ENVIRONMENTAL ASSESSMENT STATEMENT
AND
SUPPLEMENTAL REPORT

for the

Proposed

Vernon Boulevard-Broadway Rezoning

PREPARED BY:

ENVIRONMENTAL STUDIES CORPORATION
55 WATER MILL ROAD
GREAT NECK, NY 11021

APRIL 2019

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

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

Part I: GENERAL INFORMATION

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

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

2. *Project Name* Vernon Boulevard-Broadway Rezoning

3. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency)	BSA REFERENCE NUMBER (if applicable)
12DCP139Q	
ULURP REFERENCE NUMBER (if applicable)	OTHER REFERENCE NUMBER(S) (if applicable) (*e.g.*, legislative intro, CAPA)
100421ZMQ, 190152ZMQ, 190151ZRQ	

4a. *Lead Agency Information*			**4b. *Applicant Information***		
NAME OF LEAD AGENCY NYC Department of City Planning			NAME OF APPLICANT Cipico Construction Inc.		
NAME OF LEAD AGENCY CONTACT PERSON Olga Abinader			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON John Strauss for Hiram A. Rothkrug, Environmental Studies Corp.		
ADDRESS 120 Broadway, 31st Floor			ADDRESS 55 Water Mill Road		
CITY New York	STATE NY	ZIP 10271	CITY Great Neck	STATE NY	ZIP 11021
TELEPHONE 212-720-3493	EMAIL oabinad@planning.nyc.gov		TELEPHONE 718-343-0026	EMAIL jstrauss@environmentalstudiescorp.com	

5. *Project Description*

The Applicant, Cipico Construction, Inc., seeks the following discretionary actions; 1) a zoning map amendment to change the existing R5 zoning district mapped on Block 315, Lot 1 (the "Project Area") to R6B, R7X, and C1-3/R7X zoning districts; 2) a zoning text amendment of Zoning Resolution ("ZR") Appendix F: Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing Areas for Community District 1, Queens to establish the Project Area as a Mandatory Inclusionary Housing ("MIH") Area; and 3) a special permit pursuant to ZR § 74-743 (Special provisions for bulk modification) to allow within a LSGD the distribution of floor area without regard for zoning lot lines or zoning district boundaries and to modify the minimum base height requirement (the "Proposed Actions".)

The Proposed Actions would facilitate the development of the Project Area as a LSGD with three mixed-use, five-, nine-, and fourteen-story buildings with approximately 351 dwelling units, including 113 permanently income-restricted housing units. The LSGD would provide new commercial and community facility space, a cellar level parking garage, and a 16,546.6-square foot landscaped public open space.

Project Location

BOROUGH Queens	COMMUNITY DISTRICT(S) 1	STREET ADDRESS 32-01 Vernon Boulevard
TAX BLOCK(S) AND LOT(S) Block 315, Lot 1		ZIP CODE 11106

DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS Entire block bounded by Vernon Boulevard, 33rd Road, 10th Street, 11th Street, and Broadway

EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY R5	ZONING SECTIONAL MAP NUMBER 9a

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

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

☐ CITY MAP AMENDMENT	☐ ZONING CERTIFICATION	☐ CONCESSION
☒ ZONING MAP AMENDMENT	☐ ZONING AUTHORIZATION	☐ UDAAP
☒ ZONING TEXT AMENDMENT	☐ ACQUISITION—REAL PROPERTY	☐ REVOCABLE CONSENT
☐ SITE SELECTION—PUBLIC FACILITY	☐ DISPOSITION—REAL PROPERTY	☐ FRANCHISE

☐ HOUSING PLAN & PROJECT ☒ OTHER, explain: Large Scale General Development

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

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION ZR Appendix F; ZR 9a; ZR 74-74; ZR 74-743 (a)(1)(2)

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

☐ VARIANCE (use)

☐ VARIANCE (bulk)

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

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

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

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

☐ LEGISLATION
☐ RULEMAKING
☐ CONSTRUCTION OF PUBLIC FACILITIES
☐ 384(b)(4) APPROVAL
☐ OTHER, explain:

☐ FUNDING OF CONSTRUCTION, specify:
☐ POLICY OR PLAN, specify:
☐ FUNDING OF PROGRAMS, specify:
☐ PERMITS, specify:

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: Dept. of Buildings building permit

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

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

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

☒ SITE LOCATION MAP ☒ ZONING MAP ☒ SANBORN OR OTHER LAND USE MAP
☒ TAX MAP ☐ FOR LARGE AREAS OR MULTIPLE SITES, A GIS SHAPE FILE THAT DEFINES THE PROJECT SITE(S)
☒ PHOTOGRAPHS OF THE PROJECT SITE TAKEN WITHIN 6 MONTHS OF EAS SUBMISSION AND KEYED TO THE SITE LOCATION MAP

Physical Setting (both developed and undeveloped areas)

Total directly affected area (sq. ft.): 77,235

Waterbody area (sq. ft) and type: None

Roads, buildings, and other paved surfaces (sq. ft.): Approximately 77,000

Other, describe (sq. ft.): Approximately 235 SF landscaped area

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

SIZE OF PROJECT TO BE DEVELOPED (gross square feet): 349,935

NUMBER OF BUILDINGS: 3

GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): 32,130; 103,325; 214,480

HEIGHT OF EACH BUILDING (ft.): 55, 95, 145

NUMBER OF STORIES OF EACH BUILDING: 5, 9, 14

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: 77,235

The total square feet not owned or controlled by the applicant: None

Does the proposed project involve in-ground excavation or subsurface disturbance, including, but not limited to foundation work, pilings, utility lines, or grading? ☒ YES ☐ NO

If "yes," indicate the estimated area and volume dimensions of subsurface permanent and temporary disturbance (if known):

AREA OF TEMPORARY DISTURBANCE: 77,235 sq. ft. (width x length)

VOLUME OF DISTURBANCE: 772,350 cubic ft. (width x length x depth)

AREA OF PERMANENT DISTURBANCE: 77,235 sq. ft. (width x length)

Description of Proposed Uses (please complete the following information as appropriate)

	Residential	***Commercial***	***Community Facility***	***Industrial/Manufacturing***
Size (in gross sq. ft.)	332,208	11,236	6,882	0
Type (*e.g.,* retail, office, school)	351 units	local retail	medical offices	0

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

If "yes," please specify: NUMBER OF ADDITIONAL RESIDENTS: 979 NUMBER OF ADDITIONAL WORKERS: 76

Provide a brief explanation of how these numbers were determined: Residents: Based on average household size of 2.79 residents per dwelling unit for census tracts within 1/4-mile (2010 Census data); Workers: assumes 3 workers per 1,000 gsf retail space, 4 workers per 1,000 sf of medical office space, .04 workers per dwelling unit (351 units)

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

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

If "yes," see Chapter 2, "Establishing the Analysis Framework" and describe briefly: The No-Action scenario proposed by the Applicant consists of five zoning lots on the project site developed with a total of 93 dwelling units, 15,765 gsf of community facility space, and 106 accessory parking spaces. Zoning lots 1 through 4 would each be developed with approximately 12 dwelling units in five 3-story, two- and three-family dwellings. Each zoning lot would also contain 10 accessory parking spaces. Zoning lot 5 would be developed with a 4-story building containing 15,765 gsf of ground floor community facility space and 45 dwelling units on the upper three floors. The zoning lot would also contain 66 accessory parking spaces.

9. *Analysis Year* CEQR Technical Manual Chapter 2

ANTICIPATED BUILD YEAR (date the project would be completed and operational): 2022

ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: 24

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

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE:

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

☒ RESIDENTIAL ☐ MANUFACTURING ☒ COMMERCIAL ☐ PARK/FOREST/OPEN SPACE ☒ OTHER, specify: Community facility, garages, warehouses

Part II: TECHNICAL ANALYSIS

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

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

	YES	NO
1. *LAND USE, ZONING, AND PUBLIC POLICY*: CEQR Technical Manual Chapter 4		
(a) Would the proposed project result in a change in land use different from surrounding land uses?	☒	☐
(b) Would the proposed project result in a change in zoning different from surrounding zoning?	☒	☐
(c) Is there the potential to affect an applicable public policy?	☒	☐
(d) If "yes," to (a), (b), and/or (c), complete a preliminary assessment and attach. See attached report.		
(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. See attached report.		
2. *SOCIOECONOMIC CONDITIONS*: CEQR Technical Manual Chapter 5		
(a) Would the proposed project:		
○ Generate a net increase of 200 or more residential units?	☒	☐
○ Generate a net increase of 200,000 or more square feet of commercial space?	☐	☒
○ Directly displace more than 500 residents?	☐	☒
○ Directly displace more than 100 employees?	☐	☒
○ Affect conditions in a specific industry?	☐	☒
3. *COMMUNITY FACILITIES*: CEQR Technical Manual Chapter 6		
(a) Direct Effects		
○ Would the project directly eliminate, displace, or alter public or publicly funded community facilities such as educational facilities, libraries, hospitals and other health care facilities, day care centers, police stations, or fire stations?	☐	☒
(b) Indirect Effects		
○ **Child Care Centers:** Would the project result in 20 or more eligible children under age 6, based on the number of low or low/moderate income residential units? (See Table 6-1 in Chapter 6)	☐	☒
○ **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)	☐	☒
○ **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)	☒	☐
○ **Health Care Facilities and Fire/Police Protection:** Would the project result in the introduction of a sizeable new neighborhood?	☐	☒
4. *OPEN SPACE*: CEQR Technical Manual Chapter 7		
(a) Would the proposed project change or eliminate existing open space?	☐	☒
(b) Is the project located within an under-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?	☒	☐
○ If "yes," would the proposed project generate more than 50 additional residents or 125 additional employees?	☒	☐
(c) Is the project located within a well-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?	☐	☒
○ If "yes," would the proposed project generate more than 350 additional residents or 750 additional employees?	☐	☐
(d) If the project in located an area that is neither under-served nor well-served, would it generate more than 200 additional residents or 500 additional employees?	☐	☐

	YES	NO
5. *SHADOWS*: CEQR Technical Manual Chapter 8		
(a) Would the proposed project result in a net height increase of any structure of 50 feet or more?	☒	☐
(b) Would the proposed project result in any increase in structure height and be located adjacent to or across the street from a sunlight-sensitive resource?	☒	☐
6. *HISTORIC AND CULTURAL RESOURCES*: CEQR Technical Manual Chapter 9		
(a) Does the proposed project site or an adjacent site contain any architectural and/or archaeological resource that is eligible for or has been designated (or is calendared for consideration) as a New York City Landmark, Interior Landmark or Scenic Landmark; that is listed or eligible for listing on the New York State or National Register of Historic Places; or that is within a designated or eligible New York City, New York State or National Register Historic District? (See the GIS System for Archaeology and National Register to confirm)	☐	☒
(b) Would the proposed project involve construction resulting in in-ground disturbance to an area not previously excavated?	☒	☐
(c) If "yes" to either of the above, list any identified architectural and/or archaeological resources and attach supporting information on whether the proposed project would potentially affect any architectural or archeological resources. See attached report.		
7. *URBAN DESIGN AND VISUAL RESOURCES*: CEQR Technical Manual Chapter 10		
(a) Would the proposed project introduce a new building, a new building height, or result in any substantial physical alteration to the streetscape or public space in the vicinity of the proposed project that is not currently allowed by existing zoning?	☒	☐
(b) Would the proposed project result in obstruction of publicly accessible views to visual resources not currently allowed by existing zoning?	☐	☒
8. *NATURAL RESOURCES*: CEQR Technical Manual Chapter 11		
(a) Does the proposed project site or a site adjacent to the project contain natural resources as defined in Section 100 of Chapter 11?	☐	☒
○ If "yes," list the resources and attach supporting information on whether the proposed project would affect any of these resources.		
(b) Is any part of the directly affected area within the Jamaica Bay Watershed?	☐	☒
○ If "yes," complete the Jamaica Bay Watershed Form, and submit according to its instructions.		
9. *HAZARDOUS MATERIALS*: CEQR Technical Manual Chapter 12		
(a) Would the proposed project allow commercial or residential uses in an area that is currently, or was historically, a manufacturing area that involved hazardous materials?	☒	☐
(b) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to hazardous materials that preclude the potential for significant adverse impacts?	☐	☒
(c) Would the project require soil disturbance in a manufacturing area or any development on or near a manufacturing area or existing/historic facilities listed in Appendix 1 (including nonconforming uses)?	☒	☐
(d) Would the project result in the development of a site where there is reason to suspect the presence of hazardous materials, contamination, illegal dumping or fill, or fill material of unknown origin?	☒	☐
(e) Would the project result in development on or near a site that has or had underground and/or aboveground storage tanks (*e.g.*, gas stations, oil storage facilities, heating oil storage)?	☒	☐
(f) Would the project result in renovation of interior existing space on a site with the potential for compromised air quality; vapor intrusion from either on-site or off-site sources; or the presence of asbestos, PCBs, mercury or lead-based paint?	☐	☒
(g) Would the project result in development on or near a site with potential hazardous materials issues such as government-listed voluntary cleanup/brownfield site, current or former power generation/transmission facilities, coal gasification or gas storage sites, railroad tracks or rights-of-way, or municipal incinerators?	☐	☒
(h) Has a Phase I Environmental Site Assessment been performed for the site?	☒	☐
○ If "yes," were Recognized Environmental Conditions (RECs) identified? Briefly identify: See attached report.	☒	☐
10. *WATER AND SEWER INFRASTRUCTURE*: CEQR Technical Manual Chapter 13		
(a) Would the project result in water demand of more than one million gallons per day?	☐	☒
(b) If the proposed project located in a combined sewer area, would it result in at least 1,000 residential units or 250,000 square feet or more of commercial space in Manhattan, or at least 400 residential units or 150,000 square feet or more of commercial space in the Bronx, Brooklyn, Staten Island, or Queens?	☐	☒
(c) If the proposed project located in a separately sewered area, would it result in the same or greater development than the amounts listed in Table 13-1 in Chapter 13?	☐	☒
(d) Would the proposed project involve development on a site that is 5 acres or larger where the amount of impervious surface would increase?	☐	☒
(e) If the project is located within the Jamaica Bay Watershed or in certain specific drainage areas, including Bronx River, Coney Island Creek, Flushing Bay and Creek, Gowanus Canal, Hutchinson River, Newtown Creek, or Westchester Creek, would it involve development on a site that is 1 acre or larger where the amount of impervious surface would increase?	☐	☒

	YES	NO
(f) Would the proposed project be located in an area that is partially sewered or currently unsewered?	☐	☒
(g) Is the project proposing an industrial facility or activity that would contribute industrial discharges to a Wastewater Treatment Plant and/or generate contaminated stormwater in a separate storm sewer system?	☐	☒
(h) Would the project involve construction of a new stormwater outfall that requires federal and/or state permits?	☐	☒
11. *SOLID WASTE AND SANITATION SERVICES*: CEQR Technical Manual Chapter 14		
(a) Using Table 14-1 in Chapter 14, the project's projected operational solid waste generation is estimated to be (pounds per week): 17,329		
○ Would the proposed project have the potential to generate 100,000 pounds (50 tons) or more of solid waste per week?	☐	☒
(b) Would the proposed project involve a reduction in capacity at a solid waste management facility used for refuse or recyclables generated within the City?	☐	☒
12. *ENERGY*: CEQR Technical Manual Chapter 15		
(a) Using energy modeling or Table 15-1 in Chapter 15, the project's projected energy use is estimated to be (annual BTUs): 45,943,563		
(b) Would the proposed project affect the transmission or generation of energy?	☐	☒
13. *TRANSPORTATION*: CEQR Technical Manual Chapter 16		
(a) Would the proposed project exceed any threshold identified in Table 16-1 in Chapter 16?	☒	☐
(b) If "yes," conduct the screening analyses, attach appropriate back up data as needed for each stage and answer the following questions:		
○ Would the proposed project result in 50 or more Passenger Car Equivalents (PCEs) per project peak hour?	☐	☒
If "yes," would the proposed project result in 50 or more vehicle trips per project peak hour at any given intersection? ***It should be noted that the lead agency may require further analysis of intersections of concern even when a project generates fewer than 50 vehicles in the peak hour. See Subsection 313 of Chapter 16 for more information.*	☐	☐
○ Would the proposed project result in more than 200 subway/rail or bus trips per project peak hour?	☐	☒
If "yes," would the proposed project result, per project peak hour, in 50 or more bus trips on a single line (in one direction) or 200 subway trips per station or line?	☐	☐
○ Would the proposed project result in more than 200 pedestrian trips per project peak hour?	☐	☒
If "yes," would the proposed project result in more than 200 pedestrian trips per project peak hour to any given pedestrian or transit element, crosswalk, subway stair, or bus stop?	☐	☐
14. *AIR QUALITY*: CEQR Technical Manual Chapter 17		
(a) *Mobile Sources*: Would the proposed project result in the conditions outlined in Section 210 in Chapter 17?	☐	☒
(b) *Stationary Sources*: Would the proposed project result in the conditions outlined in Section 220 in Chapter 17?	☒	☐
○ If "yes," would the proposed project exceed the thresholds in Figure 17-3, Stationary Source Screen Graph in Chapter 17? (Attach graph as needed) See attached report.	☒	☐
(c) Does the proposed project involve multiple buildings on the project site?	☐	☒
(d) Does the proposed project require federal approvals, support, licensing, or permits subject to conformity requirements?	☐	☒
(e) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to air quality that preclude the potential for significant adverse impacts?	☐	☒
15. *GREENHOUSE GAS EMISSIONS*: CEQR Technical Manual Chapter 18		
(a) Is the proposed project a city capital project or a power generation plant?	☐	☒
(b) Would the proposed project fundamentally change the City's solid waste management system?	☐	☒
(c) If "yes" to any of the above, would the project require a GHG emissions assessment based on the guidance in Chapter 18?	☐	☐
16. *NOISE*: CEQR Technical Manual Chapter 19		
(a) Would the proposed project generate or reroute vehicular traffic?	☒	☐
(b) Would the proposed project introduce new or additional receptors (see Section 124 in Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed rail line with a direct line of site to that rail line?	☒	☐
(c) Would the proposed project cause a stationary noise source to operate within 1,500 feet of a receptor with a direct line of sight to that receptor or introduce receptors into an area with high ambient stationary noise?	☒	☐
(d) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to noise that preclude the potential for significant adverse impacts?	☐	☒
17. *PUBLIC HEALTH*: CEQR Technical Manual Chapter 20		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Air Quality;	☐	☒

	YES	NO
Hazardous Materials; Noise?		
(b) If "yes," explain why an assessment of public health is or is not warranted based on the guidance in Chapter 20, "Public Health." Attach a preliminary analysis, if necessary.		
18. *NEIGHBORHOOD CHARACTER*: CEQR Technical Manual Chapter 21		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Land Use, Zoning, and Public Policy; Socioeconomic Conditions; Open Space; Historic and Cultural Resources; Urban Design and Visual Resources; Shadows; Transportation; Noise?	☒	☐

(b) If "yes," explain why an assessment of neighborhood character is or is not warranted based on the guidance in Chapter 21, "Neighborhood Character." Attach a preliminary analysis, if necessary. Although the Land Use, Zoning, and Public Policy technical area of the EAS provided a detailed analysis, a neighborhood character assessment is not warranted as the project does not have the potential to result in any significant adverse Land Use, Zoning, or Public Policy impacts. The area surrounding the project site consists of a mixture of commercial and light industrial uses, community facilities, open space, and residential development. The Future No-Action scenario on the site would result in a similar, albeit somewhat smaller, residential development on the property compared to the Future With-Action project and would contain community facility space with a floor area that would be comparable to the proposed local retail floor area. The proposed mapping of R6B and C1-3/R7X zones on the project site is supported by the existence of nearby similar R6, R7A, and C1-3 and C2-3 commercial overlay districts. The C1-3 commercial overlay is proposed along the Vernon Boulevard frontage of the project site as this is the local commercial strip in this neighborhood and would be mapped across the street from other C1-3 and C2-3 commercial overlay districts. The C1-3 commercial overlay would also extend south from the Vernon Boulevard frontage of the property to accommodate the locations of the entrance and exit to the underground parking garage which would include parking for commercial uses. The mapping of an R6B zoning district on the southern portion of the project site, as recommended by DCP, is intended to lower the bulk and density on the site so that there would be no adverse impact to the adjacent neighbors to the south. The proposed rezoning would permit a new development that would be compatible with and beneficial to the adjacent and nearby residential, commercial, and other uses.

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?	☐	☒

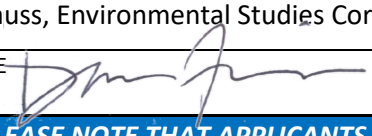
(b) If any boxes are checked "yes," explain why a preliminary construction assessment is or is not warranted based on the guidance in Chapter 22, "Construction." It should be noted that the nature and extent of any commitment to use the Best Available Technology for construction equipment or Best Management Practices for construction activities should be considered when making this determination.

See attached narrative report.

20. *APPLICANT'S CERTIFICATION*

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

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

APPLICANT/REPRESENTATIVE NAME	DATE
John Strauss, Environmental Studies Corp.	April 19, 2019
SIGNATURE  Dana Feingold for John Strauss	

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.

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

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? ☐ ☒

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
Acting Director, Environmental Assessment and Review Division	Department of City Planning, acting on behalf of the City Planning Commission
NAME	**DATE**
Olga Abinader	4/19/2019

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 project. Based on a review of information about the project contained in this environmental assessment statement and any attachments hereto, which are incorporated by reference herein, the lead agency has determined that the proposed project 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 have no significant effect on the quality of the environment. Reasons supporting this determination are noted below.

Hazardous Materials, Air Quality, and Noise

An (E) designation (E-518) for hazardous materials, air quality, and noise has been incorporated into the proposed actions. Refer to "Determination of Significance Appendix: (E) Designation" for a list of the sites affected by the proposed (E) designation and applicable (E) designation requirements. With these measures in place, the proposed actions would not result in significant adverse impacts to hazardous materials, air quality, or noise.

Land Use, Zoning, and Public Policy

The EAS includes a detailed Land Use, Zoning and Public Policy section. The analysis concludes that the proposed actions would not result in significant adverse impacts related to land use, zoning, or public policy. The proposed actions would facilitate the development of both market rate and affordable residential units, in addition to community facility and commercial space on land that is currently underutilized. The proposed R6B, R7X, and R7X/C1-3 zoning would allow bulk and uses similar to the surrounding R6, R7A, and C1-3 and C2-3 commercial overlay zoning districts. As such, the proposed actions would not generate new land uses that would be incompatible with existing land uses within the study area. The proposed actions affect an area within the boundaries of the City's Waterfront Revitalization Program. An analysis was conducted (WRP Number: WRP#14-006) that determined that the proposed actions comply with New York State's approved Coastal Management Program as expressed in New York City's approved Local Waterfront Revitalization Program. The analysis concludes that no significant adverse impacts related to Land Use, Zoning and Public Policy would result from the proposed actions.

Community Facilities

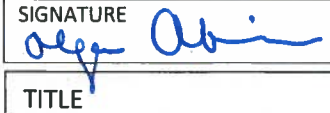
A detailed analysis of Community Facilities and Services was conducted for Public Schools and no significant adverse impacts are expected as a result of the proposed actions.

Public Schools

Pursuant to CEQR Technical Manual methodology, a significant impact on schools may occur if the collective utilization rate of the elementary and/or intermediate schools in the sub-district area that is equal to or greater than 100 percent in the With-Action condition, and if the proposed project results in an increase of five percent or more in the collective utilization rate between the No-Action and the With-Action conditions. The analysis concludes that with the proposed actions, the collective utilization rate for both elementary and intermediate schools would be above 100 percent, however, the proposed actions would result in a one percent increase in utilization from the no-action condition for primary schools and a 0.3 percent increase in utilization from the no-action condition for intermediate schools. Therefore, pursuant to the CEQR Technical Manual methodology, the proposed actions would not result in significant adverse impacts related to public schools.

Shadows

This EAS conducted a detailed Shadows analysis which found that incremental shadows would be cast on two publicly accessible sunlight-sensitive open space resources and one private open space resource associated with the Noguchi Museum. The shadows cast on these sunlight-sensitive resources as a result of the proposed actions would not be significant enough in size or duration to effect public utilization of the open spaces or the growth of vegetation. As such, the proposed actions would not affect the vitality or usage of the sunlight-sensitive resources identified in the study area, and significant adverse impacts from shadows would not result from the proposed actions.

TITLE	LEAD AGENCY
Acting Director, Environmental Assessment and Review Division	Department of City Planning, acting on behalf of the City Planning Commission
NAME Olga Abinader	DATE 4/19/2019
SIGNATURE 	

TITLE	
Chair, City Planning Commission	
NAME Marisa Lago	DATE 4/22/2019
SIGNATURE	

Project Name: Vernon Boulevard Broadway Rezoning
CEQR #: 12DCP139Q
SEQRA Classification: Unlisted

Determination of Significance Appendix: (E) Designation (E-518)

Hazardous Materials

To ensure that there would be no significant adverse hazardous materials impacts associated with the proposed project, an E designation (E-518) will be placed on the project site as follows:

Block 315, Lot 1:

Task 1 - Sampling Protocol

The applicant submits to OER, for review and approval, a Phase 1A of the site along with a soil and groundwater testing protocol, including a description of methods and a site map with all sampling locations clearly and precisely represented. If site sampling is necessary, no sampling should begin until written approval of a protocol is received from OER. The number and location of sample sites should be selected to adequately characterize the site, the specific source of suspected contamination (i.e., petroleum based contamination and non-petroleum based contamination), and the remainder of the site's condition. The characterization should be complete enough to determine what remediation strategy (if any) is necessary after review of sampling data. Guidelines and criteria for selecting sampling locations and collecting samples are provided by OER upon request.

Task 2 - Remediation Determination and Protocol

A written report with findings and a summary of the data must be submitted to OER after completion of the testing phase and laboratory analysis for review and approval. After receiving such results, a determination is made by OER if the results indicate that remediation is necessary. If OER determines that no remediation is necessary, written notice shall be given by OER. If remediation is indicated from the test results, a proposed remediation plan must be submitted to OER for review and approval. The applicant must complete such remediation as determined necessary by OER. The applicant should then provide proper documentation that the work has been satisfactorily completed. An OER-approved construction-related health and safety plan would be implemented during evacuation and construction and activities to protect workers and the community from potentially significant adverse impacts associated with contaminated soil and/or groundwater. This plan would be submitted to OER for review and approval prior to implementation.

Project Name: Vernon Boulevard Broadway Rezoning
CEQR #: 12DCP139Q
SEQRA Classification: Unlisted

Air Quality

To ensure that there would be no significant adverse hazardous materials impacts associated with the proposed project, an E designation (E-531) will be placed on the project site as follows:

Block 315, Lot 1 (Building A):
Any new residential or commercial development on the above-referenced property must exclusively use natural gas as the type of fuel for heating, ventilating, air conditioning (HVAC) and hot water equipment and ensure that the HVAC and hot water equipment stack is located at the building's highest level and at least 58 feet above the grade, and is no more than 70 feet from the lot line facing 33rd Road to avoid any potential significant adverse air quality impact.

Block 315, Lot 1 (Building B):
Any new residential or commercial development on the above-referenced property must exclusively use natural gas as the type of fuel for heating, ventilating, air conditioning (HVAC) and hot water equipment and ensure that the HVAC and hot water equipment stack is located at the building's highest level and at least 98 feet above the grade, and is no more than 200 feet from the lot line facing 33rd Road to avoid any potential significant adverse air quality impact.

Noise

To ensure that there would be no significant adverse hazardous materials impacts associated with the proposed project, an E designation (E-518) will be placed on the project site as follows:

Block 315, Lot 1 (Proposed Building A):
To ensure an acceptable interior noise environment, future residential/commercial/community facility uses must provide a closed-window condition with a minimum of 28 dBA window/wall attenuation on facades facing 33rd Road to ensure an interior noise level not greater than 45 dBA for residential and community facility uses or not greater than 50 dBA for commercial uses. 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.

Block 315, Lot 1 (Proposed Building B):
To ensure an acceptable interior noise environment, future residential/commercial/community facility uses must provide a closed-window condition with a minimum of 31 dBA window/wall attenuation on facades facing 10th Street to ensure an interior noise level not greater than 45 dBA for residential and community facility uses or not greater than 50 dBA for commercial uses. 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.

Block 315, Lot 1 (Proposed Building C):
To ensure an acceptable interior noise environment, future residential/commercial/community facility uses must provide a closed-window condition with a minimum of 31 dBA window/wall attenuation on facades facing 10th Street and 28 dBA of attenuation on facades facing Vernon Boulevard or 11th Street to ensure an interior noise level not greater than 45 dBA for residential and community facility uses or not greater than 50 dBA for commercial uses. 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.

VERNON BOULEVARD-BROADWAY REZONING

Project Description

INTRODUCTION

The Applicant, Cipico Construction, Inc., is proposing a zoning map amendment to the New York City Zoning Map, section 9A, to rezone a block located in the Astoria neighborhood of Queens, Community District 1 from the existing R5 zoning district to a combination of R6B and C1-3/R7X zoning districts. The proposed Project Area comprises Block 315, Tax Lot 1, which is generally bounded by Vernon Boulevard to the northwest, Broadway to the north, 11th Street to the east, 33rd Road to the south, and 10th Street to the west. The Applicant is proposing to amend ZR Appendix F to establish a Mandatory Inclusionary Housing Area (MIHA) coterminous with the proposed Project Area. The Applicant is also seeking approval for a Large Scale General Development pursuant to ZR 74-74 to allow greater flexibility for the purpose of achieving better site planning for the Project Area. Option 2 has been chosen under the Mandatory Inclusionary Housing (MIH) Text Amendment provisions applicable to the Proposed Actions. Under this option, 30% of the residential floor area must be for affordable housing units for residents with incomes averaging 80% Area Median Income (AMI). The final MIH Option will be chosen by the City Council through the ULURP process. Only 20% of the units will be analyzed as affordable at 80% AMI for conservative analysis purposes in the EAS.

The proposed Zoning Map Change, Zoning Text Amendment, and Large Scale General Development approval would facilitate a proposal by the Applicant to construct a 5-story residential and community facility building, a 9-story residential and community facility building, and a 14-story residential, commercial, and community facility building. The buildings would contain a total of 351 dwelling units, 113 of which would be affordable to lower income residents (70 affordable units are assumed for conservative EAS analysis purposes), 11,236 gross square feet (gsf) of commercial space, 6,882 gsf of community facility space, and 164 accessory underground parking spaces. Additionally, the Applicant intends to provide three private open space recreational areas, totaling 33,606 square feet in size, in the Project Area. The development would require the demolition of the existing warehouse structure in the Project Area.

ACTIONS NECESSARY TO FACILITATE THE PROPOSAL

The Applicant, Cipico Construction, Inc., proposes the following actions to rezone an existing R5 zoning district to R6B, R7X, and R7X/C1-3 districts in the Astoria neighborhood within Queens Community District 1.

I. A zoning map amendment to ZR section 9a to change the existing R5 zoning district to a combination of R6B and C1-3/R7X zoning districts on Block 315, Lot 1;

II. A zoning text amendment of ZR Appendix F: Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing ("MIH") Areas for Community District 1, Queens to establish an MIH Area coterminous with the Project Area. Option 2 has been chosen under the MIH Text Amendment provisions applicable to the Proposed Actions. Under this option, 30% of the residential floor area must be for affordable housing units for residents with incomes averaging 80% AMI. The final MIH Option will be chosen by the City Council through the ULURP process. Only 20% of the units will be analyzed as affordable at 80% AMI for conservative analysis purposes in the EAS; and

III. Approval for a Large Scale General Development pursuant to ZR 74-74 to allow greater flexibility for the purpose of achieving better site planning for the Project Area. Two Large Scale Special Permit waivers are also being sought for:

1. The distribution of total allowable floor area within a large-scale general development without regard for zoning lot lines or district boundaries per ZR § 74-743(a)(1) for non-complying floor area, and;
2. The location of buildings without regard for the applicable height and setback regulations per ZR § 74-743(a)(2) for the 45' portion of the building in the C1-3/R7X zone on Zoning Lot A.

DESCRIPTION OF THE SURROUNDING AREA

The Project Area is located along near the western edge of the Astoria neighborhood of Queens, Community District 1 approximately one block from the East River. The neighborhood within 400 feet of the Project Area consists of a mixture of commercial and light industrial uses, community facilities, open space, and residential development. The area between Vernon Boulevard and the East River is developed with a Costco Wholesale Store sandwiched between the Socrates Sculpture Park and Rainey Park. The Noguchi Museum occupies an entire triangular shaped block across 10th Street from the Project Area. The area west of the Project Area across 33rd Road is primarily developed with small 2-story detached residences mixed in with some larger structures occupied by automotive repair, electricians, a stone materials warehouse, and a thrift store among other uses. The area to the east across 11th Street is primarily developed with large one- and two-story structures occupied by uses including auto repair, a commercial bakery, and an import/export warehouse among other uses. A public school is also located in this area. Finally, the area opposite the Project Area bordered by Broadway and Vernon Boulevard is developed with wholesale and light industrial uses, several vacant lots currently in construction, and scattered small one- and two-story detached residences.

The discussion below identifies a prior action in the immediate vicinity of the Project Area.

The Astoria Rezoning was approved on May 25, 2010 **(**ULURP No: 100199ZMQ), and is located across Vernon Boulevard and Broadway from the subject Project Area. The Department of City Planning amended the Zoning Map on all or portions of 238 blocks in Astoria to preserve the existing scale and character of the area while allowing for a modest increase in residential and commercial density in appropriate limited locations. A related action made the Inclusionary Housing Program applicable in certain zoning districts within the rezoning area to incentivize the development of affordable housing. The rezoning area is bounded by 20th Avenue on the north, Steinway Street on the east, Broadway on the south, and Vernon Boulevard, 8th Street, 14th Street, and the East River on the west.

DESCRIPTION OF THE PROPOSED PROJECT AREA

The Project Area is located entirely within an R5 zoning district. R5 districts permit Use Groups 1-4 and allow for up to 1.25 Floor Area Ratio (FAR) of residential use and 2.0 FAR of community facility use. The proposed Project Area encompasses the entire block bounded by Vernon Boulevard (265 feet frontage), 33rd Road (185 feet frontage), 10th Street (304 feet frontage), 11th Street (506 feet frontage), and Broadway (19 feet frontage) in Astoria, Queens. The Project Area consists of approximately 77,235 square feet of land area (per survey prepared by

NY Land Surveyor LLC dated May 9, 2007, the total lot area is 77,234.69 square feet). The property is currently improved with a one-story, approximately 26,637 square foot warehouse building occupied by the Milea Truck Sales and Leasing Company. The remainder of the lot consists of a paved parking area for trucks and equipment.

DESCRIPTION OF THE PROPOSED DEVELOPMENT

As stated above, the Applicant intends to rezone the existing R5 district to a combination of R6B and C1-3/R7X zoning districts on Block 315, Lot 1, the proposed Project Area. The property would be divided into two zoning lots, Zoning Lot A and Zoning Lot B. Zoning Lot A would total 46,310 square feet in area and would be comprised of a 18,524 square foot area zoned R6B and a 27,786 square foot area zoned C1-3/R7X. Zoning Lot B would total 30,925 square feet in area and would be zoned C1-3/R7X.

R6B districts are often traditional row- house districts, which preserve the scale and harmonious streetscape of neighborhoods of four-story attached buildings developed during the 19th century. Many of these houses are set back from the street with stoops and small front yards. The FAR of 2.0 and the mandatory Quality Housing regulations also accommodate apartment buildings at a similar four- to five-story scale. In the R6B district, the residential FAR would be increased to 2.2 within the MIH area. The base height of a new building before setback must be between 30 and 40 feet; the maximum height is 50 feet. For buildings outside of the Manhattan core with qualifying ground floors, the maximum base height is increased to 45 feet and the maximum building height is increased to 55 feet. Curb cuts are prohibited on zoning lot frontages less than 40 feet. The street wall of a new building, on any lot up to 50 feet wide, must be as deep as one adjacent street wall but no deeper than the other. Buildings must have interior amenities for the residents pursuant to the Quality Housing Program. Off-street parking is required for 50% of dwelling units. It is not allowed in front of a building. Parking for community facility uses such as Use Group 4 medical offices is required at a ratio of 1 space per 400 square feet of floor area.

R7X districts are governed by contextual Quality Housing. The FAR in R7X districts is 5.0 for all uses. In the R7X district, the residential FAR would be increased to 6.0 within the MIH area. Above a base height of 60 to 85 feet, the building must be set back a depth of 10 feet on a wide street and 15 feet on a narrow street before rising to its maximum height of 125 feet. For MIH buildings, the maximum base height is increased to 95 feet with a maximum total building height of 14 stories and 145 feet. To maintain the traditional streetscape, the street wall of a new building can be no closer to the street line than any building within 150 feet on the same block but need not be farther than 15 feet. The building must have interior amenities for residents pursuant to the Quality Housing Program. Off-street parking is required for 50% of dwelling units. It is not allowed in front of a building. Parking for community facility uses such as Use Group 4 medical offices is required at a ratio of 1 space per 400 square feet of floor area.

The C1-3 commercial overlay district permits commercial Use Groups 5 and 6 as well as residential and community facility Use Groups 1 through 4. The proposed C1-3 overlay district, the boundary of which would start at a distance of approximately 100 feet north of 33rd Road running northerly to Vernon Boulevard, is intended to accommodate the retail and personal service shops needed in the surrounding residential neighborhood. The maximum commercial FAR for the C1 overlay in the R7X zone is 2.0. Residential uses are permitted within these overlays with residential bulk being governed by the provisions of the surrounding

residential zone. Parking requirements vary by use within the C1 zone with one parking space required for each 400 square feet of general retail floor area. No loading spaces are required for the first 8,000 square feet of floor area and one loading berth is required for the next 17,000 square feet of most types of commercial floor area.

The Proposed Actions would facilitate a proposal by the Applicant to develop a 5-story residential and community facility building (Building A), a 9-story residential and community facility building (Building B), and a 14-story residential, commercial, and community facility building (Building C). The buildings would contain a total of 351 dwelling units, 113 of which would be affordable to lower income residents. Option 2 has been chosen under the MIH Text Amendment provisions applicable to the Proposed Actions. Under this option, 30% of the residential floor area must be for affordable housing units for residents with incomes averaging 80% AMI. The average unit size would be approximately 946 gsf. The final MIH Option will be chosen by the City Council through the ULURP process. Only 20% of the dwelling units (70 units) will be analyzed as affordable at 80% AMI for conservative analysis purposes in the EAS.

The Proposed Actions would include 11,236 gsf of commercial space on the first floor of Building C. Commercial uses would be limited to local retail and service uses as permitted by the proposed C1-3 commercial overlay. The Actions also include 6,882 gsf of community facility space (Use Group 4 medical offices) distributed between the three buildings, and 164 accessory underground parking spaces. Parking would be required for one-half of the market rate units (238 x 0.5 = 119 spaces) while no parking would be required for the affordable units as the Project Area is located within a Transit Zone. Commercial retail parking is required to be provided at 1 space per 400 square feet of floor area (11,238 zoning square feet (zsf)/400 = 28 spaces). Community facility (ambulatory diagnostic center) parking is required to be provided at 1 space per 400 square feet of floor area in the C1-3/R7X district (1,321 sf/400 = 3).[1] The total parking required is 150 spaces while 164 spaces will be provided. Additionally, the Applicant intends to provide in the Project Area three private open space recreational areas, totaling 33,606 square feet in size, 16,547 square feet of which would be publicly accessible landscaped open space. The development would require the demolition of the existing warehouse structure on the property.

The total maximum FAR of 2.2 on the R6B zoned portion of proposed Lot A would allow a total development of 40,752 zsf on the 18,524 square foot R6B portion of the Lot. The Future With-Action Scenario would have a total floor area of 29,405 zsf representing an FAR of 1.59. The total maximum FAR of 6.0 on the C1-3/R7X zoned portion of proposed Lot A would allow a total development of 166,716 zsf on the 27,786 square foot R7X portion of the Lot. The Future With-Action Scenario would have a total floor area of 95,134 zsf representing an FAR of 3.42. The total maximum FAR of 6.0 on the C1-3/R7X zoned proposed Lot B would allow a total development of 185,550 zsf on the 30,925 square foot Lot. The Future With-Action Scenario would have a total floor area of 209,546 zsf representing an FAR of 6.78. Although the proposed development on Lot B would exceed the maximum permitted floor area, it is proposed to transfer approximately 23,996 square feet of unused floor area from Lot A in order to achieve compliance.

[1] Per ZR 77-322: For non-residential uses, the requirements for accessory off street parking of that district in which more than 50 percent of the total area of the zoning lot is located, shall apply to the entire zoning lot, in this case the R7X district. No parking is required for (R6B = 5,245 sf = none req'd as per R7X requirement; R7X = 1,361 sf – none required; and C1-3/R7X = 1,329 sf / 400 = 3 required).

Table 1 below presents a detailed summary of the Proposed Actions.

Table 1

Proposed Project

Item	Building A	Building B	Building C	Total
Zoning District	R6B	C1-3/R7X	C1-3/R7X	
Lot Size	18,524 sf	27,786 sf	30,925 sf	77,235 sf
Building Size GSF/ZSF/ FAR	32,130/ 29,405/1.59	103,325/ 95,134/3.42	214,480/ 209,546/6.78	349,935/ 334,085/4.32
Stories; Height	5; 55'0"	9; 95'-0"	14; 145'-0"	
Dwelling Units/ (Affordable Units)	30/(15)	110/(44)	211/(54)	351/(113)
Residential GSF/ZSF/ FAR	28,044/ 25,139 / 1.36	102,138/ 93,839/3.38	202,026/ 196,988/ 6.36	332,208/ 315,966/4.09
Commercial GSF/ZSF/ FAR	None	None	11,236/ 11,236/ 0.36	11,236/ 11,236/ 0.15
Community Facility GSF/ZSF/ FAR	4,266/ 4,266/ 0.23	1,295/ 1,295/ 0.05	1,321/ 1,321/ 0.04	6,882/ 6,882/ 0.09
Parking Spaces	N/A	N/A	N/A	164
Open Space	N/A	N/A	N/A	Private: 17,059 Public: 16,547 Total: 33,606

Most of the Proposed Development Site is located in a flood area, as defined by FEMA. It is within Flood Zone AE Elevation 11 (NAVD88). This area is subject to storm surge flooding from the one percent annual chance coastal flood. Such zones are not subject to high velocity wave action but are still considered high risk flooding areas. Accordingly, the proposed development would incorporate all New York State and New York City flooding and erosion requirements, including compliance with ZR Article VI, Chapter 4 "Special Regulations Applying in Flood Hazard Areas" and Appendix G of the Building Code.

Due to the development's location in an AE flood zone, the building has been designed to meet the requirements of the NYC Building Code in order to minimize the effect of flooding. Thus, the building, consistent with these regulations, has a Design Flood Elevation (DFE) of 12 feet which includes one-foot of freeboard. Pursuant to the Zoning Resolution, the building height is

measured from this elevation. Below this elevation there may not be habitable floor area and only crawlways, parking, storage, and building access are allowed. As a result of these regulations, the cellar floors of the buildings will be used for accessory parking.

The cellar level under the three proposed buildings would be constructed at an elevation of 0.8 feet and would therefore be below the DFE. The cellar would contain accessory parking only. The cellar level would be located partially below and partially above the BFE but would be dry flood proofed to grade level. The next lowest point in the proposed development would consist of the first/ground floors of the three buildings which would contain residential lobbies, community facility and commercial space, and building utilities. The elevation of the first/ground floors of the three buildings would be at an elevation of 13.0 feet and would therefore be above the DFE. The lowest residential levels would begin at the second floor of the three buildings which would be at an elevation of 28 feet which is above the DFE. The development will be landscaped with salt water proof plantings.

BUILD YEAR/PROJECT PHASING

The Project Build Year is assumed to be 2022 based on a 12-month environmental and land use approval process and a 24-month construction period.

PURPOSE AND NEED OF THE PROPOSED ACTIONS

The Proposed Actions would enable the Applicant to develop approximately 351 new dwelling units, including 113 affordable housing units, in the Astoria area of Queens on currently underutilized land. The Proposed Development Site (Projected Development Site 1) is close to extensive park and athletic facilities and mass transit bus service. It is in an area that already has substantial residential activity to the north and south, with which this use would be totally consistent. The Proposed Actions are needed to allow the proposed floor area of the new buildings on the Site.

The Proposed Actions would allow the Applicant to develop a higher density residential development with accessory commercial and community facility space in the Project Area which would not be allowed under the current zoning. The action would serve the needs of this area of Queens for high quality residential dwellings, affordable housing, and retail and community facility services with adequate parking, and would promote the development of the property in a fashion that would be compatible with and beneficial to adjacent and nearby residential and other uses.

The proposed buildings would be built pursuant to Quality Housing standards, insuring a better designed residential environment. The development of the buildings with affordable housing is consistent with the expressed desires of the City's current mayoral administration to substantially increase the amount of affordable housing, particularly in areas such as this with substantial mass transit access.

The Applicant seeks to develop a portion of the zoning lot with affordable housing consistent with the standards of the Quality Housing Program as well as the Mandatory Inclusionary Housing (MIH) Program zoning regulations.

Proposed R6B and C1-3/R7X Districts

The proposed Zoning Map Amendment would include rezoning the Proposed Development Site from its existing R5 district to the proposed R6B and C1-3/R7X districts which is required

in order to develop the proposed residential, commercial, and community facility uses and density on the property. It is required to allow the proposed bulk of the new buildings to be increased from the current permitted FAR of 1.25 for residential uses and 2.0 for community facility uses. In the R6B district, the FAR would be increased to 2.0 for residential and community facility uses with a residential FAR of 2.2 within the MIH area. In the C1-3/R7X district, the FAR would be increased to 5.0 for residential and community facility uses with a residential FAR of 6.0 within the MIH area. The C1-3 zoning overlay would permit a commercial FAR of 2.0.

The proposed zoning map amendment to establish R6B and C1-3/R7X zoning districts within the Project Area is necessary for the proposed development project and creates a transition between the existing R5 district mapped to the east, west, and south, and the R6 and R7A districts mapped to the north. The R7X zoning district is proposed to be zoned over approximately three-quarters of the Project Area while the R6B zoning district is proposed to be mapped on the southern portion of the Area in order to lower the bulk and density in the Area so that there would be no adverse impact to the adjacent neighbors to the south. The C1-3 commercial overlay is proposed along the Vernon Boulevard frontage of the Project Area as this is the commercial strip in this area. The C1-3 commercial overlay would also extend south from the Vernon Boulevard frontage of the property to accommodate the locations of the entrance and exit to the underground parking garage which would include parking for commercial uses.

Off-street parking is required for 50 percent of the residential dwelling units, but is not required for affordable housing units within the Transit Zone. Parking for community facility uses such as Use Group 4 medical offices is required at a ratio of 1 space per 400 square feet of floor area but is modified based on the zoning district in which the offices are located (see footnote 1 above). The proposed C1-3 commercial district would permit Use Groups 5 and 6 to allow local commercial development with up to 2.0 FAR. The proposed C1-3 district requires one accessory parking space per 400 sq. ft. of commercial floor area for all types of commercial uses.

Mandatory Inclusionary Housing Text Amendment

The proposed text amendment of ZR Appendix F is necessary to establish an MIH Area coterminous with the Project Area. Pursuant to the MIH program, a percentage of the new dwelling units in the proposed development must be affordable units, resulting in an affordable housing set-aside for either 25 percent of the residential floor area at an average of 60 percent of AMI (Option 1) or 30 percent of the residential floor area at an average of 80 percent AMI (Option 2).

The Applicant intends to map both Options 1 and 2 on Projected Development Site 1 but is seeking to develop pursuant to Option 2 which would result in approximately 113 permanently affordable units. The MIH program would ensure that development within the Project Area would address the need for low-income housing. The final MIH Option will be chosen by the City Council through the ULURP process. Only 20% of the dwelling units (70 units) will be analyzed as affordable at 80% AMI for conservative analysis purposes in the EAS.

Large Scale General Development

A Large Scale General Development approval pursuant to ZR 74-74 is necessary to allow greater flexibility for the purpose of achieving more efficient site planning for the Project Area while at the same time safeguarding the present and future use and development of the

surrounding area. The project involves two zoning lots but the Project Area is planned to be developed as a unit, and the district regulations currently impose rigidities on the Site which would prevent the achievement of the best possible site plan within the overall density and bulk controls.

Two Large Scale Special Permit waivers are also being sought for:

1. The distribution of total allowable floor area within a large-scale general development without regard for zoning lot lines or district boundaries per ZR § 74-743(a)(1) for non-complying floor area, and;

2. The location of buildings without regard for the applicable height and setback regulations per ZR § 74-743(a)(2) for the 45' portion of the building in the C1-3/R7X zone on Zoning Lot A.

NO-ACTION SCENARIO

Under the No-Action Scenario for the Project Build Year of 2022, it is assumed that the Applicant's Proposed Development Site (Projected Development Site 1), identified as Block 315, Lot 1 in Queens, would be developed as follows.

For the purposes of the environmental review, the No-Action Reasonable Worst Case Development Scenario (RWCDS) in the Project Area would be the development of a mixed-use residential and community facility project totaling 107,710 gsf in floor area. The No-Action scenario under the existing R5 zoning mapped on the property would consist of five zoning lots developed with a total of 92 dwelling units, 22 of which would be considered affordable, within 91,945 gsf of residential floor area, 15,765 gsf of community facility space (Use Group 4 medical offices), and 106 accessory parking spaces. The number of residential dwelling units is based on the Department's standard average size of 1,000 gsf per unit. The number of affordable units is calculated based on 20% of the total floor area of the development.

Zoning lots 1 through 4 would each be developed with 13 to 14 dwelling units in five 3-story, 2- and 3-family dwellings. Zoning lots 1 through 4 would each be developed with 13,386 gsf of residential floor area for a total residential floor area of 53,544 gsf, or 54 dwelling units. Each zoning lot would also contain 10 accessory parking spaces which would be above grade and include 3 interior garage spaces and 7 driveway/parking pad spaces for each zoning lot for a total of 40 accessory parking spaces.

Zoning lot 5 would be developed with a 54,166 gsf 4-story building containing 15,765 gsf of ground floor community facility space (Use Group 4 medical offices) and 38 dwelling units within 38,401 gsf of floor area on the upper three floors. The zoning lot would also contain 66 accessory parking spaces, 38 of which would be in a cellar level garage with the remaining 28 to be provided on the open area of the lot.

The No-Action scenario would have a residential FAR of 1.19 and a community facility FAR of 0.20 for a total FAR in the Project Area of 1.39. The Future No-Action Scenario has been developed at as close as possible to the maximum residential FAR of 1.25 and community facility FAR of 2.0 permitted under the property's existing R5 zoning. Due to the required parking for the community facility at-grade, the height restrictions for the buildings, and the minimum footprint that is feasible for a double-loaded corridor for the proposed residential component, the FAR could not be increased any further.

Therefore, absent the proposed action, the Applicant would develop a total of 92 dwelling units,

including 22 affordable units, and 15,765 gsf of Use Group 4 community facility space in the Project Area. The development would require the demolition of the existing warehouse structure on the property.

WITH-ACTION SCENARIO

This With-Action Scenario reflects the proposed Zoning for Quality and Affordability (ZQA) and Mandatory Inclusionary Housing (MIH) Text Amendments. The With-Action Scenario analyzes residential buildings with affordable housing on all sites where future residential development would be feasible. Pursuant to the MIH program, a percentage of the new dwelling units in the proposed development must be affordable units, resulting in an affordable housing set-aside for either 25 percent of the residential floor area at an average of 60 percent of AMI (Option 1) or 30 percent of the residential floor area at an average of 80 percent AMI (Option 2).

The Applicant intends to map both Options 1 and 2 on Projected Development Site 1 but is seeking to develop pursuant to Option 2 which would result in approximately 113 permanently affordable units. Option 2, the MIH 30% option, would require than 30% of the residential floor area be reserved for residents with incomes averaging 80% AMI with no unit targeted at a level exceeding 130% of AMI. The final MIH Option will be chosen by the City Council through the ULURP process. Only 20% of the dwelling units (70 units) will be analyzed as affordable at 80% AMI for conservative analysis purposes in the EAS.

The RWCDS includes one projected development site, Block 315, lot 1. This is the sole projected development site as it consists of the entirety of one block that is completely bordered and separated from other blocks in the area by four adjacent streets. Unlike the Project Area, the immediately surrounding blocks are generally developed with buildings that cover all or most of these blocks and these blocks contain commercial, institutional, and residential uses that are more economically viable than those in the Project Area which would not be likely to be redeveloped in the future.

Projected Development Site 1 (Block 315, Lot 1)

The proposed rezoning to the proposed R6B and C1-3/R7X zoning districts would limit the use and bulk of future development on Projected Development Site 1 to match the proposed project. The intent of the proposed rezoning is primarily to allow for the development of a residential project with accessory commercial and community facility uses to serve the residential occupants of the project and the surrounding area.

The With-Action RWCDS would essentially be the same as the proposed development described above. Normally, the number of dwelling units is calculated based on an average size of 1,000 gsf per unit. In this case, the proposed 332,208 gsf of residential floor area would result in 332 dwelling units. As 332 units is less than the actual proposal of 351 dwelling units, it is more conservative to base the analysis on the higher number of units. Therefore, the With-Action Scenario would have 351 dwelling units.

The With-Action Scenario for the Project Build Year of 2022 would entail the development of Projected Development Site 1 with a 5-story residential and community facility building (Building A), a 9-story residential and community facility building (Building B), and a 14-story residential, commercial, and community facility building (Building C). The buildings would

contain a total of 351 dwelling units. Under the MIH 30% option, it is assumed that 30% or 113 of the units would be affordable to lower income residents. The remaining 70% or 241 of the units would be market rate. The average unit size would be approximately 946 gsf. Although 30% or 113 of the 351 total dwelling units are proposed to be designated as affordable units, only 20% or 70 dwelling units will be analyzed as affordable at 80% AMI for conservative analysis purposes in the EAS.

The Proposed Actions would include 11,236 gsf of commercial space on the first floor of Building C. Commercial uses would be limited to local retail and service uses as permitted by the proposed C1-3 commercial overlay. The Actions also include 6,882 gsf of community facility space (Use Group 4 medical offices) and 164 accessory underground parking spaces. Parking would be required to be provided for one-half of the market rate units (119 spaces) while no parking would be required for the affordable units as the Project Area is located within a Transit Zone. 31 commercial retail and community facility parking spaces are also required for a total of 150 required parking spaces. 14 additional spaces will be provided for a total of 164 parking spaces. Additionally, the Applicant intends to provide three private open space recreational areas, totaling 33,606 square feet in size. The development would require the demolition of the existing warehouse structure on the property.

The three proposed buildings would include the following floor areas and development.

Building A, located within the R6B zoning district, would contain 32,130 gsf/29,405 zsf of total floor area on a 18,524 square foot lot representing a total FAR of 1.59 on this lot. The 28,004 gsf/ 25,139 zsf of residential floor area on the lot would represent a residential FAR of 1.36. The building would be 5-stories and 55'-0" in height, with a 45'-0" tall base, and would contain 30 dwelling units. 15 of the 30 units would be affordable housing. The building would also contain 4,226 gsf/zsf of community facility floor area representing a community facility FAR of 0.23.

Building B, located within the C1-3/R7X zoning district, would contain 103,325 gsf/95,134 zsf of total floor area on a 27,786 square foot lot representing a total FAR of 3.42 on this lot. The 102,138 gsf/ 93,839 zsf of residential floor area on the lot would represent a residential FAR of 3.38. The building would be 9-stories and 95'-0" in height, with a 65'-0" tall base, and would contain 110 dwelling units. 44 of the 110 units would be affordable housing. The building would also contain 1,295 gsf/zsf of community facility floor area representing a community facility FAR of 0.05.

Building C, located within the C1-3/R7X zoning district, would contain 212,480 gsf/209,546 zsf of total floor area on a 30,925 square foot lot representing a total FAR of 6.78 on this lot. The 202,026 gsf/ 196,988 zsf of residential floor area on the lot would represent a residential FAR of 6.36. The building would be 14-stories and 145'-0" in height, with a 65'-0" tall base, and would contain 211 dwelling units. 54 of the 211 units would be affordable housing. The building would contain 1,321 gsf/zsf of community facility floor area representing a community facility FAR of 0.04 on this lot. The building would also contain 11,236 gsf/zsf of commercial floor area on the lot representing a commercial FAR of 0.36.

The Future With-Action Scenario would have a total floor area of 334,085 zsf representing an FAR of 4.32. At 29,405 zsf, Building A would have an FAR of 1.59 on the 18,524 square foot R6B portion of Lot A. At 95,134 zsf, Building B would have an FAR of 3.42 on the 27,786 square foot C1-3/R7X portion of Lot A. At 209,546 zsf, Building C would have an FAR of 6.78 on the 30,925

square foot C1-3/R7X zoned Lot B. Although the proposed development on Lot B would exceed the maximum permitted floor area, it is proposed to transfer approximately 23,996 square feet of unused floor area from Lot A in order to achieve compliance.

INCREMENT

Under No-Action conditions, the Project Area (Projected Development Site 1) would be developed with 92 dwelling units (including 70 market rate and 22 affordable units) within 91,945 gsf of residential floor area, 15,765 gsf of community facility space (Use Group 4 medical offices), and 106 accessory parking spaces.

Under With-Action conditions, the Project Area (Projected Development Site 1) would be developed with 332,208 gsf of residential space for 351 dwelling units (including 281 market rate and 70 affordable units), 11,236 gsf of commercial space, 6,882 gsf of community facility space (Use Group 4 medical offices), and 164 accessory parking spaces.

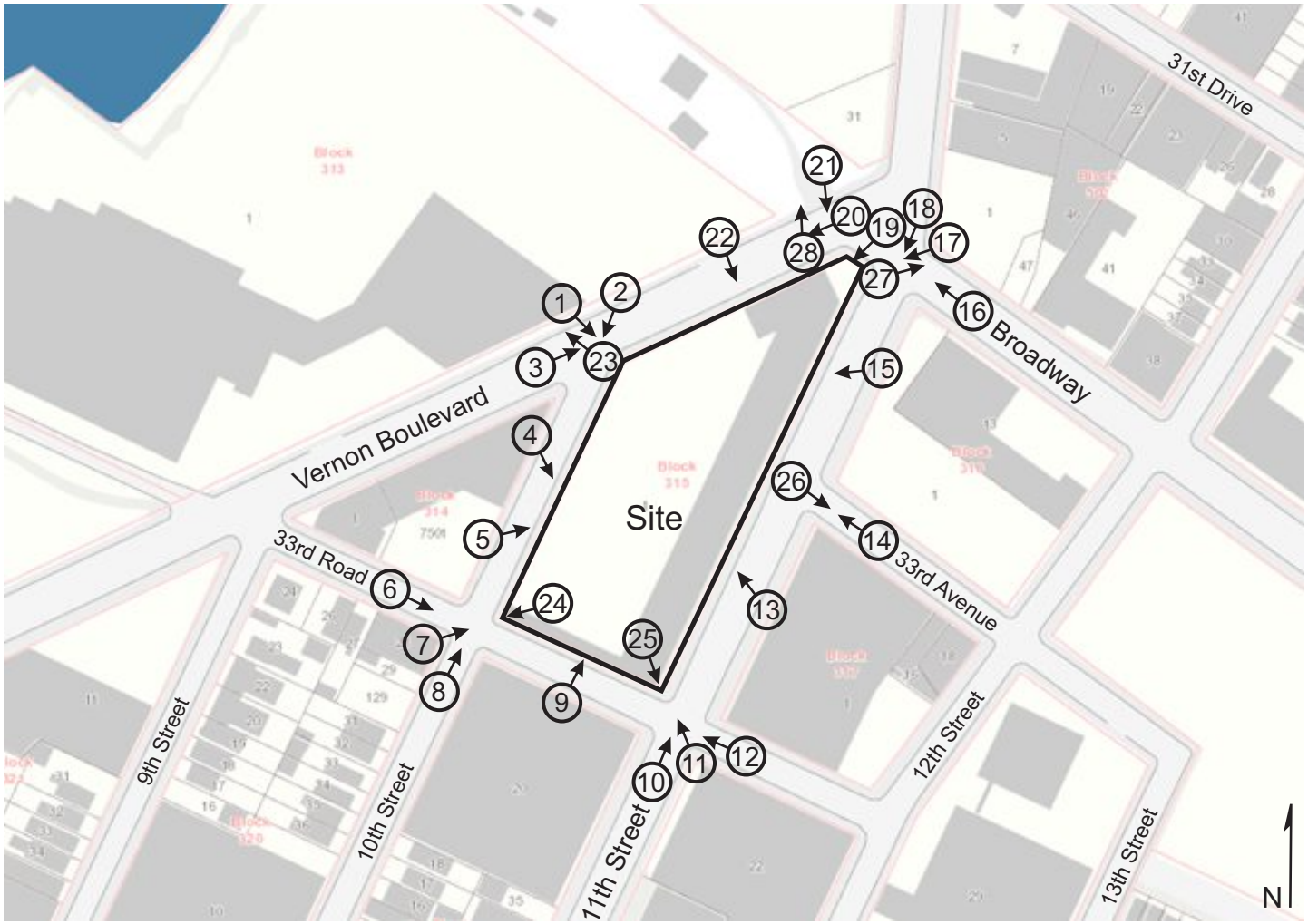
The increment between the No-Action and With-Action development scenarios would be 240,263 gsf of additional residential space for 259 additional dwelling units (including 211 market rate and 48 affordable units), 11,236 gsf of new commercial space, a decrease of 8,883 gsf of community facility space, and 58 additional accessory parking spaces. In order to allow for the projected development, the existing warehouse structure on the property would be demolished.

Table No. 2 below presents a detailed summary of the existing conditions, Future No-Action, and Future With-Action scenarios in the Project Area and shows the incremental difference between the Future No-Action and Future With-Action scenarios.

Table 2

Summary of Existing Conditions, Future No-Action, and Future With-Action Scenarios

Item	Existing	No-Action	With-Action	Increment
Gross SF	26,637	107,710	349,935	+242,225
DUs/(Afford)	0	92/(22)	351/(70)	+259/(48)
Residential SF	0	91,945	332,208	+240,263
Commercial SF	26,637	0	11,236	+ 11,236
Comm Facil SF	0	15,765	6,512	-8,883
No. of Stories	1	3-4	5-14	+2-10
Building Ht	18′	30′-40′	55′-145′	+25′-105′
Access Pkg Spaces	Open vehicle storage	106	164	+ 58


31st Drive
Broadway
Vernon Boulevard
33rd Road
33rd Avenue
9th Street
10th Street
11th Street
12th Street
13th Street
Site
N
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
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28



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Photographed by: Alaina Yuresko on March 28, 2018



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Site
33rd Road
10 St
ONE WAY
32-08 10th St.
ONSITE CONSTRUCTION ENTERPRISE INC.
ALL IS NOT LOST
N



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NO PARKING
Monday - Friday
7 am - 3pm
Site
REAR STEEL
10-02 33RD ROAD, L.I.C., NY 11106
USDOT 1393687
33rd Road
N



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METRO MARBLE INC
MARBLE GRANITE, STONE FABRICATOR
347-738-5387 10-02A 33rd Road,LIC,NY,11106
33rd Road
Site
N



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Photographed by: Alaina Yuresko on March 28, 2018


Site
11th Street
Broadway
N
718-545-4441
Engine Repair
Brake Service
Transmissions
Body Repair
Liftgates
Vernon



Urban Cartographics 421 Seventh Avenue, Suite 1008 New York, NY 10001 718.4275299 admin@urbancartographics.com www.urbancartographics.com

Photographed by: Alaina Yuresko on March 28, 2018


Site
Broadway
N
718-545-4441
Engine Repair
Brake Service
Transmissions
Body Repair
Liftgates


545-4441
Engine Repair
Brake Service
Transmissions
Body Repair
Liftgates
Site
Vernon Boulevard
N



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COSTCO
WHOLESALE
Vernon Boulevard
N



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33rd Road
11th Street
J.A.M. DELIVERY INC.
N



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Photographed by: Alaina Yuresko on March 28, 2018

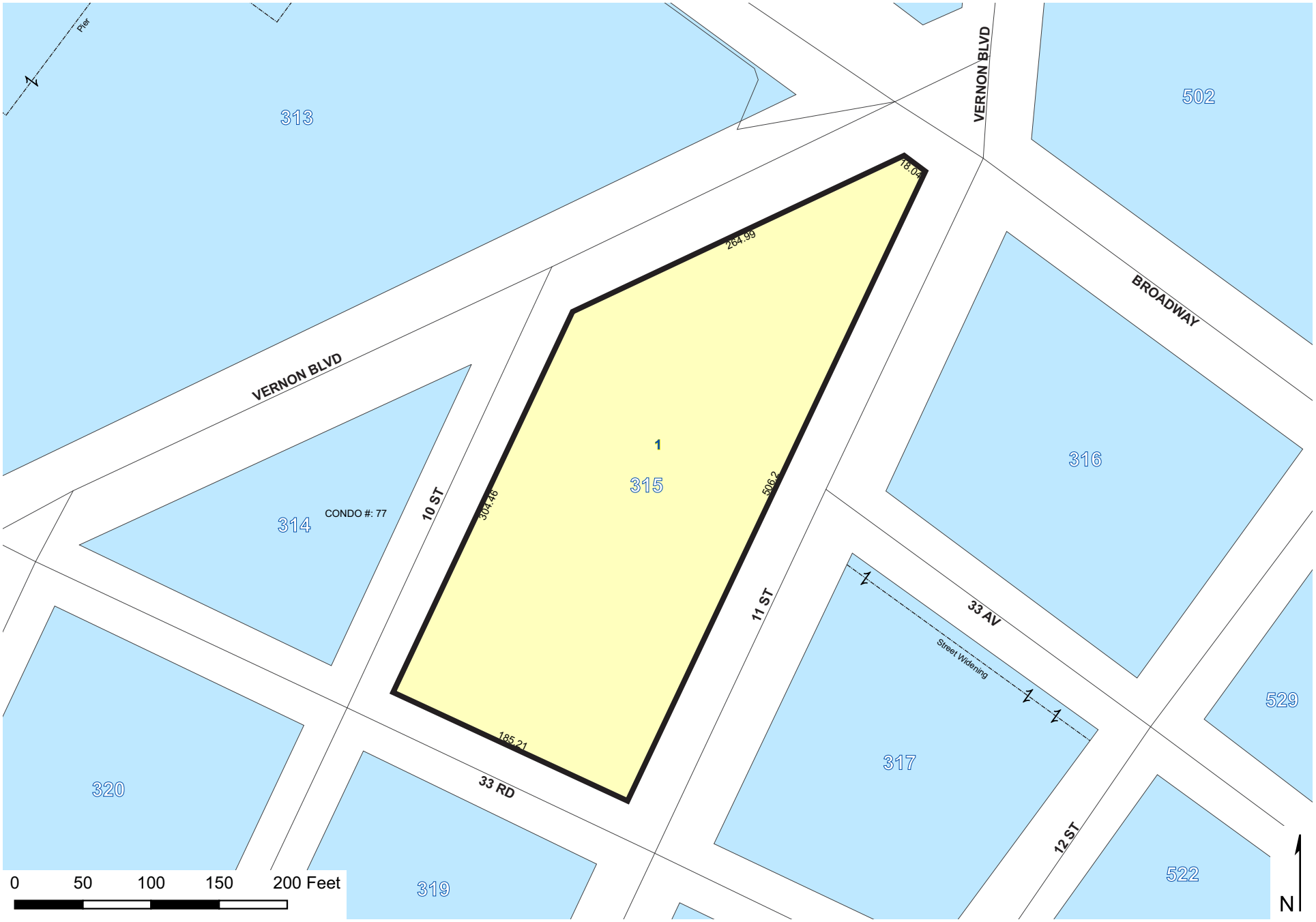

Vernon Blvd
BROADWAY
PINNACLE REALTY
STOP
Vernon Boulevard
Broadway
N


AS BORN FOR LOVE
NOT
HATRED
Vernon Boulevard
N

Figure 1 - Site Location



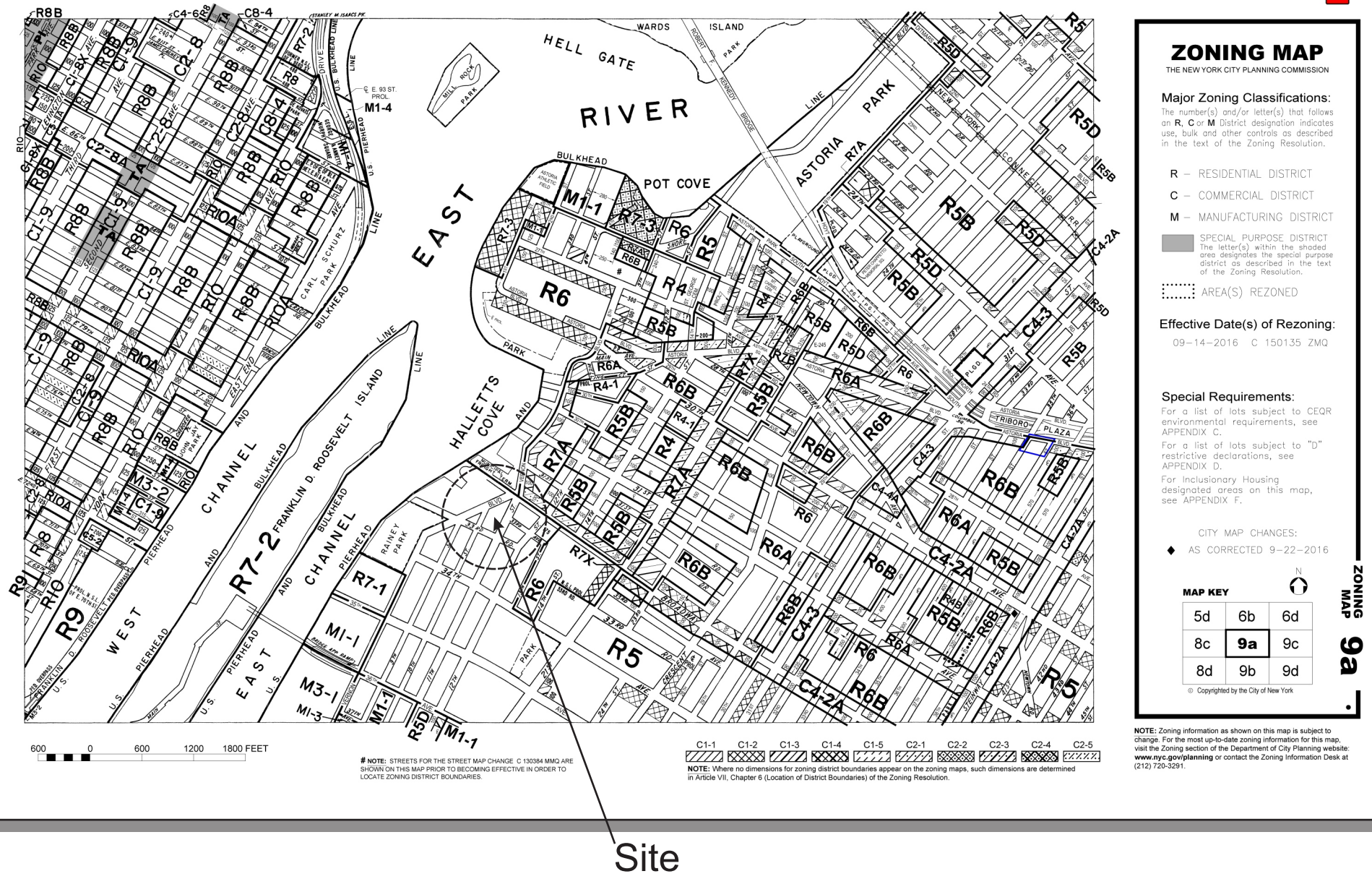
Data Source: MapPLUTO 2016v2, NYC DOF Digital Tax Map 03-16 downloaded from https://nycopendata.socrata.com



Data Source: MapPLUTO 2016v2, NYC DOF Digital Tax Map 03-16 downloaded from https://nycopendata.socrata.com

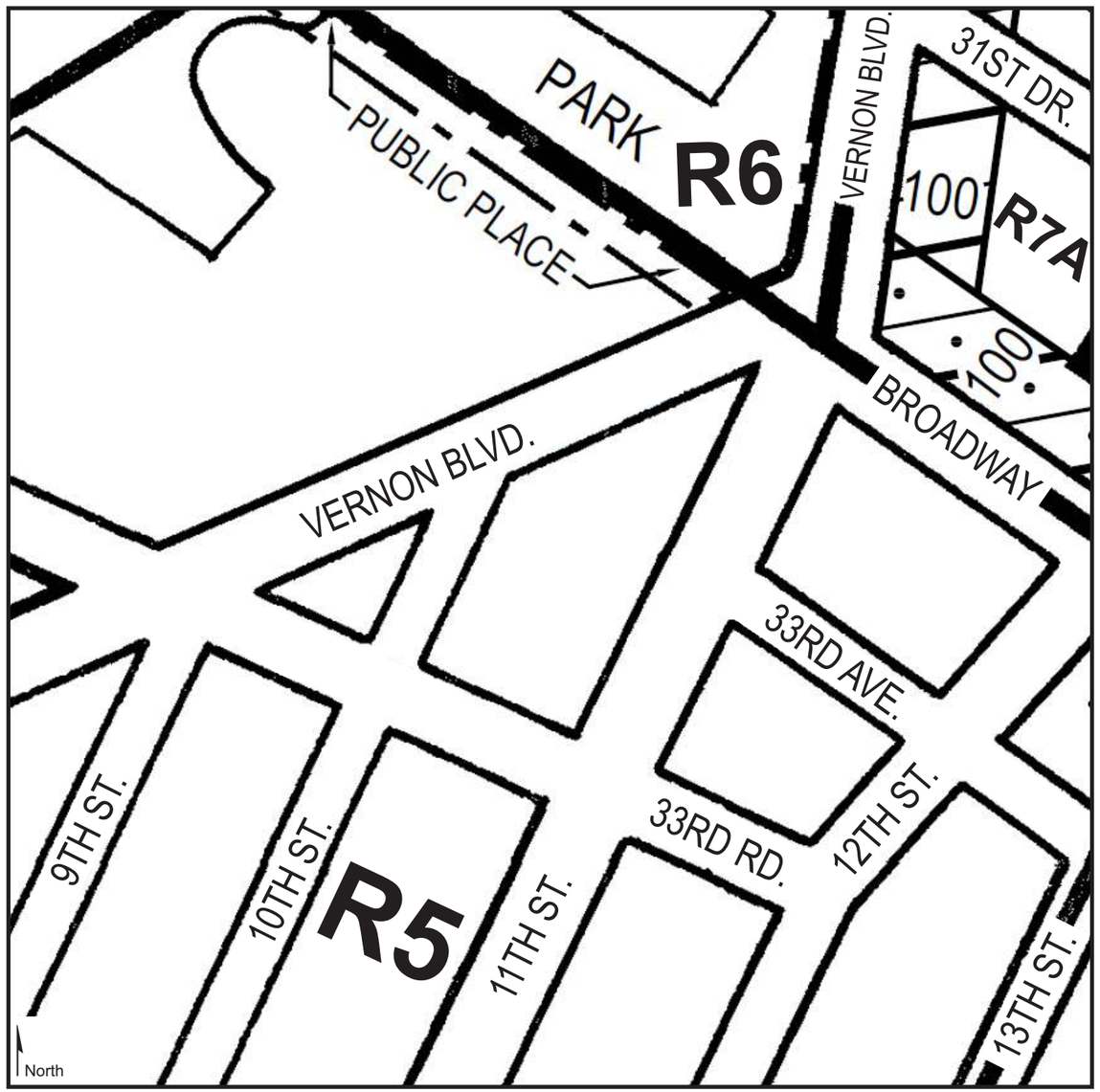


Data Source: MapPLUTO 2016v2, NYC DOF Digital Tax Map 03-16 downloaded from https://nycopendata.socrata.com

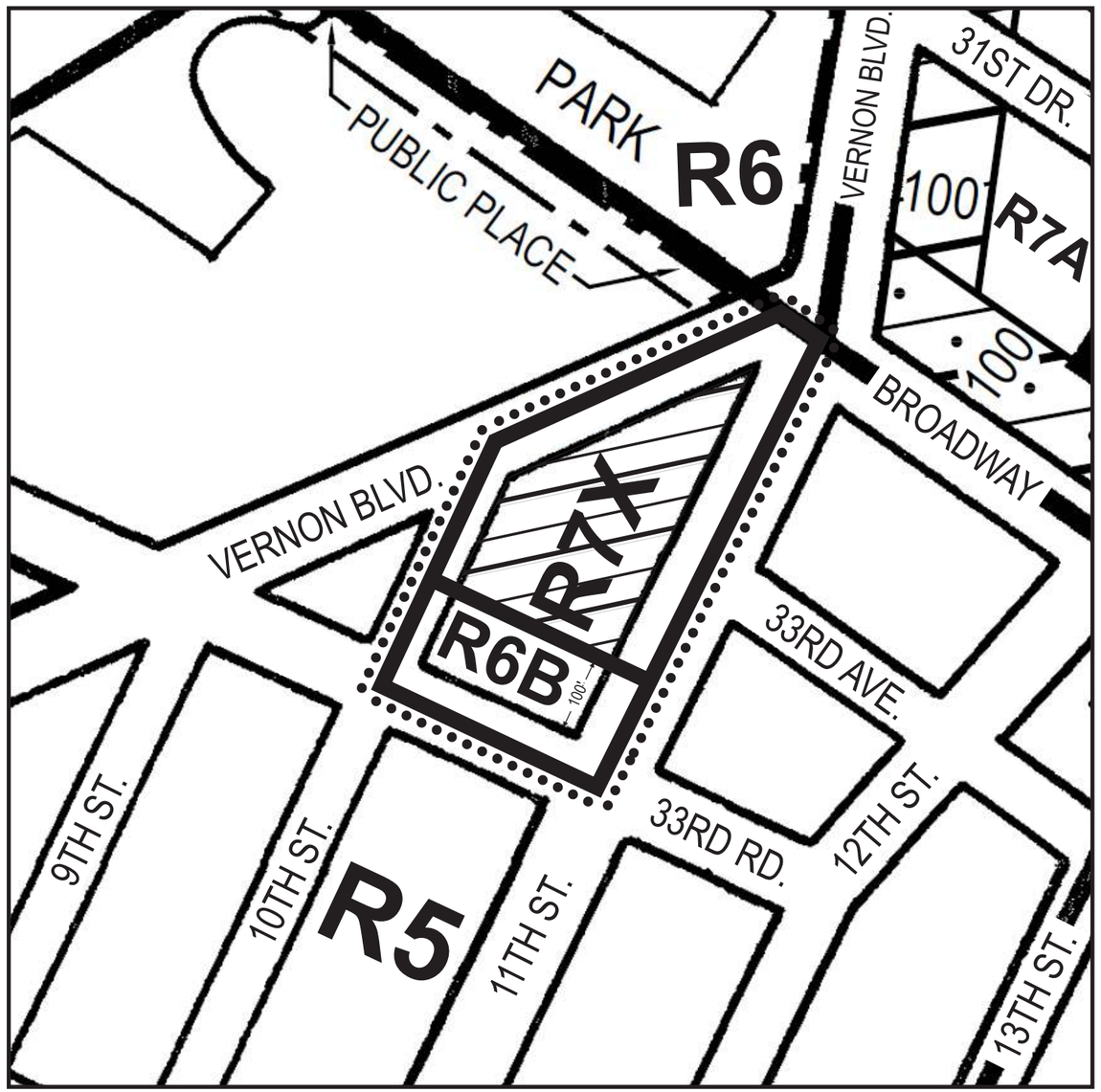

Click blue outline on map to view diagram of proposed zoning change
ZONING MAP
THE NEW YORK CITY PLANNING COMMISSION
Major Zoning Classifications:
The number(s) and/or letter(s) that follows an R, C or M District designation indicates use, bulk and other controls as described in the text of the Zoning Resolution.
R – RESIDENTIAL DISTRICT
C – COMMERCIAL DISTRICT
M – MANUFACTURING DISTRICT
SPECIAL PURPOSE DISTRICT
The letter(s) within the shaded area designates the special purpose district as described in the text of the Zoning Resolution.
AREA(S) REZONED
Effective Date(s) of Rezoning:
09-14-2016 C 150135 ZMQ
Special Requirements:
For a list of lots subject to CEQR environmental requirements, see APPENDIX C.
For a list of lots subject to "D" restrictive declarations, see APPENDIX D.
For Inclusionary Housing designated areas on this map, see APPENDIX F.
CITY MAP CHANGES:
AS CORRECTED 9-22-2016
MAP KEY
5d 6b 6d
8c 9a 9c
8d 9b 9d
© Copyrighted by the City of New York
ZONING MAP 9a
NOTE: Zoning information as shown on this map is subject to change. For the most up-to-date zoning information for this map, visit the Zoning section of the Department of City Planning website: www.nyc.gov/planning or contact the Zoning Information Desk at (212) 720-3291.
600 0 600 1200 1800 FEET
NOTE: STREETS FOR THE STREET MAP CHANGE C 130384 MMQ ARE SHOWN ON THIS MAP PRIOR TO BECOMING EFFECTIVE IN ORDER TO LOCATE ZONING DISTRICT BOUNDARIES.
C1-1 C1-2 C1-3 C1-4 C1-5 C2-1 C2-2 C2-3 C2-4 C2-5
NOTE: Where no dimensions for zoning district boundaries appear on the zoning maps, such dimensions are determined in Article VII, Chapter 6 (Location of District Boundaries) of the Zoning Resolution.
HELL GATE
RIVER
EAST
WARDS ISLAND
ASTORIA PARK
POT COVE
HALLETTS COVE
CHANNEL
FRANKLIN D. ROOSEVELT ISLAND
WEST
EAST
PIERHEAD
BULKHEAD
CARL SCHURZ PARK
RAINEY PARK
TRIBORO PLAZA
Site


400 Feet
Site
↔ VERNON BOULEVARD
↔ 31 AVENUE
→ 31 DRIVE
↔ BROADWAY
↔ 33 ROAD
↔ VERNON BOULEVARD
↔ 33 AVENUE
← 12 STREET
→ 14 STREET
↔ 33 ROAD
← 10 STREET
→ 9 STREET
← 11 STREET
↔ 34 AVENUE
← 13 STREET
↔ 33 AVENUE
BULLDOGS
0
100
200
300
400 Feet
N

Zoning Change Map



Current Zoning Map (9a)



Proposed Zoning Map (9a) - Area being rezoned is outlined with dotted lines

Rezoning from R5 to R7X/C1-3
Rezoning from R5 to R6B

C1-1 C1-2 C1-3 C1-4 C1-5 C2-1 C2-2 C2-3 C2-4 C2-5

NOTE: Where no dimensions for zoning district boundaries appear on the zoning maps, such dimensions are determined in Article VII, Chapter 6 (Location of District Boundaries) of the Zoning Resolution.

32-01 Vernon Boulevard
Community District 1, Queens
6/20/18
Zoning Map 9a

Matter underlined is new, to be added;
Matter ~~struck out~~ is to be deleted;
Matter within # # is defined in Section 12-10;
* * * indicates where unchanged text appears in the Zoning Resolution

* * *

APPENDIX F
Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing Areas

* * *

Queens

* * *

Queens Community District 1

* * *



Mandatory Inclusionary Housing Area *(see Section 23-154(d)(3))*

Area **2** — [date of adoption] — MIH Program Option 1 and Option 2

Portion of Community District 1, Queens

* * *

ENVIRONMENTAL ASSESSMENT STATEMENT

INTRODUCTION

Based on the analysis and the screens contained in the Environmental Assessment Statement Short Form, the analysis areas that require further explanation include land use, zoning, and public policy, socioeconomics, community facilities, open space, shadows, historic and cultural resources; urban design, hazardous materials, transportation, air quality, noise, and construction impacts as further detailed below. The subject heading numbers below correlate with the relevant chapters of the *CEQR Technical Manual.*

4. LAND USE, ZONING AND PUBLIC POLICY

Under the *City Environmental Quality Review (CEQR) Technical Manual* guidelines, a land use analysis evaluates the use and development trends in the area that may be affected by a proposed action and determines whether the proposed action is compatible with those conditions or may affect them. Similarly, the analysis considers the proposed action's compliance with, and effect on, the area's zoning and other applicable public policies.

The Proposed Actions include the following on Block 315 in Queens Community District 1:

- A zoning map amendment to ZR section 9a to change the existing R5 zoning district to a combination of R6B and C1-3/R7X zoning districts on Block 315, Lot 1; and

- A zoning text amendment of ZR Appendix F: Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing ("MIH") Areas for Community District 1, Queens to establish an MIH Area coterminous with the Project Area. Option 2 has been chosen under the MIH Text Amendment provisions applicable to the Proposed Actions. Under this option, 30% of the residential floor area must be for affordable housing units for residents with incomes averaging 80% AMI. The final MIH Option will be chosen by the City Council through the ULURP process. Only 20% of the units will be analyzed as affordable at 80% AMI for conservative analysis purposes in the EAS.

- Approval for a Large Scale General Development pursuant to ZR 74-74 to allow greater flexibility for the purpose of achieving better site planning for the Project Area. Two Large Scale Special Permit waivers are also being sought for:

1. The distribution of total allowable floor area within a large-scale general development without regard for zoning lot lines or district boundaries per ZR § 74-743(a)(1) for non-complying floor area, and;

2. The location of buildings without regard for the applicable height and setback regulations per ZR § 74-743(a)(2) for the 45' portion of the building in the C1-3/R7X zone on Zoning Lot A.

The proposed Zoning Map Change, Zoning Text Amendment, and Large Scale General Development would facilitate a proposal by the Applicant to construct a 5-story residential and community facility building, a 9-story residential and community facility building, and a 14-story residential, commercial, and community facility building. The buildings would contain a total of 351 dwelling units, 113 of which would be affordable to lower income residents (70 affordable units are assumed for conservative EAS analysis purposes), 11,236 gross square feet (gsf) of commercial space, 6,882 gsf of community facility space, and 164 accessory underground parking spaces. Additionally, the Applicant intends to provide three private open space recreational areas, totaling 33,606 square feet in size, in the Project Area. The development would require the demolition of the existing warehouse structure in the Project Area. The Project Build Year is assumed to be 2022 based on a 12-month environmental and land use approval process and a 24-month construction period.

According to the *CEQR Technical Manual*, the appropriate study area for land use, zoning and public policy is related to the type and size of the project, as well as the location and context of the area that could be affected by the project. To assess the potential for project related impacts, the land use study area has been defined as the area located within a 400-foot radius of the proposed Project Area. The 400-foot radius study area is generally bounded on the north by an area between Broadway and 31st Street, on the south by an area between 33rd Road and 34th Avenue, on the east by 12th Street, and on the west by Socrates Sculpture Park and Rainey Park. Various sources have been used to prepare a comprehensive analysis of land use, zoning, and public policy characteristics of the area, including field surveys, studies of the neighborhood, census data, and land use and zoning maps.

LAND USE

Existing Conditions

Project Area

The Project Area (the area subject to the Zoning Map and Zoning Text Amendments) is identified as Tax Block 315, Lot 1 located directly south of the intersection of Vernon Boulevard, Broadway, and 11th Street in Long Island City, Queens. The Project Area consists of an entire irregular shaped block bounded by Vernon Boulevard (265 feet frontage), 33rd Road (185 feet frontage), 10th Street (304 feet frontage), 11th Street (506 feet frontage), and Broadway (19 feet frontage) and totals 77,235 square feet in land area (per survey prepared by NY Land Surveyor LLC dated May 9, 2007, the total lot area is 77,234.69 square feet). The property is currently improved with a one-story, approximately 26,637 square foot warehouse building occupied by the Milea Truck

Sales and Leasing Company. The remainder of the lot consists of a paved parking area for trucks and equipment.

400-Foot Radius Project Study Area

The Project Area, which totals 77,235 square feet of developed land as described above, occupies the entirety of Block 315. The 400-foot radius project study area consists of a mixture of commercial and light industrial uses, community facilities, open space, and residential development. The area between Vernon Boulevard and the East River is developed with a Costco Wholesale Store sandwiched between the Socrates Sculpture Park and Rainey Park. The Noguchi Museum occupies an entire triangular shaped block across 10th Street from the Project Area. The area west of the site across 33rd Road is primarily developed with small 2-story detached residences mixed in with some larger structures occupied by automotive repair, electricians, a stone materials warehouse, and a thrift store among other uses. The area to the east across 11th Street is primarily developed with large one- and two-story structures occupied by uses including auto repair, a commercial bakery, and an import/export warehouse among other uses. A public school is also located in this area. Finally, the area opposite the site bordered by Broadway and Vernon Boulevard is developed with wholesale and light industrial uses, several vacant lots currently in construction, and scattered small one- and two-story detached residences.

Future No-Action Scenario

Project Area

Reasonable Worst-Case Development Scenario (RWCDS)

For the purposes of the environmental review, the No-Action RWCDS in the Project Area would be the development of a mixed-use residential and community facility project totaling 107,710 gsf in floor area. The No-Action scenario under the existing R5 zoning mapped on the property consists of five zoning lots in the Project Area developed with a total of 92 dwelling units, 22 of which would be considered affordable, 15,765 square feet of community facility space (Use Group 4 medical offices), and 106 accessory parking spaces.

The parcel was divided into five zoning lots in order to create a development scenario that would best relate to the existing development in the surrounding area and maximize the available space. Zoning lots 1 through 4, facing the more residentially developed area east of the Project Area, would each be developed with approximately 13 to 14 dwelling units in five 3-story, 2- and 3-family dwellings. Zoning lots 1 through 4 would each be developed with 13,386 gsf of residential floor area for a total residential floor area of 53,544 gsf, or 54 dwelling units. Each zoning lot would also contain 10 accessory parking spaces which would be above grade and include 3 interior garage spaces and 7 driveway/parking pad spaces for each zoning lot for a total of 40 accessory parking spaces. Six individual driveways and curb cuts would be provided onto both 10th Street and 11th Street, and one driveway and curb cut would be provided

onto 33rd Road.

Zoning lot 5, fronting on the more commercially and institutionally developed Vernon Boulevard, would be developed with a 4-story building containing 15,765 gsf of ground floor community facility space (Use Group 4 medical offices), and approximately 38 dwelling units within 38,401 gsf of floor area on the upper three floors. The zoning lot would also contain 66 accessory parking spaces, 38 of which would be in a cellar level garage with the remaining 28 to be provided on the open area of the lot. As shown on the Future No-Action as-of-right development plan attached to this document, the at-grade parking area would be accessed via a 22-foot wide driveway and curb cut onto 11th Street. The underground parking garage would have two ingress/egress points, one via a separate 22-foot wide driveway and ramp onto 11th Street and another via a 22-foot wide entrance which would be located within the at-grade parking lot and accessed from the same curb cut as the at-grade parking area.

For analysis purposes, the number of residential dwelling units is based on the Department's standard average size of 1,000 gsf per unit. However, the typical residential unit square footages are expected to be: studios - 500 to 550 square feet, 1 BRs - 700 to 750 square feet, 2 BRs - 800 to 900 square feet, and 3 BRs - 900 to 1,000 square feet. The number of affordable units is calculated based on 20% of the total floor area of the development.

400-Foot Radius Project Study Area

No new development projects are identified for the 400-foot radius project study area based on a review of the NYC Department of City Planning's (DCP) Land Use & CEQR Application Tracking System (LUCATS) for Queens Community District 1 back to the year 2010. No development plans are known to exist for the undeveloped parcels, parking lots, or other uses within the project study area as identified above by the project build year of 2022.

Surrounding land uses within the immediate study area are expected to remain largely unchanged by the project build year of 2022. The 400-foot area surrounding the Project Area is developed with a stable mixed-use community containing one- and two-family homes, commercial and light industrial uses, and community facilities and open space. Relatively few undeveloped parcels remain within the project study area and it is therefore anticipated that no significant new development would occur within the project study area by 2022.

Future With-Action Scenario

Project Area

This With-Action Scenario reflects the proposed Zoning for Quality and Affordability (ZQA) and Mandatory Inclusionary Housing (MIH) Text Amendments. The With-Action Scenario analyzes residential buildings with affordable housing on all sites where future residential development would be feasible. The MIH 30% option (30% of residential floor

area for residents with incomes averaging 80% AMI) with no unit targeted at a level exceeding 130% AMI. The final MIH Option will be chosen by the City Council through the ULURP process. Only 20% of the units will be analyzed as affordable at 80% AMI for conservative analysis purposes in the EAS.

The RWCDS includes one projected development site, Block 315, lot 1. This is the sole projected or potential development site as it consists of the entirety of one block that is completely bordered and separated from other blocks in the area by four adjacent streets. Unlike the Project Area, the blocks facing it are generally developed with buildings that cover all or most of these blocks and these blocks contain commercial, institutional, and residential uses that are more economically viable than those in the Project Area which would not be likely to be redeveloped in the future.

Projected Development Site 1 (Block 315, Lot 1)

The proposed rezoning to the proposed R6B and C1-3/R7X zoning districts would limit the use and bulk of future development on Projected Development Site 1 to match the proposed project. The intent of the proposed rezoning is primarily to allow for the development of a residential project with accessory commercial and community facility uses to serve the residential occupants of the project and the surrounding area.

The With-Action RWCDS would essentially be the same as the proposed development. The development would include 349,935 gsf/334,085 zsf of total floor area in three buildings located on two separate zoning lots. Normally, the number of dwelling units is calculated based on an average size of 1,000 gsf per unit[1]. In this case, the proposed 332,208 gsf of residential floor area would result in 332 dwelling units. As 332 units is less than the actual proposal of 351 dwelling units, it is more conservative to base the analysis on the higher number of units. Therefore, the With-Action Scenario would have 351 dwelling units including 113 affordable units (70 affordable units are assumed for conservative EAS analysis purposes).

The With-Action Scenario for the Project Build Year of 2022 would entail the development of Projected Development Site 1 with a 5-story residential and community facility building (Building A), a 9-story residential and community facility building (Building B), and a 14-story residential, commercial, and community facility building (Building C). The buildings would contain a total of 351 dwelling units. Under the MIH 30% option, it is assumed that 30% or 113 of the units would be affordable to lower income residents. The remaining 68% or 238 of the units would be market rate. The average unit size would be approximately 946 gsf. The final MIH Option will be chosen by the City Council through

[1] For analysis purposes, the number of residential units has been calculated on an assumed size of 1,000 square feet per dwelling unit. However, the typical residential unit square footages are as follows: Studio – 500 – 550 square feet; 1 BR - 700 – 750 square feet; 2 BR - 800 – 900 square feet; 3 BR - 900 – 1,000 square feet.

the ULURP process. Only 20% of the dwelling units (70 units) will be analyzed as affordable at 80% AMI for conservative analysis purposes in the EAS.

The Proposed Actions would include 11,236 gsf of commercial space on the first floor of Building C. Commercial uses would be limited to local retail and service uses as permitted by the proposed C1-3 commercial overlay. The Actions also include 6,882 gsf of community facility space (medical offices) and 164 accessory underground parking spaces. Parking is required to be provided for one-half of the market rate units (119 spaces) while no parking would be required for the affordable units as the Project Area is located within a Transit Zone. Commercial retail parking is required to be provided at 1 space per 400 square feet of floor area (11,236 zoning square feet (zsf)/400 = 28 spaces). Community facility (ambulatory diagnostic center) parking is required to be provided at 1 space per 400 square feet of floor area in the C1-3/R7X district (1,329 sf/400 = 3).[2] The total parking required is 150 spaces while 164 spaces will be provided. The underground parking spaces would be accessed via two curb cuts on 11th Street. Additionally, the Applicant intends to provide three private open space recreational areas, totaling 33,606 square feet in size. The development would require the demolition of the existing warehouse structure on the property.

Building A, located within the R6B zoning district, would contain 32,130 gsf/29,405 zsf of total floor area on a 18,524 square foot lot representing a total FAR of 1.59 on this lot. The 28,004 gsf/25,139 zsf of residential floor area on the lot would represent a residential FAR of 1.36. The building would be 5-stories and 55'-0" in height, with a 45'-0" tall base, and would contain 30 dwelling units. 15 of the 30 units would be affordable housing. The building would also contain 4,266 gsf/zsf of community facility floor area representing a community facility FAR of 0.23.

Building B, located within the C1-3/R7X zoning district, would contain 103,325 gsf/95,134 zsf of total floor area on a 27,786 square foot lot representing a total FAR of 3.42 on this lot. The 102,138 gsf/93,839 zsf of residential floor area on the lot would represent a residential FAR of 3.38. The building would be 9-stories and 95'-0" in height, with a 65'-0" tall base, and would contain 110 dwelling units. 44 of the 110 units would be affordable housing. The building would also contain 1,295 gsf/zsf of community facility floor area representing a community facility FAR of 0.05.

Building C, located within the C1-3/R7X zoning district, would contain 212,480 gsf/209,546 zsf of total floor area on a 30,925 square foot lot representing a total FAR of 6.78 on this lot. The 202,026 gsf/196,988 zsf of residential floor area on the lot would

[2] Per ZR 77-322: For non-residential uses, the requirements for accessory off street parking of that district in which more than 50 percent of the total area of the zoning lot is located, shall apply to the entire zoning lot, in this case the R7X district. No parking is required for (R6B = 5,245 sf = none req'd as per R7X requirement; R7X = 1,361 sf – none required; and C1-3/R7X = 1,329 sf /400 = 3 required).

represent a residential FAR of 6.36. The building would be 14-stories and 145'-0" in height, with a 65'-0" tall base, and would contain 211 dwelling units. 54 of the 211 units would be affordable housing. The building would contain 1,321 gsf/zsf of community facility floor area representing a community facility FAR of 0.04 on this lot. The building would also contain 11,236 gsf/zsf of commercial floor area on the lot representing a commercial FAR of 0.36.

The three proposed buildings would include the floor areas and development shown in Table 4-1 below which presents a breakdown of the RWCDS in the future with the Proposed Actions.

400-Foot Radius Project Study Area

The Proposed Actions would not result in any changes in land use within the 400-foot radius project study area.

Table 4-1
Future with Action RWCDS

Item	Building A	Building B	Building C	Total
Zoning District	R6B	C1-3/R7X	C1-3/R7X	
Lot Size	18,524 sf	27,786 sf	30,925 sf	77,235 sf
Building Size GSF/ZSF/ FAR	32,130/ 29,405/1.59	103,325/95,134/3.42	214,480/209,546/6.78	349,935/334,085/ 4.32
Stories; Height	5; 55'0"	9; 95'-0"	14; 145'-0"	
Dwelling Units/ (Affordable Units)	30/(15)	110/(44)	211/(54)	351/(113)
Residential GSF/ZSF/ FAR	28,044/25,139/ 1.36	102,138/93,839/3.38	202,026/196,988/6.36	332,208/315,966/ 4.09
Commercial GSF/ZSF/ FAR	None	None	11,236/11,236/0.36	11,236/11,236/0.15
Community Facility GSF/ZSF/ FAR	4,266/4,266/0.22	1,295/1,295/0.05	1,321/1,321/0.04	6,882/6,882/0.09
Parking Spaces	N/A	N/A	N/A	164
Open Space	N/A	N/A	N/A	Private: 17,059 Public: 16,547 Total: 33,606

Analysis Framework

The CEQR analysis prepared for the Proposed Actions is based on the difference between the No-Action RWCDS and the Future With-Action RWCDS. The difference between the No-Action and With-Action Scenarios would be the development under the With-Action Scenario of an additional 259 dwelling units, 58 parking spaces, and 11,236 gsf of retail floor area and a decrease of 8,883 gsf of community facility space. Table No. 4-2 below presents a detailed summary of the existing conditions, Future No-Action, and Future With-Action scenarios in the Project Area and shows the incremental difference between the Future No-Action and Future With-Action scenarios.

Table 4-2
Summary of Existing Conditions, Future No-Action, and Future With-Action Scenarios

Item	Existing	No-Action	With-Action	Increment
Gross SF	26,637	107,710	349,935	+242,225
DUs/(Afford)	0	92/(22)	351/(70)	+259/(70/48)
Residential gsf	0	91,945	332,208	+240,263
Commercial gsf	26,637	0	11,236	+11,236
Comm Facil gsf	0	15,765	6,882	-8,883
No. of Stories	1	3-4	5-14	+2-10
Building Ht	18′	30′-40′	55′-145′	+25′-105′
Access Pkg Spaces	Open vehicle storage	106	164	+58

The difference between the No-Action and With-Action development scenarios would constitute a significant land use change in the Project Area but the Applicant believes this change would be beneficial as it would fully develop an underutilized property and would provide market rate and affordable housing, local retail and community facility space, and accessory parking. The projected development would replace a warehouse building occupied by a truck sales and leasing establishment within the Project Area but this impact would not be considered significant. The proposed project would not create additional non-conforming uses within the Project Area or the 400-foot radius study area since residential use already exists and is permitted in these areas. The projected development could alter existing development patterns in the future, especially on the underdeveloped parcels in the vicinity of the site, by encouraging the development of additional residential uses. However, this would be in compliance with City policies to encourage the development of new housing, especially affordable housing, in underutilized areas of the City.

Based on the above analyses, it has been determined that no potentially significant adverse impacts related to land use are expected to occur as a result of the Proposed Actions. Therefore, further analysis of land use is not warranted.

ZONING

Existing Conditions

Background

The Project Area was zoned R5 with the 1961 enactment of the Zoning Resolution. The area directly to the north of the Project Area was included in the West Astoria Rezoning (C 870580 ZMQ, effective September 14, 1989), initiated by the Department of City Planning (DCP). The West Astoria Rezoning changed R5 and R6 zoning districts to R3-1, R4, R5, R6A, R6B, R7A, R7B, and R7X zoning districts with C2-2 commercial overlays on Broadway, 21st Street, and Astoria Boulevard. The rezoning was intended to reflect existing conditions in West Astoria, to prevent the construction of developments not consistent with the scale and character of the neighborhood, and to encourage new development in appropriate areas.

More recently, the Astoria Rezoning (C 100199 ZMQ, effective May 25, 2010), also initiated by DCP, rezoned all or portions of 238 blocks to the north of the Project Area. It was intended to protect neighborhood character from out-of-scale development, more closely reflect established development patterns, direct opportunities for moderate residential and commercial growth to locations along wide streets and transit resources, and provide incentives for the production of affordable housing. An associated text amendment established the voluntary Inclusionary Housing Program in R7A and equivalent districts.

In addition, a private application for the Vernon Boulevard Rezoning (C 020087 ZMQ, effective July 19, 2006) changed three nearby waterfront lots from an R5 to an R7-1 zoning district to facilitate residential development, and a portion of one waterfront lot from an R5 to an M1-1 zoning district to reflect the existing land use. It was intended to facilitate the development of two 19-story (175-foot tall) residential towers on a portion of the R7-1 rezoning area with 350 dwelling units and approximately 20,000 square feet of ground floor community facility space. An associated waterfront certification (N 020610 ZCQ) facilitated the creation of an approximately 13,000 square foot public waterfront esplanade.

Project Area

The Project Area is currently zoned R5. R5 zoning districts allow all housing types including detached, semi-detached, attached and multi-family residences. The maximum FAR for all housing types is 1.25. On blocks that are predominantly built up, a maximum FAR of 1.65 is permitted through the R5 infill provision. Detached residences are limited to lots with a minimum of 3,800 square feet in area and a

minimum lot width of 40 feet. All other housing types are limited to lots with a minimum of 1,700 square feet in area and a minimum lot width of 18 feet. R5 districts require a minimum front yard depth of 10 feet, which is increased to 18 feet if front yard parking is provided. The maximum building height is 40 feet with a maximum perimeter wall height of 30 feet. Community facilities are permitted at an FAR of 2.0. Off-street parking in a grouped facility is required for at least 85 percent of the dwelling units.

The Food Retail Expansion to Support Health (FRESH) program is mapped over the entire Project Area. The City has established the FRESH program in response to the issues raised in neighborhoods that are underserved by grocery stores. FRESH provides zoning and financial incentives to promote the establishment and retention of neighborhood grocery stores in underserved communities throughout the five boroughs. The FRESH program is open to grocery store operators renovating existing retail space or developers seeking to construct or renovate retail space that will be leased by a full-line grocery store operator. Stores that benefit from the FRESH program must provide a minimum of 6,000 square feet of retail space for a general line of food and nonfood grocery products intended for home preparation, consumption and utilization. The Project Area is eligible for various tax incentives related to grocery store development and operation.

400-Foot Radius Project Study Area

The 400-foot radius project study area south of Broadway is zoned R5 which is discussed under the Project Area above. The project study area to the north of Broadway is primarily zoned R6 and R7A. A 100-foot wide strip along the north side of Broadway east of Vernon Boulevard is mapped with a C2-1 commercial overlay, and a 100-foot wide strip along the east side of Vernon Boulevard north of Broadway is mapped with a C1-3 commercial overlay.

The R6 zoning district is appropriate for medium density housing with typical building heights ranging from three to twelve stories. The R6 zone is common in built-up areas of all the boroughs except Staten Island. The district allows residential floor area ratios ranging from 0.78 to 2.43 and a community facility floor area of 4.8. The higher FAR typically produces 12-story residential buildings with increased open space on the lot. Parking is required for 70% of the dwelling units in this zone; for 50% of the units for lots less than 10,000 square feet in area; and is waived if 5 or fewer spaces are required. The Quality Housing Program is optional in R6 districts and permits an FAR of up to 3.0 on wide streets outside the Manhattan core. In addition, parking is required for only 50% of the dwelling units in a Quality Housing development.

The R7A zoning district is a contextual zoning district that requires development to be in accordance with Quality Housing standards. The district typically produces high lot coverage seven- and eight-story apartment buildings, blending with existing buildings in many established neighborhoods. The maximum residential and community facility

FAR in the R7A zone is 4.0 with a maximum lot coverage of 65% on interior/through lots and 80% on corner lots. Parking is required for 50% of the dwelling units but may be waived if 15 or fewer spaces are required.

C1 and C2 overlay districts accommodate the retail and personal service shops needed in residential neighborhoods, and are generally mapped along major avenues. C2 districts permit a slightly wider range of uses than C1 districts, such as funeral homes and repair shops. The maximum commercial FAR for C1 and C2 overlays in R7 zones is 2.0. Residential uses are permitted within these overlays with residential bulk being governed by the provisions of the surrounding residential zone. Parking requirements vary by use within the C1 and C2 zones with one parking space required for each 300 square feet of general retail floor area. No loading spaces are required for the first 8,000 square feet of floor area and one loading berth is required for the next 17,000 square feet of most types of commercial floor area.

An Inclusionary Designated Housing Area is mapped north of the Project Area across Broadway and east of Vernon Boulevard to the west of 12th Street. The Inclusionary Housing Program promotes economic integration in areas of the City undergoing substantial new residential development by offering an optional floor area bonus in exchange for the creation or preservation of affordable housing, on-site or off-site, principally for low-income households. The Inclusionary Housing Program requires a percentage of the dwelling units within a building to be set aside, or new or rehabilitated affordable units be provided off-site within the same community district or within one-half mile of the bonused development. All affordable residential units created through the Inclusionary Housing Program must remain permanently affordable. Affordable apartments may be rental units or, under modifications made to the program in 2009, available in an ownership plan.

The entire 400-foot radius project study area is located within the boundaries of the FRESH program described under the Project Area above. The project study area is eligible for various tax incentives related to grocery store development and operation.

Future No-Action Scenario

Project Area

In the future and absent the Proposed Actions, the Project Area would continue to be zoned R5.

400-Foot Radius Project Study Area

Based on a review of DCP's LUCATS listings for Queens Community District 1, no rezonings are proposed for the 400-foot radius project study area. No rezoning actions are presently being contemplated by the DCP, as indicated on the DCP website, for the study area by the final project build year of 2022.

Future With-Action Scenario

Project Area

The Applicant proposes a zoning map amendment, a zoning text amendment, a Large Scale General Development, and two Large Scale Special Permit waivers on Block 315 in Queens Community District 1. The Proposed Actions would rezone the Project Area from the current R5 district to a mixture of R6B and C1-3/R7X contextual residential zoning districts. The boundary of the C1-3 commercial overlay would start at a distance of 100 feet north of 33rd Road running northerly to Vernon Boulevard. The property would be divided into two zoning lots, Zoning Lot A and Zoning Lot B. Zoning Lot A would total 46,310 square feet in area and would be comprised of a 18,524 square foot area zoned R6B and a 27,786 square foot area zoned C1-3/R7X. Zoning Lot B would total 30,925 square feet in area and would be zoned C1-3/R7X. The Applicant seeks a zoning text amendment which would modify Appendix F of the NYC Zoning Resolution to make the newly mapped R6B and C1-3/R7X districts Inclusionary Housing designated areas. The Applicant also seeks a Large Scale General Development approval pursuant to ZR 74-74 in order to allow greater flexibility for the purpose of achieving better site planning for the Project Area. Two Large Scale Special Permit waivers are also being sought for:

1. The distribution of total allowable floor area within a large-scale general development without regard for zoning lot lines or district boundaries per ZR § 74-743(a)(1) for non-complying floor area, and;

2. The location of buildings without regard for the applicable height and setback regulations per ZR § 74-743(a)(2) for the 45' portion of the building in the C1-3/R7X zone on Zoning Lot A.

The requested rezoning is necessary in order to allow the proposed development to proceed. The existing R5 zoning mapped on the Project Area typically produces three-story attached houses and small apartment buildings at a low residential FAR of 1.25. The Applicant proposes rezoning the Project Area with a mixture of R6B and R7X contextual residential zoning districts with a C1-3 commercial overlay. The proposed rezoning would allow the Applicant to develop a higher density residential development with accessory community facility and commercial space in the Project Area which would not be allowed under the current zoning. The proposed rezoning would enable the Applicant to develop this currently underdeveloped parcel with an appropriate amount of residential floor area at an FAR of 2.2 on the R6B zoned portion of the Project Area and 6.0 on the R7X zoned portion of the Area. It would also permit a commercial FAR of 2.0 on the C1-3/R7X zoned portion of the Project Area. The action would serve the needs of this area of Queens for high quality residential dwellings, affordable housing, and retail and community facility services with adequate parking, and would promote the development of the property in a fashion that would be compatible with and beneficial to adjacent and nearby residential and other uses.

The R6B district would be mapped on the southern portion of the Project Area. The mapping of the R6B zoning district on this portion of the site is intended to lower the bulk and density in the Project Area so that there would be no adverse impact to the adjacent neighbors to the south. R6B districts are often traditional row-house districts, which preserve the scale and harmonious streetscape of neighborhoods of four-story attached buildings developed during the 19th century. Many of these houses are set back from the street with stoops and small front yards. The FAR of 2.0 and the mandatory Quality Housing regulations also accommodate apartment buildings at a similar four- to five-story scale. In the R6B district, the residential FAR would be increased to 2.2 within the MIH area. The base height of a new building before setback must be between 30 and 40 feet; the maximum height is 50 feet. For buildings outside of the Manhattan core with qualifying ground floors, the maximum base height is increased to 45 feet and the maximum building height is increased to 55 feet. Curb cuts are prohibited on zoning lot frontages less than 40 feet. The street wall of a new building, on any lot up to 50 feet wide, must be as deep as one adjacent street wall but no deeper than the other. Buildings must have interior amenities for the residents pursuant to the Quality Housing Program. Off-street parking is required for 50% of dwelling units. It is not allowed in front of a building. Parking for community facility uses such as medical offices is required at a ratio of 1 space per 400 square feet of floor area. The mapping of the R6B zoning district on the southern portion of the Project Area is intended to lower the bulk and density in the Project Area so that there would be no adverse impact to the adjacent neighbors to the south.

R7X districts are governed by contextual Quality Housing bulk regulations. The FAR in R7X districts is 5.0 for all uses. In the R7X district, the residential FAR would be increased to 6.0 within the MIH area. Above a base height of 60 to 85 feet, the building must be set back a depth of 10 feet on a wide street and 15 feet on a narrow street before rising to its maximum height of 125 feet. For MIH buildings, the maximum base height is increased to 95 feet with a maximum total building height of 14 stories and 145 feet. To maintain the traditional streetscape, the street wall of a new building can be no closer to the street line than any building within 150 feet on the same block but need not be farther than 15 feet. The building must have interior amenities for residents pursuant to the Quality Housing Program. Off-street parking is required for 50% of dwelling units. It is not allowed in front of a building. Parking for community facility uses such as medical offices is required at a ratio of 1 space per 400 square feet of floor area.

The C1-3 commercial overlay district permits commercial Use Groups 5 and 6 as well as residential and community facility Use Groups 1 through 4. The proposed C1-3 overlay district, the boundary of which would start at a distance of approximately 100 feet north of 33rd Road running northerly to Vernon Boulevard, is intended to accommodate the retail and personal service shops needed in the surrounding residential neighborhood. The maximum commercial FAR for the C1 overlay in the R7X zone is 2.0. Residential uses are permitted within these overlays with residential bulk being governed by the provisions of the surrounding residential zone. Parking requirements vary by use within the C1 zone with one parking space required for each 400 square feet of general retail

floor area. No loading spaces are required for the first 8,000 square feet of floor area and one loading berth is required for the next 17,000 square feet of most types of commercial floor area.

As described above, the Project Area is projected to be developed with 332,208 gsf of residential space for 351 dwelling units including 238 market rate and 113 affordable units (281 market rate and 70 affordable units for conservative EAS analysis purposes), 11,236 gsf of commercial space, 6,882 gsf of community facility space (Use Group 4 medical offices), and 164 accessory parking spaces. This would be a net increase over the No-Action condition of 240,263 gsf of additional residential space for 259 additional dwelling units including 168 market rate and 91 affordable units (211 market rate and 48 affordable units for conservative EAS analysis purposes), 11,236 gsf of new commercial space, a decrease of 8,883 gsf of community facility space, and 58 additional accessory parking spaces. In order to allow for the projected development, the existing warehouse structure on the property would be demolished.

Table 4-2 below summarizes the major provisions of the existing and proposed zoning districts as applicable to the Projected Development Site.

Table 4-2

No-Action and With-Action Development Scenarios

	Existing Zoning					Proposed Zoning					
Lot Size	Zone	Max FAR	Max GSF	Max Ht	Use Groups	Lot Size	Zone	Max FAR	Max GSF	Max Ht	Use Groups
77,235 sf	R5	1.25 R, 2.0 CF	96,543 R, 154,470 CF	40′	1-4	Lot A – 46,310 sf	R6B – 18,524 sf	2.0 R/CF, 2.2 R (MIH)	37,048 R/CF; 40,752 R (MIH)	55′	1-4
							C1-3/ R7X - 27,786 sf	5.0 R/CF, 6.0 R (MIH), 2.0 C	138,930 R/CF; 166,716 R (MIH); 55,572 C	145′	1-4
						Lot B – 30,925 sf	C1-3/ R7X	5.0 R/CF, 6.0 R (MIH), 2.0 C	154,625 R/CF; 185,550 R (MIH); 61,850 C	145′	1-6

The proposed residential, community facility, and commercial development would be in conformance with the use provisions of the proposed R6B and C1-3/R7X zones. The 351 dwelling unit RWCDS Future With Action development in the Project Area would fall well below the maximum permitted development of 542 dwelling units. The proposed 11,236 square feet of commercial development would comply with the use provisions of the C1-3 commercial overlay as it would be limited to local retail and service uses.

The proposed residential, community facility, and local commercial development would also be in conformance with the bulk provisions of the proposed R6B and C1-

3/R7X zones. The total maximum FAR of 2.2 on the R6B zoned portion of proposed Lot A would allow a total development of 40,752 zsf on the 18,524 square foot R6B portion of the Lot. The Future With-Action Scenario would have a total floor area of 29,405 zsf representing an FAR of 1.59. The total maximum FAR of 6.0 on the C1-3/R7X zoned portion of proposed Lot A would allow a total development of 166,716 zsf on the 27,786 square foot C1-3/R7X portion of the Lot. The Future With-Action Scenario would have a total floor area of 95,134 zsf representing an FAR of 3.42. The total maximum FAR of 6.0 on the C1-3/R7X zoned proposed Lot B would allow a total development of 185,550 zsf on the 30,925 square foot Lot. The Future With-Action Scenario would have a total floor area of 209,546 zsf representing an FAR of 6.78. Although the proposed development on Lot B would exceed the maximum permitted floor area, it is proposed to transfer approximately 23,996 square feet of unused floor area from Lot A in order to achieve compliance.

The proposed commercial FAR for the project is 0.15 while the maximum FAR allowed in a C1-3/R7X district for retail uses is 2.0. Therefore, the proposed 11,236 square feet of commercial floor area would fall well below the maximum permitted on the lot. The maximum allowable commercial space is not proposed for Building C as all the proposed retail space is to be provided along the Vernon Boulevard frontage of the site, which is the commercial strip in this area. The C1-3 commercial overlay would also extend south from the Vernon Boulevard frontage of the property to accommodate the locations of the entrance and exit to the underground parking garage which would include parking for commercial uses.

The proposed 6,704 square feet of building lot coverage on the R6B portion of Zoning Lot A would fall well below the maximum permitted coverage of 18,524 square feet. The proposed 4,323 square feet of building lot coverage on the C1-3/R7X corner portion of Zoning Lot A would fall below the maximum permitted coverage of 5,514 square feet. The proposed 18,330 square feet of building lot coverage on the C1-3/R7X interior/through lot portion of Lot A would fall below the maximum permitted coverage of 19,450 square feet. The proposed 4,323 square feet of building lot coverage on the C1-3/R7X corner portion of Zoning Lot B would fall below the maximum permitted coverage of 5,514 square feet. The proposed 33,407 square feet of building lot coverage on the C1-3/R7X interior/through lot portion of Lot B would fall below the maximum permitted coverage of 33,997 square feet.

The proposed 55-foot and 5-story total height of Building A would comply with the maximum permitted heights in the R6B district. The proposed 45-foot base height would not comply with the required minimum base height of 60 feet in the R7X district. However, the 95-foot and 9-story total height of Building B would comply with the maximum permitted heights in the R7X district. Building C would have a 65-foot base height and a total height of 145 feet and 14 stories which would comply with the maximum base and total heights permitted for MIH developments in the R7X district.

Finally, the proposed development would comply with zoning requirements for parking. 150 parking spaces are required for the proposed development including 119 parking spaces for the proposed market rate dwelling units, and 31 parking spaces for the proposed commercial space and community facility space. No parking is required for the affordable dwelling units as the Project Area is located in a Transit Zone. 164 parking spaces will be provided.

The proposed text amendment of ZR Appendix F is necessary to establish an MIH Area coterminous with the Project Area. Pursuant to the MIH program, a percentage of the new dwelling units in the proposed development must be affordable units, resulting in an affordable housing set-aside for either 25 percent of the residential floor area at an average of 60 percent of AMI (Option 1) or 30 percent of the residential floor area at an average of 80 percent AMI (Option 2). The Applicant seeks Option 2 for the Project Area, resulting in approximately 113 permanently affordable units. Option 2 has been chosen under the MIH Text Amendment provisions applicable to the Proposed Actions. The MIH program would ensure that development within the Project Area would address the need for low-income housing. The final MIH Option will be chosen by the City Council through the ULURP process. Only 20% of the units will be analyzed as affordable at 80% AMI for conservative analysis purposes in the EAS.

The Large Scale General Development (LSGD) approval pursuant to ZR 74-74 is necessary in order to allow greater flexibility for the purpose of achieving better site planning for the Project Area while at the same time safeguarding the present and future use and development of the surrounding area. The project involves two zoning lots but the Project Area is planned to be developed as a unit, and the district regulations currently impose unnecessary rigidities on the Site which would prevent the achievement of the best possible site plan within the overall density and bulk controls.

The proposed LSGD special permit pursuant to ZR § 74-743 is necessary to facilitate the site plan, which concentrates height and density on the northern portion of the Project Area on Vernon Boulevard, Broadway, and 11th Street, and lower height and open space on the southern portion of the Project Area. The special permit would allow the distribution of floor area without regard for zoning lot lines, allowing a shift of 23,998 square feet of floor area from Zoning Lot A to Zoning Lot B. In addition, the special permit would allow Building B to have a base height of 45 feet, which is below the minimum base height of 60 feet permitted in the R7X zoning district.

The proposed distribution of floor area allows the reduced height and open space on the southern portion of the Project Area to accommodate the proposed site plan configuration that concentrates height and density at the northern portion of the site. The proposed waiver of the minimum base height allows Building B to have a height of 45 feet at its 10th Street frontage and a base height of 45 feet along its 11th Street frontage. The proposed site plan configuration is designed to respond to the lower scale of the

surrounding R5 neighborhood, the Noguchi Museum sculpture garden, and the denser R7A-zoned area to the immediate north. The proposed modifications are necessary for the site plan that meets these goals.

400-Foot Radius Project Study Area

The Proposed Actions would not result in any changes in zoning in the 400-foot radius project study area.

Conclusion

No significant impacts to zoning patterns in the area would be expected. The proposed zoning map, zoning text amendment, and Large Scale General Development approval would only apply to the Project Area and would not affect lots beyond this area. The Proposed Actions would not result in any significant impacts to zoning patterns in the area since the mapping of R6B and C1-3/R7X zones on the Project Area is supported by the existence of nearby similar R6, R7A, and C1-3 and C2-3 commercial overlay districts. The C1-3 commercial overlay is proposed along the Vernon Boulevard frontage of the Project Area as this is the local commercial strip in this neighborhood and would be mapped across the street from other C1-3 and C2-3 commercial overlay districts. The C1-3 commercial overlay would also extend south from the Vernon Boulevard frontage of the property to accommodate the locations of the entrance and exit to the underground parking garage which would include parking for commercial uses. The mapping of an R6B zoning district on the southern portion of the Project Area is intended to lower the bulk and density on the site so that there would be no adverse impact to the adjacent neighbors to the south. The Large Scale General Development approval pursuant to ZR 74-74 is necessary in order to allow greater flexibility for the purpose of achieving better site planning for the Project Area while at the same time safeguarding the present and future use and development of the surrounding area. The proposed rezoning would permit a new development that would be compatible with and beneficial to the adjacent and nearby residential, commercial, and other uses. Given the character and development of the immediate vicinity, the most appropriate contextual scenario for the subject site would be the proposed residential and commercial overlay zoning and the associated development project.

The requested rezoning would enable the property owner to develop a currently underdeveloped parcel with an appropriate amount of residential, community facility, and commercial floor area. The rezoning would permit the construction of much needed housing, including affordable housing, in the area and provide locally oriented community facility uses as well as commercial retail services along Vernon Boulevard which would serve to improve and revitalize the surrounding neighborhood.

The Proposed Actions would therefore not have a significant impact on the extent of conformity with the current zoning in the surrounding area, and would not adversely affect the viability of conforming uses on nearby properties. The proposed zoning and associated development would not represent an objectionable use that could affect

neighborhood character, but would comprise a use that is already located in and planned for development on other sites in the neighborhood.

Potentially significant adverse impacts related to zoning are not expected to occur as a result of the Proposed Actions, and further assessment of zoning is not warranted.

PUBLIC POLICY

Existing Conditions

According to the *CEQR Technical Manual*, a project that would be located within areas governed by public policies controlling land use, or that has the potential to substantially affect land use regulation or policy controlling land use, requires an analysis of public policy. Public policies applicable to the Project Area and 400-foot radius project study area are discussed below.

Project Area and 400-Foot Radius Project Study Area

The Project Area and the entire 400-foot radius project study area are located within the City's Coastal zone boundary. These areas are therefore subject to the provisions of the City's Waterfront Revitalization Program (WRP).

The Project Area and the entire 400-foot radius project study area are located within the boundaries of the City's FRESH Program. The City has established the Food Retail Expansion to Support Health (FRESH) program in response to the issues raised in neighborhoods that are underserved by grocery stores. FRESH provides zoning and financial incentives to promote the establishment and retention of neighborhood grocery stores in underserved communities throughout the five boroughs. The FRESH program is open to grocery store operators renovating existing retail space or developers seeking to construct or renovate retail space that will be leased by a full-line grocery store operator in FRESH-eligible areas that meet the following criteria:

- Provide a minimum of 6,000 square feet (sf) of retail space for a general line of food and non-food grocery products intended for home preparation, consumption and utilization;
- Provide at least 50 percent of a general line of food products intended for home preparation, consumption and utilization;
- Provide at least 30 percent of retail space for perishable goods that include dairy, fresh produce, fresh meats, poultry, fish, and frozen foods; and
- Provide at least 500 sf of retail space for fresh produce.

Financial incentives are available to eligible grocery store operators and developers to facilitate and encourage FRESH Food Stores in the designated area. These incentives include real estate tax reductions, sales tax exemptions, floor area bonuses, and mortgage recording tax deferrals. The Project Area and the 400-foot radius project study area are eligible for various tax incentives related to grocery store development and operation.

DCP has undertaken the Western Queens Transportation Study with the goal of improving mobility and enhancing connections both within western Queens and to other areas of the city, including nearby Roosevelt Island and northern Brooklyn. The objectives of this study are to:

- Enhance the connections between the various neighborhoods of western Queens.
- Create and enhance connections to neighborhoods outside western Queens, including Roosevelt Island.
- Link existing and new development and improve access and mobility throughout the neighborhood.
- Connect new and existing destinations such as waterfront parks and cultural institutions.

The study is a comprehensive examination of transportation facilities in an area encompassing Roosevelt Island to the west, Steinway Street to the east, Newtown Creek to the south, and Astoria Boulevard to the north. The Project Area is located within this area. This report presents analysis based upon factors including fieldwork, analysis of existing land use and zoning, recent and potential future development, demographics, literature search, field data, and crash data. Extensive community outreach was performed to gain an understanding of community needs and desires.

The recommendations in the final report include:

- Identifying ways to improve transit service for waterfront communities on the East River;
- Changes to the bus network to improve access to Roosevelt Island, Hallets Point, and Hunter's Point;
- Expanded East River ferry service;
- A new entrance ramp to the Long Island Expressway;
- Traffic calming, intersection improvements, and streetscape enhancements along the 21st Street and Vernon Boulevard corridors;
- Improved access to Roosevelt Island via a protected bike lane and a redesigned bridge / parking garage complex;
- A proposed new approach to urban design and streetscape improvements for mixed-use industrial streets;
- Strategic intersection improvements throughout the study area.

All of the recommendations in the report require further analyses and design work by the applicable operating agency, such as the New York City Department of Transportation or the Metropolitan Transportation Authority. DCP will continue its dialogue with those agencies to facilitate implementation.

An Inclusionary Designated Housing Area is mapped north of the Project Area across Broadway and east of Vernon Boulevard to the west of 12th Street. The Inclusionary Housing Program promotes economic integration in areas of the City undergoing

substantial new residential development by offering an optional floor area bonus in exchange for the creation or preservation of affordable housing, on-site or off-site, principally for low-income households. The Inclusionary Housing Program requires a percentage of the dwelling units within a building to be set aside, or new or rehabilitated affordable units be provided off-site within the same community district or within one-half mile of the bonused development. All affordable residential units created through the Inclusionary Housing Program must remain permanently affordable. Affordable apartments may be rental units or, under modifications made to the program in 2009, available in an ownership plan.

No Historic Districts or individually designated historic resources are located within the Project Area or the surrounding 400-foot radius study area.

No other public policies would apply to the Proposed Actions as the Project Area and the surrounding 400-foot radius study area are not located within the boundaries of any 197-a Community Development Plans or Urban Renewal Area plans, and also are not within a critical environmental area, a significant coastal fish and wildlife habitat, a wildlife refuge, or a special natural waterfront area.

Future No-Action Scenario

In the future, without the action, new development in the Project Area and within the 400-foot radius project study area would remain within the boundaries of the City's Coastal Zone, the FRESH Program, and the Western Queens Transportation Study Area, and would therefore remain subject to the provisions of the WRP, the FRESH Program and the Transportation Study. The Inclusionary Housing Designated Area mapped north of the Project Area across Broadway and east of Vernon Boulevard to the west of 12th Street would also remain and development within this area would be subject to the provisions of this designation. No other public policy initiatives would pertain to the Project Area or to the 400-foot study area around the Area by the project build year of 2022. In addition, no changes are anticipated to any public policy documents relating to the Project Area or the surrounding study area by the project build year.

Future With-Action Scenario

Project Area

As part of the Mayor's Housing New York plan, the City Council has recently approved a citywide zoning text amendment to authorize a Mandatory Inclusionary Housing (MIH) program (ULURP # 160051ZRY). The purpose of the MIH program is to promote neighborhood economic diversity in locations where land use actions create substantial new housing opportunities. The text amendment will have no effect until mapped through subsequent discretionary actions of the CPC, each of which will be subject to a public review process and separate environmental review. As with zoning actions generally, MIH Areas may be applied through DCP-initiated actions or as part of private applications, including certain zoning map amendments, text amendments, and Special

Permits that create opportunities for significant new housing development. The MIH program would require (through zoning) that when CPC actions create significant new housing capacity in medium and high-density areas, either 25 or 30 percent of new housing would be *permanently* affordable. Under the proposal, the CPC and ultimately the City Council would apply at least one of these requirements to each MIH area:

- 25 percent of residential floor area must be for affordable housing units for residents with incomes averaging 60 percent Area Median Income (AMI) ($46,620 for a family of three) with no unit targeted at a level exceeding 130% AMI; or
- 30 percent of residential floor area must be for affordable housing units for residents with incomes averaging 80 percent AMI with no unit targeted at a level exceeding 130% AMI.

In addition to the options above, the City Council and the CPC could decide to apply one or both of the following options:

- A deep affordability option, where
    - 20% of the total residential floor area must be for housing units for residents with incomes averaging 40% AMI ($31,080 per year for a family of three);
    - No direct subsidies could be used for these units except where needed to support more affordable housing; or
- An additional, limited workforce option for markets where moderate-income development is marginally feasible without subsidy. Under this option,
    - 30 percent of the residential floor area must be for housing units for residents with incomes averaging 115 percent AMI ($104,895/year for a family of three);
    - No units could go to residents with incomes above 130 percent AMI ($101,010/year for a family of three);
    - No direct subsidies could be used for these affordable housing units; and
    - This option would not be available in Manhattan CDs 1-8, which extend south of 96th Street on the east side and south of 110th Street on the west side.

Requirements would apply to developments, enlargements and residential conversions of more than ten units. Developments between 11 and 25 units would have the optional alternative of making a payment into an affordable housing fund, to be used to support affordable housing within that Community District. As indicated, the Proposed Actions include a Zoning Text Amendment to modify ZR Appendix F to designate the newly mapped R6B and C1-3/R7X districts as Inclusionary Housing designated areas. Under the MIH provisions applicable to the project, Option 2 has been chosen under the Mandatory Inclusionary Housing (MIH) Text Amendment provisions applicable to the Proposed Actions. Under this option, 30% of the residential floor area must be for affordable housing units for residents with incomes averaging 80% AMI with no unit targeted at a level exceeding 130% of AMI. It is currently anticipated that 113 affordable

units would be developed on Projected Development Site 1. The final MIH Option will be chosen by the City Council through the ULURP process. Only 20% or 70 of the units will be analyzed as affordable at 80% AMI for conservative analysis purposes in the EAS.

Waterfront approval is required for the proposed development as the Project Area is located within the City's Coastal Zone Boundary Area and the project must be assessed for its consistency with the City's Waterfront Revitalization Program. The Waterfront Consistency Assessment Form and a narrative explaining how the Proposed Actions would be consistent with WRP policies are attached to this document. The narrative explains how the Actions comply with the policies noted after each Consistency Assessment Form question that has been affirmatively responded to. The Proposed Actions are consistent with WRP policies, and no potentially significant adverse impacts related to the WRP are anticipated as a result of these Actions. A Flood Evaluation Worksheet has also been prepared and accompanies this document.

While the Project Area is within the boundaries of the city's FRESH program, the proposed development would not be relevant to the FRESH program as no grocery stores are proposed as part of the project.

Any recommendations from the Western Queens Transportation Study applicable to the Project Area will require further analyses and design work by the applicable operating agency, such as the New York City Department of Transportation or the Metropolitan Transportation Authority. DCP will continue its dialogue with those agencies to facilitate implementation.

400-Foot Radius Project Study Area

The proposed development would not have any impact on the Coastal Zone, the FRESH Program, or the Western Queens Transportation Study Area within a 400-foot radius of the Project Area.

Conclusion

No impact to public policies would occur as a result of the Proposed Actions. The action would be an appropriate development in the Project Area and would be a positive contribution to Queens Community District 1 and to the surrounding neighborhood.

The proposed project would meet the City's public policy goals as explained above as well as similar State and national public policy goals related to the provision of affordable housing. All development would comply with the provisions of the City's WRP applicable to the Coastal Zone area.

Based on the above analyses, it has been determined that no potentially significant adverse impacts related to public policy are expected to occur as a result of the Proposed Actions. Therefore, further analysis of public policy is not warranted.

FOR INTERNAL USE ONLY	WRP No. 14-006
Date Received: _____	DOS No. _____

NEW YORK CITY WATERFRONT REVITALIZATION PROGRAM
Consistency Assessment Form

Proposed actions that are subject to CEQR, ULURP or other local, state or federal discretionary review procedures, and that are within New York City's Coastal Zone, must be reviewed and assessed for their consistency with the *New York City Waterfront Revitalization Program (WRP)* which has been approved as part of the State's Coastal Management Program.

This form is intended to assist an applicant in certifying that the proposed activity is consistent with the WRP. It should be completed when the local, state, or federal application is prepared. The completed form and accompanying information will be used by the New York State Department of State, the New York City Department of City Planning, or other city or state agencies in their review of the applicant's certification of consistency.

A. APPLICANT INFORMATION

Name of Applicant: Cipico Construction Inc.

Name of Applicant Representative: John Strauss for Hiram A. Rothkrug, Environmental Studies Corp.

Address: 55 Water Mill Road, Great Neck, NY 11021

Telephone: 718-343-0026 Email: jstrauss@environmentalstudiescorp.com

Project site owner (if different than above): _____

B. PROPOSED ACTIVITY

If more space is needed, include as an attachment.

1. Brief description of activity

Rezone the Project Area from the current R5 district to a mixture of R6B and C1-3/R7X zoning districts plus a zoning text amendment to modify Appendix F of the NYC Zoning Resolution to make the newly mapped zoning districts Inclusionary Housing designated areas. The Proposed Actions also request approval for a Large Scale General Development pursuant to ZR 74-74 to allow greater flexibility for the purpose of achieving better site planning for the Project Area. Two Large Scale Special Permit waivers are also being sought for:
1. The distribution of total allowable floor area within a large-scale general development without regard for zoning lot lines or district boundaries per ZR § 74-743(a)(1) for non-complying floor area, and;
2. The location of buildings without regard for the applicable height and setback regulations per ZR § 74-743(a)(2) for the 45' portion of the building in the C1-3/R7X zone on Zoning Lot A.

The Proposed Actions would facilitate a proposal by the Applicant to develop a 5-story residential and community facility building, a 9-story residential and community facility building, and a 14-story residential, commercial, and community facility building. The buildings would contain a total of 351 dwelling units, 113 of which would be affordable to lower income residents, 11,300 gross square feet (gsf) of commercial space, 6,512 gsf of community facility space, and 166 accessory underground parking spaces. Additionally, the Applicant intends to provide three private open space recreational areas, totaling 33,606 square feet in size, on the site. The development would require the demolition of the existing warehouse structure in the Project Area.

2. Purpose of activity

The requested zoning district and zoning text amendments and the Large Scale General Development approval are necessary in order to allow the proposed development to proceed. The Proposed Actions would enable the Applicant to develop a higher density residential development with accessory commercial and community facility space in the Project Area which would not be allowed under the current zoning. The action would serve the needs of this area of Queens for high quality residential dwellings, affordable housing, and retail and medical office services with adequate parking, and would promote the development of the property in a fashion that would be compatible with and beneficial to adjacent and nearby residential and other uses.

C. PROJECT LOCATION

Borough: Queens Tax Block/Lot(s): Block 315, Lot 1

Street Address: 32-01 Vernon Boulevard

Name of water body (if located on the waterfront): N/A

D. REQUIRED ACTIONS OR APPROVALS

Check all that apply.

City Actions/Approvals/Funding

City Planning Commission ☑ Yes ☐ No

- ☐ City Map Amendment
- ☑ Zoning Map Amendment
- ☑ Zoning Text Amendment
- ☐ Site Selection – Public Facility
- ☐ Housing Plan & Project
- ☑ Special Permit
  (if appropriate, specify type: ☐ Modification ☐ Renewal ☑ other) Expiration Date: _____
- ☐ Zoning Certification
- ☐ Zoning Authorizations
- ☐ Acquisition – Real Property
- ☐ Disposition – Real Property
- ☑ Other, explain: Large Scale General Development
- ☐ Concession
- ☐ UDAAP
- ☐ Revocable Consent
- ☐ Franchise

Board of Standards and Appeals ☐ Yes ☑ No

- ☐ Variance (use)
- ☐ Variance (bulk)
- ☐ Special Permit
  (if appropriate, specify type: ☐ Modification ☐ Renewal ☐ other) Expiration Date: _____

Other City Approvals

- ☐ Legislation
- ☐ Rulemaking
- ☐ Construction of Public Facilities
- ☐ 384 (b) (4) Approval
- ☐ Other, explain: _____
- ☐ Funding for Construction, specify: _____
- ☐ Policy or Plan, specify: _____
- ☐ Funding of Program, specify: _____
- ☑ Permits, specify: Dept. of Buildings building permit

State Actions/Approvals/Funding

- ☐ State permit or license, specify Agency: _____ Permit type and number: _____
- ☐ Funding for Construction, specify: _____
- ☐ Funding of a Program, specify: _____
- ☐ Other, explain: _____

Federal Actions/Approvals/Funding

- ☐ Federal permit or license, specify Agency: _____ Permit type and number: _____
- ☐ Funding for Construction, specify: _____
- ☐ Funding of a Program, specify: _____
- ☐ Other, explain: _____

Is this being reviewed in conjunction with a Joint Application for Permits? ☐ Yes ☑ No

E. LOCATION QUESTIONS

1. Does the project require a waterfront site? ☐ Yes ☑ No
2. Would the action result in a physical alteration to a waterfront site, including land along the shoreline, land under water or coastal waters? ☐ Yes ☑ No
3. Is the project located on publicly owned land or receiving public assistance? ☐ Yes ☑ No
4. Is the project located within a FEMA 1% annual chance floodplain? *(6.2)* ☑ Yes ☐ No
5. Is the project located within a FEMA 0.2% annual chance floodplain? *(6.2)* ☑ Yes ☐ No
6. Is the project located adjacent to or within a special area designation? *See Maps – Part III of the NYC WRP. If so, check appropriate boxes below and evaluate policies noted in parentheses as part of WRP Policy Assessment (Section F).* ☐ Yes ☑ No

   ☐ Significant Maritime and Industrial Area (SMIA) *(2.1)*

   ☐ Special Natural Waterfront Area (SNWA) *(4.1)*

   ☐ Priority Maritime Activity Zone (PMAZ) *(3.5)*

   ☐ Recognized Ecological Complex (REC) *(4.4)*

   ☐ West Shore Ecologically Sensitive Maritime and Industrial Area (ESMIA) *(2.2, 4.2)*

F. WRP POLICY ASSESSMENT

Review the project or action for consistency with the WRP policies. For each policy, check Promote, Hinder *or* Not Applicable (N/A). *For more information about consistency review process and determination, see* ***Part I*** *of the NYC Waterfront Revitalization Program. When assessing each policy, review the full policy language, including all sub-policies, contained within* ***Part II*** *of the WRP. The relevance of each applicable policy may vary depending upon the project type and where it is located (i.e. if it is located within one of the special area designations).*

For those policies checked Promote *or* Hinder, *provide a written statement on a separate page that assesses the effects of the proposed activity on the relevant policies or standards. If the project or action promotes a policy, explain how the action would be consistent with the goals of the policy. If it hinders a policy, consideration should be given toward any practical means of altering or modifying the project to eliminate the hindrance. Policies that would be advanced by the project should be balanced against those that would be hindered by the project. If reasonable modifications to eliminate the hindrance are not possible, consideration should be given as to whether the hindrance is of such a degree as to be substantial, and if so, those adverse effects should be mitigated to the extent practicable.*

		Promote	Hinder	N/A
1	**Support and facilitate commercial and residential redevelopment in areas well-suited to such development.**	☑	☐	☐
1.1	Encourage commercial and residential redevelopment in appropriate Coastal Zone areas.	☑	☐	☐
1.2	Encourage non-industrial development with uses and design features that enliven the waterfront and attract the public.	☐	☐	☑
1.3	Encourage redevelopment in the Coastal Zone where public facilities and infrastructure are adequate or will be developed.	☑	☐	☐
1.4	In areas adjacent to SMIAs, ensure new residential development maximizes compatibility with existing adjacent maritime and industrial uses.	☐	☐	☑
1.5	Integrate consideration of climate change and sea level rise into the planning and design of waterfront residential and commercial development, pursuant to WRP Policy 6.2.	☑	☐	☐

		Promote	Hinder	N/A
2	**Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.**	☐	☐	☑
2.1	Promote water-dependent and industrial uses in Significant Maritime and Industrial Areas.	☐	☐	☑
2.2	Encourage a compatible relationship between working waterfront uses, upland development and natural resources within the Ecologically Sensitive Maritime and Industrial Area.	☐	☐	☑
2.3	Encourage working waterfront uses at appropriate sites outside the Significant Maritime and Industrial Areas or Ecologically Sensitive Maritime Industrial Area.	☐	☐	☑
2.4	Provide infrastructure improvements necessary to support working waterfront uses.	☐	☐	☑
2.5	Incorporate consideration of climate change and sea level rise into the planning and design of waterfront industrial development and infrastructure, pursuant to WRP Policy 6.2.	☐	☐	☑
3	**Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation.**	☐	☐	☑
3.1.	Support and encourage in-water recreational activities in suitable locations.	☐	☐	☑
3.2	Support and encourage recreational, educational and commercial boating in New York City's maritime centers.	☐	☐	☑
3.3	Minimize conflicts between recreational boating and commercial ship operations.	☐	☐	☑
3.4	Minimize impact of commercial and recreational boating activities on the aquatic environment and surrounding land and water uses.	☐	☐	☑
3.5	In Priority Marine Activity Zones, support the ongoing maintenance of maritime infrastructure for water-dependent uses.	☐	☐	☑
4	**Protect and restore the quality and function of ecological systems within the New York City coastal area.**	☐	☐	☑
4.1	Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas.	☐	☐	☑
4.2	Protect and restore the ecological quality and component habitats and resources within the Ecologically Sensitive Maritime and Industrial Area.	☐	☐	☑
4.3	Protect designated Significant Coastal Fish and Wildlife Habitats.	☐	☐	☑
4.4	Identify, remediate and restore ecological functions within Recognized Ecological Complexes.	☐	☐	☑
4.5	Protect and restore tidal and freshwater wetlands.	☐	☐	☑
4.6	In addition to wetlands, seek opportunities to create a mosaic of habitats with high ecological value and function that provide environmental and societal benefits. Restoration should strive to incorporate multiple habitat characteristics to achieve the greatest ecological benefit at a single location.	☐	☐	☑
4.7	Protect vulnerable plant, fish and wildlife species, and rare ecological communities. Design and develop land and water uses to maximize their integration or compatibility with the identified ecological community.	☐	☐	☑
4.8	Maintain and protect living aquatic resources.	☐	☐	☑

		Promote	Hinder	N/A
5	**Protect and improve water quality in the New York City coastal area.**	☐	☐	☑
5.1	Manage direct or indirect discharges to waterbodies.	☐	☐	☑
5.2	Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.	☐	☐	☑
5.3	Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.	☐	☐	☑
5.4	Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.	☐	☐	☑
5.5	Protect and improve water quality through cost-effective grey-infrastructure and in-water ecological strategies.	☐	☐	☑
6	**Minimize loss of life, structures, infrastructure, and natural resources caused by flooding and erosion, and increase resilience to future conditions created by climate change.**	☑	☐	☐
6.1	Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the site, the use of the property to be protected, and the surrounding area.	☑	☐	☐
6.2	Integrate consideration of the latest New York City projections of climate change and sea level rise (as published in *New York City Panel on Climate Change 2015 Report, Chapter 2: Sea Level Rise and Coastal Storms*) into the planning and design of projects in the city's Coastal Zone.	☑	☐	☐
6.3	Direct public funding for flood prevention or erosion control measures to those locations where the investment will yield significant public benefit.	☐	☐	☑
6.4	Protect and preserve non-renewable sources of sand for beach nourishment.	☐	☐	☑
7	**Minimize environmental degradation and negative impacts on public health from solid waste, toxic pollutants, hazardous materials, and industrial materials that may pose risks to the environment and public health and safety.**	☑	☐	☐
7.1	Manage solid waste material, hazardous wastes, toxic pollutants, substances hazardous to the environment, and the unenclosed storage of industrial materials to protect public health, control pollution and prevent degradation of coastal ecosystems.	☑	☐	☐
7.2	Prevent and remediate discharge of petroleum products.	☑	☐	☐
7.3	Transport solid waste and hazardous materials and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.	☑	☐	☐
8	**Provide public access to, from, and along New York City's coastal waters.**	☐	☐	☑
8.1	Preserve, protect, maintain, and enhance physical, visual and recreational access to the waterfront.	☐	☐	☑
8.2	Incorporate public access into new public and private development where compatible with proposed land use and coastal location.	☐	☐	☑
8.3	Provide visual access to the waterfront where physically practical.	☐	☐	☑
8.4	Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.	☐	☐	☑

		Promote	Hinder	N/A
8.5	Preserve the public interest in and use of lands and waters held in public trust by the State and City.	☐	☐	☑
8.6	Design waterfront public spaces to encourage the waterfront's identity and encourage stewardship.	☐	☐	☑
9	**Protect scenic resources that contribute to the visual quality of the New York City coastal area.**	☐	☐	☑
9.1	Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.	☐	☐	☑
9.2	Protect and enhance scenic values associated with natural resources.	☐	☐	☑
10	**Protect, preserve, and enhance resources significant to the historical, archaeological, architectural, and cultural legacy of the New York City coastal area.**	☐	☐	☑
10.1	Retain and preserve historic resources, and enhance resources significant to the coastal culture of New York City.	☐	☐	☑
10.2	Protect and preserve archaeological resources and artifacts.	☐	☐	☑

G. CERTIFICATION

The applicant or agent must certify that the proposed activity is consistent with New York City's approved Local Waterfront Revitalization Program, pursuant to New York State's Coastal Management Program. If this certification cannot be made, the proposed activity shall not be undertaken. If this certification can be made, complete this Section.

"The proposed activity complies with New York State's approved Coastal Management Program as expressed in New York City's approved Local Waterfront Revitalization Program, pursuant to New York State's Coastal Management Program, and will be conducted in a manner consistent with such program."

Applicant/Agent's Name: John Strauss for Hiram A. Rothkrug, Environmental Studies Corp.

Address: 55 Water Mill Road, Great Neck, NY 11021

Telephone: 718-343-0026 Email: jstrauss@environmentalstudiescorp.com

Applicant/Agent's Signature: John Strauss

Date: 7/27/18

Submission Requirements

For all actions requiring City Planning Commission approval, materials should be submitted to the Department of City Planning.

For local actions not requiring City Planning Commission review, the applicant or agent shall submit materials to the Lead Agency responsible for environmental review. A copy should also be sent to the Department of City Planning.

For State actions or funding, the Lead Agency responsible for environmental review should transmit its WRP consistency assessment to the Department of City Planning.

For Federal direct actions, funding, or permits applications, including Joint Applicants for Permits, the applicant or agent shall also submit a copy of this completed form along with his/her application to the NYS Department of State Office of Planning and Development and other relevant state and federal agencies. A copy of the application should be provided to the NYC Department of City Planning.

The Department of City Planning is also available for consultation and advisement regarding WRP consistency procedural matters.

New York City Department of City Planning
Waterfront and Open Space Division
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New York, New York 10271
212-720-3696
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Office of Planning and Development
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www.dos.ny.gov/opd/programs/consistency

Applicant Checklist

- ☑ Copy of original signed NYC Consistency Assessment Form
- ☑ Attachment with consistency assessment statements for all relevant policies
- ☐ For Joint Applications for Permits, one (1) copy of the complete application package
- ☑ Environmental Review documents
- ☑ Drawings (plans, sections, elevations), surveys, photographs, maps, or other information or materials which would support the certification of consistency and are not included in other documents submitted. All drawings should be clearly labeled and at a scale that is legible.
- ☑ Policy 6.2 Flood Elevation worksheet, if applicable. For guidance on applicability, refer to the WRP Policy 6.2 Guidance document available at www.nyc.gov/wrp

Vernon Boulevard Rezoning

Explanation of Consistency with Waterfront Policies

1. **Policy 1: Support and facilitate commercial and residential redevelopment in areas well-suited to such development.**

Policy 1 relates to the development of new residential, commercial, and community facility uses on the waterfront in order to revitalize derelict waterfront areas. The Project Area is not located directly on the waterfront but is separated from it by one block of existing development to the west separating the Area from the East River. Nevertheless, the development that would be facilitated by the proposed zoning map and text amendments and large scale general development approval would bring new residents, workers, shoppers, and other visitors to the area resulting in new activity in the nearby waterfront area.

2. **Policy 1.1: Encourage commercial and residential redevelopment in appropriate Coastal Zone areas.**

The Project Area is an appropriate location for the proposed development and meets the criteria of Policy 1.1 as described below.

A. Criteria that should be considered to determine areas appropriate for reuse through public and private actions include: compatibility with the continued functioning of the designated Special Natural Waterfront Areas, the Arthur Kill Ecologically Sensitive Maritime and Industrial Area, or Significant Maritime and Industrial Areas, where applicable; the absence of unique or significant natural features or, if present, the potential for compatible development; the presence of substantial vacant or underused land; proximity to existing residential or commercial uses; the potential for strengthening upland residential or commercial areas and for opening up the waterfront to the public; transportation access; the maritime and industrial jobs potentially displaced or created; and the new opportunities created by redevelopment.

Public actions – such as property disposition, urban renewal plans, and infrastructure provision – should facilitate redevelopment of underused property to promote housing and economic development and enhance the city's tax base, subject to consideration of Policy 2, where applicable.

Relative to Policy 1.1 A., the Project Area is not designated either as a Special Natural Waterfront Area (SNWA) or as a Significant Maritime and Industrial Area (SMIA) nor is it in close proximity to any areas so designated. The Project Area is located inland and does not border the shoreline. The Project Area does not contain any unique and significant natural features. The 77,235 square foot property is improved with a one-story, approximately 26,637 square foot warehouse building occupied by the Milea Truck Sales and Leasing Company. The remainder of the Area consists of paved parking for trucks and equipment. The Project Area is located in an area occupied by a mixture of commercial and light industrial uses, community facilities, open space, and residential development.

The proposed project would add to and strengthen the surrounding residential and commercial community. Development of the proposed project would have no impact upon public access to the waterfront as the Project Area is not located along or near the waterfront. Although the

proposed project would result in the loss of the few jobs associated with the Milea Truck Sales and Leasing business in the Project Area, it is anticipated to result in the generation of approximately 80 new retail, medical office, and residential maintenance jobs.

The Proposed Actions would not involve any public actions, such as property disposition, Urban Renewal Plans, and infrastructure provision. However, the action would facilitate redevelopment of underused property to promote housing and economic development and would thereby enhance the city's tax base.

3. **Policy 1.3: Encourage redevelopment in the Coastal Zone where public facilities and infrastructure are adequate or will be developed.**

A. Encourage development at a density compatible with the capacity of surrounding roadways, mass transit, and essential community services such as public schools. Lack of adequate local infrastructure need not preclude development, but it may suggest the need to upgrade or expand inadequate or deteriorated local infrastructure.

The proposed development site is located in an area with fully developed infrastructure with adequate capacity to serve the proposed project.

The Project Area is bounded by Vernon Boulevard, 33rd Road, 10th Street, 11th Street, and Broadway in Astoria, Queens providing access to areas to the north, south and east. No through roadway access is provided to the west as there is only one block of development remaining west of the Project Area. Access to I-278 is provided approximately 1.75 miles north of the Project Area which connects the Project Area to eastern Queens as well as Manhattan and the Bronx via the Triborough Bridge. Access to Manhattan is also available approximately one-mile south of the Project Area via the 59th Street Bridge.

The Project Area is approximately 0.66 miles west of the Broadway subway station (N and W trains) at Broadway and 21st Street and 0.9 miles north of the 21st Street/Queensbridge subway station (F train) near Queensborough Plaza. The Area is also served by the Q103 bus line providing north-south access and the Q104 providing east-west access.

The nearest public elementary school, P. S. 76 at 36-36 10th Street serving grades pre-K through 5, is located approximately 0.42 miles from the Project Area. The most recent enrollment and capacity data from the NYC Department of Education indicates that in the 2016-2017 school year, the target capacity of P. S. 76 was 690 seats while 508 students were enrolled, representing a utilization rate of 74%.

4. Policy 1.5: Integrate consideration of climate change and sea level rise into the planning and design of waterfront residential and commercial development, pursuant to WRP Policy 6.2.

A. Projects should consider potential risks related to coastal flooding to features specific to each project, including, but not limited to, critical electrical and mechanical systems, residential living areas, and public access areas.

See discussion under Policy 6.2 below.

5. **Policy 6: Minimize loss of life, structures, infrastructure, and natural resources caused by flooding and erosion, and increase resilience to future conditions created by climate change.**

- Policy 6.1: Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the site, the use of the property to be protected, and the surrounding area.

As shown on FEMA Panel 3604970093F, effective 09/05/2007, the Project Area is almost entirely located within Zone AE, which has a base flood elevation of 11 feet and a 1 percent annual chance flood hazard. Zone AE is described as "Areas subject to inundation by the 100-year flood determined in a Flood Insurance Study by detailed methods. Base flood elevations are shown within these zones. Mandatory flood insurance purchase requirements apply." In addition, building code requires construction meets flood resistant construction standards. All developments within the Project Area would be required to meet these standards which require that all spaces below the flood elevation, plus 1 foot for freeboard, are floodproofed subject to applicable limitations on use.

The Applicant's proposed development site is within Flood Zone AE Elevation 11 (NAVD88). This area is subject to storm surge flooding from the one percent annual chance coastal flood. Such zones are not subject to high velocity wave action but are still considered high risk flooding areas. Accordingly, the proposed development would incorporate all New York State and New York City flooding and erosion requirements, including compliance with ZR Article VI, Chapter 4 "Special Regulations Applying in Flood Hazard Areas" and Appendix G of the Building Code. The proposed development would meet the standards which require that all spaces below the flood elevation, plus 1 foot for freeboard, are floodproofed.

6. **Policy 6.2: Integrate consideration of the latest New York City projections of climate change and sea level rise (as published by the NPCC, or any successor thereof) into the planning and design of projects in the city's Coastal Zone.**

The proposed building would not contain a publicly accessible waterfront and is located upland from any shore. The Project Area is located approximately 680 feet from the nearest existing shoreline of the East River. One block of existing development separates the Project Area from the East River.

The project architect, Caliendo Architects, has provided the following responses regarding the design of the building relative to protecting the proposed buildings and their residents, workers, visitors, and natural features.

The current 1% annual chance floodplain height at the Applicant's proposed development site is 11.0 feet. The property has a Design Flood Elevation (DFE) of 12.0 feet, which includes one foot of freeboard above the Base Flood Elevation (BFE) of 11.0 feet. Due to the development's location in an AE flood zone, the proposed buildings on the Applicant's property have been designed to meet the requirements of the NYC Building Code in order to minimize the effects of

flooding. Thus, the proposed buildings, consistent with these regulations, will have a DFE of 12 feet which includes one-foot of freeboard. Pursuant to the Zoning Resolution, the building height is measured from this elevation. Below this elevation, the floor area must be dry flood proofed in order to permit habitable floor area. In the absence of dry flood proofing below the DFE, only crawlways, parking, storage, and building access are allowed.

The cellar level under the three proposed buildings would be constructed at an elevation of 0.8 feet and would therefore be below the DFE. The cellar would contain accessory parking only and would be constructed of poured concrete. The cellar level would be located partially below and partially above the BFE but would be dry flood proofed to grade level. The cellar will be below the 1% flood elevation between now and the year 2100, the project's lifespan, under all sea level rise projections. Potential consequences from flooding would include minor damage to the parking area for the development. This could result in minor damage to property and temporary displacement of the parking facility.

The next lowest point in the proposed development would consist of the first/ground floors of the three buildings which would contain residential lobbies, community facility and commercial space, and building utilities. The elevation of the first/ground floors of the three buildings would be at an elevation of 13.0 feet and would therefore be above the DFE. At worst, any flooding at this level of the buildings would result in minor damage to the residential lobbies and community facility and commercial space. There would also be damage to building utilities which would likely cause disruption to building occupants and damage to these systems. However, as some utilities would be located on the roof of the building, the utilities at the first/ground floor could be relocated to the roof as needed. The ground/first floor level of the buildings would be above the current 1% annual chance flood elevation height of 11 feet and would remain above the Mean Higher High Water + Sea Level Rise beyond the anticipated lifespan of the project in 2100. At the 1% flood elevation + Sea Level Rise, the first/ground floor level would begin to be below flood levels under high to mid Sea Level Rise projections starting in the 2050s.

The lowest residential levels would begin at the second floor of the three buildings which would be at an elevation of 28 feet which is above the DFE. The residential levels would be above the elevation of the 1% annual chance flood level under all projections. There is no chance for flooding of any residential floors under these projections.

The development will be landscaped with salt water proof plantings.

Coastal storms could bring high winds in addition to the flood hazards described above. The site is not within a Coastal V zone.

In summary, the proposed project is currently within the official FEMA 1% annual chance floodplain and is required to meet NYC Building Code requirements for flood resistant construction. The cellar level of the development has been designed so that the only use below the DFE will be vehicle parking which would be dry flood proofed to grade level. Even if the first/ground floors of the buildings were to be exposed to flood waters, it would result in minimal damage to the building and its operations as only residential lobbies, community

facility and retail space and some utility equipment would be affected. If needed, the utilities could be relocated to the roof where other utilities would already be located. The residential floors of the buildings at the second floor and above would be above flood levels under all projections.

The project would not make flooding on adjacent sites worse, nor would it conflict with other plans for flood protection on adjacent sites.

Adaptive measures to protect the Project Area from future flooding could include elevation of the site or the construction of a floodwall to protect the site from higher water levels. Although elevation of the Project Area may not be feasible, construction of a floodwall or installation of water barriers will be given ongoing consideration as water levels continue to rise. The buildings will comply with all applicable current and future flood zone building code requirements.

The proposed project is consistent with Policy 6.2. The proposed buildings have been designed to minimize the effects of flooding under present conditions, and potential losses resulting from higher high water levels in the future can feasibly be managed by adaptive measures such as floodwalls.

7. **Policy 7: Minimize environmental degradation and negative impacts on public health from solid waste, toxic pollutants, hazardous materials, and industrial materials that may pose risks to the environment and public health and safety.**

- Policy 7-1: Manage solid waste material, hazardous wastes, toxic pollutants, substances hazardous to the environment, and the unenclosed storage of industrial materials to protect public health, control pollution and prevent degradation of coastal ecosystems.

- Policy 7-2: Prevent and remediate discharge of petroleum products.

- Policy 7-3: Transport solid waste and hazardous materials and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.

These policies largely pertain to hazardous waste sites and major petroleum storage and off-loading facilities, none of which would be included in the proposed development. In addition, as the new residential and commercial and community facility uses would likely utilize natural gas and electricity for their heating and hot water generation needs, oil storage tanks would not be located in these structures, thereby eliminating a potential source of petroleum contamination. Any businesses or other facilities using petroleum products would be required to handle, store and dispose of these products and to clean up any spills in accordance with current Federal, State, and City rules and regulations.

CONCLUSIONS

DCP's Waterfront and Open Space division has completed their review of the project for consistency with the policies and intent of the NYC Waterfront Revitalization Program (WRP). Based on the information submitted, the Waterfront Open Space Division, on behalf of the New York City Coastal Commission, having reviewed the waterfront aspect of this action, finds that

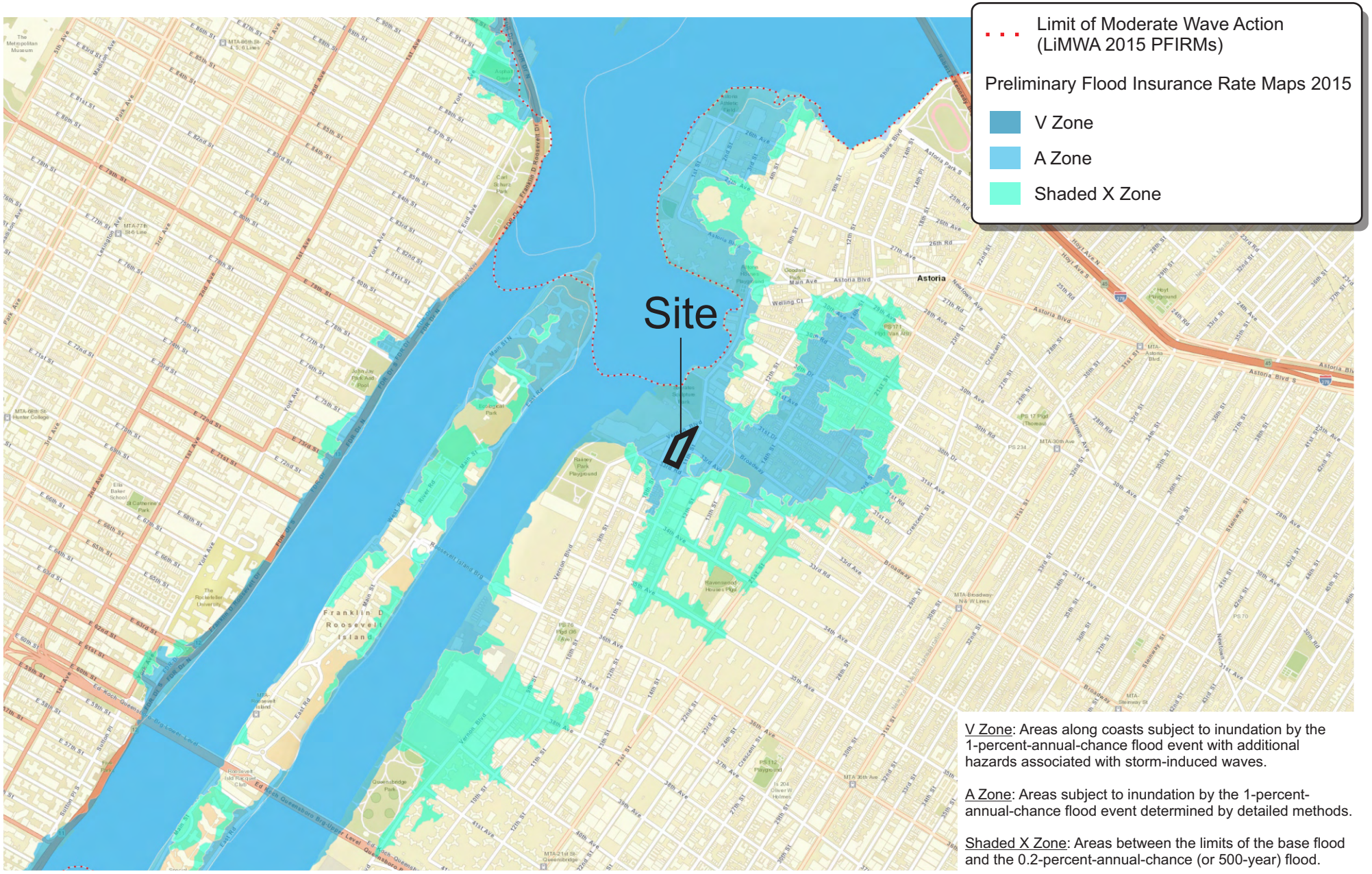
the actions will not substantially hinder the achievement of any WRP policy and determines the project consistent with the WRP policies.

This determination is only applicable to the information received and the current proposal. Any additional information or project modifications would require an independent consistency review.

This project has been assigned **WRP # 14-006**.

Vernon Boulevard, Queens

FEMA Flood Hazard Areas



V Zone: Areas along coasts subject to inundation by the 1-percent-annual-chance flood event with additional hazards associated with storm-induced waves.

A Zone: Areas subject to inundation by the 1-percent-annual-chance flood event determined by detailed methods.

Shaded X Zone: Areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood.

Source: Federal Emergency Management Agency (fema.gov) / NYC Department of City Planning (DCP)



Source: Federal Emergency Management Agency (fema.gov)



Source: U.S. Fish and Wildlife Service (fws.gov)



Source: NYS DOS Office of Communities and Waterfronts (dos.ny.gov)


400 Feet
Site
Socrates Sculpture Park
Astoria Health Playground
Rainey Park
BIKE PATH
BROADWAY
VERNON BLVD
35 RD
33 RD
31 AV
31 DR
33 AV
14 ST
12 ST
11 ST
10 ST
9 ST
13 ST
21 ST
North
0
200
400
600 Feet
Coastal Resource Boundary

Figure X - Waterfront Revitalization Program Map Zoomed Out



5. SOCIOECONOMIC CONDITIONS

Introduction

The Proposed Actions would allow for the development of a 5-story residential and community facility building, a 9-story residential and community facility building, and a 14-story residential, commercial, and community facility building. The buildings would contain a total of 351 dwelling units, 11,236 gsf of commercial space and 6,882 gsf of community facility space. The Proposed Actions affect a single property and development is not assumed on any other properties. Under No-Action conditions, the Project Area (Projected Development Site 1) would be developed with 92 dwelling units within 91,945 gsf of floor area and 15,765 gsf of community facility space (Use Group 4 medical offices). Under With-Action conditions, the Project Area would be developed with 332,208 gsf of residential space for 351 dwelling units, 11,236 gsf of commercial space and 6,882 gsf of community facility space (Use Group 4 medical offices). Therefore, the increment between the No-Action and With-Action development scenarios would be 240,263 gsf of additional residential space for 259 additional dwelling units, 11,236 gsf of new commercial space and a decrease of 8,883 gsf of community facility space.

Preliminary Assessment

The Proposed Actions and resulting development would not result in the direct loss of 500 residents but would result in an increase of approximately 240,263 gsf of residential space, according to the RWCDS. The Proposed Actions would also result in a net increase of approximately 11,236 gsf of commercial retail and a net reduction of 8,883 gsf of community facility space. This is less than the *CEQR Technical Manual* threshold of 200,000 square foot for consideration of indirect business displacement. Furthermore, the Proposed Action would not directly displace 100 employees, as the existing 26,637 square foot warehouse structure is assumed for redevelopment absent the Proposed Actions. Even if the Proposed Actions were responsible for the redevelopment of the existing warehouse structure, the business contains less than 100 employees, assuming one employee per 1,000 square feet of space (27 employees). Therefore, no further analysis is required for direct residential, direct business or indirect business displacement.

The Proposed Actions could potentially generate a net increase of 259 residential units, as compared to the No Build condition. This would exceed the 200-unit threshold established for further assessment of potential indirect residential displacement. Therefore, the following provides a preliminary assessment of the potential for the Proposed Actions to result in any significant adverse impacts related to indirect residential displacement.

Indirect Residential Displacement

As indicated in the *CEQR Technical Manual,* "the objective of the indirect residential displacement analysis is to determine whether the proposed project may either introduce a trend or accelerate a trend of changing socioeconomic conditions that may potentially displace a vulnerable population to the extent that the socioeconomic character of the

neighborhood would change." The risk of indirect residential displacement is typically associated with rising rents caused by new higher-income housing that may contribute to increased area housing costs to an extent that could potentially force lower-income residents out of the neighborhood. The potential for impact is generally limited to households in unprotected, private rental units.

The With-Action RWCDS includes the development of 351 dwelling units of housing, with 92 new dwelling units anticipated to occur under the No-Action RWCDS. Therefore, the Proposed Actions would result in the development of a net increase of 259 dwelling units. These 259 dwelling units are expected to generate approximately 723 residents based on the 2010 U.S. Census average household size of 2.79 persons per household for Census Tracts within ¼-mile of the Projected Development Site including tracts 39, 45, 77, 81, and 85.

Table 5-1: ½ Mile Study Area Population (2010, 2016)

Census Tract	Total Population 2010[3]	Total Population 2016[4]
37	0	0
39	1,592	1,658
43	2,437	2,660
45	2,975	3,290
47	3,984	3,910
77	1,478	1,596
79	3,493	3,384
81	1,188	1,389
87	4,582	5,196
Study Area Total	**21,729**	**23,083**

As shown in Table 5-1, the ½ mile area surrounding the Rezoning Area is estimated to have contained 21,729 residents in 2010 according to the 2010 Census and 23,083 residents in 2016 based on 2016 American Community Survey (ACS) data. It should be noted that Tract 283.02, which consists of the northern end of Roosevelt Island in the Borough of Manhattan, is within the half-mile study area. However, since the tract is separated by water, in a separate borough and likely contains a markedly different set of socioeconomic characteristics, is less likely to be affected by the Proposed Actions. Therefore, for a conservative analysis, the tract is removed from this analysis.

No-Action Scenario

[3] Source: 2010 US Census Data

[4] Source: 2016 ACS Data

As stated above, the estimated 2016 ACS population of the half-mile open space study area was 23,083. In order to account for background growth over the six-year timeframe to the 2022 project build year, the six-year ACS annual growth rate of 1.0% from 2010 to 2016 was assumed. Based on this assumption, the population of the ½-mile open space study area will have increased by 6.0%.

Applying the 6.0% increase to the 2016 estimated population of 23,083 persons results in an estimated population in 2022 of 24,468 persons. In addition, the RWCDS future no action development in the Project Area would result in the development of 92 residential dwelling units which are estimated to contain 257 residents based on an average household size of 2.79 persons. Therefore, the open space study area would have a No-Action population of 24,725 persons in 2022.

With-Action Scenario

In the future with the Proposed Actions, 351 new dwelling units of housing are anticipated to occur, resulting in a With-Action population of 25,448 persons in 2022. Assuming No-Action development of 92 residential dwelling units results in an increment of 259 dwelling units, these 259 dwelling units are expected to generate approximately 723 residents based on the household size of 2.79 persons per household. Therefore, the With-Action scenario would result in a population increase of 2.9% (See Table 5-2).

Table 5-2: Study Area Income and Housing Characteristics

Existing Population (2016)	**No-Action Population (2022)**	**With-Action Population (2022)**
23,083	24,725	25,448
Percent Change (+)	7.1%	2.9%

Conclusion

Section 322.1 of Chapter 5 of the *CEQR Technical Manual* indicates that if a Proposed Action is expected to result in a study area population increase of more than 5%, further analysis is warranted to assess the potential for indirect residential displacement. Since the Proposed Actions are anticipated to result in a net population increase of less than 5%, further analysis is not warranted and the Proposed Actions would not be expected to affect real estate market conditions and would not result in potential impacts related to socioeconomic character.

Figure 5-1: Socioeconomic Analysis Map



6. COMMUNITY FACILITIES AND SERVICES

Introduction

The community facilities and services considered under *CEQR* are public schools, public or publicly subsidized day care centers, public libraries, hospitals and other health care facilities, and police and fire protection services. Under the guidelines set forth in the *CEQR Technical Manual,* a detailed analysis is required only if a proposed action would displace or otherwise directly affect an existing community facility or if it would place significant new demands on facilities or services. Most of the demand for community facility services is generated by the introduction of new residents in an area.

Direct Effects

The Proposed Actions would not physically displace or affect any existing community facilities, and would therefore have no direct impact on any community facilities or services. Therefore, further assessment of direct impacts is not warranted.

Indirect Effects

The *CEQR Technical Manual* provides a set of thresholds to use in determining whether detailed studies of potentially significant adverse indirect impacts related to community facilities and services are warranted. The RWCDS under the Proposed Actions includes the development of 351 dwelling units of housing in the Project Area. The No-Action RWCDS includes the development of 92 dwelling units on the property. Therefore, the Proposed Actions would result in the development of a net increase of 259 dwelling units in the Project Area.

Based on *CEQR Technical Manual* criteria (Table 6-1), the development of 259 dwelling units would exceed the minimum number of 124 dwelling units for conducting a detailed analysis of impacts to public elementary and middle schools in the Borough of Queens. An assessment of the project's potential impacts on these facilities is described below.

Public Schools

The *CEQR Technical Manual* states that, in general, if a project would introduce more than 50 school-age children (elementary and intermediate grades), significant impacts on public schools may occur and further analysis of schools may be appropriate. Based on the 2018 Projected Public School Ratio table, the 259 net new dwelling units resulting from the Proposed Actions would be anticipated to generate a total of 52 public school students, including 42 elementary school and 10 middle school pupils. The 259 dwelling units would be anticipated to generate a total of 34 public high school students, which would fall below the threshold of concern of 150 high school level pupils. A detailed public elementary and intermediate schools analysis is provided below.

Other Community Facilities

The development of a net increase of 259 dwelling units of housing in the Project Area would not be anticipated to exceed the thresholds of concern for any other community facilities and services. A day care analysis is required for projects in Queens containing at least 139 low- to moderate-income dwelling units. As the project would include an increment of only 48 affordable units, a day care analysis would not be required. Therefore, based on the *CEQR Technical Manual*, the Proposed Actions would have no adverse impacts to libraries, child care centers, health care facilities, or fire and police protection.

Public Schools

Existing Conditions

Primary Study Area (Sub-district Analysis)

The Project Area is located in Queens Community School District (CSD) 30, Sub-district 3. CSD 30, Sub-district 3 is considered to be the primary study area for the analysis of elementary and intermediate schools.

Within CSD 30, Sub-district 3, there are 9 elementary schools and 9 intermediate level schools. **Figure 6-1, Public Elementary and Intermediate Schools Within CSD 30, Sub-district 3,** illustrates the locations of these public elementary and intermediate schools. The zoned elementary school for the Project Area is P.S. 76 at 36-36 10th Street. The zoned middle school for the Project Area is I.S. 204 at 36-41 28th Street.

Table 6-1 provides a listing of the elementary and intermediate schools within CSD 30, Sub-district 3. The table identifies the schools by school number, address, and grades served, and includes the latest available enrollment and school capacity numbers.

Elementary school capacity numbers are less than actual building capacities as they assume a class size reduction for Kindergarten through the third grades of 20 children per class, 28 children for grades 4-8; and 30 children for grades 9-12 ("target capacity").

Table 6-1 indicates that the elementary schools within CSD 30, Sub-district 3 are under capacity in the aggregate and have an average utilization rate of 88% with enrollments ranging from 51% to 163% of target capacity at individual school buildings. The elementary schools within CSD 30, Sub-district 3 have a total enrollment of 3,598 students relative to a target capacity of 4,072 seats resulting in an excess of 474 seats.

Table 6-1 indicates that the intermediate level schools in CSD 30, Sub-district 3 have substantial excess capacity with an average utilization rate of 77% with rates ranging from 51% to 163% of target capacity at individual middle school buildings. The intermediate level schools in CSD 30, Sub-district 3 have a total enrollment of 2,255 students relative to a target capacity of 2,935 seats resulting in 680 available seats.

Table 6-1

CSD 30, Sub-district 3 (Primary Study Area) - Existing Enrollment, Capacity and Utilization 2016-2017 School Year

#	School Number (Organization ID)	Address	Grades	School Enrollment	Target Capacity	Available Seats	% Utilized
ELEMENTARY SCHOOLS							
1	P.S. 17	28-37 29th Street	PK-5	573	485	-88	118
2	P.S. 76	36-36 10th Street	PK-5	508	690	182	74
3	P.S. 78	48-09 Center Blvd. & 46-08 5th Street	PK-5	538	622	84	67
4	P.S. 111	37-15 13th Street	PK-5	208	410	202	51
5	P.S. 112	25-05 37th Avenue	PK-5	510	402	-108	127
6	P.S. 171	14-14 29th Avenue	PK-5	484	742	258	65
7	P.S. 234	30-15 29th Street	PK-5	558	555	-3	101
13	The 30th Avenue School (I.S. 126 Bldg)	14-14 29th Avenue	PK-5	89	87	-2	103
14	The 30th Avenue School (P.S. 17 Bldg)	31-51 21st Street	K-5	130	79	-51	163
	Subtotal			**3,598**	**4,072**	**474**	**88**
INTERMEDIATE SCHOOLS							
8	I.S. 111	37-15 13th Street	6-8	76	150	74	51
9	I.S. 126	31-51 21st Street	6-8	625	780	155	80
10	I.S. 204	36-41 28th Street	6-8	495	923	428	54
11	I.S. 235	30-15 29th Street	6-8	149	200	51	75
12	Young Women's Leadership School	23-15 Newtown Avenue	6-8	239	242	3	99
15	The 30th Avenue School (I.S. 126 Bldg)	14-14 29th Avenue	6-8	62	60	-2	103
16	Hunters Point Community Middle School	1-50 51st Avenue	6-8	410	398	-12	103
17	I.S. 78	48-09 Center Blvd. & 46-08 5th Street	6-8	110	127	17	55
18	The 30th Avenue School (P.S. 17 Bldg)	28-37 29th Street	6-8	89	55	-34	163
	Subtotal			**2,255**	**2,935**	**680**	**77**
	TOTAL			**5,853**	**7,007**	**1,154**	**84**

Source: 2016-2017 Enrollment, Capacity and Utilization Report, NYC Department of Education, December 2017. Target Capacity assumes maximum classroom capacity of 20 children per class for grades K-3; 28 children for grades 4-8; and 30 children for grades 9-12.

Based on a review of the School Construction Authority list of active projects within CSD 30, Sub-district 3, no new schools are currently under construction and no

additions or decreases to the capacities of any of these schools is currently being constructed. CSD 30, Sub-district 3 does not have an elementary and/or middle school choice policy, or other priority admissions program.

Future No-Action Scenario

This section presents an analysis of public school enrollments (including Pre-Kindergarten enrollments) and capacities for the Project Build Year of 2022 without the Proposed Actions. The analysis includes the primary study area of CSD 30, Sub-district 3 and is derived from DOE enrollment projections.

In the future and absent the action, it is assumed that no new residential development would occur in the Project Area by the project build year of 2022. However, based on the School Construction Authority's (SCA) "Projected New Housing Starts" (aka Housing Pipeline) projections, additional student enrollments would occur in the CSD 30 sub-districts under the No-Build condition by the project build year of 2022 as presented in Table 6-2 below.

As outlined in the *CEQR Technical Manual*, No-Action school capacity changes considered in a community facilities analysis include information on proposed and adopted "Significant Changes in School Utilization" and the DOE's Five-Year Capital Plan. The NYC SCA February 2018 Proposed Five Year Capital Plan Amendment has identified a need for 5,975 additional seats in CSD 30, 4,537 seats of which have been funded (2,720 of which have been funded for design only), and 1,618 of which have not yet been funded. 2,921 seats are completed or in process. However, the FY 2010 - FY 2014 Five Year Capital Plan Capacity in Process and the Quarterly Status of Projects in Process (Quarter Ending December 31, 2017) does not identify any additional school seats to be added in CSD 30, Sub-district 3 by the project build year of 2022.

Based on DOE's February 23, 2017 Underutilized Space Memorandum, there are several public schools in CSD 30, Sub-district 3 that are underutilized by 300 seats or more in the 2017-2018 school year based on the 2015-2016 Blue Book including P.S. 171 with a building capacity of 801 seats and an enrollment of 521 students, I.S. 126 with a building capacity of 1,049 seats and an enrollment of 656 students, and I.S. 204 with a building capacity of 1,343 seats and an enrollment of 826 students. There is also one public school in CSD 30, Sub-district 3 that is underutilized by 150 seats or more based on the 2015-2016 Blue Book, that being P.S. 76 with a building capacity of 767 seats and an enrollment of 557 students. This may affect this sub-district in the future. However, DOE's Panel for Educational Policy does not identify any proposals for significant changes in school utilization for schools within CSD 30, Sub-district 3 at this time.

Based on the above analyses, no changes related to decreases or increases in school capacities within CSD 30, Sub-district 3 have been identified.

Table 6-2 indicates that there would be a shortfall in seats within the elementary and intermediate schools within Sub-district 3 in 2022 without the proposed project.

Table 6-2

Estimated Public School Enrollment, Capacity, and Utilization Year 2022
Future Without the Proposed Actions

School Level	2022 Projected Enrollment (w/Pre-K, Spec Educ)	Students Generated by Development Without Action	Total Projected Enrollment	Program Capacity	Seats Available	Program Utilization (%)
Elementary/K-5 Schools						
Sub-district 3	3,792	2,999	6,791	4,072	-2,719	166.8%
Intermediate/Secondary 6-8 Schools						
Sub-district 3	2,079	867	2,946	2,935	-11	100.4%
Source: Enrollment Projections 2016 to 2025 New York City Public Schools by Statistical Forecasting						

Sub-district Projections

	Percentages for Sub-district 3	*Projected Enrollment*
P.S.	17.34% (x 21,867)	3,792
I.S.	21.76% (x 9,556)	2,079

Future With-Action Scenario

As stated above, applying the household multipliers for Queens from Table 6-1a of the *CEQR Technical Manual* to the 259 net increase in dwelling units, would result in the anticipated generation of approximately 52 elementary and middle school children. Approximately 42 of these children would be elementary school students and the remaining 10 would be intermediate school enrollments. The development would not result in the addition of any new schools or additional capacity in the District.

Table 6-3 presents the anticipated student enrollments that would be generated by the Proposed Actions and the effect of these enrollments on the available capacity of the schools within Sub-district 3. The projected increase of 42 elementary and 10 middle school students resulting from the Proposed Actions in 2022 would have a minimal impact upon the utilization rates of the schools in Sub-district 3. With the addition of these new enrollments, elementary and middle schools in these areas would be overcapacity. However, based on *CEQR Technical Manual* criteria and as further explained below, it is not anticipated that the elementary school and middle school students that would be generated by the Proposed Actions would result in a significant impact on the elementary and intermediate schools in the area.

Table 6-3

Estimated Public School Enrollment, Capacity, and Utilization Year 2022
Future With the Proposed Actions

School Level	2022 No-Build Projected Enrollment (w/Pre-K)	Students Generated by Develop (With Action)	Total Projected Enroll	Program Capacity	Seats Avail	Program Utiliz (%)	No Action Prog Utiliz (%)	Diff betw No Action/ With Action
Elementary/K-5 Schools								
Sub-district 3	6,791	42	6,833	4,072	-2,761	167.8%	166.8%	1.0%
Intermediate/Secondary 6-8 Schools								
Sub-district 3	2,946	10	2,956	2,935	-21	100.7%	100.4%	0.3%

According to the *CEQR Technical Manual*, a significant impact on schools may occur if the following two conditions are met. A significant impact may occur if the project results in a collective utilization rate of the elementary and/or intermediate schools in the sub-district study area that is equal to or greater than 100 percent in the With-Action Condition, and if the project results in an increase of five percent or more in the collective utilization rate between the No-Action and With-Action conditions. With the Proposed Actions, the elementary and intermediate schools in Sub-district 3 would be more than 100 percent utilized. However, the difference between the No-Action and With-Action conditions for the elementary and intermediate schools within Sub-district 3 would be 1.0 and 0.3 percent, respectively. Therefore, the Proposed Actions would not be expected to result in a significant adverse impact on elementary or intermediate schools. No further analysis of the Proposed Actions on public schools is therefore required.

Figure 6-1: Public Elementary and Intermediate Schools Within CSD 30, Sub-district 3



7. OPEN SPACE

Introduction

For the purpose of CEQR, open space is defined as publicly or privately owned land that is publicly accessible and has been designated for leisure, play, or sport; or land that is set aside for the protection and/or enhancement of the natural environment. Under CEQR, an open space analysis is conducted to determine whether or not a proposed action would have either a direct impact resulting from the elimination or alteration of open space or an indirect impact resulting from overtaxing the use of open space. The analyses focus only on officially designated existing or planned public open space. Open space may be public or private and may include active and/or passive areas. Active open space is the part of a facility used for active play such as sports or exercise and may include playground equipment, playing fields and courts, swimming pools, skating rinks, golf courses, lawns and paved areas for active recreation. Passive open space is used for sitting, strolling, and relaxation with benches, walkways, and picnicking areas. Certain spaces such as lawns, can be used for both active and passive recreation.

Open space analyses may be necessary when an action would potentially have a direct or indirect effect on open space. A direct impact would physically change, diminish or eliminate an open space or reduce its utilization or aesthetic value. An indirect impact could result from an action introducing a substantial new user population that would create or exacerbate an overutilization of open space resources.

Direct Effects

The Project Area is located directly across 10th Street from the Noguchi Museum complex which contains a large private open space area at the corner of 33rd Road and 10th Street. The site is also located directly across Vernon Boulevard and Broadway from the Socrates Sculpture Park and the Costco waterfront esplanade. Finally, Rainey Park is located approximately one block from the Project Area at the corner of Vernon Boulevard and 33rd Road. Due to the proximity of the Project Area to these open space resources, potential shadow impacts could occur from the proposed development on the property. A detailed discussion of potential shadows impacts on these facilities is presented in the Shadows section below.

Indirect Effects

Introduction

On the basis of *CEQR Technical Manual* criteria, the proposed development could potentially result in indirect effects to open space resources within the project study area and must be further assessed to determine whether significant indirect effects would be expected to occur. The Project Area is located within the underserved open space area of the Astoria neighborhood (**see Figure 7-1, Underserved Neighborhood – Astoria**). If a project is located in an underserved area, the *CEQR Technical Manual* requires that an open space assessment be conducted if that project would generate more than 50 residents or 125 workers.

The With-Action RWCDS includes the development of 351 dwelling units of housing in the Project Area. The No-Action RWCDS includes the development of 92 dwelling units on the property. Therefore, the Proposed Actions would result in the development of a net increase of 259 dwelling units on the site. These 259 dwelling units are expected to generate approximately 723 residents based on the 2010 U.S. Census average household size of 2.79 persons per household for Census Tracts within ¼-mile of the Projected Development Site including tracts 39, 45, 77, 81, and 85. The Proposed Actions would exceed the threshold number of 50 new residents and a preliminary quantitative analysis of indirect open space impacts is therefore required. The Proposed Actions would generate approximately 17 net new employees relative to the No-Action condition and would therefore not exceed the threshold number of 125 new workers and a quantitative analysis of indirect open space impacts for employees would not be required.

Preliminary Assessment

Based on the methodologies presented in the *CEQR Technical Manual*, an initial quantitative open space assessment involves a determination of an area's open space ratio based on the population of the study area and the acreage of all publicly accessible open space resources within this study area. If an area's open space ratio decreases significantly as a result of a proposed action or if an area has a very low open space ratio, a more detailed assessment may be required.

Based on the calculation of the ratio of publicly accessible open space acres to the study area population, a determination of the adequacy of open space resources in the study area was quantified. The resultant computation for the study area was then compared with the median ratio for New York City, which is 1.5 acres per 1,000 residents, and with the City's planning goal as expressed in the CEQR Technical Manual of 2.5 acres per 1,000 population. Ideally, this would comprise 0.50 acres of passive space and 2.0 acres of active open space per 1,000 residents.

The *CEQR Technical Manual* considers an action to result in significant impacts to open space resources if it would decrease the open space ratio substantially, thereby reducing the availability of open spaces for an area's population. A decrease in the open space ratio of 5 percent or more is generally considered to be a significant adverse impact on open space resources. However, if the existing open space ratio is low even an open space ratio change of less than 1 percent may result in potential significant open space impacts.

The open space project study area exhibits an above average open space ratio of 2.11 acres per 1,000 residents, (based on 48.76 acres of existing open space divided by the 2010 Census study area population of 21,729 persons).

Existing Conditions

Study Area Population

The study area population was estimated using data from the 2010 U. S. Census of Population and Housing for the accessible census tracts[5] located fully or at least 50 percent within the one-half mile study area. As shown in Table 7-1, in 2010 the study area contained a total of 21,729 residents within the nine relevant census tracts.

The 2016 American Community Survey (ACS) provides a more recent estimate of the Study Area Population for each of the nine relevant census tracts. As shown in Table 7-1, in 2016 the study area is estimated to have contained a total of 23,083 residents within the nine relevant census tracts which represents an increase of 1,354 residents or a 6.2% increase over six years. This converts to an annual increase of approximately 1.0% over the period.

Table 7-1

Study Area Population

Census Tract	**Total Population (2010)[6]**	**Total Population (2016)[7]**
37	0	0
39	1,592	1,658
43	2,437	2,660
45	2,975	3,290
47	3,984	3,910
77	1,478	1,596
79	3,493	3,384
81	1,188	1,389
87	4,582	5,196
Study Area Total	**21,729**	**23,083**

Study Area Open Space

The one-half mile open space study area is generally bounded by 27th Avenue/Astoria Boulevard on the north, 37th Avenue on the south, Crescent Street on the east, and the East River on the west. Within the census tracts that are fully or at least 50 percent

[5] Although the ½-mile radius area includes more than 50% of census tract 238.02, this tract is located on Roosevelt Island and is separated from the Project Area by the East River. It is therefore not considered accessible to the Project Area.

[6] Source: 2010 US Census data.

[7] Source: 2016 ACS data.

within this area, there are twelve[8] publicly owned and accessible facilities **(See Figure 7-2, Open Space Facilities and Census Tracts and Table 7-2, Inventory of Open Space Resources)**, providing a total of 48.76 acres of open space resources. 25.129 acres or 51.5% of the open space resources are considered to be active open space and 23.631 acres or 48.5% of the open space resources are considered to be passive open space.

The open space study area also includes the 0.78 acre Two Coves Community Garden/Goodwill Park/Phoenix Triangle which is solely comprised of passive open space. This facility is not included in the quantitative analysis as it is a community garden with limited hours of operation. In addition, the Noguchi Museum open space area has not been included in the quantitative as it is a private open space.

Table 7-2

Inventory of Open Space Resources

Map Key	Open Space Name and Location	Size (acres)	Active (acres)	Passive (acres)
1	Rainey Park	8.09	3.24 (40%)	4.85 (60%)
2	Socrates Sculpture Park	4.89	0 (0%)	4.89 (100%)
3	Hallets Cove/Astoria Houses Playground	5.7	4.26 (75%)	1.44 (25%)
4	Van Alst Playground	1.03	0.93 (90%)	0.10 (10%)
5	Astoria Health Center Playground	0.21	0.189 (90%)	0.021 (10%)
6	Ravenswood Playground	2.76	2.48 (90%)	0.28 (10%)
7	P S 76/Spirit Playground	0.71	0.64 (90%)	0.07 (10%)
8	Placella Park/Sixteen Oaks Grove	0.22	0 (0%)	0.22 (100%)
9	Costco Waterfront Esplanade	1.05	0 (0%)	1.05 (100%)

[8] Although the majority of the census tract containing it is not located within the ½-mile radius, the Van Alst playground is located within that distance and is appropriate to include in the inventory.

10	35th Avenue Visual Corridor	0.54	0 (0%)	0.54 (100%)
11	Queensbridge Park	20.34	10.17 (50%)	10.17 (50%)
12	Long Island City High School Field	3.22	3.22 (100%)	0 (0%)
TOT		**48.76**	**25.129 (51.5%)**	**23.631 (48.5%)**

Assessment of Open Space Adequacy

The open space ratio was calculated based on the 2016 ACS study area population shown in Table 7-1 and the total open space acreage shown in Table 7-2. The resultant ratio is 2.112 acres per 1,000 residents. This ratio exceeds the citywide average of 1.5 acres and is somewhat less than the City's planning goal as expressed in the CEQR Technical Manual of 2.5 acres per 1,000 population, indicating that the area has an above average but not ideal amount of public open space resources.

The project study area has an active open space ratio of 1.089 acres per 1,000 residents and a passive open space ratio of 1.024 acres per 1,000 residents. While this exceeds the ideal of 0.50 acres of passive open space noted in the *CEQR Technical Manual*, it falls below the ideal of 2.0 acres of active open space.

Future No-Action Condition

Study Area Population

As stated above, the estimated 2016 ACS population of the half-mile open space study area was 23,083. In order to account for background growth over the six-year timeframe to the 2022 project build year, the six-year ACS annual growth rate of 1.0% from 2010 to 2016 was assumed. Based on this assumption, the population of the ½-mile open space study area will have increased by 6.0%.

Applying the 6.0% increase to the 2016 estimated population of 23,083 persons results in an estimated population in 2022 of 24,468 persons. In addition, the RWCDS future no action development in the Project Area would result in the development of 92 residential dwelling units which are estimated to contain 257 residents based on an average household size of 2.79 persons. Therefore, the open space study area would have a No-Action population of 24,725 persons in 2022.

Study Area Open Space

There would be no increase or decrease in the 48.76 acres of existing open space area within the project study area by the project build year of 2022.

Assessment of Open Space Adequacy

The future no-action open space ratio within a ½ mile radius of the Projected Development Site is 1.972 based on the area population of 24,725 persons in 2022 and the 48.76 acres of open space area. The open space project study area would have an active open space ratio of 1.016 acres per 1,000 residents and a passive open space ratio of 0.956 acres per 1,000 residents.

Future With-Action Scenario

Study Area Population

As discussed above, the project is expected to generate approximately 723 net new residents based on the 2010 U.S. Census average household size of 2.79 persons per household for Census Tracts within ¼-mile of the Projected Development Site including tracts 39, 45, 77, 81, and 85. Adding these 723 residents to the future no-action population of 24,725 persons would result in a total population of 25,488 persons.

Study Area Open Space

The project would include 33,606 square feet (0.77 acres) of open space, including 16,547 square feet (0.38 acres) of publicly accessible passive open space and 17,059 square feet (0.39 acres) of private open space. With the addition of the 0.38 acres of publicly accessible open space in the Project Area, the project study area would contain approximately 49.14 acres of open space resources by the Project Build Year of 2022, including 25.129 acres of active open space and 24.011 acres of passive open space.

Assessment of Open Space Adequacy

The projected open space ratio in 2022 with the Proposed Actions would be 1.928 acres per 1,000 residents compared with the projected ratio of 1.972 acres in the study area in the future without the project. This represents a decrease of approximately 0.044 acres or 2.2 percent in the open space ratio. The open space project study area would have an active open space ratio of 0.986 acres per 1,000 residents with the Proposed Actions compared to 1.016 acres in the future without the project, a decrease of 0.03 acres. The study area would have a passive open space ratio of 0.942 acres per 1,000 residents with the Proposed Actions compared to 0.956 acres in the future without the project, a decrease of 0.014 acres. Therefore, the community would continue to have an above average amount of open space compared to the City as a whole but would not meet DCP's open space planning goal.

Table 7-3 shows the calculation of open space ratios for the existing and Future With-Action Scenarios.

Figure 7-3
Existing and Future With-Action Open Space Ratios

	Existing Conditions (2016)	Future No-Action	Future With-Action
Publicly Accessible Open Space (Acreage)	48.76 (25.129 active, 23.631 passive)	48.76 (25.129 active, 23.631 passive)	49.14 (25.129 active, 24.011 passive)
Study Area Population	23,083	24,725	25,488
Open Space Ratio (Acres/1,000 Residents)	2.112 (1.089 active; 1.024 passive)	1.972 (1,016 active; 0.956 passive)	1.928 (0.986 active; 0.942 passive); –0.044 ac/2.2% decrease

Impact Significance

Quantitative Impact

The *CEQR Technical Manual* considers an action to result in significant impacts to open space resources if it would directly displace or alter an existing resource to the detriment of its users. The project development associated with the proposed rezoning would not result in the direct displacement of any parklands or recreational facilities. The Proposed Actions would, however, reduce the open space ratio as further discussed below.

At 1.928 acres per 1,000 population, the amount of publicly accessible open space with the Proposed Actions would continue to be above the average of 1.5 acres per 1,000 population in community districts in the City but would be below the City's planning goal as expressed in the CEQR Technical Manual of 2.5 acres per 1,000 population. Nevertheless, it is recognized that this goal may not be feasible in many areas of the City, and it is not considered to be an impact threshold.

The *CEQR Technical Manual* considers an action to result in significant impacts to open space resources if it would decrease the open space ratio substantially, thereby reducing the availability of open spaces for an area's population. A decrease in the open space ratio of 5 percent or more is generally considered to be a significant adverse impact on open space resources if the area has an average open space ratio of 1.5 acres per 1,000 population or greater.

Relative to indirect impacts on open space resources, the proposed development would result in a decrease of 2.2 percent in the open space ratio in the project study area. At an open space ratio of 1.928 acres, the ratio in the project study area would be above the community district median of 1.5 acres per 1,000 population. The open space ratio

would not decrease substantially relative to existing and Future No-Action conditions. Therefore, based on *CEQR Technical Manual* criteria, the proposed project would not result in a significant adverse impact on open space resources.

A detailed open space assessment is not required as it has been determined that the project would not decrease the open space ratio by more than 5 percent. In addition, private open space would be provided in the Project Area which would serve to meet at least a portion of the open space needs of the project's residents.

Qualitative Impact

The Proposed Actions would result in the creation of new publicly accessible open space as well as private open space. The proposed rezoning of the Project Area to R6B and R7X zones would include open space per the Quality Housing provisions applicable to these districts. Quality Housing requires the provision of open space equal to 3.3 percent of the residential floor area of the project, thereby requiring approximately 10,437 square feet or 0.24 acres of open space for the proposed 315,966 zsf of residential space.

The Applicant intends to provide three open space recreational areas, totaling approximately 33,606 square feet (0.77 acre) in size. This is more than three times the amount required under the Quality Housing provisions of the Zoning Resolution under which this project would be developed. The open spaces would consist of landscaped outdoor recreation areas with active and passive open space including children's playgrounds, seating areas, landscaped islands, and lawn areas. A 16,547 square foot (0.38 acre) public passive open space area would be provided in front of Building A opposite the Noguchi Museum and has been included in the calculations of publicly accessible open space discussed above. 17,059 square feet (0.39 acres) of private open space would be provided in two areas including a 15,869 square foot (0.36 acre) open space between Buildings B and C and an 1,190 square foot (0.3 acre) open space at the Broadway/Vernon Boulevard corner of Building C. The private outdoor recreational areas would be provided for use by project residents, and as they would not be publicly accessible, the areas have not been included in any calculations of publicly accessible open space.

It should also be noted that one of the publicly accessible open space resources, Queensbridge Park, while located within a census that that is more than 50% with the project study area, is itself located approximately 0.78 miles from the Project Area.

The *CEQR Technical Manual* considers an action to result in significant impacts to open space resources if it would significantly increase shadows, noise, air pollutant emissions, or odors on existing public open spaces resources compared to the future without the action conditions. The project development associated with the proposed rezoning would not significantly increase such impacts on existing public open spaces resources as further explained below.

Based on *CEQR Technical Manual* criteria and as explained further in the Shadows section below, the proposed project would not result in any significant shadows impacts on any open space or other shadow sensitive uses.

Conclusion

Due to the absence of significant direct impacts on any open space resource and the minimal decrease in the future with the action open space ratio, as well as the additional public and private passive open space to be provided in the Project Area under the Proposed Actions, it is anticipated that the project would not have any potentially significant adverse open space impacts and further assessment is not warranted.

Figure 7-2: Open Space Facilities and Census Tracts

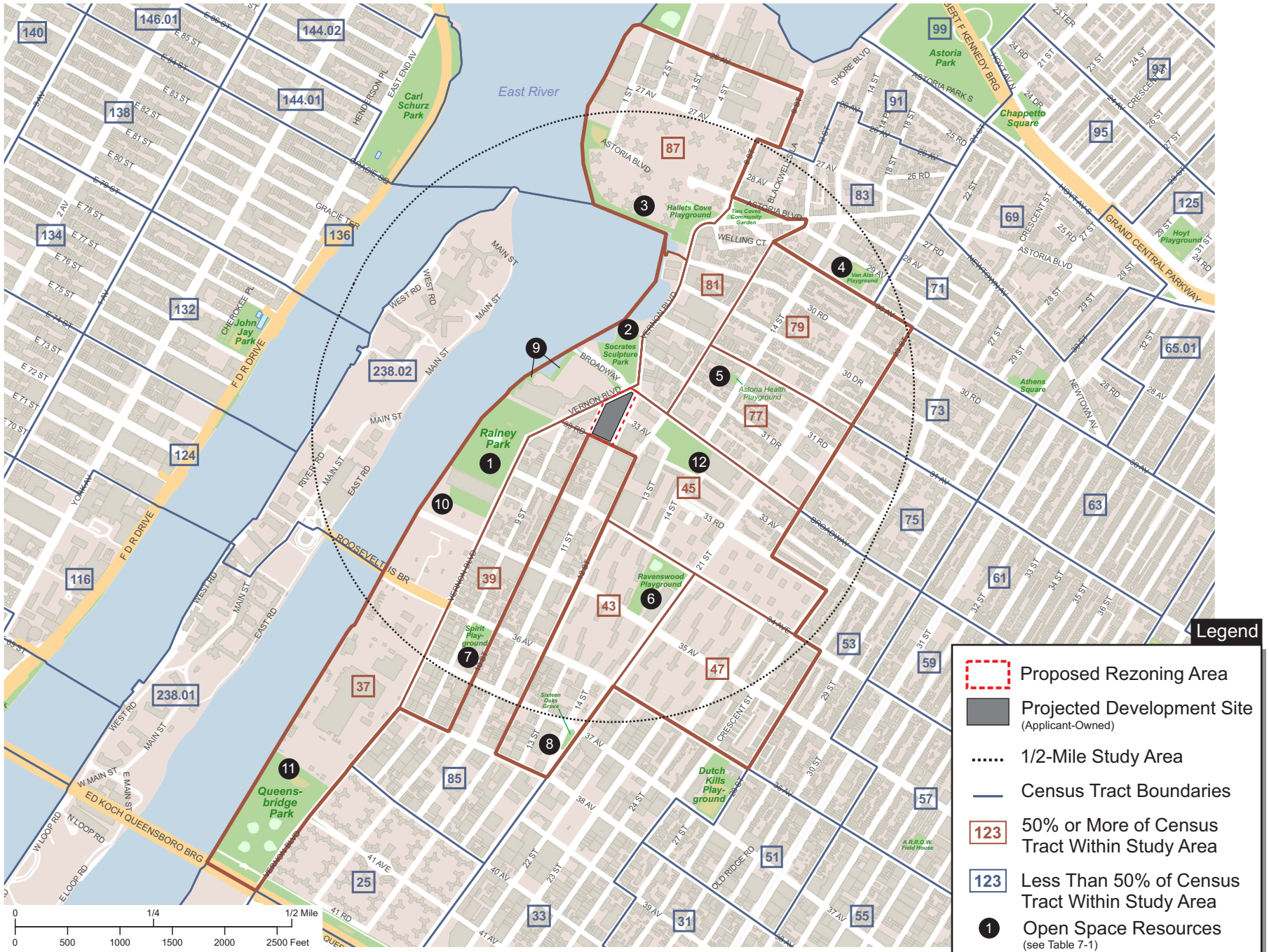
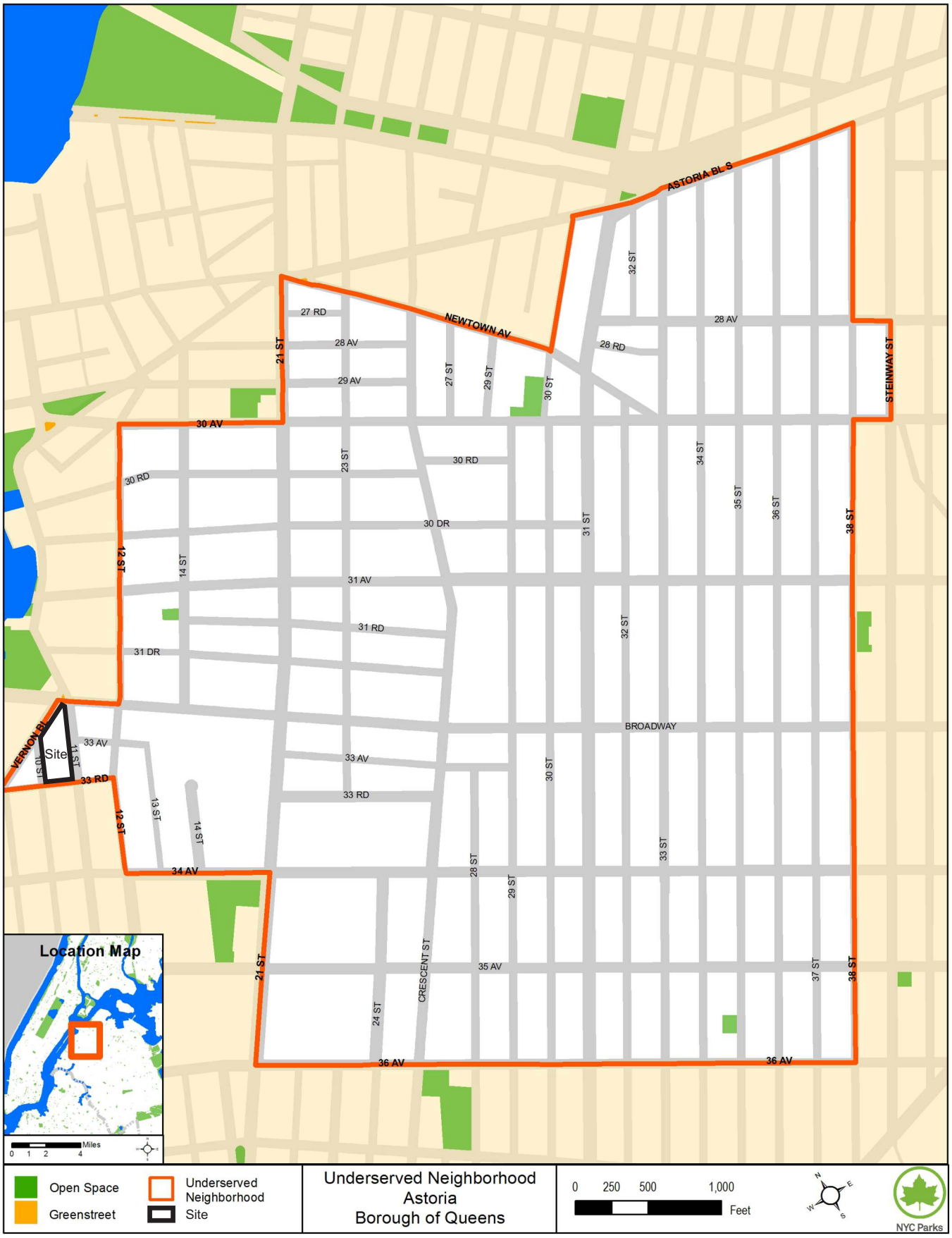


Figure 7-1: Underserved Open Space Area – Astoria – Borough of Queens



8. SHADOWS

Introduction

Under CEQR, a shadow is defined as the circumstance in which a building or other built structure blocks the sun from the land. An adverse shadow impact is considered to occur when the shadow from a proposed project falls upon a publicly accessible open space, a historic landscape, or other historic resource if the features that make the resource significant depend on sunlight, or if the shadow falls on an important natural feature and adversely affects its uses or threatens the survival of important vegetation. An adverse impact would occur only if the shadow would fall on a location that would otherwise be in sunlight; the assessment therefore distinguishes between existing shadows and new shadows resulting from a proposed project. Finally, the determination of whether the impact of new shadows on an open space or a natural or historic resource would be significant is dependent on their extent and duration. In general, shadows on City streets and sidewalks or on other buildings are not considered significant under CEQR. In addition, shadows occurring within an hour and a half of sunrise or sunset generally are not considered significant under CEQR.

According to the *CEQR Technical Manual*, a shadows assessment is not required unless the project would include a structure or an addition to a structure at least 50 feet in height or if it would contain shorter structures that might cast substantial new shadows on an adjacent park, historic resource, or an important natural resource. A shadows analysis is required for this project since the Project Area is located either directly across the street or a short distance from several open space resources.

Preliminary Screening Assessment

Tier 1 Screening Assessment

There are five potentially shadow sensitive resources in the vicinity of the Project Area. The Project Area is located directly across 10th Street from the Noguchi Museum complex, which contains an outdoor garden area at the corner of 33rd Road and 10th Street labeled as no. 3 on the attached Figure 8-1. The site is also located directly across Vernon Boulevard and Broadway from the Socrates Sculpture Park labeled as no. 2 on Figure 8-1 and the Costco waterfront esplanade labeled as no. 4 on Figure 8-1. Rainey Park is located approximately one block from the Project Area at the corner of Vernon Boulevard and 33rd Road labeled as no. 1 on Figure 8-1. Finally, the Sohmer and Company Piano Factory building at the corner of 31st Avenue and Vernon Boulevard (31-01 Vernon Boulevard) is an individually designated historic resource and is labelled as "Landmarked Building" on Figure 8-1.

The longest shadow of 722.4 feet on the Tier 1 shadow assessment figure was calculated as 4.3 times the maximum proposed building height of 168 feet including bulkheads on the roof of proposed Building C.

Due to the proximity of the Project Area to the open space and historic resources noted above, potential shadow impacts could occur from the proposed development on the Noguchi Museum open space area, Socrates Sculpture Park, the Costco waterfront esplanade, Rainey Park, and the Sohmer and Company Piano Factory building.

Tier 2 Screening Assessment

Based on the Tier 1 assessment, which showed the potential for the longest shadow to reach a sunlight sensitive open space resource, a Tier 2 assessment was generated. A Tier 2 assessment locates the area south of a building that cannot be cast in shadow. This area in New York City lies between -108 and +108 degrees from true north.

The attached Figure 8-2 shows the area south of the Project Area that cannot be shaded by the proposed project. As illustrated on the figure, only a small area in the southeast corner of Rainey Park lies within the area that cannot be shaded by the project.

Tier 3 Screening Assessment

The Tier 3 screening assessment is used to determine if shadows resulting from the proposed project can reach a sunlight-sensitive resource. The screening assessment uses three-dimensional computer modeling software with the capacity to accurately calculate shadow patterns.

A Tier 3 screening assessment was performed for the four representative days of the year set forth in the *CEQR Technical Manual*: December 21, the winter solstice and shortest day of the year; March 21/September 21, the equinoxes; May 6, the midpoint between the summer solstice and the equinox (and equivalent to August 6); and June 21, the summer solstice and the longest day of the year. The *CEQR Technical Manual* defines the temporal limits of a shadow analysis period to fall from an hour and a half after sunrise to an hour and a half before sunset. In accordance with the *CEQR Technical Manual*, surrounding buildings are not included in the Tier 3 shadow assessment model.

A Tier 3 screening assessment has been performed as the Noguchi Museum open space area, portions of the Costco waterfront esplanade and Socrates Sculpture Park, and the Sohmer and Company Piano Factory building lie within the area that could be shaded by the proposed project. As shown on the attached Figures 8-3 through 8-6, shadows from the proposed building could reach portions of the Noguchi Museum open space area, the Costco waterfront esplanade, and Socrates Sculpture Park on the December 21st and March 21st analysis days; the Noguchi Museum open space and the Costco waterfront esplanade on the May 6th analysis day; and the Noguchi Museum open space on the June 21st analysis day. No new shadows from the project would reach Rainey Park or the Sohmer and Company Piano Factory building on any of the analysis days.

As new shadows from the project could potentially reach the Noguchi Museum open space area, portions of the Costco waterfront esplanade, and the Socrates Sculpture Park on the analysis days noted above, an incremental shadows analysis for these days was prepared as illustrated on Figures 8-7 through 8-9.

New shadows would be cast by the proposed development on the Noguchi Museum open space area, the Costco waterfront esplanade, and Socrates Sculpture Park as follows:

- December 21: The project would cast a new shadow on southern portions of Socrates Sculpture Park from 9:33 AM to 2:53 PM, a period of 5 hours. The project would cast a new shadow on the northern third of the Noguchi Museum open space area from 8:51 AM to 9:30 AM, a period of 39 minutes. The project would also cast a new shadow on northern portions of the Costco waterfront esplanade, from 8:51 AM to 2:53 PM, a period of 6 hours and 1 minute.

- March 21: The project would cast a new shadow on very small area at the southern end of Socrates Sculpture Park from 11:58 AM to 1:32 PM, a period of 1 hour and 34 minutes. The project would cast a new shadow on about two-thirds of the Noguchi Museum open space area from 7:36 AM to 8:09 AM, a period of 33 minutes. The project would also cast a new shadow on northeast edge of the Costco waterfront esplanade, from 7:36 AM to 1:28 PM, a period of 6 hours and 2 minutes.

- May 6: The project would cast a new shadow on the Noguchi Museum open space area from 6:27 AM to 7:49 AM, a period of 1 hour and 22 minutes. The project would also cast a new shadow on a very small area along the extreme eastern edge of the Costco waterfront esplanade, from 9:24 AM to 10:34 AM, a period of 1 hour and 10 minutes.

- June 21: The project would cast a new shadow on most of the Noguchi Museum open space area from 5:57 AM to 8:04 AM, a period of 2 hours and 7 minutes.

Significance of Shadows Impacts

Based on *CEQR Technical Manual* criteria and as shown on the Tier 3 Incremental Impact Screening Assessment diagrams, the significance of the new shadows from the project on the Noguchi Museum open space area, the Costco waterfront esplanade, and the Socrates Sculpture Park identified above would be as follows:

- December 21 – The 5 hour shadow from the project on Socrates Sculpture Park would affect approximately 40% of the park in it southern area. This area of the park includes large sculptures, lawn area, and some trees. As the shadow would be occurring during the coldest period of the year outside of the growing season when public use would be minimal, the new shadow would not have any significant adverse impact on Socrates Sculpture Park. The 39 minute shadow

from the project on the Noguchi Museum open space area would affect the northern one-third of the open space area. However, as the shadow would be less than one hour in duration and would be occurring during the coldest period of the year outside of the growing season when public use would be minimal, the new shadow would not have any significant adverse impact on the Noguchi Museum open space area. The 6 hour, 1 minute shadow from the project on the Costco waterfront esplanade would primarily affect the northern leg of the facility comprising approximately one third of its area. As the shadow would be occurring during the coldest period of the year when public use would be minimal, the new shadow would not have any significant adverse impact on the esplanade.

- March 21 - The 1 hour and 34 minute shadow from the project on Socrates Sculpture Park would only reach a tiny portion of the extreme southwest corner of the park and would therefore not be significant. The 33 minute shadow from the project on the Noguchi Museum open space would affect about two-thirds of the open space area. However, this shadow would not be considered significant as it would be of very short duration and would be occurring during the late winter period when minimal use of the outside area of the facility would be expected. The 6 hour and 2 minute shadow on the northeast edge of the Costco waterfront esplanade, would not be considered significant as it would affect less than 10 percent of the area of the facility and would be occurring during the late winter period when minimal use of the facility would be expected.

- May 6 - The 1 hour and 22 minute shadow from the project on the Noguchi Museum open space area would not be considered significant since it would affect the open space for a very short period of time during the early morning hours. The *CEQR Technical Manual* states that a minimum of 4 to 6 hours of sunlight is required during the growing season for the survival of vegetation. There would be well in excess of 6 hours of sunlight on this resource on the May 6th analysis day. The 1 hour and 10 minute shadow on the extreme eastern edge of the Costco waterfront esplanade, would not be considered significant as it would affect an almost unnoticeable percentage of the resource and would be occurring over a very limited period of time.

- June 21 – The 2 hour and 7 minute shadow from the project on the Noguchi Museum open space area would not be considered significant since it would affect the open space for a very short period of time during the early morning hours. There would be well in excess of 6 hours of sunlight on this resource on the June 21st analysis day to assure the survival of vegetation.

Conclusion

As detailed above, new shadows cast by the project on the Noguchi Museum open space area would not be significant as they would affect this facility for short periods of time during the warmer periods of the year when greater use of this open space would

be anticipated and when vegetation survival is of concern. New shadows cast on Socrates Sculpture Park and the Costco waterfront esplanade, outside of the winter period would affect only extremely limited areas of these resources and would therefore also be considered insignificant. Therefore, the Proposed Actions would not result in any significant shadows impacts, and no further assessment is needed for the project.

Figure 8-1: Tier 1 Screening Assessment



Figure 8-2: Tier 2 Screening Assessment

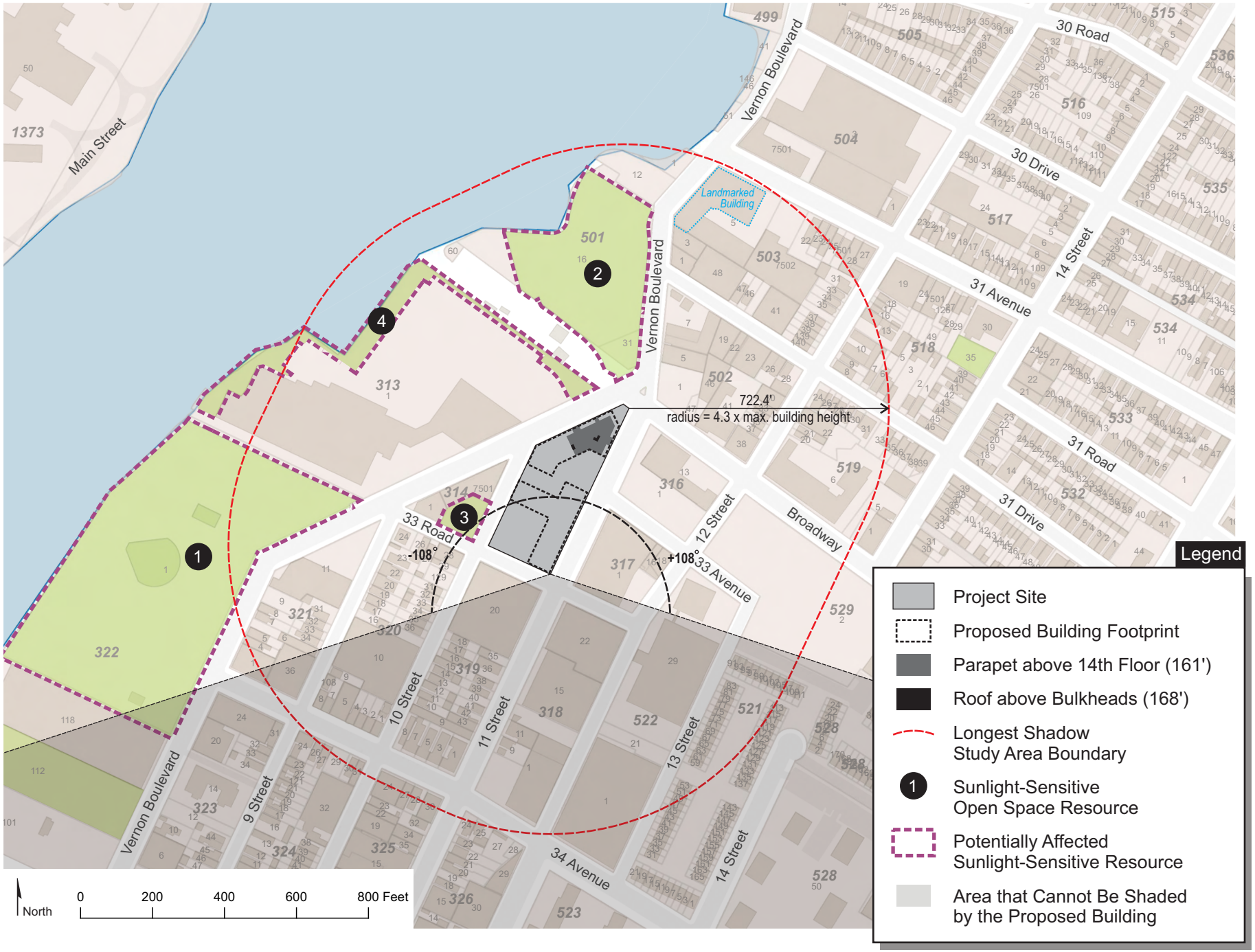


Figure 8-3: Tier 3 Screening Assessment for the December 21 Analysis Day

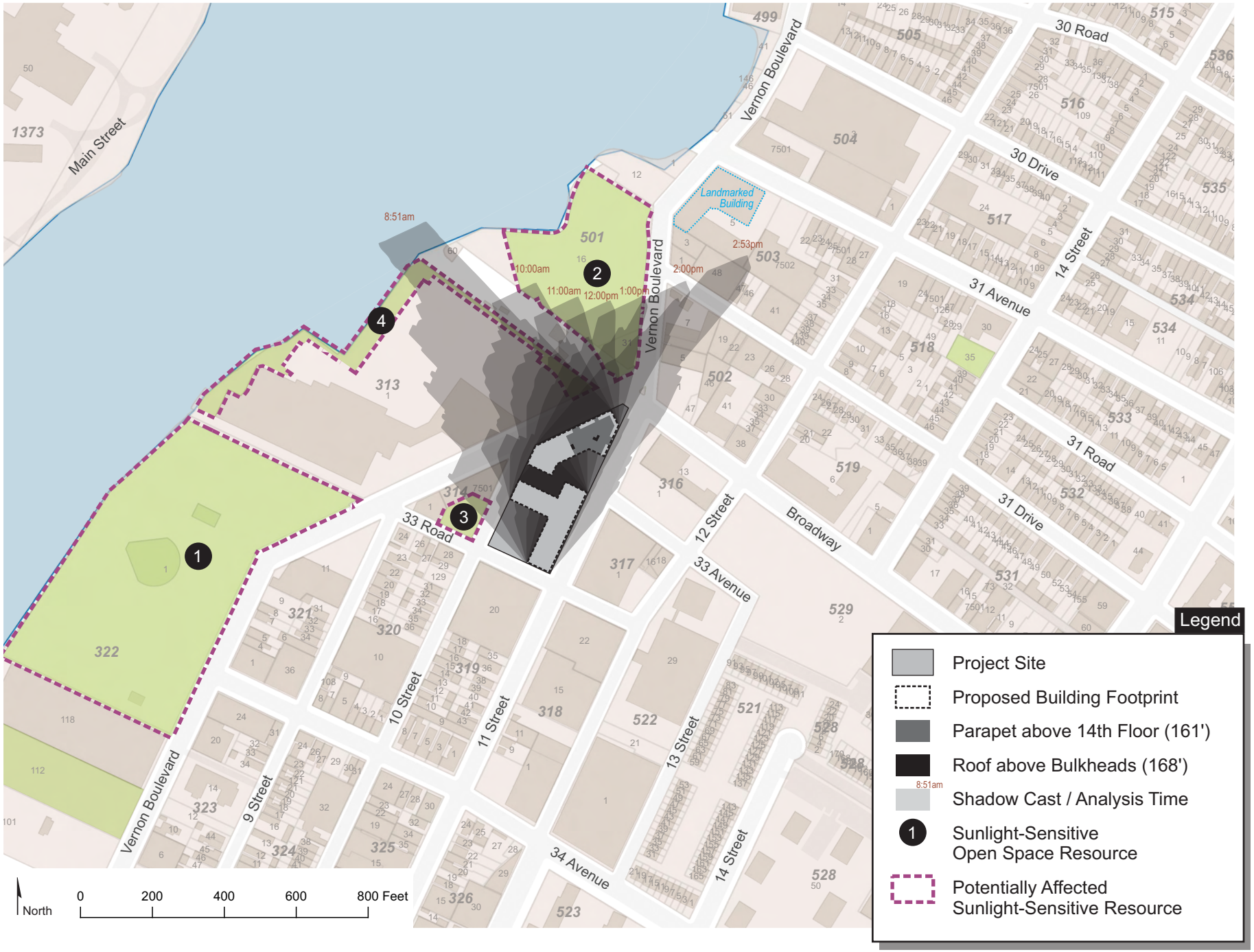


Figure 8-4: Tier 3 Screening Assessment for the March 21 Analysis Day

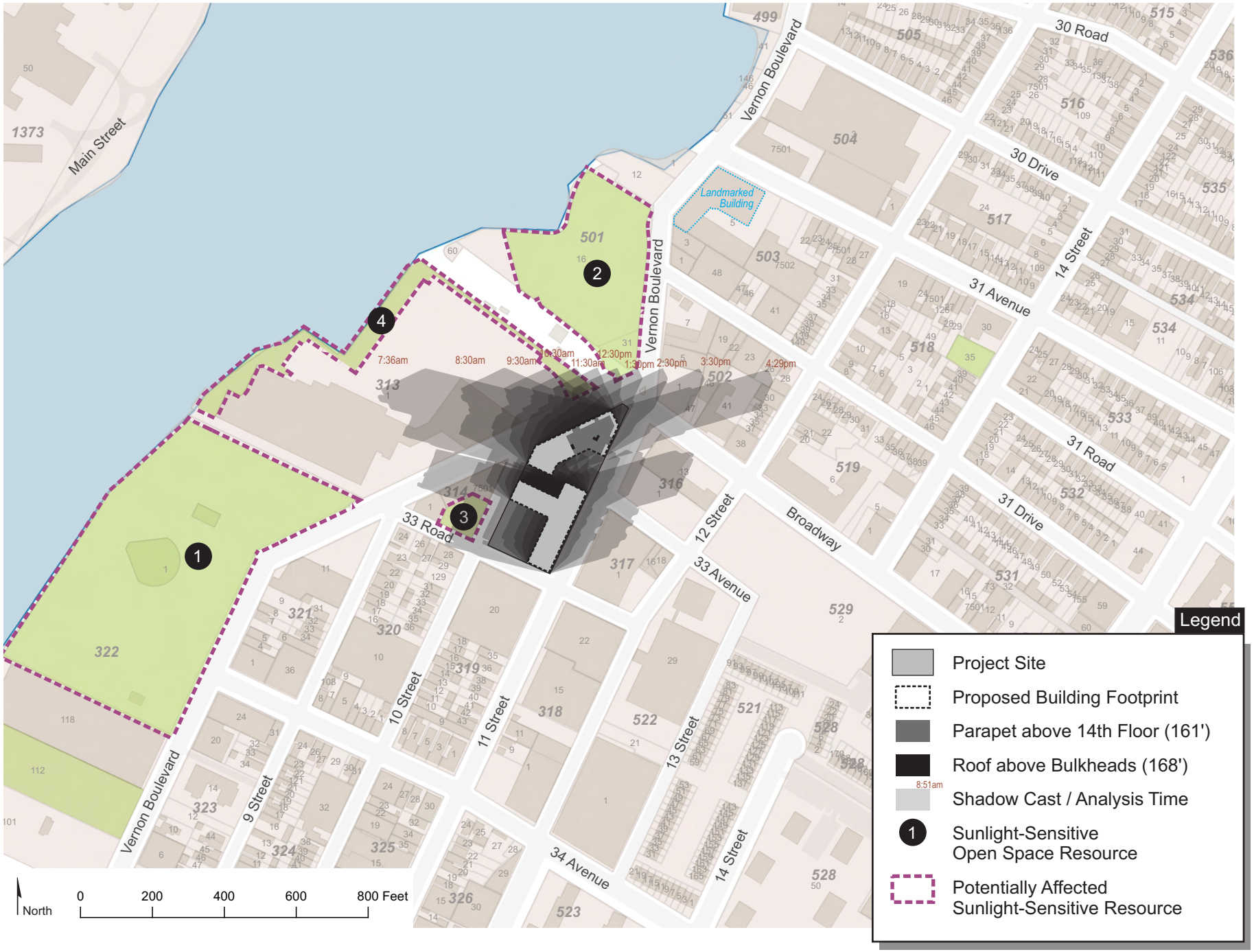


Figure 8-5: Tier 3 Screening Assessment for the May 6 Analysis Day

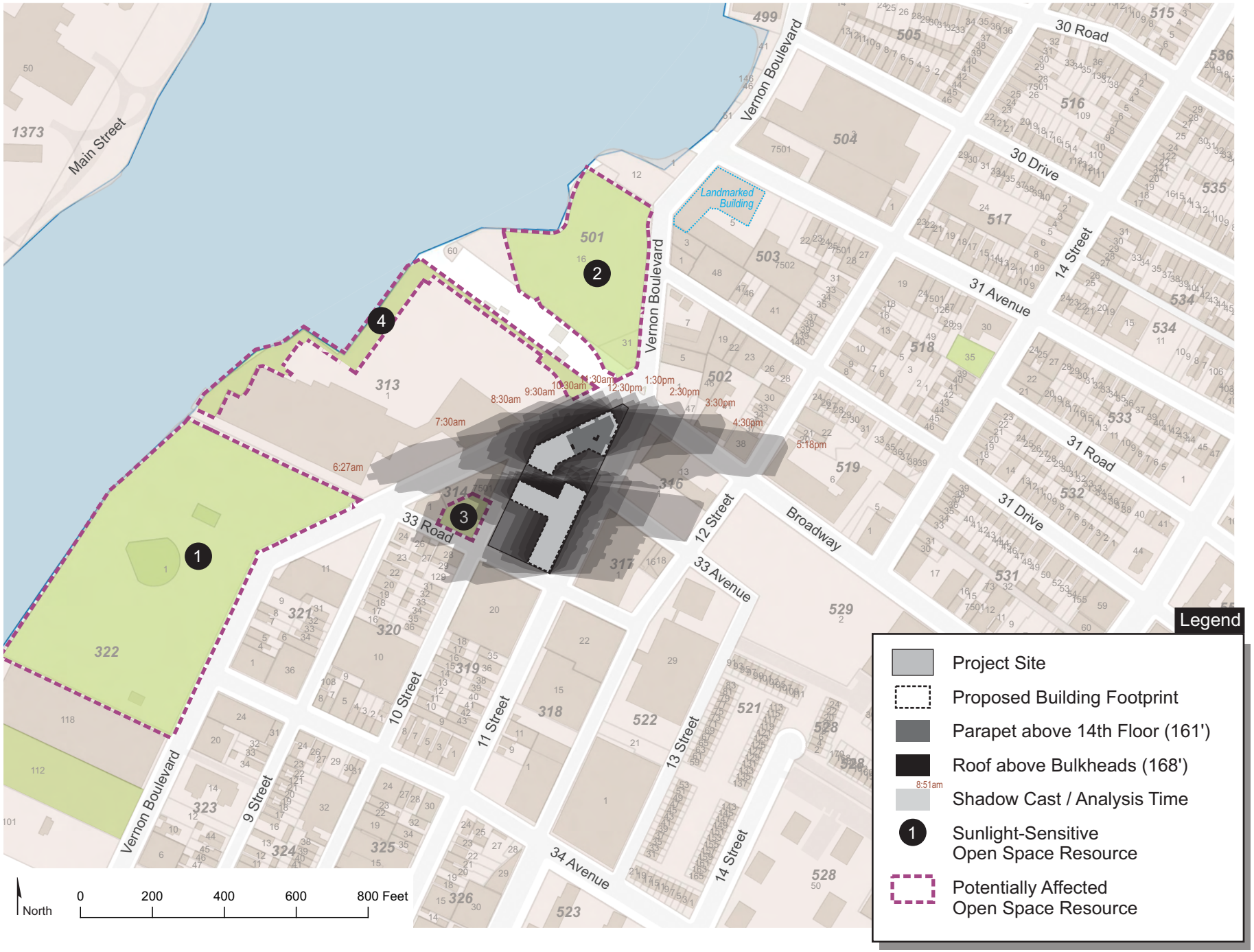


Figure 8-6: Tier 3 Screening Assessment for the June 21 Analysis Day

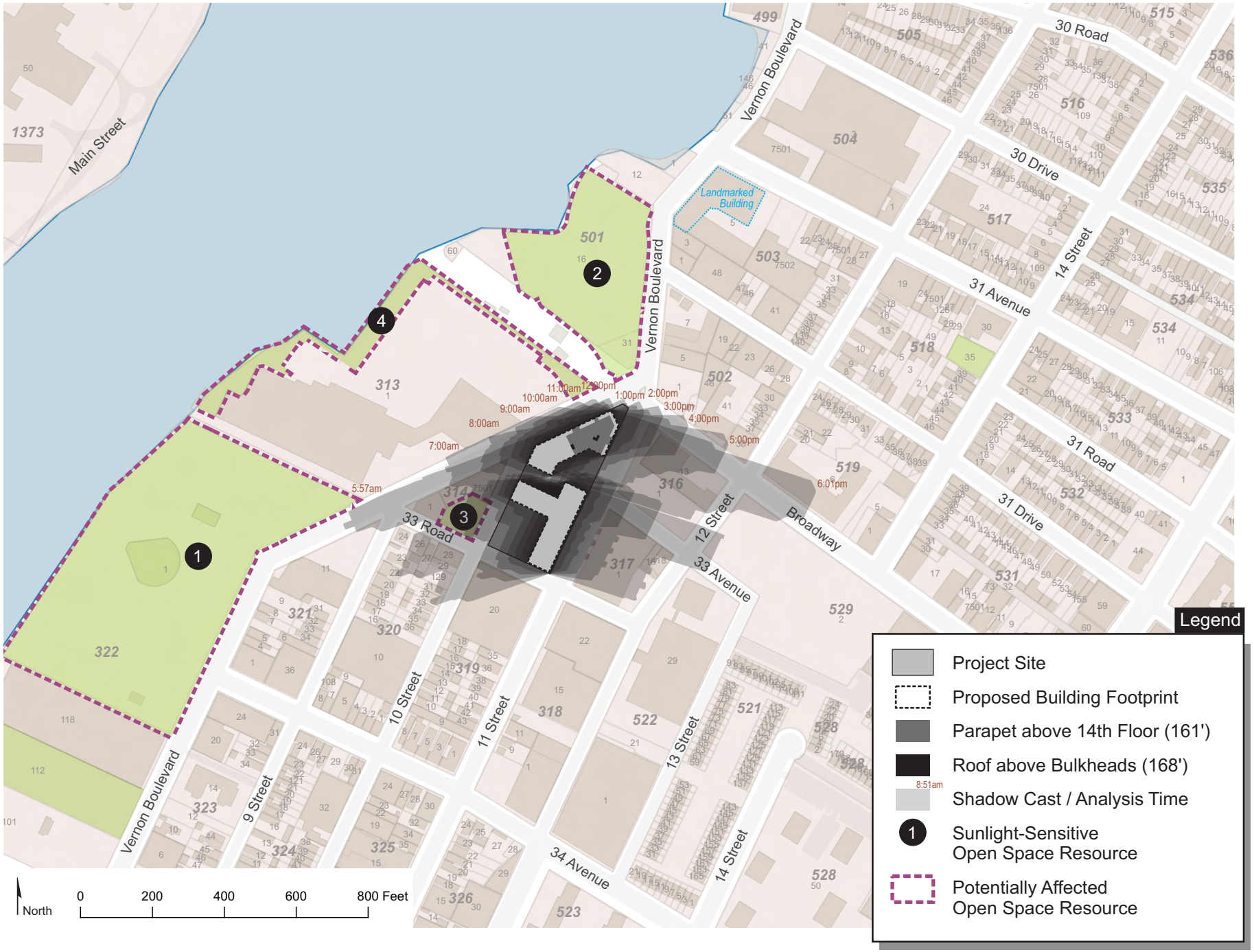


Figure 8-7: Tier 3 Incremental Impact for the December 21 Analysis Day

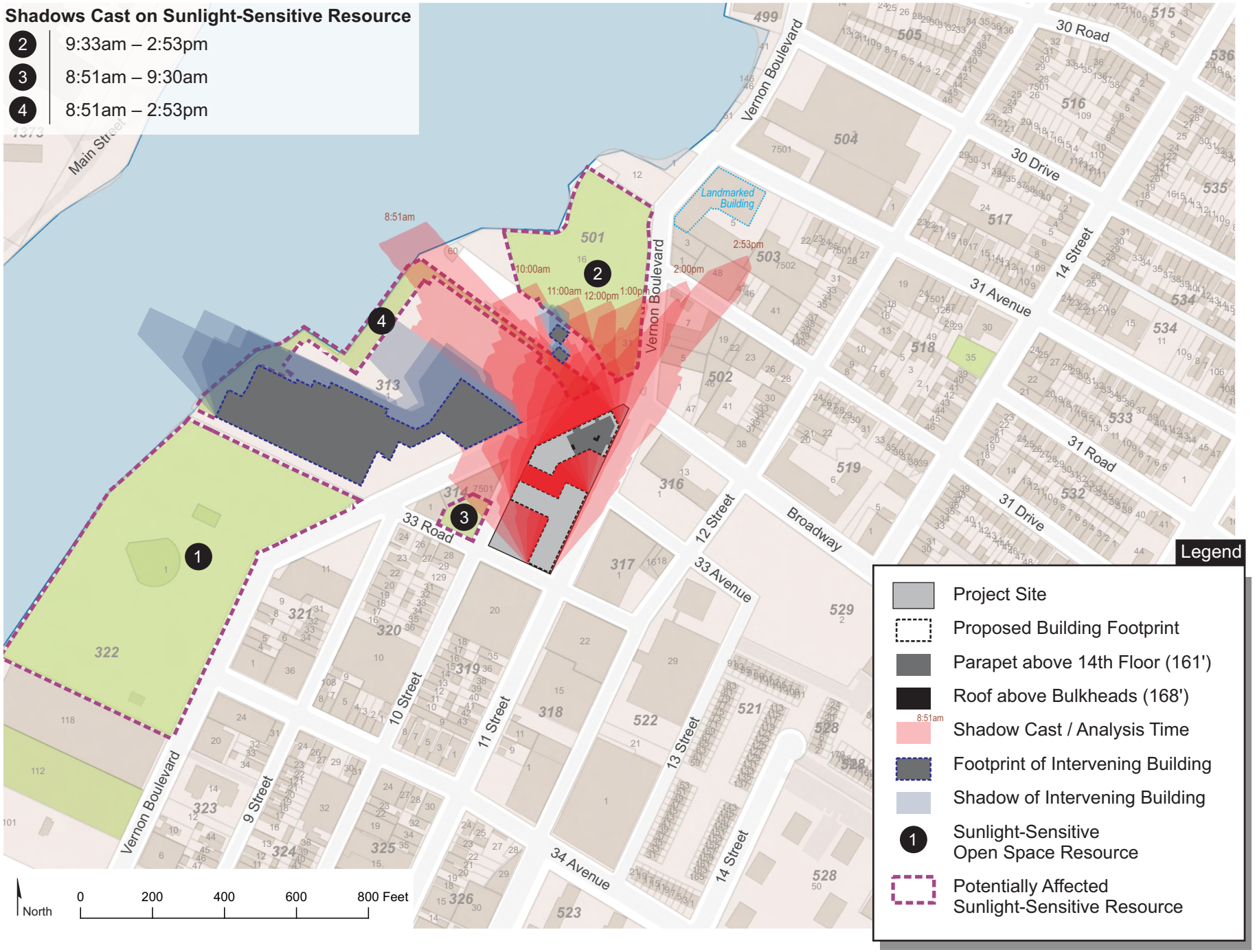


Figure 8-8: Tier 3 Incremental Impact for the March 21 Analysis Day

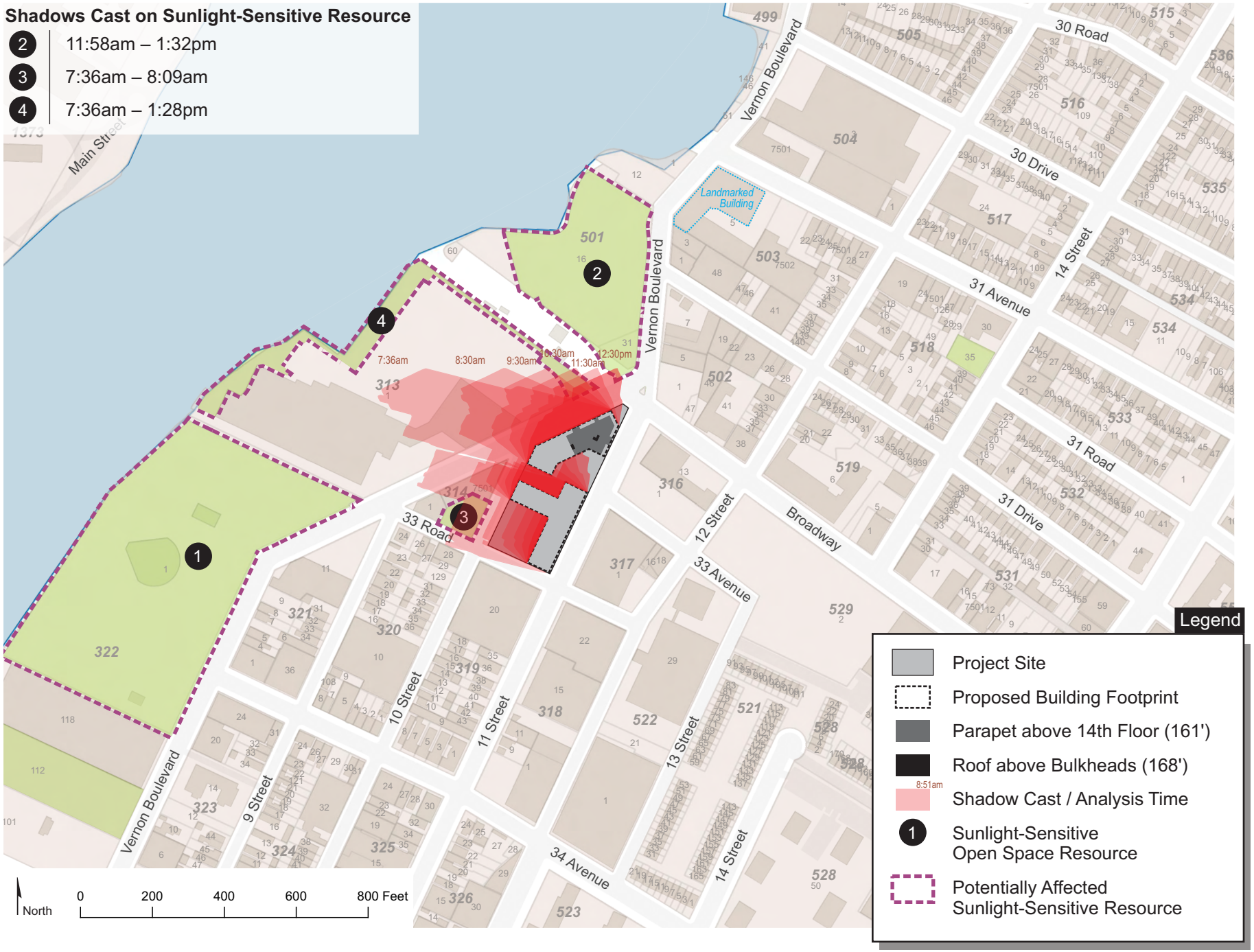


Figure 8-9: Tier 3 Incremental Impact for the May 6 Analysis Day

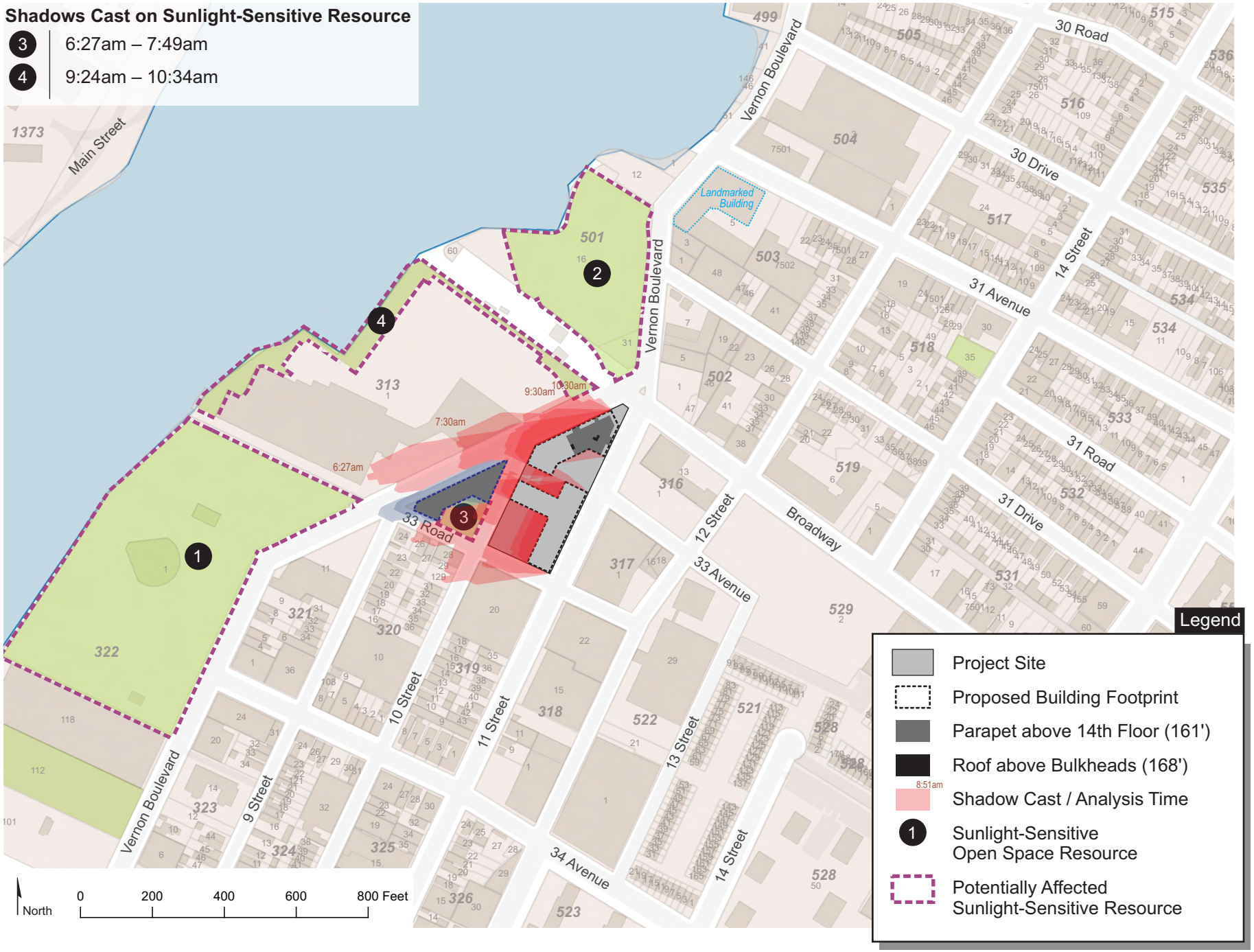
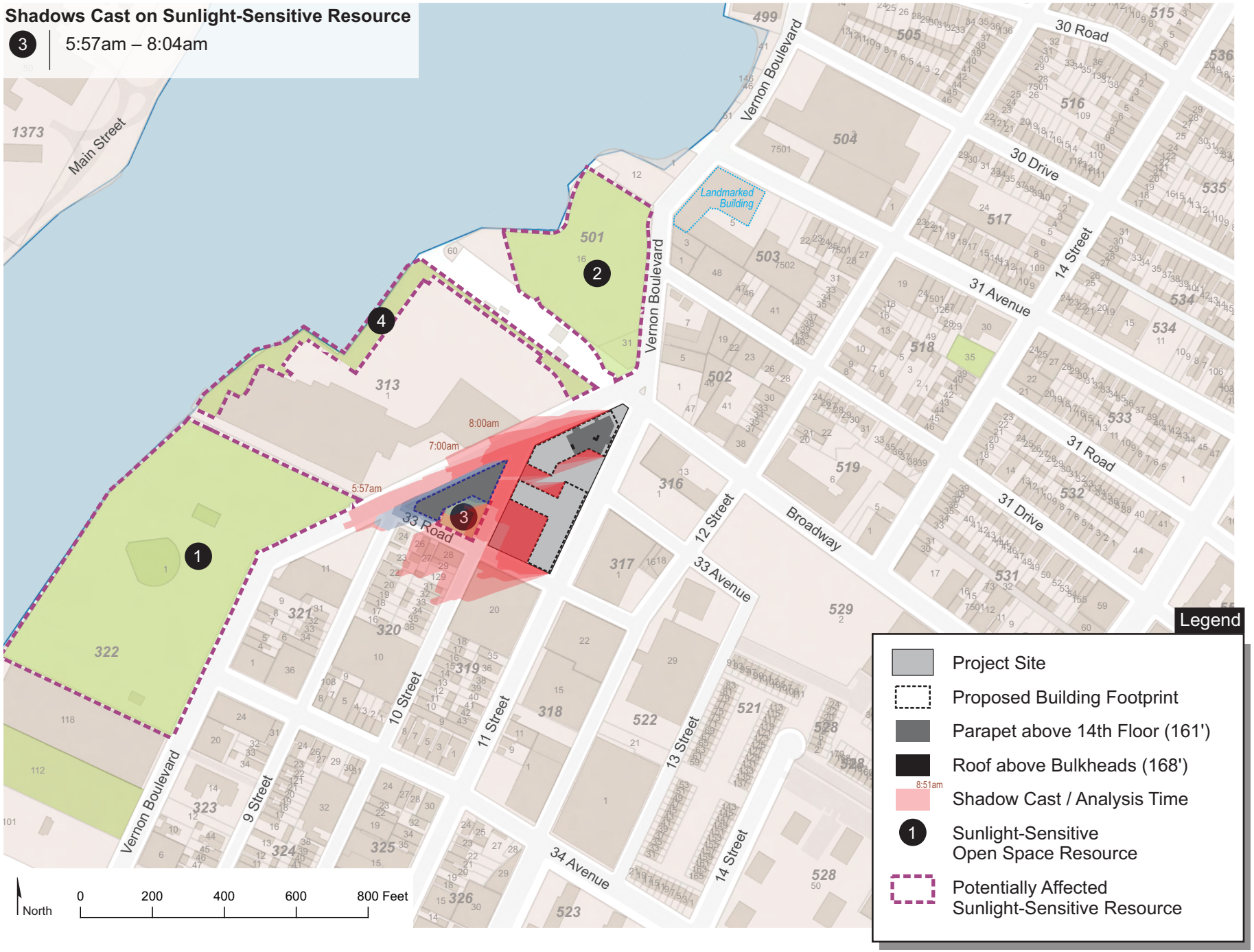


Figure 8-6: Tier 3 Screening Assessment for the June 21 Analysis Day



9. HISTORIC AND CULTURAL RESOURCES

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

The Project Area and the 400-foot radius project study area are not a Federal, State, or New York City designated Historic District and do not contain any individually designated historic resources. As such, a historic architectural analysis is not warranted for the Proposed Actions.

Under the Proposed Actions, new development is anticipated on Projected Development Site 1 resulting in new soils disturbance to areas that may not have previously been excavated.

By letter dated 5/30/18, the New York City Landmarks Preservation Commission (LPC) has determined that Projected Development Site 1 does not have any historic or archaeological significance (see Historic and Cultural Resources Appendix).

10. URBAN DESIGN AND VISUAL RESOURCES

Introduction

An assessment of urban design is needed when a project may have effects on any of the elements that contribute to the pedestrian experience of public space. A preliminary assessment 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, including the following:

1. Projects that permit the modification of yard, height, and setback requirements;

2. 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.

The Proposed Actions involves the request for a rezoning of the property from its current R5 district to R6B and R7X contextual residential zoning districts with a C1-3 commercial overlay over the R7X portion of the property. The floor area that could feasibly be built on the site in the future under its existing R5 zoning is approximately 107,710 square feet while under the proposed zoning the maximum feasible floor area would be approximately 338,200 square feet. The requested rezoning would allow the development on the site of an additional 259 dwelling units, 11,236 gsf of new commercial space, a decrease of 8,883 gsf of community facility space, and 58 additional accessory parking spaces compared to the future without the Proposed Actions development on the property. The Proposed Actions would also permit the modification of the existing yard, height, and setback requirements relevant to the property. A preliminary urban design assessment is therefore required.

Preliminary Assessment

Existing Conditions

The proposed Rezoning Area/Project Area encompasses the entire block bounded by Vernon Boulevard, 33rd Road, 10th Street, 11th Street, and Broadway in Astoria, Queens, and consists of approximately 77,235 square feet of land area. The property is currently improved with a one-story, approximately 26,637 square foot warehouse building occupied by the Milea Truck Sales and Leasing Company. The remainder of the lot consists of a paved parking area for trucks and equipment.

The area within 400 feet of the Project Area consists of a mixture of commercial and light industrial uses, community facilities, open space, and residential development. The area between Vernon Boulevard and the East River is developed with a Costco Wholesale Store sandwiched between the Socrates Sculpture Park and Rainey Park. The Noguchi Museum occupies an entire triangular shaped block across 10th Street from the Project Area. The area west of the site across 33rd Road is primarily developed with small 2-story detached residences mixed in with some larger structures occupied by automotive repair, electricians, a stone materials warehouse, and a thrift store among other uses. The area to the east across 11th Street is primarily developed with large one-

and two-story structures occupied by uses including auto repair, a commercial bakery, and an import/export warehouse among other uses. A public school is also located in this area. Finally, the area opposite the site bordered by Broadway and Vernon Boulevard is developed with wholesale and light industrial uses, several vacant lots currently in construction, and scattered small one- and two-story detached residences.

Visual resources in the vicinity of the Project Area include three open space areas. The Project Area is located directly across 10th Street from the Noguchi Museum complex which contains a large open space area at corner of 33rd Road and 10th Street. The site is also located directly across Vernon Boulevard and Broadway from the Socrates Sculpture Park. Finally, Rainey Park is located approximately one block from the Project Area at the corner of Vernon Boulevard and 33rd Road.

An aerial photograph of the project study area and ground level photographs of the site area and the immediate context are attached which show existing conditions on the site and in the surrounding area. Zoning calculations of the existing conditions on the site, including floor area calculations, lot coverage, and building heights, are shown in Table 10-1 below.

No-Action Scenario

The No-Action scenario under the existing R5 zoning mapped on the property consists of five zoning lots in the Project Area developed with a total of 92 dwelling units, 15,765 square feet of community facility space, and 106 accessory parking spaces. Zoning lots 1 through 4 would each be developed with 13 to 14 dwelling units in five 3-story, 2- and 3-family dwellings. Each zoning lot would also contain 10 accessory parking spaces. Zoning lot 5 would be developed with a 4-story building containing 15,765 square feet of ground floor community facility space and approximately 38 dwelling units on the upper three floors. The zoning lot would also contain 66 accessory parking spaces.

The future No-Action Development Scenario in the Project Area would result in a significant change to the existing urban design and visual character of the property. The existing one-story warehouse type building occupying only about one-third of the site would be replaced by twenty 3-story, 2- and 3-family dwellings and a 4-story building containing 15,765 square feet of ground floor community facility space and approximately 38 dwelling units on the upper three floors. The character of the surrounding project study area would not change significantly.

The No-Action Development Scenario in the Project Area would not result in any significant impacts to the visual resources in the vicinity of the site. Views to the Noguchi Museum open space area, Socrates Sculpture Park, and Rainey Park would still be available from the streets bordering the Project Area.

Zoning calculations of future No-Action conditions on the site, including floor area calculations, lot coverage, and building heights, are shown in Table 10-1 below.

Future With-Action Scenario

The future With-Action Development Scenario in the Project Area would result in a denser development on the property as compared to the future No-Action Development Scenario. The Applicant seeks to develop the property with a five-story residential structure, a nine-story residential structure, and a fourteen-story mixed-use residential and commercial building, totaling approximately 349,935 gsf in floor area, as well as providing 164 underground parking spaces and open space on the site. Approximately 351 dwelling units, 11,236 gsf of retail floor area, and 6,882 gsf of community facility space (Use Group 4 medical offices) are proposed. The existing one-story warehouse structure on the site would be demolished to facilitate the proposed development.

The difference between the No-Action and With-Action Scenarios would be the development under the With-Action Scenario of an additional 259 dwelling units, 11,236 gsf of new commercial space, a decrease of 8,883 gsf of community facility space, and 58 additional accessory parking spaces. Building heights would be greater under the With-Action Scenario. The With-Action development would consist of only three buildings separated by areas of common open space in comparison to 21 buildings with primarily individual private open space. All parking for the With-Action development would be provided underground while most of the parking spaces for the No-Action Scenario would be provided at-grade.

Zoning calculations of future With-Action conditions on the site, including floor area calculations, lot coverage, and building heights, are shown in Table 10-1 below. A three-dimensional representation of the future With-Action condition streetscape is also attached.

Table 10-1
Zoning Calculations Relevant to Urban Design Analysis

Item	Existing Conditions	No-Action Conditions	With-Action Conditions
Development Scenario	1 warehouse; open parking & vehicle storage	54 DUs in 20 dwellings; 38 DUs & 15,765 gsf comm. facility in 1 bldg; 106 parking spaces	351 DUs in 3 bldgs; 11,236 gsf retail in 1 bldg; 6,882 gsf medical offices in 3 bldgs.; 164 parking spaces
Building Floor Area	26,637 gsf	107,710 gsf	349,935 gsf
Lot Coverage	26,637 sf (34.5%)	38,075 sf (49.3%)	44,811 sf (58.0%)
Building Heights	1-story, 18′	Twenty 3-story 30′ dwellings; one 4-story 40′ mixed-use bldg	One 5-story 55′, one 9-story 95′, one 14-story 145′ mixed-use bldgs

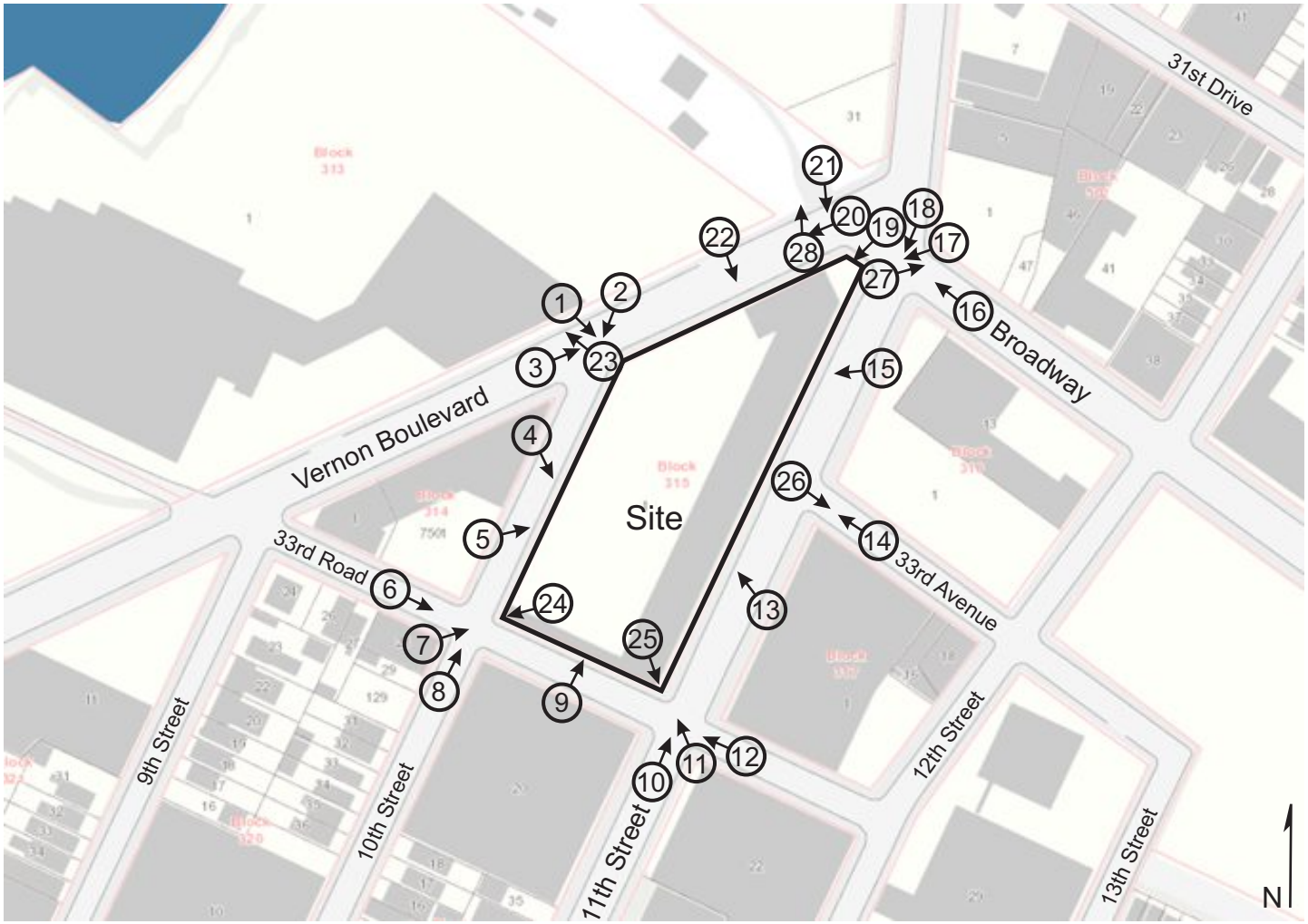
Conclusion

The Proposed Actions would result in the development of residential and local retail and community facility uses on a site located in an area characterized by a mix of residential, community facility, and warehouse uses. The proposed mapping of an R7X/C1-3 zone at the intersection of Vernon Boulevard and Broadway is supported by the existence of a C1-3 zone along the east side of Vernon Boulevard north of Broadway. The mapping of an R6B zoning district on the southern portion of the Project Area block is intended to lower the bulk and density on the Project Area so that there would be no adverse impact to the adjacent neighbors to the south. The proposed rezoning would permit a new development that would be compatible with and beneficial to the adjacent and nearby residential, commercial, and other uses. Given the character and development of the immediate vicinity, the most appropriate contextual scenario for the subject site would be the proposed residential and commercial overlay zoning and the associated development project.

The With-Action Development Scenario in the Project Area would not result in any significant impacts to the visual resources in the vicinity of the site as compared to a No-Action Development on the property. Views to the Noguchi Museum open space area, Socrates Sculpture Park, and Rainey Park would still be available from the streets bordering the Project Area.

The Proposed Actions would not partially or totally block a view corridor or a natural or built visual resource that is rare in the area or considered a defining feature of the neighborhood. Although the project would alter the context of natural or built visual resources, specifically the three open space areas in the vicinity of the site, the most significant difference would occur between the existing and future No-Action Development Scenarios on the property rather than between the future No-Action and With-Action Development Scenarios. In addition, the context of these open space areas would be significantly improved by the replacement of the existing obsolete trucking use of the site by a modern residential and commercial development. A detailed urban design analysis would not be required.


400 Feet
Site
↔ VERNON BOULEVARD
↔ 31 AVENUE
→ 31 DRIVE
↔ BROADWAY
↔ 33 ROAD
↔ VERNON BOULEVARD
↔ 33 AVENUE
← 12 STREET
→ 14 STREET
↔ 33 ROAD
← 10 STREET
→ 9 STREET
← 11 STREET
↔ 34 AVENUE
← 13 STREET
↔ 33 AVENUE
BULLDOGS
0
100
200
300
400 Feet
N


31st Drive
Broadway
Vernon Boulevard
33rd Road
33rd Avenue
9th Street
10th Street
11th Street
12th Street
13th Street
Site
N
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
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Photographed by: Alaina Yuresko on March 28, 2018



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Site
33rd Road
10 St
ONE WAY
32-08 10th St.
ONSITE CONSTRUCTION ENTERPRISE INC.
ALL IS NOT LOST
N



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NO PARKING
Monday - Friday
7 am - 3pm
Site
REAR STEEL
10-02 33RD ROAD, L.I.C., NY 11106
USDOT 1393687
33rd Road
N



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METRO MARBLE INC
MARBLE GRANITE, STONE FABRICATOR
347-738-5387 10-02A 33rd Road,LIC,NY,11106
33rd Road
Site
N



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Site
11th Street
Broadway
N
718-545-4441
Engine Repair
Brake Service
Transmissions
Body Repair
Liftgates
Vernon



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Site
Broadway
N
718-545-4441
Engine Repair
Brake Service
Transmissions
Body Repair
Liftgates


545-4441
Engine Repair
Brake Service
Transmissions
Body Repair
Liftgates
Site
Vernon Boulevard
N



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COSTCO
WHOLESALE
Vernon Boulevard
N



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33rd Road
11th Street
J.A.M. DELIVERY INC.
N



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Photographed by: Alaina Yuresko on March 28, 2018


Vernon Blvd
BROADWAY
PINNACLE REALTY
STOP
Vernon Boulevard
Broadway
N


AS BORN FOR LOVE
NOT
HATRED
Vernon Boulevard
N

Vernon Boulevard facing south (Site straight ahead)



No-Action Scenario

Vernon Boulevard facing south (Site straight ahead)



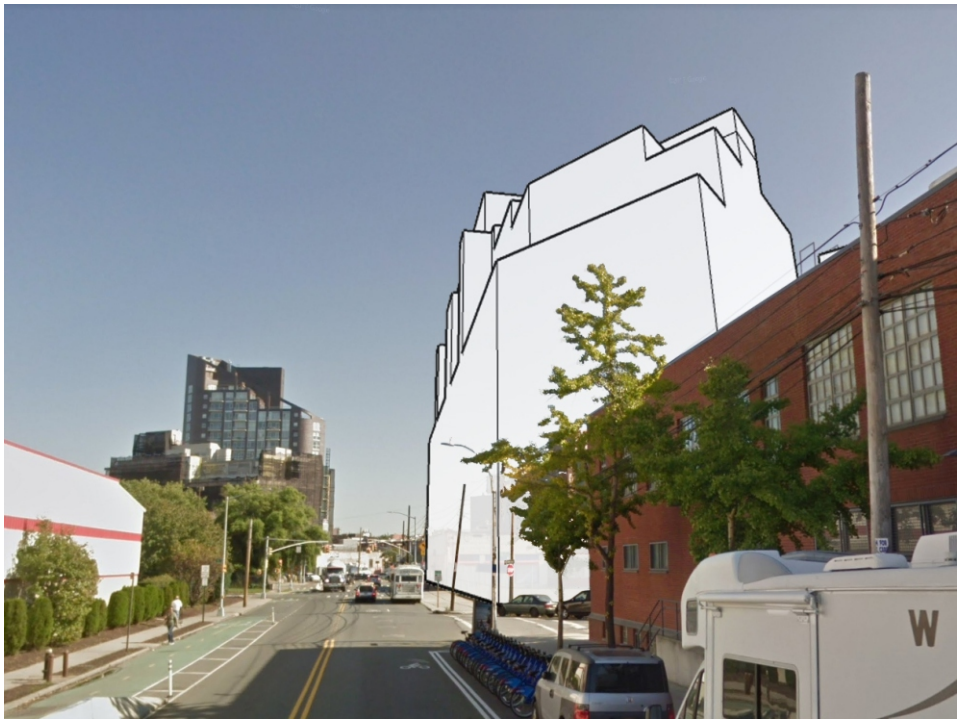
With-Action Scenario

Vernon Boulevard facing northeast (Site at right)



No-Action Scenario

Vernon Boulevard facing northeast (Site at right)



With-Action Scenario

11th Street facing north (Site at left)



No-Action Scenario

11th Street facing north (Site at left)



With-Action Scenario

10th Street facing north (Site at right)



No-Action Scenario

10th Street facing north (Site at right)



With-Action Scenario

12. HAZARDOUS MATERIALS

Introduction

EPDSCO, Inc., has performed a Phase I Environmental Site Assessment (ESA) of the property located at 32-01 Vernon Boulevard in the Borough of Queens in the City of New York. The ESA, dated November 2010, was prepared in accordance with the ASTM Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment (ESA) Process (ASTM Designation E 1527-05). Conditions on the site and in the immediately surrounding area have not appreciably changed since the preparation of the Phase I ESA.

The purpose of the ESA is to identify, to the extent feasible in accordance with ASTM E 1527-05, recognized environmental conditions in connection with the site with regard to hazardous materials as defined by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and petroleum products. Additionally, several ASTM "Non-Scope" items including asbestos-containing materials, lead-based paints, and radon are also discussed. Recognized Environmental Conditions are identified through research into the history and uses of the site and surrounding area, an inspection of the subject property and a survey of adjoining and nearby uses, and a review of available regulatory agency records and environmental databases.

The following summarizes the findings, conclusions, and recommendations of the Phase I ESA.

Site Description

The subject property consists of an irregularly shaped rectangular parcel, approximately 77,235 square feet in area. The site contains a 25,000+-square foot, one-story (on slab), masonry, wood and steel frame industrial building located on the eastern portion of the property. The northern portion of the building is occupied by PDC Truck and Equipment Leasing Company (PDC Truck) and contains three truck service and repair bays, an office area, a showroom area, and the former boiler room for the building. The rest of the building is divided into five areas occupied by the following businesses/uses; Quality Stone (a stone and marble company), Cleen Fleets (a pressure washing and fleet cleaning service), Bear Steel (structural and decorative steel fabrication), a storage area for the nearby Noguchi Museum, and one area for the personal use of the property owner.

Exterior portions of the property contain asphalt-paved parking and storage areas for the businesses located at the site. These areas are divided and secured by a combination of chain link fences and/or corrugated steel sheet metal panels.

Heat for the subject building is currently provided by individual oil-fired furnaces located within each occupied area of the building. The building formerly contained a central heating system located in a boiler room on the northern part of the building.

12. HAZARDOUS MATERIALS

Introduction

EPDSCO, Inc., has performed a Phase I Environmental Site Assessment (ESA) of the property located at 32-01 Vernon Boulevard in the Borough of Queens in the City of New York. The ESA, dated November 2010, was prepared in accordance with the ASTM Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment (ESA) Process (ASTM Designation E 1527-05). Conditions on the site and in the immediately surrounding area have not appreciably changed since the preparation of the Phase I ESA.

The purpose of the ESA is to identify, to the extent feasible in accordance with ASTM E 1527-05, recognized environmental conditions in connection with the site with regard to hazardous materials as defined by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and petroleum products. Additionally, several ASTM "Non-Scope" items including asbestos-containing materials, lead-based paints, and radon are also discussed. Recognized Environmental Conditions are identified through research into the history and uses of the site and surrounding area, an inspection of the subject property and a survey of adjoining and nearby uses, and a review of available regulatory agency records and environmental databases.

The following summarizes the findings, conclusions, and recommendations of the Phase I ESA.

Site Description

The subject property consists of an irregularly shaped rectangular parcel, approximately 77,235 square feet in area. The site contains a 25,000+-square foot, one-story (on slab), masonry, wood and steel frame industrial building located on the eastern portion of the property. The northern portion of the building is occupied by PDC Truck and Equipment Leasing Company (PDC Truck) and contains three truck service and repair bays, an office area, a showroom area, and the former boiler room for the building. The rest of the building is divided into five areas occupied by the following businesses/uses; Quality Stone (a stone and marble company), Cleen Fleets (a pressure washing and fleet cleaning service), Bear Steel (structural and decorative steel fabrication), a storage area for the nearby Noguchi Museum, and one area for the personal use of the property owner.

Exterior portions of the property contain asphalt-paved parking and storage areas for the businesses located at the site. These areas are divided and secured by a combination of chain link fences and/or corrugated steel sheet metal panels.

Heat for the subject building is currently provided by individual oil-fired furnaces located within each occupied area of the building. The building formerly contained a central heating system located in a boiler room on the northern part of the building.

The original brick chimney for this system is also located on the northern portion of the building, with the word "Wood" visible on the chimney.

Site History

Research into the history of the subject property shows that the site was vacant land prior to 1915, as is shown on the 1896 and 1915 Sanborn maps. The subject building was constructed at the site sometime between 1915 and 1928 for the Wood Hydraulic Hoist and Body Company. The building was occupied by the Wood Hydraulic Hoist and Body Company (and later its successors including Gar Wood Industries, Inc. and Gar Wood NY Truck Equipment, Inc.) from the time of its construction to the 1970s. According to Sanborn historical maps, the operations of the Wood Hydraulic Hoist and Body Company involved spray-painting operations. It is also likely that operations included the use of automotive related chemicals including hydraulic fluid, lubricating oils, greases, solvents and cleaners, etc.

In addition to the Wood Hydraulic Hoist and Body Company, other identified former businesses/uses in the subject building included and/ or presently include bus and transit companies (Walters Transit Corp., Cosmopolitan Tourist Co., Inc.,) truck sales, leasing and repair businesses (Specialty Truck Leasing and Sales, Inc., New Amsterdam Kenworth, Liberty Sales and Leasing Company, PDC Truck Equipment Leasing) and construction and contracting companies (Cipico Construction, Lord Electric). The operations of bus and transit companies and truck sales, leasing and repair operations typically involve the storage and use of hazardous materials and petroleum products such as lubricating oils, brake and transmission fluids, antifreeze, greases, parts washing solvents, paints and others. Additionally, these operations typically generate waste materials including waste motor oils, waste brake and transmission fluids, used antifreeze, spent parts washing solvents, and others. Any past spills, leaks, or discharges of hazardous materials or petroleum products from past truck body manufacturing operations, bus and transit company operations, or truck sales, leasing, and repair operations at the subject property would be a potential source of contamination to the site.

Current Site Operations/Hazardous Materials

The northern portion of the subject property is occupied by PDC Truck and Equipment Leasing Company and contains three truck service and repair bays. The truck repair operations at the site involve the storage and use of typical automotive chemicals such as lubricating oils, brake and transmission fluids, antifreeze, greases, parts washing solvent, and others. At the time of the site visit, conducted on November 21, 2009, two 55-gallon drums of transmission fluid, four 55-gallon drums of motor oil, one 35-gallon drum of ZEP Cleaner, and numerous small (i.e., 1-gallon or less) containers of spray lubricants and other automotive chemicals were observed in the repair bays. In addition, a 275-gallon aboveground motor oil tank and a parts washing machine containing approximately 30 gallons of parts washing solvents were

observed in the area. It was observed that these materials were neatly stored inside the repair bays. Several small areas of localized staining were observed on the concrete floor of the repair bays, however, there were not any indications of large spills, leaks, or discharges of petroleum products or other automotive chemicals noted.

The operations of Cleen Fleets involve the storage and use of general automotive cleaners. At the time of the site visit, eight 55-gallon drums and several small (i.e., 1-gallon or less) containers of automotive cleaning chemicals were observed in this portion of the building. It was observed that these materials were neatly stored inside the building. No significant staining or other indications of large spills, leaks, or discharges of petroleum products or other automotive chemicals were noted in the portion of the subject building occupied by Cleen Fleets.

The operations of Bear Steel at the subject property involve the storage, fabrication, and welding of structural and decorative steel items. The operations of Quality Stone at the site involve the storage, cutting, and polishing of marble, granite, and other stone. The portion of the subject building occupied by the property owner was being used for personal storage. No significant quantities of hazardous materials or petroleum products (other than heating oil) were observed in these areas of the subject property during the site visit.

The storage area for the nearby Noguchi Museum was locked and inaccessible at the time of the site visit, and no inspection of this portion of the property was performed. According to Mr. Frank Panico, the owner of the subject property, this area contains steel shipping containers used for storage by the museum. To the best of his knowledge, no hazardous materials or petroleum products are stored or used on this part of the site.

Drainage Structures

Two square storm drains were observed in the parking area on the northern portion of the subject property, one of which was located just outside the area occupied by Cleen Fleets. In addition, a narrow, rectangular trench drain was observed on the portion of the building occupied by Bear Steel. Significant oil staining was observed on and around the square drain located just outside of the portion of the building occupied by Cleen Fleets. No staining or other visible indications of past spills or discharges of hazardous materials or petroleum products were observed around any other drains at the subject property. The drainage destination of the drainage structures observed at the site could not be determined from the information reviewed for this report. At the time of the site visit, Mr. Panico provided EPDSCO with a blueprint of the subject building dated 1945 which shows one of the drains on the northern portion of the property connected to the municipal sewer line located below 11th Street. The blue print was prepared for Gar-Wood Industries. Any past spills, leaks, or discharges of hazardous materials or petroleum products to drainage structures at the site which are

not connected to the municipal sewer system would be a potential source of contamination to the subject property.

Petroleum Storage Tanks

At the time of the site visit, four aboveground tanks were observed in the subject building; one 1,000-gallon and one 275-gallon fuel oil tank, one 275-gallon motor oil tank, and one 275-gallon waste oil tank. All four of these tanks were in service at the time of the site visit. There were no oil staining, strong petroleum odors, or other indications of recent spills or leaks observed around any of the aboveground tanks at the subject property during the site visit.

According to Sanborn historical maps of the subject property, and the presence of a brick chimney located on the northern portion of the subject building, the subject building formerly contained a central boiler located on the north side of the building. The type of fuel used to power this boiler (e.g., oil, coal, gas) could not be determined from the information reviewed for this report. However, indications of the possible presence of an underground fuel oil tank were observed in the repair bay area on the north side of the building. A two-foot diameter, cast iron manhole cover was observed in the floor of the repair bay area. The cover was not opened at the time of the site visit because of a truck undergoing repairs which was parked on top of the cover. However, Mr. Panico was able to open the cover at a later date and reported that the manhole below the cover was filled with dirt and bricks. In addition to the cover, a two-inch diameter steel pipe was observed inside the east wall of the repair bay area. This pipe exits the floor of the building and runs up the wall and out the roof of the building. This type and configuration of pipe is typical of an underground storage tank vent line. Therefore, it is possible that a buried fuel oil tank is located below the floor of the repair bay area on the north side of the building. Any out of service underground tanks are required to be properly closed or removed in accordance with applicable New York State Department of Environmental Conservation (NYSDEC) and New York City Fire Department (NYCFD) regulations.

According to Mr. Panico, the subject property formerly contained six 550-gallon steel underground diesel storage tanks and two 550-gallon steel underground gasoline storage tanks. These tanks were formerly located in the parking area on the west/central portion of the property and were used by former occupants of the subject property. These tanks were removed from the site by Kalco Pump & Tank Corp. of Astoria, New York in June of 1997. Mr. Panico did not know the installation date of these tanks. Following the removal of these tanks, approximately 28 cubic yards of lead-contaminated soil and two 55-gallon drums of sludge from the cleaning of the tanks were generated. The contaminated soil was transported to Republic Environmental Systems in Hatfield, Pa. for disposal, and the tank bottom sludge was transported to Chemical Waste Disposal Corp. in Astoria, New York for disposal.

Copies of waste manifests for the transport and disposal of these materials were provided to EPDSCO by Mr. Panico. No soil or groundwater testing results performed following the removal of the underground tanks were provided to EPDSCO for review. According to Mr. Panico and to the best of his knowledge, there are not any additional underground tanks located at the subject property.

Any past spills or leaks from former or current underground storage tanks at the subject property would be a potential source of contamination to the subject property.

Asbestos/Lead Based Paints/PCBs

During the site visit, approximately 500 linear feet of suspected asbestos-containing pipe insulation was observed in the subject building. In addition, vinyl floor tiles, ceiling tiles, roofing materials, and decorative surfacing materials were observed in the building. Given the age of the subject building (constructed prior to 1980), it is possible that these materials contain asbestos.

Given the age of the subject building, it is possible that it contains lead-based paints. Painted surfaces in the building were observed to be in generally fair condition, with some areas of chipped and/or peeling paint observed.

There were not any electrical transformers or other equipment suspected of containing PCBs observed on accessible portions of the subject property during the site visit.

Regulatory Agency Database Information

Two of the former businesses at the subject property appear in the RCRA Hazardous Waste Generator database. According to information in the database, Liberty Truck Sales and Leasing, formerly located at 32-05 Vernon Boulevard, generated five gallons of waste materials containing tetrachloroethylene in 1996. Additionally, Cipico Construction, formerly located at 32-03 Vernon Boulevard, generated 28 cubic yards of lead-contaminated soil and two 55-gallon drums of sludge from the cleaning of underground gasoline and diesel tanks in 1997.

There is one NYSDEC-reported spill incident listed at the subject property (Spill Number 95-11578). According to information in the Spill Logs database, this spill incident occurred on 12/13/95 at New Amsterdam Kenworth, which was formerly located at 32-05 Vernon Boulevard. This incident involved the spill of approximately one quart of fuel oil released during a fuel delivery at the site. This spill incident was closed by the NYSDEC on 12/13/95. Based on the information in the Spill Logs database, it is considered unlikely that the spill incident listed at the subject property would have resulted in significant contamination to the site.

The subject property appears in the NYSDEC PBS database. According to information in the database, six 550-gallon diesel tanks and two 550-gallon gasoline tanks were

registered at the subject property. The status of all eight tanks is listed as "Closed-Removed" in the database.

Off-Site Findings

The subject property is currently adjoined to the north by Vernon Boulevard, beyond which is the Socrates Sculpture Park, and by Broadway, beyond which is a vacant lot at 31-65 Vernon Boulevard. The 1950 through 1995 Sanborn maps show a gasoline filling station on the lot at 31-65 Vernon Boulevard. To the south of the subject site is 33rd Road, beyond which is a large warehouse building for rent. A sign on the front of the building states "Repco Distributors - Glass, Plastics, Radiators, Condensers, Gas Tanks, Heaters, Supplies." Sanborn maps show this building was also formerly occupied by the Dreier Structural Steel Company, Inc.

Adjacent and to the east of the subject property is 11th Street, beyond which is a vacant lot and warehouse building with no signs or business names on the building. The vacant lot was formerly occupied by Nelson Galvanizing, Inc. at 11-02 Broadway, which is listed on the USEPA's CERCLIS database. According to information in the database, Nelson Galvanizing operated a custom hot dip galvanizing production facility at this location from approximately 1967 to the 1990s. Numerous actions were performed under the CERCLIS program at this site, including inspections, assessments, removals, consent orders, property liens, and others. Nelson Galvanizing also appears on the RCRA Hazardous Waste Generator database and the NYSDEC PBS and CBS databases. To the west of the subject property is Vernon Boulevard, beyond which is a Costco retail store and the Noguchi Museum. The Noguchi Museum site appears in the NYSDEC PBS and CBS databases. Sanborn maps show that this site was formerly occupied by the Astoria Photo Engravers Supply company.

A review of Sanborn historical maps shows that land uses surrounding the subject property have been a mix of residential, commercial/retail, auto related (e.g., filling stations auto repair garages, etc.), and industrial uses since at least the 1930s. The 1967 Sanborn map shows the presence of a gasoline filling station at 32-43 Vernon Boulevard, approximately 200 feet west of the subject property. There are two NYSDEC Inactive Hazardous Waste Disposal sites located within one mile of the subject property. There are 31 NYSDEC-reported Leaking Tank spill incidents listed within one-half mile of the subject property. Of these 31 incidents, 28 have been closed by the NYSDEC and three are listed as Active. All three active Leaking Tank spill incidents occurred more than one-quarter mile from the subject property. In addition to the leaking tank spill incidents, there are four spill incidents from other causes listed within 1/8 mile of the subject property. All four of these incidents have been closed by the NYSDEC. Any past spills, leaks, or discharges of petroleum products or hazardous materials from past or current off-site industrial or auto-related uses, or from leaking underground storage tanks in the area, would be a potential source of groundwater contamination in the area of the subject property.

Conclusions

The Phase I ESA has revealed no evidence of recognized environmental conditions in connection with the property, with the following exceptions:

- The possible presence of contamination from past spills, leaks, or discharges of hazardous materials or petroleum products from former truck body manufacturing operations, bus and transit company operations and truck sales, leasing and repair operations at the subject property.
- The possible presence of site contamination from past spills or leaks from former or current underground storage tanks at the site.
- The possible presence of an out of service underground fuel oil tank located below the repair bays on the northern portion of the subject building which has not been closed in accordance with NYSDEC and NYCFD regulations.
- The possible presence of site contamination from past spills, leaks, or discharges of hazardous materials or petroleum products to on-site drainage structures which are not connected to the municipal sewer system.
- The possible presence of asbestos-containing materials and lead-based paints in the subject building.
- The possible presence of groundwater contamination in the area of the subject property from past spills, leaks, or discharges from historical off-site industrial uses, auto-related uses or leaking underground storage tanks in the area of the subject property.

Based on the evidence of recognized environmental conditions presented above, Phase II testing of the site would be required. However, it is not feasible to conduct subsurface testing at the present time as the site is currently occupied by an active truck sales and leasing operation. It is therefore recommended that an (E) designation be placed on the property to ensure that testing for and mitigation and/or remediation of any hazardous materials contamination of the property be completed prior to, or as part of, future development of the site.

To avoid any potential impacts associated with hazardous materials, the Proposed Actions will place an (E) designation (E-518) for hazardous materials on the following property:

Block 315, Lot 1

The text of the (E) designation is as follows:

Due to the possible presence of hazardous materials on the aforementioned designated site, there is potential for contamination of the soil and groundwater. To determine if contamination exists and perform the appropriate remediation, the following tasks must be undertaken by the fee owners of the lot restricted by this (E) designation prior to any demolition or disturbance of soil on the lot.

Task 1

The fee owners of the lot restricted by this (E) designation will be required to prepare a scope of work for any soil, gas, or groundwater sampling and testing needed to determine if contamination exists, the extent of the contamination, and to what extent remediation may be required. The scope of work will include all relevant supporting documentation, including site plans and sampling locations. This scope of work will be submitted to the Mayor's Office of Environmental Remediation (OER) for review and approval prior to implementation. It will be reviewed to ensure that an adequate number of samples will be collected and that appropriate parameters are selected for laboratory analysis.

No sampling program may begin until written approval of a work plan and sampling protocol is received from the OER. The number and location of sample sites should be selected to adequately characterize the type and extent of the contamination, and the condition of the remainder of the site. The characterization should be complete enough to determine what remediation strategy (if any) is necessary after review of the sampling data. Guidelines and criteria for choosing sampling sites and performing sampling will be provided by OER upon request.

Task 2

A written report with findings and a summary of the data must be presented to OER after completion of the testing phase and laboratory analysis for review and approval. After receiving such test results, a determination will be provided by OER if the results indicate that remediation is necessary.

If OER determines that no remediation is necessary, written notice shall be given by OER.

If remediation is necessary according to test results, a proposed remediation plan must be submitted to OER for review and approval. The fee owners of the lot restricted by this (E) designation must perform such remediation as determined necessary by OER. After completing the remediation, the fee owners of the lot restricted by this (E) designation should provide proof that the work has been satisfactorily completed.

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

With the implementation of the above (E) designation, no significant adverse impacts related to hazardous materials would occur.

Therefore, there is no potential for the Proposed Actions to result in significant adverse impacts related to hazardous materials.

NYC Department of Environmental Protection (NYCDEP) Review

The NYCDEP has reviewed the March 2012 EAS and the November 2010 Phase I ESA report prepared for Projected Development Site 1. By letter dated October 19, 2012 (see Hazardous Materials Appendix), NYCDEP provides the following conclusions and recommendations.

> Based upon our review of the submitted documentation, we have the following comments and recommendations to DCP:
>
> > Because of the extensive manufacturing history and on-site uses which could result in environmental contamination, DEP recommends that an "E" designation for hazardous materials should be placed on the zoning map pursuant to Section 11-15 of the New York City Zoning Resolution for the subject property. The "E" designation will ensure that testing and mitigation will be provided as necessary before any future development and/or soil disturbance.
>
> The applicant should be directed to coordinate further hazardous materials assessments through the Mayor's Office of Environmental Remediation.

16. TRANSPORTATION

Introduction

A screening analysis was conducted to determine if the proposed development would result in any significant adverse impacts related to transportation. The transportation threshold of concern is defined as projects that would generally result in fewer than 50 peak hour vehicle trips (with "trips" referring to trip ends), 200 peak hour subway/rail or bus transit riders, and 200 peak hour pedestrian trips, where significant adverse impacts are generally considered unlikely.

The transportation screening analysis prepared for the Proposed Actions is based on the difference between the No-Action RWCDS and the Future With-Action RWCDS. The difference between the No-Action and With-Action Scenarios would be the development under the With-Action Scenario of an additional 259 dwelling units, 11,236 gross square feet of local retail space, 58 accessory parking spaces and a deduction of 8,883 gross square feet of community facility space (medical office). This level of development would exceed the minimum development density potentially requiring a transportation analysis as shown in Table 16-1 of the transportation chapter of the *2014 CEQR Technical Manual*. The applicable minimum development density for the location of the project site in Zone 4 is 200 new residential dwelling units, 10,000 additional square feet of local retail space, 15,000 additional square feet of community facility or 60 new off-street parking spaces.

Transportation related vehicle trip, transit trip, and pedestrian trip generation resulting from the Proposed Actions could potentially exceed the relevant *2014 CEQR Technical Manual* thresholds for conducting a detailed analysis of transportation impacts. Therefore, the following Level 1 Screening assessment has been prepared.

Level 1 Screening Assessment

As stated above, the transportation analysis is based on the difference between the No-Action RWCDS and the Future With-Action RWCDS. These are further detailed below.

No-Action Scenario

The No Action scenario under the existing R5 zoning mapped on the property would consist of five zoning lots in the Project Area developed with a total of 92 dwelling units within 91,945 gsf of floor area, 15,765 gsf of community facility space (professional medical office space), and 106 accessory parking spaces.

Future With-Action Scenario

The With Action RWCDS in the Project Area would be the development of a mixed-use residential and community facility, totaling 349,935 gsf in floor area. The project would include a five-story residential structure, a nine-story residential structure, and a twelve-story mixed use residential and commercial building as well as 164 underground parking spaces. The 332,208 gsf of residential floor area proposed would

result in the creation of 332 dwelling units based on the Department's standard average size of 1,000 gsf per unit. As 332 units is less than the actual proposal of 351 dwelling units, it is more conservative to base the analysis on the higher number of units. Therefore, the With-Action Scenario would have 351 dwelling units. 11,236 gsf of local retail space and 6,882 gsf of community facility (professional medical office) are also proposed as part of the Proposed Actions. Access to the parking would be provided separately via one entrance and one exit to and from the underground garage via 11th Street. The Proposed Actions would be taken in 2022.

Analysis Framework

The transportation analysis below has been prepared based on the difference between the No-Action RWCDS and the Future With-Action RWCDS described above. The difference between the No-Action and With-Action Scenarios would be the development under the With-Action Scenario of an additional 259 dwelling units, 11,236 gsf of new commercial local retail space, a deduction of 8,883 gsf of community facility space (professional medical office), and 58 additional accessory parking spaces.

Trip Generation Rates, Modal Split Data, and Sources

Local Retail Component

Future With-Action Scenario generated person and vehicular trips, including truck trips, are based upon both the *2014 CEQR Technical Manual (Table 16-2)* for rates and the percent temporal distribution, and the recent *NYCDOT* survey for mode of transportation for local retail development, as shown in **Table 1** in the Transportation Appendix**.**

Residential Components

Future With-Action Scenario and No-Action Scenario generated person and vehicular trips, including truck trips, are based upon the rates and percent temporal distribution as provided in the *2014 CEQR Technical Manual (Table 16-2)*, for the residential developments. The modal split information was taken from the 5-year *2012-2016 American Community Survey (ACS) Journey-to-Work* information for census tract numbers 37, 39, 43, 45, 47, 53, 77, 81 and 85 in Queens NY, as shown in **Table 1** in the Transportation Appendix.

Community Facility (Professional Medical Office)

Future With-Action Scenario and Future No-Action Scenario generated person and vehicular trips are based upon the rates, percent temporal distribution, and modal split information as provided by NYCDOT, for the community facility (professional medical office) development. The *2014 CEQR Technical Manual*, Table 16-2, was applied for the office use in order to estimate the future truck trips.

Modal Split Data

The results of the modal split data are as follows:

For the local retail use, 11% percent would travel by car, zero (0%) percent would travel by taxi, three (3%) percent would travel by bus, four (4%) percent would travel by subway, and eighty-two (82%) percent would travel by foot.

For the residential use, 27.1 percent would travel by car, 0.2% percent would travel by taxi, 3.3 percent would travel by bus, 53.8 percent would travel by subway, 11.1 percent would travel by foot, and 4.5 percent would travel by other mode of travel, such as bicycle.

For the community facility (professional medical office) use, 30 percent would travel by car, two (2) percent would travel by taxi, 18 percent would travel by bus, 33 percent would travel by Subway, and 17 percent would travel by other mode of travel, such as bicycle.

The above information is summarized in **Table 1** in the Transportation Appendix**.**

Person and Vehicular Trips

Person Trips

The Proposed Actions would generate a total of 217 net person trip ends during the AM (8AM-9AM) peak hour period, 309 net person trip ends during the Midday (12Noon-1PM) peak hour time period, 267 net person trip ends during the PM (5PM-6PM) peak hour time period, and 277 net person trip ends during the (1PM-2PM) Saturday peak hour time period, as is summarized in **Table 2** in the Transportation Appendix**.**

Vehicle Trips

The Proposed Actions would generate a total of 46 net vehicle trip ends during the AM (8AM-9AM) peak hour period, 22 net vehicle trip ends during the Midday (12Noon-1PM) peak hour time period, 38 net vehicle trip ends during the PM (5PM-6PM) peak hour time period, and 34 net vehicle trip ends during the (1PM-2PM) Saturday peak hour time period, as is summarized in **Table 3** in the Transportation Appendix**.**

The Proposed Actions would therefore generate fewer than 50 net peak hour vehicle trip ends, and based upon the *CEQR Technical Manual*, would not result in any of the conditions that would typically trigger the need for a detailed assessment of traffic and parking impacts.

Transit and Pedestrians

Bus Trips

The Future With-Action Scenario would generate a total of 1 net bus trip ends during the AM (8AM-9AM) peak hour period, -9 net bus trip ends during the Midday (12Noon-1PM) peak hour time period, -12 net bus trip ends during the PM (5PM-6PM) peak hour time period, and -10 net bus trip ends during the (1PM-2PM) Saturday peak hour time period, is summarized in **Table 2** in the Transportation Appendix**.**

The Proposed Actions would therefore generate fewer than 200 net peak hour bus trip ends and fewer than 50 bus trip ends per line per direction in any peak hour, and based upon the *CEQR Technical Manual*, would not result in any of the conditions that would typically trigger the need for a detailed assessment of bus impact.

Subway Trips

The Future With-Action Scenario would generate a total of 100 net subway trip ends during the AM (8AM-9AM) peak hour period, 28 net subway trip ends during the Midday (12Noon-1PM) peak hour time period, 86 net subway trips during the PM (5PM-6PM) peak hour time period, and 74 net subway trips during the (1PM-2PM) Saturday peak hour time period, as is summarized in **Table 2** in the Transportation Appendix**.**

The Proposed Actions would therefore generate fewer than 200 net peak hour subway trip ends, and based upon the *CEQR Technical Manual*, would not result in any of the conditions that would typically trigger the need for a detailed assessment of subway impact.

Pedestrian Trips

The action would generate a total of 168 net pedestrian (bus, subway, walk and other) trip ends during the AM (8AM-9AM) peak hour period, 284 net pedestrian trip ends during the Midday (12Noon-1PM) peak hour time period, 229 net pedestrian trip ends during the PM (5PM-6PM) peak hour time period, and 240 net pedestrian trip ends during the (1PM-2PM) Saturday peak hour time period, as is summarized in **Table 2**. Although the pedestrian trips for the MD, PM and Saturday MD peak hours are slightly above the *2014 CEQR Technical Manual* threshold, the proposed project, as shown on the Site Plan, would include two pedestrian entrance/exit points on 10th Street for residential buildings B and C, one on 11th Street for residential building A, and several pedestrian access points along Vernon Boulevard for local retail uses. Therefore, none of the pedestrian elements in the study area would experience more than 200 pedestrian trips during the MD, PM and Saturday MD peak hours.

The project would not result in 200 or more pedestrian trips on any one sidewalk, corner, or crosswalk. Therefore, and in accordance with the threshold guidelines as detailed in the *2014 CEQR Technical Manual*, the Proposed Actions are not expected to result in significant adverse impacts related to pedestrian conditions.

Conclusion

The results of the transportation screening analysis indicate that the proposed project would generate fewer than 50 net vehicle trip ends during the AM, Midday, PM and Saturday MD peak hour time periods. No significant adverse impacts related to traffic and parking conditions are anticipated to occur. Similarly, no significant adverse impacts related to transit and pedestrians would be expected. No significant adverse

impacts related to transportation would occur as a result of the Proposed Actions, and no further assessment is warranted.

17. AIR QUALITY

Introduction

Ambient air quality describes pollutant levels in the surrounding environment to which the public has access. To assess potential health hazards due to ambient air quality, the impact of air pollutants emitted by motor vehicles (mobile source) and by fixed facilities (stationary source) are analyzed, where the effects of both the proposed project on ambient air quality and the ambient air quality effect on the proposed project are considered. The analysis frame work, as mandated by the State Environmental Review Act, follows the *New York City Environmental Quality Review 2014 Technical Manual (CEQR TM)*. The potential air quality impacts of the following emissions are estimated following the procedures and methodologies prescribed in the *CEQR TM*:

- The potential for changes in vehicular travel associated with proposed development activities to result in significant mobile source (vehicular related) air quality impacts.
- The potential for emissions from the heating, ventilation and air conditioning (HVAC) systems of the proposed developments to significantly impact nearby existing or planned land uses.
- The potential for air toxic emissions released from existing industrial facilities to significantly impact the proposed development.
- The potential for significant air quality impacts from the emissions of facilities that require Prevention of Significant Deterioration permits (Title V), and facilities which require a state facility permit to significantly impact the proposed development.
- The potential for facilities' malodorous emissions to unreasonably interfere with the proposed project's occupant's comfortable enjoyment of life or their property.

Per *CEQR TM*, a project's effects on air quality are determined by comparing predictions made for the future No-Action and the future With-Action conditions. The existing condition does not serve as a baseline for determining if a proposed project would have a significant impact but is typically included in the analysis for informational purposes.

Existing Conditions

The Project Area comprises Block 315, Lot 1 (Lot 1 encompasses the entire block the entire block) in the Astoria neighborhood of Queens, Community District #1. The Project Area is bounded by Vernon Boulevard to the northwest, Broadway to the north, 11th Street to the east, 33rd Road to the south, and 10th Street to the west.

The property is currently improved with a one-story, approximately 26,637 square foot warehouse building occupied by a truck sales and leasing company and a utility contractor. The remainder of the lot consists of a paved parking area for trucks and equipment.

Future No-Action

The No-Action Reasonable Worst-Case Development Scenario (RWCDS), under the existing R5 zoning mapped on the property, consists of five zoning lots in the Project Area developed with a mixed-use residential and community facility project totaling 107,710 gsf in floor area, and 106 accessory parking spaces.

Future With-Action

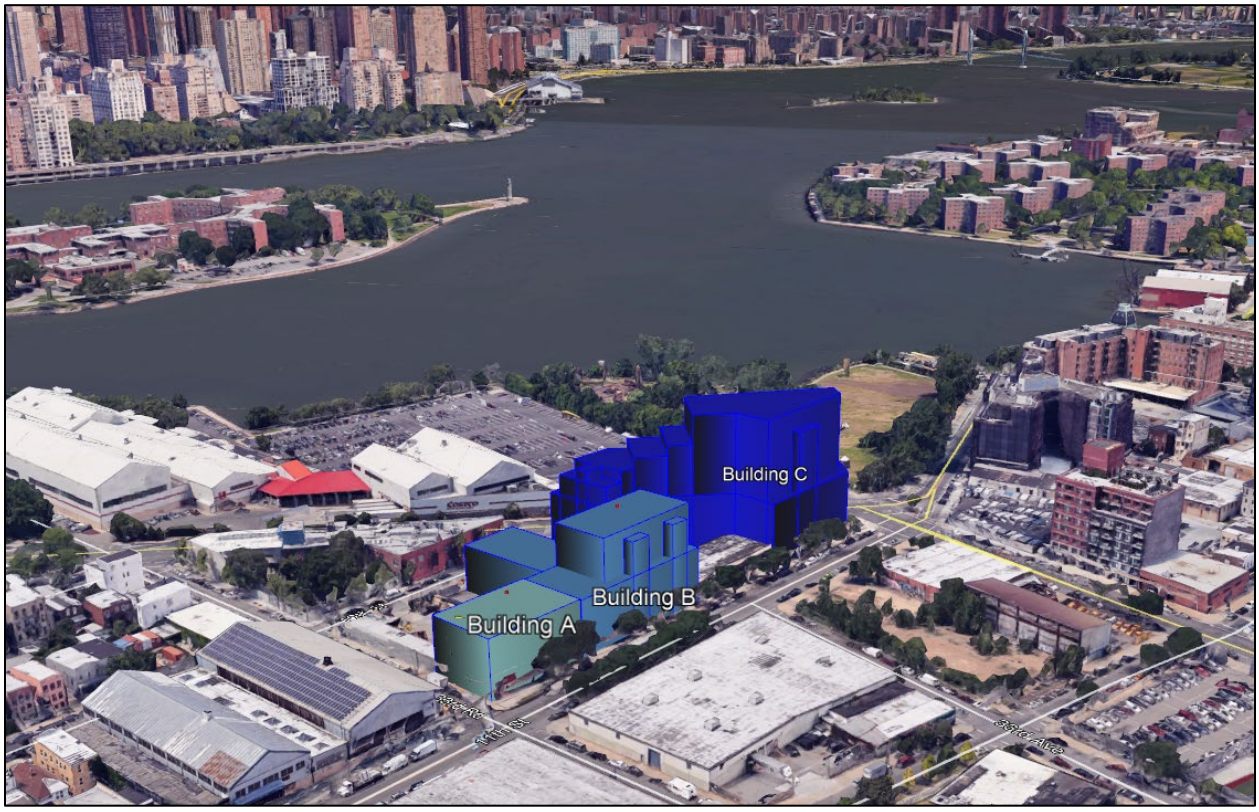
Under the proposed rezoning action, the Project Area would be redeveloped with three buildings: a 5-story residential and community facility building (Building A), a 9-story residential and community facility building (Building B), and a 14-story residential, commercial, and community facility building (Building C). The Proposed Actions would also contain 164 spaces parking garage, encompassing the entire Lot. The project Build year is 2022**.** Table 17-1 presents a detailed summary of the Proposed Actions.

Table 17-1. Proposed Project.

Item	Building A	Building B	Building C	Total
Zoning Lot ID	Lot A		Lot B	
Lot Size	18,524 sf	27,786 sf	30,925 sf	77,235 sf
Building Size GSF	32,130	103,325	214,480	349,935
Stories; Height	5; 55'0"	9; 95'-0"	14; 145'-0"	
Parking Spaces	N/A	N/A	N/A	164

Figure 17-1 shows the proposed project plotted in Google Earth.

Figure 17-1. The Proposed Developments on the Project Area Plotted in Google Earth and Viewed from the South.



I. AIR POLLUTANTS AND APPLICABLE STANDARDS/GUIDELINES

National Air Quality Standards

The U.S. Environmental Protection Agency (EPA) has identified six pollutants, known as criteria pollutants which are being of concern nationwide, and established threshold concentration based upon adverse effect on human health.

As required by the Clean Air Act, National Ambient Air Quality Standards (NAAQS) have been established for the criteria pollutants by EPA, and New York State has adopted the NAAQS as the State ambient air quality standards. The NO_2, $PM_{2.5}$, and PM_{10} standards—the pollutant for which a detailed analysis was conducted—together with their health-related averaging periods are presented in Table 17-2.

Table 17-2. National And New York States Ambient Air Quality.

Pollutant	Averaging Period	National and State Standards
NO_2	1-Hour Concentration	0.10 ppm (188 $\mu g/m^3$)
	Annual Arithmetic Average	0.053 ppm (100 $\mu g/m^3$)
$PM_{2.5}$	24-Hour Concentration	35 $\mu g/m^3$
	Average of 3 Consecutive Annual Means	12 $\mu g/m^3$
PM_{10}	24-Hour Concentration	150 $\mu g/m^3$
CO	1-Hour	35 ppm
	8-Hour	9 ppm

NO_2 NAAQS

Nitrogen oxide (NO_x) emissions from gas combustion consist predominantly of nitric oxide (NO) at the source. The NO_x in these emissions are then gradually converted to NO_2, which is the pollutant of concern, in the atmosphere (in the presence of ozone and sunlight as these emissions travel downwind of a source).

The 1-hour NO_2 NAAQS standard of 0.100 ppm (188 ug/m^3) is the 3-year average of the 98th percentile (8th Highest) of daily maximum 1-hour average concentrations in a year. For determining compliance with this standard, the EPA has developed a modeling approach for estimating 1-hour NO_2 concentrations that is comprised of 3 tiers: Tier 1, the most conservative approach, assumes a full (100%) conversion of NO_x to NO_2; Tier 2 applies a conservative ambient NOx/NO_2 ratio of 80% to the NO_x estimated concentrations; and Tier 3, which is the most precise approach, employs AERMOD's PVMRM module. The PVMRM accounts for the chemical transformation of NO emitted from the stack to NO_2 within the source plume using hourly ozone background concentrations. When Tier 3 is utilized, AERMOD generates 8th highest daily maximum 1-hour NO_2 concentrations or total 1-hour NO_2 concentrations if hourly NO_2 background concentrations are added within the model.

Per the *CEQR TM*, a Tier 1 approach is initially applied, followed by a Tier 2 application of NOx/NO_2 ratio of 80% to the NOx modeled concentration to determine whether violation of the NAAQS is likely to occur. A less conservative Tier 3 approach is then applied if exceedances of the 1-hour NO_2 NAAQS were estimated.

New York State Standards

As mentioned, New York State has adopted the national standard, NAAQS. In addition, the New York State Department of Environmental Conservation (NYSDEC) has established guidelines for maximum allowable concentration of "noncriteria pollutants," which are potentially toxic or carcinogenic pollutants. The maximum allowable guidelines set a maximum 1-hour and annual averaging time concentrations and are published in the DAR-1 AGC/SGC Table, where AGC/SGC refers to Annual and Short-term Guideline Concentrations. The most recent DAR-1 guidelines were created on August 10, 2016.

NYSDEC also regulates pollutants that produce discomfort due to odors, where significant discomfort is evaluated on quantity, characteristic or duration.

NYC Guidelines

In addition to the NAAQS, the *CEQR TM* requires that projects subject to CEQR apply a $PM_{2.5}$ and CO 8-hour averaging time significant impact criteria (based on concentration increments). These criteria are called *de minimis* and they are more stringent than the NAAQS and the state standards, as the criteria set a maximum increase of pollutant concentration that is below the national standard. If the estimated impacts of a proposed project are less than the *de minimis* criteria, the impacts are not considered to be significant. As outlined in the *CEQR TM,* CO significant impacts are evaluated as follow:

- An increase of 0.5 parts per million (ppm) or more in the maximum 8-hour average CO con-centration at a location where the predicted No-Action 8-hour concentration is equal to 8 ppm or between 8 ppm and 9 ppm; or
- An increase of more than half the difference between baseline (*i.e.*, No-Action) concentrations and the 8-hour standard, when No-Action concentrations are below 8 ppm.

Per the *CEQR TM*, significant adverse $PM_{2.5}$ concentration is determined by:

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

Background Concentrations

Determination of significant impact criteria is evaluated by adding the background concentrations at the nearest NYSDEC monitoring station to the concentrations of criteria pollutants in the ambient air of the existing and planned land uses.

Background concentrations of NO_2, PM_{10}, and $PM_{2.5}$—the criteria pollutants for which a detailed analysis was conducted—were obtained from the NYSDEC's annual report for 2016 at the nearest monitoring stations. Table 17-3 shows the background concentrations.

Table 17-3. Background Concentration at the Queens College Monitoring Station.

Pollutant	Averaging Period	Background Concentration
NO_2	1-Hour Concentration	112.2 $\mu g/m^3$
	Annual Arithmetic Average	33 $\mu g/m^3$
$PM_{2.5}$	24-Hour Concentration	19.7 $\mu g/m^3$
	Average of 3 Consecutive Annual Means	7.5 $\mu g/m^3$
PM_{10}	24-Hour Concentration	44 $\mu g/m^3$
CO	1-Hour	1.59 ppm
	8-Hour	1.4 ppm

The *de minimis* criteria for CO and $PM_{2.5}$ were evaluated as described in the NYC Guidelines. The concentrations increments are presented below:

- CO 8-hour 3.8 ppm
- 24-hour $PM_{2.5}$ 7.65 $\mu g/m^3$
- Annual $PM_{2.5}$ 0.3 $\mu g/m^3$ (for stationary source)

II. MOBILE SOURCE ANALYSIS

Introduction

Projects may result in significant mobile source impacts when they create mobile sources of pollutants, change traffic pattern, or add new uses near mobile sources of pollutants. Per CEQR guidelines, a detailed analysis is conducted to predict whether the proposed actions could potentially have a significant adverse air quality impact if certain threshold

criteria are met or exceeded, while proposed projects that do not meet or exceed the threshold criteria (screen out) are not expected to have a mobile source impact. Projects that require a detailed analysis, model the ambient air CO and $PM_{2.5}$ concentrations—the mobile source pollutants of concern—and compare the modeled concentrations with the applicable air quality standard.

Mobile source impacts are a function of vehicular related emissions and the pollutants dispersion. In a detailed analysis, the emission rates of vehicular mechanical components are generated with the latest EPA's Mobile Vehicle Emission Simulator 2014a version (MOVES2014a), and emission of dust generated by vehicle travelling on paved roadways are added to estimate total particulate matter emission rates. The pollutants' concentrations at sensitive receptors are modeled with the EPA's CAL3QHC or CAL3QHCR, or AERMOD Gaussian dispersion models. Alternatively, dispersion analysis of parking facilities may use the spreadsheet and formula referenced in the *CEQR TM Appendices.*

According to the transportation analysis for this project, the Proposed Actions would generate a total of 46 (44 autos and 2 trucks), 22 (20 autos and 2 trucks), 38 (38 autos and 0 trucks), and 34 (34 autos and 0 trucks) net vehicle trip ends during the AM, Midday, PM and Saturday Midday peak hour time periods, respectively. In addition, the No Action scenario would result in 106 spaces parking garage, and the With Action Scenario would contain 164 spaces parking garage; an increment of 58 parking spaces.

Mobile Source Screen

Project-Generated Traffic

Per the *CEQR TM*, localized increases in CO and $PM_{2.5}$ levels may result from increased vehicular traffic volumes and changed traffic patterns in the study area as a consequence of the proposed development. As such, screening analyses for CO and $PM_{2.5}$ were carried out to determine whether the project-generated traffic have the potential to cause significant adverse impact. The project-generated traffic is the vehicular trips in any given hour, determined as the difference between the Future With No-Action and the Future With Action.

As provided in the transportation analysis for this project, the Proposed Actions would generate a net increase of 46, 22, 38, and 34 (inbound and outbound combined) vehicle trip ends, during the AM, Midday, PM, and Saturday peak hours, respectively. These net vehicle trip ends include 2 trucks during the AM and Midday peak hours and no trucks during the PM and Saturday peak hours.

For this area of the City, the threshold volume for a detailed analysis of CO concentration, using MOVES2014 and CAL3QHC, is an increment of 170 vehicles. $PM_{2.5}$ threshold criterion is an increment of applies heavy-duty diesel vehicles (HDDVs) screen.

As outlined in the Transportation section, the maximum trip generation increment between the Future With No-Action and the Future With Action does not exceeds the threshold of 170 vehicular trip generation.

According to *CEQR TM*, $PM_{2.5}$ detailed analysis is required if a threshold criterion, determined by project-generate peak hour HDDVs traffic or its equivalent in vehicular emission, is exceeded. The threshold criteria depend on the type of road and the incremental vehicular traffic as followed:

- 12 or more HDDV for paved roads with 5,000 vehicles;
- 19 or more HDDV for collector roads;
- 23 or more HDDV for principal and minor arterials; or
- 23 or more HDDV for expressways and limited access roads.

The worst-case HDDVs peak hour traffic is 46 net vehicles of which 2 are trucks, during the AM peak hour period. The analysis assumed that the peak hour traffic would travel on a paved road, which is the most stringent road type. As the $PM_{2.5}$ screen does not apply to passenger cars, the NYSDEC vehicle population by source type database (part of MOVES2014a database for the county of Queens) was consulted. The database shows 60.5% and 39.5% LDGV (passenger car) and LDGT1 (passenger truck) distribution. Therefore, the worst-case net increment is at most 20 (18 LDGT1 and 2 HDDVs) vehicle trip ends. This translates to at most 10 net equivalent trucks trip ends during the AM peak hour period. As such, the peak hour vehicle trip ends pass the $PM_{2.5}$ screening analysis.

Therefore, no intersection detailed air quality analysis was required, and no significant adverse mobile source air quality impacts are expected at intersections affected by the proposed project.

Parking Garage

Based on CEQR recommendations, the maximum capacities of parking garages are evaluated with a threshold criterion to predict whether the potential impacts associated with mobile source emissions are significant. The threshold criteria level, per CEQR guidelines, is 85 off-street parking spaces. If the threshold is met or exceeded, a detailed analysis is warranted.

As previously outlined, the No Action scenario would result in 106 spaces parking garage; the With Action Scenario would contain 164 spaces parking garage. The increment between the With Action and No Actions scenarios is 58 off-street parking spaces, less than the 85 parking spaces threshold criterion. However, per *CEQR TM*, the NYC Guidelines considers the increment, while the total number of vehicles is considered for the NAAQS. As such, a detailed analysis was conducted.

Parking Garage Detailed Analysis

The Proposed Actions contain 164 parking spaces in the cellar level, with dedicated entrance and exit on 11th Street. Per the building's architect, the exit and entrance are 275 feet apart. The parking garage would occupy 64,889 square feet, with 110 feet long exit and entrance ramps, each at a 1:7 slope. As determined by the traffic analysis for this project, there are a maximum of 51 vehicles entering the parking garage in the PM hour and a maximum of 46 vehicles exiting the parking garage in the AM hour. The maximum on-street peak hour traffic considered for the analysis was during the AM period. At this peak hour period there are 47 net vehicle trips ends of which 2 are HDDVs. These traffic data were considered as a worst-case scenario for the With-Action scenario.

Per *CEQR TM*, vehicles exiting the parking garage idle for 1 minute before starting to travel to the parking lot exit, and all parking garage vehicles are assumed to drive at a speed of 5 miles per hour. In addition, entering and exiting vehicles are assumed to travel a mean travel distance of two-thirds of the width and the length of the parking garage plus the ramps' lengths.

The following conditions, as outlined in the *CEQR TM*, are assumed in the analysis to simulate the maximum potential air quality impacts:

- Pollutants within the garage are exhausted through a single vent situated above the parking garage entrance at 12 feet above grade.
- A receptor is placed at 6 feet high and 6 feet from the parking garage entrance, directly downwind from the garage's exhaust vent, to simulate a pedestrian on the adjacent sidewalk of the parking garage.
- A receptor is placed at 6 feet high and at the opposite sidewalk, directly downwind from the garage's exhaust vent.
- A receptor is placed 5 feet above the garage's exhaust vent to simulate a receptor placed in a window above the exhaust vent.
- Wind speed is assumed to be 1 meter per second.
- The garage ventilation rate is assumed to be the minimum rate as required by the New York City Building Code and outlined in the *CEQR TM*.
- The impact of the pollutants generated by on-street traffic are added to the receptor placed on the opposite sidewalk from the parking garage. These include both emissions from vehicular mechanical components and dust generated by vehicles travelling on paved roads.

Pollutants from vehicle emissions were generated by the EPA's Motor Vehicle Emission Simulator, MOVES2014a, as outlined below. Pollutants concentrations from the garage's exhaust vent and from the on-street traffic emissions were calculated using the spreadsheet and formula referenced in the *CEQR TM Appendices.* The With-Action on-street traffic (47 vehicles) was considered for both the NYC Guidelines, *de minimis,* and the NAAQS. A specific receptor was considered for the annual *de minimis* criterion as the garage's exhaust vent is a stationary source.

Per *CEQR TM*, a persistence factor of 0.7 was applied to the 1-hour CO concentration to evaluate the 8-hour CO concentration. Persistence factors of 0.6 and 0.1 were applied to the 1-hour $PM_{2.5}$ concentration to evaluate the 24-hour and annual averaging times concentrations, respectively. These persistence factors are referenced in the EPA's *AERSCREEN User Guide*.

Emission Factors

MOVES can be used to calculate emission rates of criteria air pollutants, greenhouse gas emissions, and some hazardous air pollutants for both onroad motor vehicles and nonroad equipment. MOVES models calculate emissions at the national, county, and project level by use of databases and by specifying the characteristics (Run Specification) of the scenario that is modeled.

The onroad emission factors that MOVES produces are either grams/vehicle-mile or grams/hour. In a microscale analysis (project level scale—which is the finest level of modeling) a specific hour of the day is specified, and the model output emission factors for each roadway (link) specified in the database. Table 17-4 shows the Run Specification and databases that were used to develop CO and $PM_{2.5}$ emission factors.

Table 17-4. MOVES2014a Run Specification and Database Inputs.

Run Specification		**Databases**	
Scale	Project	**I/M Program**	NYSDEC
Calculation Type	Inventory	**Age Distribution**	NYSDEC
	Emission Rate	**Fuel**	NYSDEC
Time Span (Year/Month/Day/Hour)	2020/January/Weekday/17:00–8:00 - 8:59	**Meteorology Data**	NYSDEC
Geographic Bounds	Queens, NY	**Links**	Project input
Vehicle and Equipment (Fuels/Source Use Type)	Gasoline/Passenger Car Diesel/HDDVs	**Links Source Type**	Project Input
Road Types	Urban Unrestricted Access		
Pollutants and Processes			
CO	Running Exhaust, Crankcase Running Exhaust		

$PM_{2.5}$	Running Exhaust, Crankcase Running Exhaust, Brakewear, Tirewear
Total Gaseous Hydrocarbons	Running Exhaust

In addition to exhaust running $PM_{2.5}$ emissions, vehicle-related $PM_{2.5}$ emissions of dust generated by vehicles traveling on paved roadways (11 Street) were added to estimate total particulate matter emission factors for the short-term analysis (per DEP, annual fugitive dust emission is negligible). Depending of the silt content on a road, re-entrained road dust can be a significant contributor to the total $PM_{2.5}$ concentration. Per the *CEQR TM,* a silt loading factor of 0.4 g/m^2 for local roads and standard average fleet vehicle weight of 3-tons were used in the analysis. In addition, based on DEP guidance, the conservative assumptions of "dry" road conditions were used for the short-term calculation (precipitation reduced silt loading).

Results of Parking Garage Analysis

Table 17-5 shows the results of the parking garage future With-Action analysis. As previously outlined, the background concentration was added to the future With-Action potential impact, and the results compared with the NAAQS.

Table 17-5. Parking Garage Air Quality Impact.

Pollutant		**Near Sidewalk**		**Far Sidewalk**		**Window Above Vent**	
CO (ppm)	**Averaging Period**	**1-hour**	**8-hour**	**1-hour**	**8-hour**	**1-hour**	**8-hour**
	Garage	0.19	0.13	0.16	0.12	0.16	0.11
	Line Source	N.A.	N.A.			N.A.	N.A.
	de minimis	N.A.	3.80	N.A.	3.80	N.A.	3.80
	Impact	**No**		**No**		**No**	
		Near Sidewalk		**Far Sidewalk**		**Window Above Vent**	
$PM_{2.5}$ ($\mu g/m^3$)		**24-hour**	**Annual**	**24-hour**	**Annual**	**24-hour**	**Annual**
	Garage	1.16	0.19	1.51	0.16	1.12	0.19
	Line Source	N.A.	N.A.			N.A.	N.A.

	de minimis	7.65	0.3	7.65	0.3	7.65	0.3
	Impact	**No**		**No**		**No**	

As seen in Table 17-5, the NYC Guidelines evaluated the future With-Action concentration increment to the existing conditions, and no impacts were predicted. As the future No-Action concentration would result in greater concentrations than the existing conditions, the methodology of evaluating the With-Action concentrations only is conservative. Therefore, the analysis concluded that all the pollutants are within the NAAQS and the NYC Guideline threshold criterions.

III. PROJECT HVAC SYSTEMS ANALYSIS

Introduction

Per the *CEQR Technical Manual*, the HVAC analysis considers the potential for emissions from the HVAC system of the proposed project to significantly impact existing land uses (project-on-existing), and the potential of the proposed project to significantly impact each other (project-on-project). Based on CEQR guidelines, a preliminary screening analysis is to be conducted as a first step to predict whether the potential impacts of the heat and hot water system boiler emissions can be significant. The screening analysis determines the threshold of distance beyond which the action would not have a significant impact. This CEQR screening procedure is applicable to buildings that are not less than 30 feet from the nearest building of similar or greater height. Otherwise, a detailed dispersion analysis is required.

Screening Analysis

Per the *CEQR Technical Manual,* the potential for stationary source emissions from heat and hot water systems to have a significant adverse impact on nearby receptors depends on the type of fuel that would be used, the building's residential or non-residential use, the square footage of the development that would be served by the system, the height of the building served by the HVAC system and the distance to the nearest building whose height is at least as great as the building served by the HVAC system. The *CEQR Technical Manual* provides a screening analysis based on these factors, which was utilized to determine the potential for significant impacts from the projected buildings' HVAC systems.

The anticipated development within the proposed rezoning area would consist of three buildings. Each of the three buildings would be equipped with its own separate heat and hot water system. Buildings A and B heat and hot water system would be natural gas fueled; Building C heat and hot water system would either be fueled by natural gas or fuel oil No. 2 (the allowed heating fuels for this type of development in NYC.) Therefore, Building A and B screening analyses were performed for natural gas use and

environmental designations added to specify use of natural gas only, and Building C was screened for fuel oil No. 2.

The three buildings vary in heights. Therefore, screening analyses were performed for each building. The following screening analyses were conducted:

1. The impact of Building A on existing or planned land uses that are at least 55 feet tall.
2. The impact of Building B on existing or planned land uses that are at least 95 feet tall.
3. The impact of Building C on existing or planned land uses that are at least 145 feet tall.

Per the *CEQR TM*, the CEQR nomograph depicted on Figures 17-5 and Figure 17-7 of the *CEQR TM Appendices* were used. These stationary source screens are generic screens that consider the type of fuels used and the residential or nonresidential uses of the buildings. Figure 17-5 of the *CEQR TM Appendices* is the nomograph for fuel oil No. 2. These CEQR nomographs depict the size of the development versus distance below which the potential impact can occur and provides a conservative estimate of the threshold distance. In addition, and per *CEQR Technical Manual*, the distance to nearest building of similar or greater height was assumed to be 400 feet if the actual distance is greater.

Figures 17-2 shows the Building A screening analysis nomograph. Figure 17-3 shows the Building B screening analysis. Each of these screening analyses applied a stack height of 30 feet, which is the curve height that is closest to but not higher than any of the proposed stacks heights.

Figure 17-2. Building A Minimum Distance - HVAC Screen Natural Gas Nomograph.

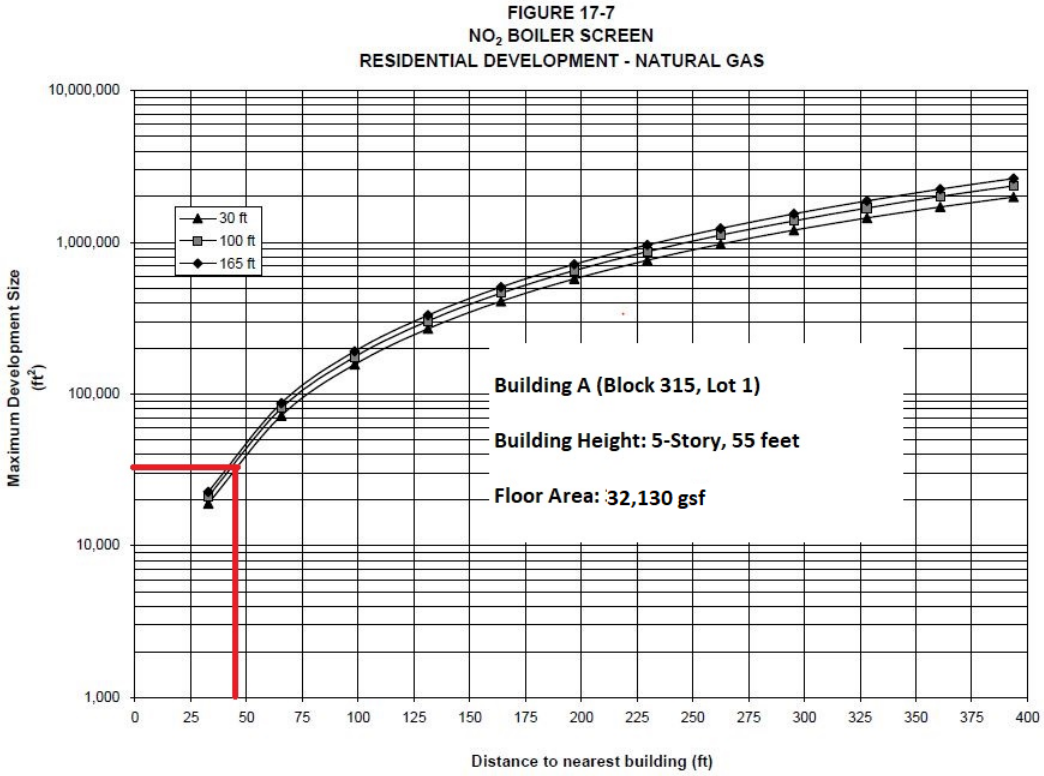


Figure 17-3. Building B Minimum Distance - HVAC Screen Natural Gas Nomograph.

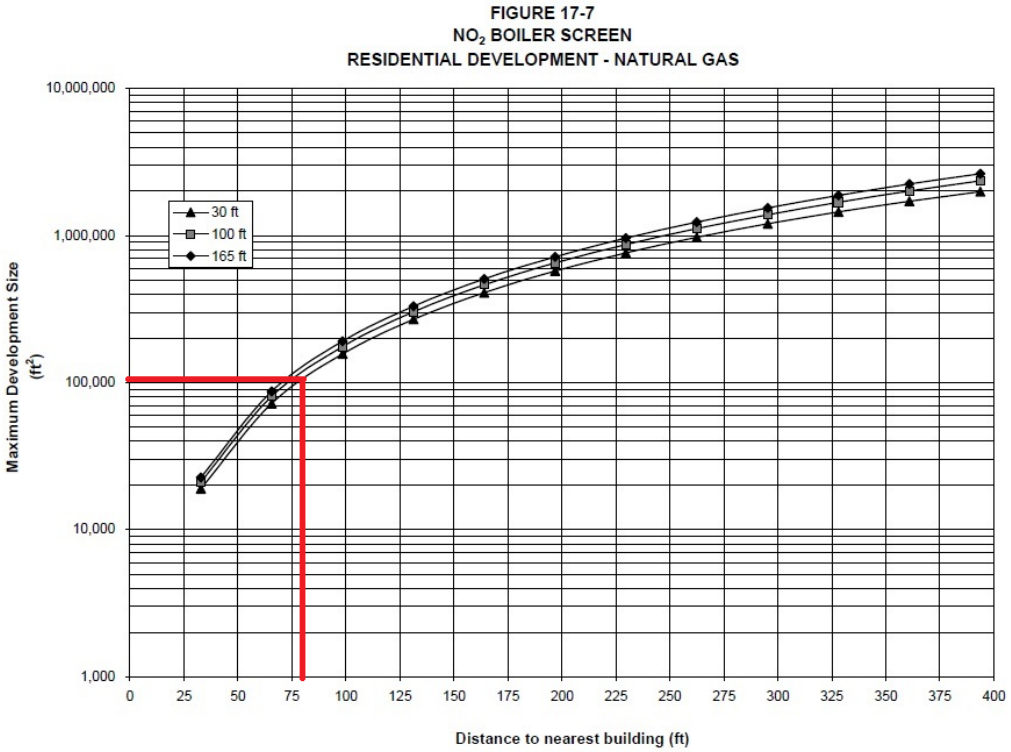
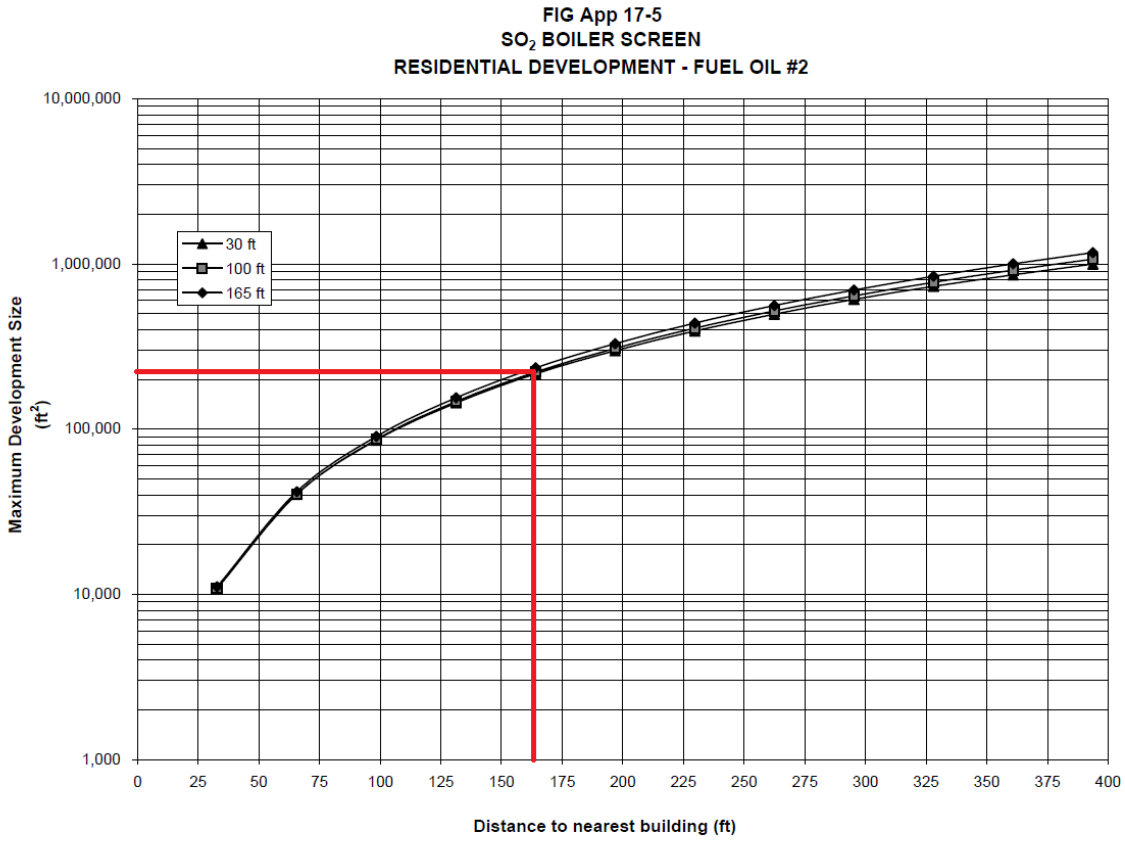


Figure 17-4 shows the Building C screening analysis. This screening analysis applied a stack height of 100 feet.

Figure 17-4. Building C Minimum Distance - HVAC Screen Fuel Oil No. 2 Nomograph.



The screening analysis Figure 17-2 nomograph shows that a detailed analysis would be required for any existing or planned land uses that are 55 feet or taller and at a distance of less than 48 feet from Building A. There is no existing land use 55 feet or taller at a distance of less than 48 feet from Building A. However, Building B, a 95-foot high building, is contiguous to Building A. As such, Building A passes the screening analysis on existing land uses, but fails the screening analysis on Building B.

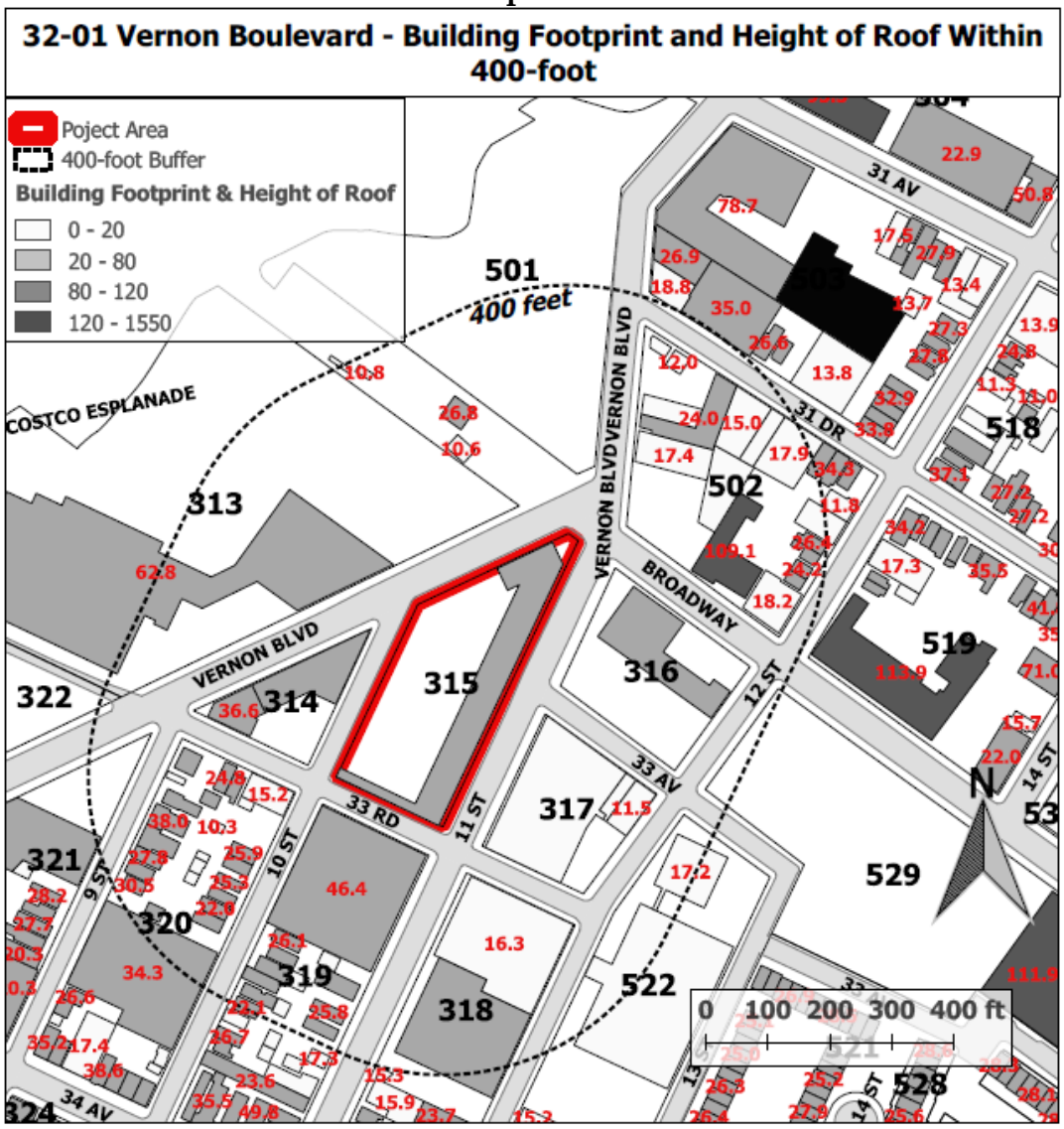
The screening analysis Figure 17-3 nomograph shows that a detailed analysis would be required for any existing or planned land uses that are 95 feet or taller and at a distance of less than 80 feet from Building B. There is no existing land use 95 feet or taller at a distance of less than 80 feet from Building B. However, Building C, a 145-foot high building, 9-story roof terrace is 47 feet from Building B and its 14-story tower is 105 feet from Building B. As such, Building B passes the screening analysis on existing land uses, but fail the screening analysis on Building C.

The screening analysis Figure 17-4 nomograph shows that a detailed analysis would be required for any existing or planned land uses that are 145 feet or taller and at a distance of less than 162 feet from the Project Area. There is no existing land use 145 feet or taller at a distance of less than 162 feet from the Project Area. The nearest building of equal or

greater height is the 20-story residential building located at 11-24 31 Avenue (Block 503, Lot 7502) and 550 feet from the Project Area. As such, Building C stack emissions passes the screening analysis on existing land uses.

Figure 17-5 shows the building footprints of existing land uses and their roof heights. These buildings footprint geo metadata were obtained from the NYC Open Data Building Footprints shapefile[9].

Figure 17-5. Existing Buildings Footprint and Height of Roofs from the NYC Housing and Development database



Source: NYC Housing and Development

[9] https://data.cityofnewyork.us/Housing-Development/Building-Footprints/nqwf-w8eh/data.

Table 17-6 depicts the screening analyses results, where "Use AERMOD" indicate that a detailed analysis using AERMOD dispersion analysis is required.

Table 17-6. Screening Analysis Results.

Development Site ID	Building Height (ft.)	Heated Area (sq. ft.)	Screen Distance (ft.)	Receptor Building (Site ID or Block/Lot)	Receiving Building Distance (ft.)	Pass/ Fail
Building A	55	32,130	48	Building B	0	Use AERMOD
				Costco (313/ 1), 33-26 Vernon Boulevard	311	Pass
Buildings B	95	103,325	80	Building C	47	Use AERMOD
				(502/ 41) 11-15 Broadway	354	Pass
Building C	145	214,480	162	(503/ 7502) 11-24 31 Avenue	550	Pass

Detailed Analysis

Two AERMOD dispersion analyses were conducted: Building A on Building B, and the cumulative impact of Buildings A and B on Building C.

As previously mentioned, Building A and B heat and hot water systems are expected to be heated by natural gas. Per *CEQR TM*, the pollutants of concern for natural gas fueled boilers are NO_2 and $PM_{2.5}$. The proposed buildings emission rates were estimated as follows:

- Emission rates of NOx and $PM_{2.5}$ were calculated based on annual natural gas usage corresponding to the gross floor area of the buildings, EPA AP-42 emission factors for natural gas combustion in small boilers, and gross heating values of natural gas (1,020 Btu per million cubic feet).
- $PM_{2.5}$ emissions from natural gas combustion accounted for both filterable and condensable particulate matter.
- The natural gas fuel usage factor of 59.1 cubic foot per square foot per year was used to estimate the annual natural gas usage of the residential buildings.

Table 17-7 shows the buildings NO_2 and $PM_{2.5}$ emission rates, both short-term and annual.

Table 17-7. Estimated Short-term and Annual Emission Rates of Each Building

Development ID	Floor Area	NO_2 Emission factor (g/s)		$PM_{2.5}$ Emission factor (g/s)	
	ft^2	1-hour	Annual	24-hour	Annual
Building A	32,130	9.97E-03	2.73E-03	7.58E-04	2.08E-04
Building B	104,587	3.25E-02	8.89E-03	2.47E-03	6.76E-04

AERMOD Model Setting and Inputs

AERMOD dispersion modeling analyses were conducted to estimate the NO_2 and $PM_{2.5}$ impacts concentrations using the latest version of EPA's AERMOD dispersion model version 18081 and AERMET version 14134. Tier 3 approaches were utilized for the NO_2 1-hour impacts.

In accordance with CEQR guidance, this analysis was conducted assuming stack tip downwash, elimination of calms, and with and without downwash effect on plume dispersion. In addition, the models specified flat terrain and population of 2,000,000.

The diameters of the stacks were estimated based on values obtained from the NYCDEP "CA Permit" database for the corresponding boiler sizes (i.e., rated heat input or million Btu per hour). Boiler sizes were estimated based on the assumption that all fuel was consumed during the 100-day (or 2,400 hour) heating season. The stacks exit temperatures were assumed to be 300^0F (423^0K), which is appropriate for boilers. The exhaust's exit velocity of Building B HVAC system was estimated based on values obtained from the NYCDEP "CA Permit" database for the corresponding boiler sizes. The stack exit velocity of Building A HVAC system was calculated according to the EPA Method 19.

The New York City Building Code (Building Code) requires that a rooftop stack should be at least 10 feet away from the edge of the roof and at least 3 feet higher than the roofline. As such, the HVAC stacks of each building were located on the buildings' highest level, 10 feet from the edge of the roof, and as close as possible to the receiving building. If a modeled pollutant concentration exceeded its significant impact criterion, the stack distance from the receiving building was increased, until the dispersion model showed no significant impact. In addition, if a stack setback distance was required in one of the dispersion models, this stack setback distance was applied to all other dispersion model.

Receptors on the receiving buildings were placed on all floor levels, around the building envelope at 10 feet increments. Ground floor receptors were placed at 6 feet above grade. Second floor receptors were placed at heights of 21 feet, 6 feet above the 15-foot high ground floor level. Receptors were also placed 6-foot above Building C 9-11 roof terraces.

In total, 485 receptors were inputted in the Building A on Building B model, and 1,052 in the impact on Building C model.

AERMOD calculates concentrations according to the dispersion option, pollutant and averaging time, and output specified in the model, where the model is capable of handling multiple sources in a single run. As such, each pollutant was modeled separately and two stacks, one for the short-term and the other for annual averaging time were created. Each stack was placed in a different source group.

All analyses were conducted using the latest five consecutive years of meteorological data (2013-2017). Surface data was obtained from La Guardia Airport and upper air data was obtained from Brookhaven station, New York. These meteorological data provide hour-by-hour wind speeds and directions, stability states, and temperature inversion elevations over the 5-year period. Meteorological data were combined to develop a 5-year set of meteorological conditions, which was used for the AERMOD modeling runs and Anemometer height of 9.4 meters was specified per Lakes Environmental Software Inc.

NO_2 1-hour were modeled with a Tier 3 approach with NO_2 and ozone background concentrations. 2013-2017 Ozone hourly background concentrations were obtained from the NYSDEC[10] Queens College monitoring station. The maximum ozone hourly concentration was filled for missing values. 2015-2017 NO_2 hourly background concentrations were obtained from the NYSDEC for Queens College monitoring station. The 3-year of data was compiled, and a 5-year of hourly background concentrations file created following the methodology referenced in the EPA's March 2011 Memorandum[11].

Results of Dispersion Analyses

As stated in the AERMOD Model Setting and Inputs section, each pollutant averaging time was modeled twice—with building wake effect enabled/disabled. The predicted concentration is the highest concentration of these. The results are compared with the 24-hour/annual $PM_{2.5}$ significant impact criteria, and the 1-hour/annual NO_2 NAAQS. Result of the HVAC NO_2 and $PM_{2.5}$ dispersion analyses are shown in Table 17-8.

[10] http://www.nyaqinow.net/

[11] https://www.epa.gov/sites/production/files/2015-07/documents/appwno2_2.pdf

Table 17-8. Detailed HVAC Analyses Results

Scenario ID	24-hr $PM_{2.5}$ Impact	Annual $PM_{2.5}$ Impact	1-hr NO_2 Impact		Annual NO_2 Impact
	µg/m³	µg/m³	µg/m³	Tier No.	µg/m³
Building A-on-Building B	3.83	0.13	161(1)	3	34.7
Building A&B-on-Building C	3.18	0.12	173	3	34.7
Standard	**7.65**	**0.3**	**188**		**100**

Note: 1. With downwash effect Tier 2 analysis resulted in 177 µg/m³ concentration.

The $PM_{2.5}$ impacts are less than the significant impact criteria for $PM_{2.5}$ of 7.65 µg/m³ and 0.3 µg/m³, respectively, and both the 1-hour and annual NO_2 concentrations estimated are less than the 1-hour and annual NO_2 NAAQS of 188 µg/m³ and 100 µg/m³, respectively.

Therefore, with (E) Designations in place, the HVAC systems emissions of the proposed project would not significantly impact any planned or existing land uses.

(E) Designation

The HVAC analysis for the Proposed Actions concluded that the HVAC systems of Building A and B would need to be restricted to the exclusive use of natural gas, and their stacks would require setback distances.

The (E) Designation language is as follows:

Block 315, Lot 1 (Building A): Any new residential or commercial development on the above-referenced property must exclusively use natural gas as the type of fuel for heating, ventilating, air conditioning (HVAC) and hot water equipment and ensure that the HVAC and hot water equipment stack is located at the building's highest level and at least 58 feet above the grade, and is no more than 70 feet from the lot line facing 33rd Road to avoid any potential significant adverse air quality impact.

Block 315, Lot 1 (Building B): Any new residential or commercial development on the above-referenced property must exclusively use natural gas as the type of fuel for heating, ventilating, air conditioning (HVAC) and hot water equipment and ensure that the HVAC and hot water equipment stack is located at the building's highest level and at least 98 feet above the grade, and is no more than 200 feet from the lot line facing 33rd Road to avoid any potential significant adverse air quality impact.

V. INDUSTRIAL SOURCES

As outlined in the *CEQR TM*, projects that would introduce new uses near industrial sources may result in potentially significant adverse air quality impacts. The study area considers industrial sources within 400 feet of the Project Area. Industrial sources are identified as commercial, industrial, or processing facilities that are likely to have New York City Department of Environmental Protection (DEP) processing permits.

Land Survey Methodology

Information regarding potential emissions of toxic air pollutants from existing industrial sources within 400 feet of the Project Area, were developed using the following procedure:

A study area was developed that includes all industrial facilities with potential air toxic emissions located within 400 feet of the Project Area;

A search was performed to identify permits listed in the EPA Envirofacts database in this study area;

New York City's Open Accessible Space Information System Cooperative (OASIS), Google Street View, and online searches were used to identify and categorize facilities;

A field work investigation/observation was conducted on February 21st, 2018 to affirm the online study findings and to identify any other likely industrial source in the study area;

The New York City Department of Environmental Protection (DEP) online Clean Air Tracking System (CATS) was consulted to determine whether air emissions permits had been issued for any of the nonresidential zoned lots; and

A formal request was sent to the NYCDEP to review the current and expired status processing type permits identified in the NYCDEP online CATS database (with blocks and lot numbers).

Existing Conditions Within the Study Area

The Project Area occupies the entire Block 315, which is bounded by Broadway to the north, 33rd Road to the south, 11th Street to the east and 10th Street to the west. The study area encompasses all or part of Blocks 1313, 314, 315, 316, 317, 318, 319, 320, 321, 501, 502 and 529.

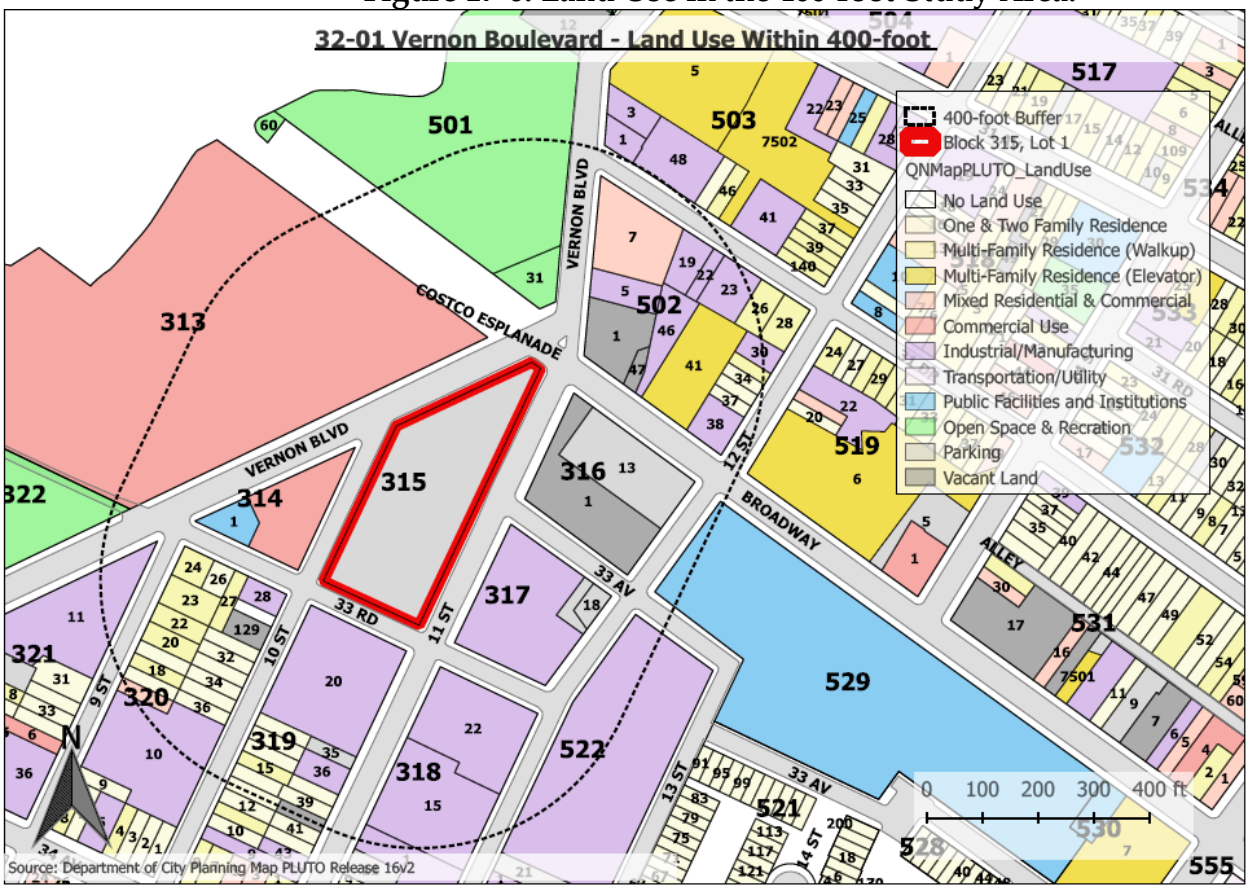
The uses adjacent to the Project Area are as follows:

- The Socrates Sculpture Park and a truck parking lot area located adjacent to the north of the Project Area, beyond Broadway
- An industrial building occupied by Bear Steel Iron Works, Metro Marble (granite and stone works), and Superior Selected Stone (granite and stone works) are located adjacent to the south of the site, across 33rd Road.
- A 2-story commercial building occupied by the Noguchi Museum is located adjacent to the west of the site, across 10th Street.
- Adjacent to the east of the site (across 11th Street) is a vacant lot, an auto repair garage, and an iron works (JVT Industries) on Block 316, and a 2-story

commercial/warehouse building occupied by the Catholic Medical Mission Board and two auto repair garages on Block 317.

Non-residential land uses in the study area are a mix of parking lots, commercial/warehouse uses, retail stores, and light industrial uses. Figure 17-6 shows the 400-foot study area.

Figure 17-6. Land Use in the 400-foot Study Area.



Study Result – Industrial Sources Toxic Air Emission

The result of the study identified 33 non-residential lots within 400 feet of the Project Area. These lots were searched in the DEP online CATS database for processing permits, and the lots current use and CATS database information are identified in the land survey study. Table 17-9 show the current use on the lots in the study area, where entries are color coded according to their land use category.

Table 17-9. Land Survey Study Results of Non-Residential Uses Within 400 Feet of the Project Area, Land Use Category by Color Attribute as Seen in Figure 17-6.

Block	Lot	CATS info	Permit No.	Current Use (Land Survey)
313	1	None	NA	Costco Retail Store
314	7501	None	NA	Noguchi Museum
	1	None	NA	Noguchi Museum
315	1	None	NA	Project Area – Parking and commercial
316	1	Cancelled	PA084088	Vacant Land
	13	None	NA	Auto Repair Garages (no auto body repairs noted)(1), JVT Industries Iron Works(1)
317	1	None	NA	Catholic Medical Mission Board
	16	None	NA	Harry's Alignment (auto wheel alignment)
	18	None	NA	Foreign Car Center (auto mechanic)
318	1	None	NA	Verifone Media and Parking Lot
	15	None	NA	Operative Cake
	22	None	NA	Mitchell's New York (newspaper & magazine delivery)
319	20	None	NA	Metro Marble, Bear Steel iron works(1), Superior Selected Stone(1) (stone wholesale)
	35	None	NA	Electrical contractor warehouse
	36	None	NA	Junk Luggers (warehouse & office above)
	40	None	NA	Parking
320	10	None	NA	2-story warehouse - Globe Electric Supply Co., Inc.
	16	None	NA	Residential
	28	None	NA	The Isamu Noguchi Foundation, Inc.
	129	None	NA	Shipping container storage yard
321	11	None	NA	Krauss Maintenance (offices & warehouse)
502	1	None	NA	Truck parking
	5	None	NA	General contractor warehouse
	7	None	NA	New building under construction
	19	None	NA	Warehouse (possibly unoccupied)
	22	None	NA	New residential building under construction
	23	Cancelled Cancelled Cancelled Expired Expired	PA012683 PA012783 PA012883 PA024569 PB020102	Manufacturing Eagle Woodworking and Construction

Block	Lot	CATS info	Permit No.	Current Use (Land Survey)
	30	None	NA	One Two Three Stages (production co.), electric/plumbing contractor
	38	None	NA	H&L Iron Works
	46	None	NA	Work permit for full demolition (2)
	47	None	NA	Truck parking
522	29	Cancelled Expired Cancelled Expired Cancelled Cancelled Cancelled Cancelled Cancelled	CA237883 CA030594 CA237783 PB003606 PB047002 PA061084 PA089473 PA089573 PA089673	Commercial/warehouse DHL Shipping
529	2	Cancelled Disapproved	CA013693 CA013793	Parking and sports field

1. Confirmed by a phone call
2. Land use revised with data obtained from the NYC Department of Building

As seen in Table 17-9, the non-residential land uses in the area of the Project Area include retail stores, commercial businesses, auto repair garages, parking lots and light industrial uses. Potential emission sources identified in the study area included the Eagle Woodworking and Construction, located at 11-32 31st Drive (Block 502, Lot 23), and the JVT Industries, located at 11-06 Broadway (Block 316, Lot 13). There was one emission stack visible from the street on the east side of the building occupied by Eagle Woodworking and Construction. Information obtained by a phone call to JVT Industries indicted that the iron-work facility is involves in spray painting activity.

The suspected auto body repair garage at 11-11 Broadway was closed at the time of the site visit and no signs or other items identifying the business in the building were visible from the street. Several automobiles that appeared to be in the process of having body work performed were parked in the driveway in front of the building, and an emission stack was observed protruding from the west wall of the building. The NYC Department of Building database shows that the facility has a work permit for a full demolition of the

building[12]. The demolition permit was issued in October 2018 and after the fieldwork observation. Therefore, no auto body facility operates from the facility and no analysis was required.

Eagle Woodwork and Construction

Eagle Woodwork and Construction, located at 11-32 31 Drive (Block 502, Lot 23) has two operational permits: PB0024569 for a paint spray booth operation, and PB020102 for woodworking equipment. The facility is situated 300 feet north-east of the project Area. The emissions' parameters associated with the facility are:

Woodworking Emission (PB020102)

The two table saws, identified as Emission Point #2 in the certificate, are connected to an internal filter bag dust collector with a 99.9% control efficiency. The emitted air returns into the workroom. The contaminants listed in the certificate is wood fines (NY identification number NY075-00-0), which is PM_{10}. The equipment operates 8 hours per day, 200 days per year. The certificate situates the 12-inch in diameter stack at 8-foot above grade and 8-foot below the roof. The stack volumetric flow rate of 4,000 cubic feet per minute (C.F.M) and exit temperature of 70-degree Fahrenheit were procured from the certificate. The site plans, included in PB020102, situate the stack 387 feet from the Project Area. The source. Table 17-10 shows the woodworking equipment emission rates.

Spray Booth Emission (PA024569)

The emission associated with PA024569 processing permit, identified as Emission Point #1, is from an industrial spray booth operation with an activity rate of 8 hours per day, 200 days per year. The operation consumes 0.5 gallon per hour and 4.0 gallons in a maximum of 8-hour day. The coating is applied by an air atomizing handgun, and emission of pigments (solids) are reduced by a custom filter with a 95 percent control efficiency; all the solvents are emitted to the atmosphere. The non-captured solids and solvents are emitted to the outside atmosphere through a 34-inch diameter roof top stack. The stack exhausts at a rate of 7,000 CFM and its exit temperature is 70-degree Fahrenheit. The 6-above the 16 feet high roof is located 341 feet from the Project Area.

The contaminants associated with spray booths operations are solids (also named particulates) and solvents. Solvents are the VOC which evaporate during the spraying activity and while the coating substance dries on the sprayed article. The solids are pigments, resin, and polymers, in fluid or solid phase, that bind to the sprayed article, eventually drying to a hard surface. However, some of the solids are over sprayed and 5 percent (there is a 95 percent control efficiency filter) of that over sprayed amount is

[12] http://a810-bisweb.nyc.gov/bisweb/JobsQueryByNumberServlet?requestid=6&passjobnumber=421677509&passdocnumber=01

emitted to the outside air. The coatings contain 30 to 85 percent solvents by volume and this amount is regulated by the EPA and NYSDEC.

The contaminants listed in the certificate are pigments (NY identification number NY075-00-0) and nine other contaminants identified as volatile organic (VOC) compounds and/or Hazardous Air Pollutants (HAP). The pigments are the solids, also named particulates. Per NYS DEC, NY075-00-0 is PM_{10}, and per NYS DEC DAR-1, these contaminants, identified collectively as particulates, are analyzed with the more stringent concentration guideline of PM_{10}. The other contaminants listed in the certificate are the VOC and HAP contaminants. Each of these is analyzed with the SGC/AGC guideline concentration. Table 17-10 shows the particulate emission rates from both the woodworking equipment and the spray booth operation. Table 17-11 shows the VOC emission rates from the spray booth operation.

Table 17-10. Eagle Woodwork and Construction PM_{10} Emission Rates from the Woodworking Equipment and Spray Booth Operation.

Certificate ID	Contaminant	Permitted Emission Rate		Emission rate			
				Short-term		Annual	
		lb/hr	lb/yr	lb/hr	g/s	lb/yr	g/s
PB020102	PM_{10}	0.001	1.6	0.001	1.26E-04	1.6	2.30E-05
PA024569		0.02	32	0.02	2.52E-03	32	4.60E-04

Table 17-11. Eagle Woodwork and Construction VOC Short-term and Annual Emission Rates from the Spray Booth Operation.

Contaminant name	CAS No.	1-Hour		Annual	
		lb/hr	g/s	lb/yr	g/s
N-Butyl Acetate	123-86-4	0.27	3.41E-02	432	6.21E-03
Butyl Cellosolve	111-76-2	0.09	1.14E-02	144	2.07E-03
Methyl Ethyl Ketone	78-93-3	0.59	7.44E-02	944	1.36E-02
Methyl Isobutyl Ketone	108-10-1	0.64	8.07E-02	1024	1.47E-02
Xylene	1330-20-7	0.22	2.77E-02	176	2.53E-03
Acetone	67-64-1	0.45	5.68E-02	720	1.04E-02
Isopropanol Alcohol	67-63-0	0.18	2.27E-02	228	3.28E-03
Methanol	67-56-1	0.03	3.78E-03	24	3.45E-04
Dioctyl Phthalate	117-81-7	0.13	1.64E-02	208	2.99E-03

JVT Industries

Per *CEQR TM*, projects that would result in new uses that may be adversely affected by air-born emissions from existing industrial sources require an assessment of both criteria and non-criteria pollutants emissions. If the industrial source does not have a NYS DEC or DEP permits, but emissions are expected due to the type of manufacturing process, a conservative emission analysis is appropriate.

The field work observation and site study determined that the facility, located at 11-01 Broadway (Block 316, Lot 13), is an iron-work shop. A phone call to the facility indicated that the facility is involved in spray painting. The facility is situated 200 feet east of the Project Area, in a 32.6 feet high building (Department of Housing and Development database). Per 6 CRR-NY 212-1.2 the spray painting activity at the facility is defined as process operation with a process emission source. However, the facility does not have a NYSDEC or DEP permit. As such, conservative assumptions, based on EPA rules, NYSDEC rules, data of coating substances, and the facility feasible activity rate were applied.

Information regarding the type of coating substance and some of the activity rate were obtained in the phone call to the facility. The information provided by the company's representative is that the facility spray paint undercoat only at small amount, once per week or two weeks. As MSDS were not available, three Rust-oleum metal coating primers were used to assess the mixture of VOC contaminants, their emission rate, and other properties. The "small amount" in the phone call conversation was interpreted as half a gallon per hour. For the annual emission rate, the analysis assumed that the spray painting activity is ten hours per day, once per week. These factors were used to estimate the facility annual paint consumption and emission rates.

As previously discussed, the contaminants associated with spray booth/area operations are solids (also named particulates) and solvents. Solvents are the VOC which evaporate during the spraying activity and while the coating substance dries on the sprayed article. The solids emission is the over sprayed amount, which is (must be per national and state rules) reduced by a filter. Per the NYS DEC and the EPA, spray-applied coating must be applied with high volume low pressure (HVLP) spray guns, or its equivalent in terms of transfer efficiency. The spray painting activity was identified as *Other Metal Coating* section *4.2.2.4* in the EPA AP42 manual. However, the analysis applied a transfer efficiency of 25 percent per the EPA AP42 section *Metal Furniture Surface Coating 4.2.2.12* as a conservative measure. Per the National (Subpart 6H) and NYS DEC regulations, filters achieving 98 percent capture efficiency must be installed on the exhaust of all spray operations. In addition, the analysis assumed solids content of 80 percent by weight. The solids emission rate is presented in Table 17-12.

Table 17-14. JVD Industry PM_{10} Emission Rate from the Spray Booth/Area Operation.

Contaminant	Emission Rate		Emission rate			
			Short-term		Annual	
	lb/hr	lb/yr	lb/hr	g/s	lb/yr	g/s
PM_{10}	0.07	36	0.07	8.73E-03	36	5.18E-04

As the composition of the coating substance was not known, a representative composition by percent weight was compiled from Rust-oleum metal coating primers. Table 17-11 shows the ingredients that make up the VOC

group along with their Chemical Abstract Service (CAS) number by percent weight, and the hourly and annual emission rates calculated as the percent of the total VOC.

Table 17-11. JVD Industry VOC Short-term and Annual Emission Rates from the Spray Booth/Area Operation.

Contaminant name	CAS No.	Percent Weight	1-Hour		Annual	
			lb/hr	g/s	lb/yr	g/s
Mineral Spirits	64742-88-7	25%	**1.4425**	**0.181915**	**750.1**	**0.010799**
Hydrotreated Light Distillate	64742-47-8	25%	**1.4425**	**0.181915**	**750.1**	**0.010799**
Stoddard Solvent	8052-41-3	10%	**0.577**	**0.072766**	**300**	**0.004319**
Ethylbenzene	100-41-4	1%	**0.0575**	**0.007251**	**29.9**	**0.00043**
Solvent Naphtha, Light Aromatic	64742-95-6	1%	**0.0575**	**0.007251**	**29.9**	**0.00043**
bis(1,2,2,6,6-Pentamethyl-4-Piperidinyl) Sebacate	41556-26-7	1%	**0.0465**	**0.005864**	**24.2**	**0.000348**
Triethylamine	121-44-8	1%	**0.0465**	**0.005864**	**24.2**	**0.000348**
Talc (Hydrous Magnesium Silicate)	14807-96-6	10%	**0.577**	**0.072766**	**300**	**0.004319**
Iron Oxide	1309-37-1	25%	**1.4425**	**0.181915**	**750.1**	**0.010799**
Kaolin Clay	1332-58-7	10%	**0.467**	**0.058894**	**242.8**	**0.003495**
Titanium Dioxide	13463-67-7	2.5%	**0.1165**	**0.014692**	**60.6**	**0.000872**

Air Dispersion Analysis

For estimating potential impacts from a single industrial emission source of toxic air pollutants, the *CEQR TM* recommends using a screening procedure as a first step in the analysis. For impact from multiple sources, the impact concentrations from each source are added. This procedure uses pre-tabulated pollutant concentration values based on a generic emission rate of 1 gram per second from *CEQR TM* Table 17-3, "Industrial Source Screen," for the applicable averaging time periods. This approach, can be used to estimate maximum short-terms and annual average concentration values at various distances (from 30 to 400 feet) from an emission source.

The facilities shortest distances to the Project Area were obtained from ZoLa. The CEQR pre-tabulated concentrations corresponding to distances less than or equal to the measure distance were utilized. The pre-tabulated concentrations are displayed in Table 17-12.

Table 17-12. *CEQR TM Table 17-3 Industrial Source Screen* Generic Concentrations.

Facility Name	Distance from Source (ft) Actual/ CEQR	1-Hour ($\mu g/m^3$)	24-Hour ($\mu g/m^3$)	Annual ($\mu g/m^3$)
Eagle Woodwork and Construction PB020102	387 / 365	1,528	434	62
Eagle Woodwork and Construction PA024569	341 / 330	1,703	509	73
JVD Industry	200 / 200	3,335	1,174	167

Air Dispersion Results

The air dispersion analysis utilized the *CEQR TM* Table 17-3 Industrial Source Screen. The results of the criteria pollutants are displayed in Table 17-13.

Table 17-13. Criteria Pollutants Dispersion Analysis Results.

Criteria Pollutant and Averaging Time	Threshold Standard	Predicted Conc. ($\mu g/m^3$)	Background Conc. ($\mu g/m^3$)	Total Conc. ($\mu g/m^3$)	Threshold Criteria ($\mu g/m^3$)
Eagle Woodwork and Construction – Spray-Applied Coating					
PM_{10} 24-Hour	NAAQS	0.05	44	**44.1**	**150**
Eagle Woodwork and Construction – Woodworking Equipment PA024569					
PM_{10} 24-Hour	NAAQS	1.28	44	**45.3**	**150**
JVD Industry					
PM_{10} 24-Hour	NAAQS	10.2	44	**54.2**	**150**
PM_{10} 24-Hour Cumulative Impact					
PM_{10} 24-Hour	NAAQS	11.2	44	**56**	**150**

As displayed in Table 17-13, the PM_{10} predicted concentration was compared with the NAAQS, and the $PM_{2.5}$ 24-hour and annual averaging times with the NYC Interim Guidelines. The criteria pollutant analysis shows that all the criteria pollutants are within the NAAQS and NYC Interim Guidelines.

The VOCs impact utilized the *CEQR TM* Table 17-3 Industrial Source Screen. The predicted concentrations were compared with the NYSDEC SGC/AGC guidelines where applicable (some contaminants do not have guideline concentration). The results of the non-criteria pollutants analysis are displayed in Table 17-14.

Table 17-14. Non-Criteria Pollutants Dispersion Analysis Results.

Contaminant name	CAS No.	1-Hour	SGC	Annual	AGC
		$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$
Eagle Woodwork and Construction – Spray-Applied Coating					
N-Butyl Acetate	123-86-4	57.99	95000.0	0.45	17000.0
Butyl Cellosolve	111-76-2	19.33	14000.0	0.15	1600.0
Methyl Ethyl Ketone	78-93-3	126.71	13000.0	0.99	5000.0
Methyl Isobutyl Ketone	108-10-1	137.45	31000.0	1.08	3000.0
Xylene	1330-20-7	47.25	22000.0	0.18	100.0
Acetone	67-64-1	96.65	180000.0	0.76	30000.0
Isopropanol Alcohol	67-63-0	38.66	98000.0	0.24	7000.0
Methanol	67-56-1	6.44	33000.0	0.03	4000.0

Contaminant name	CAS No.	1-Hour	SGC	Annual	AGC
		µg/m³	µg/m³	µg/m³	µg/m³
Dioctyl Phthalate	117-81-7	27.92	N.A.	0.22	4.2E-01
JVD Industry - Spray-Applied Coating					
Mineral Spirits	64742-88-7	606.7		1.8	3200.0
Hydrotreated Light Distillate	64742-47-8	606.7		1.8	900.0
Stoddard Solvent	8052-41-3	242.7		0.7	900.0
Ethylbenzene	100-41-4	24.2		0.1	1000.0
Solvent Naphtha, Light Aromatic	64742-95-6	24.2		0.1	100.0
bis(1,2,2,6,6-Pentamethyl-4-Piperidinyl)	41556-26-7	19.6		0.1	---
Triethylamine	121-44-8	19.6	2800.0	0.1	7.0
Talc (Hydrous Magnesium Silicate)	14807-96-6	242.7		0.7	4.8
Iron Oxide	1309-37-1	606.7		1.8	12.0
Kaolin Clay	1332-58-7	196.4		0.6	4.8
Titanium Dioxide	13463-67-7	49		0.1	24.0

As seen in Table 17-14**,** the VOCs predicted concentrations are below the AGC/SGC standards. As the VOCs predicted concentrations are below the AGC/SGC standards, and the particulate matter concentrations are below the NAAQS and/or *de minimis* guidelines, no significant toxic air quality impacts are expected as a result of the industrial sources facilities to the proposed project.

VI. MAJOR AND LARGE SOURCES

As outlined in the *CEQR TM*, projects that would introduce new uses near major sources, large sources, and odor producing facilities may result in potentially significant adverse air quality impacts. The study area considers major sources, large sources, and odor producing facilities within 1,000 feet of the Project Area. Here, major emission sources are identified as those sources located at Title V facilities that require Prevention of Significant Deterioration permits; large emission sources are identified as sources located at facilities which require a State facility permit, such as solid waste or medical waste incinerators, co-generation facilities, and asphalt and concrete plants, or power generating plants; odor producing facilities are operations that have the potential to cause discomfort, such as: solid waste management facilities, water pollution control plants (i.e., sewage treatment plants), and incinerators.

No existing large combustion sources, such as power plants, cogeneration facilities, etc., located within 1,000 feet of the Project Area were identified. In addition, no odor producing facility was identified within 1,000 feet of the Project Area. As such, no analysis was warranted.

VII. CONCLUSION

The air quality analysis addressed the proposed project HVAC equipment, mobile source impacts, industrial sources, and major and large sources. The results of the analysis are shown below:

- Emissions from project-related vehicle trips would not cause significant adverse air quality impacts to receptors at the local or neighborhood scale;
- Emission from the parking garage would not cause significant adverse air quality impacts to receptors at the local scale;
- Emissions from project-related heating, ventilation, and air conditioning equipment (HVACs) would not cause significant adverse air quality impacts to receptors at the local scale with (E) - Designations in place.
- No significant adverse air quality impacts are anticipated from air toxics to the proposed project; and
- No existing large or major sources are located within 1,000 feet of the Project Area, emissions from existing stationary sources would not cause a significant adverse air quality impact to the proposed project.

19. NOISE

Introduction

The Proposed Actions would allow for new development of the subject property located in the Astoria neighborhood of Queens, NY. The subject site is located on a block bounded by 10th Street to the west, 11th Street to the east, 33rd Road to the south, and Vernon Boulevard to the north. Because the Proposed Action would allow for development of a noise-sensitive land use (residential), an assessment of the potential for adverse effects on project occupants from ambient noise is warranted.

The subject property is identified as Tax Block 315, Lot 1. Vernon Boulevard and Broadway are two-way streets with one moving lane in each direction and their intersection is controlled by a traffic light. 11th Street is also a two-way street with one moving lane in each direction. 33rd Road is a one-way westbound street with one moving lane, and 10th Street is a one-way northbound street with one moving lane. The area in which the subject property is located is developed primarily with industrial use warehouses and residences. In addition, a Costco warehouse store and two parks are located across Vernon Boulevard to the west of the subject site. A Stone (marble) Facility and Iron Fabricating facility (Block 319, Lot 20) are located to the south of the Subject Property (*See Photo 1 below)* and were not noted to be a significant stationary noise source. Further, any noise generated by these uses were captured by the noise monitoring, and are therefore considered in the assessment of existing ambient noise levels.

Photo 1: Block 319, Lot 20



Vehicular traffic is the predominant source of noise in the area surrounding the subject property. Additionally, the proposed project would introduce a sensitive receptor, where traffic would increase on roadways where existing background traffic is low.

Accordingly, a Proportional Noise Passenger Car Equivalent (PCE) Modeling Analysis was conducted to evaluate the No-Action and With-Action noise levels, and the corresponding building attenuation requirements for development effectuated by the Proposed Action. This noise assessment is limited to an assessment of ambient noise that could adversely affect occupants of the development.

Framework of Noise Analysis

Noise is defined as any unwanted sound, and sound is defined as any pressure variation that the human ear can detect. Humans can detect a large range of sound pressures, from 20 to 20 million micropascals, but only those air pressure variations occurring within a particular set of frequencies are experienced as sound. Air pressure changes that occur between 20 and 20,000 times a second, stated as units of Hertz (Hz), are registered as sound.

Because the human ear can detect such a wide range of sound pressures, sound pressure is converted to sound pressure level (SPL), which is measured in units called decibels (dB). The decibel is a relative measure of the sound pressure with respect to a standardized reference quantity. Because the dB scale is logarithmic, a relative increase of 10 dB represents a sound pressure that is 10 times higher. However, humans do not perceive a 10-dB increase as 10 times louder. Instead, they perceive it as twice as loud.

Sound is often measured and described in terms of its overall energy, taking all frequencies into account. However, the human hearing process is not the same at all frequencies. Humans are less sensitive to low frequencies (less than 250 Hz) than mid-frequencies (500 Hz to 1,000 Hz) and are most sensitive to frequencies in the 1,000- to 5,000-Hz range. Therefore, noise measurements are often adjusted, or weighted, as a function of frequency to account for human perception and sensitivities. The most common frequency weightings used are the A- and C-weightings. These weight scales were developed to allow sound level meters, which use filter networks to approximate the characteristic of the human hearing mechanism, to simulate the frequency sensitivity of human hearing. The A-weighting is the most commonly used for environmental measurements, and sound levels measured using this weighting are denoted as dBA. The letter "A" indicates that the sound has been filtered to reduce the strength of very low and very high frequency sounds, much as the human ear does. C-weighting gives nearly equal emphasis to sounds of most frequencies. Mid-range frequencies approximate the actual (unweighted) sound level, while the very low and very high frequency bands are significantly affected by C-weighting.

Table 19-1: Noise Levels of Common Sources

Sound Source	SPL (dB(A))
Air Raid Siren at 50 feet	120
Maximum Levels at Rock Concerts (Rear Seats)	110
On Platform by Passing Subway Train	100
On Sidewalk by Passing Heavy Truck or Bus	90
On Sidewalk by Typical Highway	80
On Sidewalk by Passing Automobiles with Mufflers	70
Typical Urban Area	60-70
Typical Suburban Area	50-60
Quiet Suburban Area at Night	40-50
Typical Rural Area at Night	30-40
Isolated Broadcast Studio	20
Audiometric (Hearing Testing) Booth	10
Threshold of Hearing	0
Notes: A change in 3dB(A) is a just noticeable change in SPL. A change in 10 dB(A)Is perceived as a doubling or halving in SPL.	
Source: 2014 CEQR Technical Manual	

Methodology for a Mobile Noise Assessment

An initial noise assessment, described in Subsection 311.1 of the CEQR Technical Manual, may be appropriate if a proposed project would:

- Generate or reroute vehicular traffic; or
- Introduce a new receptor near a heavily trafficked thoroughfare.

Pursuant to Section 111 of the *2014 CEQR Technical Manual*, mobile sources are those noise sources that move in relation to a noise-sensitive receptor—principally automobiles, buses, trucks, aircraft, and trains. Each has its own distinctive noise character, and, consequently, an associated set of noise assessment descriptors.

For Mobile Sources, an initial noise assessment may be appropriate if a proposed action would generate additional project-generated vehicular traffic in an area where roadways currently carry no or very low traffic volumes, or where a nearby receptor would potentially be impacted by high ambient noise levels. Receptors are generally the subject of most noise impact analyses. A noise-sensitive location (known as a "receptor") is usually defined as an area where human activity may be adversely affected when noise levels exceed predefined thresholds of acceptability or when noise levels increase by an amount exceeding predefined thresholds of change.

Automobile noise is a function of vehicle speed and engine noise. With changing gears, the noise levels tend to increase in a sawtooth kind of pattern as vehicular speed

increases. The interaction of the road surface with the tires generates noise that increases with vehicle speed. At vehicular speeds below 30 miles per hour, the typical automobile noise spectrum is dominated by engine noise. At speeds higher than 30 miles per hour, the automobile noise signature is composed of a combination of lower frequency engine noise and higher frequency tire noise. The engine and tire noise for vehicular speeds above 30 miles per hour are comparable in noise level. Noise generated by buses and heavy trucks is also composed of engine and tire noise, but tire noise tends to dominate the noise signature at vehicular speeds above 30 miles per hour in trucks and buses. Cargo load normally does not significantly affect noise levels because increased load usually results in decreased vehicular speed and the effects cancel each other out. Because individual trucks and buses are noisier than individual automobiles, the concept of passenger car equivalents (PCEs) is used.

Pursuant to Section 332.1 of the *2014 CEQR Technical Manual*, to calculate vehicular noise using projections:

- 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

After the Noise PCEs are calculated and tabulated, noise levels under No-Action and With-Action Conditions can be calculated using the existing $L_{eq(1)}$ noise measurement results pursuant to the logarithmic equation provided in *Equation 19-1* of the CEQR TM. $L_{10(1)}$ values are calculated by adding the difference between the $L_{10(1)}$ and $L_{eq(1)}$ descriptors found to exist in the measurement program to the calculated $L_{eq(1)}$ noise level.

Noise Standards and Guidelines

In 1983, the New York City Department of Environmental Protection (NYCDEP) adopted the City Environmental Quality Review (CEQR) noise exposure guidelines for exterior noise levels. As shown in Table 19-2 below, noise standards classify noise exposure into four categories based on noise level limits and land use, for vehicular traffic, rail, and aircraft noise sources: Acceptable, Marginally Acceptable, Marginally Unacceptable and Clearly Unacceptable, Table 19-3 of the CEQR Technical Manual defines attenuation requirements for buildings based on exterior noise exposure levels. Recommended noise attenuation values for buildings are designed to maintain interior noise levels of 45 dBA (L10 or Ldn, depending on the source) or below.

Table 19-2: Noise Exposure Guidelines for Use in City Environmental Impact Review

Receptor Type	Time Period	Acceptable General External Exposure	Airport[3] Exposure	Marginally Acceptable General External Exposure	Airport[3] Exposure	Marginally Unacceptable General External Exposure	Airport[3] Exposure	Clearly Unacceptable General External Exposure	Airport[3] Exposure
1.Outdoor area requiring serenity and quiet[2]		$L_{10} \leq 55$ dBA	Ldn < 60 dBA		Ldn < 60 dBA		Ldn < 60 dBA		Ldn < 75 dBA
2. Hospital, Nursing Home		$L_{10} \leq 55$ dBA		$55 < L_{10} \leq 65$ dBA		$65 < L_{10} \leq 80$ dBA		$L_{10} > 80$dBA	
3. Residence, residential hotel or motel	7 am to 10 pm	$L_{10} \leq 65$dBA		$65 < L_{10} \leq 70$ dBA		$70 < L_{10} \leq 80$ dBA		$L_{10} > 80$dBA	
	10 pm to 7 am	L10≤55dBA		$55 < L_{10} \leq 70$ dBA		$70 < L_{10} \leq 80$ dBA		$L_{10} > 80$dBA	
4. School, museum, library, court house of worship, transient hotel or motel, public meeting room, auditorium, out- patient public health facility		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM- 10 PM)		Same as Residential Day (7 AM –10 PM)	
5. Commercial or office		Same as Residential Day (7 AM-10		Same as Residential Day (7 AM-10		Same as Residential Day (7 AM –10 PM)		Same as Residential Day (7 AM-10	
6. Industrial, public areas only[4]	Note 4	Note 4		Note 4		Note 4		Note 4	

Source: New York City Department of Environmental Protection (adopted policy 1983).

Notes:

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

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

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

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

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

Table 19-3 CEQR TM: Attenuation Values to Achieve Acceptable Interior Noise Levels[13]

	Marginally Unacceptable				Clearly Unacceptable
Noise Level with Proposed Project	$70 < L_{10} \leq 73$	$73 < L_{10} \leq 76$	$76 < L_{10} \leq 78$	$78 < L_{10} \leq 80$	$80 < L_{10}$
Attenuation[1]	(i) 28 dB(A)	(ii) 31 dB(A)	(iii) 33 dB(A)	(iv) 35 dB(A)	$36 + (L_{10} - 80)^2$ dB(A)

Source: New York City of Environmental Protection

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Measurement Location and Equipment

Because the predominant noise sources in the area of the proposed project consist of vehicular traffic, noise monitoring was conducted during peak weekday vehicular travel periods (AM, Midday, PM) at all monitoring locations identified below. Additionally, the residential receptors nearest Vernon Boulevard and the Costco Warehouse will likely experience the highest ambient noise levels; For those locations (*Locations 4 and 5*), Saturday Peak Hour monitoring was conducted between 4 pm and 5 pm to determine if weekend vehicular traffic, and resulting noise levels, would warrant additional noise mitigation measures. Refer to **Figure 19-1** for the identified Costco Peak Hours based on location based google analytical data.

Pursuant to CEQR Technical Manual Methodology, measurement periods of 20-minutes were conducted at the street frontages of the Project Site:

- **Location One (1)** ***AM/MD/PM readings***: Located at the southwest corner of 11th Street and Broadway;
- **Location Two (2)** ***AM/MD/PM readings***: Located on 11th Street between 33rd Avenue and 33rd Road;
- **Location Three (3)** ***AM/MD/PM readings***: Located on 33rd Road approximately 60 feet west of 11th Street;
- **Location Four (4) AM/MD/PM and Saturday readings**: located on 10th Street approximately 70 feet south of Vernon Boulevard; and
- **Location Five (5) AM/MD/PM and Saturday readings**: located on Vernon Boulevard opposite the Costco parking lot.

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[13] [1] The above composite window-wall attenuation values are for residential dwellings. Commercial and office spaces/meeting rooms would be 5 dB(A) less in each category. All the above categories require a closed window situation and hence an alternate means of ventilation.
[2] Required attenuation values increase by 1 dB(A) increments for L_{10} values greater than 80 dBA.

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The monitoring locations are identified in Figure 19-2 and Photo 19-1, 19-2, 19-3, 19-4, and 19-5 below.

Noise monitoring was conducted using a Type 1 Casella CEL-633C sound meter with wind screen (*Locations 1, 4 and 5*) and a Type 2 Larson-Davis sound meter with wind screen (*Location 2 and 3*). The monitors were placed on a tripod at a height of approximately three feet above the ground, away from any other noise-reflective surfaces. The monitors were calibrated prior to and following each monitoring session. Periods of peak vehicular traffic around the subject site constitute a worst-case condition for noise at the project site. Noise meter calibration certification and back up data are provided in Appendix A.

Figure 19-1: Costco Peak Hour

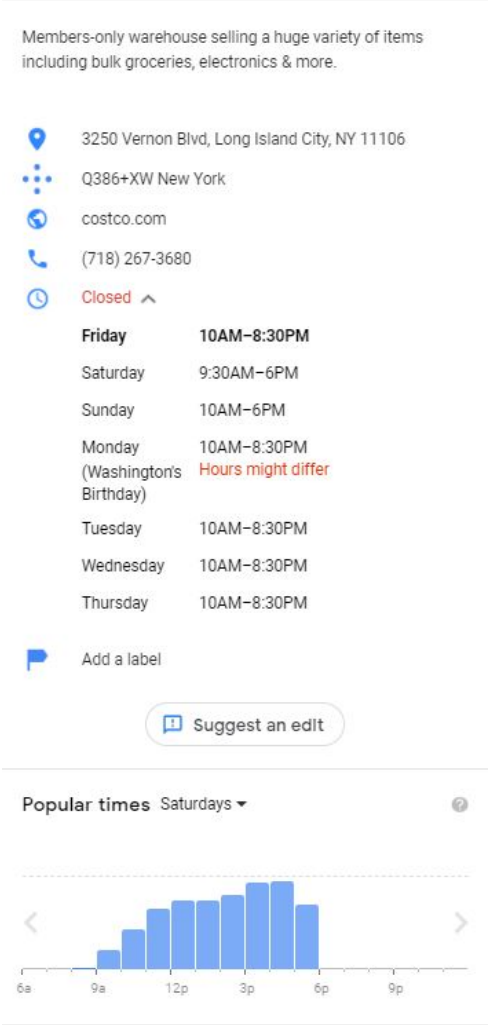


Photo 19-1: Noise Monitoring Location One (1)
Southwest corner of 11th Street and Broadway.



Photo 19-2: Noise Monitoring Location Two (2)
11th Street between 33rd Avenue and 33rd Road



Photo 19-3: Noise Monitoring Location Three (3)
33rd Road approximately 60 feet west of 11th Street



Photo 19-4: Noise Monitoring Location Four (4)
10th Street approximately 70 feet south of Vernon Boulevard



Photo 19-5: Noise Monitoring Location Five (5)
Vernon Boulevard opposite the Costco parking lot



Figure 19-2: Noise Monitoring Locations



Measurement Conditions

Monitoring was conducted during typical midweek conditions and Weekend peak hour, on Tuesday November 17th, 2015, Tuesday February 26th, 2019, and Saturday March 2nd, 2019. The weather was dry and wind speeds were moderate during all monitoring periods. Traffic volumes and vehicle classification were documented during each noise monitoring session.

Existing Conditions

Based on the noise measurements taken at the Project Site, the predominant source of noise is vehicular traffic. ***Table 19-4, 19-5, 19-6, 19-7, and 19-8*** *below contains the results for the measurements taken at the Project Site:*

Table 19-4
Noise Levels (dB) at Location 1

Tuesday November 17, 2015

Time	**8:45 am -9:05 am**	**12:44 pm – 1:04 pm**	**5:39 pm – 5:59 pm**
L_{max}	83.7	87.5	82.2
L_{10}	70.0	68.0	68.0
L_{eq}	67.0	64.7	64.4
L_{50}	62.5	61.0	60.5
L_{90}	57.5	56.0	53.5
L_{min}	52.0	47.8	46.7

Note: **Bold** denotes L_{10} noise level exceedances, according to Table 19-2 of the CEQR Technical Manual

Table 19-5
Noise Levels (dB) at Location 2

Tuesday, November 17, 2015

Time	**8:52 am – 9:13 am**	**12:27 pm – 12:51 pm**	**5:23 pm – 5:44 pm**
L_{max}	85.1	82.5	81.4
L_{10}	66.2	64.2	64.2
L_{eq}	64.0	62.0	62.1
L_{50}	56.9	53.2	52.1
L_{90}	52.5	50.0	47.2
L_{min}	50.2	47.8	45.5

Note: **Bold** denotes L_{10} noise level exceedances, according to Table 19-2 of the CEQR Technical Manual

Table 19-6 *Noise Levels (dB) at Location 3*			
Tuesday November 17, 2015			
Time	**8:25 am – 8:48 am**	**12:01 pm – 12:23 pm**	**5:00 pm – 5:21 pm**
L_{max}	79.1	76.5	77.9
L_{10}	69.0	64.7	66.2
L_{eq}	65.4	62.1	62.4
L_{50}	62.0	58.6	58.7
L_{90}	59.2	56.9	55.4
L_{min}	56.4	55.2	53.6

Note: **Bold** denotes L_{10} noise level exceedances, according to Table 19-2 of the CEQR Technical Manual

Table 19-7 *Noise Levels (dB) at Location 4*				
Tuesday, February 26, 2019 *Weekday Peak Hours*				*March 2, 2019* *Saturday Peak Hour*
Time	**7:50 am – 8:10 am**	**12:00 pm – 12:22 pm**	**4:30 pm – 4:51 pm**	**4:00 pm – 4:20 pm**
L_{max}	81.9	76.5	77.6	78.2
L_{10}	64.0	62.5	61.0	62.5
L_{eq}	60.8	59.1	58.2	61.0
L_{50}	57.5	55.0	55.0	59.0
L_{90}	52.5	51.0	52.0	53.0
L_{min}	49.3	49.1	49.8	51.4

Note: **Bold** denotes L_{10} noise level exceedances, according to Table 19-2 of the CEQR Technical Manual

Table 19-8 *Noise Levels (dB) at Location 5*				
Tuesday, February 26, 2019 *Weekday Peak Hours*				*March 2, 2019* *Saturday Peak Hour*
Time	**8:13 am – 8:33 am**	**12:24 pm – 12:45 pm**	**4:54 pm – 5:14 pm**	**4:22 pm – 4:42 pm**
L_{max}	91.8	85	93.4	96.4
L_{10}	**71.5**	**71.5**	**70.5**	68.5
L_{eq}	68.5	68.9	68.6	**70.3**
L_{50}	64.5	66.0	67.0	62.5
L_{90}	54.5	63.0	64.0	57
L_{min}	48.7	59.7	59.2	52.7

Note: **Bold** denotes L_{10} noise level exceedances, according to Table 19-2 of the CEQR Technical Manual; Because the Leq value was higher than the L_{10} during the Saturday Peak Hour, the Leq was used a the representative L_{10} value.

Table 19-9, 19-10, 19-11, 19-12, and 19-13 *below contains the traffic counts and vehicle classifications taken at the Project Site during each monitoring period:*

Table 19-9 ***Location 1:*** *Traffic volumes and vehicle classification at Location 1*			
Tuesday November 17, 2015			
	8:45 am - 9:05 am	**12:44 pm – 1:04 pm**	**5:39 pm – 5:59 pm**
Car/ Taxi	49	55	50
Van/Light Truck/SUV	42	58	48
Motorcycle	0	0	0
Medium Truck	10	8	4
Bus	3	4	1
Train	0	0	0

Table 19-9 Traffic Counts above are believed be collected erroneously and were substituted in the PCE analysis with the counts collected at location 5 and checked against 2016 AADT at a data point closest to the project intersection. Volumes on Vernon Blvd exceed 800 automobiles during all peak periods at Vernon Blvd Roosevelt Island and at Vernon Blvd -I495 locations. These data sheets are attached to this document.

Table 19-10 ***Location 2:*** *Traffic volumes and vehicle classification at Location 2*			
Tuesday November 17, 2015			
	8:52 am – 9:13 am	**12:27 pm – 12:51 pm**	**5:23 pm – 5:44 pm**
Car/ Taxi	32	22	17
Van/Light Truck/SUV	26	24	17
Motorcycle	0	0	0
Medium Truck	5	5	0
Bus	1	2	1
Train	0	0	0

Table 19-11 ***Location 3:*** *Traffic volumes and vehicle classification at Location 3*			
Tuesday November 17, 2015			
	8:25 am – 8:48 am	**12:01 pm – 12:23 pm**	**5:00 pm – 5:21 pm**
Car/ Taxi	5	3	5
Van/Light Truck/SUV	7	3	4
Motorcycle	0	0	0
Medium Truck	4	1	0
Bus		0	0
Train	0	0	0

Table 19-12
Location 4: *Traffic volumes and vehicle classification at Location 4*

	Tuesday, February 26, 2019 Weekday Peak Hours			*March 2, 2019 Saturday Peak Hour*
	7:50 am – 8:10 am	**12:00 pm – 12:22 pm**	**4:30 pm – 4:51 pm**	**4:00 pm – 4:20 pm**
Car/ Taxi	2	1	2	1
Van/Light Truck/SUV	2	2	2	3
Motorcycle	0	0	0	0
Medium Truck	0	0	1	0
Bus	0	0	0	1
Train	0	0	0	0

Table 19-13
Location 5: *Traffic volumes and vehicle classification at Location 5*

	Tuesday, February 26, 2019 Weekday Peak Hours			*March 2, 2019 Saturday Peak Hour*
	8:13 am – 8:33 am	**12:24 pm – 12:45 pm**	**4:54 pm – 5:14 pm**	**4:22 pm – 4:42 pm**
Car/ Taxi	60	53	69	66
Van/Light Truck/SUV	118	102	109	96
Motorcycle	0	0	0	0
Medium Truck	13	11	10	6
Bus	10	7	8	3
Train	0	0	0	0

Noise PCE Analysis

Existing Conditions

The property is currently improved with a one-story, approximately 26,637 square foot warehouse building occupied by the Milea Truck Sales and Leasing Company. Conditions on the site, and in the immediately surrounding area have not appreciably changed since the noise monitoring was conducted in 2015 for Locations 1, 2 and 3. New traffic counts were performed at Locations 4 & 5 and were not adjusted. According to CEQR Technical Manual 2014, Table 16-4, annual background growth rate for "Other Queens" section of the city has per annum growth rate of 0.5%. The 2015 traffic sample counts were factored to the no-build year using 5 years of 0.5% growth and 0.25% for every year after to 2022. As noise monitoring was conducted for 20-minute periods, and peak-hour traffic increments are based on 1-hour standards, all vehicular counts recorded during noise monitoring were multiplied by three (3) in the PCE analysis to reflect a one-hour equivalent.

No-Action Conditions

To determine the future No-Action traffic, and its corresponding noise levels, the vehicle counts and classifications collected during noise monitoring were converted to Noise PCEs and projected out from existing 2015 conditions (when the noise readings were conducted), to the 2022 Build Year. A per annum traffic growth rate of 0.5% for years 1-5 or 2015 to 2020 was applied for all locations and a per annum traffic growth rate of .25% was applied for years up till the 2022 build year

As indicated in Section 16: Transportation above, the No-Action Scenario would generate a total of 39 vehicle trip ends during the AM (8AM-9AM) peak hour period, 61 vehicle trip ends during the Midday (12Noon-1PM) peak hour time period, 75 vehicle trip ends during the PM (5PM-6PM) peak hour time period, and 68 vehicle trip ends during the (1PM-2PM) Saturday peak hour time period. The No-Action vehicular trips were added to existing noise conditions for their respective peak-hour, converted to Noise PCEs and tabulated. All project-generated vehicular trips were considered private-auto with a weighting of 1 PCE each. Noise levels under No-Action Conditions were calculated using the existing Leq(1) noise measurement results for each monitoring location pursuant to the logarithmic equation provided in Equation 19-1 of the CEQR TM. L10(1) values were calculated by adding the difference between the L10(1) and Leq(1) descriptors found to exist in the measurement program to the calculated No-Action Leq(1) noise level. The results of the Future No-Action Noise PCE Analysis for each monitoring location are shown below in *Table 19-14* and *Table 19-15*.

With-Action Conditions

As indicated above in Section 16: Transportation, the Proposed Total Build-Out would generate a total of 85 vehicle trip ends during the AM (8AM-9AM) peak hour period, 83 vehicle trip ends during the Midday (12Noon-1PM) peak hour time period, 113 vehicle trip ends during the PM (5PM-6PM) peak hour time period, and 102 vehicle trip ends during the (1PM-2PM) Saturday peak hour time period**.**

Accordingly, the Proposed Action is projected to generate a total of 46 incremental vehicle trip-ends during the AM (8AM-9AM) peak hour period, 22 net vehicle trip ends during the Midday (12Noon-1PM) peak hour time period, 38 net vehicle trip-ends during the PM (5PM-6PM) peak hour time period, and 34 net vehicle trip-ends during the (1PM-2PM) Saturday peak hour time period. Because the project screens out of a Level 2 Traffic Assignment to the local network, and to provide a conservative analysis, all project-generated vehicles were assumed to traverse past each monitoring location during their

respective peak hour[15]. To simplify the analysis but to assure a conservative analysis all trip ends were considered auto with a 1 PCE increment each.

The calculated total Noise PCEs derived from the incremental With-Action traffic were converted to Noise PCEs, and the resulting noise levels under With-Action Conditions were calculated for each monitoring location pursuant to CEQR methodology. The With-Action Noise Levels are corresponding attenuation requirements are shown below in *Table 19-14* and *Table 19-15*.

Conclusion

The 2014 *CEQR Technical Manual* Table 19-2 contains noise exposure guidelines. For the proposed redevelopment for residential use, an L_{10} of between 65 and 70 dB(A) is identified as a marginally acceptable general external exposure, and noise levels between 70 and 75 dB(A) are marginally unacceptable.

The highest recorded L_{10} based on the With Action PCE Analysis for each noise monitoring location is as follows:

- **Location 1: 70.7 dB(A)** during the AM peak hour
- **Location 2:** 67.1 dB(A) during the AM peak hour
- **Location 3: 70.7 dB(A) during the AM peak hour**
- **Location 4: 73.1 dB(A) during the AM peak hour**
- **Location 5: 71.9 dB(A) during the MD peak hours**

The 2014 *CEQR Technical Manual* Table 19-3 contains noise attenuation requirements to ensure an acceptable indoor noise environment. Based on these results, a window-wall attenuation is proposed as follows;

Based on a 70.7 max imputed L_{10} at Location 1, 28 dB(A) is recommended for east facing façades.

Based on a 70.7 max imputed L10 at Location 3, 28 dB(A) is recommended for 33rd Rd – south facing façades.

Based on a 73.1 max imputed L_{10} at Location 4, 31 dB(A) is recommended for 10th Street – west facing façades.

[15] Although the Saturday Project Peak Hour differs from the Saturday Peak Hour identified for noise analysis purposes, all Saturday peak hour vehicles were applied to the 4-5 pm peak hour for each monitoring location.

Based on a 71.9 max imputed L_{10} at Location 5, 28 dB(A) is recommended for Vernon Blvd – north facing façades.

With this level of noise attenuation, the proposed project does not have the potential for adverse impacts related to noise.

To avoid any potential impacts associated with noise, the Proposed Actions will place an (E) designation (E-518) for noise on the following property:

Block 315, Lot 1

The text of the (E) designation is as follows:

> **Block 315, Lot 1 (Proposed Building A):** To ensure an acceptable interior noise environment, future residential/commercial/community facility uses must provide a closed-window condition with a minimum of 28 dBA window/wall attenuation on facades facing 33rd Road to ensure an interior noise level not greater than 45 dBA for residential and community facility uses or not greater than 50 dBA for commercial uses. 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.
>
> **Block 315, Lot 1 (Proposed Building B):** To ensure an acceptable interior noise environment, future residential/commercial/community facility uses must provide a closed-window condition with a minimum of 31 dBA window/wall attenuation on facades facing 10th Street to ensure an interior noise level not greater than 45 dBA for residential and community facility uses or not greater than 50 dBA for commercial uses. 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.
>
> **Block 315, Lot 1 (Proposed Building C):** To ensure an acceptable interior noise environment, future residential/commercial/community facility uses must provide a closed-window condition with a minimum of 31 dBA window/wall attenuation on facades facing 10th Street and 28 dBA of attenuation on facades facing Vernon Boulevard or 11th Street to ensure an interior noise level not greater than 45 dBA for residential and community facility uses or not greater than 50 dBA for commercial uses. 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.

The owner of the project site will record the above-referenced (E) designation related to noise with the Mayor's Office of Environmental Remediation (OER) prior to the City Planning Commission's approval of the Proposed Actions.

With the implementation of the (E) designation, no significant adverse impacts related to noise would occur.

Therefore, the action would not result in any potentially significant adverse stationary or mobile source noise impacts, and further assessment is not warranted.

22. CONSTRUCTION

Introduction

A preliminary construction analysis may be required because the proposed development would result in the following:

- The project's construction would be located in a Central Business District (CBD) or along an arterial or major thoroughfare.
- The project's construction activities would require closing, narrowing, or otherwise impeding moving lanes, roadways, key pedestrian facilities (*e.g.*, sidewalks, crosswalks, corners/corner reservoirs), parking lanes and/or parking spaces in on-site or nearby parking lots and garages, bicycle routes and facilities, bus lanes or routes, or access points to transit.
- 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.

Proposed Construction Schedule

The proposed development is comprised of three buildings that would be constructed on a single block that is Applicant owned. The Project Area, which is bounded by Vernon Boulevard, 33rd Road, 10th Street, 11th Street, and Broadway in Astoria, Queens, is separated from existing development in the vicinity by these streets. All three buildings would be constructed simultaneously over a period of 24 months or less. Construction is anticipated to begin in 2020 with completion expected in 2022. The Project Build Year is therefore assumed to be 2022.

Proposed Construction Activities

Construction activities would begin with the demolition of the existing structure in the Project Area. Following this, the major construction activities for each of the three buildings would include site preparation and excavation, construction of the building foundations, construction of the superstructure and building envelope, and interior fit-out work. The demolition of the existing structure on the site would take approximately two months. The construction of each of the three structures would include two months for site preparation and excavation, four months for the construction of the building foundations, ten months for the construction of the superstructures and building envelopes, and six months for interior fit-out work. The total construction process would take 24 months or less.

As all three buildings would be constructed, completed, and occupied at approximately the same time, there would be no construction impacts of either building on the residents of the other. All construction work would be completed sometime in late 2022.

Project construction activities are expected to be typical for larger building construction projects in New York City. Construction activities would predominantly occur Monday through Friday, although limited delivery of certain critical pieces of equipment (e.g., cranes) may be necessary on weekend days if required in order to minimize traffic disruptions. Any weekend work would be contingent upon any conditions that may be imposed by City agencies that approve and monitor construction activities such as the NYC Department of Buildings (DOB) and the NYC Department of Transportation (DOT). DOB also regulates the permitted hours of construction. In accordance with those regulations, typical construction activities in New York City begin no earlier than 7 AM during the week, and workers typically arrive and begin to prepare work areas between 6 and 7 AM. The standard weekday construction work day ends by 3:30 PM with an occasional extended shift until 6 PM.

Potential Construction Impacts

In accordance with the 2014 *CEQR Technical Manual*, the proposed project was reviewed to determine whether further analysis of the proposed construction activities is needed for any technical area, as follows.

Transportation

According to the *CEQR Technical Manual*, a number of factors should be considered before determining whether a preliminary assessment of the effect of construction on transportation is needed including:

• *Whether the project's construction would be located in a Central Business District (CBD) or along an arterial or major thoroughfare;*

• *Whether the project's construction activities would require closing, narrowing, or otherwise impeding moving lanes, roadways, key pedestrian facilities, parking lanes and/or parking spaces, bicycle routes and facilities, bus lanes or routes, or access points to transit; and*

• *Whether the project would involve construction on multiple development sites in the same geographic area, such that there is the potential for several construction timelines to overlap, and last for more than two years overall.*

The proposed development would be located along Vernon Boulevard and Broadway, which are arterial roadways/major thoroughfares, and the construction of the proposed development may require the temporary closing of the sidewalks adjacent to the Project Area along Vernon Boulevard, 33rd Road, 10th Street, 11th Street, and/or Broadway. The sidewalks adjacent to the site are likely to be reconstructed, which may temporarily impact pedestrian flow and the availability of parking spaces along these streets.

However, changes to moving traffic lanes are not likely. The affected locations would not be particularly sensitive to such a closure as they are not areas with high pedestrian activity, are not located adjacent to or along a direct transportation route to sensitive land uses such as a school or hospital, and the sidewalks and roadways affected by the proposed construction would not be considered to be near capacity. Any potential closure of the sidewalks adjacent to the Project Area would be considered a routine closure that would be addressed by a permit and pedestrian access plan issued by NYC DOT Office of Construction Mitigation and Coordination at the time of closure. Therefore, no significant adverse transportation impacts are expected to result from the project.

It should also be noted that the Project Area will be entirely vacant once the existing building on the property is demolished. All construction equipment and supplies could therefore be stored on site, which would limit any disturbance to the surrounding transportation infrastructure.

Although the project would involve construction on multiple development sites on the same block with some overlap in construction activities, construction of the proposed development would occur over a relatively short time period of approximately 24 months or less.

On the basis of the above, construction of the proposed project would not be expected to result in significant adverse impacts on transportation.

Air Quality and Noise

According to the *CEQR Technical Manual*, an assessment of air quality and noise for construction activities is likely not warranted if the project's construction activities:

- *Are considered short-term (less than two years);*
- *Are not located near sensitive receptors; and*
- *Do not involve construction of multiple buildings where there is a potential for on-site receptors on buildings to be completed before the final built-out.*

Development of the proposed project would take 2 years or less and would therefore be considered to be short term. In addition, although construction of the project would involve multiple buildings, the three proposed buildings would be constructed simultaneously and no occupancy of the buildings would occur until all construction is completed. Therefore, there is no potential for on-site receptors on buildings to be completed before the final built-out.

There are some sensitive receptors including residences and open space facilities within 400 feet of the Project Area which are separated from the Project Area by streets and other development. The closest receptor is the Noguchi Museum open space which is separated

from the Project Area by the intersection of Vernon Boulevard and Broadway. The Socrates Sculpture Park is also separated from the Project Area by Vernon Boulevard. Residential uses are located to the south of the Project Area and are separated from it by 10th Street and 33rd Road as well as existing industrial development along 33rd Road between 10th and 11th Streets as well as an industrial use at the corner of 33rd Road and 10th Street. It should be noted that these open space facilities are located across these streets to the north from the narrow tip of the Project Area and away from the bulk of construction activities on the site.

The *CEQR Technical Manual* states that if a project meets one or more of the criteria above, a preliminary air quality or noise assessment is not automatically required. Instead, various factors should be considered, such as the types of construction equipment (*e.g.*, gas, diesel, electric), the nature and extent of any commitment to use the Best Available Technology (BAT) for construction equipment, the physical relationship of the Project Area to nearby sensitive receptors, the type of construction activity, and the duration of any heavy construction activity. These measures are discussed below.

Demolition, excavation, and foundation activities, which often generate the highest levels of air emissions and noise, would be temporary and limited in duration and would take approximately 8 months to complete. Other exterior building activities would occur over 10 months and would generate relatively low air quality and noise impacts on the surroundings. No external air and noise impacts for the interior building work would be expected.

Air Quality

The project would make use of the Best Available Technology to minimize impacts to the residential and open space uses in the vicinity of the Project Area as further discussed below.

As with most construction projects in the City, the proposed project would require the operation of several pieces of diesel equipment at one time during the heavier periods of construction, such as excavation. The Applicant would implement the following measures that would minimize air quality and noise impacts on the surrounding community.

• *Diesel Equipment Reduction.* Construction of the proposed project would minimize the use of diesel engines and use electric engines, to the extent practicable. This would reduce the need for on-site generators, and require the use of electric engines in lieu of diesel where practicable.

• *Clean Fuel.* To the extent practicable, ultra-low sulfur diesel (ULSD) would be used for diesel engines in the Project Area.

• *Best Available Tailpipe Reduction Technologies.* To the extent practicable, non-road diesel engines with a power rating of 50 horsepower (hp) or greater would utilize the best

available tailpipe (BAT) technology for reducing diesel particulate matter (DPM) emissions. Diesel particle filters (DPF) have been identified as being the tailpipe technology currently proven to have the highest PM reduction capability.

To the extent practicable, construction contracts would specify that all diesel non-road engines rated at 50 hp or greater would utilize DPFs, either installed on the engine by the original equipment manufacturer (OEM) or retrofit with a DPF verified by EPA or the California Air Resources Board, and may include active DPFs if necessary; or other technology proven to reduce DPM by at least 90 percent.

• *Utilization of Newer Equipment.* EPA's Tier 1 through 4 standards for non-road engines regulate the emission of criteria pollutants from new engines, including PM, CO, NOx, and hydrocarbons (HC). To the extent practicable, all non-road construction equipment in the project would meet at least the Tier 2 emissions standard, and construction equipment meeting Tier 3 and/or Tier 4 emissions standards would be used where conforming equipment is widely available, and the use of such equipment is practicable.

• *Dust Control.* Fugitive dust control plans will be implemented as part of the construction process. For example, stabilized truck exit areas would be established for washing off the wheels of all trucks that exit the construction sites. Truck routes within the Project Area would be watered as needed to avoid the re-suspension of dust. All trucks hauling loose material will be equipped with tight fitting tailgates and their loads securely covered prior to leaving the Project Area. In addition to regular cleaning by the City, streets adjacent to the Project Area would be cleaned as frequently as needed by the construction contractor. Water sprays will be used for all transfer of spoils to ensure that materials are dampened as necessary to avoid the suspension of dust into the air.

• *Restrictions on Vehicle Idling.* In addition to adhering to local laws restricting unnecessary idling on roadways, on-site vehicle idle time will also be restricted to three minutes, to the extent practicable, for all equipment and vehicles that are not using their engines to operate a loading, unloading, or a processing device (e.g., concrete mixing trucks) or otherwise required for the proper operation of the engine.

Overall, these air emission control commitments would significantly reduce DPM emissions to a level otherwise achieved by applying the currently defined best available control technologies under NYC Local Law 77, which are required only for publically funded City capital projects. In addition, as stated in the *CEQR Technical Manual*, all the necessary measures would be implemented to ensure compliance with the NYC Air Pollution Control Code regulating construction-related dust emissions. Based on the project size and the construction work involved, construction activities for the proposed project would not be considered out of the ordinary or exceptional in terms of intensity and would be of a relatively short duration. Therefore, based on above and with the implementation of an emissions control program, the proposed project would not result in any significant adverse impacts on air quality.

Noise

While increases in ambient noise levels due to construction exceeding the *CEQR* impact criteria for two years or less may be noisy and intrusive, they are not considered to be significant adverse noise impacts. As described above, construction of the proposed development in the Project Area would occur over a relatively short time period of approximately 24 months or less and only 18 of these months would involve exterior construction activities. In addition, demolition, excavation, and foundation activities, which are the noisiest construction activities, would be temporary and limited in duration and would take approximately 8 months to complete. These activities would be spread out over three separate locations on the block. Other exterior building activities would occur over 10 months and would be located at three separate locations on the block. As this work would be occurring along four different street frontages of the block, no significant cumulative noise impacts would be expected.

Construction noise is regulated by the NYC Noise Control Code and by EPA's noise emission standards for construction equipment. These local and federal requirements mandate that certain classifications of construction equipment and motor vehicles meet specified noise emission standards; that construction activities be limited to weekdays between the hours of 7 AM and 6 PM; and that construction materials be handled and transported in such a manner as not to create unnecessary noise. If weekend or after hour work is necessary, permits would be required to be obtained, as specified in the NYC Noise Control Code. In addition, the Applicant would commit to a preparing a noise control plan that would be implemented during project construction. The measures to be contained in the plan would avoid noise impacts on the surrounding community. As stated above, there would be no noise impacts from construction to the residents of the project as project occupancy would not occur until all construction is completed. The plan would be prepared to be compliant with the NYC Noise Control Code (which requires a "Construction Noise Mitigation Plan") and would include such measures as construction noise source controls, path controls, and receiver controls. With these measures in place, no significant noise impacts are expected to occur as a result of the project construction.

Historic and Cultural Resources

There are no known historic or archaeological resources either on the Project Area or within 400 feet of the Project Area. Therefore, no impacts to historic and cultural resources would be anticipated from construction of the proposed development.

Hazardous Materials

As explained in the Hazardous Materials section above, the Phase I ESA conducted for the Project Area revealed the following recognized environmental conditions (RECs) in connection with the Project Area:

- The possible presence of contamination from past spills, leaks, or discharges of hazardous materials or petroleum products from former truck body

manufacturing operations, bus and transit company operations and truck sales, leasing and repair operations at the subject property.

- The possible presence of site contamination from past spills or leaks from former or current underground storage tanks at the site.
- The possible presence of an out of service underground fuel oil tank located below the repair bays on the northern portion of the subject building which has not been closed in accordance with NYSDEC and NYCFD regulations.
- The possible presence of site contamination from past spills, leaks, or discharges of hazardous materials or petroleum products to on-site drainage structures which are not connected to the municipal sewer system.
- The possible presence of asbestos-containing materials and lead-based paints in the subject building.
- The possible presence of groundwater contamination in the area of the subject property from past spills, leaks, or discharges from historical off-site industrial uses, auto-related uses or leaking underground storage tanks in the area of the subject property.

Based on the evidence of recognized environmental conditions presented above, Phase II testing of the site would be required. However, it is not feasible to conduct subsurface testing at the present time as the site is currently occupied by an active truck sales and leasing operation. Therefore, an (E) designation will be mapped on the property to ensure that testing for and mitigation and/or remediation of any hazardous materials contamination of the property be completed prior to, or as part of, future development of the site.

To avoid any potential impacts associated with hazardous materials, the Proposed Actions will place an (E) designation (E-518) for hazardous materials on the following property:

Block 315, Lot 1

The text of the (E) designation is as follows:

Due to the possible presence of hazardous materials on the aforementioned designated site, there is potential for contamination of the soil and groundwater. To determine if contamination exists and perform the appropriate remediation, the following tasks must be undertaken by the fee owners of the lot restricted by this (E) designation prior to any demolition or disturbance of soil on the lot.

Task 1

The fee owners of the lot restricted by this (E) designation will be required to prepare a scope of work for any soil, gas, or groundwater sampling and testing needed to determine if contamination exists, the extent of the contamination, and to what extent remediation may be required. The scope of work will include all relevant supporting documentation, including site plans and sampling locations. This scope of work will be submitted to the Mayor's Office of Environmental Remediation (OER) for review and approval prior to implementation. It will be reviewed to ensure that an adequate number of samples will be collected and that appropriate parameters are selected for laboratory analysis.

No sampling program may begin until written approval of a work plan and sampling protocol is received from the OER. The number and location of sample sites should be selected to adequately characterize the type and extent of the contamination, and the condition of the remainder of the site. The characterization should be complete enough to determine what remediation strategy (if any) is necessary after review of the sampling data. Guidelines and criteria for choosing sampling sites and performing sampling will be provided by OER upon request.

Task 2

A written report with findings and a summary of the data must be presented to OER after completion of the testing phase and laboratory analysis for review and approval. After receiving such test results, a determination will be provided by OER if the results indicate that remediation is necessary.

If OER determines that no remediation is necessary, written notice shall be given by OER.

If remediation is necessary according to test results, a proposed remediation plan must be submitted to OER for review and approval. The fee owners of the lot restricted by this (E) designation must perform such remediation as determined necessary by OER. After completing the remediation, the fee owners of the lot restricted by this (E) designation should provide proof that the work has been satisfactorily completed.

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

With the implementation of the above (E) designation, no significant adverse impacts related to hazardous materials would occur.

Therefore, there is no potential for the Proposed Actions to result in significant adverse construction impacts related to hazardous materials.

Natural Resources

There are no natural resources in the Project Area which is entirely covered by an existing building and pavement. The Project Area is surrounded by existing streets on all sides and therefore is not located adjacent to properties containing natural resources. Therefore, there is no potential for significant adverse construction impacts on natural resources.

Open Space, Socioeconomic Conditions, Community Facilities, Land Use and Public Policy, Neighborhood Character, and Infrastructure

According to the *CEQR Technical Manual*, a preliminary construction assessment is generally not needed for these technical areas unless the following are true:

- *The construction activities are considered "long-term" (more than 2 years);*

- *Short-term construction activities would not directly affect a technical area, such as impeding the operation of a community facility.*

As discussed above, construction activities would be considered short term as they would occur over a period of 24 months or less. Construction of the proposed project would not have any significant direct effects on open space areas, socioeconomic conditions, community facilities, or infrastructure conditions, and would not have cumulative impacts on land use or neighborhood character. Therefore, construction of the proposed project would not be expected to result in any significant adverse construction impacts on these technical areas.

Conclusion

On the basis of the above analysis, the Proposed Actions would not have any potentially significant adverse construction impacts, and further analysis would not be warranted.

APPENDIX

Architectural Plans

PLOT PLAN
SCALE: 1" = 40'-0"

FOR ILLUSTRATIVE PURPOSES ONLY

Gerald J. Caliendo, R.A., A.I.A.
Architect, P.C.

Architecture
Interior Design
Code Consultant
Building Dept.
Expediting

138-72 Queens Boulevard
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REGISTERED ARCHITECT
GERALD J. CALIENDO
020241
STATE OF NEW YORK

DRAWING TITLE: SITE PLAN
NO ACTION SCENARIO

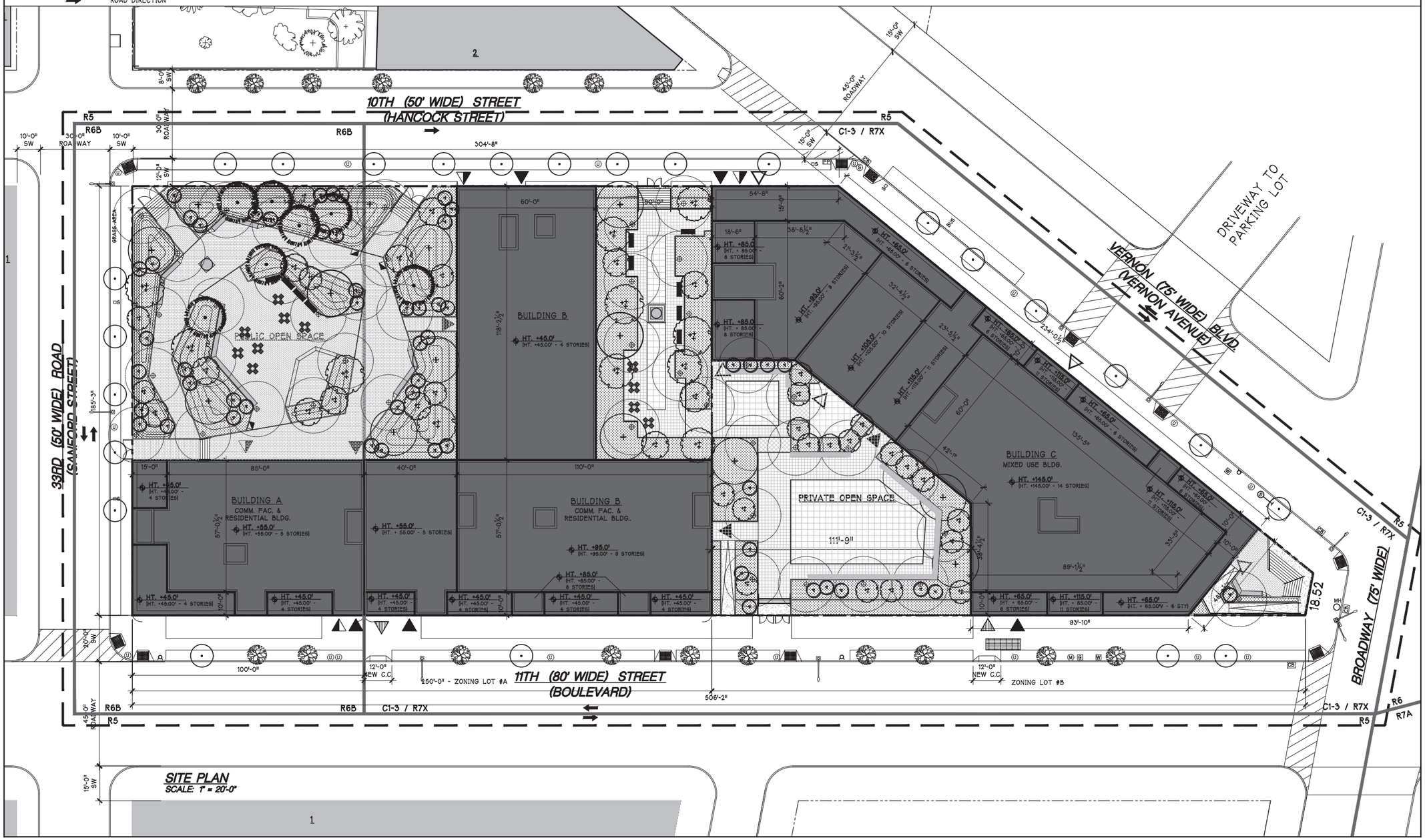
PREMISES: 32-01 VERNON BLVD.
L.I.C., QUEENS, NY

DRAWN BY:	GJC
CHECKED BY:	GJC
JOB No:	07130
SCALE:	AS NOTED
DATE:	REV. 2-27-14

DRAWING NO: CC-2

LEGEND

- COMMERCIAL ACCESS POINT
- COMMUNITY FAC. ACCESS POINT
- RESIDENTIAL ACCESS POINT
- PARKING GARAGE ENTRANCE/EXIT
- BUILDING ENTRANCE POINTS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY
- C1-3 / R7X — ZONING DISTRICT
- 7 — No. OF STORIES
- 3B — No. OF STORIES W/ BASEMENT
- 1S — No. OF STORIES W/ STORE
- 60' — BUILDING HEIGHT
- ROAD DIRECTION
- ZONING LOT LINE
- ZONING DISTRICT BOUNDARY
- ILLUSTRATIVE BUILDING LINE
- PROPOSED MAXIMUM BUILDING ENVELOPE
- GENERAL LARGE SCALE DEVELOPMENT
- STREET LAMP
- TRAFFIC LIGHT
- STREET LAMP WITH TRAFFIC LIGHT
- FIRE HYDRANT
- PROPOSED NEW TREE
- EXISTING STREET TREE
- EXISTING POST
- EXISTING UTILITY POLE
- EXISTING MANHOLE
- EXISTING SIGN
- UTILITY BOX
- FIRE & POLICE CALL BOX
- EXISTING CATCH BASIN
- EXISTING BUS STOP
- EXISTING SUBWAY VENT
- HT. +149.00' (HT. + 149.00') — DEVELOPMENT ENVELOPE HEIGHT / ILLUSTRATIVE BUILDING HEIGHT
- EXISTING BUILDING FOOTPRINT
- PROPOSED BUILDING FOOTPRINT



SITE PLAN
SCALE: 1" = 20'-0"

THE ARCHITECT SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, DEVIATIONS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTIONS WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUB-CONTRACTORS OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK OR FOR THE FAILURE OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALWAYS USE DIMENSIONS AS SHOWN. DRAWINGS ARE NOT TO BE SCALED. GERALD J. CALIENDO ARCHITECT, P.C. AND ITS PRINCIPAL/EMPLOYEES WERE NOT RETAINED FOR ANY CONSTRUCTION SUPERVISION.

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CONSULTANTS:

OWNER:
CIPICO CONSTRUCTION
58-08 48TH STREET
MASPETH, NY

DRAWING TITLE:
SITE PLAN
PROPOSED CONDITIONS

PROJECT ADDRESS:
32-01 VERNON BLVD.
LONG ISLAND CITY, NY

NO.	DATE	REVISION

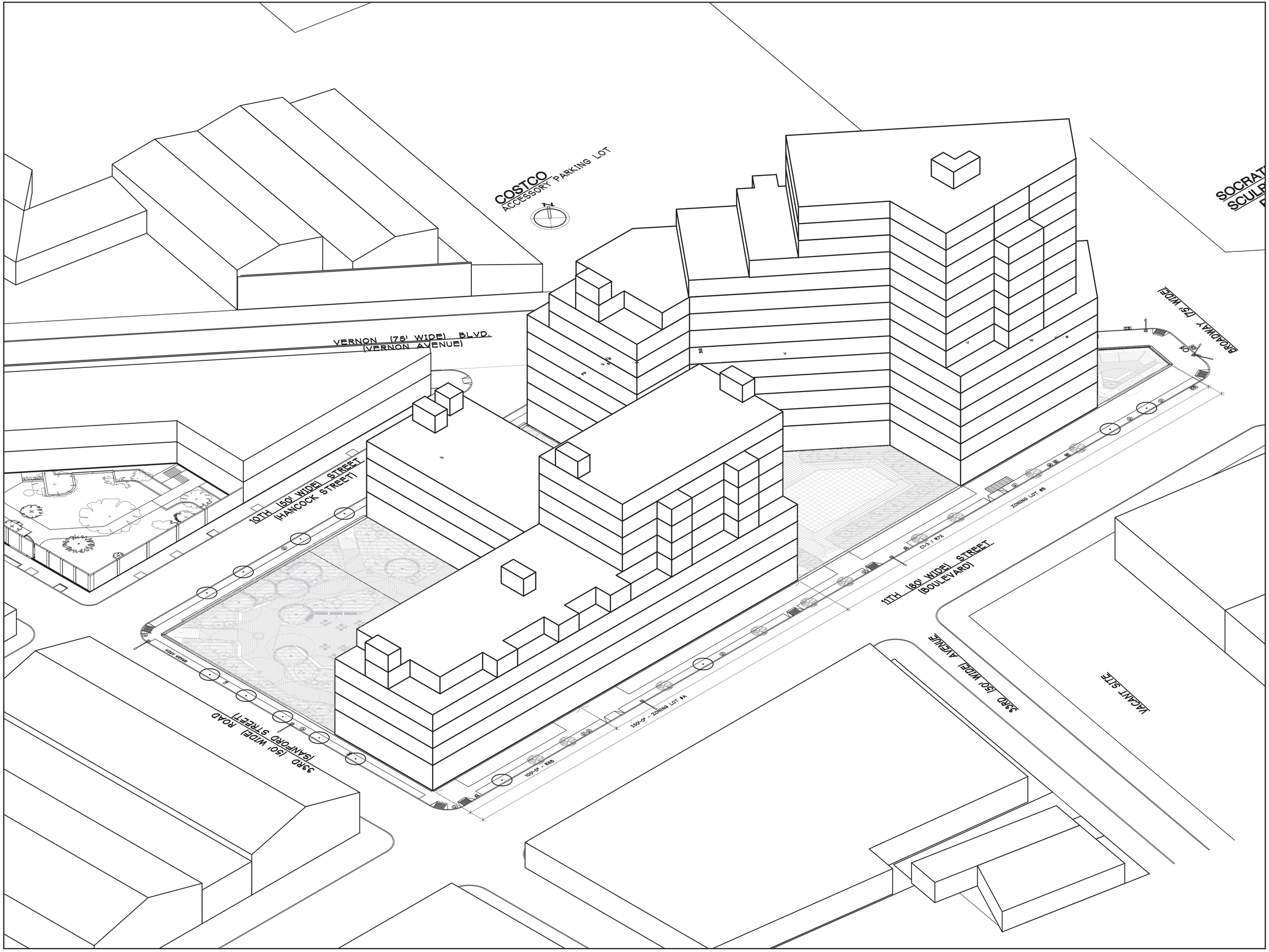
DRAWN BY: N.M.M.
CHECKED BY: G.J.C.
JOB NO: 0730
SCALE: AS NOTED
DATE: 4-9-19

SEAL:

DOB:

DRAWING No: 4 OF 17

Z-400.00



THE ARCHITECT SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, DEVIATIONS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTIONS WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUB-CONTRACTORS OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK OR FOR THE FAILURE OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALWAYS USE DIMENSIONS AS SHOWN. DRAWINGS ARE NOT TO BE SCALED. GERALD J. CALIENDO ARCHITECT, P.C. AND ITS PRINCIPAL/EMPLOYEES WERE NOT RETAINED FOR ANY CONSTRUCTION SUPERVISION.

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MASPETH, NY

NO.	DATE	REVISION

SEAL:

REGISTERED ARCHITECT GERALD J. CALIENDO 022241 STATE OF NEW YORK

DRAWING TITLE:
3D MASSING
FOR ILLUSTRATIVE PURPOSES ONLY

PROJECT ADDRESS:
32-01 VERNON BLVD.
LONG ISLAND CITY, NY

DRAWN BY: NAM.
CHECKED BY: GJC
JOB NO: 07130
SCALE: AS NOTED
DATE: REV 1-29-19

DOB:

DRAWING No: 3 OF 15

D-100.00

HISTORIC AND CULTURAL RESOURCES APPENDIX

Landmarks Preservation Commission

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

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

ENVIRONMENTAL REVIEW

Project number: NO LEAD AGENCY / NL-CEQR-Q
Project: 32-01 VERNON BLVD
Address: 33-02 11 STREET, **BBL:** 4003150001
Date Received: 5/30/2018

[X] No architectural significance

[X] No archaeological significance

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

[ ] Listed on National Register of Historic Places

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

[ ] May be archaeologically significant; requesting additional materials

Gina Santucci 5/30/2018

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 33427_FSO_DNP_05302018.doc

HAZARDOUS MATERIALS APPENDIX

NYC Environmental Protection

Carter H. Strickland, Jr.
Commissioner

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

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

October 19, 2012

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

Re: Vernon Boulevard Rezoning
32-01 Vernon Boulevard
Block 315, Lot 1
DEP # 13DEPTECH016Q / CEQR # 12DCP139Q
Queens, New York

Dear Mr. Dobruskin:

The New York City Department of Environmental Protection, Bureau of Environmental Planning and Analysis (DEP) has reviewed the March 2012 Environmental Assessment Statement and the November 2010 Phase I Environmental Site Assessment (Phase I) prepared by Environmental Project Data Statements Company on behalf of Cipico Construction Inc. (applicant). It is our understanding that the applicant is seeking a zoning map amendment from the New York City Department of City Planning (DCP) to rezone Block 315 from an R5 district to an R6B district, R7A district, and an R7A/C1-3 district. The proposed action would facilitate a proposal by the applicant to redevelop the block with a five-story residential building, an eight-story residential building, and an eight story mixed-use residential and commercial building containing a total of 261 dwelling units, including 52 affordable units; approximately 16,692 square feet of commercial space; and 200 below grade accessory parking spaces. The project site is currently developed with a one-story warehouse building occupied by a truck sales and leasing company and paved parking for trucks and equipment. The proposed rezoning area is bounded by Vernon Boulevard, 33rd Road, 10th Street, 11th Street, and Broadway in the Long Island City neighborhood of Queens Community District 1.

The November 2010 Phase I report revealed that historical on-site and surrounding area land uses consisted of a variety of commercial and industrial uses including the Wood Hydraulic and Hoist Company, bus and transit companies, truck sales, leasing and repair businesses, storage and use of automotive cleaners, fabrication and welding of structural and decorative steel items, a stone business, a gasoline filling station, a structural steel company, a custom hot dip galvanizing production facility, retail, a museum, a photo engravers supply company, and auto repair. The operations of the Wood Hydraulic and Hoist Company involved spray painting operations in the subject building and it is also likely that the operations included the use of automotive related chemicals including hydraulic fluid, lubricating oils, greases, solvents,

and cleaners. The operations of bus and transit companies, truck sales, leasing and repair operations typically involve the storage and use of hazardous materials and petroleum products such as lubricating oils, brake and transmission fluids, antifreeze, greases, parts washing solvents, and paints. Based on the age of the subject building, asbestos containing materials and lead based paints could be present in the on-site structure. The New York State Department of Environmental Conservation SPILLS database identified one prior spill on the subject property.

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

- Because of the extensive manufacturing history and on-site uses which could result in environmental contamination, DEP recommends that an "E" designation for hazardous materials should be placed on the zoning map pursuant to Section 11-15 of the New York City Zoning Resolution for the subject property. The "E" designation will ensure that testing and mitigation will be provided as necessary before any future development and/or soil disturbance.

The applicant should be directed to coordinate further hazardous materials assessments through the Mayor's Office of Environmental Remediation. Future correspondence and submittals to DEP related to this project should include the following tracking number **13DEPTECH016Q**. If you have any questions, you may contact Mr. Wei Yu at (718) 595-4358.

Sincerely,

Maurice S. Winter
Deputy Director, Site Assessment

c: E. Mahoney
M. Winter
W. Yu
T. Estesen
M. Wimbish
D. Cole – OER
C. Evans – DCP
L. Dorestant – DCP
File

TRANSPORTATION APPENDIX

Table 1 : Transportation Planning Factors-*Revised*

32-02 Vernon Blvd. Astoria, Queens NY

Land Use:	Residential	Local Retail	Medical Office
	d.u.	Space-sq.ft.	Space-sq.ft.
Size/Units:	259	11,236	-8,883
	(1)	**(1)**	**(4)**
Trip Generation:			
Weekday	8.075	205	127
Saturday	9.6	240	127
	per d.u.	per 1,000 sq.ft.	per 1,000 sq.ft.
Linked-Trip:	0%	25%	0%
Temporal Distribution:	**(1)**	**(1)**	**(4)**
AM Peak Hour	10%	3%	4%
MD Peak Hour	5%	19%	11%
PM Peak Hour	11%	10%	12%
Saturday Midday Peak Hour	8%	10%	11%
	(2)	**(4)**	**(4)**
Modal Split :	AM/MD/PM/Sat.Mid.	AM/MD/PM/Sat.Mid.	AM/MD/PM/Sat.Mid.
Auto	27.1%	11%	30%
Taxi	0.2%	0%	2%
Subway	53.8%	4%	33%
Bus	3.3%	3%	18%
Walk	11.1%	82%	17%
Other	4.5%	0%	0%
Total	100%	100%	100%
	(3)	(4)	(4)
In/Out Splits:	In/Out	In/Out	In/Out
AM Peak Hour	15/85	50/50	89/11
MD Peak Hour	50/50	50/50	51/49
PM Peak Hour	70/30	50/50	48/52
Saturday Midday Peak Hour	50/50	55/45	41/59
Vehicle Occupancy:	**(2)**	(4)	(4)
Auto	1.122	1.5	1.5
Taxi	1.40	1.5	1.5
Truck Trip Generation:	**(1)**	**(1)**	**(1)**
Weekday	0.06	0.35	0.32
Saturday	0.02	0.04	0.01
	per d.u.	per 1,000 s.f.	per 1,000 s.f.
	(1)	**(1)**	**(1)**
AM Peak Hour	12%	8%	10%
MD Peak Hour	9%	11%	11%
PM Peak Hour	2%	2%	2%
Saturday Midday Peak Hour	9%	11%	11%
AM/MD/PM/Saturday Midday	50/50	50/50	50/50

Sources:

(1)-2014 CEQR Technical Manual, Table 16-2.

(2)-2012-2018 American Community Survey (ACS)-Census Tract #'s 37, 39, 43, 45, 47, 53, 77, 81 & 85 Queens N.Y.

(3)_P & Z

(4)-NYCDOT

Table 2 : Estimated Person Trips_*Revised*

32-02 Vernon Blvd. Astoria, Queens NY

Land Use:	Residential	Local Retail	Medical Office	Total Net	subway
	d.u.	sq.ft.	sq.ft.	Demand	bus
Size/Units:	259	11,236	-8,883		walk
Peak hour Trips					Pedestrian
AM Peak Hour	209	52	-45	216	volumes
Midday Peak Hour	105	328	-124	309	
PM Peak Hour	230	173	-135	267	
Saturday Midday Peak Hour	199	202	-124	277	
Person Trips:					
AM Peak Hour					
Auto	57	6	-14	49	
Taxi	0	0	-1	0	
Subway	112	2	-15	100	100
Bus	7	2	-8	1	1
Walk	23	43	-8	58	58
Other	9	0	0	9	9
Total	209	53	-45	217	168
Midday Peak Hour					
Auto	28	36	-37	27	
Taxi	0	0	-2	-2	
Subway	56	13	-41	28	28
Bus	3	10	-22	-9	-9
Walk	12	269	-21	260	260
Other	5	0	0	5	5
Total	105	328	-124	309	284
PM Peak Hour					
Auto	62	19	-41	41	
Taxi	0	0	-3	-2	
Subway	124	7	-45	86	86
Bus	8	5	-24	-12	-12
Walk	26	142	-23	144	144
Other	10	0	0	10	10
Total	230	173	-135	267	229
Saturday Midday Peak Hour					
Auto	54	22	-37	39	
Taxi	0	0	-2	-2	
Subway	107	8	-41	74	74
Bus	7	6	-22	-10	-10
Walk	22	166	-21	167	167
Other	9	0	0	9	9
Total	199	202	-124	277	240

Table 3 : Estimated Vehicular Trips_*Revised*

32-02 Vernon Blvd. Astoria, Queens NY

Vehicular Trips	Residential	Local Retail	Medical Office	Total
AM Peak Hour				
Auto (Total)	51	4	-9	46
Taxi	0	0	-1	-1
Taxi (Balanced)	0	0	-2	-2
Truck	2	0	0	2
Truck(Balanced)	2	0	0	2
Total	53	4	-11	46
Midday Peak Hour				
Auto (Total)	25	24	-25	24
Taxi	0	0	-2	-2
Taxi (Balanced)	0	0	-4	-4
Truck	1	0	0	2
Truck(Balanced)	2	0	0	2
Total	27	24	-29	22
PM Peak Hour				
Auto (Total)	56	13	-27	42
Taxi	0	0	-2	-2
Taxi (Balanced)	0	0	-4	-4
Truck	0	0	0	0
Truck(Balanced)	0	0	0	0
Total	56	13	-31	38
Saturday Midday Peak Hour				
Auto (Total)	48	15	-25	38
Taxi	0	0	-2	-2
Taxi (Balanced)	0	0	-4	-4
Truck	0	0	0	0
Truck(Balanced)	0	0	0	0
Total	48	15	-29	**34**

Exhibit 1

Modal Split Information

20012-2016 ACS 5-YEAR Journey-to-Work (JTW) for Census Tract #'s 37, 39, 43, 45, 47, 53, 77, 81 & 85 in Queens

32-02 Vernon Blvd. Astoria, Queens New York

2012-2016 ACS 5-Year, Journey-to-Work:

Census Tract	Total Workers	Car or Van Drive-Alone	Carpool	Bus	Street Car	Subway	R.R.	Ferry	Taxi	Motor cycle	Bi cycle	Walk	Other Means	Worked @ Home	Total
37	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
39	**687**	**111**	**35**	**46**	**0**	**322**	**0**	**0**	**0**	**0**	**65**	**65**	**0**	**43**	687
43	**1065**	**123**	**66**	**102**	**0**	**564**	**0**	**0**	**0**	**0**	**27**	**150**	**5**	**28**	1065
45	**1610**	**213**	**65**	**96**	**0**	**943**	**0**	**0**	**9**	**0**	**34**	**167**	**0**	**83**	1610
47	**1695**	**204**	**32**	**49**	**0**	**1202**	**28**	**0**	**25**	**0**	**0**	**127**	**0**	**28**	1695
53	**3023**	**252**	**24**	**76**	**0**	**2383**	**65**	**0**	**10**	**0**	**10**	**96**	**11**	**96**	3023
77	**1014**	**146**	**0**	**34**	**0**	**614**	**11**	**0**	**34**	**0**	**45**	**87**	**0**	**43**	1014
81	771	140	56	25	0	420	6	0	2	0	9	93	6	14	771
85	516	133	20	18	0	272	6	17	0	0	0	50	0	0	516
Total	1,287	273	76	43	0	692	12	17	2	0	9	143	6	14	1,287
		0.212	***0.059***	***0.033***	***0.00***	***0.538***	***###***	***0.01***	***0.00***	***0.00***	***0.01***	***0.111***	***0.00***	***0.011***	***1.00***

Exhibit 2

Vehicle Occupancy Information

Census Tract #'s 37,39,43, 45, 47, 53, 77, 81 & 85 Queens, New York

2012-2016 ACS-5 Year, Vehicle Occupancy Rate:

Census Tract	Total	Drove alone	carpool Total	2person	3 Person	4 Person	5 or 6 Perso	7 or mor Person	Total
37	0	0	0	0	0	0	0	0	0
39	146	111	35	29	6	0	0	0	35
43	189	123	66	28	0	0	0	38	66
45	278	213	65	37	28	0	0	0	65
47	236	204	32	8	24	0	0	0	32
53	276	252	24	24	0	0	0	0	24
77	146	146	0	0	0	0	0	0	0
81	196	140	56	53	0	0	3	0	56
85	153	133	20	6	10	0	4	0	20
	1620	1,322		93	23	0	1	5	#####
Vehicle Occupancy =			1.122						

Modal Split summary

Auto	**0.271**
Taxi	**0.002**
Bus	**0.033**
Subwa	**0.538**
Walk	**0.111**
Other	**0.045**
Total	**1.000**

Parking Accumulation Table

A/Q Parking Garage Analysis
32-01 Vernon Blvd. Queens NY

Time	Inbound	Outbound	Total	Parking Accumulation
Before 7am				**166**
7-8am	**4**	**23**	**27**	**147**
8-9am	**22**	**46**	**68**	**123**
9-10am	**14**	**38**	**52**	**99**
10-11am	**17**	**24**	**41**	**92**
11-12n	**21**	**21**	**42**	**92**
12n-1pm	**32**	**32**	**64**	**92**
1-2pm	**32**	**32**	**64**	**92**
2-3pm	**23**	**23**	**46**	**92**
3-4pm	**28**	**21**	**49**	**99**
4-5pm	**40**	**21**	**61**	**118**
5-6pm	**50**	**39**	**89**	**129**
6-7pm	**51**	**25**	**76**	**155**
7-8pm	**41**	**30**	**71**	**166**
Total	**371**	**352**	**723**	

Source for Temporal Distribution (Residential and Local Retail Uses):
Pushkarev and Zupan, "Urban Space for Pedestrians", Table 2.7,

NOISE APPENDIX

Receptor/Station ID	Hour/Weekday	Existing Condition							No Build 2022								Build 2022							
		Auto	Medium	Heavy	Bus	PCE	Leq	L_{10}	Auto	Medium	Heavy	Bus	PCE	Leq	L_{10}	Change over existing	Auto Volume Increment	Medium Truck Volume Increment	Heavy Truck Volume Increment	Bus Volume Increment	Total PCE	Leq	L_{10}	Change over No Build
Location 1 Location 1 (growth rate of .5% applied for 2016-2020 and .25% applied for 2021-2022)	AM	273.0	12		9.0	591.0	67.0	70.0	317.3	12.4	0.0	9.3	645.0	67.4	70.4	0.4	46.0	0.0	0.0	0.0	691.0	67.7	70.7	0.3
	MD	339.0	24		12.0	867.0	64.7	68.0	472.6	24.7	0.0	12.4	1016.6	65.4	68.7	0.7	22.0	0.0	0.0	0.0	1038.6	65.5	68.8	0.1
	PM	294.0	12		3.0	504.0	64.4	68.0	329.9	12.4	0.0	3.1	546.3	64.8	68.4	0.4	38.0	0.0	0.0	0.0	584.3	65.0	68.6	0.3
	SAT	-	-		-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Location 2 (growth rate of .5% applied for 2016-2020 and .25% applied for 2021-2022)	AM	174.0	15.0		3.0	423.0	64.0	66.2	218.3	15.5	0.0	3.1	474.9	64.5	66.7	0.5	46.0	0.0	0.0	0.0	520.9	64.9	67.1	0.4
	MD	138.0	15.0		6.0	441.0	62.0	64.2	201.1	15.5	0.0	6.2	513.3	62.7	64.9	0.7	22.0	0.0	0.0	0.0	535.3	62.8	65.0	0.2
	PM	102.0	0.0		3.0	156.0	62.1	64.2	180.1	0.0	0.0	3.1	235.7	63.9	66.0	1.8	38.0	0.0	0.0	0.0	273.7	64.5	66.6	0.6
	SAT	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Location 3 (growth rate of .5% applied for 2016-2020 and .25% applied for 2021-2022)	AM	36.0	12.0		0.0	192.0	65.4	69.0	76.1	12.4	0.0	0.0	236.8	66.3	69.9	0.9	46.0	0.0	0.0	0.0	282.8	67.1	70.7	0.8
	MD	21.0	3.0		0.0	60.0	62.1	64.7	82.6	3.1	0.0	0.0	122.8	65.2	67.8	3.1	22.0	0.0	0.0	0.0	144.8	65.9	68.5	0.7
	PM	27.0	12.0		0.0	183.0	62.4	66.2	102.8	12.4	0.0	0.0	263.6	64.0	67.8	1.6	38.0	0.0	0.0	0.0	301.6	64.6	68.4	0.6
	SAT	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Location 4 (growth rate of .5% applied for 2020-2022)	AM	12.0	0.0		0.0	12.0	60.8	64.0	51.2	0.0	0.0	0.0	51.2	67.1	70.3	6.3	46.0	0.0	0.0	0.0	97.2	69.9	73.1	2.8
	MD	9.0	0.0		0.0	9.0	59.1	62.5	70.1	0.0	0.0	0.0	70.1	68.0	71.4	8.9	22.0	0.0	0.0	0.0	92.1	69.2	72.6	1.2
	PM	12.0	3.0		0.0	51.0	58.2	61.0	87.2	3.0	0.0	0.0	126.8	62.2	65.0	4.0	38.0	0.0	0.0	0.0	164.8	63.3	66.1	1.1
	SAT	12.0	0		3	66.0	61	62.5	80.2	0.0	0	3.1	135.8	64.1	65.6	3.1	34.0	0.0	0.0	0.0	169.8	65.1	66.6	1.0
Location 5 (growth rate of .5% applied for 2020-2022)	AM	534.0	39		30	1581	68.5	71.5	581.1	39.6	0.0	30.9	1652	68.7	71.7	0.2	46.0	0.0	0.0	0.0	1698.1	68.8	71.8	0.1
	MD	465.0	33		21	1272	68.9	71.5	533.0	33.5	0.0	21.6	1358	69.2	71.8	0.3	22.0	0.0	0.0	0.0	1380.0	69.3	71.9	0.07
	PM	534.0	30		24	1356	68.6	70.5	617.1	30.5	0.0	24.7	1458	68.9	70.8	0.3	38.0	0.0	0.0	0.0	1496.1	69.0	70.9	0.1
	SAT	486.0	18		9	882	70.3	70.3	566.3	18.3	0.0	9.3	971	70.7	70.7	0.4	34.0	0.0	0.0	0.0	1004.7	70.9	70.9	0.1

Receptor/Station ID	Hour	Existing L_{10}	Existing Category	NB Delta	NB L_{10}	No Build Category	Build Delta	Build L_{10}	Build Category	CEQR criteria dB(A)	Building Attenuation Required
Location 1	AM	70.0	MARGINALLY ACCEPTABLE	0.4	70.4	MARGINALLY UNACCEPTABLE	0.3	70.7	MARGINALLY UNACCEPTABLE	45	28
	MD	68.0	MARGINALLY ACCEPTABLE	0.7	68.7	MARGINALLY ACCEPTABLE	0.1	68.8	MARGINALLY ACCEPTABLE	45	
	PM	68.0	MARGINALLY ACCEPTABLE	0.4	68.4	MARGINALLY ACCEPTABLE	0.3	68.6	MARGINALLY ACCEPTABLE	45	
Location 2	AM	66.2	MARGINALLY ACCEPTABLE	0.5	66.7	MARGINALLY ACCEPTABLE	0.4	67.1	MARGINALLY ACCEPTABLE	45	-
	MD	64.2	MARGINALLY ACCEPTABLE	0.7	64.9	MARGINALLY ACCEPTABLE	0.2	65.0	MARGINALLY ACCEPTABLE	45	-
	PM	64.2	MARGINALLY ACCEPTABLE	1.8	66.0	MARGINALLY ACCEPTABLE	0.6	66.6	MARGINALLY ACCEPTABLE	45	-
Location 3	AM	69.0	MARGINALLY ACCEPTABLE	0.9	69.9	MARGINALLY ACCEPTABLE	0.8	70.7	MARGINALLY UNACCEPTABLE	45	28
	MD	64.7	MARGINALLY ACCEPTABLE	3.1	67.8	MARGINALLY ACCEPTABLE	0.7	68.5	MARGINALLY ACCEPTABLE	45	-
	PM	66.2	MARGINALLY ACCEPTABLE	1.6	67.8	MARGINALLY ACCEPTABLE	0.6	68.4	MARGINALLY ACCEPTABLE	45	-
Location 4	AM	64.0	MARGINALLY ACCEPTABLE	6.3	70.3	MARGINALLY UNACCEPTABLE	2.8	73.1	MARGINALLY UNACCEPTABLE	45	31
	MD	62.5	MARGINALLY ACCEPTABLE	8.9	71.4	MARGINALLY UNACCEPTABLE	1.2	72.6	MARGINALLY UNACCEPTABLE	45	28
	PM	61.0	MARGINALLY ACCEPTABLE	4.0	65.0	MARGINALLY ACCEPTABLE	1.1	66.1	MARGINALLY ACCEPTABLE	45	-
	SAT	62.5	MARGINALLY ACCEPTABLE	3.1	65.6	MARGINALLY ACCEPTABLE	1.0	66.6	MARGINALLY ACCEPTABLE	45	-
Location 5	AM	71.5	MARGINALLY UNACCEPTABLE	0.2	71.7	MARGINALLY UNACCEPTABLE	0.1	71.8	MARGINALLY UNACCEPTABLE	45	28
	MD	71.5	MARGINALLY UNACCEPTABLE	0.3	71.8	MARGINALLY UNACCEPTABLE	0.07	71.9	MARGINALLY UNACCEPTABLE	45	28
	PM	70.5	MARGINALLY UNACCEPTABLE	0.3	70.8	MARGINALLY UNACCEPTABLE	0.1	70.9	MARGINALLY UNACCEPTABLE	45	28
	SAT	70.3	MARGINALLY UNACCEPTABLE	0.4	70.7	MARGINALLY UNACCEPTABLE	0.1	70.9	MARGINALLY UNACCEPTABLE	45	28