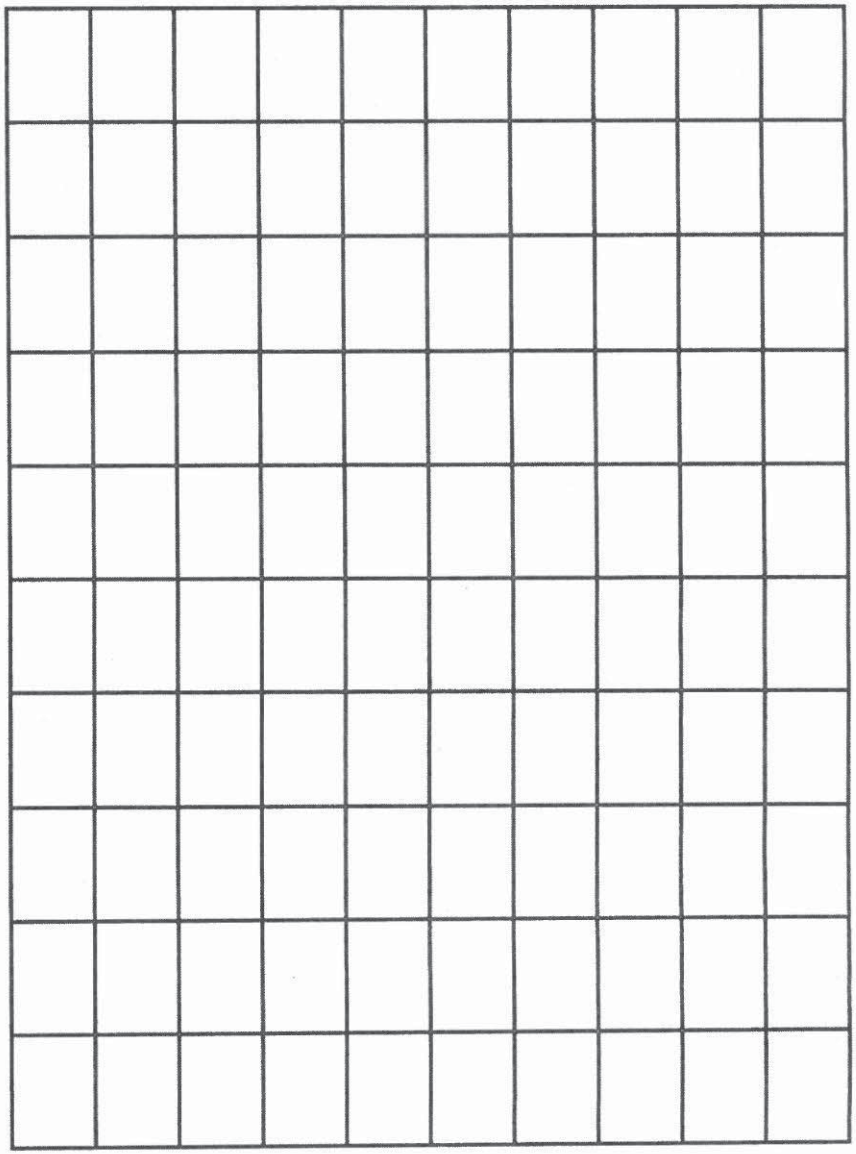
(MAJOR)



DATE: _____ START: _____ END: _____

DAY: _____ DIRECTION: _____

UNPOSTED: _____



INTERSECTION CONTROL DATA COLLECTION ANALYSIS (FACTOR) SHEET

LOC.	23rd Street & 42nd Road			**GAP STUDY** (For Warrant #'s 4 and 5) DATES and TIMES		**Totals # of Gaps**	**VS. # of Minutes**
REF#:		**INSP:**					60 Min.
Posted Speed Limit 25 **MPH**		**RADAR STUDY(Warrants 1A, 1B, 2, 3, 4 & SC Location)**					60 Min.
		85% SPEED	**N/B :** N/A **S/B :** N/A				
DISTANCE TO THE NEAREST TRAFFIC CONTROL DEVICE ON MAJOR ST. **WARRANT # 6** (> 1000' both Direction)		**Warrant # 5 & California Warrant**					
		School X-Walk?	**NO**				60 Min.
		School X-ing Guard?	**NO**				60 Min.
380 **Ft. to** 43rd Ave	215 **Ft. to** QPS	**Does A/W Stop Exist?**	**NO**				60 Min.

DATE	TIME	OBSERVED VOLUMES: VEHICULAR VOLUMES (OBSERVED) Warr.s 1A,1B,2,3		OBSERVED VOLUMES: PEDEDSRIAN VOLUMES (OBSERVED) Warrant # 4				WARRANT CRITERIA: WARRANT # 5 School Crossing		WARRANT CRITERIA: California Warrant	
		MAJOR Observed	Higher MINOR Observed	All PEDS observed	50% volume reduction if Ped speed < 3.5 fps	70% Factor if 85th percentile speed on major > 35 mph	All Senior Citizens observed	All School Children observed	20 or More School Children	100 or more School Children	500 or more Vehicles on Major
Weekday	7am-8am	230	468	461							
Weekday	8am-9am	209	415	495							
Weekday	9am-10am	201	418								
Weekday	12pm-1:00pm			629							
Weekday	4:30pm-5:30pm	311	444	612							

MAJOR STREET 23rd Street

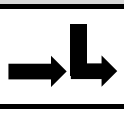
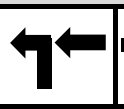
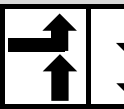
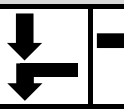
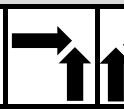
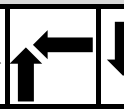
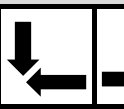
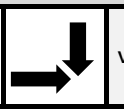
MINOR STREET 42nd Road

MAJOR STREET VOLUMES ARE THE TOTAL OF BOTH APPROACHES

MINOR STREET VOLUMES ARE FOR THE HIGHER APPROACH ONLY

ATR'S Ordered?	EACH MAJOR APPROACH	EACH MINOR APPROACH	WARRANT CRITERIA: MAJOR STREET VOLUMES 100% abs	80% acc	70% spd	OBSERVED	MINOR STREET VOLUMES 100% abs	80% acc	70% spd	OBSERVED	ATR.s 8th Highest HR Major	Minor
NO	HAS 1 Lanes	HAS 1 Lanes										
WARRANT-1A Minimun Vehicular Volume	1 LANE	1 LANE	500	400	350	311	150	120	105	417		
	2 OR MORE LANE	1 LANE	600	480	420		150	120	105			
	2 OR MORE LANE	2 OR MORE LANE	600	480	420		200	160	140			
	1 LANE	2 OR MORE LANE	500	400	350		200	160	140			
WARRANT-1B Interuption of Conditions Traffic	1 LANE	1 LANE	750	600	525	311	75	60	53	417		
	2 OR MORE LANE	1 LANE	900	720	630		75	60	53			
	2 OR MORE LANE	2 OR MORE LANE	900	720	630		100	80	70			
	1 LANE	2 OR MORE LANE	750	600	525		100	80	70			

Abs= ***absolute basic minimum hourly volume.*** **Acc=** ***W/5 Preventable accidents= 80% of abs.*** **spd=** ***w/ speed of 40 mph = 70% of abs***

ACC. Time Period	Were Accidents Ordered? N/A	WARRANT # 7. CRASH EXPERIENCE- ACCIDENT TYPES									Actual Preventable after Accidents Received
12/36 Month Period	Total Acc's	Tital Received									PEDS hit by Vehicles from Major	
TO												
TO												
TO												

Highest # of Preventable in any 12/36 month period: - **# Of Prev. Acc.**

Do You Have 5 or more Preventable and 300 ft or less to a T/S on the Major? NO If Yes, Possible Crash Warrant.

Do adjacent coordinated signals on major provide sufficient gaps? N/A If Yes, Traffic Signal may not be needed

**Count Classification is needed for L/T and LPI Study .*

Comments: All volumes included in this table are projected 2024 With Action volumes from the EAS.

Improvements/changes:

WARRANT ANALYSIS

Warrant 1, Eight-Hour Vehicular Volume — Not Met

Condition A – Minimum Vehicular Volume									
		MAJOR STREET VOLUMES				MINOR STREET VOLUMES			
Number of Lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher volume minor-street approach (one direction only)			
Major Street	Minor Street	100%[a] Absolute Minimum Required	80%[b] of minimum Reduction for 5 Acc.	70%[c] of minimum Reduction for 40+MPH	ATR'S 8TH Highest Hour	100%[a] Absolute Minimum Required	80%[b] of minimum Reduction for 5 Acc.	70%[c] of minimum Reduction for 40+MPH	ATR'S 8TH Highest Hour
1……	1……	500	400	350	311	150	120	105	417
2 or more….	1……	600	480	420		150	120	105	
2 or more….	2 or more….	600	480	420		200	160	140	
1……	2 or more….	500	400	350		200	160	140	

Condition B – Interruption of Continuous Traffic									
		MAJOR STREET VOLUMES				MINOR STREET VOLUMES			
Number of Lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher volume minor-street approach (one direction only)			
Major Street	Minor Street	100%[a] Absolute Minimum Required	80%[b] of minimum Reduction for 5 Acc.	70%[c] of minimum Reduction for 40+MPH	ATR'S 8TH Highest Hour	100%[a] Absolute Minimum Required	80%[b] of minimum Reduction for 5 Acc.	70%[c] of minimum Reduction for 40+MPH	ATR'S 8TH Highest Hour
1……	1……	750	600	525	311	75	60	53	417
2 or more….	1……	900	720	630		75	60	53	
2 or more….	2 or more….	900	720	630		100	80	70	
1……	2 or more….	750	600	525		100	80	70	

[a] **Basic minimum hourly volume**

[b] **Used for combination of Condition A and B after adequate trial of other remedial measures.**

[C] **May be used when the major street speed exceeds 40 mph(70km/h) or in an isolated community with a population of less than 10,000.**

Accident Reduction Table for Warrant 1: Eight-Hour Vehicular Volume

N/A

Condition A – Minimum Vehicular Volume

Number of Lanes for moving traffic on each approach		MAJOR STREET VOLUMES Vehicles per hour on major street (total of both approaches)							MINOR STREET VOLUMES Vehicles per hour on higher volume minor-street approach (one direction only)						
Major Street	**Minor Street**	100% a	96% b	92% c	88% d	84% e	80% f	70% g	100% a	96% b	92% c	88% d	84% e	80% f	70% g
1……..	**1……..**	500	480	460	440	420	400	350	150	144	138	132	126	120	105
2 or more	**1…….**	600	576	552	528	504	480	420	150	144	138	132	126	120	105
2 or more	**2 or more**	600	576	552	528	504	480	420	200	192	184	176	168	160	140
1…….	**2 or more**	500	480	460	440	420	400	350	200	192	184	176	168	160	140

Condition B – Interruption of Continuous Traffic

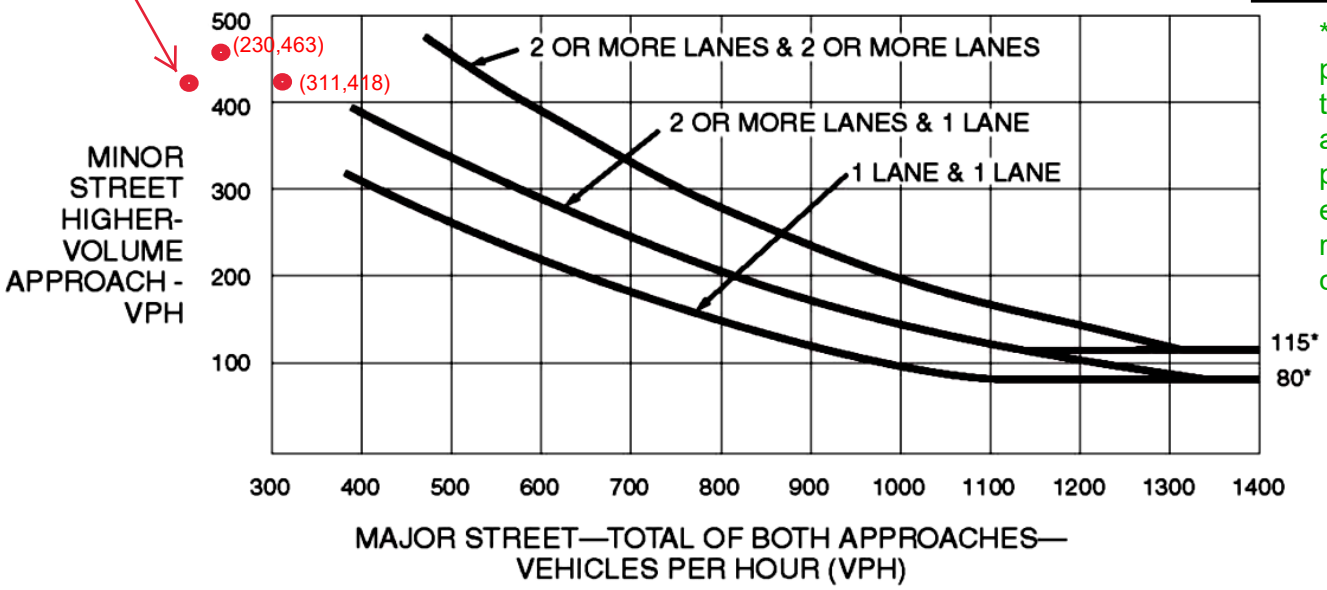
Number of Lanes for moving traffic on each approach		MAJOR STREET VOLUMES Vehicles per hour on major street (total of both approaches)							MINOR STREET VOLUMES Vehicles per hour on higher volume minor-street approach (one direction only)						
Major Street	**Minor Street**	100% a	96% b	92% c	88% d	84% e	80% f	70% g	100% a	96% b	92% c	88% d	84% e	80% f	70% g
1……..	**1……..**	750	720	690	660	630	600	525	75	72	69	66	63	60	53
2 or more	**1…….**	900	864	828	762	756	720	630	75	72	69	66	63	60	53
2 or more	**2 or more**	900	864	828	792	756	720	630	100	96	92	88	84	80	70
1…….	**2 or more**	750	720	690	660	630	600	525	100	96	92	88	84	80	70

aAbsolute minimum hourly volume
b4% reduction for 1 preventable accident
c8% reduction for 2 preventable accidents
d12% reduction for 3 preventable accidents
e16% reduction for 4 preventable accidents
f20% traffic volume reduction for 5 preventable accidents
g30% traffic volume reduction may be used when the 85th percentile major street speed exceeds 40 mph (70 km/h) or in an isolated community with a population of less than 10,000.

8am and 9am hours effectively plot at the same point (209,415 & 201,418)

Met*

Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



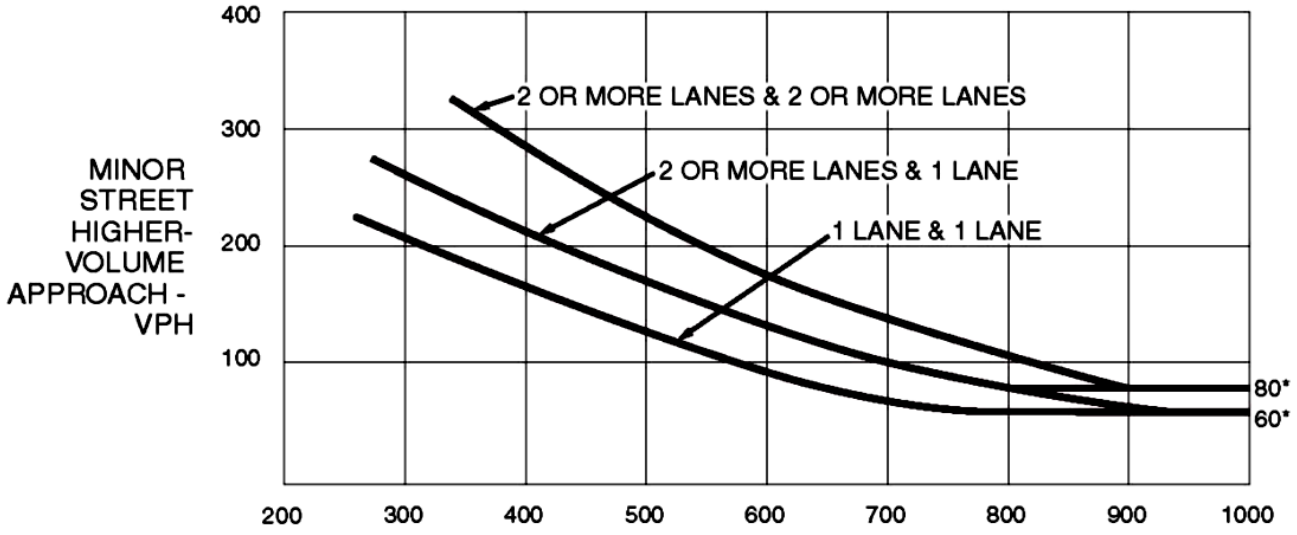
*Two points plot above the curve and two points plot effectively right on the curve.

*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

N/A

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

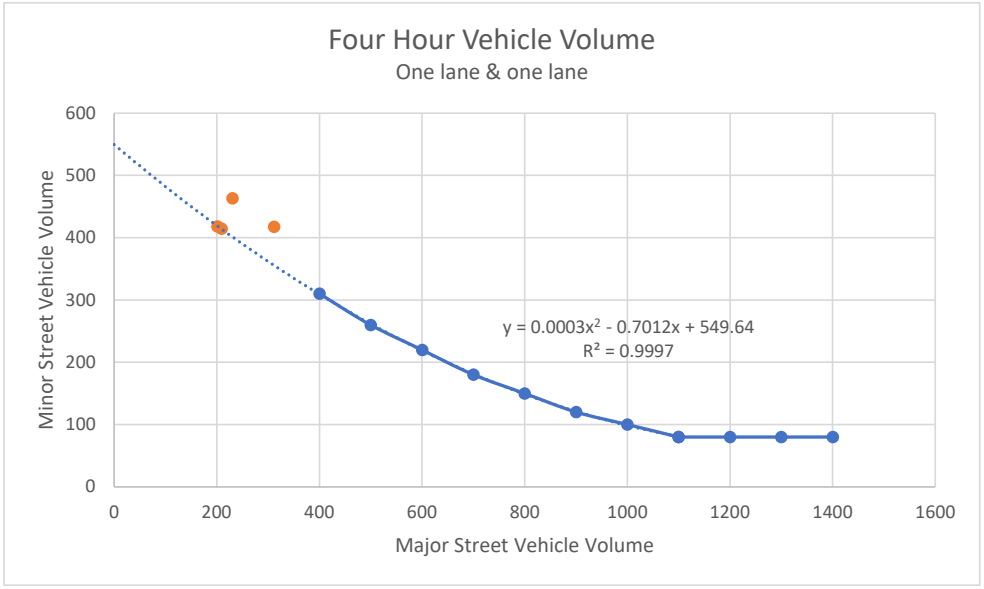
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

Hour Start	VPH Major	VPH Minor
7:00:00 AM	230	463
8:00:00 AM	209	415
9:00:00 AM	201	418
4:30:00 PM	311	418

One lane and one lane		Two or more lanes and one lane		Two or more lanes and two or more lanes	
VPH on the major street (Total of both approaches)	VPH on the minor street (Higher volume approach)	VPH on the major street (Total of both approaches)	VPH on the minor street (Higher volume approach)	VPH on the major street (Total of both approaches)	VPH on the minor street (Higher volume approach)
1400	80	1400	80 or 115*	1400	115
1300	80	1300	90 or 115*	1300	115
1200	80	1200	100 or 115*	1200	145
1100	80	1100	120	1100	165
1000	100	1000	150	1000	200
900	120	900	175	900	240
800	150	800	200	800	275
700	180	700	250	700	340
600	220	600	290	600	390
500	260	500	340	500	460
400	310	400	390	400	Not available



WARRANT 3, PEAK HOUR: N/A

WARRANT # 3 condition A

Total volume for intersection W/3 Approaches = 650 or more VPH ( )
Total volume for intersection W/4 Approaches = 800 or more VPH ( )
Higher Minor Approach W/1 Lane = 100 or more VPH ( )
Higher Minor Approach W/2 Lane = 150 or more VPH ( )

INTERSECTION DELAY STUDY

TOTAL DELAY = TOTAL VEHICLES STOPPED X SAMPLING INTERVAL

= _____ X 15 = _____Veh. Sec.

AVERAGE DELAY PER APPROACH VEHICLE = TOTAL DELAY / APPROACH VOLUME = _____

= _____ Sec.

AVERAGE DELAY FOR WARRANT 3 = AVERAGE DELAY XPEAK HOUR VOLUME FROM MACHINECOUNTS

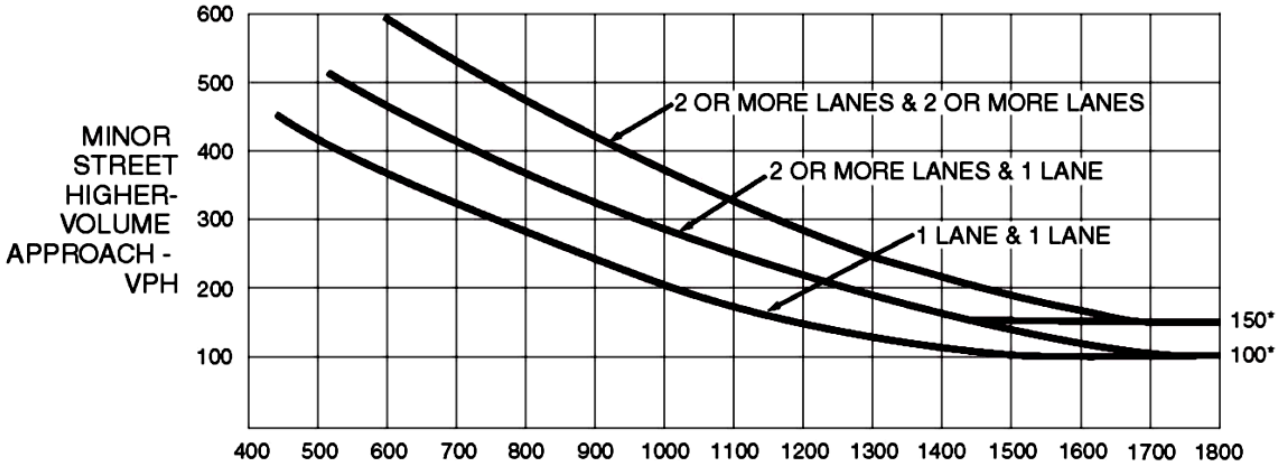
= _____ X _____

= _____ Veh. -Sec.

NOTE:
The above information will be used for Warrant 3 – Peak Hour analysis.

N/A

Figure 4C-3. Warrant 3, Peak Hour

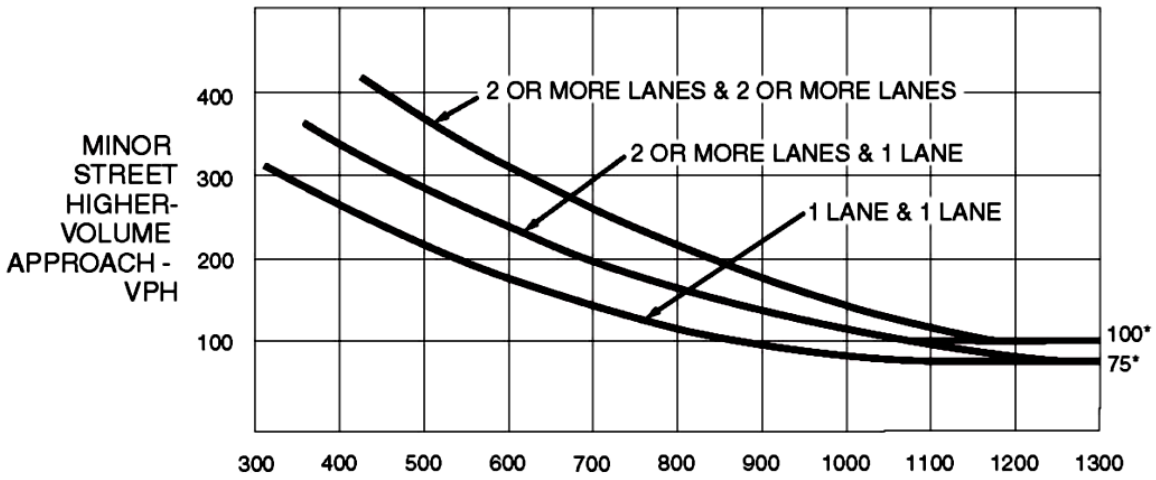


*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

N/A

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

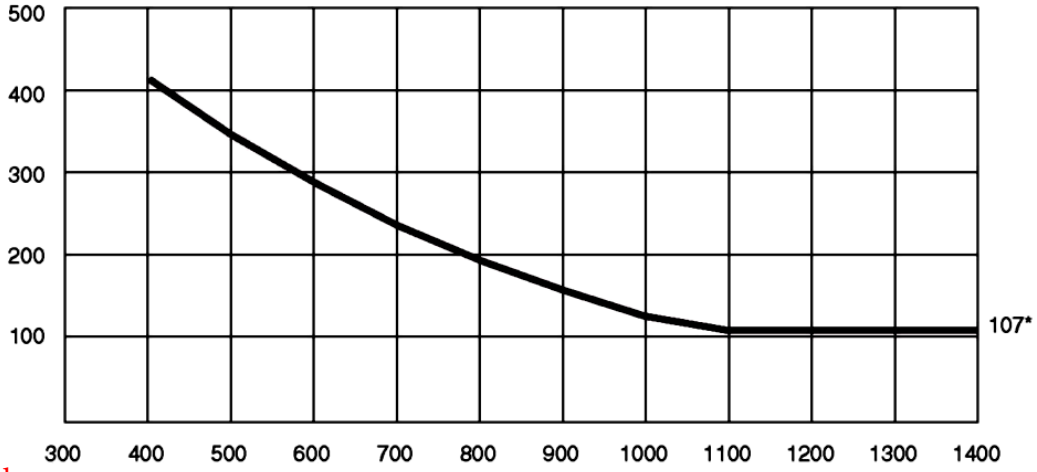
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Not Met

Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume

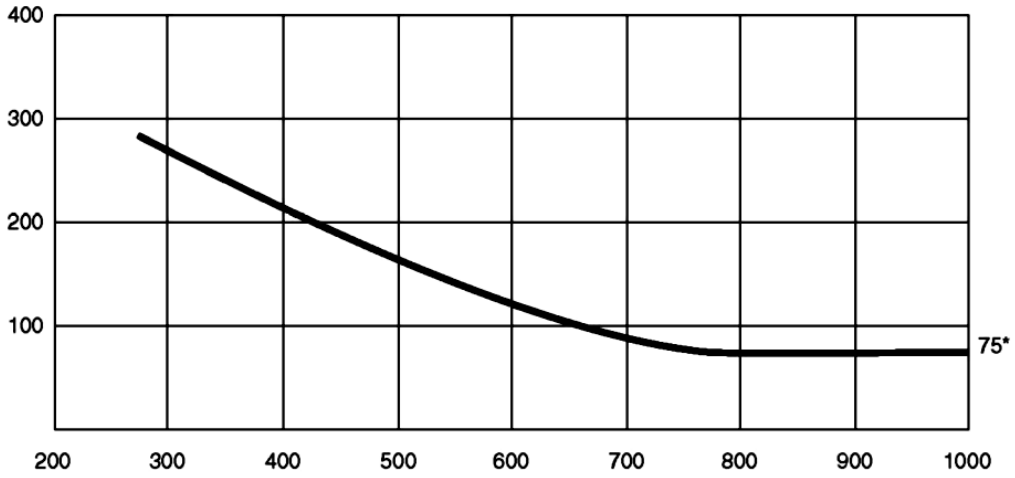


All four hours would plot below the curve in this area.

*Note: 107 pph applies as the lower threshold volume.

N/A

Figure 4C-6. Warrant 4, Pedestrian Four-Hour Volume (70% Factor)

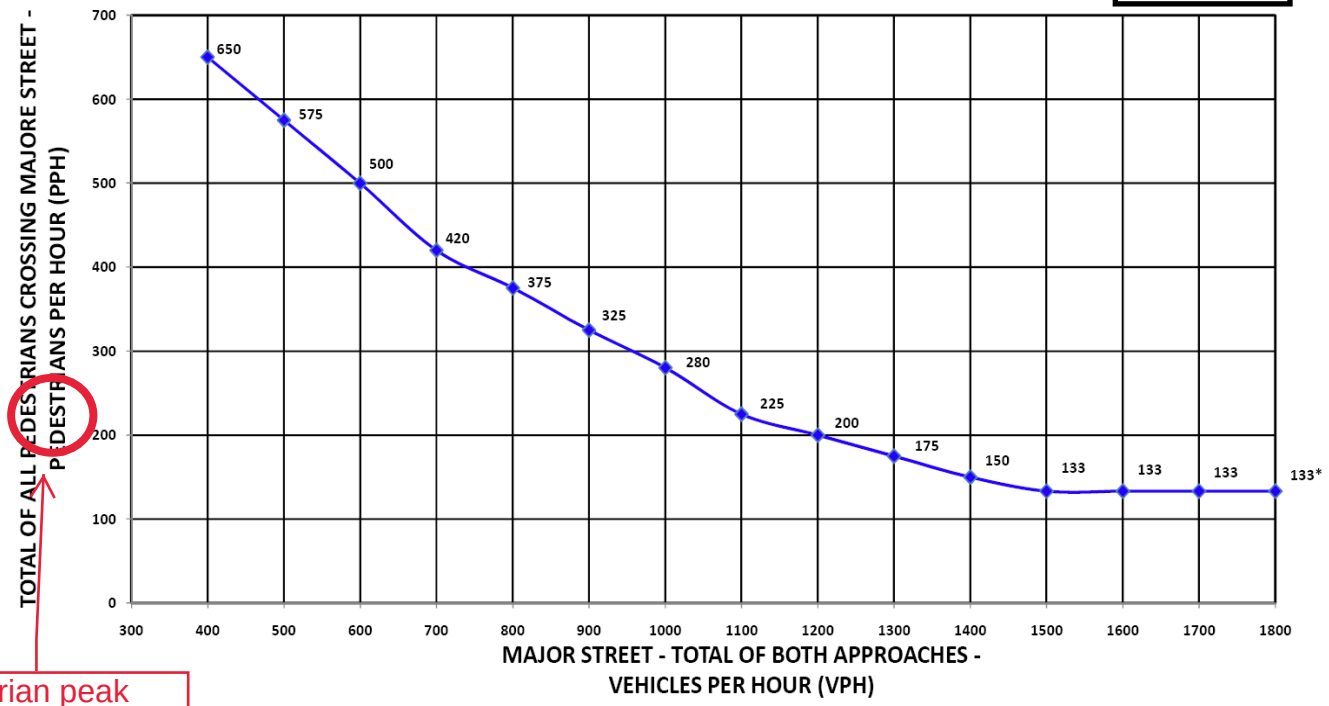


*Note: 75 pph applies as the lower threshold volume.

Warrant #4 - Peak Hour Pedestrian Factor Tables

Not Met

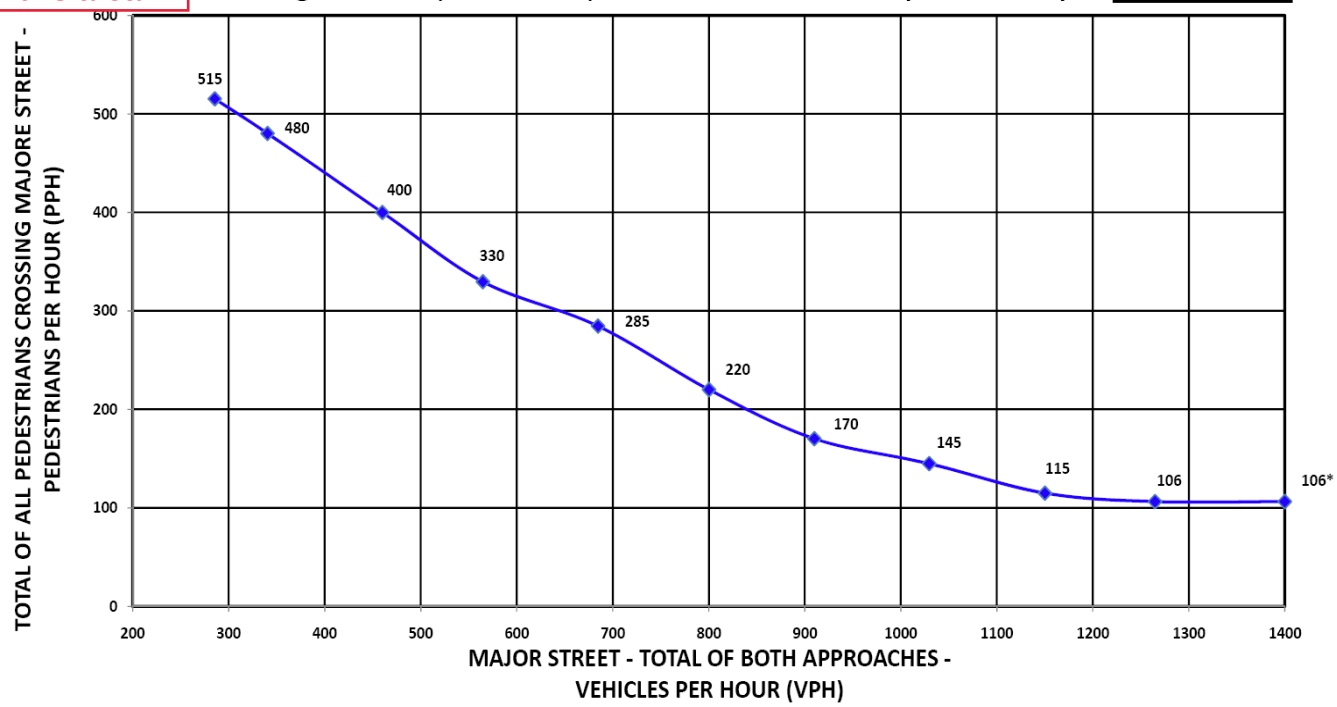
Figure 4C-7, Warrant 4, Pedestrian Peak Hour (100% Factor)



Pedestrian peak hour plots below curve in this area

N/A

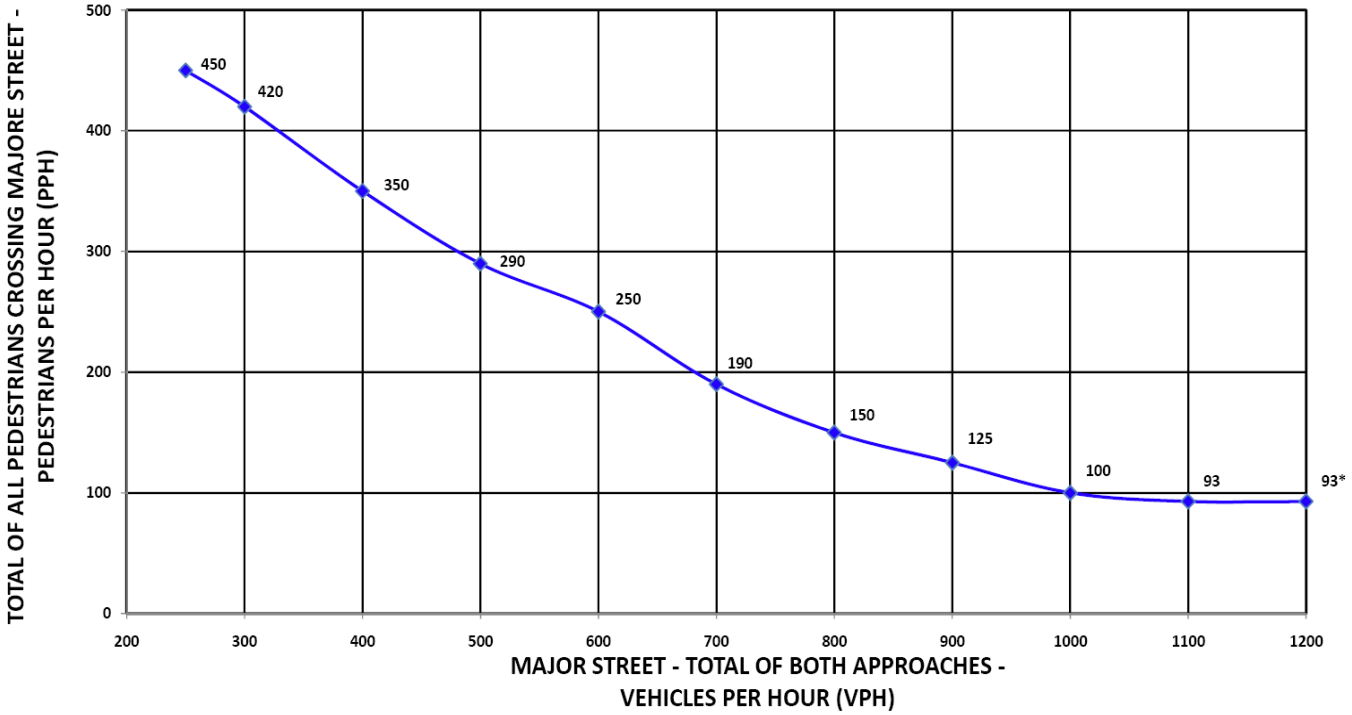
Figure 4C-7a, Warrant 4, Pedestrian Peak Hour (80% Factor)



The 80% factor graph shall be used for intersections having 1-2 preventable crashes in a 12-month period.

N/A

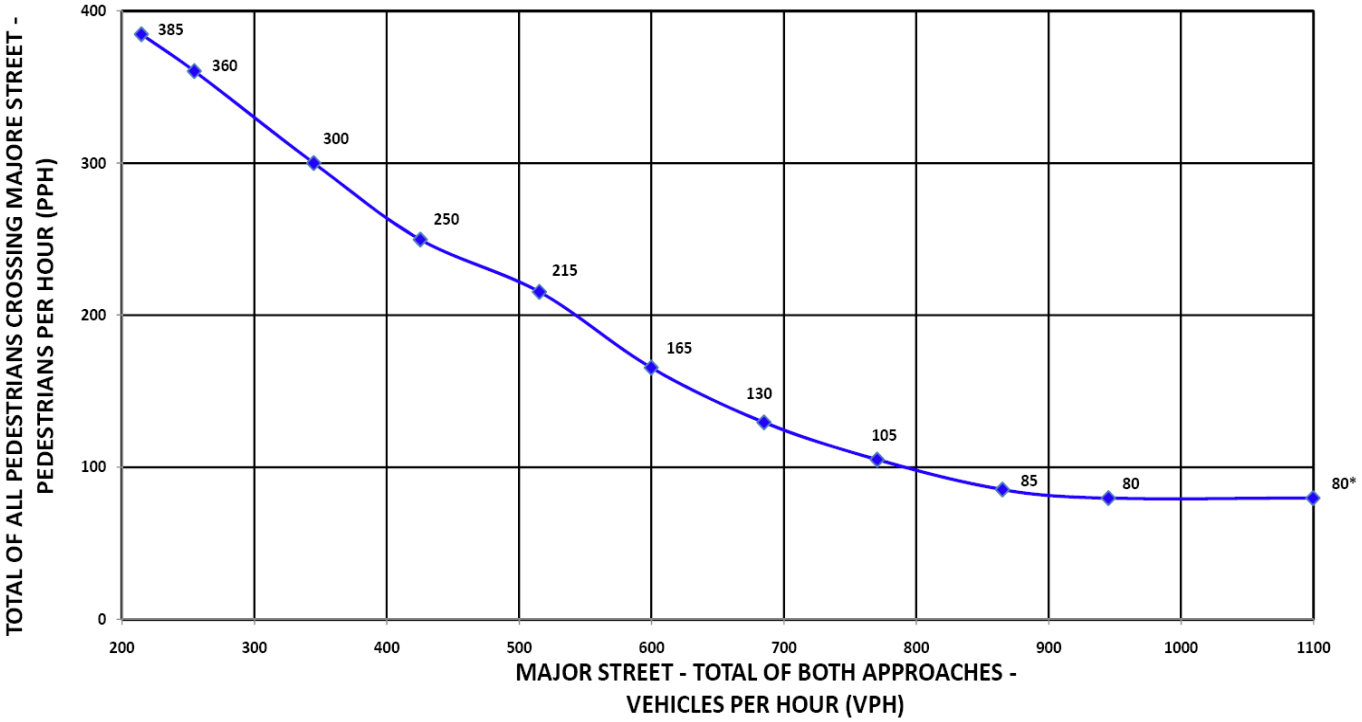
Figure 4C-7b, Warrant 4, Pedestrian Peak Hour (70% Factor)



The 70% factor graph shall be used for intersections having 3-5 preventable crashes in a 12-month period or if the 85th percentile speed on the major street exceeds 35 mph.

N/A

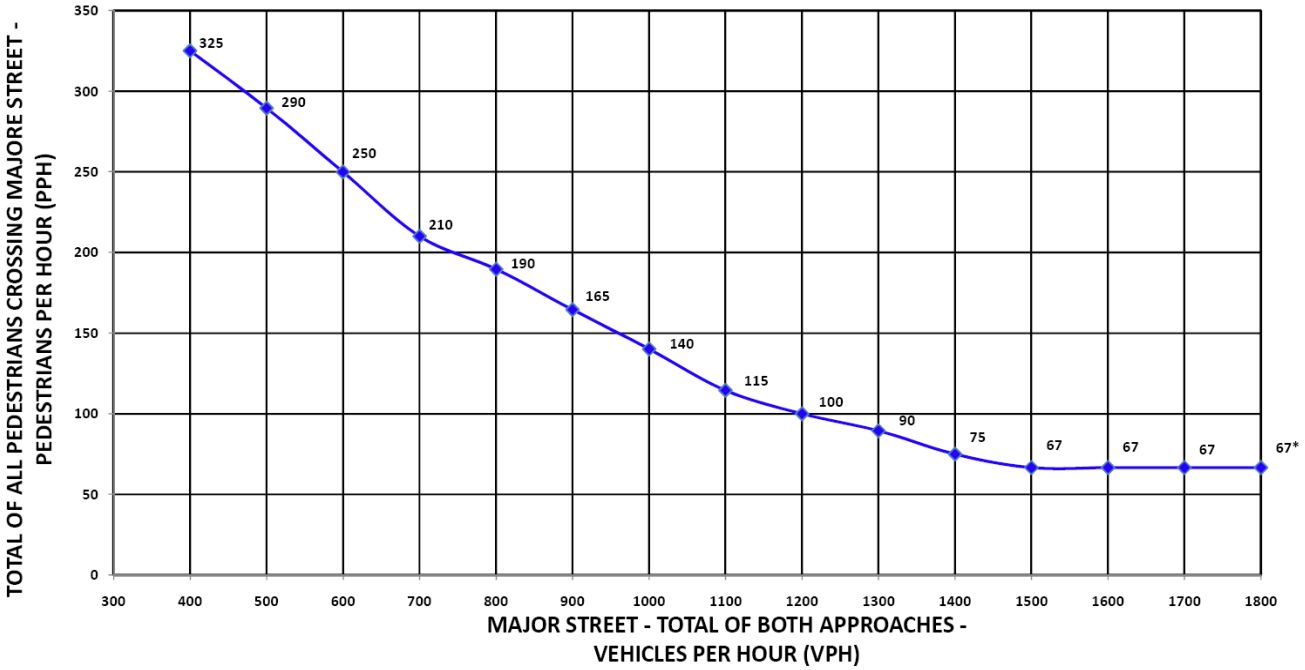
Figure 4C-7c, Warrant 4, Pedestrian Peak Hour (60% Factor)



The 60% factor graph shall be used for intersections having at least 1 preventable crash and 1 KSI in a 12-month period or more than 5 preventable crashes in a 12-month period.

N/A

Figure 4C-7d, Warrant 4, Pedestrian Peak Hour (50% Factor)



The 50% factor graph shall be used if the 15th-percentile crossing speed of pedestrians is less than 3.5 fps or if 15% of the crossing population is school children and/or senior pedestrians.

Not Met

SECTION 4C.05 WARRANT 4, PEDESTRIAN VOLUME:

Support:

01 The Pedestrian Volume signal warrant is intended for application where the traffic volume on a major street is so heavy that pedestrians experience excessive delay in crossing the major street.

Standard:

02 **The need for a traffic control signal at an intersection or midblock crossing shall be considered if an engineering study finds that one of the following criteria is met:**

A. For each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) all fall above the curve in Figure 4C-5; or

B. For 1 hour (any four consecutive 15-minute periods) of an average day, the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) falls above the curve in any of Figure 4C-7, 4C-7a, 4C-7b¸4C-7c & 4C-7d.

Option:

03 If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 35 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000,Figure 4C-6 may be used in place of Figure 4C-5 to evaluate Criterion A in Paragraph 2, and Figure 4C-8 may be used in place of Figure 4C-7 to evaluate CriterionB in Paragraph 2.

WARRANT 5, SCHOOL CROSSING:

N/A

Section 4C.06 Warrant 5, School Crossing

The School Crossing signal warrant is intended for applications where the fact that Schoolchildren cross the major street is the principal reason to consider installing a traffic control signal.

The word "Schoolchildren" includes elementary through High School students

The need for a traffic control signal shall be considered when an engineering study of the frequency and adequacy of gaps in the vehicular traffic stream as related to the number and size of groups of school children at an established school crossing across the major street shows that the number of adequate gaps in the traffic stream during the period when the school children are using the crossing is less than the number of minutes in the same period and there are a minimum of 20 Schoolchildren during the highest crossing hour.

School Crossing Warrant (California Warrant):

N/A

The School Crossing Warrant (Warrant# 5) as contained in the federal Manual on Uniform Traffic Control Devices (MUTCD) is dependent on the frequency and adequacy of gaps in the traffic stream. At certain intersections with designated school crosswalks, gaps cannot be measured due to the presence of a school crossing guard, all way stop control, or other field conditions.

In such cases, if no other warrant contained in the MUTCD is satisfied, the engineer, upon review of the traffic conditions and physical characteristics of the intersection, can use guidelines outlined in the California Department of Transportation (CALTRANS) Traffic Manual. These guidelines are based on satisfying minimum vehicular and schoolchildren volume requirements. In an urban area, 500 vehicles (total in both directions on the major street) and 100 schoolchildren for each of any two hours (notnecessarily consecutive) are required.

California Warrant = A School Crossing with All-Way stop or School Crossing Guard present and 500 vehicles on major street and 100 schoolchildren crossing major street for each of any two hours.

WARRANT 6, COORDINATED SIGNAL SYSTEM:

Not Met

The need for a traffic control signal shall be considered if an engineering study finds that one of the following criteria is met:

A. On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning.

B. On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.

Note: *The Coordinated Signal System signal warrant should not be applied where the resultant spacing of traffic control signals would be less than 300 m (1000 ft).*

WARRANT 7, CRASH EXPERIENCE:

Not Met

The crash experience signal warrant conditions are intended for applications where the severity and frequency of crashes are the principal reason to consider installing a traffic signal.

The need for a traffic control signal shall be considered if an engineering study finds that all of the following criteria are met:

A. Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency; and

B. One of the following conditions apply to the reported crash history (where each reported crash considered is related to the intersection and apparently exceeds the applicable requirements for a reportable crash):

1. The number of reported angle crashes and pedestrian crashes within a one-year period equals or exceeds the threshold number in Table 4C-2 for total angle crashes and pedestrian crashes (all severities); or

2. The number of reported fatal-and-injury angle crashes and pedestrian crashes within a one-year period equals or exceeds the threshold number in Table 4C-2 for total fatal-and-injury angle crashes and pedestrian crashes ; or

3. The number of reported angle crashes and pedestrian crashes within a three-year period equals or exceeds the threshold number in Table 4C-3 for total angle crashes and pedestrian crashes (all severities); or

4. The number of reported fatal-and-injury angle crashes and pedestrian crashes within a three-year period equals or exceeds the threshold number in Table 4C-3 for total fatal-and-injury angle crashes and pedestrian crashes; and

C. For each of any 8 hours of an average day, the vehicles per hour (VPH) given in both of the 80 percent columns of Condition A or the VPH in both of the 80 percent columns of Condition B exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80 percent of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be onthe same approach during each of the 8 hours.

D. Crash experience should be applied when the resultant spacing of Traffic Control Signal would be 300ft or less & there are more preventable crashes as per table 4C-2 & 4C-3 below.

Table 4C-2. Minimum Number of Reported Crashes in a One Year Period

Urban Area					
Number of through lanes on each approach		Total of Angle and Pedestrian Crashes (all severities)[a]		Total of Fatal-and -Injury Angle And Pedestrian Crashes[a]	
Major Street	Minor Street	Four legs	Three Legs	Four Legs	Three Legs
1	1	5	4	3	3
2 or more	1	5	4	3	3
2 or more	2 or more	5	4	3	3
1	2 or more	5	4	3	3
Rural Area[b]					
Number of through lanes on each approach		Total of Angle and Pedestrian Crashes (all severities)[a]		Total of Fatal-and -Injury Angle And Pedestrian Crashes[a]	
Major Street	Minor Street	Four legs	Three Legs	Four Legs	Three Legs
1	1	4	3	3	3
2 or more	1	10	9	6	6
2 or more	2 or more	10	9	6	6
1	2 or more	4	3	3	3

[a] Angle crashes include all crashes that occur at an angle and involve one or more vehicles on the major streetand one or more vehicles on the minor street

[b] "Rural Area" value apply to intersections where the major-street speed exceeds 40 mph or intersections located in an isolated community with a population of less than 10,000.

Table 4C-3. Minimum Number of Reported Crashes in a Three Year Period

Urban Area					
Number of through lanes on each approach		Total of Angle and Pedestrian Crashes (all severities)[a]		Total of Fatal-and -Injury Angle And Pedestrian Crashes[a]	
Major Street	Minor Street	Four legs	Three Legs	Four Legs	Three Legs
1	1	6	5	4	4
2 or more	1	6	5	4	4
2 or more	2 or more	6	5	4	4
1	2 or more	6	5	4	4
Rural Area[b]					
Number of through lanes on each approach		Total of Angle and Pedestrian Crashes (all severities)[a]		Total of Fatal-and -Injury Angle And Pedestrian Crashes[a]	
Major Street	Minor Street	Four legs	Three Legs	Four Legs	Three Legs
1	1	6	5	4	4
2 or more	1	16	13	9	9
2 or more	2 or more	16	13	9	9
1	2 or more	6	5	4	4

[a] Angle crashes include all crashes that occur at an angle and involve one or more vehicles on the major streetand one or more vehicles on the minor street

[b] "Rural Area" value apply to intersections where the major-street speed exceeds 40 mph or intersections located in an isolated community with a population of less than 10,000.

Section 4C.09 Warrant 8, Roadway Network:

N/A

01 Installing a traffic control signal at some intersections might be justified to encourage concentration and organization of traffic flow on a roadway network.

Standard:

02 **The need for a traffic control signal shall be considered if an engineering study finds that the common intersection of two or more major routes meets one or both of the following criteria:**

A. The intersection has a total existing, or immediately projected, entering volume of at least 1,000 vehicles per hour during the peak hour of a typical weekday and has 5-year projected traffic volumes, based on an engineering study, that meet one or more of Warrants 1, 2, and 3 during an average weekday; or

B. The intersection has a total existing or immediately projected entering volume of at least 1,000 vehicles per hour for each of any 5 hours of a non-normal business day (Saturday or Sunday).

03 **A major route as used in this signal warrant shall have at least one of the following characteristics:**

A. It is part of the street or highway system that serves as the principal roadway network for through traffic flow.

B. It includes rural or suburban highways outside, entering, or traversing a city.

C. It appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study.

Section 4C.10 Warrant 9, Intersection Near a Grade Crossing:

N/A

Support:

01 The Intersection near a Grade Crossing signal warrant is intended for use at a location where none of the conditions described in the other eight traffic signal warrants are met, but the proximity to the intersection of a grade crossing on an intersection approach controlled by a STOP or YIELD sign is the principal reason to consider installing a traffic control signal.

Guidance:

02 *This signal warrant should be applied only after adequate consideration has been given to other alternatives or after a trial of an alternative has failed to alleviate the safety concerns associated with the grade crossing. Among the alternatives that should be considered or tried are:*
A. Providing additional pavement that would enable vehicles to clear the track or that would provide space for an evasive maneuver, or
B. Reassigning the stop controls at the intersection to make the approach across the track a non-stopping approach.

Standard:

03 **The need for a traffic control signal shall be considered if an engineering study finds that both of the following criteria are met:**

A. A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach; and

B. During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the minor-street approach that crosses the track (one direction only, approaching the intersection) falls above the applicable curve in Figure 4C-9 or 4C-10 for the existing combination of approach lanes over the track and the distance D, which is the clear storage distance as defined in Section 1A.13.

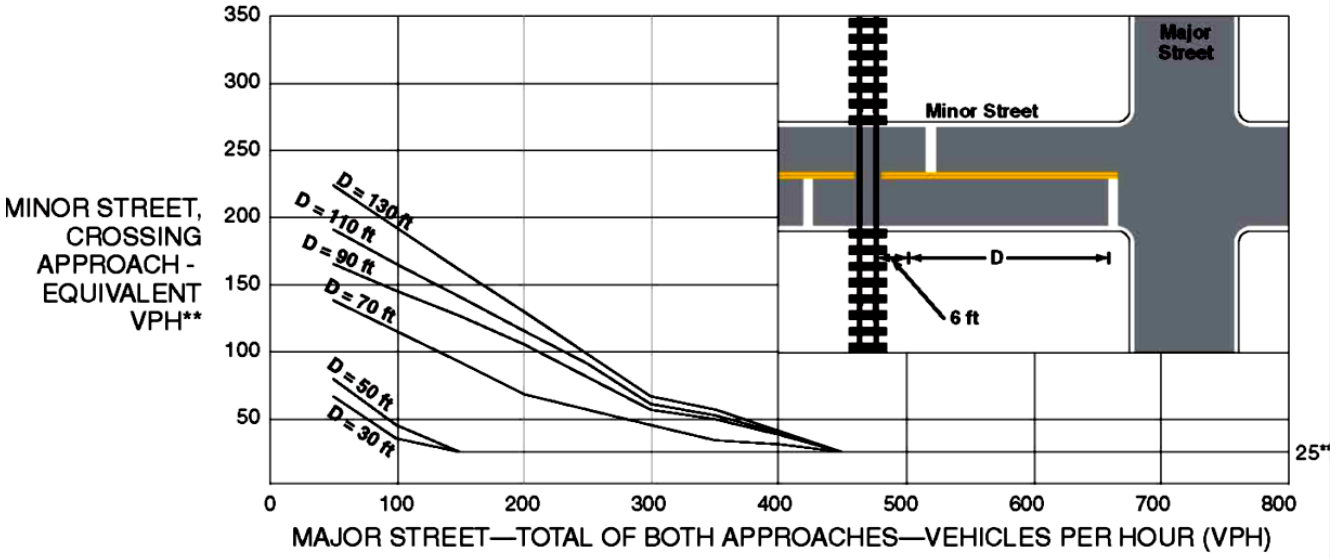
Guidance:

04 *The following considerations apply when plotting the traffic volume data on Figure 4C-9 or 4C-10:*

A. Figure 4C-9 should be used if there is only one lane approaching the intersection at the track crossing location and Figure 4C-10 should be used if there are two or more lanes approaching the intersection at the track crossing location.

N/A

Figure 4C-9. Warrant 9, Intersection Near a Grade Crossing (One Approach Lane at the Track Crossing)



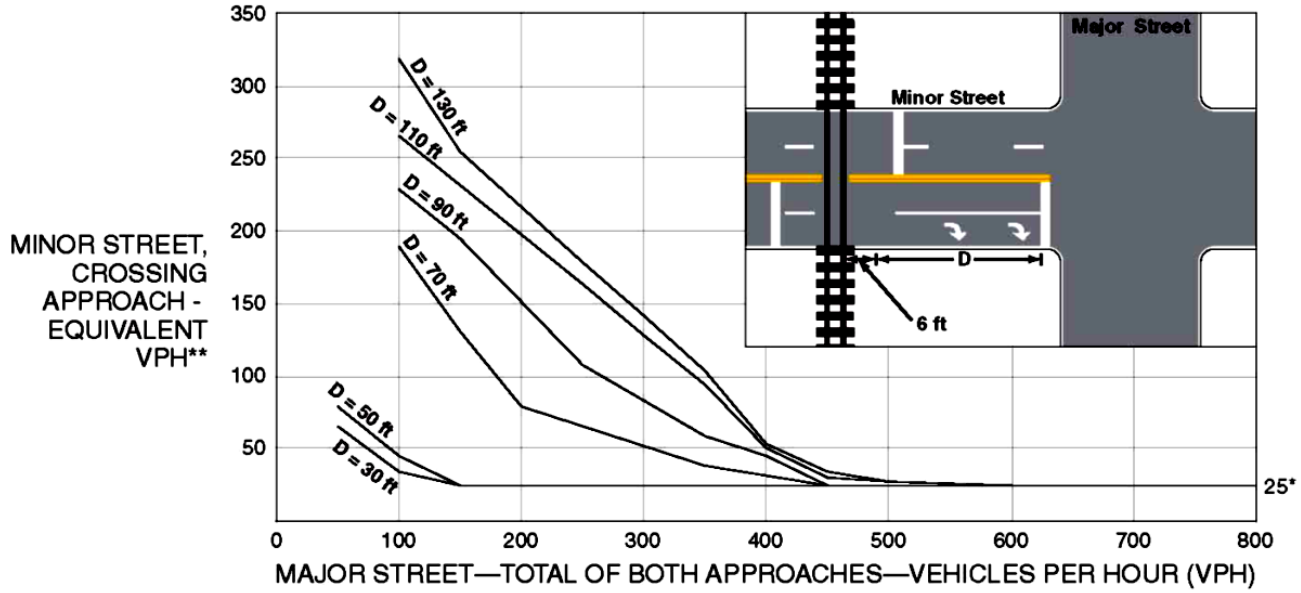
* 25 vph applies as the lower threshold volume

** VPH after applying the adjustment factors in Tables 4C-2, 4C-3, and/or 4C-4, if appropriate

---

N/A

Figure 4C-10. Warrant 9, Intersection Near a Grade Crossing (Two or More Approach Lanes at the Track Crossing)



* 25 vph applies as the lower threshold volume

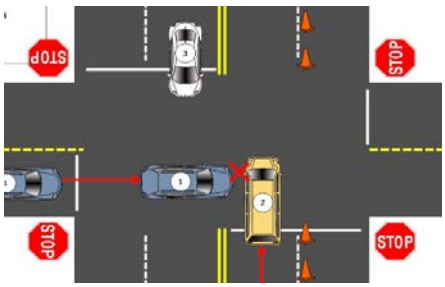
** VPH after applying the adjustment factors in Tables 4C-2, 4C-3, and/or 4C-4, if appropriate

Attach all relevant crash reports and summaries

Crash reports were not obtained

(Pedestrians hit by Vehicles crossing Major, Right Angle, and Left-Turn Crashes)

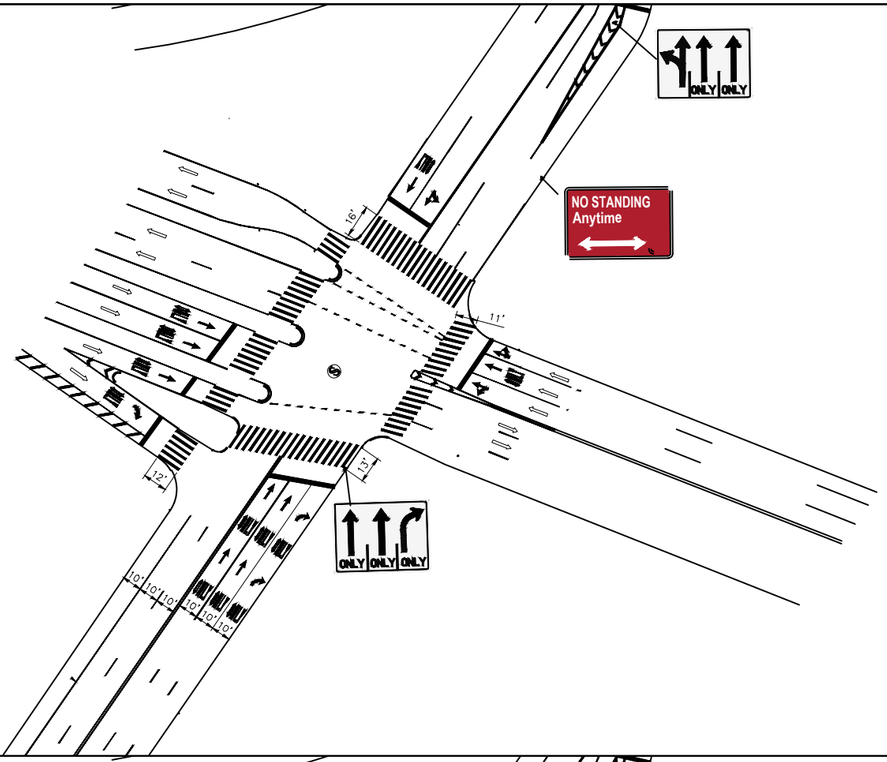




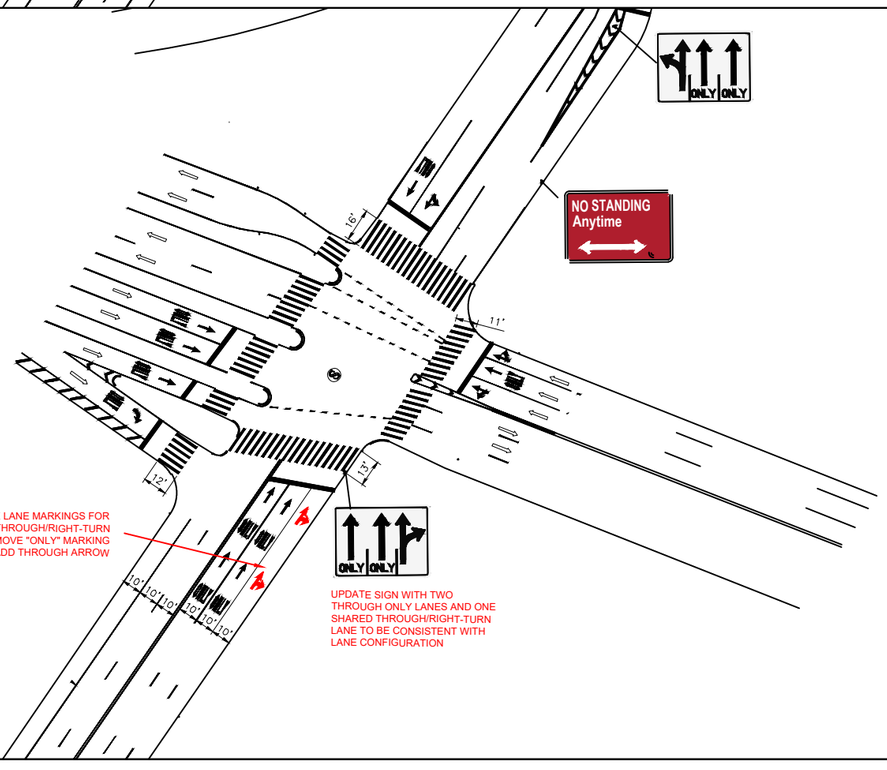
Prepared by: M. Rahman - 03/04/2015 – Updated- 7/10/2018

Appendix B-3

Project Improvement: Queens Boulevard & Jackson Avenue/ Northern Boulevard



NO ACTION CONDITION



DRAFT

WITH ACTION WITH IMPROVEMENTS CONDITION

M:\ 2020\1 NY\20-01-0010 23-10 Queens Plaza South\Graphics\CAD Files\20220614 23-10 Queens Plaza South Fieldsheets.dwg

CLIENT:

AAGS Holdings LLC c/o Dynamic Star
343 Taconic Road
Greenwich, CT 06831

PREPARED BY:

Sam Schwartz
322 EIGHTH AVENUE
5TH FLOOR
NEW YORK, NY 10001

SEAL:

FOR REVIEW & FILING
NOT FOR CONSTRUCTION

NO:	DATE:	REVISION:	APPROVED:

PROJECT:

23-10 QUEENS PLAZA SOUTH

LOCATED AT:

BOROUGH OF QUEENS, CITY AND STATE OF NEW YORK

TAX DESIGNATION:

-

BLOCK/LOT:

BLOCK 425, LOT 5

DRAWING TITLE:

QUEENS BOULEVARD / JACKSON AVENUE/NORTHERN BOULEVARD

NO ACTION vs. WITH ACTION WITH PROJECT IMPROVEMENTS CONDITION

DRAWN BY: **SL**

CHECKED BY: **AB**

SCALE: **N.T.S**

PROJECT NUMBER: **20-01-0010**

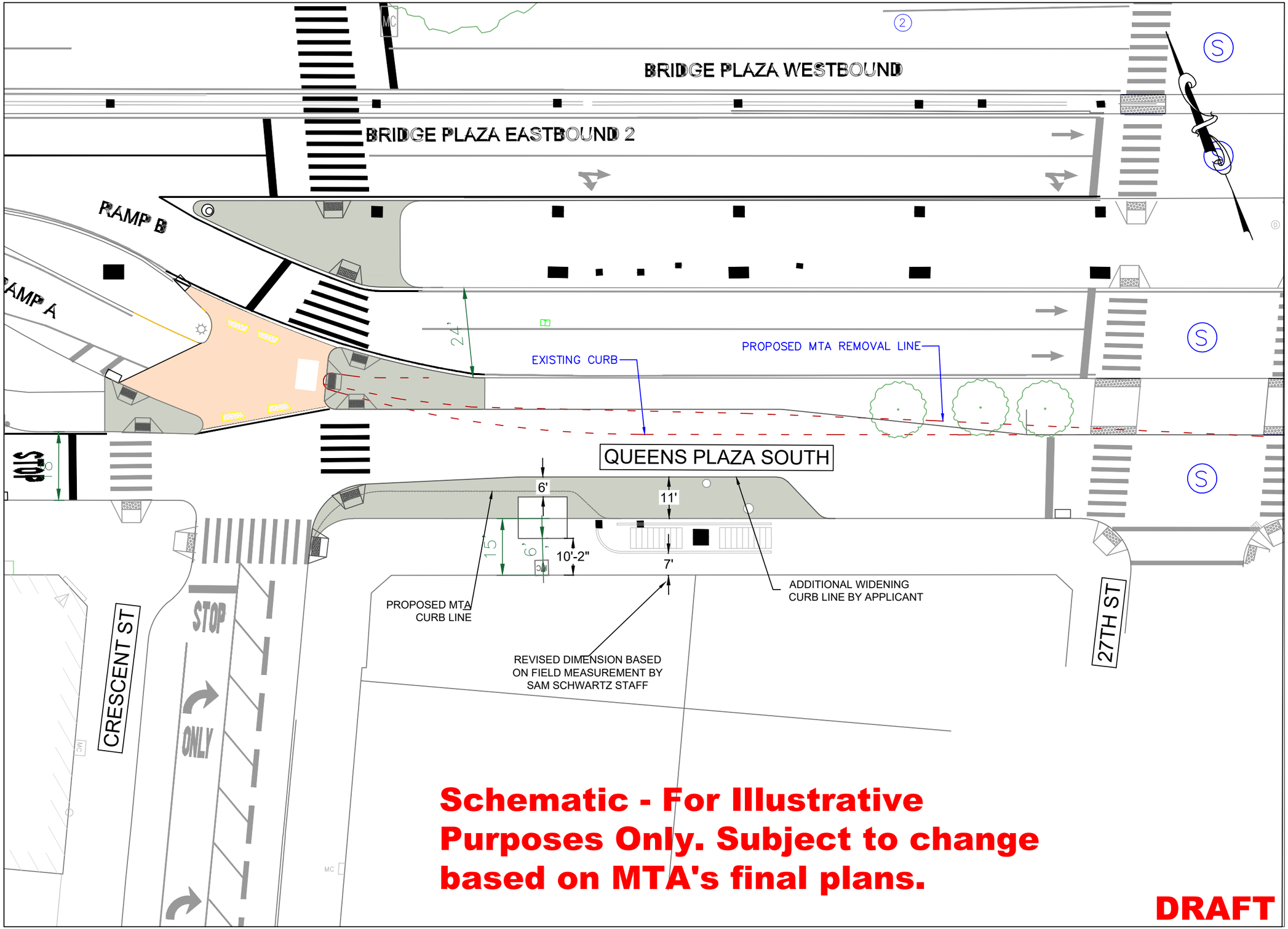
DATE: **June 14, 2022**

DRAWING NUMBER:

APPENDIX 10-3

Appendix B-4

Project Improvement: Queens Plaza South Between Crescent Street and 27th Street South Sidewalk Extension



M:\ 2020\1 NY\20-01-0010 23-10 Queens Plaza South\Graphics\CAD Files\20220812 QPS Sidewalk Mitigation.dwg

CLIENT:

AAGS Holdings LLC c/o Dynamic Star
343 Taconic Road
Greenwich, CT 06831

PREPARED BY:

Sam Schwartz
322 EIGHTH AVENUE
5TH FLOOR
NEW YORK, NY 10001

SEAL:

FOR REVIEW & FILING
NOT FOR CONSTRUCTION

NO:	DATE:	REVISION:	APPROVED:

PROJECT:

23-10 QUEENS PLAZA SOUTH

LOCATED AT:

BOROUGH OF QUEENS, CITY AND STATE OF NEW YORK

TAX DESIGNATION:

-

BLOCK/LOT:

BLOCK 425, LOT 5

DRAWING TITLE:

QUEENS PLAZA SOUTH BETWEEN CRESCENT STREET AND 27TH STREET SOUTH SIDEWALK EXTENSION PROJECT IMPROVEMENT

DRAWN BY: **SL**

CHECKED BY: **RB**

SCALE: **N.T.S**

PROJECT NUMBER: **20-01-0010**

DATE: **August 15, 2022**

DRAWING NUMBER:

APPENDIX 10-4

SHEET: **1** OF: **1**