Environmental Assessment Statement
and
Supplemental Report

for

22-60 46th Street Astoria Rezoning

22-60 46th Street
Astoria, NY

Prepared by:

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Table of Contents

22-60 46th Street Astoria Rezoning

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* 22-60 46th Street Astoria Rezoning

3. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency)	BSA REFERENCE NUMBER (if applicable)
19DCP145Q	
ULURP REFERENCE NUMBER (if applicable)	OTHER REFERENCE NUMBER(S) (if applicable)
190267 ZMQ, N 190266 ZRQ	(*e.g.*, legislative intro, CAPA) Project ID: P2018Q101

4a. *Lead Agency Information*			**4b. *Applicant Information***		
NAME OF LEAD AGENCY NYC Department of City Planning			NAME OF APPLICANT Mega Realty Holding LLC and Pancyprian Association, 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 Co-Applicants, Mega Realty Holding LLC and Pancyprian Association, Inc., seek to amend Zoning Sectional Map 9c as it pertains to the Project Area, Block 769, Lots 25, 30, 31, 32, 33, 34, 35, 36, 38, 39, 42, 130, 131, and 7501 (the entirety of Block 769) in the Astoria neighborhood of Queens, Community District 1. The Co-Applicant, Mega Realty Holding LLC owns the property located at Block 769, Lots 25 and 42 while the remaining Lots are not controlled by the Applicant and are not proposed for development. The Proposed Actions would rezone the southern portion of Block 769 (Lots 25, 30, 31, 32, 33, 34, 35, 36, 38, 39, 42, 130, and 131) from M1-1 to a combination of R4, R4/C2-3, R6A, and R6A/C2-3 zoning districts and the northern portion of Block 769 (Lot 7501) from R4 to R6A. The Proposed Actions seek 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 new R6A and R6A/C2-3 districts mapped over Block 769, Lots 25, 30, 42, and 7501 within the Project Area. The Co-Applicants have chosen Option 2 and the Workforce Option under the MIH Text Amendment provisions applicable to the Proposed Actions. 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 Actions would facilitate a proposal by the Co-Applicants to develop Block 769, Lots 25 and 42 with two, 8-story, cellar, and sub-cellar mixed-use residential, commercial, and community facility buildings totaling approximately 172,953 gross square feet (gsf) in floor area. The Proposed Development would contain approximately 122,125 gsf of residential floor area, 10,097 gsf of commercial floor area, and 8,700 gsf of community facility floor area. The Proposed Development would contain approximately 136 dwelling units, of which approximately 41 units would be permanently affordable pursuant to the MIH program. The buildings would also contain 32,031 gsf of floor area for 105 attended accessory parking spaces on the buildings' sub-cellar and first floors which would be accessed from a new curb cut on 46th Street. The existing structures and uses on the site would be demolished and removed. See attached Project Description.

Project Location

BOROUGH Queens	COMMUNITY DISTRICT(S) 1	STREET ADDRESS 22-60 46th Street
TAX BLOCK(S) AND LOT(S) Block 769, Lots 25, 30, 31, 32, 33, 34, 35, 36, 38, 39, 42, 130, 131, and 7501		ZIP CODE 11105
DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS Entire block bounded by Ditmars Boulevard, 23rd Avenue, and 45th and 46th Streets		
EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY M1-1, R4		ZONING SECTIONAL MAP NUMBER 9c

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

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

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

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

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION ZR Appendix F; ZR 9c

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

☐ VARIANCE (use)
☐ VARIANCE (bulk)
☐ SPECIAL PERMIT (if appropriate, specify type: ☐ modification; ☐ renewal; ☐ other); EXPIRATION DATE:
SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

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

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

☐ LEGISLATION	☐ FUNDING OF CONSTRUCTION, specify:
☐ RULEMAKING	☐ POLICY OR PLAN, specify:
☐ CONSTRUCTION OF PUBLIC FACILITIES	☐ FUNDING OF PROGRAMS, specify:
☐ 384(b)(4) APPROVAL	☐ PERMITS, specify:
☐ OTHER, explain:	

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

☐ PERMITS FROM DOT'S OFFICE OF CONSTRUCTION MITIGATION AND COORDINATION (OCMC)	☐ LANDMARKS PRESERVATION COMMISSION APPROVAL
	☒ OTHER, explain: 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.): 126,809 (rezoning area); 30,008 (proposed development site)

Waterbody area (sq. ft) and type: None

Roads, buildings, and other paved surfaces (sq. ft.): 126,809 (rezoning area); 30,008 (proposed development site)

Other, describe (sq. ft.): None

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): 172,953

NUMBER OF BUILDINGS: 2

GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): 172,953

HEIGHT OF EACH BUILDING (ft.): 76'-6"

NUMBER OF STORIES OF EACH BUILDING: 8

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

If "yes," specify: The total square feet owned or controlled by the applicant: 30,008

The total square feet not owned or controlled by the applicant: 96,801

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: sq. ft. (width x length) VOLUME OF DISTURBANCE: 660,176 cubic ft. (width x length x depth)

AREA OF PERMANENT DISTURBANCE: 30,008 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.)	122,125	10,097	8,700	0
Type (*e.g.,* retail, office, school)	136 units	retail	community theater	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: 339 NUMBER OF ADDITIONAL WORKERS: 36

Provide a brief explanation of how these numbers were determined: Residents: Based on average household size of 2.49 residents per dwelling unit for census tracts within 1/4-mile (2010 Census & ACS data); Workers: assumes 3 workers per 1,000 sf of retail space and .04 workers per dwelling unit (136 units); community facility would be staffed by volunteers

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

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

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

9. *Analysis Year* CEQR Technical Manual Chapter 2

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

ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: 18

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: Vacant land, transportation

Part II: TECHNICAL ANALYSIS

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

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

	YES	NO
1. *LAND USE, ZONING, AND PUBLIC POLICY*: CEQR Technical Manual Chapter 4		
(a) Would the proposed project result in a change in land use different from surrounding land uses?	☐	☒
(b) Would the proposed project result in a change in zoning different from surrounding zoning?	☒	☐
(c) Is there the potential to affect an applicable public policy?	☒	☐
(d) If "yes," to (a), (b), and/or (c), complete a preliminary assessment and attach. 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.		
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): 7,946		
○ 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): 19,838,309		
(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.		
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.	August 23, 2019

SIGNATURE

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

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

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

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

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

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

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

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

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

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

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

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

TITLE	LEAD AGENCY
Director, Environmental Assessment and Review Division	Department of City Planning, acting on behalf of the City Planning Commission
NAME	**DATE**
Olga Abinader	8/23/2019

SIGNATURE

NEGATIVE DECLARATION (Use of this form is optional)

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 that finds the proposed project and related 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.

1. **Land Use, Zoning, and Public Policy**- This section concludes the Proposed Actions would not result in significant adverse impacts related to land use, zoning, and public policy. While the Proposed Actions would replace two warehouses and three single-family dwellings with multi-story mixed-use apartment buildings, the Proposed Actions would be in compliance with City policies to encourage the development of new housing, including affordable housing. Regarding zoning, the analysis concludes the Proposed Actions would not present impacts related to the mapping of R4, R4/C2-3, R6A, and R6A/C2-3 districts as these districts would allow for several nonconforming and/or noncomplying properties within the Project Area to be brought into conformance and/or compliance with the Zoning Resolution.

2. **Open Space**- This analysis concludes the Proposed Actions would not result in significant adverse impacts related to open space. While in the future with the Proposed Actions, there would be a below average amount of open space (0.359 acres per 1,000 residents), the open space ratio would not decrease substantially relative to the No-Action condition (0.363 acres per 1,000 residents), a decrease of 1.1%, below the 5% *CEQR Technical Manual* threshold for declaring significant adverse impacts to open space. Additionally, private open space would be provided within the Proposed Development, which would serve to meet at least a portion of the open space needs of the project-generated population.

3. **Urban Design and Visual Resources**- A detailed analysis pertaining to urban design and visual resources is included in this EAS. The analysis notes that while the Proposed Actions would facilitate denser development by replacing two warehouses and three single-family dwellings with multi-story mixed-use apartment buildings, the Proposed Actions would activate the streetscape by allowing ground floor retail in the Project Area. The analysis concludes there would be no significant adverse impacts with respect to urban design and visual resources.

4. **Hazardous Materials, Air Quality**- A detailed analysis of the potential for the Proposed Actions to result in significant adverse impacts related to hazardous materials, air quality, and noise was included in this EAS. To ensure that the Proposed Actions would not result in significant adverse impacts, an (E) Designation (E-549) would be established on the development sites as part of the approval of the Proposed Actions. Refer to "Determination of Significance Appendix: (E) Designation" for the applicable requirements. The analyses conclude that with the (E) Designation requirements in place, the Proposed Actions would not result in significant adverse impacts.

No other significant effects upon the environment that would require the preparation of a Draft Environmental Impact Statement are foreseeable. This Negative Declaration has been prepared in accordance with Article 8 of the New York State Environmental Conservation Law (SEQRA).

TITLE	LEAD AGENCY
Director, Environmental Assessment and Review Division	Department of City Planning, acting on behalf of the City Planning Commission
NAME Olga Abinader	DATE 8/23/2019
SIGNATURE	

TITLE	
Chair, Department of City Planning	
NAME Marisa Lago	DATE 8/26/2019
SIGNATURE	

Determination of Significance Appendix: (E) Designation

To ensure that the Proposed Action would not result in significant adverse impacts, an (E) Designation (E-549) will be placed on Projected Development Sites 1 and 2 (Block 769, Lots 25, 42, 36 and 38) as described below.

Air Quality

The following (E) designation (E-549) air quality text will apply to Block 769, Lots 25, 42, 36 and 38:

Block 769, Lot 25 (Projected Development Site 1, Building A): Any new residential and/or commercial development or enlargement on the above-referenced property must ensure that the heating, ventilating, air conditioning (HVAC) and hot water equipment exhaust stack(s) are located at the highest tier and at least 89'- 6" above the grade, and at least 40 feet from the lot line facing 45 Street, to avoid any potential significant adverse air quality impacts.

Block 769, Lot 42 (Projected Development Site 1, Building B): Any new residential and/or commercial development or enlargement on the above-referenced property must ensure that the heating, ventilating, air conditioning (HVAC) and hot water equipment exhaust stack(s) are located at the highest tier and at least 89' – 6" above the grade, and at least 40 feet from the lot line facing 46 Street, to avoid any potential significant adverse air quality impacts.

Block 769, Lots 36 and 38 (Projected Development Site 3): Any new residential and/or commercial development or enlargement on the above-referenced property must ensure that the heating, ventilating, air conditioning (HVAC) and hot water equipment exhaust stack(s) are located at the highest tier and at least 38 feet above the grade, and at least 35 feet from the lot line facing Ditmars Boulevard, to avoid any potential significant adverse air quality impacts.

Hazardous Materials

The following (E) designation (E-549) hazardous materials text will apply to Block 769, Lots 36 and 38:

Task 1-Sampling Protocol

The fee owners of the lots 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-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 test results, a proposed remediation plan must be submitted to OER for review and approval. The applicant must complete such remediation as determined necessary by OER. The applicant should then provide proper documentation that the work has been satisfactorily completed.

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

46TH STREET ASTORIA REZONING

Reasonable Worst-Case Development Scenario

INTRODUCTION

The Co-Applicants, Mega Realty Holding LLC and Pancyprian Association, Inc., are proposing a zoning map amendment to the New York City Zoning Map, section 9c, to rezone the Co-Applicant, Mega Realty Holding's property at 22-60 46th Street and 22-61 45th Street (Block 769, Lots 25 and 42) in the Steinway neighborhood of Queens, Community District 1 from the existing M1-1 zoning district to an R6A/C2-3 district. As part of the Proposed Actions, the remainder of Block 769 would also be rezoned. The southern approximately one-third of the block would be rezoned from M1-1 to a combination of R4 (Lots 31-35, 130, 131), R4/C2-3 (Lots 36, 38, 39), R6A (Lot 30), and R6A/C2-3 (Lots 25 and 42 which would be merged) zoning districts. The northern approximately two-thirds of the block would be rezoned from R4 to R6A (Lot 7501). The proposed Project Area comprises the entirety of Block 769, which is generally bounded by 45th and 46th Streets, 23rd Avenue, and Ditmars Boulevard. The Co-Applicants are also proposing to amend ZR Appendix F to establish a Mandatory Inclusionary Housing Area (MIHA) coterminous with the R6A portion of the proposed Project Area. Option 2 together with the Workforce Housing Option have 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 a weighted average of all income bands not to exceed 115 percent of the 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 Actions would facilitate a proposal by the Co-Applicants to construct two, 8-story, cellar, and sub-cellar mixed-use residential, commercial, and community facility buildings totaling approximately 172,953 gross square feet (gsf) in floor area. Building A would front on 46th Street and Building B would front on 45th Street. The Proposed Development would contain approximately 122,125 gsf of residential floor area, 10,097 gsf of commercial floor area, and 8,700 gsf of community facility floor area. The buildings would also contain 32,031 gsf of floor area for parking on the buildings' sub-cellar and first floors. The Proposed Development would contain approximately 136 dwelling units, 41 units of which would be set aside as affordable (27 affordable units are assumed for conservative EAS analysis purposes). The buildings would be connected at the cellar and first floor. A parking garage with 105 attended accessory parking spaces on the first floor and sub-cellar would be accessed from a new curb cut on 46th Street. The existing structures and uses on the site would be demolished and removed.

ACTIONS NECESSARY TO FACILITATE THE PROPOSAL

The Co-Applicants, Mega Realty Holding LLC and Pancyprian Association, Inc., propose the following actions to rezone an existing M1-1 zoning district to a combination of R4, R4/C2-3, R6A, and R6A/C2-3 zoning districts and to rezone an existing R4 district to an R6A zoning district on Block 769 (the Project Area) in the Astoria-Steinway neighborhood within Queens Community District 1.

I. A zoning map amendment to ZR section 9c to change the existing M1-1 zoning district to a combination of R4 (Lots 31-35, 130, 131), R4/C2-3 (Lots 36, 38, 39), R6A (Lot 30), and

R6A/C2-3 (Lots 25 and 42 which would be merged) zoning districts and an existing R4 district to an R6A zoning district (Lot 7501) on Block 769; and

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 R6A portion of the Project Area. Option 2 together with the Workforce Housing Option have 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 a weighted average of all income bands not to exceed 115%. 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.

DESCRIPTION OF THE SURROUNDING AREA

The Project Area is located along near the southern edge of the Astoria-Steinway neighborhood of Queens, Community District 1 approximately one-half block north of the Brooklyn-Queens Expressway (I-278). The neighborhood within 400 feet of the Project Area is primarily residential, but there is a mix of commercial and light industrial uses concentrated in the Project Area and adjacent blocks to the east and west. The prevailing built form is generally reflective of the underlying zoning, with the exception of the non-conforming residential buildings within the M1-1 zoning district mapped within the Project Area and Block 782 immediately to the west.

To the east of the Project Area across 46th Street, the majority of Block 768 is zoned R4 with a C2-2 commercial overlay mapped to a depth of 150 feet from Ditmars Boulevard. A mid-block portion of Block 768 is zoned M1-1 for 350 feet along 46th Street to the centerline of the block. Block 768 primarily consists of one-and two-family residential buildings within the R4 zoning district, and one-story auto-oriented and neighborhood retail establishments within the C2-2 overlay. There is a new three-story, 45-foot tall, self-storage facility under construction in the M1-1 zoning district.

Block 782 to the west of the Project Area across 45th Street is within an M1-1 zoning district. The two-story commercial LaGuardia Shopping Center is on the northern portion of the block, and there are one-story buildings with light industrial uses on the southeastern portion of the block. There are non-conforming two- and three-story one- and two-family and multi-family residential buildings on the southwestern portion of the block. The area further to the west beyond 43rd Street is within an R5 zoning district and primarily consists of two-, three-, and four-story one- and two-family, multi-family, and mixed-use buildings.

The blocks to the north and northwest of the Project Area in the R4 zoning district and R5 to the northwest primarily consist of one- and two-story, one- and two-family residences. There are non-conforming local retail uses along Ditmars Boulevard at its intersection with 45th Street. Additionally, there is a community facility use, the Greek School Saint Irene Chrysovalantou, on Ditmars Boulevard at 43rd Street.

There are small irregularly shaped blocks to the south and southeast of the Project Area between 23rd Avenue, 42nd Street, and Astoria Boulevard North within an R5 zoning district. These blocks are predominately made up of three-story multi-family and two-story one- and two-family residential buildings. Further south, there is a large concentration of low-scale industrial uses located within the M1-1 zoning district mapped to the south of Grand Central Parkway which are generally located more than 400 feet from the Project Area.

DESCRIPTION OF THE PROPOSED PROJECT AREA

The Project Area consists of the entirety of Block 769 including Lots 25, 30, 31, 32, 33, 34, 35, 36, 38, 39, 42, 130, 131, and 7501 in the Steinway neighborhood of Queens, and is bounded by Ditmars Boulevard to the north, 23rd Avenue to the south, 45th Street to the west, and 46th Street to the east. Ditmars Boulevard and 23rd Avenue are both 80-foot-wide, two-way streets. Both are wide streets as defined in the Zoning Resolution.[1] 45th Street and 46th Street are both narrow, 70-foot-wide, one-way streets.

Block 769 consists of 14 contiguous tax lots, Lots 25, 30, 31, 32, 33, 34, 35, 36, 38, 39, 42, 130, 131, and 7501. The northernmost portion of Block 769 within 525 feet of Ditmars Boulevard, including only Lot 7501, is within an R4 zoning district. The southernmost portion of Block 769 within 275 feet of 23rd Avenue is within an M1-1 zoning district, and includes the remaining lots on the block, Lots 25, 30, 31, 32, 33, 34, 35, 36, 38, 39, 42, 130, and 131.

Block 769 was zoned M1-1 in 1961. The northern portion of the Project Area, located within 525 feet of Ditmars Boulevard, was rezoned from M1-1 to R4 in 1998 (C 980493 ZMQ) to convert the former Steinway warehouse (Pistilli Grand Manor) on this portion of the block to a primarily residential use. The remainder of the Project Area, which comprises the southerly portion of the block within 275 feet of 23rd Avenue, was not rezoned and remains zoned M1-1.

The Project Area includes two Projected Development Sites described below and summarized in Table 1. Relevant information about Other Sites not anticipated to be developed is also presented in Table 1.

1. Proposed Development Site/Projected Development Site 1 (Block 769, Lots 25 and 42) - consists of two contiguous tax lots which would be combined into a single zoning lot totaling 30,008 square feet in area and owned by Mega Realty Holding. Lot 25, which fronts on 46th Street, has a lot area of approximately 12,503 square feet, and is improved with a one-story, 16-foot tall, approximately 12,500 square foot (1.0 FAR) building occupied by Mega Contracting Group LLC for office and warehouse uses. The property has a Certificate of Occupancy dated 2/29/1956 for "factory, offices, warehouse, and storage" and a Certificate of Occupancy dated 5/19/1961 for "manufacturing, office, loading and unloading of trucks, warehouse, and storage. Manufacturing is limited to any factory use not prohibited by Article 2, Section 4 of the Zoning Resolution". Lot 42, which fronts on 45th Street, has a lot area of approximately 17,505 square feet, and is improved with a one-story 1.0 FAR building occupied by a plumbing supply business.

2. Projected Development Site 2 – (Block 769, Lots 36 & 38) – Lot 36 is a 2,500 sf lot developed with a 1-story building totaling 625 gsf in size and occupied by a single family dwelling; FAR of 0.25. Lot 38 is a 5,000 sf lot developed with two 2-story buildings totaling 1,728 gsf in size and occupied by two single family dwellings; FAR of 0.35. The lots would be combined under the Proposed Actions and would total 7,500 sf in area. The three single family dwellings on the lots contain 2,353 sf of floor area and have an FAR of 0.31.

[1] Pursuant to the definition in ZR § 12-10, a "wide street" is any street that is 75 feet or more in width. A "narrow street" is any street that is less than 75 feet wide.

Table 1

Summary of Projected Development Sites and Other Sites Within Project Area

Site Ident	Block/Lot	Lot Size (sf)	Bldg Size (sf)	FAR	# of bldgs	# of stories	# of DUs	Resid sf	Comm'l/ Other sf
Projected Development Sites									
1	B 769, L 25	12,503	12,500	1.0	1	1	0	0	12,500 whse/office
	B 769, L 42	17,505	17,505	1.0	1	1	0	0	17,505 plmbg supply
2	B 769, L 36	2,500	625	0.25	1	1	1	625	0
	B 769, L 38	5,000	1,728	0.35	2	2	2	1,728	0
Other Sites									
1	B 769, L 30	2,687	700	0.24	1	1	1	700	0
2	B 769, L 31	1,500	700	0.47	1	1	1	700	0
3	B 769, L 32	1,500	700	0.47	1	1	1	700	0
4	B 769, L 33	1,500	700	0.47	1	1	1	700	0
5	B 769, L 34	1,500	700	0.47	1	1	1	700	0
6	B 769, L 35	2,500	1,671	0.67	1	1	1	1,671	0
7	B 769, L 39	2,500	2,500	1.0	1	1	0	0	2,500 restaurant, office, storage
8	B 769, L 130	2,000	700	0.35	1	1	1	700	0
9	B 769, L 131	1,500	1,140	0.76	1	1	1	1,140	0
10	B 769, L 7501	71,934	234,260	3.36	1	6	201	195,217	39,043 comm'l
Total		**126,809**	**276,124**		**15**		**212**	**204,581**	**71,543**

DESCRIPTION OF THE PROPOSED DEVELOPMENT

As stated above, the Proposed Actions would rezone the entirety of Block 769: the southern portion of the block would be rezoned from M1-1 to a combination of R4 (Lots 31-35, 130, 131), R4/C2-3 (Lots 36, 38, 39), R6A (Lot 30), and R6A/C2-3 (Lots 25, 42) zoning districts. The northern portion of the block would be rezoned from R4 to R6A (Lot 7501).

The Co-Applicant property, Projected Development Site 1 (Lots 25 & 42), would be rezoned from M1-1 to an R6A/C2-3 district. Projected Development Site 2 (Lots 36 & 38) would be rezoned from M1-1 to an R4/C2-3 district. Other Site 1 (Lot 30) would be rezoned from M1-1 to an R6A district. Other Sites 2-6, 8, and 9 (Lots 31-35, 130, 131) would be rezoned from M1-1 to an R4 district; Other Site 7 (Lots 39) would be rezoned from M1-1 to an R4/C2-3 district; and Other Site 10 (Lot 7501) would be rezoned from R4 to an R6A district. A proposed zoning text amendment to modify ZR §23-933, Appendix F would make the new R6A and R6A/C2-3 districts mapped over Projected Development Site 1 and Other Sites 1 and 10 a Mandatory Inclusionary Housing (MIH) designated area.

The Proposed Actions would facilitate a proposal by the Co-Applicants to construct two, 8-story, cellar, and sub-cellar mixed-use residential, commercial, and community facility buildings totaling approximately 172,953 gsf in floor area. Building A would front on 46th Street and Building B would front on 45th Street. The Proposed Development would contain approximately 122,125 gsf of residential floor area (including 8,100 gsf within the cellar), 10,097 gsf of commercial floor area (including 8,400 gsf in the cellar of Building B), and 8,700 gsf of community facility floor area (including 7,000 gsf in the cellar of Building A). The buildings would also contain 32,031 gsf of floor area for parking on the buildings' sub-cellar and first floors (including 13,181 gsf in the sub-cellar of Building B). The Proposed Development would contain approximately 136 dwelling units, of which approximately 41 units would be permanently affordable pursuant to the MIH program. The buildings would be connected at the cellar and first floor. Both would rise to a height of 76'-6" after 15-foot setbacks above the sixth floors (57'-6"). The southern portion of Building B would be stepped down to a height of 36'-6" feet. A parking garage with 105 attended accessory parking spaces on the first floor and sub-cellar would be accessed from a new curb cut on 46th Street. The existing structures and uses on the site would be demolished and removed.

The Co-Applicants' proposal includes 136 residential dwelling units within 114,025 gsf of residential floor area (above the cellar floor level) based on approximately 838 gsf per unit. Upon consultation with the Councilmember for City Council District 22, the Co-Applicants are proposing to map Option 2 together with the Workforce Housing Option based on the range of income levels in this Community District and the immediate neighborhood. For MIH developments utilizing the Workforce Option, an amount of affordable floor area for qualifying households shall be provided that is equal to at least 30 percent of the residential floor area within such MIH development. The weighted average of all income bands for affordable housing units shall not exceed 115 percent of the AMI ($89,355 for a household of three), and there shall be no more than four income bands. No income band shall exceed 135 percent of the AMI. At least 5 percent of the residential floor area within such MIH development shall be affordable within an income band at 70 percent of the AMI ($54,390 for a household of three), and in addition, at least 5 percent of the residential floor area within such MIH development shall be affordable within an income band at 90 percent of the AMI ($69,930 for a household of three). Such MIH development may not utilize public funding. The Workforce Option typically expires within an MIH area ten years after the effective date of the amendment establishing or renewing such option in an MIH area. Under this option 41 dwelling units would be set aside as affordable. The final MIH Option will be chosen by the City Council through the ULURP process. Only 20% of the dwelling units (27 units) will be analyzed as affordable at 80% AMI for conservative analysis purposes in the EAS.

The Pancyprian Association Inc.[2] will be leasing approximately 8,700 gsf of community facility community space within the project, which will include a 250-seat theater. The community

[2] The Pancyprian Association was founded in 1975 and focused its efforts on protecting and assisting the struggle of the Cypriot people for freedom and justice. There are five divisions: Athletic, Youth Athletic (Eleftheria), Women's Issues Network,The Dance, and Choir Division. Pancyprian Association has branches in Texas, Florida and Washington DC. A main focus of the Pancyprian is to help educate Greek Cypriot American students and to keep our heritage and traditions alive. In the past 30 years hundreds of students have been educated at the best universities through Pancyprian scholarships. The Women's Issues Network offers health fairs and breast and cervical cancer screening for women with no insurance. Our community center has served as the headquarters for political fundraisers, cultural events and community mobilization.

facility will have an at-grade entrance lobby with dedicated egress and elevator to a lower level with the 250-seat theater, theater foyer space, restrooms, and a flexible office/meeting room. The Pancyprian Association will utilize the theater space to host cultural and theatrical programs for the Cyprian and Hellenic communities. They will also utilize the flexible space as a meeting room for their various cultural and athletic organizations. The space would typically be used during evenings and weekends. The Pancyprian Association will also make the theater available for sublease on a short-term basis to other local community groups, also for theatrical and cultural performances. Events would happen no more than a weekly basis on average.

The development would provide accessory attended parking for 105 vehicles occupying 32,031 gsf in the sub-cellar and on the first floor of the buildings and be accessible from a new curb cut on 46th Street. 92 accessory parking spaces are required for the proposed development while the proposed design provides attended parking for 105 cars. The residential parking requirement was calculated based on 1 parking space per 2 market rate DUs (48 spaces) and 1 parking space per 4 affordable DUs (10 spaces). The commercial parking requirement was calculated at one space per 300 gsf of floor area (34 spaces). No parking would be required or provided for the community facility use. Approximately 26,011 square feet of common outdoor recreational space would be provided in an open space between the two buildings on the roof of the first floor, in open space terraces on the 4th and 6th floors, and in open space on the roof. Residential and commercial entrances would be on 45th Street while entrances to the community facility space, parking garage, and building fitness center would be on 46th Street. The existing structures and uses on the site would be demolished and removed.

The proposed development would contain 108,028 zoning square feet (zsf) of floor area on the 30,008 square foot site. The development would have an FAR of 3.6 comprised of a residential FAR of 3.5, a commercial FAR of 0.05, and a community facility FAR of 0.05.

BUILD YEAR/PROJECT PHASING

Based on an estimated 12-month approval process and a 24-month construction period, the Build Year for the Co-Applicant owned Projected Development Site 1 is assumed to be early 2022. The Proposed Actions would result in the creation of one additional development site that is not controlled by the Co-Applicants. It is anticipated that Projected Development Site 2, which would consist of a relatively small building, would be developed over an additional 12-month period with a Build Year of 2023.

PURPOSE AND NEED OF THE PROPOSED ACTIONS

As stated above, the Proposed Actions would rezone the entirety of Block 769: the southern portion of the block would be rezoned from M1-1 to a combination of R4 (Lots 31-35, 130, 131), R4/C2-3 (Lots 36, 38, 39), R6A (lot 30), and R6A/C2-3 (Lots 25, 42) zoning districts. The northern portion of the block would be rezoned from R4 to R6A (Lot 7501). In addition, the Proposed Actions would amend ZR Appendix F to establish a MIH coterminous with the R6A portion of the proposed Project Area. Option 2 together with the Workforce Housing Option have 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 a weighted average of all income bands not to exceed 115 percent of the 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.

Proposed R4 District

R4 zoning districts permit single-family detached residences and multi-family residences. The maximum residential FAR in an R4 zoning district is 0.75 for residential uses and 2.0 for community facility uses. The maximum residential lot coverage is 45 percent and 55 percent for community facility uses on interior or through lots. The perimeter wall may rise to 25 feet before being set back to the maximum building height of 35 feet. One off-street parking space is required for each dwelling unit. For blocks entirely within R4 districts, the regulations for predominately-built up areas may be applied to permit a maximum residential FAR of 1.35. The proposed R4 zoning district would bring existing non-conforming residential uses within the southernmost portion of the Project Area into conformance. The bulk provisions of the proposed R4 zoning district are consistent with the existing built conditions within this portion of the Project Area, and would not create any new non-compliances.

Proposed R6A District

R6A is a contextual district where the Quality Housing bulk regulations are mandatory. These regulations produce high lot coverage, six- to eight-story apartment buildings set at or near the street line, and are designed to be compatible with older buildings found in medium-density neighborhoods. The maximum FAR in R6A districts is 3.0. Above a minimum base height of 40 feet, the building must set back by at least 10 feet on a wide street and 15 feet on a narrow street before rising to its maximum height of 70 feet, or 75 feet if providing a qualifying ground floor. Off-street parking is generally required for 50 percent of a building's dwelling units, but requirements are lower for income-restricted housing units (IRHU) and are further modified in certain areas, such as within the Transit Zone, or for lots less than 10,000 square feet. Parking can be waived if five or fewer spaces are required. The proposed R6A zoning district, combined with designation as an MIH Area (Option 2 and the Workforce Option), would allow a maximum 3.6 FAR for residential and community facility uses. The R6A zoning district will allow the proposed contextual, mixed-use building at the Proposed Development Site, which is consistent with the existing built character and land use patterns in the surrounding area. In addition, the proposed R6A zoning district will bring the Pistilli Grand Manor building into compliance.

Proposed C2-3 Overlay District

The proposed C2-3 overlay is intended to accommodate the retail and personal service shops needed in residential neighborhoods, and is intended to permit a wider range of local retail and service establishments and to serve a wider neighborhood than C1 districts. The maximum commercial FAR for a C2-3 overlay in an R4 zone is 1.0 and 2.0 in an R6 zone. 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 C2-3 zone with one parking space required for each 300 to 400 square feet of general retail commercial floor area or food stores. The proposed C2-3 overlay would be mapped to a depth of 100 feet and extend 275 feet north from 23rd Avenue along 45th Street. The proposed C2-3 overlay would allow existing commercial uses to remain in conformance with the proposed R4 and R6A districts, and allow new mixed-use development along the 45th Street frontage of Projected Development Site 1 and the entirety of Projected Development Site 2 subject to the provision of affordable housing under the MIH program.

Proposed Mandatory Inclusionary Housing Text Amendment

The proposed zoning text amendment to designate the Project Area as an MIH Area is consistent with the policy goals of the City's Housing New York: A Five-Borough, Ten-Year Plan. According to the U.S. Census Bureau, 40.5 percent of households in Queens Community District 1 are rent burdened, spending 35 percent or more of their income on rent.

The MIH program requires that permanently affordable housing be provided within certain new residential developments, enlargements, and conversions from non-residential to residential use within the mapped MIH Areas. The proposed zoning text amendment would establish an MIH Area contiguous with the Project Area. Within the MIH Area, all housing developments, enlargements, and conversions that meet the criteria set forth in the MIH program must comply with the requirements of either Option 2 or the Workforce Option. Option 2 requires that 30% of the residential floor area be provided as housing affordable to households at an average of 80% of the AMI, with no unit at a level exceeding 130% of AMI. The Workforce Option requires that 30% of the residential floor area be provided at an average of 115% of AMI with 5% of the residential floor area at 70% AMI and 5% of the residential floor area at 90% AMI with no unit at a level exceeding 135% of AMI. No subsidy is permitted for affordable housing under the Workforce Option, and it must be developed within a 10-year period from the effective date of the amendment establishing or renewing the option in an MIH Area. 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 Co-Applicants have selected the Workforce Option because market rents in the area reflect a moderate market condition. The Workforce Option was established to address policy concerns about the potential effects of mandatory affordability requirements in areas, such as Steinway, where prevailing rents are sufficient to support construction at moderate rents, but not the internal cross-subsidy of units affordable at low incomes. The website Trulia reports a median rent in Ditmars/Steinway of $2,350 for all properties in August 2017. According to the Furman Center's State of New York City's Housing and Neighborhoods in 2016, the median monthly rent in Queens Community District 1 was $1,540 in 2015, and the median asking rent was $2,250 in 2016. With the Workforce Option, the Co-Applicants are able to create 41 units of permanently affordable moderate-income housing without subsidy, in keeping with the moderate market condition in the area.

The Co-Applicants seek to redevelop Projected Development Site 1 primarily for residential purposes with commercial and community facility space and accessory parking to serve project residents and visitors to the building. The proposed Zoning Map Change would include rezoning the Co-Applicant controlled Projected Development Site 1 from its existing M1-1 district to the proposed R6A/C2-3 district which is required in order to develop residential uses on the property. It is also required to allow the proposed bulk of the new building to be increased from the current permitted FAR of 1.0 for manufacturing and commercial uses and 2.4 for community facility uses to 3.0 for all permitted residential and community facility uses (manufacturing uses would not be allowed), 2.0 for commercial uses, and 3.6 for Mandatory Inclusionary Housing. It would allow Use Group 5 and 6 hotel and commercial retail and office uses and also expand the scope of permitted commercial uses to include Use Groups 7, 8, and 9 local service uses which are not permitted in C1 commercial districts. It would allow for the

establishment of new uses in Use Groups 1–4 (residential and community facility use) in the Affected Area. The change in zoning is appropriate given the lack of demand for new manufacturing facilities in this area and the conversion of the former Steinway warehouse (Pistilli Grand Manor building) on the northern portion of the block to a primarily residential use in 1998.

The proposed zoning text amendment to modify ZR §23-933, Appendix F is necessary in order to make the newly mapped R6A and R6A/C2-3 districts in the Project Area a Mandatory Inclusionary Housing designated area. The text amendment is needed to provide the floor area needed to permit buildings that will be providing a large percentage of low- and middle-income dwelling units.

The proposed zoning change from M1-1 to R4/C2-3 for Projected Development Site 2 is required in order to legally develop new residential uses on the property. It would allow Use Group 5 and 6 hotel and commercial retail and office uses and also expand the scope of permitted commercial uses to include Use Groups 7, 8, and 9 local service uses which are not permitted in C1 commercial districts. It would allow for the establishment of new uses in Use Groups 1–4 (residential and community facility use) in the Project Area. The change in zoning is appropriate given the lack of demand for new manufacturing facilities in this area and the conversion of the former Steinway warehouse (Pistilli Grand Manor) on the northern portion of the block to a primarily residential use in 1998.

The proposed zoning change from M1-1 to R6A for Other Site 1 would serve to make the residential use on this Site conforming under zoning. This Site is currently zoned M1-1 which does not permit residential use. The proposed R6A zoning under the proposed Mandatory Inclusionary Housing would permit a maximum residential FAR of 3.6. The developed FAR on this Site is 0.24. Although expansion of this residentially developed property would be permitted, no significant additional development is anticipated as this 2,867 square foot Site consists of a relatively small lot relative to the standard soft site size of 5,000 square feet. Although the maximum FAR in the proposed R6A zoning district is 3.6, the proximity of the R4 district boundary makes certain regulations applicable that mandate an 8’ side yard and a maximum height of 45’ on Other Site 1. Given these restrictions, the maximum residential development that could be built on Other Site 1 is a 5,788 sf, 2.02 FAR building.

The proposed zoning change from M1-1 to R4 for Other Sites 2-6, 8, and 9 would serve to make the residential uses on these Sites conforming under zoning. These Sites are currently zoned M1-1 which does not permit residential use. The maximum residential FAR permitted under the proposed R4 zoning is 0.75 with an increase of up to 20% permitted as an attic allowance. The developed FAR on these Sites currently ranges from 0.35 to 0.76. Although some minimal expansion of these residentially developed properties would be permitted, no significant additional development is anticipated as these Sites consist of small lots of between 1,500 and 2,500 square feet in size with limited additional square footage permitted and with many properties developed in excess of 50% of the maximum permitted FAR.

The proposed zoning change from M1-1 to R4/C2-3 for Other Site 7 would serve to make the development on this site conforming and complying under zoning. Other Site 7 is developed with a commercial use at an FAR of 1.0. The C2-3 overlay would permit commercial development of up to 1.0 FAR and the C2-3 overlay would bring this use into conformance with zoning.

The proposed zoning change from R4 to R6A for Other Site 10 would serve to make the development density on this site complying under zoning. This site, the former Steinway warehouse (Pistilli Grand Manor), occupies approximately two-thirds of the area of the block, and the proposed R6A district would bring the development into compliance with zoning. This development has an FAR of approximately 3.26 and is overbuilt relative to its R4 zoning which only permits a maximum residential FAR of 0.9. The proposed R6A zoning under the proposed Mandatory Inclusionary Housing would permit a maximum residential FAR of 3.6.

NO-ACTION SCENARIO

Under the No-Action Scenario for the Project Build Year of 2023, it is assumed that the Project Area's existing M1-1 and R4 zoning would remain. No new development would occur on the 14 lots within the Project Area and all existing uses in the Project Area would remain as they are legal non-conforming uses.

Therefore, absent the Proposed Actions, the Project Area would contain 212 dwelling units, 41,543 gsf of commercial space including commercial office space and eating and drinking establishments, 30,000 gsf of warehouse space, and 307 accessory parking spaces.

WITH-ACTION SCENARIO

The Proposed Actions would rezone the entirety of Block 769: the southern portion of the block would be rezoned from M1-1 to a combination of R4, R4/C2-3, R6A, and R6A/C2-3 zoning districts while the northern portion of the block would be rezoned from R4 to R6A. The Co-Applicant property, Projected Development Site 1, would be rezoned from M1-1 to an R6A/C2-3 district. Projected Development Site 2 would be rezoned from M1-1 to an R4/C2-3 district; Other Site 7 would be rezoned from M1-1 to an R4/C2-3 district; and Other Site 10 would be rezoned from R4 to an R6A district. Other Site 1 would be rezoned from M1-1 to R6A and Other Sites 2-6, 8, & 9 would be rezoned from M1-1 to R4. A proposed zoning text amendment to modify ZR §23-933, Appendix F would make the new R6A and R6A/C2-3 districts mapped over Projected Development Site 1 and Other Sites 1 and 10 a Mandatory Inclusionary Housing (MIH) designated area.

Projected Development Sites

Projected Development Site 1 (Block 769, Lots 25 & 42) – The 30,008 square foot Site would be developed with two new 8-story, cellar, and sub-cellar residential, commercial, and community facility buildings with approximately 172,953 gsf/108,028 zsf of floor area for an FAR of 3.6. The With-Action development on Projected Development Site 1 would be the same as the proposed development. The buildings would be connected at the cellar and first floor. Both would rise to a height of 76'-6" after 15-foot setbacks above the sixth floors (57'-6"). The southern portion of Building B would be stepped down to a height of 36'-6" feet.

The 122,125 gsf of residential floor area would include 136 residential dwelling units. The Project proposes 136 residential dwelling units within 122,125 total gsf and 114,025 gsf of residential floor area above the cellar floor level based on approximately 838 gsf per unit while the standard calculation is based on 1,000 gsf per unit. As 1,000 gsf per unit would result in only 114 dwelling units, the Co-Applicants' proposal for 136 units is more conservative for CEQR analysis purposes. Therefore, the With-Action Scenario would have 136 dwelling units. The Co-Applicants are proposing to map Option 2 together with the Workforce Housing Option under the MIH designation requiring that 30% of the development's residential floor area, or 41 dwelling units, be set aside as affordable housing for households with incomes at 115% or less

than the AMI. The final MIH Option will be chosen by the City Council through the ULURP process. Only 20% of the dwelling units (27 units) will be analyzed as affordable at 80% AMI for conservative analysis purposes in the EAS.

The proposed development would include 10,097 gsf of commercial space in the cellar with a ground-floor lobby in Building A and 8,700 gsf of community facility space in the cellar with a ground-floor lobby in Building B which is anticipated to be occupied by a theater. The development would provide attended accessory parking for 105 vehicles occupying 32,031 gsf in the sub-cellar and on the first floor of the buildings and accessible from a new curb cut on 46th Street. 92 accessory parking spaces are required for the proposed development while the proposed design provides attended parking for 105 cars. The residential parking requirement was calculated based on 1 parking space per 2 market rate DUs (48 spaces) and 1 parking space per 4 affordable DUs (10 spaces). The commercial parking requirement was calculated at one space per 300 gsf of floor area (34 spaces). No parking would be required or provided for the community facility use. Approximately 26,011 square feet of common outdoor recreational space would be provided in an open space between the two buildings on the roof of the first floor, in open space terraces on the 4th and 6th floors, and in open space on the roof. Residential and commercial entrances would be on 45th Street while entrances to the community facility space, parking garage, and building fitness center would be on 46th Street. The existing structures and uses on the site would be demolished and removed.

Projected Development Site 2 (Block 769, Lots 36 & 38) - The 7,500 square foot Site would be developed with a new 35' tall, 3-story, residential and commercial building with approximately 7,895 gsf/7,500 zsf of floor area for an FAR of 1.0. The 5,895 gsf of residential floor area would include 7 residential dwelling units. The proposed development would also include 2,000 gsf of commercial space on the ground-floor of the building. The development would provide 8 at-grade accessory parking spaces (7 residential and 1 commercial). Residential parking was calculated based on 1 parking space per DU. Commercial parking assumes a waiver of parking below the minimum number of spaces pursuant to ZR 36-231. Residential, commercial, and parking entrances would be on 23rd Avenue. The existing structures and uses on the site would be demolished and removed.

No new development is anticipated on Other Sites 1 through 10 as described below.

Other Site 1 (Block 769, Lot 30) – The proposed R6A zoning for Other Site 1 would serve to make the residential use on this Site conforming under zoning. This Site is currently zoned M1-1 which does not permit residential use. The proposed R6A zoning under the proposed Mandatory Inclusionary Housing would permit a maximum residential FAR of 3.6. The developed FAR on this Site is 0.24. Although expansion of this residentially developed property would be permitted, no significant additional development is anticipated as this 2,867 square foot Site consists of a relatively small lot relative to the standard soft site size of 5,000 square feet. Although the maximum FAR in the proposed R6A zoning district is 3.6, the proximity of the R4 district boundary makes certain regulations applicable that mandate an 8' side yard and a maximum height of 45' on Other Site 1. Given these restrictions, the maximum residential development that could be built on Other Site 1 is a 5,788 sf, 2.02 FAR building.

Other Sites 2-6, 8, & 9 (Block 769, Lots 31-35, 130, & 131) – The proposed R4 zoning for Other Sites 2-6, 8, and 9 would serve to make the residential uses on these Sites conforming under zoning. These Sites are currently zoned M1-1 which does not permit residential use. The maximum residential FAR permitted under the proposed R4 zoning is 0.75 with an increase of

up to 20% permitted as an attic allowance. The developed FAR on these Sites currently ranges from 0.35 to 0.76. Although some minimal expansion of these residentially developed properties would be permitted, no significant additional development is anticipated as these Sites consist of small lots of between 1,500 and 2,500 square feet in size with limited additional square footage permitted and with many properties developed in excess of 50% of the maximum permitted FAR. In addition, all lots are under separate ownership and there is currently no potential for a merger with any other lots in the Project Area.

Other Site 7 (Block 769, Lot 39) – The proposed R4/C2-3 zoning for Other Site 7 would serve to allow the commercial use on this Site to remain conforming and complying under zoning. This Site is currently zoned M1-1 which permits a manufacturing or commercial FAR of 1.0. Other Site 7 is developed with a commercial use at an FAR of 1.0 and the proposed C2-3 overlay would also permit commercial development of up to 1.0 FAR. Although the maximum residential FAR permitted under the proposed R4 zoning is 0.75 with an increase of up to 20% permitted as an attic allowance, no additional residential development would occur on this Site as it is already developed to the maximum FAR of 1.0 that would be permitted on the Site.

Other Site 10- (Block 769, Lot 7501) – The proposed R6A zoning for Other Site 10 would serve to bring the developed FAR of this Site into conformance with zoning. The R4 zoning of the Site permits a maximum residential FAR of 0.9 and the Site currently has an FAR of 3.26. The proposed R6A zoning and the mapping of the Site as a Mandatory Inclusionary Housing designated area would permit a maximum residential FAR of 3.6. No additional development is anticipated on Other Site 10 as the developed FAR of 3.26 on this Site is very close to the maximum residential and total FAR of 3.6 that would be permitted.

INCREMENT BETWEEN NO-ACTION AND WITH-ACTION SCENARIOS

Under No-Action conditions, the Project Area would continue to be developed as under currently existing conditions with 212 market rate dwelling units within 204,581 gsf of floor area, 41,543 gsf of commercial space, 30,000 gsf of warehouse space, and 307 accessory parking spaces.

Under With-Action conditions, the Project Area would be developed with 330,248 gsf of residential space for 352 dwelling units (including 325 market rate and 27 affordable units), 53,640 gsf of commercial space, 8,700 gsf of community facility space (community theater), and 412 accessory parking spaces.

The increment between the No-Action and With-Action development scenarios would be 125,667 gsf of additional residential space for 140 additional dwelling units (including 113 market rate and 27 affordable units), 12,097 gsf of new commercial space, 8,700 gsf of new community facility space, and 105 additional accessory parking spaces. In order to allow for the projected development, two existing warehouse structures totaling 30,000 gsf in floor area and three single-family dwellings in the Project Area would be demolished.

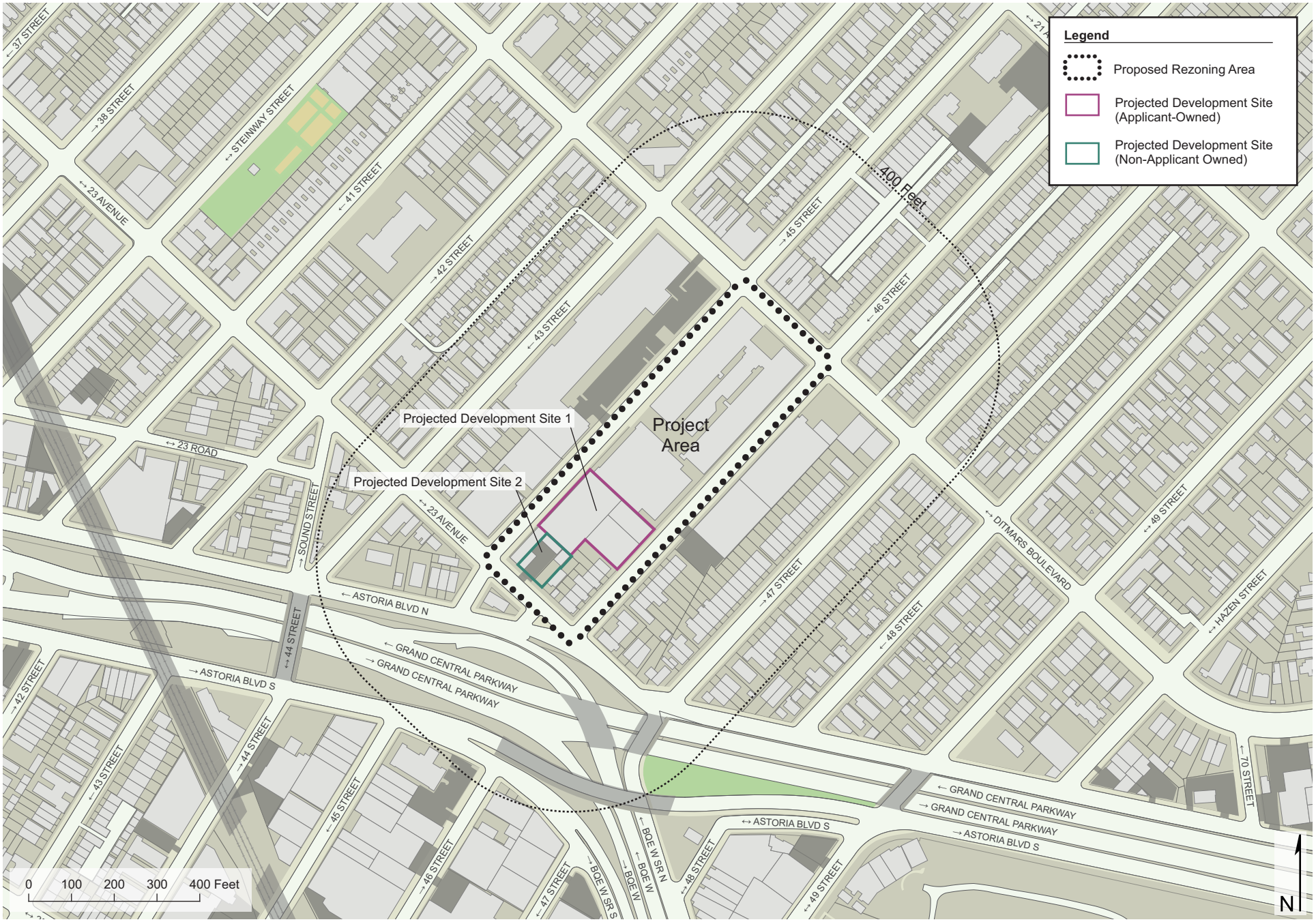
Table No. 2 below presents a detailed summary of the existing conditions, Future No-Action, and Future With-Action scenarios in the Project Area and shows the incremental difference between the Future No-Action and Future With-Action scenarios.

Table 2

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

Item	Existing	No-Action	With-Action	Increment
Gross SF[3]	276,124	276,124	392,588	+116,464
DUs/(Afford)	212/(0)	212/(0)	352/(27)	+140/(+27)
Residential SF	204,581	204,581	330,248	+125,667
Commercial SF	41,543	41,543	53,640	+12,097
Comm Facil SF	0	0	8,700	+8,700
Wrhse SF	30,000	30,000	0	-30,000
No. of Stories	1-6	1-6	3-8	+2
Building Ht	16'-70'	16'-70'	35'-76'-6"	+6'-6"
Access Pkg Spaces	307	307	412	+105

[3] Does not include subsurface floors used for parking.

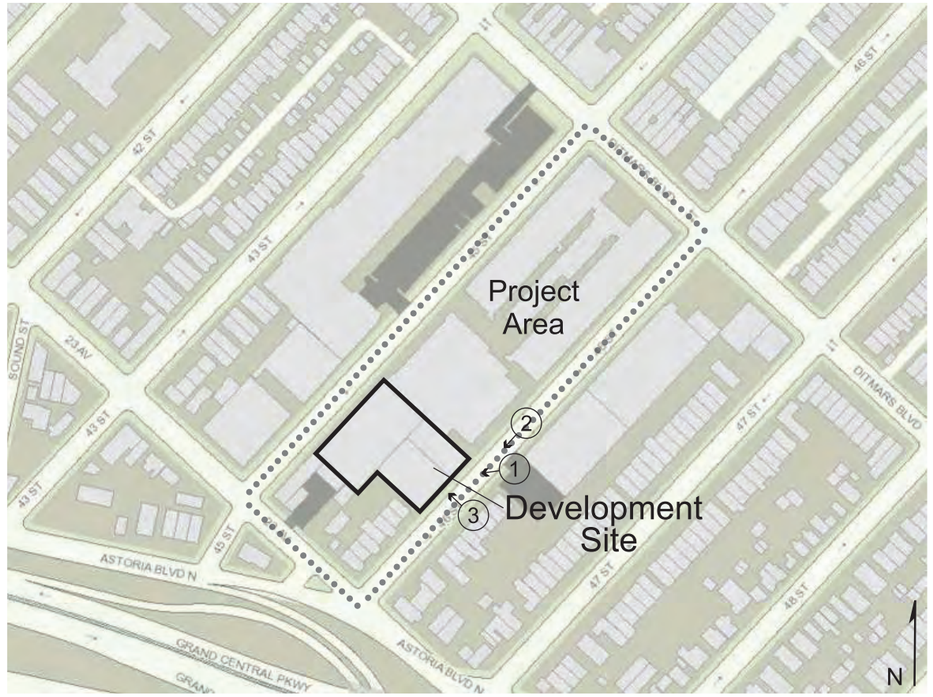


Data Source: MapPLUTO 2016v2, NYC DOF Digital Tax Map 03-16 downloaded from https://nycopendata.socrata.com

1. View of the Development Site facing west from 46th Street.

2. View of 46th Street facing southwest (Development Site at right).

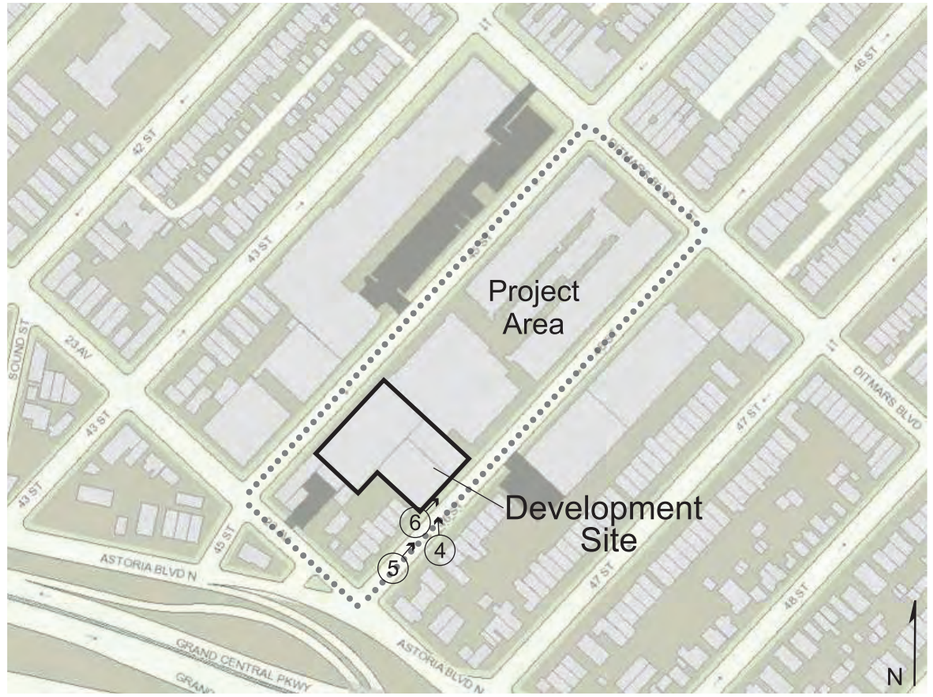
3. View of the Development Site facing northwest from 46th Street.



4. View of the Development Site facing north from 46th Street.

5. View of 46th Street facing northeast (Development Site at left).

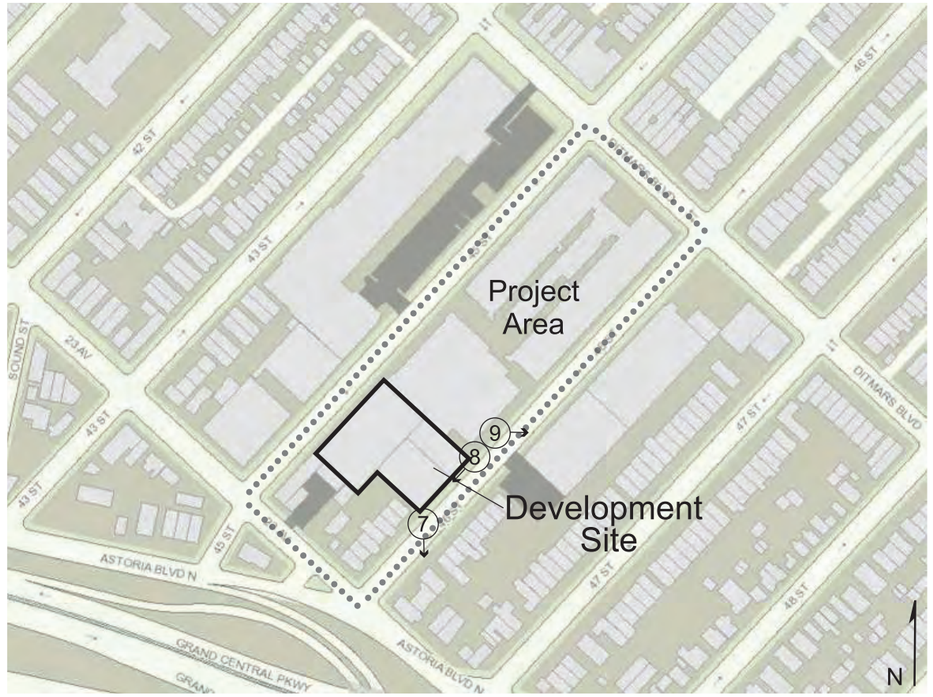
6. View of the sidewalk along the northwest side of 46th Street facing northeast (Development Site at left).



7. View of the southeast side of 46th Street facing south from the Development Site.

8. View of the sidewalk along the northwest side of 46th Street facing southwest (Development Site at right).

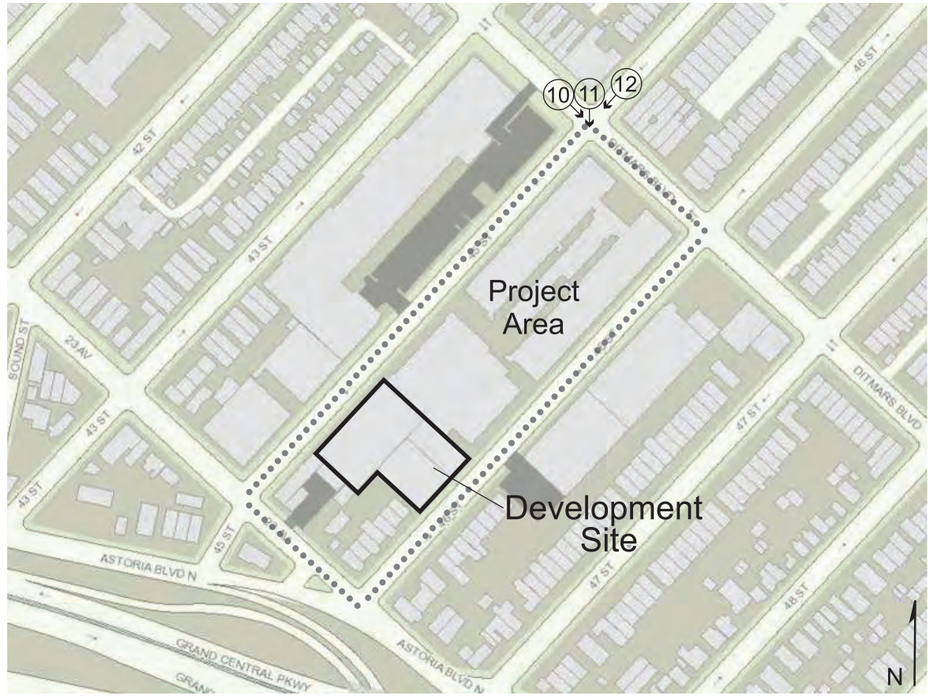
9. View of the southeast side of 46th Street facing east from the Development Site.



10. View of Ditmars Boulevard facing southeast from 45th Street (Project Area at right).

11. View of the Project Area facing south from the intersection of Ditmars Boulevard and 45th Street.

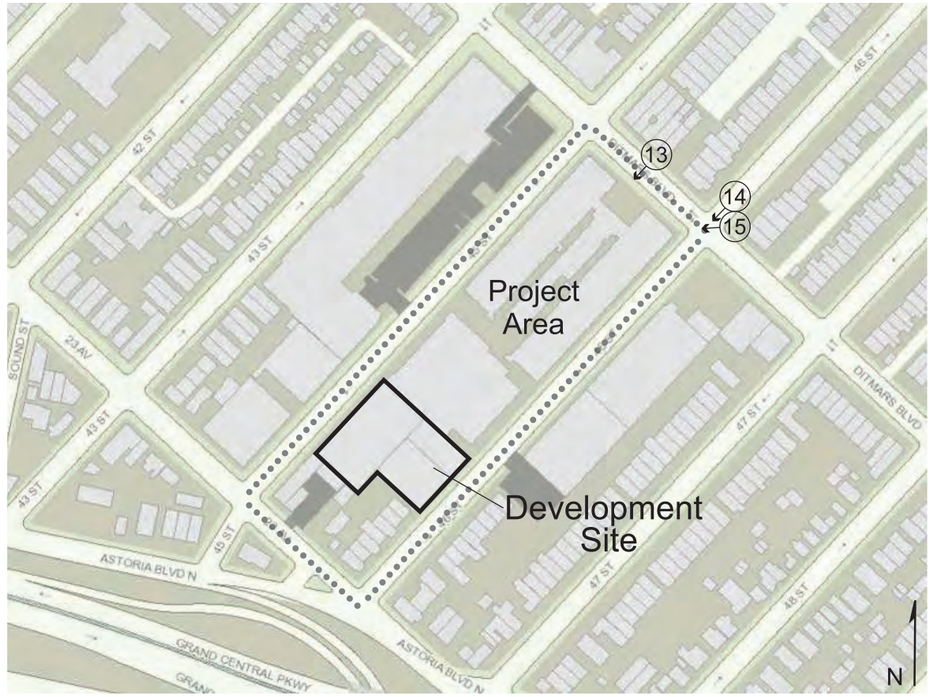
12. View of 45th Street facing southwest from Ditmars Boulevard (Project Area at left).



13. View of the Project Area facing southwest from Ditmars Boulevard.

14. View of 46th Street facing southwest from Ditmars Boulevard (Project Area at right).

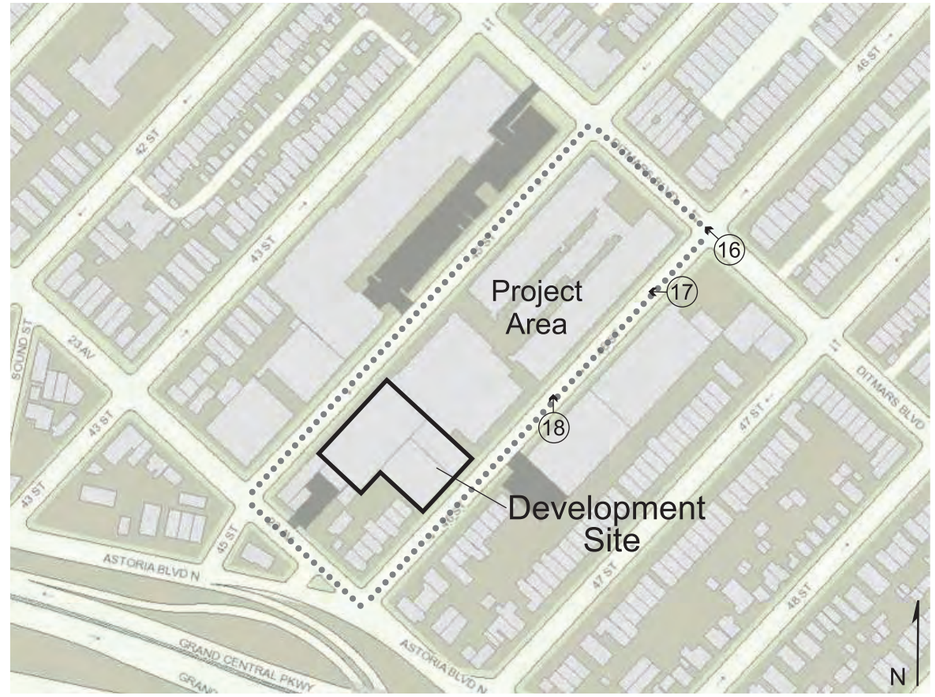
15. View of the Project Area facing west from the intersection of Ditmars Boulevard and 46th Street.



16. View of Ditmars Boulevard facing northwest from 46th Street (Project Area at left).

17. View of the Project Area facing west from 46th Street.

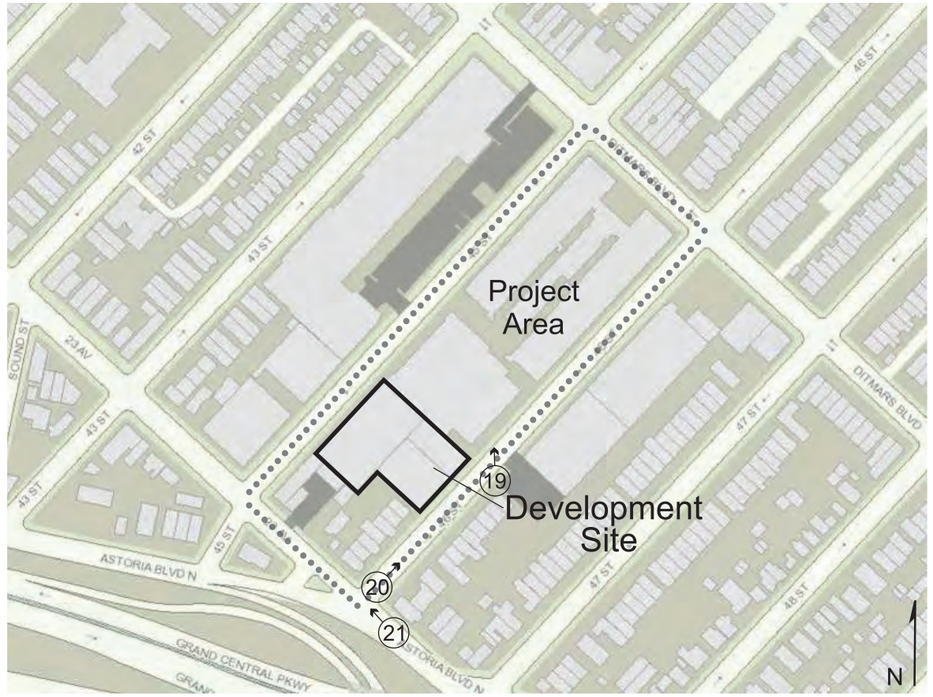
18. View of the Project Area facing north from 46th Street.



19. View of the Project Area facing north from 46th Street (Development Site at far left).

20. View of 46th Street facing northeast from 23rd Avenue (Project Area at left).

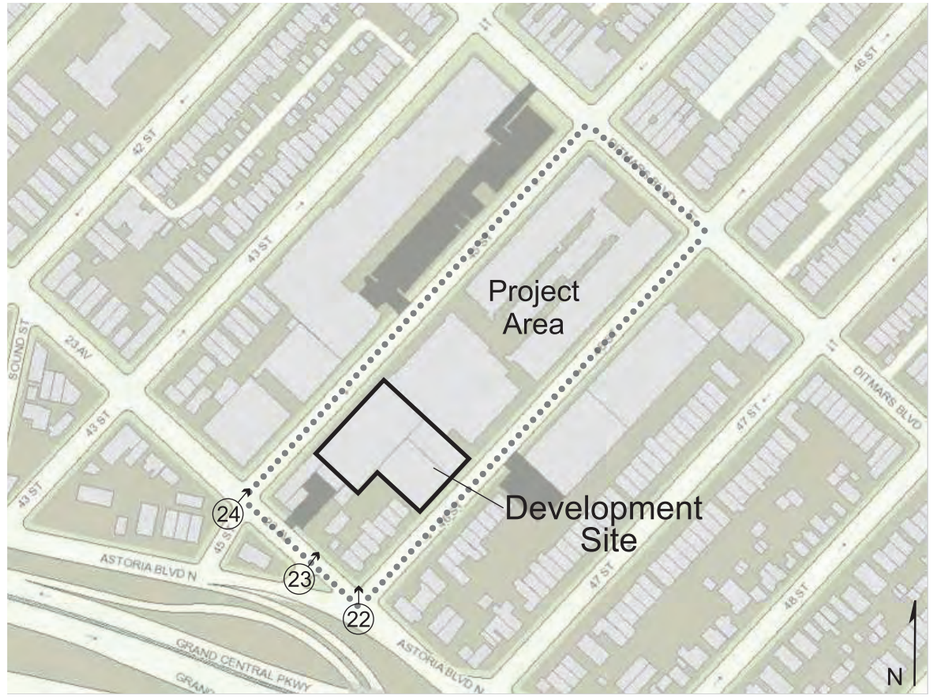
21. View of 23rd Avenue facing northwest from 46th Street (Project Area at right).



22. View of the Project Area facing north from the intersection of 23rd Avenue and 46th Street.

23. View of the Project Area facing northeast from 23rd Avenue.

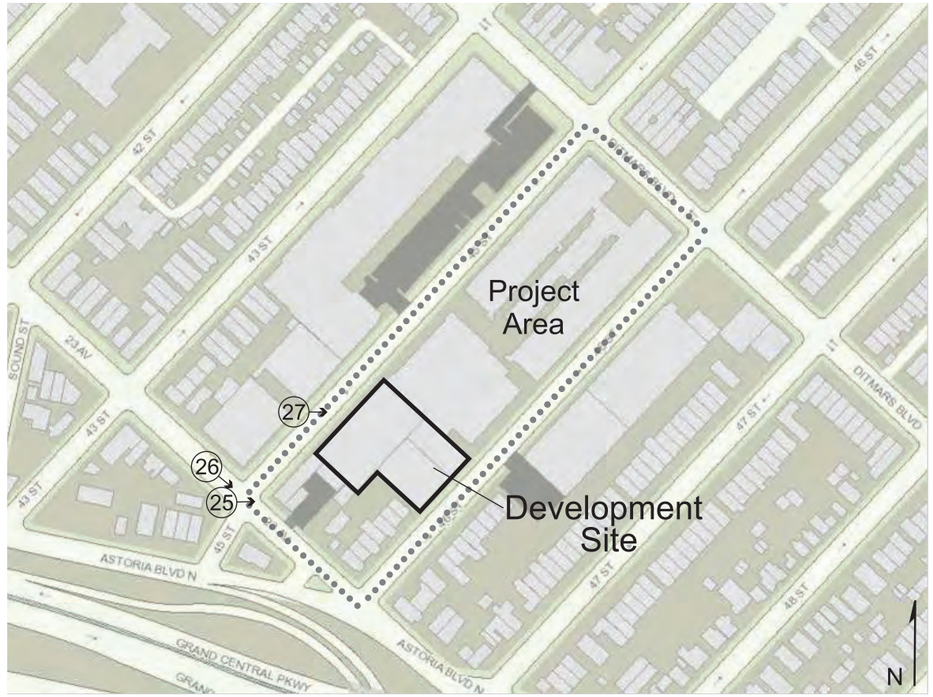
24. View of 45th Street facing northeast from 23rd Avenue (Project Area at right).



25. View of the Project Area facing east from the intersection of 23rd Avenue and 35th Street.

26. View of 23rd Avenue facing southeast from 45th Street (Project Area at left).

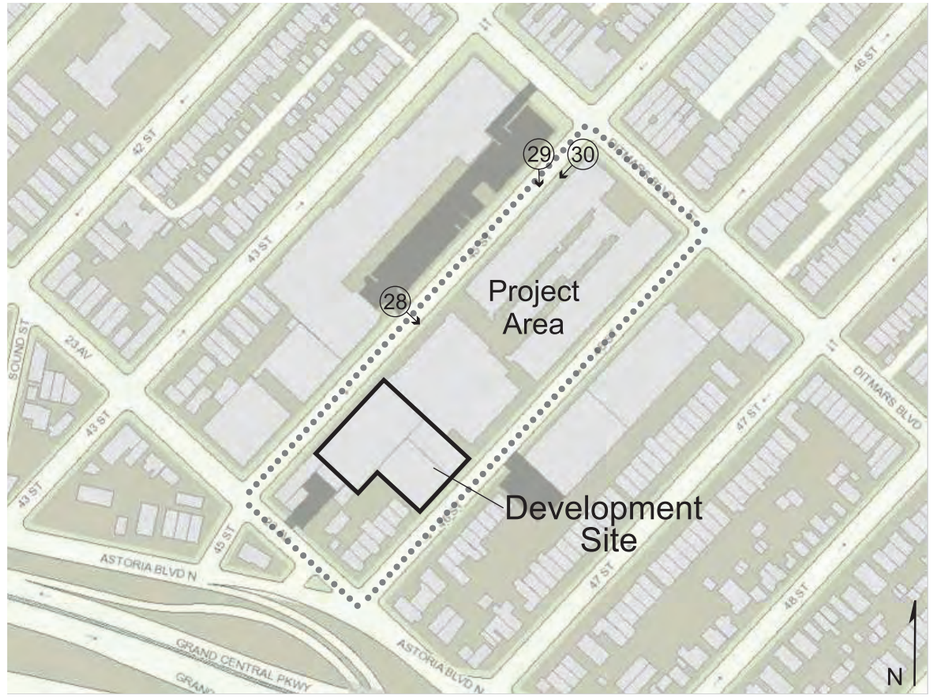
27. View of the Development Site facing east from 45th Street.



28. View of the Project Area facing southeast from 45th Street.

29. View of the Project Area facing south from 45th Street.

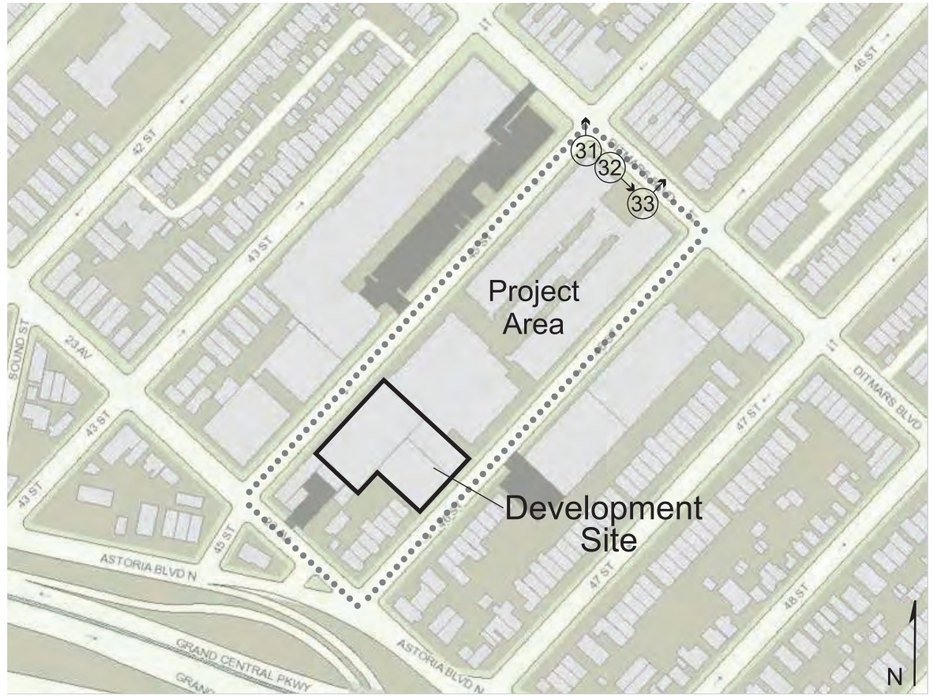
30. View of the sidewalk along the southeast side of 45th Street facing southwest from Ditmars Boulevard (Project Area at left).



31. View of the intersection of Ditmars Boulevard and 45th Street facing north from the Project Area.

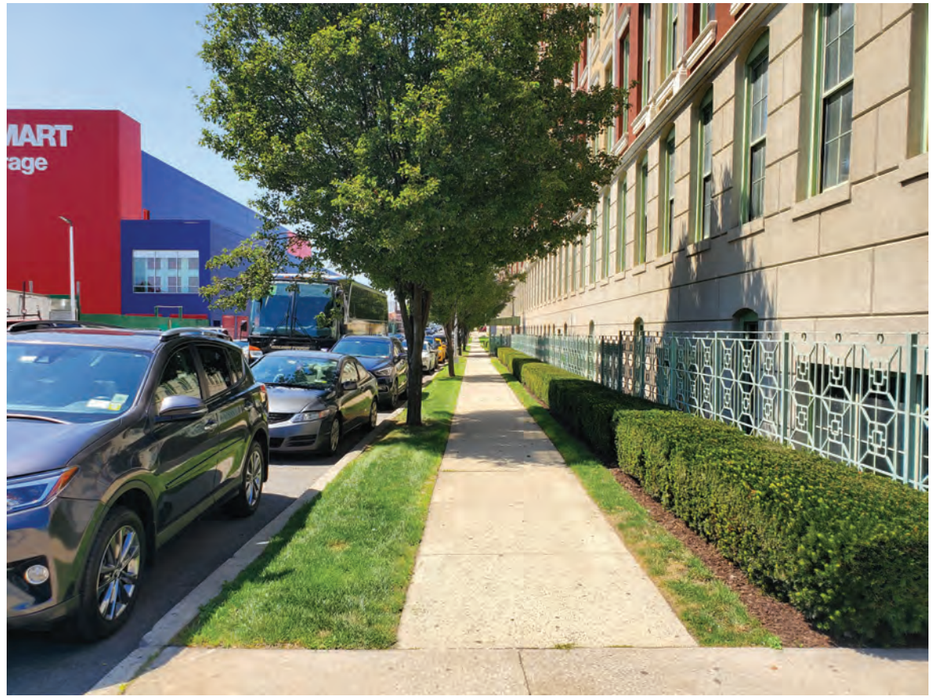
32. View of the sidewalk along the southwest side of Ditmars Boulevard facing southeast from 45th Street (Project Area at right).

33. View of the northeast side of Ditmars Boulevard facing northeast from the Project Area.

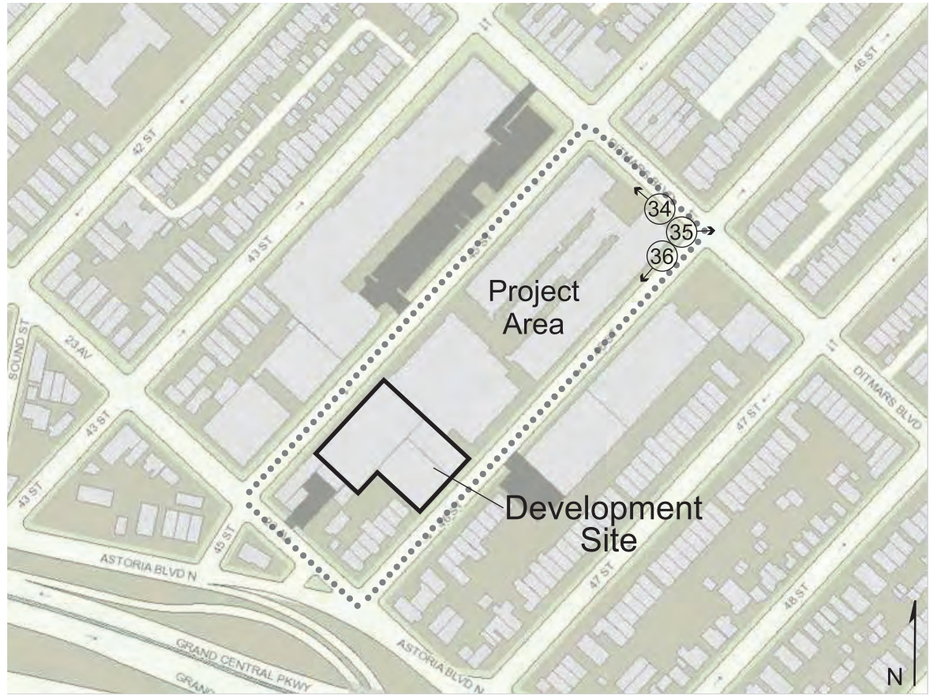


34. View of the sidewalk along the southwest side of Ditmars Boulevard facing northwest from 46th Street (Project Area at left).

35. View of the intersection of Ditmars Boulevard and 46th Street facing east from the Project Area.



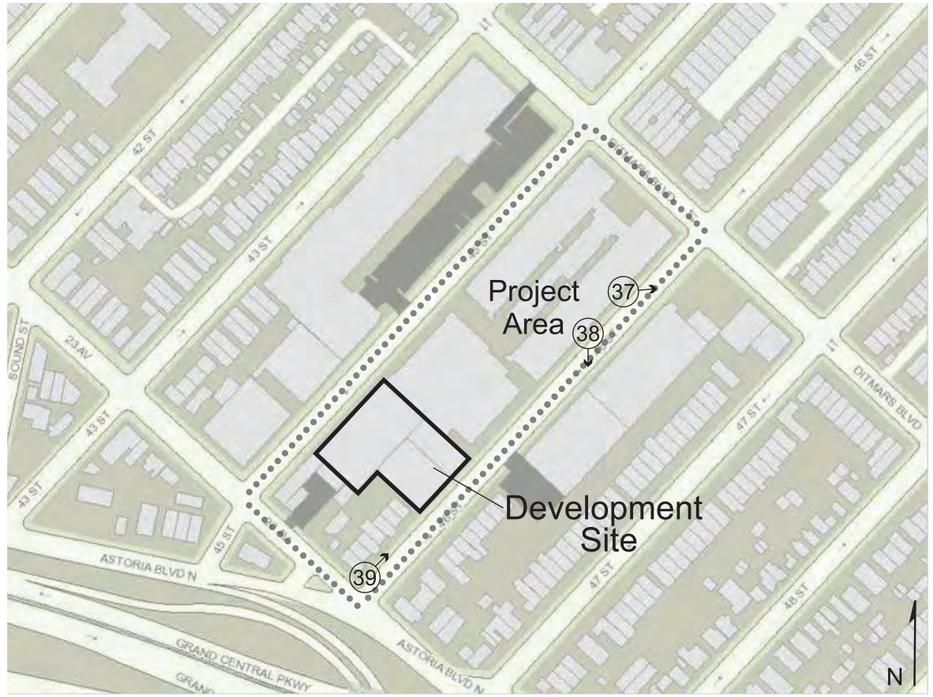
36. View of the sidewalk along the northwest side of 46th Street facing southwest from Ditmars Boulevard (Project Area at right).



37. View of the southeast side of 46th Street facing east from the Project Area.

38. View of the southeast side of 46th Street facing south from the Project Area.

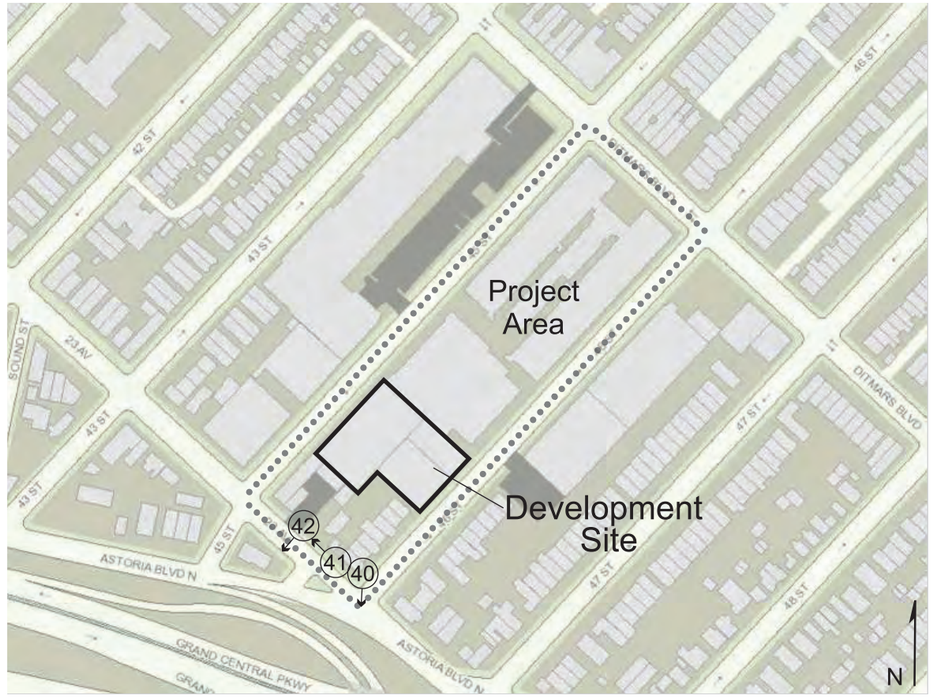
39. View of the sidewalk along the northwest side of 46th Street facing northeast from 23rd Avenue (Project Area at left).



40. View of the intersection of Astoria Boulevard, 23rd Avenue, and 46th Street facing south from the Project Area.

41. View of the sidewalk along the northeast side of 23rd Avenue facing northwest from 46th Street (Project Area at right).

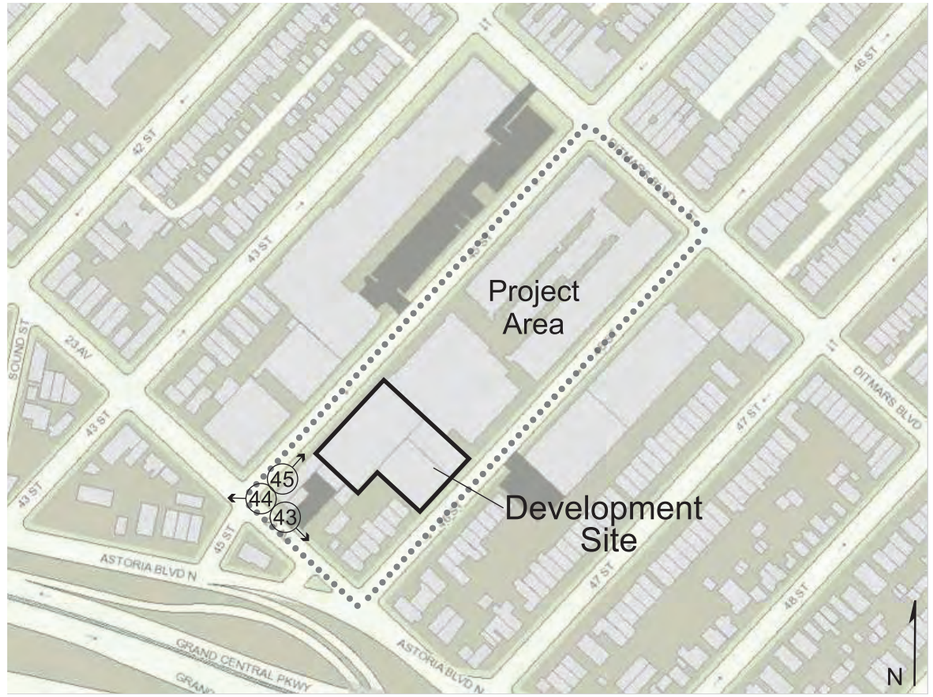
42. View of the southwest side of 23rd Avenue facing southwest from the Project Area.



43. View of the sidewalk along the northeast side of 23rd Avenue facing southeast from 45th Street (Project Area at left).

44. View of the intersection of 23rd Avenue and 45th Street facing west from the Project Area.

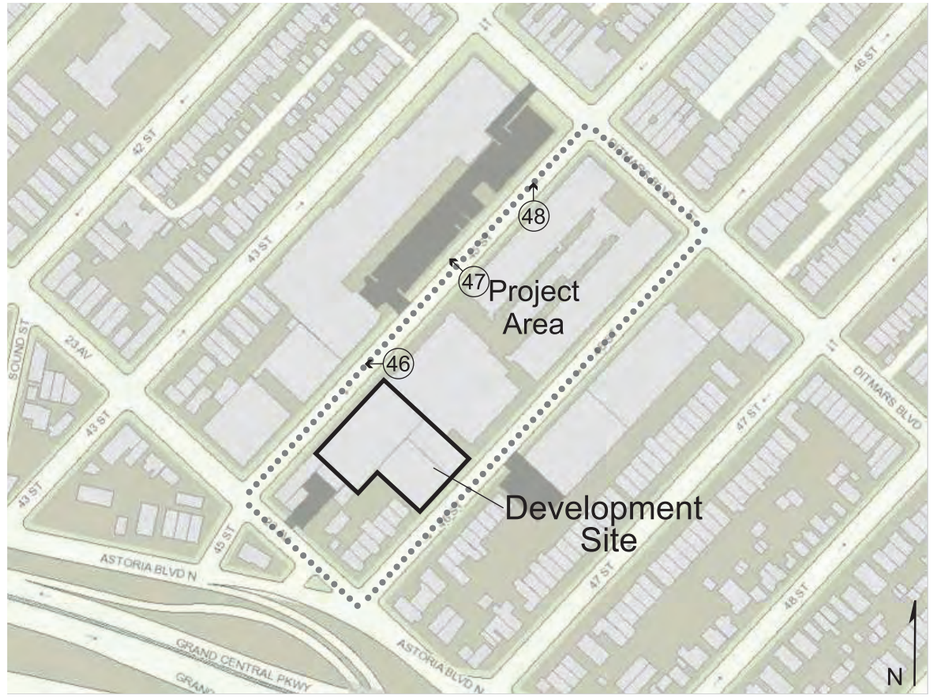
45. View of the sidewalk along the southeast side of 45th Street facing northeast from 23rd Avenue (Project Area at right).



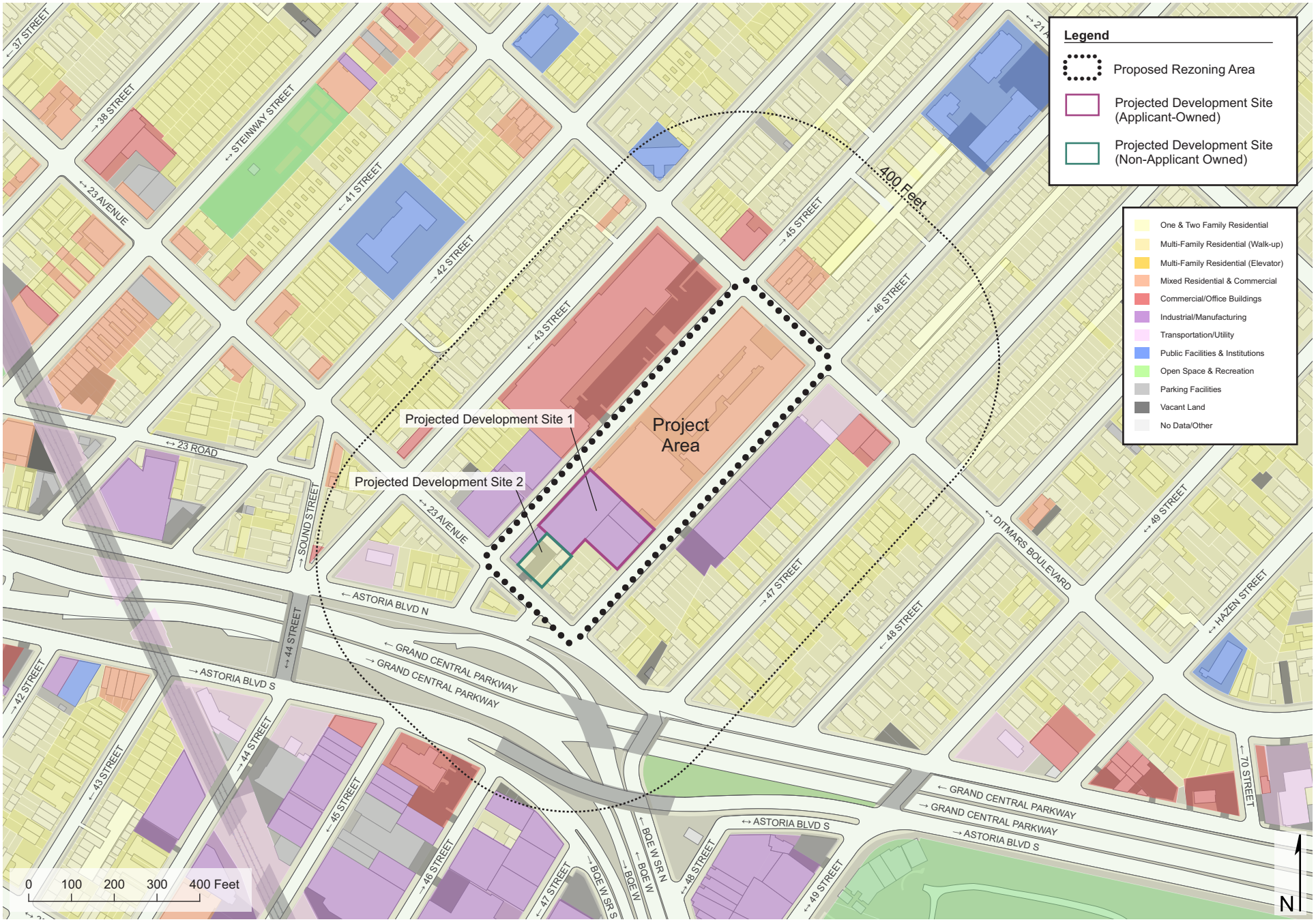
46. View of the northwest side of 45th Street facing west from the Project Area.

47. View of the northwest side of 45th Street facing northwest from the Project Area.

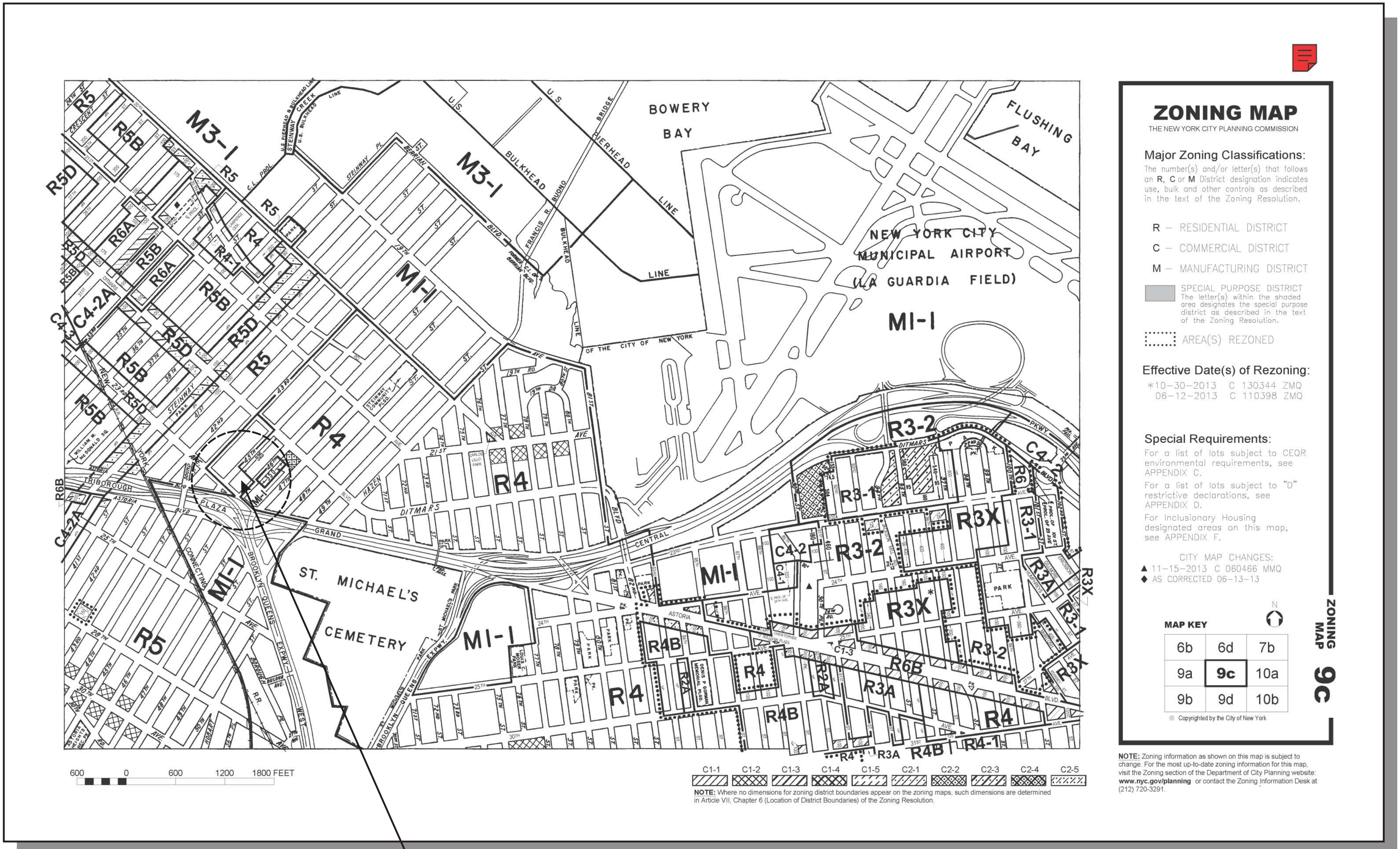
48. View of the northwest side of 45th Street facing north from the Project Area.

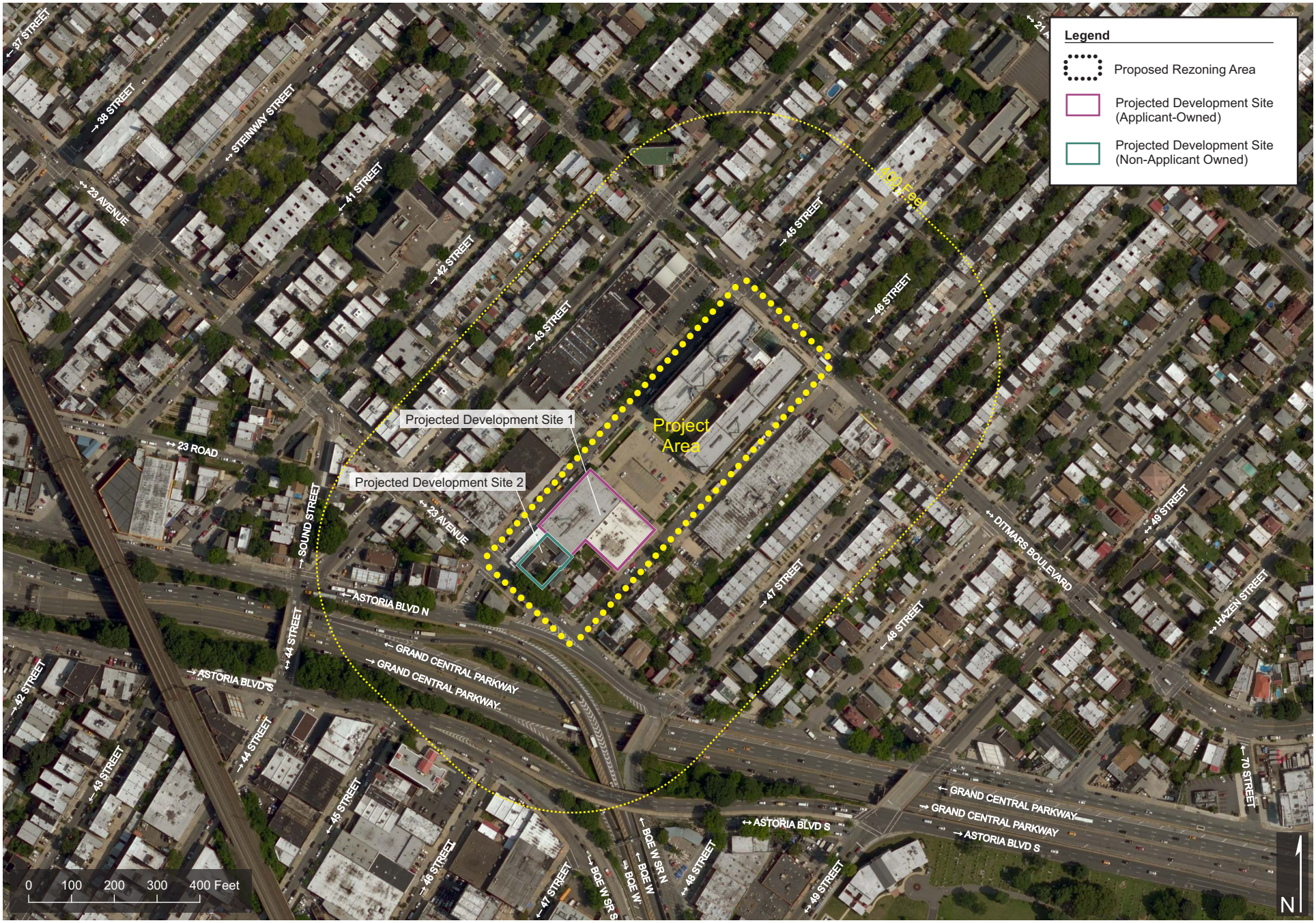


Data Source: MapPLUTO 2016v2, NYC DOF Digital Tax Map 03-16 downloaded from https://nycopendata.socrata.com

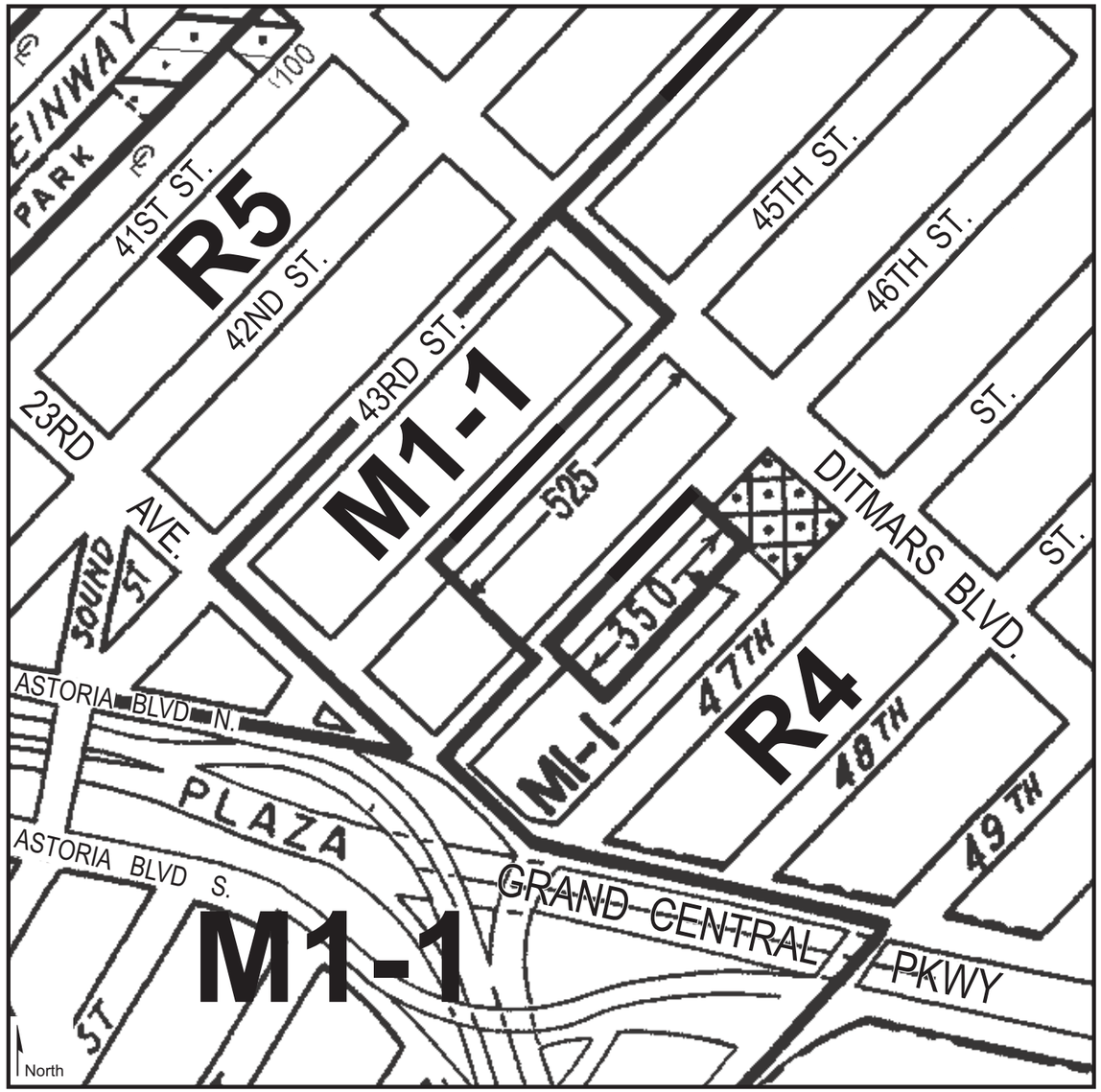


Data Source: MapPLUTO 2016v2, NYC DOF Digital Tax Map 03-16 downloaded from https://nycopendata.socrata.com

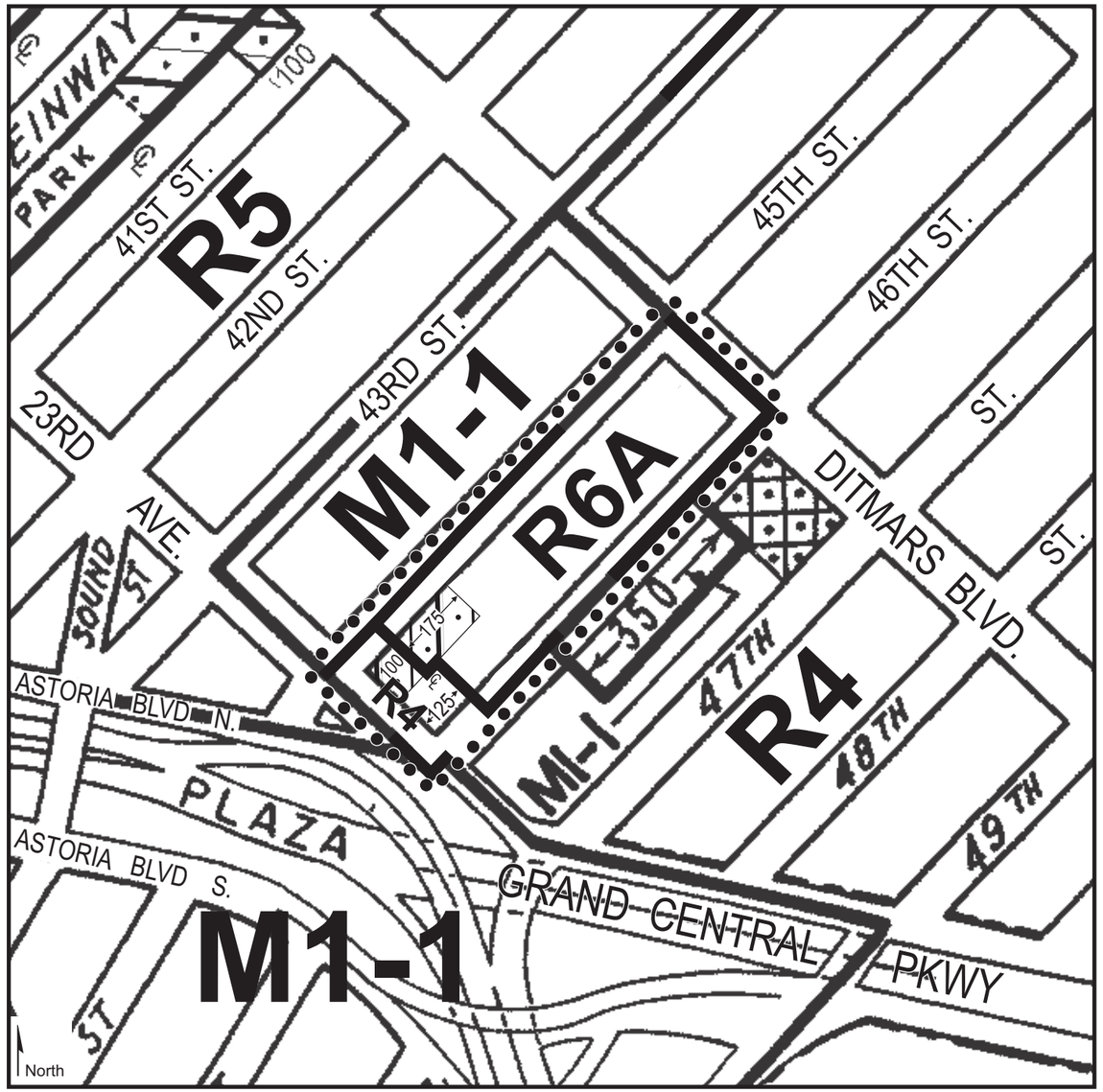

ZONING MAP
THE NEW YORK CITY PLANNING COMMISSION
Major Zoning Classifications:
The number(s) and/or letter(s) that follows an R, C or M District designation indicates use, bulk and other controls as described in the text of the Zoning Resolution.
R – RESIDENTIAL DISTRICT
C – COMMERCIAL DISTRICT
M – MANUFACTURING 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:
*10-30-2013 C 130344 ZMQ
06-12-2013 C 110398 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:
▲ 11-15-2013 C 060466 MMQ
◆ AS CORRECTED 06-13-13
MAP KEY
6b 6d 7b
9a 9c 10a
9b 9d 10b
© Copyrighted by the City of New York
ZONING MAP 9c
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.
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.
600 0 600 1200 1800 FEET
BOWERY BAY
FLUSHING BAY
NEW YORK CITY MUNICIPAL AIRPORT (LA GUARDIA FIELD)
ST. MICHAEL'S CEMETERY
M3-1
M1-1
R4
R5
R3-2
R3X
R4B
Site


Legend
Proposed Rezoning Area
Projected Development Site (Applicant-Owned)
Projected Development Site (Non-Applicant Owned)
400 Feet
Projected Development Site 1
Projected Development Site 2
Project Area
37 STREET
38 STREET
STEINWAY STREET
23 AVENUE
41 STREET
42 STREET
43 STREET
45 STREET
46 STREET
23 ROAD
SOUND STREET
23 AVENUE
ASTORIA BLVD N
44 STREET
GRAND CENTRAL PARKWAY
ASTORIA BLVD S
42 STREET
43 STREET
44 STREET
45 STREET
46 STREET
47 STREET
BQE W SR S
BQE W SR N
BQE W
48 STREET
49 STREET
DITMARS BOULEVARD
47 STREET
48 STREET
49 STREET
HAZEN STREET
70 STREET
0 100 200 300 400 Feet
N

Zoning Change Map



Current Zoning Map (9c)



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

Rezoning from M1-1 to R4
Rezoning from M1-1 to R4/C2-3
Rezoning from M1-1 to R6A
Rezoning from M1-1 to R6A/C2-3
Rezoning from R4 to R6A

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.

22-60 46th Street
Community District 1, Queens
8/20/19
Zoning Map 9c

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

* * *

Map 8 – [date of adoption]

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

Area **8** — [date of adoption] — MIH Program Option 2 and Workforce Option

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, open space, shadows, historic and cultural resources, urban design, hazardous materials, transportation, air quality, noise, and construction 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

Introduction

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 Actions' compliance with, and effect on, the area's zoning and other applicable public policies.

The Proposed Actions include the following on Block 769 in Queens Community District 1:

- A zoning map amendment to ZR section 9c to change the existing M1-1 zoning district to a combination of R4 (Lots 31-35, 130, 131), R4/C2-3 (Lots 36, 38, 39), R6A (lot 30), R6A/C2-3 (Lots 25 and 42 which would be merged) zoning districts and an existing R4 district to an R6A zoning district (Lot 7501) on Block 769 (the Project Area); 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 R6A portion of the Project Area. Option 2 together with the Workforce Housing Option have 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 a weighted average of all income bands not to exceed 115%. 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 Actions would facilitate a proposal by the Applicant to construct two, 8-story, cellar, and sub-cellar mixed-use residential, commercial, and community facility buildings totaling approximately 172,953 gross square feet (gsf) in floor area on the Proposed Development Site/Projected Development Site 1 (Block 769, Lot 25). Building A would front on 46th Street and Building B would front on 45th Street. The Proposed Development would contain approximately 122,125 gsf of residential floor area, 10,097

gsf of commercial floor area, and 8,700 gsf of community facility floor area anticipated to be occupied by a community theater. The buildings would also contain 32,031 gsf of floor area for parking on the buildings' sub-cellar and first floors. The Proposed Development would contain approximately 136 dwelling units, 41 units of which would be set aside as affordable (27 affordable units are assumed for conservative EAS analysis purposes). The buildings would be connected at the cellar and first floor. A parking garage with 105 attended accessory parking spaces on the first floor and sub-cellar would be accessed from a new curb cut on 46th Street. Approximately 26,011 square feet of common outdoor recreational space would be provided in an open space between the two buildings on the roof of the first floor, in open space terraces on the 4th and 6th floors, and in open space on the roof. The existing structures and uses on the site would be demolished and removed. One additional site not owned by the Applicant, Projected Development Site 2 (Block 769, Lots 36 & 38), is also anticipated to be developed.

Based on an estimated 12-month approval process and a 24-month construction period, the Build Year for the Applicant owned Projected Development Site 1 is assumed to be early 2022. The Proposed Actions would result in the creation of one additional development site that is not controlled by the Applicant. It is anticipated that Projected Development Site 2, which would consist of a relatively small building, would be developed over an additional 12-month period with a Build Year of 2023.

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 Ditmars Boulevard and 21st Avenue, on the south by Astoria Boulevard South, on the east by area between 47th and 48th Streets, and on the west by an area between 42nd and 43rd Streets. 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 consists of the entirety of Block 769 including Lots 25, 30, 31, 32, 33, 34, 35, 36, 38, 39, 42, 130, 131, and 7501 in the Steinway neighborhood of Queens, and is bounded by Ditmars Boulevard to the north, 23rd Avenue to the south, 45th Street to the west, and 46th Street to the east. Ditmars Boulevard and 23rd Avenue are both 80-foot-

wide, two-way streets. Both are wide streets as defined in the Zoning Resolution.[1] 45th Street and 46th Street are both narrow, 70-foot-wide, one-way streets.

The Project Area totals approximately 126,809 square feet in land area. The Project Area contains 212 dwelling units, 41,543 gsf of commercial space including commercial office space and eating and drinking establishments, 30,000 gsf of warehouse space, and 307 accessory parking spaces. The Project Area includes two Projected Development Sites described below and summarized in Table 4-1. Relevant information about Other Sites not anticipated to be developed is also presented in Table 4-1.

1. Proposed Development Site/Projected Development Site 1 (Block 769, Lots 25 and 42) -consists of two contiguous tax lots which would be combined into a single zoning lot totaling 30,008 square feet in area and owned by the Applicant. Lot 25, which fronts on 46th Street, has a lot area of approximately 12,503 square feet, and is improved with a one-story, 16-foot tall, approximately 12,500 square foot (1.0 FAR) building occupied by Mega Contracting Group LLC for office and warehouse uses. The property has a Certificate of Occupancy dated 2/29/1956 for "factory, offices, warehouse, and storage" and a Certificate of Occupancy dated 5/19/1961 for "manufacturing, office, loading and unloading of trucks, warehouse, and storage. Manufacturing is limited to any factory use not prohibited by Article 2, Section 4 of the Zoning Resolution". Lot 42, which fronts on 45th Street, has a lot area of approximately 17,505 square feet, and is improved with a one-story 1.0 FAR building occupied by a plumbing supply business.

2. Projected Development Site 2 – (Block 769, Lots 36 & 38) – Lot 36 is a 2,500 sf lot developed with a 1-story building totaling 625 gsf in size and occupied by a single family dwelling; FAR of 0.25. Lot 38 is a 5,000 sf lot developed with two 2-story buildings totaling 1,728 gsf in size and occupied by two single family dwellings; FAR of 0.35. The lots would be combined under the Proposed Actions and would total 7,500 sf in area. The three single family dwellings on the lots contain 2,353 sf of floor area and have an FAR of 0.31.

400-Foot Radius Project Study Area

The Project Area is located along near the southern edge of the Astoria-Steinway neighborhood of Queens, Community District 1 approximately one-half block north of the Brooklyn-Queens Expressway (I-278). The neighborhood within 400 feet of the Project Area is primarily residential, but there is a mix of commercial and light industrial uses concentrated in the Project Area and adjacent blocks to the east and west.

[1] Pursuant to the definition in ZR § 12-10, a "wide street" is any street that is 75 feet or more in width. A "narrow street" is any street that is less than 75 feet wide.

Table 4-1

Summary of Projected Development Sites and Other Sites Within Project Area

Site Ident	Block/Lot	Lot Size (sf)	Bldg Size (sf)	FAR	# of bldgs	# of stories	# of DUs	Resid sf	Comm'l/ Other sf
Projected Development Sites									
1	B 769, L 25	12,503	12,500	1.0	1	1	0	0	12,500 whse/office
	B 769, L 42	17,505	17,505	1.0	1	1	0	0	17,505 plmbg supply
2	B 769, L 36	2,500	625	0.25	1	1	1	625	0
	B 769, L 38	5,000	1,728	0.35	2	2	2	1,728	0
Other Sites									
1	B 769, L 30	2,687	700	0.24	1	1	1	700	0
2	B 769, L 31	1,500	700	0.47	1	1	1	700	0
3	B 769, L 32	1,500	700	0.47	1	1	1	700	0
4	B 769, L 33	1,500	700	0.47	1	1	1	700	0
5	B 769, L 34	1,500	700	0.47	1	1	1	700	0
6	B 769, L 35	2,500	1,671	0.67	1	1	1	1,671	0
7	B 769, L 39	2,500	2,500	1.0	1	1	0	0	2,500 restaurant, office, storage
8	B 769, L 130	2,000	700	0.35	1	1	1	700	0
9	B 769, L 131	1,500	1,140	0.76	1	1	1	1,140	0
10	B 769, L 7501	71,934	234,260	3.36	1	6	201	195,217	39,043 comm'l
Total		**126,809**	**276,124**		**15**		**212**	**204,581**	**71,543**

East of the Project Area, Block 768 primarily consists of one-and two-family residential buildings and one-story auto-oriented and neighborhood retail establishments. There is a new three-story, 45-foot tall, self-storage facility currently under construction on the block.

Block 782 to the west of the Project Area across 45th Street contains the two-story commercial LaGuardia Shopping Center on the northern portion of the block, and one-story buildings with light industrial uses on the southeastern portion of the block. There are two- and three-story one- and two-family and multi-family residential buildings on the southwestern portion of the block. The area further to the west beyond 43rd Street primarily consists of two-, three-, and four-story one- and two-family, multi-family, and mixed-use buildings.

The blocks to the north and northwest of the Project Area primarily consist of one- and two-story, one- and two-family residences. There are local retail uses along Ditmars

Boulevard at its intersection with 45th Street. Additionally, there is a community facility use, the Greek School Saint Irene Chrysovalantou, on Ditmars Boulevard at 43rd Street.

There are small irregularly shaped blocks to the south and southeast of the Project Area between 23rd Avenue, 42nd Street, and Astoria Boulevard North. These blocks are predominately made up of three-story multi-family and two-story one- and two-family residential buildings. Further south, there is a large concentration of low-scale industrial uses located to the south of Grand Central Parkway, which are generally, located more than 400 feet from the Project Area.

Future No-Action Scenario

Project Area

Reasonable Worst-Case Development Scenario (RWCDS)

The No-Action RWCDS in the Project Area would be the same as the existing condition. No new development would occur on the 14 lots within the Project Area and all existing uses in the Project Area would remain as they are legal non-conforming uses. Therefore, absent the Proposed Actions, the Project Area would contain 212 dwelling units, 41,543 gsf of commercial space including commercial office space and eating and drinking establishments, 30,000 gsf of warehouse space, and 307 accessory parking spaces.

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) ZAP Search of Zoning and Land Use Applications. 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 2023.

Surrounding land uses within the immediate study area are expected to remain largely unchanged by the project build year of 2023. The 400-foot area surrounding the Project Area is developed with a stable mixed-use community containing one-, two-, and multi-family residences, commercial and light industrial uses, and community facilities. 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 2023.

Future With-Action Scenario

Project Area

Under the With-Action Scenario for the project build year of 2023, the two Projected Development Sites would be developed with three new buildings containing a total of 180,848 gsf of floor area including 143 dwelling units within 128,020 gsf of residential floor area (based on an average size of 895 gsf per dwelling unit excluding cellar space) 41 of which would be affordable units (27 affordable units are assumed for conservative EAS analysis purposes), 12,097 gsf of commercial retail/office space, 8,700 gsf of

community facility space (community theater), and 113 accessory parking spaces. Two existing warehouse structures totaling 30,000 gsf in floor area and three single-family dwellings in the Project Area would be demolished. The anticipated development on each of the Projected Development Sites is detailed below.

Projected Development Site 1 (Block 769, Lots 25 & 42) – Under the proposed R6A/C2-3 zoning, the 30,008 square foot Site would be developed with two new 8-story, cellar, and sub-cellar residential, commercial, and community facility buildings with approximately 172,953 gsf/108,028 zsf of floor area for an FAR of 3.6. The With-Action development on Projected Development Site 1 would be the same as the proposed development. The buildings would be connected at the cellar and first floor. Both would rise to a height of 76'-6" after 15-foot setbacks above the sixth floors (57'-6"). The southern portion of Building B would be stepped down to a height of 36'-6" feet.

The 122,125 gsf of residential floor area would include 136 residential dwelling units. The Project proposes 136 residential dwelling units within 122,125 total gsf and 114,025 gsf of residential floor area above the cellar floor level based on approximately 838 gsf per unit while the standard calculation is based on 1,000 gsf per unit. As 1,000 gsf per unit would result in only 114 dwelling units, the Applicant's proposal for 136 units is more conservative for CEQR analysis purposes. Therefore, the With-Action Scenario would have 136 dwelling units, 41 of which would be considered affordable (see discussion in the Introduction section above). Only 20% of the dwelling units (27 units) will be analyzed as affordable at 80% AMI for conservative analysis purposes in the EAS.

The proposed development would include 10,097 gsf of commercial space in the cellar with a ground-floor lobby in Building A and 8,700 gsf of community facility space in the cellar with a ground-floor lobby in Building B which is anticipated to be occupied by a theater. The development would provide attended accessory parking for 105 vehicles occupying 32,031 gsf in the sub-cellar and on the first floor of the buildings and accessible from a new curb cut on 46th Street. 92 accessory parking spaces are required for the proposed development while the proposed design provides attended parking for 105 cars. The residential parking requirement was calculated based on 1 parking space per 2 market rate DUs (48 spaces) and 1 parking space per 4 affordable DUs (10 spaces). The commercial parking requirement was calculated at one space per 300 gsf of floor area (34 spaces). No parking would be required or provided for the community facility use. Approximately 26,011 square feet of common outdoor recreational space would be provided in an open space between the two buildings on the roof of the first floor, in open space terraces on the 4th and 6th floors, and in open space on the roof. Residential and commercial entrances would be on 45th Street while entrances to the community facility space, parking garage, and building fitness center would be on 46th Street. The existing structures and uses on the site would be demolished and removed.

Projected Development Site 2 (Block 769, Lots 36 & 38) – Under the proposed R4/C2-3 zoning, the 7,500 square foot Site would be developed with a new 35' tall, 3-story, residential and commercial building with approximately 7,895 gsf/7,500 zsf of floor area for an FAR of 1.0. The 5,895 gsf of residential floor area would include 7 residential dwelling units. The proposed development would also include 2,000 gsf of commercial space on the ground-floor of the building. The development would provide 8 at-grade accessory parking spaces (7 residential and 1 commercial). Residential parking was calculated based on 1 parking space per DU. Commercial parking assumes a waiver of parking below the minimum number of spaces pursuant to ZR 36-231. Residential, commercial, and parking entrances would be on 23rd Avenue. The existing structures and uses on the site would be demolished and removed.

No new development is anticipated on Other Sites 1 through 10 as described below.

Other Site 1 (Block 769, Lot 30) – The proposed R6A zoning for Other Site 1 would serve to make the residential use on this Site conforming under zoning. This Site is currently zoned M1-1 which does not permit residential use. The proposed R6A zoning under the proposed Mandatory Inclusionary Housing would permit a maximum residential FAR of 3.6. The developed FAR on this Site is 0.24. Although expansion of this residentially developed property would be permitted, no significant additional development is anticipated as this 2,867 square foot Site consists of a relatively small lot relative to the standard soft site size of 5,000 square feet. Although the maximum FAR in the proposed R6A zoning district is 3.6, the proximity of the R4 district boundary makes certain regulations applicable that mandate an 8' side yard and a maximum height of 45' on Other Site 1. Given these restrictions, the maximum residential development that could be built on Other Site 1 is a 5,788 sf, 2.02 FAR building.

Other Sites 2-6, 8, & 9 (Block 769, Lots 31-35, 130, & 131) – The proposed R4 zoning for Other Sites 2-6, 8, and 9 would serve to make the residential uses on these Sites conforming under zoning. These Sites are currently zoned M1-1 which does not permit residential use. The maximum residential FAR permitted under the proposed R4 zoning is 0.75 with an increase of up to 20% permitted as an attic allowance. The developed FAR on these Sites currently ranges from 0.35 to 0.76. Although some minimal expansion of these residentially developed properties would be permitted, no significant additional development is anticipated as these Sites consist of small lots of between 1,500 and 2,500 square feet in size with limited additional square footage permitted and with many properties developed in excess of 50% of the maximum permitted FAR. In addition, all lots are under separate ownership and there is currently no potential for a merger with any other lots in the Project Area.

Other Site 7 (Block 769, Lot 39) – The proposed R4/C2-3 zoning for Other Site 7 would serve to allow the commercial use on this Site to remain conforming and complying under zoning. This Site is currently zoned M1-1 which permits a manufacturing or commercial FAR of 1.0. Other Site 7 is developed with a commercial use at an FAR of 1.0 and the proposed C2-3 overlay would also permit commercial development of up to

1.0 FAR. Although the maximum residential FAR permitted under the proposed R4 zoning is 0.75 with an increase of up to 20% permitted as an attic allowance, no additional residential development would occur on this Site as it is already developed to the maximum FAR of 1.0 that would be permitted on the Site.

Other Site 10- (Block 769, Lot 7501) – The proposed R6A zoning for Other Site 10 would serve to bring the developed FAR of this Site into conformance with zoning. The R4 zoning of the Site permits a maximum residential FAR of 0.9 and the Site currently has an FAR of 3.26. The proposed R6A zoning and the mapping of the Site as a Mandatory Inclusionary Housing designated area would permit a maximum residential FAR of 3.6. No additional development is anticipated on Other Site 10 as the developed FAR of 3.26 on this Site is very close to the maximum residential and total FAR of 3.6 that would be permitted.

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.

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 125,667 gsf of additional residential space for 140 additional dwelling units (including 113 market rate and 27 affordable units), 12,097 gsf of new commercial space, 8,700 gsf of new community facility space, and 105 additional accessory parking spaces. In order to allow for the projected development, two existing warehouse structures totaling 30,000 gsf in floor area and three single-family dwellings in the Project Area would be demolished.

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[2]	276,124	276,124	392,588	+116,464
DUs/(Afford)	212/(0)	212/(0)	352/(27)	+140/(+27)
Residential SF	204,581	204,581	330,248	+125,667

[2] Does not include subsurface floors used for parking.

Commercial SF	41,543	41,543	53,640	+12,097
Comm Facil SF	0	0	8,700	+8,700
Wrhse SF	30,000	30,000	0	-30,000
No. of Stories	1-6	1-6	3-8	+2
Building Ht	16'-70'	16'-70'	35'-76'-6"	+6'-6"
Access Pkg Spaces	307	307	412	+105

Conclusion

The Applicant seeks to develop his property to provide 136 dwelling units, 41 of which would be considered affordable (27 affordable units are assumed for conservative EAS analysis purposes), together with 10,097 gsf of commercial space, 8,700 gsf of community facility space, and 105 accessory parking spaces to serve project residents and other persons in the surrounding community. An additional Site within the Project Area is projected to be developed with one new building containing 7 dwelling units, 2,000 gsf of commercial space, and 8 accessory parking spaces. This 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 these underutilized Sites and would provide new housing, including affordable housing, commercial and community facility space, and accessory parking.

The projected developments would replace two warehouses and three single-family dwellings which would not be considered to be a significant land use impact. The projected developments could alter existing development patterns in the surrounding project study area in the future, especially of the light industrial uses and vacant parcels, by encouraging the development of new 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

Project Area

The Project Area includes the entirety of Block 769 which consists of 14 contiguous tax lots, Lots 25, 30, 31, 32, 33, 34, 35, 36, 38, 39, 42, 130, 131, and 7501. The northernmost portion of Block 769 within 525 feet of Ditmars Boulevard, including only Lot 7501, is within an R4 zoning district. The southernmost portion of Block 769 within 275 feet of 23rd Avenue is within an M1-1 zoning district, and includes the remaining lots on the block, Lots 25, 30, 31, 32, 33, 34, 35, 36, 38, 39, 42, 130, and 131.

Block 769 was zoned M1-1 in 1961. The northern portion of the Project Area, located within 525 feet of Ditmars Boulevard, was rezoned from M1-1 to R4 in 1998 (C 980493 ZMQ) to convert the former Steinway warehouse (Pistilli Grand Manor) on this portion of the block to a primarily residential use. The remainder of the Project Area, which comprises the southerly portion of the block within 275 feet of 23rd Avenue, was not rezoned and remains zoned M1-1.

R4 zoning districts permit single-family detached residences and multi-family residences. The maximum residential FAR in an R4 zoning district is 0.75 for residential uses and 2.0 for community facility uses. The maximum residential lot coverage is 45 percent and 55 percent for community facility uses on interior or through lots. The perimeter wall may rise to 25 feet before being set back to the maximum building height of 35 feet. One off-street parking space is required for each dwelling unit. For blocks entirely within R4 districts, the regulations for predominately-built up areas may be applied to permit a maximum residential FAR of 1.35.

M1-1 zoning districts permit nearly all industrial uses subject to M1 performance standards. Commercial offices, hotels and most retail uses are also permitted along with certain community facility uses. New residential use is not permitted within M1-1 districts. The maximum FAR for permitted manufacturing and commercial uses within the M1-1 district is 1.0 and 2.4 for permitted community facility uses. The maximum base height before setback is 30 feet or two-stories, whichever is less, and the building height is controlled by a sky exposure plane of 1 to 1. Off-street parking is required for manufacturing and commercial uses, and for most uses is calculated based on the amount of floor area. In M1-1 districts, the off-street parking requirement may be waived if fewer than 15 spaces are required.

400-Foot Radius Project Study Area

The 400-foot radius project study area is zoned a mixture of M1-1, R4, R5, and C2-2 commercial overlay zoning districts. To the east of the Project Area across 46th Street, the majority of Block 768 is zoned R4 with a C2-2 commercial overlay mapped to a depth of 150 feet from Ditmars Boulevard. A mid-block portion of Block 768 is zoned M1-1 for 350 feet along 46th Street to the centerline of the block. Block 782 to the west of the Project Area across 45th Street is within an M1-1 zoning district. The area further to the west beyond 43rd Street is within an R5 zoning district. The blocks to the north and northwest of the Project Area are in an R4 zoning district and an R5 district to the northwest. There are small irregularly shaped blocks to the south and southeast of the Project Area between 23rd Avenue, 42nd Street, and Astoria Boulevard North within an R5 zoning district. Further south, there is an M1-1 zoning district mapped to the south of Grand Central Parkway which is generally located more than 400 feet from the Project Area.

R5 zoning districts permit a variety of housing types. The maximum residential FAR is 1.25 and 2.0 FAR for community facility uses. The maximum residential lot coverage is

45 percent and 55 percent for community facility uses on interior or through lots. The maximum street wall height of a new residential building is 30 feet and the maximum building height is 40 feet. Above a height of 30 feet, a setback of 15 feet is required from the street wall of the building. In addition, any portion of the building that exceeds a height of 33 feet must be set back from a rear or side yard line. Off-street parking is required for 85 percent of the dwelling units in the building. For blocks entirely within R5 districts, the regulations for predominately-built up areas may be applied to permit a maximum residential FAR of 1.65.

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. Local retail and service uses are permitted within the C2-2 commercial overlay along Ditmars Boulevard. C2-2 overlays in R4 zoning districts allow commercial uses at a maximum FAR of 1.0. Residential uses are permitted within this overlay with residential bulk being governed by the provisions of the surrounding R4 residential zone.

Future No-Action Scenario

Project Area

In the future and absent the Proposed Actions, Lot 7501 in the Project Area would continue to be zoned R4 while Lots 25, 30, 31, 32, 33, 34, 35, 36, 38, 39, 42, 130, and 131 would remain zoned M1-1.

400-Foot Radius Project Study Area

Based on a review of DCP's ZAP Search of Zoning and Land Use Applications, no rezoning applications 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 2023.

Future With-Action Scenario

Project Area

The Proposed Actions would rezone the entirety of Block 769: the southern portion of the block would be rezoned from M1-1 to a combination of R4 (Lots 31-35, 130, 131), R4/C2-3 (Lots 36, 38, 39), R6A (lot 30), R6A/C2-3 (Lots 25 & 42 which would be merged) zoning districts. The northern portion of the block would be rezoned from R4 to R6A (Lot 7501). In addition, the Proposed Actions would amend ZR Appendix F to establish a MIH coterminous with the R6A portion of the proposed Project Area (see discussion in the Introduction section above). Only 20% of the units will be analyzed as affordable at 80% AMI for conservative analysis purposes in the EAS.

Proposed R4 District

The proposed R4 zoning district would bring existing non-conforming residential uses within the southernmost portion of the Project Area into conformance. The bulk provisions of the proposed R4 zoning district are consistent with the existing built conditions within this portion of the Project Area, and would not create any new non-compliances.

Proposed R6A District

R6A is a contextual district where the Quality Housing bulk regulations are mandatory. These regulations produce high lot coverage, six- to eight-story apartment buildings set at or near the street line, and are designed to be compatible with older buildings found in medium-density neighborhoods. The maximum FAR in R6A districts is 3.0. Above a minimum base height of 40 feet, the building must set back by at least 10 feet on a wide street and 15 feet on a narrow street before rising to its maximum height of 70 feet, or 75 feet if providing a qualifying ground floor. Off-street parking is generally required for 50 percent of a building's dwelling units, but requirements are lower for income-restricted housing units (IRHU) and are further modified in certain areas, such as within the Transit Zone, or for lots less than 10,000 square feet. Parking can be waived if five or fewer spaces are required. The proposed R6A zoning district, combined with designation as an MIH Area (Option 2 and the Workforce Option), would allow a maximum 3.6 FAR for residential and community facility uses. The R6A zoning district will allow the proposed contextual, mixed-use building at the Proposed Development Site, which is consistent with the existing built character and land use patterns in the surrounding area. In addition, the proposed R6A zoning district will bring the Pistilli Grand Manor building into compliance.

Proposed C2-3 Overlay District

The proposed C2-3 overlay is intended to accommodate the retail and personal service shops needed in residential neighborhoods, and is intended to permit a wider range of local retail and service establishments and to serve a wider neighborhood than C1 districts. The maximum commercial FAR for a C2-3 overlay in an R4 zone is 1.0 and 2.0 in an R6 zone. 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 C2-3 zone with one parking space required for each 300 to 400 square feet of general retail commercial floor area or food stores. The proposed C2-3 overlay would be mapped to a depth of 100 feet and extend 275 feet north from 23rd Avenue along 45th Street. The proposed C2-3 overlay would allow existing commercial uses to remain in conformance with the proposed R4 and R6A districts, and allow new mixed-use development along the 45th Street frontage of Projected Development Site 1 and the entirety of Projected Development Site 2 subject to the provision of affordable housing under the MIH program.

Proposed Mandatory Inclusionary Housing Text Amendment

The proposed zoning text amendment to designate the Project Area as an MIH Area is consistent with the policy goals of the City's Housing New York: A Five-Borough, Ten-Year Plan. According to the U.S. Census Bureau, 40.5 percent of households in Queens Community District 1 are rent burdened, spending 35 percent or more of their income on rent.

The MIH program requires that permanently affordable housing be provided within certain new residential developments, enlargements, and conversions from non-residential to residential use within the mapped MIH Areas. The proposed zoning text amendment would establish an MIH Area contiguous with the Project Area. Within the MIH Area, all housing developments, enlargements and conversions that meet the criteria set forth in the MIH program must comply with the requirements of either Option 2 or the Workforce Option. Option 2 requires that 30% of the residential floor area be provided as housing affordable to households at an average of 80% of the AMI, with no unit at a level exceeding 130% of AMI. The Workforce Option requires that 30% of the residential floor area be provided at an average of 115% of AMI with 5% of the residential floor area at 70% AMI and 5% of the residential floor area at 90% AMI with no unit at a level exceeding 135% of AMI. No subsidy is permitted for affordable housing under the Workforce Option, and it must be developed within a 10-year period from the effective date of the amendment establishing or renewing the option in an MIH Area. 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 Applicant has selected the Workforce Option because market rents in the area reflect a moderate market condition. The Workforce Option was established to address policy concerns about the potential effects of mandatory affordability requirements in areas, such as Steinway, where prevailing rents are sufficient to support construction at moderate rents, but not the internal cross-subsidy of units affordable at low incomes. The website Trulia reports a median rent in Ditmars/Steinway of $2,350 for all properties in August 2017. According to the Furman Center's State of New York City's Housing and Neighborhoods in 2016, the median monthly rent in Queens Community District 1 was $1,540 in 2015, and the median asking rent was $2,250 in 2016. With the Workforce Option, the Applicant is able to create 18 units of permanently affordable moderate-income housing without subsidy, in keeping with the moderate market condition in the area.

Projected Development Sites

The Applicant seeks to redevelop Projected Development Site 1 primarily for residential purposes with commercial and community facility space and accessory parking to serve project residents and visitors to the building. The proposed Zoning Map Change would include rezoning the Applicant owned Projected Development Site 1 from its existing M1-1 district to the proposed R6A/C2-3 district which is required in order to develop

residential uses on the property. It is also required to allow the proposed bulk of the new building to be increased from the current permitted FAR of 1.0 for manufacturing and commercial uses and 2.4 for community facility uses to 3.0 for all permitted residential and community facility uses (manufacturing uses would not be allowed), 2.0 for commercial uses, and 3.6 for Mandatory Inclusionary Housing. It would allow Use Group 5 and 6 hotel and commercial retail and office uses and also expand the scope of permitted commercial uses to include Use Groups 7, 8, and 9 local service uses which are not permitted in C1 commercial districts. It would allow for the establishment of new uses in Use Groups 1–4 (residential and community facility use) in the Affected Area. The change in zoning is appropriate given the lack of demand for new manufacturing facilities in this area and the conversion of the former Steinway warehouse (Pistilli Grand Manor building) on the northern portion of the block to a primarily residential use in 1998.

The proposed zoning text amendment to modify ZR §23-933, Appendix F is necessary in order to make the newly mapped R6A and R6A/C2-3 districts in the Project Area a Mandatory Inclusionary Housing designated area. The text amendment is needed to provide the floor area needed to permit buildings that will be providing a large percentage of low- and middle-income dwelling units.

The proposed zoning change from M1-1 to R4/C2-3 for Projected Development Site 2 is required in order to legally develop new residential uses on the property. It would allow Use Group 5 and 6 hotel and commercial retail and office uses and also expand the scope of permitted commercial uses to include Use Groups 7, 8, and 9 local service uses which are not permitted in C1 commercial districts. It would allow for the establishment of new uses in Use Groups 1–4 (residential and community facility use) in the Project Area. The change in zoning is appropriate given the lack of demand for new manufacturing facilities in this area and the conversion of the former Steinway warehouse (Pistilli Grand Manor) on the northern portion of the block to a primarily residential use in 1998.

Other Sites

The proposed zoning change from M1-1 to R6A for Other Site 1 would serve to make the residential use on this Site conforming under zoning. This Site is currently zoned M1-1 which does not permit residential use. The proposed R6A zoning under the proposed Mandatory Inclusionary Housing would permit a maximum residential FAR of 3.6. The developed FAR on this Site is 0.24. Although expansion of this residentially developed property would be permitted, no significant additional development is anticipated as this 2,867 square foot Site consists of a relatively small lot relative to the standard soft site size of 5,000 square feet. Although the maximum FAR in the proposed R6A zoning district is 3.6, the proximity of the R4 district boundary makes certain regulations applicable that mandate an 8’ side yard and a maximum height of 45’ on Other Site 1. Given these restrictions, the maximum residential development that could be built on Other Site 1 is a 5,788 sf, 2.02 FAR building.

The proposed zoning change from M1-1 to R4 for Other Sites 2-6, 8, and 9 would serve to make the residential uses on these Sites conforming under zoning. These Sites are currently zoned M1-1 which does not permit residential use. The maximum residential FAR permitted under the proposed R4 zoning is 0.75 with an increase of up to 20% permitted as an attic allowance. The developed FAR on these Sites currently ranges from 0.35 to 0.76. Although some minimal expansion of these residentially developed properties would be permitted, no significant additional development is anticipated as these Sites consist of small lots of between 1,500 and 2,500 square feet in size with limited additional square footage permitted and with many properties developed in excess of 50% of the maximum permitted FAR.

The proposed zoning change from M1-1 to R4/C2-3 for Other Site 7 would serve to make the development on this site conforming and complying under zoning. Other Site 7 is developed with a commercial use at an FAR of 1.0. The C2-3 overlay would permit commercial development of up to 1.0 FAR and the C2-3 overlay would bring this use into conformance with zoning.

The proposed zoning change from R4 to R6A for Other Site 10 would serve to make the development density on this site complying under zoning. This site, the former Steinway warehouse (Pistilli Grand Manor), occupies approximately two-thirds of the area of the block, and the proposed R6A district would bring the development into compliance with zoning. This development has an FAR of approximately 3.26 and is overbuilt relative to its R4 zoning which only permits a maximum residential FAR of 0.9. The proposed R6A zoning under the proposed Mandatory Inclusionary Housing would permit a maximum residential FAR of 3.6.

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 Change and Zoning Text Amendment 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. The mapping of the R4 zoning district is supported by the existence of surrounding R4 districts. In addition, the proposed R4 zoning district brings existing non-conforming residential uses within the southernmost portion of the Project Area currently zoned M1-1 into conformance. The bulk provisions of the proposed R4 zoning district are consistent with the existing built conditions within this portion of the Project Area, and would not create any new non-compliances. The proposed R6A/C2-3 zoning on Projected Development Site 1 would allow contextual, mixed-use buildings on this Development Site, which would be consistent with the existing built character and land use patterns in the surrounding area. In addition, the proposed R6A zoning district on Other Site 10 will bring the existing Pistilli Grand Manor

building into compliance. The proposed C2-3 overlay allows existing commercial uses in the Project Area to remain in conformance with the proposed R4 and R6A districts, and allows new mixed-use development on Projected Development Sites 1 and 2. The rezoning of the Project Area to R4, R4/C2-3, R6A, and R6A/C2-3 zoning districts brings the area into conformance and compliance with the Zoning Resolution. The Proposed Actions would provide sufficient floor area to develop affordable dwelling units on the Applicant owned Projected Development Site 1 as well as on the non-Applicant Owned Projected Development Site 2.

Based on the above analysis, it has been determined that no potentially significant adverse impacts related to zoning are expected to occur as a result of the Proposed Actions. Therefore, further analysis 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

No public policies apply to the Project Area or the 400-foot radius project study area. Neither area is located within the City's Coastal zone boundary and these areas are therefore not subject to the provisions of the City's Waterfront Revitalization Program (WRP). 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, no new public policies are anticipated to apply to either the Project Area or the 400-foot radius project study area by the project build year of 2023. Therefore, neither the Project Area nor the 400-foot radius project study area would be subject to any public policies.

Future With-Action Scenario

Project Area

The Project Area would be subject to the provisions of the Mandatory Inclusionary Housing (MIH) program which would go into effect once mapped over the newly mapped R6A and R6A/C2-3 zoning districts (see discussion in the Future With-Action zoning section above). It is currently anticipated that 41 affordable units would be developed on Projected Development Site 1. 27 units are analyzed as affordable at 80% AMI for conservative analysis purposes in the EAS.

400-Foot Radius Project Study Area

In the future with the action, no public policies would apply to the 400-foot radius project study 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.

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.

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 Proposed Actions would not result in any direct effects on open space resources. No open space areas are located within the maximum shadows radius of any of the three Projected Development Sites. The maximum height of any of the projected developments a specified in the RWCDS memorandum would be 85 feet. The maximum shadows radius distance of any structure is 4.3 times its height or 365.5 feet in this instance. The closest open space resource to any of the Projected Development Sites is the approximately 23,643 square foot Grand Central Parkway Extension park which is located approximately 435 feet from Projected Development Site 1.

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 in an area that is neither underserved nor well served relative to open space resources. If a project is located in such as area, the *CEQR Technical Manual* requires that an open space assessment be conducted if that project would generate more than 200 residents or 500 workers.

The With-Action RWCDS includes the development of 352 dwelling units of housing in the Project Area. The No-Action RWCDS includes the development of 212 dwelling units on the property. Therefore, the Proposed Actions would result in the development of a net increase of 140 dwelling units in the Project Area. These 140 dwelling units are expected to generate approximately 349 residents based on the 2010 U.S. Census average household size of 2.49 persons per household for Census Tracts within ¼-mile of the Projected Development Site including tracts 119, 121, 135, 137, and 141. The Proposed Actions would exceed the threshold number of 200 new residents and a preliminary quantitative analysis of indirect open space impacts is therefore required. The Proposed Actions would generate approximately 42 new employees relative to the No-Action condition and would therefore not exceed the threshold number of 500 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 a below average open space ratio of 0.376 acres per 1,000 residents, (based on 9.84 acres of existing open space divided by the 2016 American Community Survey study area population of 26,167 persons).

Existing Conditions

Study Area Population

The study area population was estimated using data from the 2012-2016 American Community Survey (ACS) for the census tracts located fully or at least 50 percent within the one-half mile study area. As shown in Table 7-1, in 2016 the study area contained a total of 26,167 residents within the eleven relevant census tracts.

Table 7-1

Study Area Population (2016)

Census Tract	**Total Population (2010)**
113	4,295
117	3,841
119	1,576
121	2,268
123.01	2,741
135	1,447
137	1,842
141	1,755
143	4,205
145	2,197
299	0
Study Area Total	**26,167**

Study Area Open Space

The one-half mile open space study area is generally bounded by 19th Avenue on the north, an area between 28th and 30th Avenue on the south, 77th Street on the east, and 32nd Street on the west. Within the census tracts that are fully or at least 50 percent within this area, there are four publicly owned and accessible facilities and one privately owned and accessible facility **(See Figure 7-2, Open Space Facilities and Census Tracts and Table 7-2, Inventory of Open Space Resources)**. The five open space resources provide a total of 9.84 acres of open space. 2.72 acres or 27.6% of the open space resources are considered to be active open space and 7.12 acres or 72.4% of the open space resources are considered to be passive open space.

Table 7-2

Inventory of Open Space Resources

Map Key	Open Space Name and Location	Size (acres)	Active (acres)	Passive (acres)
1	Ditmars Park/Playground	0.92	0.46 (50%)	0.46 (50%)
2	Paul Raimonda Playground	1.31	0.79 (60%)	0.52 (40%)
3	Steinway Playground	0.81	0.65 (80%)	0.16 (20%)
4	Woodtree Playground	1.03	0.82 (80%)	0.21 (20%)
5	St. Michael's Cemetery Pathways	5.77	0 (0%)	5.77 (100%)
TOT		**9.84**	**2.72 (27.6%)**	**7.12 (72.4%)**

Assessment of Open Space Adequacy

The open space ratio was calculated based on the study area population shown in Table 7-1 and the total open space acreage shown in Table 7-2. The resultant ratio is 0.376 acres per 1,000 residents. This ratio falls below the citywide average of 1.5 acres and 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 a below average amount of public open space resources.

The project study area has an active open space ratio of 0.104 acres per 1,000 residents and a passive open space ratio of 0.272 acres per 1,000 residents, which fall below the ideal acreage of active and passive open space noted in the *CEQR Technical Manual*.

Future No-Action Condition

Study Area Population

As stated above, the 2016 ACS population of the accessible portions of the one half-mile open space study area was 26,167. Under the No-Action Scenario for the Project Build Year of 2023, it is assumed that no new development would occur on the 14 lots within the Project Area. In order to account for background growth within the open space study area over the seven-year timeframe to the 2023 project build year, an annual growth rate of 0.5% was assumed for a total growth rate of 3.5%.

Therefore, as projected to 2023, the base population of the open space study area is assumed to be 27,082 residents.

Study Area Open Space

There would be no increase or decrease in the 9.84 acres of existing open space area, including 2.72 acres of active open space and 7.12 acres of passive open space, within the open space study area by the project build year of 2023.

Assessment of Open Space Adequacy

The future no-action open space ratio within the open space study area is 0.363 based on the area population of 27,082 persons in 2023 and the 9.84 acres of open space area. The open space project study area would have an active open space ratio of 0.100 acres per 1,000 residents and a passive open space ratio of 0.263 acres per 1,000 residents.

Future With-Action Scenario

Study Area Population

As discussed above, the project is expected to generate approximately 349 net new residents based on the 2010 U.S. Census average household size of 2.49 persons per household for Census Tracts within ¼-mile of the Projected Development Site including tracts 119, 121, 135, 137, and 141. Adding these 349 residents to the future no-action population of 27,082 persons would result in a total population of 27,431 persons.

Study Area Open Space

Although the project on Projected Development Site 1 would include open space resources for use by the residents of the project, there would be no increase or decrease in the 9.84 acres of existing publicly accessible open space area, including 2.72 acres of active open space and 7.12 acres of passive open space, within the open space study area by the project build year of 2023.

Assessment of Open Space Adequacy

The projected open space ratio in 2023 with the Proposed Actions would be 0.359 acres per 1,000 residents compared with the projected ratio of 0.363 acres in the study area in the future without the project. This represents a decrease of approximately 0.004 acres or 1.1 percent in the open space ratio. The open space project study area would have an active open space ratio of 0.099 acres per 1,000 residents with the Proposed Actions compared to 0.100 acres in the future without the project, a decrease of 0.001 acres. The study area would have a passive open space ratio of 0.260 acres per 1,000 residents with the Proposed Actions compared to 0.263 acres in the future without the project, a decrease of 0.003 acres. Therefore, the community would continue to have a below average amount of open space compared to the City as a whole and 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	Future No-Action	Future With-Action
Publicly/Privately Accessible Open Space (Acreage)	9.84 (2.72 active, 7.12 passive)	9.84 (2.72 active, 7.12 passive)	9.84 (2.72 active, 7.12 passive)
Study Area Population	26,167	27,082	27,431
Open Space Ratio (Acres/1,000 Residents)	0.376 (0.104 active; 0.272 passive)	0.363 (0.100 active; 0.263 passive)	0.359 (0.099 active; 0.260 passive); – 0.004 ac/1.1% 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 0.359 acres per 1,000 population, the amount of publicly accessible open space with the Proposed Actions would continue to be below the average of 1.5 acres per 1,000 population in community districts in the City and 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. In areas that are extremely lacking in open space, a reduction as small as 1 percent may be considered significant, depending on the area of the City.

Relative to indirect impacts on open space resources, the proposed development would result in a decrease of 1.1% in the open space ratio in the project study area. At an open space ratio of 0.359 acres, the ratio in the project study area would fall below the community district median of 1.5 acres per 1,000 population. However, the open space ratio would not decrease substantially relative to existing and Future No-Action conditions where the open space ratio is already below average. 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, Therefore, based on *CEQR Technical Manual* criteria, the proposed project would not result in a significant adverse impact on open space resources.

Qualitative Impact

The Proposed Actions would result in the creation of new private open space. The rezoning of the Proposed Development Site (Projected Development Site 1) to an R6A district would include open space per the Quality Housing provisions applicable to the 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 3,462 square feet or 0.079 acres of open space for the proposed 104,903 zsf of residential space. Approximately 26,011 square feet of common outdoor recreational space would be provided in an open space between the two buildings on the roof of the first floor, in open space terraces on the 4th and 6th floors, and in open space on the roof. 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 in addition to the walkways included in St. Michaels Cemetery as discussed above, the approximately 88-acre Cemetery includes broad expanses of landscaped and lawn areas that can be used for passive activities and as a visual open space resource. The Cemetery also periodically offers concerts, barbeques, video presentations, lectures, and other events including a Scott Joplin concert and barbeque each May.

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.

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 private passive open space to be provided on Projected Development Site 1 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 7-1: Open Space Facilities and Census Tracts

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.

Preliminary Screening Assessment

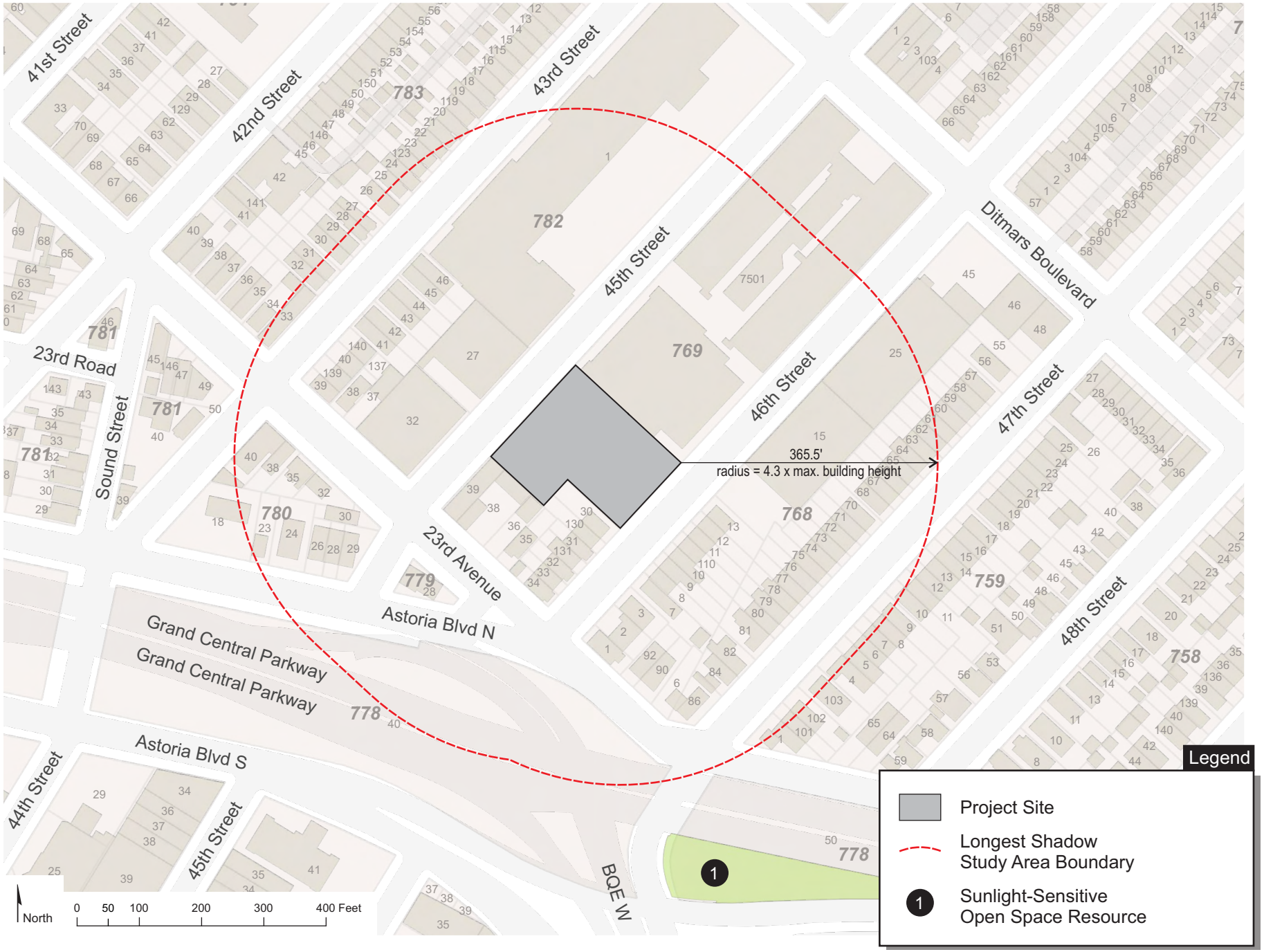
Tier 1 Screening Assessment

No parks, historic resources, or important natural resources are located within the maximum shadows radius of the two Projected Development Sites. The maximum height of any of the projected developments a specified in the RWCDS memorandum would be 85 feet. The maximum shadows radius distance of any structure is 4.3 times its height or 365.5 feet in this instance. The closest open space resource to any of the Projected Development Sites is the approximately 23,643 square foot Grand Central Parkway Extension park which is located approximately 435 feet from Projected Development Site 1. There are no adjacent or nearby historic resources that could be affected by shadows from the proposed development. This is illustrated on the attached Figure 8-1: Tier 1 Screening Assessment (the Grand Central Parkway Extension park is identified as resource no. 1).

Conclusion

As no new shadows would be cast by the Proposed Actions on any parks, historic resources, or important natural resources, no further assessment of shadow impacts from the project is required.

Figure 8-1: Tier 1 Screening Assessment



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 (Block 769, Lots 25, 30, 31, 32, 33, 34, 35, 36, 38, 39, 42, 130, 131, and 7501) 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.

By letter dated 2/21/18, the New York City Landmarks Preservation Commission (LPC) has determined that the Project Area does not have any historic or archaeological significance (see Historic and Cultural Resources Appendix).

Under the Proposed Actions, new development is anticipated on Projected Development Sites 1 and 2 resulting in new soils disturbance to areas that may not have previously been excavated. As these Sites do not have any archaeological significance, an archaeological analysis is not warranted for the Proposed Actions.

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 involve the request for a rezoning of the Project Area from an existing M1-1 zoning district to a combination of R4, R4/C2-3, R6A, and R6A/C2-3 zoning districts and to rezone an existing R4 district to an R6A zoning district.

The Proposed Actions would allow the development in the Project Area of two Projected Development Sites with three new buildings containing a total of 180,848 gsf of floor area including 143 dwelling units within 128,020 gsf of residential floor area (based on an average size of 895 gsf per dwelling unit excluding cellar space), 12,097 gsf of commercial retail/office space, 8,700 gsf of community facility space (community theater), and 113 accessory parking spaces. In order to allow for the projected development, two existing warehouse structures totaling 30,000 gsf in floor area and three single-family dwellings in the Project Area would be demolished. 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 Project Area encompasses the entirety of Block 769 bounded by Ditmars Boulevard, 23rd Avenue, 45th Street, and 46th Street in the Steinway neighborhood of Queens, and consists of approximately 126,809 square feet of land area. The Project Area is currently improved with 212 dwelling units, 41,543 gsf of commercial space including commercial office space and eating and drinking establishments, 30,000 gsf of warehouse space, and 307 accessory parking spaces. There are 201 multi-family dwelling units located in a 6-story building and the remaining 11 dwelling units consist of one- to two-story single-family homes. With the exception of some commercial space located in the 6-story multi-family building, all other commercial and industrial uses are located in one-story structures.

The neighborhood within 400 feet of the Project Area is primarily residential, but there is a mix of commercial and light industrial uses located in the adjacent blocks to the east

and west. To the east of the Project Area across 46th Street, Block 768 primarily consists of one-and two-family residential buildings, and one-story auto-oriented and neighborhood retail establishments. There is also a new three-story, 45-foot tall, self-storage facility under construction on the block. Block 782 to the west of the Project Area across 45th Street contains the two-story commercial LaGuardia Shopping Center, one-story buildings with light industrial uses, and two- and three-story one- and two-family and multi-family residential buildings. The area further to the west beyond 43rd Street primarily consists of two-, three-, and four-story one- and two-family, multi-family, and mixed-use buildings. The blocks to the north and northwest of the Project Area consist of one- and two-story, one- and two-family residences. There are local retail uses along Ditmars Boulevard at its intersection with 45th Street. Additionally, there is a community facility use, the Greek School Saint Irene Chrysovalantou, on Ditmars Boulevard at 43rd Street. There are small irregularly shaped blocks to the south and southeast of the Project Area between 23rd Avenue, 42nd Street, and Astoria Boulevard North. These blocks are predominately made up of three-story multi-family and two-story one- and two-family residential buildings. Further south, there is a large concentration of low-scale industrial uses mapped to the south of Grand Central Parkway which are generally located more than 400 feet from the Project Area.

There are minimal visual resources within 400 feet of the Project Area. The northwestern corner of an approximately 23,643 square foot open space area identified as the Grand Central Parkway Extension is located south of the Project Area on the opposite side of the Grand Central Parkway. It is generally not visible from the Project Area.

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

Under the No-Action Scenario for the Project Build Year of 2023, it is assumed that no new development would occur on the 14 lots within the Project Area and all existing uses in the Project Area would remain. Therefore, absent the Proposed Actions, the Project Area would contain 212 dwelling units, 41,543 gsf of commercial space including commercial office space and eating and drinking establishments, 30,000 gsf of warehouse space, and 307 accessory parking spaces.

The future No-Action Development Scenario would not result in any changes to the existing urban design and visual character of the Project Area and would not result in any impacts to the visual resources in the vicinity of the site.

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 in the Project Area as compared to the future No-Action Development Scenario. The Applicant seeks to develop Projected Development Site 1 with two, 8-story, cellar, and sub-cellar mixed-use residential, commercial, and community facility buildings totaling approximately 172,953 gsf in floor area. Building A would front on 46th Street and Building B would front on 45th Street. The Proposed Development would contain approximately 122,125 gsf of residential floor area (including 8,100 gsf within the cellar), 10,097 gsf of commercial floor area (including 8,400 gsf in the cellar of Building B), and 8,700 gsf of community facility floor area (including 7,000 gsf in the cellar of Building A). The buildings would also contain 32,031 gsf of floor area for parking on the buildings' sub-cellar and first floors (including 13,181 gsf in the sub-cellar of Building B). The Proposed Development would contain approximately 136 dwelling units. The buildings would be connected at the cellar and first floor. Both would rise to a height of 76'-6" after 15-foot setbacks above the sixth floors (57'-6"). The southern portion of Building B would be stepped down to a height of 36'-6" feet. A parking garage with 105 attended accessory parking spaces on the first floor and sub-cellar would be accessed from a new curb cut on 46th Street. The two existing warehouses on the Site would be demolished and removed.

It is anticipated that Projected Development Site 2 would be developed with a new 35' tall, 3-story, 7,895 gsf residential and commercial building. The 5,895 gsf of residential floor area would include 7 residential dwelling units. The proposed development would also include 2,000 gsf of commercial space on the ground-floor of the building. The development would provide 8 at-grade accessory parking spaces (7 residential and 1 commercial). Residential, commercial, and parking entrances would be on 23rd Avenue. The three existing single-family dwellings on the Site would be demolished and removed.

The difference between the No-Action and With-Action Scenarios would be the development under the With-Action Scenario of 125,667 gsf of additional residential space for 140 additional dwelling units, 12,097 gsf of new commercial space, 8,700 gsf of new community facility space, and 105 additional accessory parking spaces. In order to allow for the projected development, two existing warehouse structures totaling 30,000 gsf in floor area and three single-family dwellings containing 2,353 sf of floor area in the Project Area would be demolished.

The development of Projected Development Site 1 with an 8-story, 172,953 gsf residential, commercial, and community facility structure spaninng the 45th and 46th Street frontages of the block would result in a building that would roughly match the size and scale of the 6-story, 234,260 gsf Pistilli Manor residential and commercial building which occupies the northern half of the block along 45th and 46th Streets up to Ditmars Boulevard. The development of Projected Development Site 2 along 23rd Avenue with a 3-story, 7,895 gsf residential and commercial building would maintain

the scale and character of the southern approximately 20% of the block the remainder of which would continue to be developed with one-story attached single-family residential structures along 46th Street and a one-story restaurant and office at the corner of 45th Street and 23rd Avenue. The new building on Projected Development Site 2 would provide a transition in building height and bulk between the larger structure on Projected Development Site 1 and the existing development along 46th Street anticipated to remain. The existing one-story warehouse structures in the Project Area do not currently provide a quality pedestrian experience. Under the Proposed Action, the removal of these structures and their replacement with newly built multi-story mixed-use buildings containing ground level retail facilities would improve the streetscape around the Project Area.

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	212 DUs (12 bldgs), 41,543 gsf comm'l (2 bldgs), 30,000 gsf whse (2 bldgs), 307 parking spaces	212 DUs (12 bldgs), 41,543 gsf comm'l (2 bldgs), 30,000 gsf whse (2 bldgs), 307 parking spaces	352 DUs in 11 bldgs; 53,640 gsf retail in 4 bldgs; 8,700 gsf community theater in 1 bldg.; 412 parking spaces
Building Floor Area	276,124 gsf	276,124 gsf	392,588 gsf
Lot Coverage	101,447 sf (80%)	101,447 sf (80%)	101,447 sf (80%)
Building Heights	12 one-story (12'-18'), 2 two-story (24'), 1 six-story (70') bldgs	12 one-story (12'-18'), 2 two-story (24'), 1 six-story (70') bldgs	1 eight-story (76'-6"), 1 three-story (35'), 9 one-story (12'-18'), 1 six-story (70') bldgs

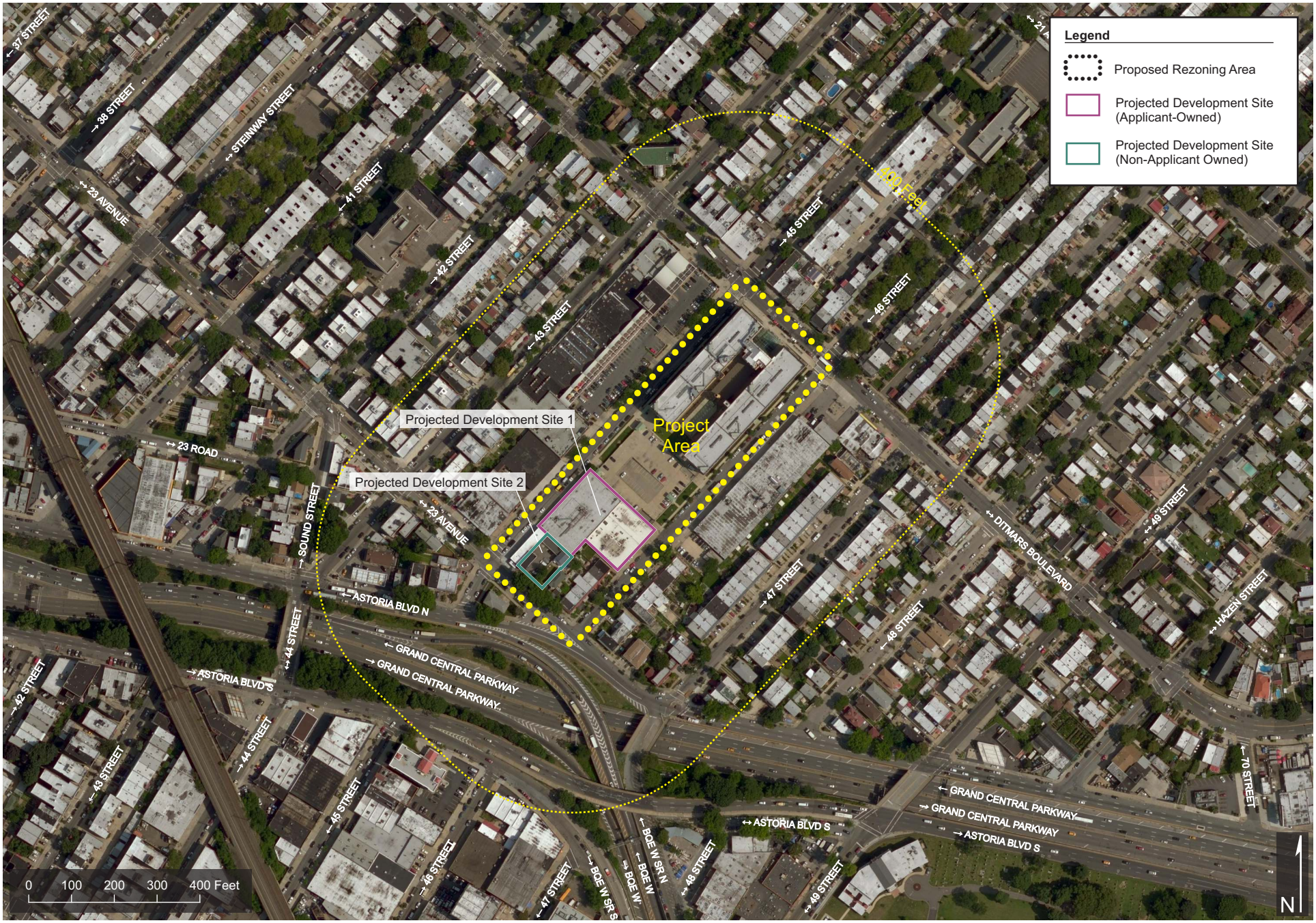
Conclusion

The Proposed Actions would result in the development of residential and local retail and community facility uses on two Projected Development Sites located in an area characterized by a mix of residential, commercial, and light industrial uses. The projected developments would replace two warehouses and three single-family dwellings. The proposed mapping of the R4 zoning district is supported by the existence of surrounding R4 districts. In addition, the proposed R4 zoning district brings existing non-conforming residential uses within the southernmost portion of the Project Area currently zoned M1-1 into conformance. The bulk provisions of the proposed R4 zoning district are consistent with the existing built conditions within this

portion of the Project Area and with the anticipated future development on Projected Development Site 2, and would not create any new non-compliances. The proposed R6A/C2-3 zoning district on Projected Development Site 1 will allow contextual, mixed-use buildings on this Development Site, which would be consistent with the existing built character and land use patterns in the surrounding area. In addition, the proposed R6A zoning district on Other Site 10 will bring the existing Pistilli Grand Manor building into compliance. The proposed C2-3 overlay allows existing commercial uses in the Project Area to remain in conformance with the proposed R4 and R6A districts, and allows new commercial development on Projected Development Sites 1 and 2. The rezoning of the Project Area to R4, R4/C2-3, R6A, and R6A/C2-3 zoning districts brings the area into conformance and compliance with the Zoning Resolution. The Proposed Actions would provide sufficient floor area to develop affordable dwelling units on the Applicant owned Projected Development Site 1 as well as on the non-Applicant Owned Projected Development Site 2.

The With-Action Development Scenario in the Project Area would not result in any impacts to the visual resources in the vicinity of the site as compared to a No-Action Development on the property. 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 one open space area in the vicinity of the site, this open space is located on the opposite side of the Grand Central Parkway from the Project Area and would experience no significant impact from the Proposed Actions.

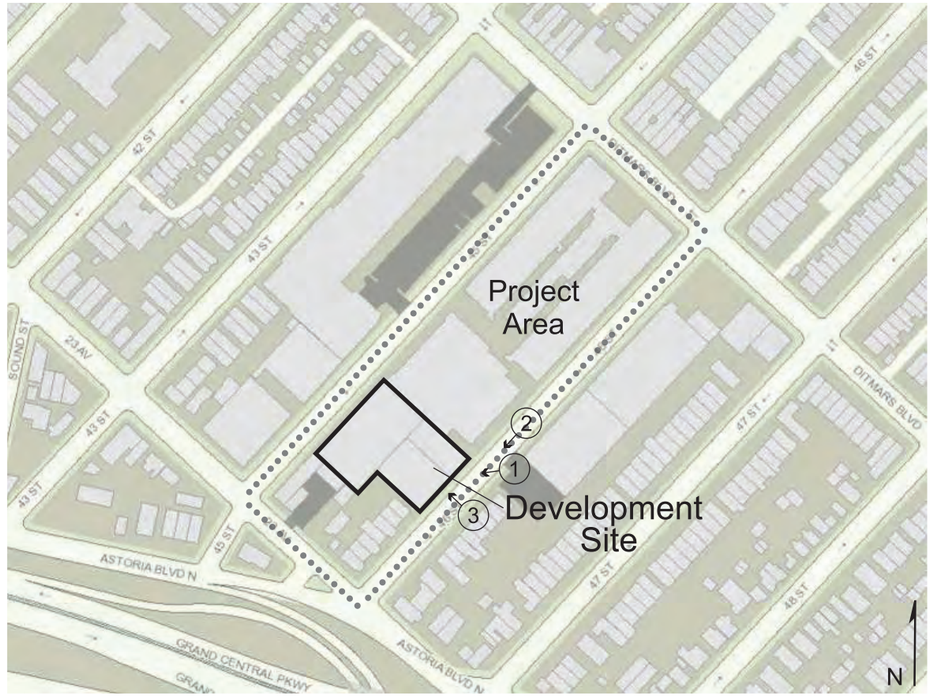
The Proposed Actions would not result in any significant adverse impacts to urban design and visual resources and a detailed urban design and visual resource analysis would not be required.


Legend
Proposed Rezoning Area
Projected Development Site (Applicant-Owned)
Projected Development Site (Non-Applicant Owned)
400 Feet
Projected Development Site 1
Projected Development Site 2
Project Area
37 STREET
38 STREET
STEINWAY STREET
23 AVENUE
41 STREET
42 STREET
43 STREET
45 STREET
46 STREET
23 ROAD
SOUND STREET
23 AVENUE
ASTORIA BLVD N
44 STREET
GRAND CENTRAL PARKWAY
ASTORIA BLVD S
42 STREET
43 STREET
44 STREET
45 STREET
46 STREET
47 STREET
BQE W SR S
BQE W SR N
BQE W
48 STREET
49 STREET
DITMARS BOULEVARD
47 STREET
48 STREET
49 STREET
HAZEN STREET
70 STREET
0 100 200 300 400 Feet
N

1. View of the Development Site facing west from 46th Street.

2. View of 46th Street facing southwest (Development Site at right).

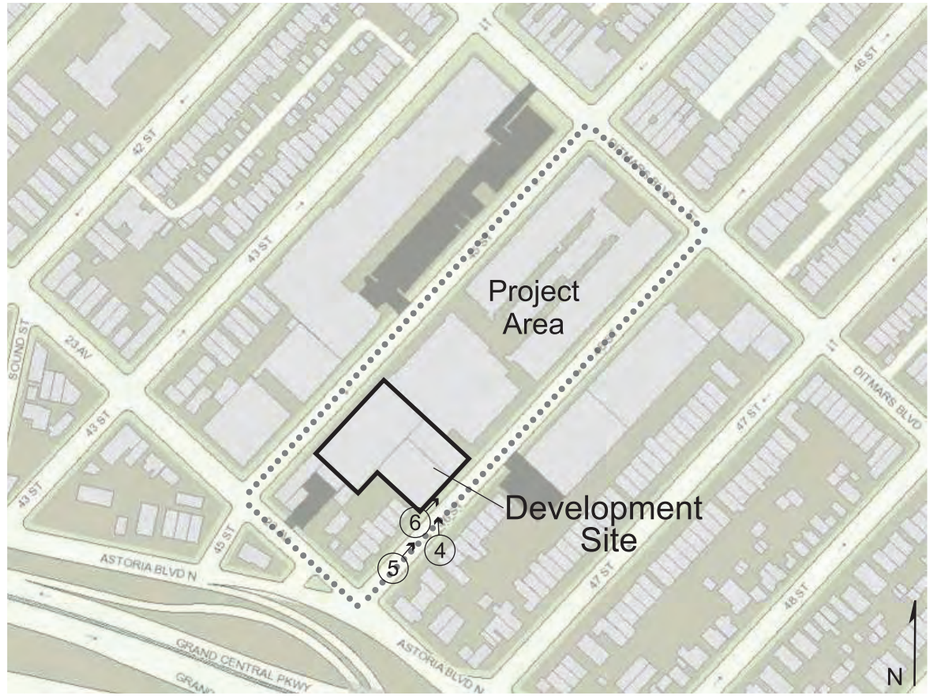
3. View of the Development Site facing northwest from 46th Street.



4. View of the Development Site facing north from 46th Street.

5. View of 46th Street facing northeast (Development Site at left).

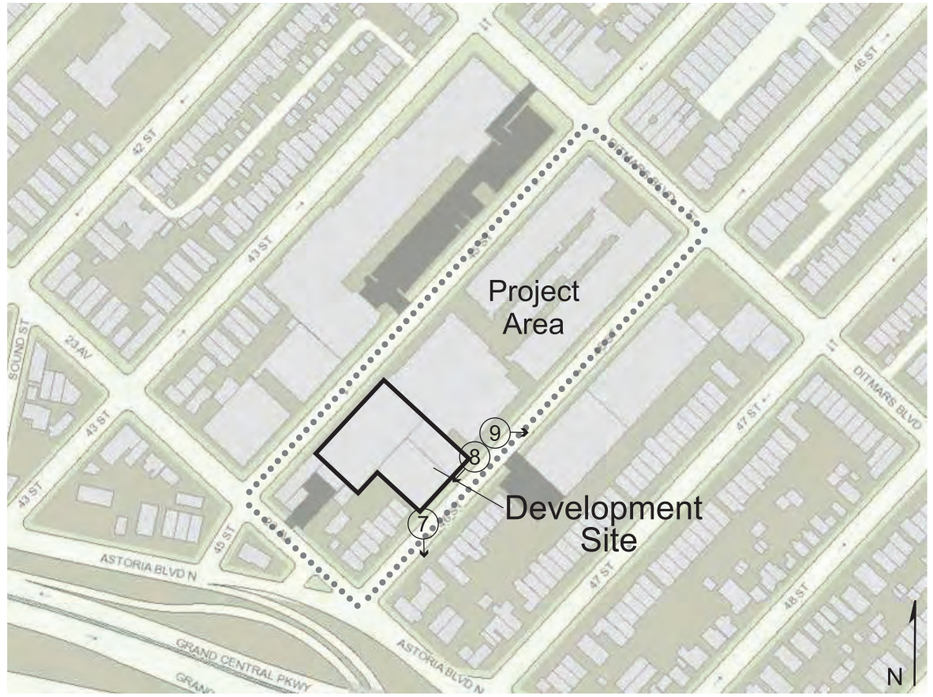
6. View of the sidewalk along the northwest side of 46th Street facing northeast (Development Site at left).



7. View of the southeast side of 46th Street facing south from the Development Site.

8. View of the sidewalk along the northwest side of 46th Street facing southwest (Development Site at right).

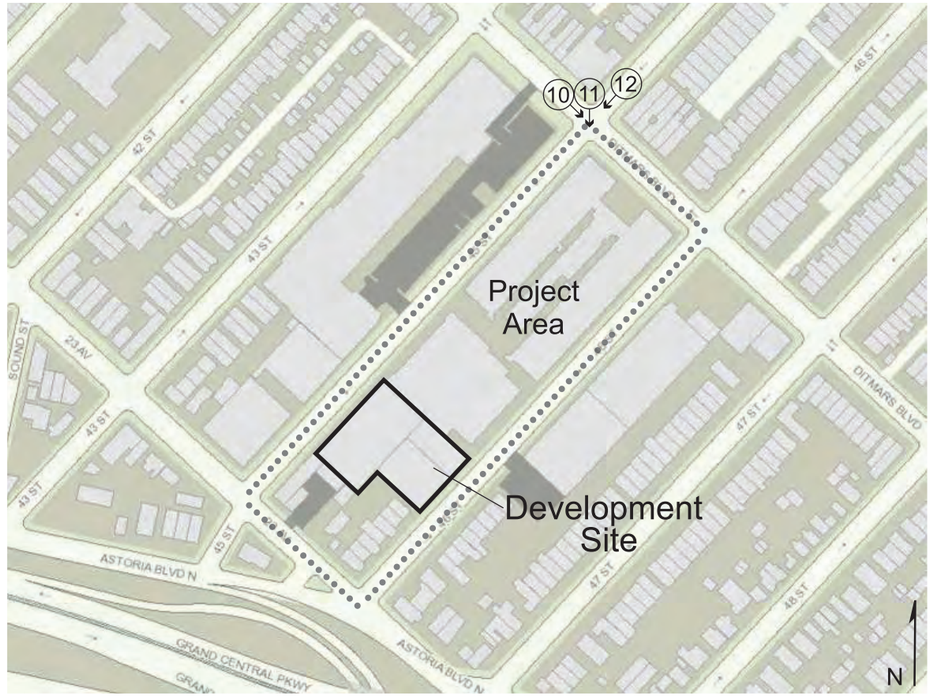
9. View of the southeast side of 46th Street facing east from the Development Site.



10. View of Ditmars Boulevard facing southeast from 45th Street (Project Area at right).

11. View of the Project Area facing south from the intersection of Ditmars Boulevard and 45th Street.

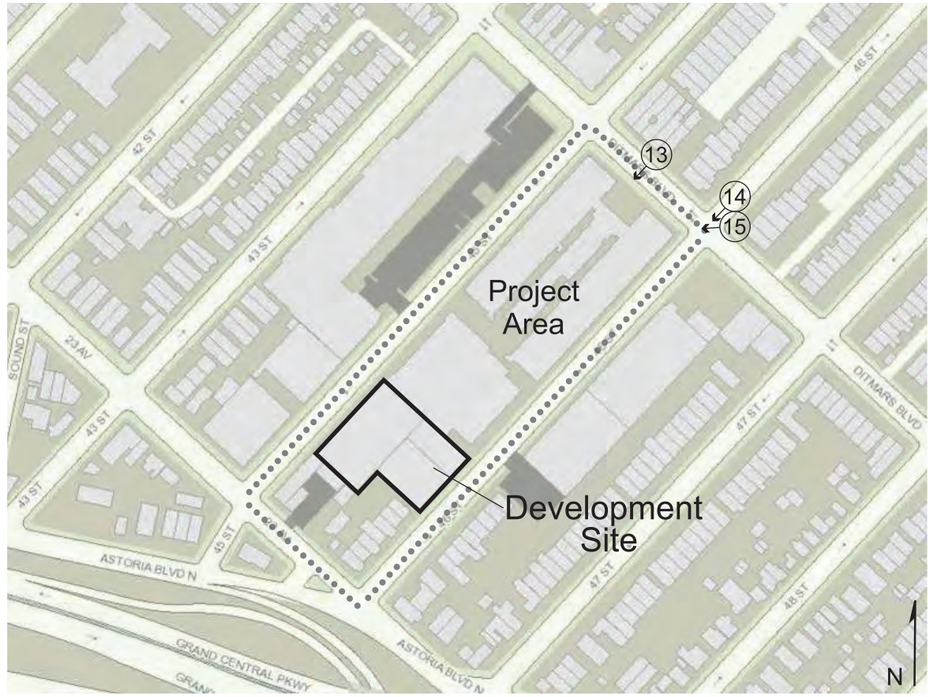
12. View of 45th Street facing southwest from Ditmars Boulevard (Project Area at left).



13. View of the Project Area facing southwest from Ditmars Boulevard.

14. View of 46th Street facing southwest from Ditmars Boulevard (Project Area at right).

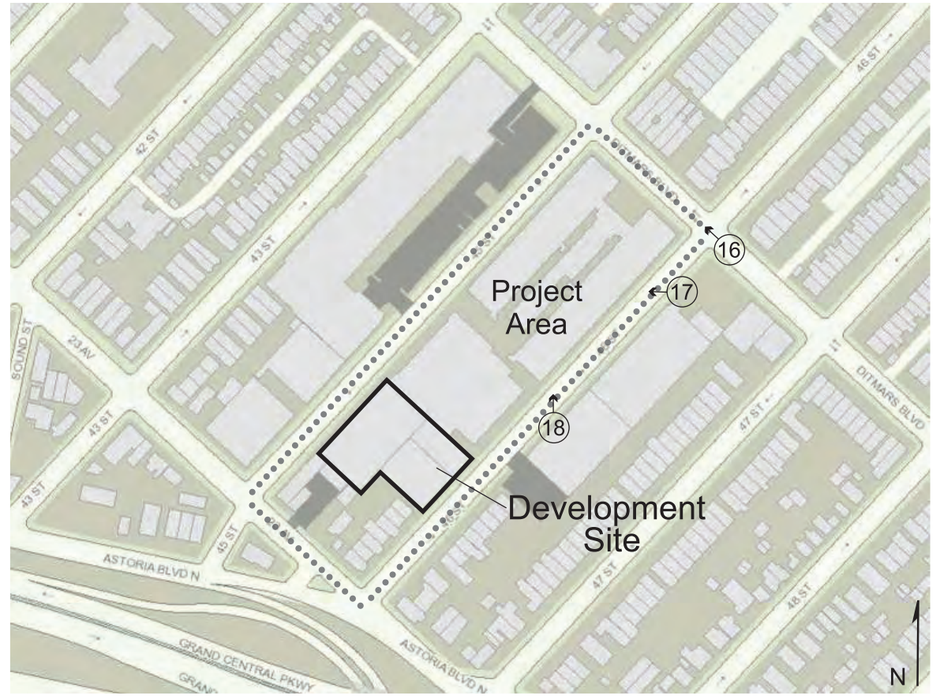
15. View of the Project Area facing west from the intersection of Ditmars Boulevard and 46th Street.



16. View of Ditmars Boulevard facing northwest from 46th Street (Project Area at left).

17. View of the Project Area facing west from 46th Street.

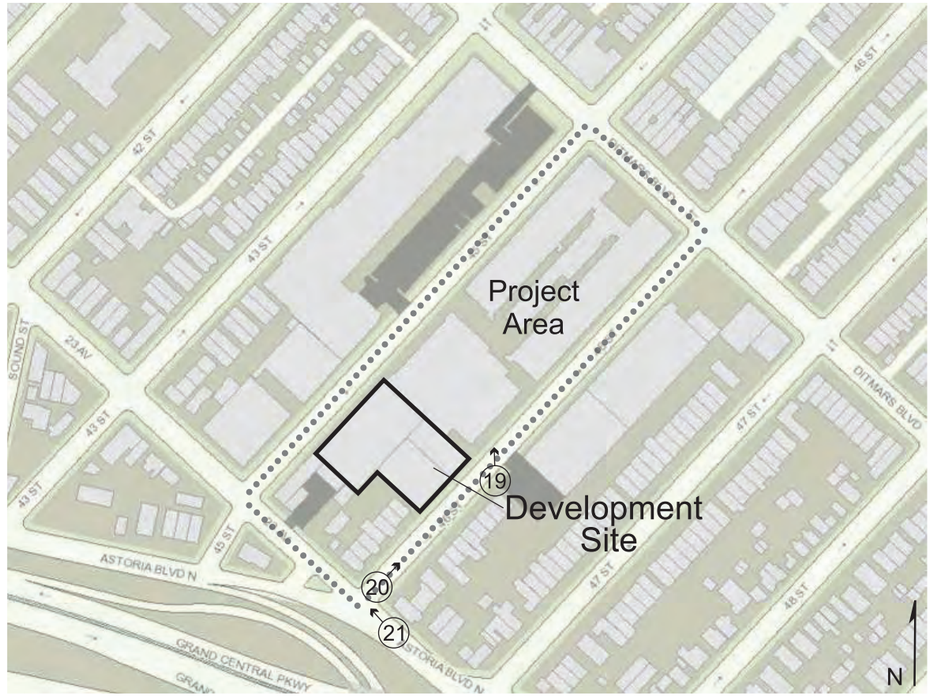
18. View of the Project Area facing north from 46th Street.



19. View of the Project Area facing north from 46th Street (Development Site at far left).

20. View of 46th Street facing northeast from 23rd Avenue (Project Area at left).

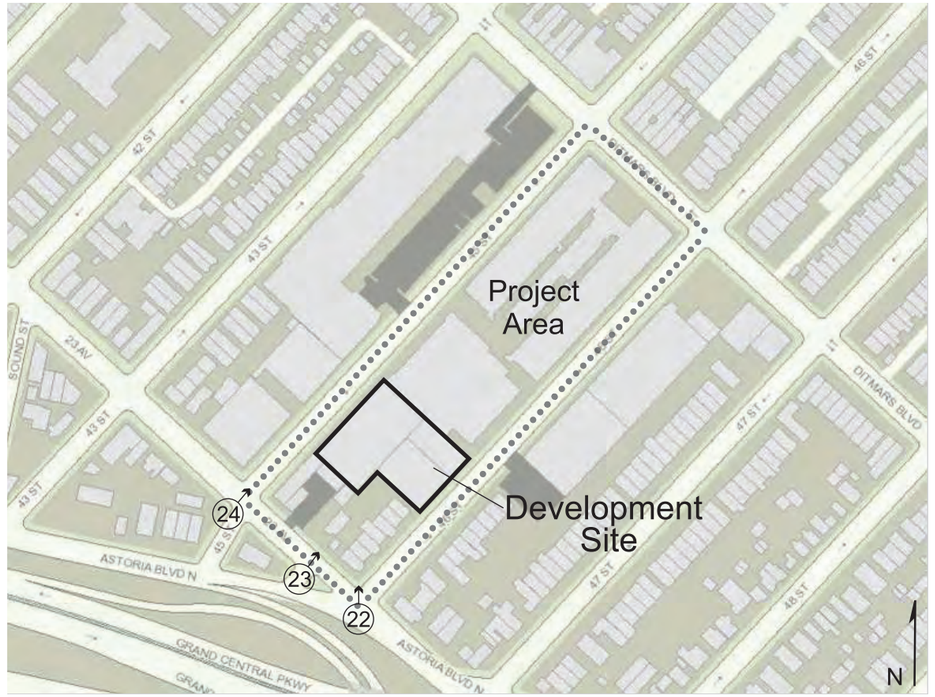
21. View of 23rd Avenue facing northwest from 46th Street (Project Area at right).



22. View of the Project Area facing north from the intersection of 23rd Avenue and 46th Street.

23. View of the Project Area facing northeast from 23rd Avenue.

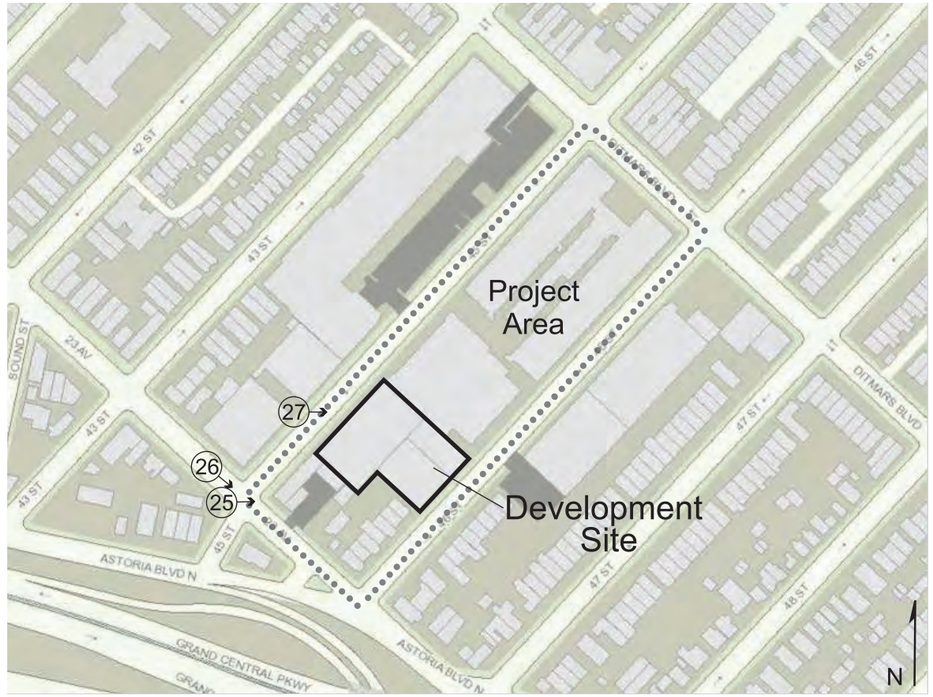
24. View of 45th Street facing northeast from 23rd Avenue (Project Area at right).



25. View of the Project Area facing east from the intersection of 23rd Avenue and 35th Street.

26. View of 23rd Avenue facing southeast from 45th Street (Project Area at left).

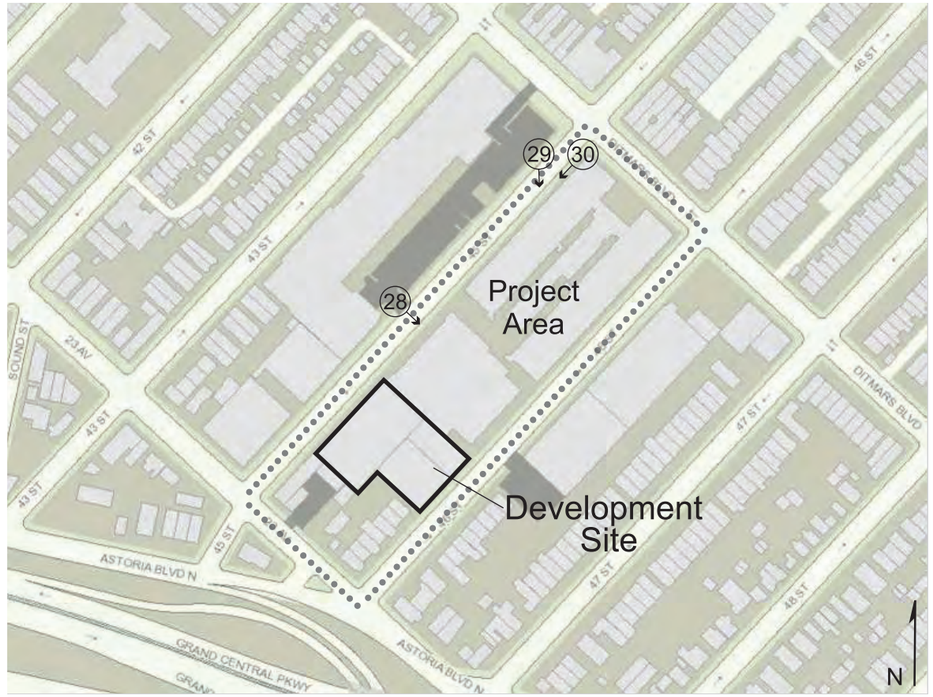
27. View of the Development Site facing east from 45th Street.



28. View of the Project Area facing southeast from 45th Street.

29. View of the Project Area facing south from 45th Street.

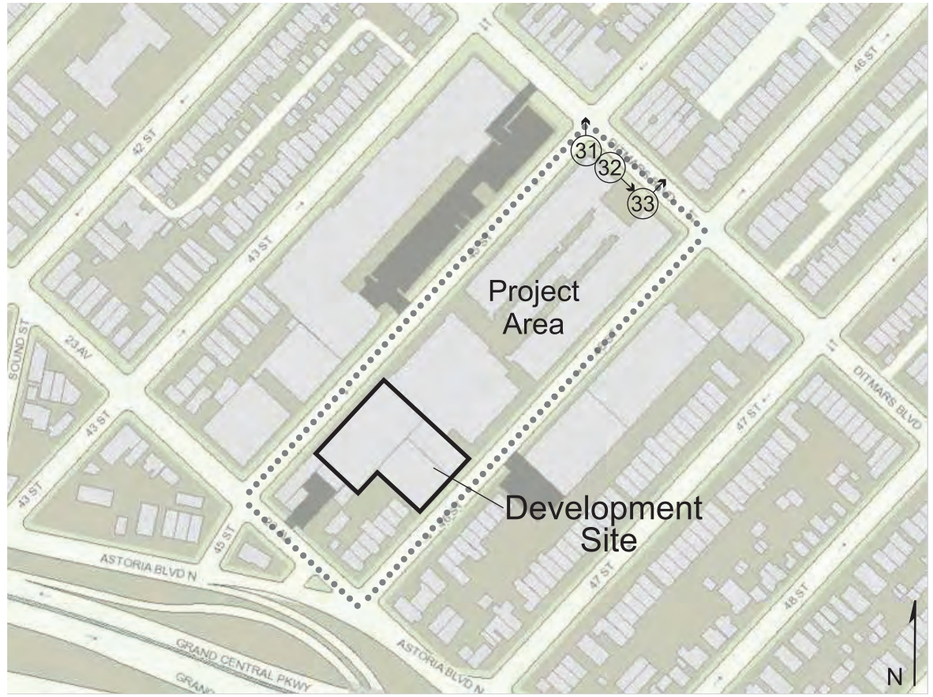
30. View of the sidewalk along the southeast side of 45th Street facing southwest from Ditmars Boulevard (Project Area at left).



31. View of the intersection of Ditmars Boulevard and 45th Street facing north from the Project Area.

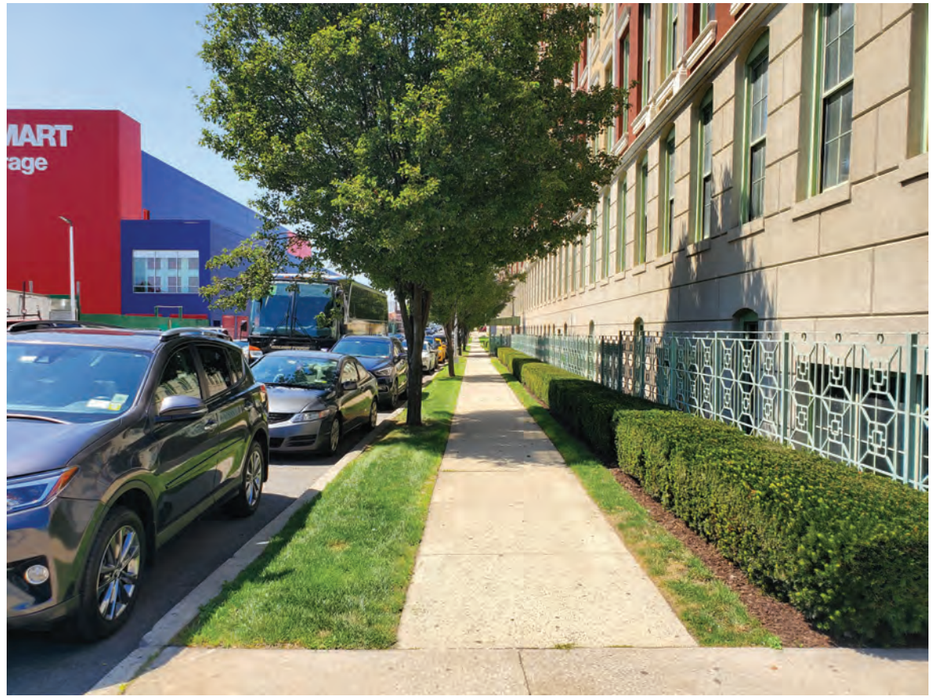
32. View of the sidewalk along the southwest side of Ditmars Boulevard facing southeast from 45th Street (Project Area at right).

33. View of the northeast side of Ditmars Boulevard facing northeast from the Project Area.

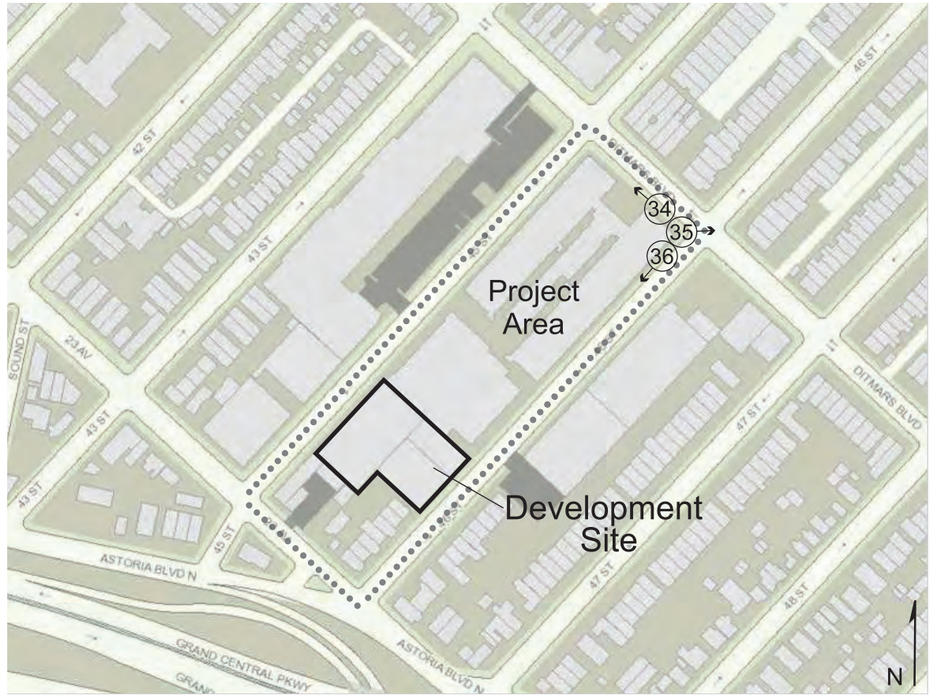


34. View of the sidewalk along the southwest side of Ditmars Boulevard facing northwest from 46th Street (Project Area at left).

35. View of the intersection of Ditmars Boulevard and 46th Street facing east from the Project Area.



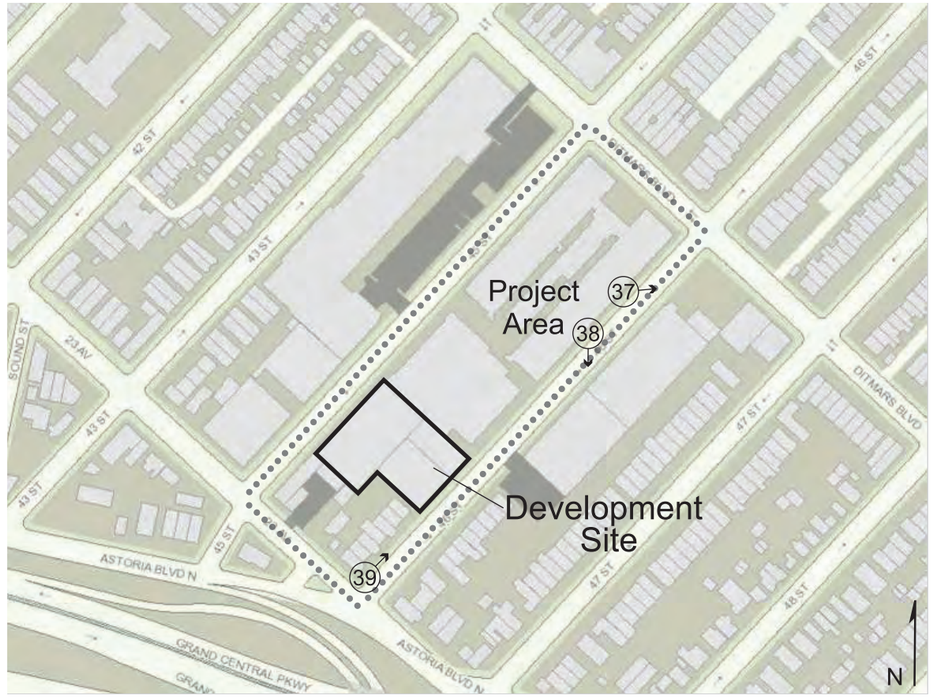
36. View of the sidewalk along the northwest side of 46th Street facing southwest from Ditmars Boulevard (Project Area at right).



37. View of the southeast side of 46th Street facing east from the Project Area.

38. View of the southeast side of 46th Street facing south from the Project Area.

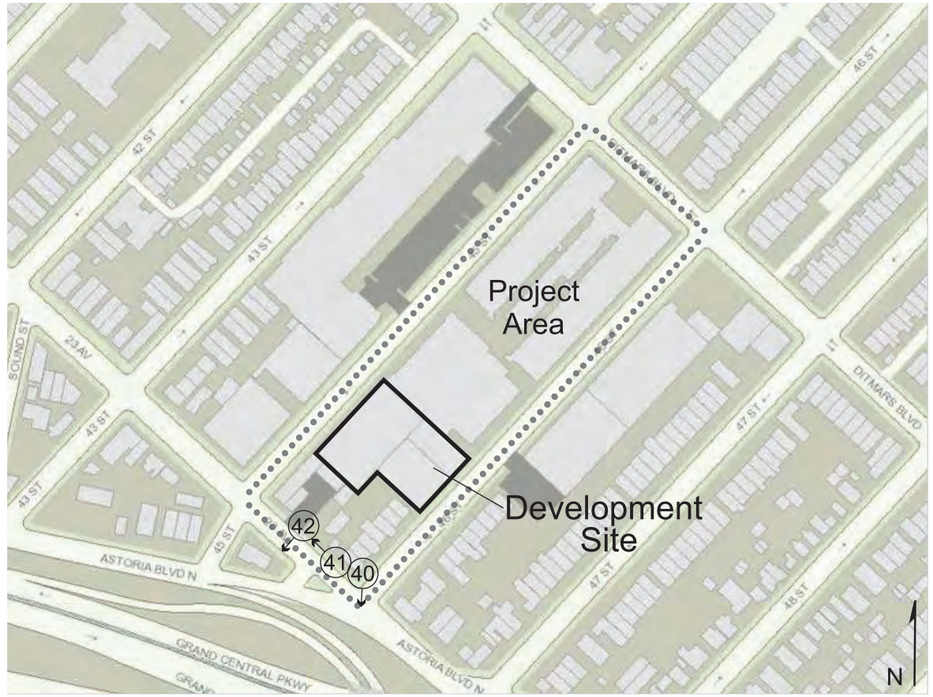
39. View of the sidewalk along the northwest side of 46th Street facing northeast from 23rd Avenue (Project Area at left).



40. View of the intersection of Astoria Boulevard, 23rd Avenue, and 46th Street facing south from the Project Area.

41. View of the sidewalk along the northeast side of 23rd Avenue facing northwest from 46th Street (Project Area at right).

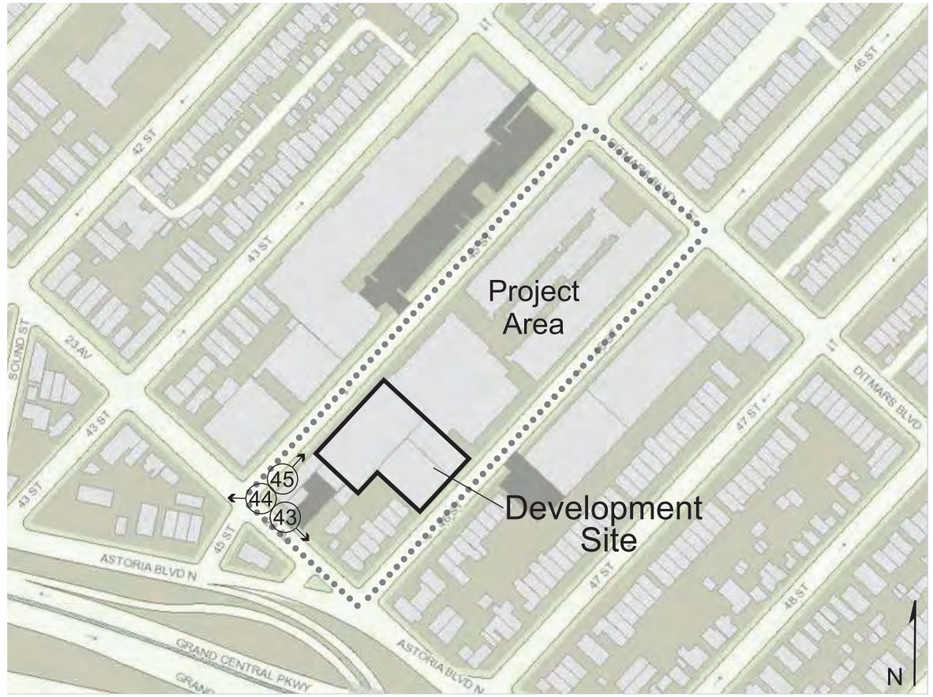
42. View of the southwest side of 23rd Avenue facing southwest from the Project Area.



43. View of the sidewalk along the northeast side of 23rd Avenue facing southeast from 45th Street (Project Area at left).

44. View of the intersection of 23rd Avenue and 45th Street facing west from the Project Area.

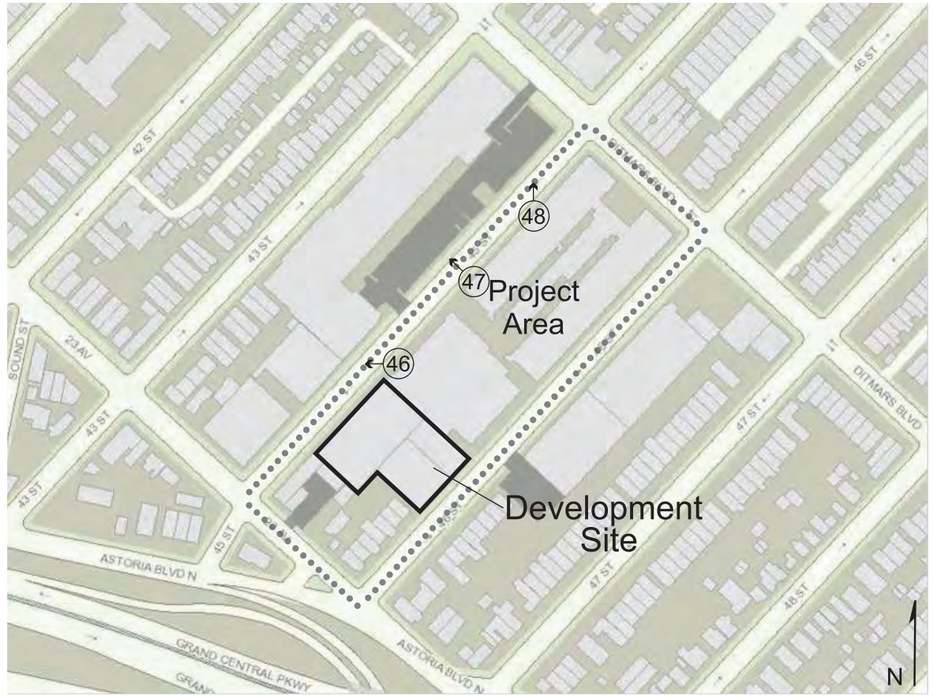
45. View of the sidewalk along the southeast side of 45th Street facing northeast from 23rd Avenue (Project Area at right).



46. View of the northwest side of 45th Street facing west from the Project Area.

47. View of the northwest side of 45th Street facing northwest from the Project Area.

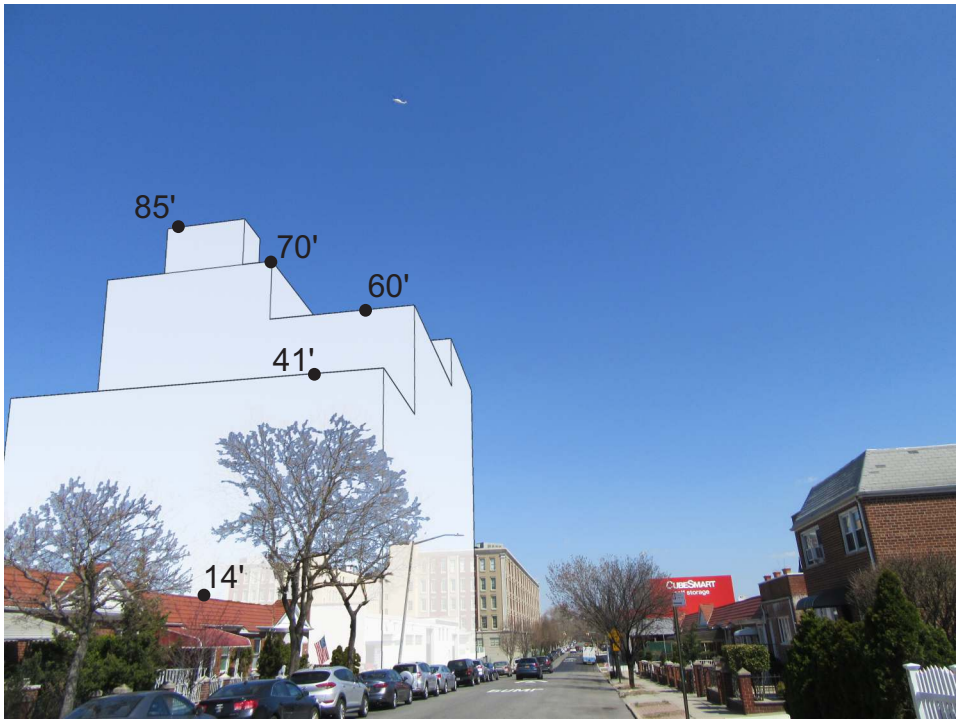
48. View of the northwest side of 45th Street facing north from the Project Area.



46th Street facing northeast (Projected Site 1 at left)

No-Action Scenario

46th Street facing northeast (Projected Site 1 at left)

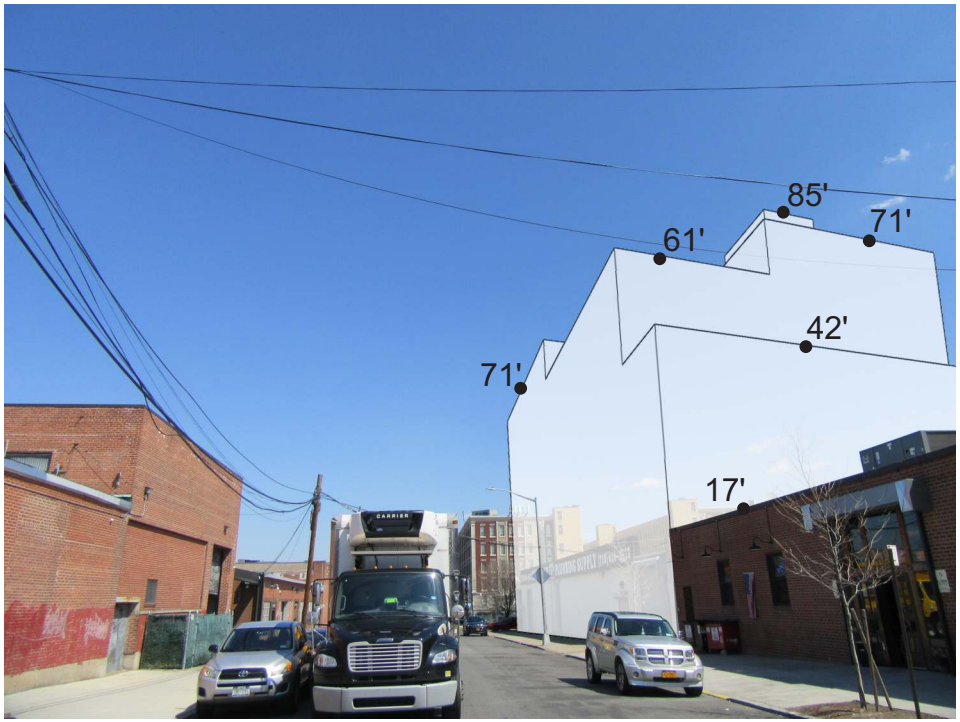


With-Action Scenario

45th Street facing northeast (Projected Site 1 at right)

No-Action Scenario

45th Street facing northeast (Projected Site 1 at right)



With-Action Scenario

23rd Avenue facing northwest (Projected Site 2 at right)

No-Action Scenario

23rd Avenue facing northwest (Projected Site 2 at right)

With-Action Scenario

12. HAZARDOUS MATERIALS

Phase I Environmental Site Assessment (ESA)

P/O Projected Development Site 1 - 22-60 46th Street (Block 769, Lot 25)

Introduction

EPDSCO, Inc. has performed a Phase I Environmental Site Assessment (ESA) of the subject property located at 22-60 46th Street, in the Borough of Queens, New York City, New York (Block 769, Lot 25 portion of Projected Development Site 1) dated April 2018. This Phase I ESA was prepared in accordance with the latest ASTM Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM Designation E 1527-13).

The Standard Practice E 1527-13 defines good commercial and customary practice for conducting an environmental site assessment (ESA) of a parcel of commercial real estate with respect to the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and petroleum products. As such, the Practice is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on CERCLA liability (referred to as landowner liability protections or LLPs); that is, the practice that constitutes all appropriate inquiries into the previous ownership and uses of the property consistent with good commercial and customary practice.

The goal of an ESA is to identify, to the extent feasible in accordance with ASTM E 1527-13, *recognized environmental conditions (RECs)* in connection with the property. The term *recognized environmental condition* means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. *De minimis* conditions are not *recognized environmental conditions*. The term *de minimis* condition means a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. The presence or likely presence of hazardous substances or petroleum products at a site includes any form, such as solid or liquid at the surface or subsurface, and vapor in the subsurface.

The Practice also defines two additional *RECs*; *controlled recognized environmental conditions* and *historical recognized environmental conditions*. The term *controlled recognized environmental conditions* means a *recognized environmental condition* resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for

example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).

The term *historical recognized environmental condition* means a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been address to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).

Recognized environmental conditions are identified through a review of pertinent records for the project site and nearby properties, a site reconnaissance and interviews. The records review includes a review of *Standard Historical Sources* of information to determine the history of the property. Such sources include historical aerial photographs, fire insurance maps such as those published by the Sanborn Map Company, reverse telephone directories, building department records such as Certificates of Occupancy, building and demolition permits, etc., property tax records, recorded land title records, previous environmental reports and others. The records review also includes regulatory agency lists and databases of documented hazardous waste sites, spill incidents, registered storage tanks and others.

The non-invasive site reconnaissance is performed to identify potential sources of contamination at the project site and in the immediate vicinity of the site. Such potential sources of contamination include operations involving the storage or use of hazardous substances or petroleum products, the presence of petroleum storage tanks, drainage structures, chemical/oil staining, dead or dying vegetation and others.

Interviews are conducted, whenever possible, with site owners, operators, tenants, local government officials, and others with knowledge of the site and information regarding potential RECs at a property. Finally, several ASTM "Non-Scope" items including asbestos-containing materials, lead-based paints, and radon are also discussed.

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

Site Description

The subject property consists of a 12,500 square-foot rectangular shaped parcel. The lot contains a 1-story (on slab), masonry and steel frame industrial/warehouse building that occupies the entire lot. The building is divided into two separate commercial spaces; 22-50 46th Street and 22-60 46th Street. The 22-50 46th Street part of the building is occupied by Dynamic U.S., and the Minosis Group. The Minosis Group is an insulation contractor with office space, truck storage and warehouse storage for insulation, tools and equipment. Dynamic U.S. is a small company whose operations involve the hand assembly (i.e., assembly and soldering) of small electronic panels in a small workshop in the rear of the building.

The 22-60 46th Street part of the building is occupied by Williams Global Power Company, an electrical contractor. The area contains office space, truck storage and storage of electrical supplies and equipment.

There were not any operations involving the storage or use of significant quantities of hazardous substances or petroleum products observed in the subject building during the site visit. In addition, no stained surfaces, discarded drums or chemical containers, or other visible indications of the past storage or use of hazardous substances or petroleum products were observed.

Site History

Research into the history of the property shows that the portion of the building at 22-50 46th Street was constructed in 1956, and was originally part of the adjoining building at 22-61 45th Street. In 1982, the subject lot was sub-divided to create Lot 25 (subject lot) and Lot 42 (adjoining lot at 22-61 45th Street). When the sub-division was completed, the portion of the building at 22-50 46th Street was partitioned from the adjoining Lot 42, and added to the subject lot. From 1956 to 1982, this portion of the building was part of a larger kitting mill operation. From the 1980s to the present time, the area has been used for warehouse and office purposes. It is not known if the knitting mill operations involved the use of hazardous substance such as fabric treatment or fabric dying operations however, it is likely that they included the use of various materials to maintain the mill equipment such as cleaners/solvents, and lubricating oils and greases. Any past spills, leaks or discharges of such materials would be a potential source of contamination to the project site, including the potential for vapor encroachment condition to the existing building and any future buildings.

The portion of the building at 22-60 46th Street was constructed in 1961. From the time of its construction to the 1990s, the building was occupied by electronics manufacturing companies (i.e., Frequency Electronics, Inc., Team Electronics, Inc. and Avtech Electronics, Inc.). From circa 2000 to the present time the building has been occupied by contracting companies for office and warehouse storage purposes. It is not known if the electronics manufacturing operations involved the storage or use of hazardous substances. However, electronics manufacturing operations are types which are known to have used hazardous substances, including solvents and cleaners used to clean sensitive electronic components. Any past spills, leaks or discharges of such materials would be a potential source of contamination to the project site, including the potential for vapor encroachment condition to the existing building and future buildings.

Prior to the construction of the subject building, the project site was undeveloped land from at least 1898 to the 1950s. The 1924 aerial photograph shows the project site in agricultural use with crop rows visible across the site, and the 1951 and 1954 show the site as an undeveloped lot partially cleared of vegetation.

Current Site Operations/Hazardous Materials

Typical lavatory drainage structures such as sinks and toilets were observed in the building. No staining or other visible indications of past spills, leaks or discharges of petroleum products or hazardous substances were observed around any of the drainage structures at the site. No storm drains, floor drains, trench drains, drywells, pits, ponds or lagoons were observed at the project site. A rectangular steel cover was observed in the floor on the south side of the 22-50 46th Street part of the building. The structure below this cover is not known; however, it may contain a sewer cleanout or similar structure.

No aboveground storage tanks, or visible indications of the presence of underground storage tanks, such as tank fillports or tank vent lines, associated mechanical equipment, etc., were observed during the site visit. The property does not appear in the New York State Department of Environmental Conservation (NYSDEC) Petroleum Bulk Storage (PBS) database, which lists all registered facilities with a total combined petroleum storage capacity in excess of 1,100 gallons. In addition, there are not any Oil Burner Applications on file in the New York City Department of Buildings records reviewed for the project site.

Given the age of the subject building (constructed sometime between 1956 and 1961), it is possible that it contains asbestos-containing building materials and lead-based paints. Potential asbestos-containing material observed in the building include floor tiles, ceiling tiles, surfacing materials and roofing materials. No suspected asbestos-containing thermal system insulation materials were observed in the building. Painted surfaces in the building were observed to be in generally good condition, with no large areas of chipped or peeling paint noted.

Regulatory Agency Database Information

The site does not appear in the Federal or State environmental databases reviewed including the USEPA's Superfund, CERCLIS or ERNS databases, the RCRA Hazardous Waste Treatment/Storage/Disposal Facilities list, or the NYSDEC's Spill Logs database, Solid Waste Facilities database, Petroleum Bulk Storage database, Brownfield site database, Voluntary Cleanup Program list or the Registry of Inactive Hazardous Waste Disposal Sites. A former occupant of the subject property is identified in the RCRA Hazardous Waste Generator database. Makro General Contractors, Inc. at 22-60 46th Street is listed as a Large Quantity Generator of Hazardous Waste from 2006 to 2008. Wastes generated included ignitable wastes, spent non-halogenated solvents, lead, chromium, and methyl ethyl ketone. These materials were transported to Republic Environmental Systems of Pa., Inc., in Hatfield, Pa. for treatment or disposal.

On 9/23/2008, Makro General Contractors received a RCRA Notice of Violation. The Area of Violation is: Listing-General. Violation compliance was achieved on 11/5/2008 and the case was closed on 11/20/2008.

It is not known if the hazardous waste activities occurred in the subject building, or if they were generated at off-site job locations by Makro General Contractors. Given that the wastes appeared to have been properly handled, and the relatively short time of hazardous waste activity (3 years), it is considered unlikely that the hazardous waste activities would have impacted the project site.

Off-Site Findings

A review of Sanborn maps shows that land uses in the area surrounding the subject property have contained a mix of residential and commercial/retail uses, warehouses, auto-related uses (e.g. gasoline filling stations, auto repair garages, parking lots, etc.), and industrial uses since at least the 1940s. Industrial and auto-related uses identified in the vicinity of the project site include the Steinway and Sons Piano Factory, knitting mills, a gasoline filling station, advertising display manufacturing, a chemical company warehouse, truck and auto repair garages and others, many of which are located hydraulically upgradient (i.e. southwest) of the project site. There are 34 NYSDEC-reported spill incidents identified within ½ mile of the project site, and 17 NYSDEC-registered Underground Storage Tank sites located within ¼ mile of the property.

Based on the numerous potential off-site sources of contamination identified in the area surrounding the project site, the potential for groundwater contamination exists in the area of the subject property. In addition, the potential for the encroachment of vapors into the existing and any future buildings at the site exists from off-site sources of contamination.

Conclusions

The Phase I ESA has revealed no evidence of *Controlled Recognized Environmental Conditions* or *Historical Recognized Environmental Conditions* in connection with the property. This assessment has revealed no evidence of *Recognized Environmental Conditions* in connection with the property, with the following exceptions:

- The potential for site contamination from past electronics manufacturing and knitting mill operations in the subject building.
- The potential for a vapor encroachment condition to the current and future buildings at the site from past on-site manufacturing operations, and from potential off-site sources of contamination in the immediate vicinity of the project site.
- The possible presence of asbestos-containing building materials and lead-based paints in the subject building.

Additional investigation would be required to determine if the project site has been impacted by the RECs identified above.

P/O Projected Development Site 1 - 22-61 45th Street (Block 769, Lot 42)

Introduction

CA RICH Consultants, Inc. (CA RICH) has completed a Phase I Environmental Site Assessment (ESA) of the subject property located at 22-61 45th Street, Queens, New York (Block 769, Lot 42 portion of Projected Development Site 1) dated June 2018.

This Phase I ESA was completed in substantive conformance with the scope and limitations of ASTM Practice E 1527-13, which sets forth nationally accepted Phase I guidance criteria. In addition, a Tier 1 vapor encroachment screening completed in accordance with ASTM E 2600-10 is included in the Report.

The purpose of this Phase I ESA is to identify ASTM-defined Recognized Environmental Conditions associated with the subject Property. This assessment was conducted in substantive conformance with ASTMs "*Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*" E 1527-13.

The ASTM E 1527-13 standard defines recognized environmental conditions as the presence of any hazardous substances or petroleum product in, on, or at the property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environments; or (3) under conditions that pose a material threat of a future release to the environment. *De minimis* conditions are not recognized environmental conditions. A de minimis condition is a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis conditions are not recognized environmental conditions nor controlled recognized environmental conditions.

Additionally, controlled recognized environmental conditions (CRECs), and historical recognized environmental conditions (HRECs) are defined in the ASTM E 1527-13 standard. A controlled recognized environmental condition (CREC) is a recognized environmental condition resulting from a past release of hazardous substance or petroleum product that has been addressed to the satisfaction of the applicable regulatory agency, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls. A condition considered by the environmental professional to be a controlled recognized environmental condition shall be listed in the Findings section of the Phase I ESA and as a REC in the Conclusion section.

An historical recognized environmental condition (HREC) is a 'past-release' of any hazardous substance or petroleum product that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls.

This Standard is designed to constitute "*all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice*" as defined in CERCLA 42 USC 9601 (35) (B). Consequently, this assessment investigates the historical land use and present-day condition of the Property in accordance with accepted standards prevailing within the lending industry and the environmental assessment profession.

The following general activities were performed by CA RICH as part of this Phase I ESA:

- Visual and physical inspection of representative and reasonably accessible interior and exterior areas of the Property by an experienced CA RICH Environmental Professional (EP) or their appointee under their direct supervision. The inspection also included a review of building practices at adjoining properties;

- Investigation of historical land use practices including review of available Local Directory publications, historical Sanborn® Maps, discussions with knowledgeable parties associated with the Property and other readily available records or reports (i.e. prior Phase 1's);

- Review and inquiry of relevant Federal, State, and local database records pertaining to the subject Property and properties located within approximate minimum search distances for the purposes of identifying any potential sources of migrating hazardous substances or petroleum products; and,

- Review of the Property's proximity to ecologically sensitive areas or media (i.e. parks, rivers, underlying ground water, etc.) using records and maps published by the Federal United States Geological Survey (USGS) along with neighborhood reconnaissance.

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

Site Description

The subject Property is located at 22-61 45th Street in Queens, New York. The Property is situated on the south side of 45th Street between Ditmars Boulevard to the east and 23rd Avenue to the west. The tax map designation is Block 769, Lot 42. The Property is a rectangular-shaped parcel of land that is improved with a one-story warehouse. The Property is located in a well-developed urban area of Queens that consists of commercial land usage. The subject Property contains a one-story warehouse. The warehouse is occupied by "Three Way Plumbing Supply", a plumbing supply distribution company.

The Property is located in a well-developed urban area of Queens that contains commercial land use. Adjoining properties include the following:
North: One-story commercial building (across 45th Street)

South: One-story commercial building
East: Parking lot
West: One-story commercial building

According to maps and reports published by the United States Geological Survey (USGS), the Property is situated at approximately 53 feet above mean sea level and is underlain by glaciofluvial deposits of Upper Cretaceous and/or Quaternary age consisting sand, silt, clay gravel, cobbles and boulders. These deposits rest unconformably on crystalline bedrock of early Paleozoic and/or Precambrian age. No site-specific hydrogeological information is available concerning groundwater depth and flow direction. The actual soil type, depth to groundwater and flow direction can only be obtained through a site-specific hydrogeological study including the physical installation of soil borings and wells, which is beyond the scope of this Phase I ESA. However, based on the topography of the area, groundwater likely flows in a north easterly direction towards the East River. The Property is relatively flat and has no natural or artificial surface water bodies or impoundments. Water from rain events runs off into City storm sewers.

Current Site Operations/Hazardous Materials

The exterior façade of the building consists of cinderblock and brick. A sidewalk fronts the building along 45th Street. Three roll-up doors were identified along 45th Street. No stressed vegetation or staining was observed at the time of inspection.

Interior building materials consist of painted sheetrock and cinderblock walls and ceilings, concrete and ceramic tile flooring. The warehouse is heated via forced-air-overhead blowers. The building also contains multiple offices. The electric and natural gas meters were identified within the warehouse.

At the time of inspection, no evidence of existing or former ASTs or USTs was observed.

No toxic or hazardous materials were observed during the inspection.

The Property is situated within a commercial area in Queens, New York. The computerized database records identifies approximately 192 sites in the categories of Government reported sites located in proximity to the Property in accordance with ASTM E 1527- 13 minimum search distances. There are National Wetlands, FEMA 100- and 500-Year Flood Zones mapped within a mile north east of the Property. City water is supplied to the Property and there is no on-site use of shallow groundwater beneath the Property.

Site History

Based on Sanborn Fire Insurance Rate maps, the subject Property first appears improved with a commercial structure identified as a "knitting mill" in 1967. The 1994 through 2006 maps identify the Property as manufacturing. There are no open NYSDEC SPILLS or violations associated with this Property.

CA RICH conducted a review of available Local Directory records for 22-61 45th Street, Queens, New York from 1922 to 2014. The city directory records indicate that the Property has been utilized as commercial since 1962.

Regulatory Agency Database Information

Federal Listings

The subject Property does not appear in the following Federal environmental databases reviewed: EPA National Priority List Sites (NPL); EPA SEMS Sites/CERCLIS Sites; EPA SEMS-ARCHIVE/CERCLIS-NFRAP; EPA DELISTED NPL; RCRA-TSDF, -LQG, -SQG, -CESQG; CORRACTS; ERNS; FINDS; HMIRS; FEDERAL Engineering Controls; FEDERAL Institutional Controls; or FEDERAL Brownfields.

One property within 0.5 miles of the site is on the EPA SEMS-ARCHIVE/CERCLIS-NFRAP list. Based upon the information reviewed, as well as the distance from the subject Property, this site is not expected to have a direct negative impact on the subject Property.

One property within 1.0 mile of the site is on the EPA DELISTED NPL list. Based upon the information reviewed, as well as the distance from the subject Property, this site is not expected to have a direct negative impact on the subject Property.

Two properties within 0.25 miles of the site are on the RCRA-LQG list; three properties within 0.25 miles of the site are on the RCRA-SQG list; three properties within 0.25 miles of the site are on the RCRA-CESQG list. None of these sites contain open violations. Based upon the information reviewed, these sites are not expected to have a direct negative impact on the subject Property.

Three properties within 1.0 mile of the site are on the CORRACTS list. Based upon the information reviewed, these sites are not expected to have a direct negative impact on the subject Property.

NYS Listings

The subject Property does not appear in the following State environmental databases reviewed: NYS Inactive Hazardous Waste Sites (SHWS); NYS Solid Waste Disposal Sites or Landfills (SWF/LF); NY Vapor Reopened; NYS Leaking Underground Storage Tanks (LTANKS); NYS Registered Storage Tank (UST); NYS Chemical Bulk Storage Facilities (CBS); NYS Major Oil Storage Facilities (MOSF); NYS Registered Storage Tank (AST); NY Spills (NY SPILLS); NY Brownfields; NY Engineering Controls; NY Institutional Controls; NY Dry Cleaners.

There are three SHWS sites located within 1.0 mile of the site. Based upon the information reviewed, as well as the distance from the subject Property, these sites are not expected to have a direct negative impact on the subject Property.

There is one documented landfill within 0.5 miles of the site. Based upon the information reviewed, this site is not expected to have a direct negative impact on the subject Property.

There are 28 LTANKS and 12 NY SPILLS identified within 0.5 miles of the site. All LTANKS and SPILLS sites have been closed out to the satisfaction of the NYSDEC with the exception of one SPILLS site. The open SPILLS site is summarized as follows: NYSDEC Spill number 1606649, identified as "Residence" was generated in October 2016 when a chemical smell was identified by a resident. This site is located within an eighth of a mile northwest of the subject Property, at a higher elevation. Corrective action has been taken. Based upon the information reviewed, resources effected, as well as the direction and the distance from the subject Property, this site is not expected to have a direct negative impact on the subject Property.

There are 17 UST and 19 AST sites located within 0.25 miles of the site. The existence of these sites is not expected to have a direct negative impact upon the subject Property.

There is one CBS site located within 0.25 miles of the site. The existence of this site is not expected to have a direct negative impact upon the subject Property.

There is one dry cleaning facility reported within 0.25 miles of the site, identified as Vel-An Cleaners. Based upon the information reviewed, as well as the distance from the subject Property, this site is not expected to have a direct negative impact on the subject Property.

Vapor Encroachment Survey (VES)

A Tier 1 Vapor Encroachment Survey (VES) was conducted using the EDR database ordered by CA RICH on May 24, 2018 and in conjunction with the Phase I ESA field inspection. The field inspection revealed that the subject Property contains a one-story warehouse.

Topographic maps were used to aid in determining the uppermost direction of groundwater flow. The direction of groundwater flow can help to establish any upgradient locations of potential soil vapor relative to the Site. Upgradient sources of soil vapor present a greater concern for vapor encroachment at the Site; and according to topographic maps, groundwater is assumed to be moving in a north easterly direction towards the East River.

The EDR's database was used to aid in identifying neighboring properties that may present a vapor encroachment condition. A review of the database found that there are 28 LTANKS and 12 NY SPILLS identified within the approximate search radius from the Property. All LTANKS and SPILLS sites have been closed out to the satisfaction of the NYSDEC with the exception of one SPILLS site. The open SPILLS site is summarized as follows:

NYSDEC Spill number 1606649, identified as "Residence" was generated in October 2016 when a chemical smell was identified by a resident. This site is located within an eighth of a mile northwest of the subject Property, at a higher elevation. Corrective action has been taken.

The general area immediately surrounding the Property contains commercial land use. No gasoline filling stations or dry cleaners were identified during the Site Inspection. Based upon the field inspection and pertinent information reviewed, a vapor encroachment condition is unlikely to exist at the subject Property.

Asbestos

Based upon the age of the building, constructed circa 1955, asbestos is likely present in the interior building materials.

Radon Gas

Review of geologic maps prepared by the United States Geological Survey and the findings of an EPA Residential Radon Survey revealed that the Property is located in an area identified as Zone 3, which indicates that the average indoor living area levels of radon are below the action level of 4 pCi/L. The potential for naturally occurring radon gas contamination at the Property is unlikely.

Lead-Based Paint

Based on the age of the building, constructed circa 1955, it is likely that lead-based paint is present inside this building. At the time of inspection, no peeling paint was observed anywhere inside the building.

Conclusions

Based upon the field inspection and pertinent information reviewed, a vapor encroachment condition is unlikely to exist at the subject Property. This assessment did not reveal any "Recognized Environmental Conditions" (RECs).

Two Other Issues (OIs) were identified that do not meet the REC criteria. These are summarized below.

OI-1 Based upon the age of the structure, constructed circa 1955, asbestos is likely present in some of the building materials. If the building is to be renovated or demolished, it is recommended that an Asbestos Containing Material (ACM) survey be performed and appropriate measures taken to protect the health and safety of building occupants or workers during activities that may disturb the ACM.

OI-2 Based upon the age of the structure, constructed circa 1955, lead-based paint is likely present in some of the building materials especially in the lower layers of paint. If the building is to be renovated or demolished, it is recommended that a lead-based paint survey be performed. At the time of the inspection, no peeling paint was observed.

Recommendations

Projected Development Site 1 - (Block 769, Lots 25 & 42)

Based on the evidence of recognized environmental conditions presented above on the Lot 25 portion of Projected Development Site 1, Phase II testing of the site would be required. This is discussed below (see "Phase II Environmental Site Investigation").

Projected Development Site 2 - (Block 769, Lots 36 & 38)

Projected Development Site 2 is not under the control or ownership of the Applicant and is not included in the proposed development plans for this project. An "E" designation for hazardous materials will be placed on the zoning map pursuant to Section 11-15 of the New York City Zoning Resolution for the subject properties. The "E" designation will ensure that testing and mitigation will be provided as necessary before any future development and/or soil disturbance on these properties. These applicant(s) should be directed to coordinate further hazardous materials assessments through the Mayor's Office of Environmental Remediation.

Therefore, in order to avoid any potential impacts associated with hazardous materials, an (E) designation (E-549) will be assigned for hazardous materials on the following properties:

Block 769, Lots 36 and 38

The text for the (E) designation related to hazardous materials is as follows:

Due to the possible presence of hazardous materials on the aforementioned designated sites, 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 lots restricted by this (E) designation prior to any demolition or disturbance of soil on the lots.

Task 1

The fee owners of the lots 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 lots restricted by this (E) designation must perform such remediation as determined necessary by OER. After completing the remediation, the fee owners of the lots 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 this (E) designation in place, no significant adverse impacts related to hazardous materials are expected, and no further analysis is warranted. Therefore, there is no potential for the Proposed Actions to result in significant adverse impacts related to hazardous materials on Projected Development Sites 2 and 3.

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

Phase II Environmental Site Investigation (ESI)

Introduction

Environmental Studies Corporation, Inc. has performed a Phase II Environmental Site Investigation (ESI) of the subject property located at 22-60 46th Street, in the Borough of Queens, New York City, New York (Block 769, Lots 25 and 42) dated June 2019. The purpose of this Phase 2 investigation was to establish existing soil, soil vapor and ground water quality conditions and a comparison to relevant regulatory agency and standard practice guidelines and standards. A Phase 2 Environmental Investigation Work Plan and Health and Safety Plan (HASP) were prepared which outlined the means and methods of the subsurface investigation. All work was completed in accordance with ASTM E1903-97 Standard Guide for Environmental Site Assessments: Phase 2 Environmental Site Assessment Process.

A subsurface investigation work plan was developed. The scope of work was implemented to determine the subsurface soil, water and soil vapor quality conditions at the subject property. The scope of work included the following elements:

- Completed a geophysical investigation which included an electromagnetic survey and ground penetrating radar (GPR) survey.
- Performed eight (8) soil test borings (B-1, B-2, B-3, B-4, B-5, B-6, B-7 and B-8) and collected two soil samples from each soil boring location at surface (0 - 2ft) and a deeper sample from (15 - 17ft) to match the excavation depth of the proposed building.
- Installed two (2) temporary groundwater monitoring wells (GW-1 and GW-2).
- Collected six soil vapor samples (SV-1, SV-2, SV-3, SV-4, SV-5 and SV-6) at a depth of the proposed building foundation depth.
- Prepared a written comprehensive report of findings.

Geophysical Survey

An Electromagnetic (EM) Magnetometer survey was conducted in an attempt to identify any possible unknown magnetic anomalies such as underground storage tanks (USTs) on the site. ESC used a Fisher TW-6 magnetometer in the inductive phase mode over the property accessible areas in an overlapping grid pattern. The results of the survey indicated no evidence of any magnetic anomalies indicative of USTs.

Soil Testing

A total of eight soil test borings (B-1, B-2, B-3, B-4, B-5, B-6, B-7 and B-8) were conducted on the subject property using a Geoprobe direct-push drilling rig. A total of eight soil samples were collected from the borings and sent to the laboratory for analysis. Two soil samples were collected from each soil boring location. One soil sample was collected from the surface at a depth of 0 to 2 feet, and another deeper soil sample was collected at a depth 15 - 17 feet below surface grade elevation. Two temporary monitoring well piezometers were installed at locations B-3 and B-8. The boreholes were drilled into soil and screened using 1-inch diameter machine slotted (0.20 slot) schedule 40 PVC screen and riser pipe.

The soil was characterized and logged for potential impacts (e.g., odor, staining, anthropogenic materials and other observations) and screened for volatile organic vapors with a photoionization detector (PID). All soil samples were analyzed for the following parameters:

- Volatile Organic Compounds (VOCs) by United Stated Environmental Protection Agency (USEPA) Method 8260
- Semi-Volatile Organic Compounds by USEPA Method 8270 BN
- Pesticides/Polychlorinated Biphenyls (PCBs) using USEPA Method 8081/8082
- Target Analyte List (TAL) Metals

Groundwater Quality

Two (2) temporary groundwater monitoring wells (GW-1 and GW-2) constructed of one-inch slotted PVC, were installed in order to evaluate the groundwater quality underlying the site. Groundwater was encountered at depth of 45 feet below surface grade elevation.

Soil Vapor Testing

Soil vapor probes (SV-1, SV-2, SV-3, SV-4, SV-5 and SV-6) were installed ranging in depth from 15 to 17 feet. Soil vapor samples were collected via dedicated polyethylene tubing and Summa Canisters, tested for VOCs using USEPA TO-15 method parameters.

Soil Quality Conditions

Urban fill disturbed soil and various fill materials such as red brick, concrete and stone fragments were found intermixed with fine to coarse sand and gravel throughout the property to an average depth of 4 to 6 feet. Below this fill layer is brown - tan loose fine sand and silt with fine gravel. No petroleum type odors were observed in the fill materials or in any soil samples observed. Results of photoionization detector field screening readings which give an indication of whether any volatile organic compounds (VOC) are present did not detect readings above instrument detection levels.

Based on observations noted in the field (visual, olfactory and PID readings), no petroleum or chemical type impacts at the site were identified during the field screening inspection.

The samples were compared to NYSDEC Soil Cleanup Objectives (SCOs) 6 NYCRR Subpart 375-6.8 (a): Unrestricted Use SCOs.

- No Volatile organic compounds (VOCs) were identified above laboratory detection limitations or the SCOs in the soil samples collected.
- One semi-volatile organic PAH compound (SVOCs) was found: ideno (123-cd pyrene) (0.51 mg/kg maximum) above the laboratory detection limits or the SCO's.
- No Pesticides or Polyvinyl Chlorinated Bi-phenols (PCBs) were identified above laboratory detection limitations or the SCOs.
- Total metals exceeding the SCOs included copper (174 mg/kg maximum), lead (315 mg/kg maximum), mercury (0.4 mg/kg maximum), nickel (43 mg/kg maximum) and zinc (772 mg/kg maximum).

Groundwater

No VOCs, SVOCs, Pesticides or metals were found above the NYSDEC (T.O.G.S) ambient water quality (AWQ) standards. One PCB compound Aroclor 1260 was found at a concentration of 0.164 ug/L. The NYSDEC groundwater quality standard is 0.09 ug/L.

Soil Vapor Sampling

The following compounds were found above laboratory method detection limitations in soil vapor samples collected: 1,1,1-Trichloroethane (130 ug/m3 maximum), 1,2,4 Trimethylbenzene (59 ug/m3 maximum), 1,3,5 Trimethylbenzene (2.7 ug/m3 maximum), 2-Butanone (67 ug/m3 maximum), Chloromethane (1.1 ug/m3 maximum), Acetone (130 ug/m3 maximum), Benzene (8.4 ug/m3 maximum), Chloroform (31 ug/m3 maximum), Cyclohexane (5.5 ug/m3 maximum), Ethyl Benzene (8.8 ug/m3 maximum),Methylene Chloride (16 ug/m3 maximum), n-Heptane (12 ug/m3 maximum), n-Hexane (18 ug/m3 maximum), o-xylene (12 ug/m3 maximum), m&p Xylene (2,000 ug/m3 maximum), Tetrachloroethlene (4,900 ug/m3 maximum), Tetrahydrofuran (17 ug/m3 maximum), Toluene (64 ug/m3 maximum) and Trichlorofluoromethane (Freon) (2,800 ug/m3 maximum).

Conclusions

The results of this subsurface investigation have found urban fill soil with ideno (123-cd pyrene) and total metals (copper, lead, nickel, mercury and zinc) above unrestricted use cleanup objectives and are typically found in urban fill soils around the New York Metropolitan area. This contamination is not a result of historical spills, commercial or industrial process releases related to the prior site occupancy or uses. It is limited in vertical extent to only the fill soils found onsite. The remaining native soils are clean and meet NYSDEC Part 375 unrestricted soil cleanup standards.

No groundwater chemical impacts were found other than an elevated concentration of the PCB (Aroclor 1260) in GW-1.

Results of the soil vapor investigation identified volatile organic compounds (VOCs) related to petroleum compounds above laboratory method detection limits. The petroleum compound VOC's are likely resulting from the urban fill materials and interchange with the ambient air surrounding the project site and adjacent neighborhood. The soil vapor conditions found are typical of what is usually measured in shallow soils in the metropolitan New York neighborhoods.

The chlorinated volatile organic compounds (1,1,1-Trichloroethane, Tetrachloroethylene, and Methylene Chloride, were detected above the New York State Department of Health 2017 Soil Vapor/Indoor Air Matrix guidelines. The matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. The findings of this soil vapor investigation show that mitigation is recommended to address human exposures are needed related to chlorinated volatile compounds.

Recommendations

There are no recommendations for additional testing or remedial action being made at this time. Any fill soils and native soil exported off-site should be disposed in accordance with New York State Department of Environmental Conservation

(NYSDEC) Part 365 regulations.

The new building construction should have an engineered polyethylene vapor barrier with a minimum thickness of 20 mils under the foundation slab and foundation sidewalls in order to prevent any potential vapor migration into the building structure. A Remedial Action Plan (RAP) detailing the installation of a vapor barrier and a Construction Health and Safety Plan (CHASP) will be written describing the means and methods for the vapor barrier installation and excavation and disposal of impacted soils.

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 140 dwelling units, 12,097 gross square feet of local retail space, 8,700 gross square feet of community theater space, 105 accessory parking spaces, and a deduction of 30,000 gross square feet of warehouse space. 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

Under No-Action conditions, the Project Area would continue to be developed as under currently existing conditions with 212 dwelling units within 204,581 gsf of floor area, 41,543 gsf of commercial space, 30,000 gsf of warehouse space, and 307 accessory parking spaces.

Future With-Action Scenario

Under With-Action conditions, the Project Area would be developed with 330,248 gsf of residential space for 352 dwelling units, 53,640 gsf of commercial space, 8,700 gsf of community facility space (community theater), and 412 accessory parking spaces. A new curb cut on 46th Street would provide access to the proposed parking garage.

Build Year/Project Phasing

Based on an estimated 12-month approval process and a 24-month construction period, the Build Year for the Applicant owned Projected Development Site 1 is assumed to be early 2022. The Proposed Actions would result in the creation of one additional development site that is not controlled by the Applicant. It is anticipated that Projected Development Site 2, which would consist of a relatively small building, would be developed over an additional 12-month period with a Build Year of 2023.

Analysis Framework

The transportation analysis below has been prepared based on the difference between the No-Action and With-Action Scenarios which would result in the development under the With-Action Scenario of an additional 140 dwelling units, 12,097 gross square feet of local retail space, 8,700 gross square feet of community theater space, 105 accessory parking spaces, and a deduction of 30,000 gross square feet of warehouse space.

Trip Generation Rates, Modal Split Data, and Sources

Local Retail Component

Future With-Action Scenario and No-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.**

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 residential developments. The modal split information was taken from the 5-year *2013-2017 American Community Survey (ACS) Journey-to-Work* information for census tract numbers 117, 119, 121, 125, 135, 137, 141, 299 and 317 in Queens NY, as shown in **Table 1**.

Community Center (Community Theater)

Future With-Action Scenario generated person and vehicular trips are based upon the rates and percent temporal distribution, as provided in the *2014 CEQR Technical Manual (Table 16-2)*. The modal split information is based on the *East New York Rezoning FEIS,* for the community center (community theater*)* development.

Warehouse Space

Future No-Action Scenario generated person and vehicular trips, including truck trips, are based upon the rates and percent temporal distribution as shown in the *Jerome Avenue Rezoning FEIS, Table 13-8 (recently approved in January 5, 2018)*. The modal split information is based on the 5-year *2006-2010 American Community Survey (ACS) Reverse-*

Journey-to-Work information for census tract numbers 117, 119, 121, 125, 135, 137, 141, 299 and 317 in Queens NY, as shown in **Table 1**.

Modal Split Data

The results of the modal split data are as follows:

For the local retail use, 29% percent would travel by car, zero (0%) percent would travel by taxi, seven (7%) percent would travel by bus, zero (0%) percent would travel by subway, and sixty-four (64%) percent would travel by foot.

For the residential use, 26 percent would travel by car, 0.3% percent would travel by taxi, 7.7 percent would travel by bus, 52.8 percent would travel by subway, 13.2 percent would travel by foot and other mode of travel, such as bicycle.

For the community center (community theater) use, five (5) percent would travel by car, one (1) percent would travel by taxi, six (6) percent would travel by bus, three (3) percent would travel by subway, and 85 percent would travel by foot and other mode of travel, such as bicycle.

For the warehouse use, 61.3 percent would travel by car, 0.5 percent would travel by taxi, 8.6 percent would travel by bus, 16.2 percent would travel by subway, and 13.3 percent would travel by foot and other mode of travel, such as bicycle.

The above information is summarized in **Table 1.**

Person and Vehicular Trips

Person Trips

The Proposed Actions would generate a total of 173 net person trip ends during the AM (8AM-9AM) peak hour period, 424 net person trip ends during the Midday (12Noon-1PM) peak hour time period, 317 net person trip ends during the PM (5PM-6PM) peak hour time period, and 340 net person trip ends during the (1PM-2PM) Saturday peak hour time period, as is summarized in **Tables 2 and 5.**

Vehicle Trips

The Proposed Actions would generate a total of 25 (3 inbound and 22 outbound) net vehicle trip ends during the AM (8AM-9AM) peak hour period, 68 (35 inbound and 33 outbound) net vehicle trip ends during the Midday (12Noon-1PM) peak hour time period, 55 (34 inbound and 21 outbound) net vehicle trip ends during the PM (5PM-6PM) peak hour time period, and 62 (30 inbound and 32 outbound trips)- net vehicle trip ends during the (1PM-2PM) Saturday peak hour time period, as is summarized in **Tables 3 and 6.** A new curb cut on 46th Street would provide access to the proposed parking garage. 46th Street is one-way northbound and no intersection would experience more than 50 vehicle trips during the Weekday Midday, PM and Saturday Midday peak hour periods.

The Proposed Actions would therefore generate fewer than 50 net peak hour vehicle trip ends at any intersection, 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 Proposed Actions would generate a total of 13 net bus trip ends during the AM (8AM-9AM) peak hour period, 29 net bus trip ends during the Midday (12Noon-1PM) peak hour time period, 23 net bus trip ends during the PM (5PM-6PM) peak hour time period, and 24 net bus trip ends during the (1PM-2PM) Saturday peak hour time period, is summarized in **Tables 2 and 5.**

There are two bus lines operating in the study area; the Q69 bus line operates along Ditmars Boulevard and the Q19 along Astoria Boulevard (N and S).

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 impacts.

Subway Trips

The Proposed Actions would generate a total of 58 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, 64 net subway trips during the PM (5PM-6PM) peak hour time period, and 57 net subway trips during the (1PM-2PM) Saturday peak hour time period, as is summarized in **Tables 2 and 5.**

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 Proposed Actions would generate a total of 134 net pedestrian (bus, subway, walk and other) trip ends during the AM (8AM-9AM) peak hour period, 318 net pedestrian trip ends during the Midday (12Noon-1PM) peak hour time period, 237 net pedestrian trip ends during the PM (5PM-6PM) peak hour time period, and 251 net pedestrian trip ends during the (1PM-2PM) Saturday peak hour time period, as is summarized in **Tables 2 and 5**.

Although the proposed estimated pedestrian trips for the MD, PM, and Saturday MD peak hours are above the *2014 CEQR Technical Manual* threshold, the proposed project, as shown on the Site Plan, would include several points of entry and exit for

pedestrians travelling to and from subway stations and bus stops and neighborhood shops. Therefore, none of the pedestrian elements in the study area would be likely to 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 Actions would generate fewer than 50 net vehicle trip ends at any intersection 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 action, and no further assessment is warranted.

Table 1 : Transportation Planning Factors_Revised

22-60 46th Street, Queens NY

Weekday

Land Use:	Warehousing Space-sq.ft.	Residential d.u.	Local Retail Space-sq.ft.	Community Theater Community Center Space-sq.ft.
Size/Units:	-30,000	140	12,097	8,700
	(6)	**(1)**	**(1)**	**(1)**
Trip Generation:				
Weekday	4.9	8.075	205	44.7
	per 1,000 sq.ft.	per d.u.	per 1,000 sq.ft.	per 1,000 sq.ft.
Linked-Trip:	0%	0%	25%	0%
Temporal Distribution:	**(6)**	**(1)**	**(1)**	**(1)**
AM Peak Hour	8.4%	10%	3%	4%
MD Peak Hour	14.0%	5%	19%	9%
PM Peak Hour	8.9%	11%	10%	5%
	(3)	**(4)**	**(2)**	**(5)**
Modal Split :	AM/MD/PM	AM/MD/PM	AM/MD/PM	AM/MD/PM
Auto	61.3%	26.0%	29%	5%
Taxi	0.5%	0.3%	0%	1%
Subway	16.2%	52.8%	0%	3%
Bus	8.6%	7.7%	7%	6%
Walk & Other	13.3%	13.2%	64%	85%
Total	100%	100.0%	100%	100%
	(6)	**(5)**	**(5)**	**(5)**
In/Out Splits:	In/Out	In/Out	In/Out	In/Out
AM Peak Hour	79/21	15/85	50/50	61/39
MD Peak Hour	50/50	50/50	50/50	55/45
PM Peak Hour	25/75	70/30	50/50	29/71
Vehicle Occupancy:	**(3)**	**(4)**	**(2)**	**(5)**
Auto	1.219	1.282	1.5	1.65
Taxi	1.4	1.40	1.4	1.3
Truck Trip Generation:	**(6)**	**(1)**	**(1)**	**(5)**
Weekday	0.67	0.06	0.35	0.29
	per 1,000 s.f.	per d.u.	per 1,000 s.f.	per 1,000 s.f.
	(6)	**(1)**	**(1)**	**(5)**
AM Peak Hour	14%	12%	8%	9.6%
MD Peak Hour	9%	9%	11%	11%
PM Peak Hour	1%	2%	2%	1%
AM/MD/PM	50/50	50/50	50/50	50/50

Sources:

(1)-2014 CEQR Technical Manual, Table 16-2.

(2)-NYCDOT

(3)-2006-2010 American Community Survey (ACS)- Reverse-Journey-to-Work (RJTW) Census Tract #'s 117, 119, 121, 125, 135, 137, 141, 299 and 317 in Queens N.Y.

(4)-2013-2017 American Community Survey (ACS)- Journey-to-Work (JTW) Census Tract #'s 117, 119, 121, 125, 135, 137, 141, 299 and 317 in Queens N.Y.

(5)-East New York FEIS.

(6)-Jerome Avenue FEIS, Jan. 5, 2018 (table 13.8).

Table 2 : Estimated Person Trips_*Revised*

22-60 46th Street, Queens NY

Weekday

Land Use:	Warehousing	Residential	Local Retail	Community Theater	Total Net	subway
	Space-sq.ft.	d.u.	Space-sq.ft.	Community Center	Demand	bus
Size/Units:				Space-sq.ft.		walk
Peak hour Trips	-30,000	140	12,097	8,700		Pedestrian
AM Peak Hour	-12	113	56	16	173	volumes
Midday Peak Hour	-21	57	353	35	424	
PM Peak Hour	-13	124	186	19	317	
Person Trips:						
AM Peak Hour						
Auto	-7	29	16	1	39	
Taxi	0	0	0	0	0	
Subway	-2	60	0	0	58	58
Bus	-1	9	4	1	13	13
Walk & Other	-2	15	36	14	63	63
Total	-12	113	56	16	173	134
Midday Peak Hour						
Auto	-13	15	102	2	106	
Taxi	0	0	0	0	0	
Subway	-3	30	0	1	28	28
Bus	-2	4	25	2	29	29
Walk & Other	-3	7	226	30	261	261
Total	-21	56	353	35	424	318
PM Peak Hour						
Auto	-8	32	54	1	79	
Taxi	0	0	0	0	1	
Subway	-2	66	0	1	64	64
Bus	-1	10	13	1	23	23
Walk & Other	-2	16	119	17	150	150
Total	-13	124	186	19	317	237

Table 3 : Estimated Vehicular Trips_*Revised*

22-60 46th Street, Queens NY

Weekday

Use	Warehousing	Residential	Local Retail	Community Theater	Total Net
	Space-sq.ft.	d.u.	Space-sq.ft.	Community Center	Demand
Size/Units:				Space-sq.ft.	
	-30,000	140	12,097	8,700	
Vehicular Trips					
AM Peak Hour					
Auto (Total)	-6	23	11	1	29
Taxi	0	0	0	0	0
Taxi (Balanced)	0	0	0	0	0
Truck	-3	1	0	0	-1
Truck(Balanced)	-6	2	0	0	-4
Total	-12	25	11	1	25
Total Vehicle (In/Out)	-8/-4	4/21	6/5	1/0	3/22
Midday Peak Hour					
Auto (Total)	-10	11	68	1	70
Taxi	0	0	0	0	0
Taxi (Balanced)	0	0	0	0	0
Truck	-2	1	0	0	0
Truck(Balanced)	-4	2	0	0	-2
Total	-14	13	68	1	68
Total Vehicle (In/Out)	-7/-7	7/6	'34/34	1/0	35/33
PM Peak Hour					
Auto (Total)	-7	25	36	1	55
Taxi	0	0	0	0	0
Taxi (Balanced)	0	0	0	0	0
Truck	0	0	0	0	0
Truck(Balanced)	0	0	0	0	0
Total	-7	25	36	1	55
Total Vehicle (In/Out)	-2/-5	18/7	18/18	0/1	34/21

Table 4 : Transportation Planning Factors_Revised

22-60 46th Street, Queens NY

Saturday

Land Use:	Warehousing	Residential	Local Retail	Community Center
	Space-sq.ft.	d.u.	Space-sq.ft.	Space-sq.ft.
Size/Units:	-30,000	140	12,097	8,700
	(6)	**(1)**	**(1)**	**(1)**
Trip Generation:				
Saturday	1.7	9.6	240	26.1
	per 1,000 sq.ft.	per d.u.	per 1,000 sq.ft.	per 1,000 sq.ft.
Linked-Trip:	0%	0%	25%	0%
Temporal Distribution:	**(6)**	**(1)**	**(1)**	**(1)**
Saturday MD Peak Hour	10.6%	8%	10%	9%
	(3)	**(4)**	**(2)**	**(5)**
Modal Split :	Saturday	Saturday	Saturday	Saturday
Auto	61.3%	26.0%	29%	5%
Taxi	0.5%	0.3%	0%	1%
Subway	16.2%	52.8%	0%	3%
Bus	8.6%	7.7%	7%	6%
Walk & Other	13.3%	13.2%	64%	85%
Total	100%	100.0%	100%	100%
	(6)	**(5)**	**(5)**	**(5)**
In/Out Splits:	In/Out	In/Out	In/Out	In/Out
Saturday MD Peak Hour	64/36	50/50	50/50	49/51
Vehicle Occupancy:	**(3)**	**(4)**	**(2)**	**(5)**
Auto	1.219	1.282	1.5	1.65
Taxi	2	1.40	1.4	1.3
Truck Trip Generation:	**(6)**	**(1)**	**(1)**	**(5)**
Saturday	0.03	0.01	0.04	0.29
	per 1,000 s.f.	per d.u.	per 1,000 s.f.	per 1,000 s.f.
	(6)	**(1)**	**(1)**	**(5)**
Saturday MD Peak Hour	9%	11%	11%	0%
Saturday MD Peak Hour	50/50	50/50	50/50	50/50

Sources:

(1)-2014 CEQR Technical Manual, Table 16-2.

(2)-NYCDOT

(3)-2006-2010 American Community Survey (ACS)- Reverse-Journey-to-Work (RJTW) Census Tract #'s 117, 119, 121, 125, 135, 137, 141, 299 and 317 in Queens N.Y.

(4)-2013-2017 American Community Survey (ACS)- Journey-to-Work (JTW) Census Tract #'s 117, 119, 121, 125, 135, 137, 141, 299 and 317 in Queens N.Y.

(5)-East New York FEIS.

(6)-Jerome Avenue FEIS, Jan. 5, 2018 (table 13.8).

Table 5 : Estimated Person Trips_*Revised*

22-60 46th Street, Queens NY

Saturday

Land Use:	Warehousing	Residential	Local Retail	Community Center	Total Net	subway
	Space-sq.ft.	d.u.	Space-sq.ft.	Space-sq.ft.	Demand	bus
Size/Units:	-30,000	140	12,097	8,700		walk
Peak hour Trip						Pedestrian
Saturday MD Peak Hour	-5	108	218	20	340	
Person Trips:						
Saturday MD Peak Hour						
Auto	-3	28	63	1	89	
Taxi	0	0	0	0	0	
Subway	-1	57	0	1	57	57
Bus	0	8	15	1	24	24
Walk & Other	-1	14	139	17	170	170
Total	-5	108	218	20	340	251

Table 6 : Estimated Vehicular Trips_*Revised*

22-60 46th Street, Queens NY

Saturday

Use	Warehousing	Residential	Local Retail	Community Center	Total Net
	Space-sq.ft.	d.u.	Space-sq.ft.	Space-sq.ft.	Demand
Size/Units:	-30,000	140	12,097	8,700	
Vehicular Trips					
PM Peak Hour					
Auto (Total)	-3	22	42	1	62
Taxi	0	0	0	0	0
Taxi (Balanced)	0	0	0	0	0
Truck	0	0	0	0	0
Truck(Balanced)	0	0	0	0	0
Total	-3	22	42	1	62
Total Vehicles (In & Out)	***-2/-1***	***11/11***	***21/21***	***0/1***	***30/32***

Exhibit 1

Modal Split Information

2013-2017 ACS 5-YEAR Journey-to-Work (JTW) for tract numbers 117, 119, 121, 125, 135, 137, 141, 299 and 317 in Queens

22-60 46th Street, Queens New York

2013-2017 ACS 5-Year, Journey-to-Work:

Census Tract	Total Workers	Car or Van Drive-Alone	Car Pool	Bus	Street Car	Subway	R.R.	Ferry	Taxi	Motor cycle	Bi cycle	Walk	Other Means	Worked @ Home	Total
117	**2443**	**364**	**32**	**149**	**0**	**1588**	**6**	**0**	**0**	**0**	**16**	**205**	**28**	**55**	2,443
119	**936**	**89**	**29**	**49**	**0**	**603**	**0**	**0**	**0**	**5**	**13**	**91**	**0**	**57**	936
121	**1377**	**313**	**78**	**76**	**0**	**712**	**12**	**0**	**0**	**0**	**0**	**138**	**0**	**48**	1,377
125	**1258**	**195**	**29**	**8**	**0**	**848**	**12**	**0**	**0**	**5**	**30**	**88**	**0**	**43**	1,258
135	**733**	**338**	**49**	**45**	**0**	**192**	**4**	**0**	**7**	**22**	**0**	**35**	**0**	**41**	733
137	**941**	**143**	**0**	**61**	**0**	**615**	**0**	**0**	**5**	**0**	**0**	**77**	**5**	**35**	941
141	**1123**	**98**	**21**	**131**	**9**	**674**	**11**	**0**	**25**	**0**	**33**	**77**	**0**	**44**	1,123
299	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
317	**2914**	**997**	**269**	**372**	**0**	**964**	**7**	**0**	**0**	**0**	**0**	**172**	**0**	**133**	2,914
Total	11,725	2,537	507	891	9	6,196	52	0	37	32	92	883	33	456	11,725
		0.216	***###***	***0.076***	***0.00***	***0.528***	***0.004***	***0.00***	***0.00***	***0.00***	***0.01***	***0.075***	***0.00***	***0.039***	***1.00***

Modal Split summary

Auto	**0.260**
Taxi	**0.003**
Bus	**0.077**
Subway	**0.528**
Walk	**0.075**
Other	**0.057**
Total	**1.000**

Exhibit 2

Vehicle Occupancy Information

2013-2017 ACS 5-YEAR Journey-to-Work (JTW) for tract numbers 117, 119, 121, 125, 135, 137, 141, 299 and 317 in Queens

2013-2017 ACS-5 Year, Vehicle Occupancy Rate:

Census Tract	Total	Drove alone	Total carpool	2person	3 Person	4 Person	5 or 6 Person	7 or more Person	Total
117	396	364	32	0	20	12	0	0	32
119	118	89	29	9	8	12	0	0	29
121	391	313	78	68	0	10	0	0	78
125	224	195	29	29	0	0	0	0	29
135	387	338	49	43	6	0	0	0	49
137	143	143	0	0	0	0	0	0	0
141	119	98	21	21	0	0	0	0	21
317	1,778	997	269	255	14	0	0	0	269
	3556	2,537	507	425	48	34	0	0	507
		2,537		213	16	9	0	0	2,774

Vehicle Occupancy = **1.282**

Exhibit 3

Modal Split Information

2006-2010 ACS 5-YEAR Reverse- Journey-to-Work (JTW) for tract numbers 117, 119, 121, 135, 137, 141, 299 and 317 in Queens

22-60 46th Street, Queens New York

2006-2010 ACS 5-Year, Reverse- Journey-to-Work:

Census Tract	Total Workers	Car or Van Drive-Alone	Car Pool	Bus	Street Car	Subway	R.R.	Ferry	Taxi	Motor cycle	Bi cycle	Walk	Other Means	Worked @ Home	Total
117	**829**	**310**	**54**	**80**	**20**	**150**	**10**	**0**	**0**	**0**	**0**	**130**	**0**	**75**	829
119	**505**	**250**	**65**	**65**	**0**	**45**	**25**	**0**	**0**	**0**	**0**	**40**	**0**	**15**	505
121	**535**	**245**	**60**	**25**	**0**	**100**	**0**	**0**	**0**	**0**	**0**	**65**	**0**	**40**	535
135	**250**	**120**	**40**	**30**	**0**	**25**	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**25**	250
137	**595**	**245**	**15**	**85**	**0**	**100**	**0**	**0**	**0**	**0**	**0**	**95**	**0**	**55**	595
141	**1500**	**890**	**90**	**125**	**0**	**305**	**0**	**0**	**0**	**0**	**0**	**45**	**0**	**45**	1,500
299	**320**	**165**	**0**	**60**	**0**	**70**	**0**	**0**	**15**	**10**	**0**	**0**	**0**	**0**	320
317	**2515**	**1590**	**185**	**115**	**0**	**350**	**0**	**10**	**20**	**0**	**0**	**170**	**60**	**15**	2,515
Total	7,049	3,815	509	585	20	1,145	45	10	35	10	0	545	60	270	7,049
		0.541	###	***0.083***	***0.00***	***0.162***	***0.006***	***0.00***	***0.00***	***0.00***	***0.00***	***0.077***	***0.01***	***0.038***	***1.00***

Modal Split summary

Auto	**0.613**
Taxi	**0.005**
Bus	**0.086**
Subway	**0.162**
Walk	**0.077**
Other	**0.056**
Total	**1.000**

Exhibit 4

Vehicle Occupancy Information

2006-2010 ACS 5-YEAR Reverse- Journey-to-Work (JTW) for tract numbers 117, 119, 121, 135, 137, 141, 299 and 317 in Queens

2006-2010 ACS-5 Year, Vehicle Occupancy Rate:

Census Tract	Total	Drove alone	Total carpool	2person	3 Person	4 Person	5 or 6 Person	7 or more Person	Total
117	364	310	54	50	4	0	0	0	54
119	315	250	65	15	50	0	0	0	65
121	305	245	60	50	0	0	0	10	60
135	160	120	40	40	0	0	0	0	40
137	260	245	15	15	0	0	0	0	15
141	980	890	90	75	15	0	0	0	90
299	165	165	0	0	0	0	0	0	0
317	2,384	1,590	185	145	20	20	0	0	185
	4933	3,815	509	390	89	20	0	10	509
		3,815		195	30	5	0	1	4,046

Vehicle Occupancy = **1.219**

Parking Accumulation Table

A/Q Parking Garage Analysis

22-60 46th Street, Queens NY

Warehousing_-30,000gsf					Residential_140 d.u.				Local Retail_12,097gsf				Commuinty Ctr._8,700g				Total			
Time	In	Out	Total	Accu.	In	Out	Total	Accu.	In	Out	Total	Accu.	In	Out	Total	Accu.	In	Out	Total	Accu.
Before 7am								105												105
7-8am	0	0	0	0	1	8	9	98	0	0	0	0	0	0	0	0	1	8	9	98
8-9am	-5	-1	-6	-4	4	19	23	83	6	5	11	1	1	0	1	1	6	23	29	81
9-10am	-3	-3	-6	-4	4	12	16	75	6	6	12	1	0	0	0	1	7	15	22	73
10-11am	-3	-3	-6	-4	5	7	12	73	7	7	14	1	0	1	1	0	9	12	21	70
11-12n	-3	-3	-6	-4	5	5	10	73	13	13	26	1	0	0	0	0	15	15	30	70
12n-1pm	-5	-5	-10	-4	6	5	11	74	34	34	68	1	1	0	1	1	36	34	70	72
1-2pm	-3	-3	-6	-4	5	5	10	74	34	34	68	1	1	0	1	2	37	36	73	73
2-3pm	-3	-3	-6	-4	5	5	10	74	19	19	38	1	0	0	0	2	21	21	42	73
3-4pm	-3	-3	-6	-4	8	5	13	77	12	12	24	1	1	0	1	3	18	14	32	77
4-5pm	-3	-3	-6	-4	12	6	18	83	12	12	24	1	0	1	1	2	21	16	37	82
5-6pm	-3	-4	-7	-3	17	8	25	92	18	18	36	1	1	0	1	3	33	22	55	93
6-7pm	-3	-6	-9	0	15	6	21	101	12	12	24	1	1	2	3	2	25	14	39	104
7-8pm					9	3	12	107	5	5	10	1	0	2	2	0	14	10	24	108

17. AIR QUALITY

INTRODUCTION

Ambient air quality, or the quality of the surrounding air, may be affected by air pollutants produced by motor vehicles, referred to as "mobile sources"; by fixed facilities, usually referenced as "stationary sources"; or by a combination of both. Under CEQR, an air quality assessment determines both a proposed project's effects on ambient air quality as well as the effects of ambient air quality on the project. The analysis framework, as mandated by the State Environmental Review Act, followed the *New York City Environmental Quality Review 2014 Technical Manual*. The potential air quality impacts of the following emission sources were evaluated:

- Vehicular emissions resulting from increased vehicular traffic and/or changes to traffic pattern.
- Vehicular emissions associated with off-street parking facilities.
- Vehicular emissions generated at an atypical (*e.g.*, not at-grade) roadway.
- Emissions from the burning of fossil fuels in the heating, ventilation and air conditioning (HVAC) equipment of the proposed developments.
- Air toxics emissions released from industrial or manufacturing facilities.
- Stationary source emissions of facilities that require Prevention of Significant Deterioration permits (Title V facilities), and facilities which require a state facility permit.
- Facilities' malodorous emissions to unreasonably interfere with the proposed project's occupant's comfortable enjoyment of life or their property.

Project Description

The Affected Area is comprised of Block 769; Lots 25, 30, 130, 31, 131, 32, 33, 34, 35, 36, 38, 39, 42, 7501, in the Steinway neighborhood of Queens, Community District 1. The Affected Area is bounded by Ditmars Boulevard to the north, 23rd Avenue to the south, 45th Street to the west, and 46th Street to the east. The Project Area is located just north of the Grand Central Parkway and its access roads. The Applicant-controlled Development Site consists of Block 769, Lots 25 and 42.

The Affected Area includes the following Projected Development Sites and Other Sites not anticipated to be developed.

Projected Development Site 1 (Block 769, Lots 25 & 42) – The 30,008 square foot Site would be developed with two new 8-story, cellar, and sub-cellar residential, commercial, and community facility buildings with approximately 172,953 gsf of floor area. Building

A would front on 46th Street and Building B would front on 45th Street. The With-Action development on Projected Development Site 1 would be the same as the proposed development. The buildings would be connected at the cellar and first floor. Both would rise to a height of 76'-6". Per the site plans provided by the building's architect for this project, both buildings would include bulkheads that rise to heights of 86'-6". The development would provide attended accessory parking for 105 vehicles occupying 32,031 gsf in the sub-cellar and on the first floor of the buildings and accessible from a new curb cut on 46th Street. For the purpose of the air quality analysis, each building would feature a backyard depth of 30 feet, per the zoning requirement (the actual proposed building feature backyards greater in depths).

Projected Development Site 2 (Block 769, Lots 36 & 38) - The 7,500 square foot Site would be developed with a new 35' tall, 3-story, residential and commercial building with approximately 7,895 gsf of floor area. The proposed development would also include 2,000 gsf of commercial space on the ground-floor of the building. The development would provide 8 at-grade accessory parking spaces (7 residential and 1 commercial).

The existing buildings on Block 769, Lots 30, 31, 32, 33, 34, 35, 39, 130, 131, and 7501 (identified as Other Sites 1 through 10) are anticipated to remain in the future with the Proposed Actions, and therefore, are not included in the Air Quality chapter of the EAS.

The increment between the No-Action and With-Action development scenarios would be 125,667 gsf of additional residential space for 140 additional dwelling units (including 113 market rate and 27 affordable units), 12,097 gsf of new commercial space, 8,700 gsf of new community facility space, and 105 additional accessory parking spaces. In order to allow for the projected development, two existing warehouse structures totaling 30,000 gsf in floor area and three single-family dwellings in the Project Area would be demolished. The project Build year is 2023.

Air Pollutants and Applicable Standards and Guidelines

National Air Quality Standards

The U.S. Environmental Protection Agency (EPA) has identified six pollutants, known as criteria pollutants which are of concern nationwide, and established threshold concentrations 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 pollutant for which a detailed analysis was conducted, together with their health-related averaging periods, are presented in Table 17-1.

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 Technical Manual* 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. $PM_{2.5}$ significant impact concentration was evaluated as follows:

- Predicted 24-hour maximum $PM_{2.5}$ concentration increase of more than half the difference between the 24-hour background concentration and the 24-hour standard; or
- Predicted annual average PM2.5 concentration increments greater than 0.1 µg/m3 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.

Per the *CEQR Technical Manual*, CO significant impact concentration is:

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

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

Background Concentrations

Background concentrations of the criteria pollutants for which detailed analyses were conducted were obtained from the NYSDEC's annual report for 2017 at the nearest monitoring stations. Table 17-1 shows the background concentrations and the NAAQS.

Table 17-1. The NAAQS and Background Concentrations at the Nearest NYSDEC Monitoring Stations

Pollutant	Averaging Period	National and State Standards	Background Concentration	Monitoring Station
NO_2	1-Hour	188 µg/m^3	117.2 µg/m^3	IS 52
	Annual	100 µg/m^3	38.0 µg/m^3	
$PM_{2.5}$	24-Hour	35 µg/m^3	19.6 µg/m^3	
	Average of 3 consecutive annual means	12 µg/m^3	8.0 µg/m^3	
PM_{10}	24-hour	150 µg/m^3	34 µg/m^3	
CO	1-hour	35 ppm	1.78 ppm	Queens College 2
	8-hour	9 ppm	0.90 ppm	
SO_2	1-Hour	196 µg/m^3	20.7 µg/m^3	IS 52
	Annual(1)	80 µg/m^3	4.9 µg/m^3	

1. NYS standard – Assumed annual SO_2 background concentration is the highest annual average from the latest 3 years of available monitoring data (2015-2017).

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

- 24-hour $PM_{2.5}$ 7.70 µg/m^3
- Annual $PM_{2.5}$ 0.3 µg/m^3 (for stationary source)
- CO 8-hour 4.05 ppm

NO_2 NAAQS

Nitrogen oxide (NOx) emissions from gas combustion consist predominantly of nitric oxide (NO) at the source. The NOx 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). For determining compliance with the 1-hour standard, the EPA has developed a three-tiered modeling approach: Tier 1, the most conservative approach, assumes a full (100%) conversion of NOx to NO_2; Tier 2 applies a conservative ambient NOx/NO2 ratio of 80% to the NOx 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 NO2 concentrations or total 1-hour NO_2 concentrations if hourly NO_2 background concentrations are added within the model. Per the *CEQR Technical Manual*, a Tier 1 approach is initially applied, followed by a Tier 2 application. A less conservative Tier 3 approach is then applied if exceedances of the 1-hour NO_2 NAAQS were estimated.

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 pollutant's dispersion. Emission of vehicular mechanical components are generated with the latest EPA's Mobile Vehicle Emission Simulator 2014a version (MOVES2014a). Emission of dust generated by vehicles travelling on paved roadways are added to the MOVES2014a emission to estimate total particulate matter emissions. The pollutants' concentrations at sensitive receptors are modeled with the EPA's CAL3QHC/R or AERMOD Gaussian dispersion models. Dispersion analysis of emissions generated in parking facilities may use the spreadsheet and formula referenced in the *CEQR Technical Manual* appendices.

Mobile Source Screen

Project-Generated Traffic

Per the *CEQR Technical Manual*, 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 project. For this area of the City, the threshold volume for a detailed analysis of CO concentration is an increment of 170 vehicles. $PM_{2.5}$ threshold criterion is an increment of 12 to 23 heavy-duty diesel vehicles (HDDVs) or its equivalence depending on the road types.

Per the transportation analysis for this project, the Proposed Actions would generate a total of 25 (3 inbound and 22 outbound) net vehicle trip ends during the AM peak hour period, 68 (35 inbound and 33 outbound) net vehicle trip ends during the Midday (12Noon-1PM) peak hour time period, 55 (34 inbound and 21 outbound) net vehicle trip ends during the PM (5PM-6PM) peak hour time period, and 62 (30 inbound and 32

outbound trips) net vehicle trip ends during the (1PM-2PM) Saturday peak hour time period. These project-generated net vehicle trip ends include -4, -2, 0, and 0 truck trip ends during the AM, Midday, PM, and Saturday peak hour periods, respectively. However, no intersection would experience more than 50 vehicle trip ends at any intersection during any peak hour period.

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

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

According to the *CEQR Technical Manual*, a $PM_{2.5}$ detailed analysis is required if a threshold criterion, determined by project-generated 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 follows:

- 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.

Ditmars Boulevard is categorized as a principal arterial road; the other roads around the Affected Area are categorized as a paved road with less than 5,000 vehicles. Therefore, the analysis assumed that the peak hour traffic would travel on a paved road, which is the most stringent road type.

According to the transportation analysis for this project, the maximum HDDVs trip generation increment between the Future No-Action and the Future With-Action is zero (0) trucks peak hour traffic and at most 50 net peak hour vehicle trip ends at any intersection. As such, 50 vehicles comprising of no trucks were considered for the $PM_{2.5}$ screening analysis.

The $PM_{2.5}$ screen does not apply to passenger cars. As such, the NYSDEC vehicle population by source type database (part of MOVES2014a database for the county of Queens) was consulted to determine the number of passenger trucks part of the 50 net vehicles. The MOVES database shows 60.5% and 39.5% LDGV/LDGT1 distribution, which translated to 30 LDGV and 20 LDGT1. As such, no intersection would experience more than 10 net equivalent truck trip ends during any 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 mobile source air quality impacts are expected at intersections affected by the proposed project.

Atypical Roadway

According to *CEQR Technical Manual*, projects that would result in new sensitive uses within 200 feet of an atypical roadways may result in significant adverse mobile source air quality impacts. These impacts are estimated at sensitive receptors located at air intakes, operable windows, and terraces of the receiving building.

The Affected Area is located approximately 190 feet north to the Grand Central Parkway (GCP) and approximately 110 feet from the Brooklyn Queens Expressway (BQE) offramp and onramp to the Grand Central parkway. Therefore, a detailed analysis using MOVES2014a and AERMOD was required.

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.

The increment between the With Action and No Actions scenarios would result in 105 accessory parking spaces in Project Development Site 1, and more than the 85 parking spaces threshold criterion. Therefore, a detailed analysis was required.

Atypical Roadway Detailed Analysis

Methodology and Databases

Just south of the Affected Area, the GCP and BQE split. The GCP runs 30 feet below grade and is a 3-lane in each direction highway (not including on/off ramps). Commercial vehicles are not permitted on the GCP just east of 47th Street. The BQE has two northbound lanes prior to merging with the GCP. The two northbound lanes of the BQE split before the GCP; the right lane is the offramp to Astoria Boulevard; the left lane merges with the GCP westbound traveling lanes in a dedicated lane. West of 47th Street the eastbound BQE and GCP combined roadways have 4 lanes; the right lane is the BQE southbound offramp. The offramp is a single lane until 49th Street, where traffic from Astoria Boulevard South merges with the BQE. In addition, the BQE northbound lanes passes over the GCP at 47th Street.

Hourly traffic counts were obtained from the New York State Department of Transportation (NYSDOT) for the following stations:

- 050915 - the combined traffic on the GCP and BQE

- 050039 – the combined traffic on the GCP and BQE
- 050038 - the BQE at 47th Street
- 053164 – BQE northbound Exit 44 offramp to Astoria Boulevard

As seen above, stations 050915 and 050039 are for the same roadways. As station 050915 shows significantly more traffic, its data was used. The *CEQR Technical Manual,* Table 16-4: *Annual Background Growth Rates*, of 0.250% was used to account for the general background traffic growth in Queens. To separate the GCP volume from the BQE volume for station 050915, the BQE volume for station 050038 was reduced from station 050915. This approach accounted for vehicles existing the BQE at Exit 44 to Astoria Boulevard. In addition, and as a conservative approach, the volume of long-haul combination trucks applied station 050039 volume.

The vehicle mix on the GCP (commercial traffic not permitted) was modeled as passenger cars and passenger trucks. The vehicle mix was obtained from the NYSDEC source type population database for Queens county (60.5% passenger car and 39.5% passenger trucks). Vehicle mix on the BQE was obtained from station 050038 Classification Count Average Weekday Data Report. This vehicle mix was used for Exit 44 to Astoria Boulevard.

The Tier 1 analysis applied the vehicle volume and vehicle mix corresponding to the peak hour traffic. The Tier 2 analysis (24-hour $PM_{2.5}$) applied the vehicle volume and vehicle mix corresponding to the peak hour traffic for the AM and PM periods, and average vehicle volume and vehicle mix for the MD and over-night hours. AM, MD, and PM periods were assumed to be 5-hours each.

Vehicle speed was obtained from the City of New York Department of Transportation (NYCDOT) and MTA bridges and tunnels for the month of April 2018[3]. Weekday (Tuesday-Thursday) hourly data was averaged for each link, and the slowest speed in each direction used. The Tier 1 analysis specified the slowest hourly speed in the day; the Tier 2 analysis specified the slowest hourly speed per the period of the day. Table 17-2 shows the traffic data (traffic volumes and speeds) on the roadways.

Table 17-2. Traffic Data on the BQE and GCP

	AM		MD		PM		Over Night	
Roadway	**Volume**	**Speed (mph)**	**Volume**	**Speed (mph)**	**Volume**	**Speed (mph)**	**Volume**	**Speed (mph)**
BQE Northbound	3830	13.97	1281	11.62	2091	8.72	566	11.16
BQE Southbound	2214	9.97	1510	13.53	2214	12.19	681	29.49
BQE Exit 44	809	13.97	691	11.62	774	8.72	267	11.16
GCP Westbound	2816	13.97	4062	11.62	3968	8.72	809	11.16
GCP Eastbound	2900	9.97	3285	13.53	4455	12.19	674	29.49

[3] http://data.beta.nyc/dataset/nyc-real-time-traffic-speed-data-feed-archived/resource/6e35575d-37fc-4e8c-a28d-ee34e9189682?inner_span=True

Grade elevation needed for the MOVES2014a run was obtained from elevation points along the roadways. The elevation geo metadata was obtained from the NYC Open Data Elevation Points Planimetric mapping file[4].

Emission Rates

The EPA's MOVES2014a emission factor algorithm was used to estimate CO, PM_{10}, and $PM_{2.5}$ 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.

For project level analyses, MOVES require the use of site-specific input data of traffic volumes, vehicle type, fuel parameters, age distribution, and other inputs rather than the use of national default data. When conducting a project-scale analysis, MOVES also requires the analysis to be performed with no pre-aggregation (i.e., averaging) of input data. The software outputs either total emissions per hour per link in inventory mode or as an activity rate (emission per vehicle per mile traveled) in emission rate mode. As such, the MOVES2014a models were run for the primary total CO, $PM_{2.5}$, and PM_{10} and primary $PM_{2.5}$ species running and crankcase exhaust, with primary $PM_{2.5}$ and PM_{10} brake and tire wear emissions, and at inventory mode.

To account for seasonal and daily variations of meteorology conditions, and NYS fuels used, MOVES2014a was run multiple times. The Tier 1 analysis specified AM hour between 8:00-9:00 and the model was run for January, April, July, and October. The Tier 2 analysis specified AM, MD, PM, and overnight hours at each season (MOVES was run 16 times).

Modeling inputs for inspection/maintenance, fuel data (fuel data for all source types except combination trucks), age distribution, meteorology, etc., were all provided by the NYSDEC for the borough of Queens. MOVES default fuel was used for combination trucks per the EPA *Transportation Conformity Guidance for Quantitative Hot-spot Analyses in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas*.

Modeling inputs for the roadways traffic data were specified per the NYSDOT and NYCDOT database. To correlate the MOVES2014a emissions to the AERMOD dispersion analysis, links in MOVES2014a and in AERMOD were modeled for equal lengths. Links that are not straight were divided into shorter segments.

In addition to exhaust running $PM_{2.5}/PM_{10}$ emissions, vehicle-related $PM_{2.5}/PM_{10}$ emissions of dust generated by vehicles traveling on paved roadways were added to estimate total particulate matter emission factors for the short-term analysis (per DEP,

[4] https://data.cityofnewyork.us/Transportation/Elevation-points/szwg-xci6

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 $PM_{2.5}/PM_{10}$ concentrations. NYCDEP recommends silt loading factor for expressways and limited access roadways of 0.015 g/m^2 and an average vehicle weight of 6,000 pounds. These factors with the equation from Section 13.2.1-3 of EPA's AP-42 were used to calculate each link emission. In addition, based on DEP guidance, the conservative assumptions of "dry" road condition was used for the short-term calculation (precipitation reduced silt loading).

Gaussian Dispersion

The dispersion analysis of the traffic emissions impact on the planned developments and sidewalks at the Affected Area was conducted using the USEPA's AERMOD dispersion model version 16216r, AERMET version 14134, and the AERMOD AERMAP terrain processor. The default regulatory option and flat and elevated terrain were specified. All dispersion analyses used the calculated emission factors, elimination of calms, and a population of 2,000,000 was specified. Vehicle activity on the roadways were simulated as a polygon area sources with lengths equal to the lengths used in the MOVES runs.

Two scenarios were modeled: A Tier 1 analysis for each pollutant, specifying the emission quantities corresponding to peak hour traffic; and, a Tier 2 analysis for $PM_{2.5}$ 24-hour, specifying emission quantities corresponding to specific periods in a day.

Sources, receptors, and building base heights (elevations) and hill heights were generated by AERMOD AERMAP terrain processor with the U.S. Geological Survey (USGS) Digital Elevation Model data North American Datum of 1983 digital elevation file.

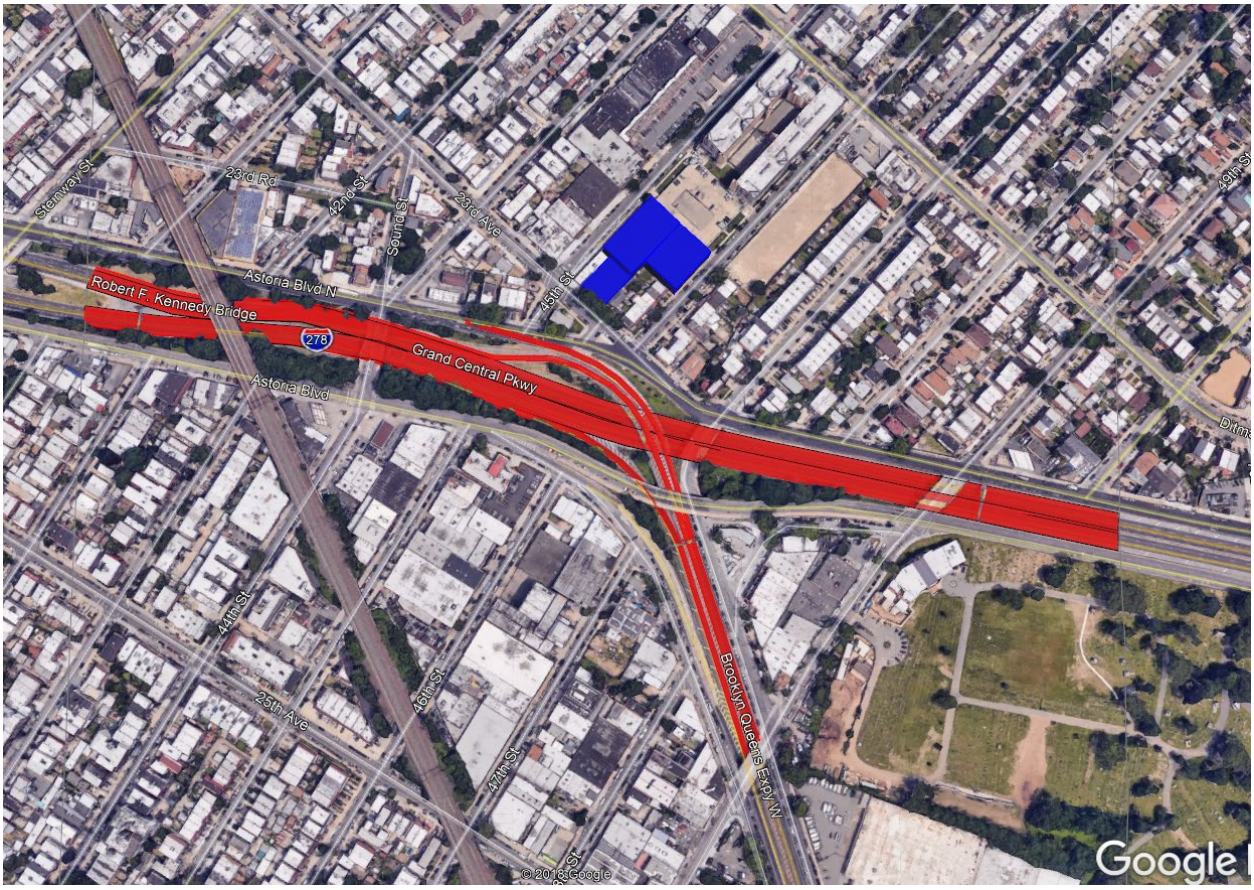
The EPA PM-Hot Spot 3-Day Training fleet volume-weighted average procedure was used to calculate the source release height and its initial vertical dimension. A source release height of 1.3 meter and 3.4 meter for light-duty and heavy-duty vehicle respectively were applied. The source initial vertical dimension of 2.6 meter and 6.8 meter for light-duty and heavy-duty vehicle respectively were applied to account for the vehicle-induced turbulence. The Tier 2 analysis calculated these factors for each period of the day.

Links' widths were set according to the EPA *Transportation Conformity Guidance for Quantitative Hot-spot Analyses in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas*. In general, a link for which the vehicle mix was known, such as a single lane of traffic, was set at the actual width of the link, and where the vehicle mix per lane was not known, the width of the link was set at the link's actual width plus 3-meters at each side.

Receptors were placed around the buildings' envelopes and along the sidewalks in the Affected Area. Ground floor receptors were placed at 6 feet above grade. Second floor receptors were placed at heights of 21 feet above grade and higher floors specified receptors assuming 10-foot high floors. These receptors were placed every 10 feet.

Figure 17-1 shows the Projected Development Sites and the modeled roadways' source locations as specified in the AERMOD models.

Figure 17-1. AERMOD Model Showing the Projected Development Sites and the GCP and BQE Emission Sources Plotted in Google Earth



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.

Atypical Roadway Analysis Results

The predicted concentrations of the 24-hour $PM_{2.5}$ and CO 8-hour were compared with the NYC Guideline; the annual $PM_{2.5}$, PM_{10}, and CO 1-hour predicted concentrations were added to the background concentrations, and results compared with the NAAQS.

Table 17-3 shows the dispersion analysis results, where the 24-hour $PM_{2.5}$ analysis required a tier 2 approach (traffic conditions in the four daily periods).

Table 17-3 - Dispersion Analysis Results

Pollutant and Averaging time	Unit	Modeled Conc.	Background Conc.	Conc. With Background	Threshold Criteria	
					Standard	Conc.
$PM_{2.5}$ 24-hour	$\mu g/m^3$	4.49	N.A.	N.A.	*de minimis*	7.70
$PM_{2.5}$ Annual	$\mu g/m^3$	1.8	8.0	9.8	NAAQS	12
CO 1hour	ppm	1.68	1.78	3.46	NAAQS	35
CO 8hour	ppm	0.72	N.A.	N.A.	*de minimis*	4.05
PM_{10} 24hour	$\mu g/m^3$	36	34	70	NAAQS	150

As seen in Table 17-3, the $PM_{2.5}$ 24-hour averaging time and CO 8-hour averaging time concentrations do not exceed the *de minimis,* and the PM_{10} 24-hour, CO 1-hour, and $PM_{2.5}$ annual averaging times concentrations are within the NAAQS. Therefore, no significant adverse air quality impacts are expected to the proposed project from the emissions associated with the vehicular traffic on the BQE and GCP.

Parking Garage Detailed Analysis

Methodology and Databases

The Proposed Actions would contain 105 parking spaces in the ground floor and sub-cellar level of the Projected Development Site 1, with a single dedicated entrance on 46th Street. Vehicles existing the garage were assumed to exit at the same location. The parking garage would occupy 32,031 square feet. The ramp between the ground floor and the sub-cellar level, interpolated from the site plans provided by the building's architect for this project, was determined to be 195 feet long. A ramp's slop of 1:7 was assumed per the NYC Building Code, which is the maximum allowable slope[5]. As determined by the traffic analysis for this project, there are a maximum of 37 vehicles entering the parking garage and 36 vehicles exiting the parking garage in the MD hour; the hourly average (compiled from the parking accumulation) of inbound/outbound vehicles was calculated at 19 and 18 vehicles, respectively (these averages did not account for overnight parking accumulation, which would reduce the daily averages). The maximum on-street peak hour traffic of 50 (30/20 passenger cars/trucks) vehicles was assumed in the analysis. This traffic data was considered as a worst-case scenario in the analysis.

[5] https://www1.nyc.gov/assets/buildings/apps/pdf_viewer/viewer.html?file=2014CC_BC_Chapter_4_Special_Detailed_Requirements.pdf&section=conscode_2014

Per *CEQR Technical Manual*, vehicles exiting the parking garage idle for 1 minute before starting to travel to the parking facility 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-third the length and half the width of the parking garage, plus the ramp's length.

The following conditions, as outlined in the *CEQR Technical Manual*, 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 Technical Manual*.
- 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.

46th Street is 32 feet wide[6]. The sidewalks on either side of 46th Street were measured at 15 feet in width. The opposite side receptor was placed 6 feet from the curb and 53 feet from the garage's exhaust vent. Traffic on 46th Street was assumed to travel at 15 miles per hour. The length of 46th Street was measured between the intersection with Ditmars Boulevard and 23rd Avenue.

Pollutants from vehicle emissions were generated by the EPA's MOVES2014a. Vehicle-related $PM_{2.5}$ emissions were calculated according to the methodology outlined in the EPA's AP-42 manual. Pollutants' concentrations from the garage's exhaust vent were calculated using the spreadsheet in the *CEQR Technical Manual Appendices.* As MOVES produced emissions in grams per hour, the emission rates (in grams per second) were

[6] https://data.cityofnewyork.us/City-Government/NYC-Street-Centerline-CSCL-/exjm-f27b

directly specified in the spreadsheet calculation (the spreadsheet obtained from the *CEQR Technical Manual Appendices*). The formula referenced in the *CEQR Technical Manual Appendices* was used to calculate the on-street traffic contribution. In addition, a specific receptor was considered for the annual *de minimis* criterion as the garage's exhaust vent is defined as a stationary source.

Per *CEQR Technical Manual*, a persistence factor of 0.7 was applied to the 1-hour CO concentration to evaluate the 8-hour CO concentration. Persistence factors of 0.4 and 0.08 were applied to the 1-hour $PM_{2.5}$ concentration to evaluate the 24-hour and annual averaging times concentrations, respectively.

Emission Rates

Emission rates, in gram per hour, were compiled with MOVES2014a. Each link specified 100 vehicles, the actual length of the links, and the vehicle speed discussed above. The emission rates produced with MOVES were then adjusted to the actual traffic volumes used in the dispersion analyses. The MOVES Run Specification were set for a January 2023 build year, urban unrestricted roadway, running exhaust and crankcase running exhaust, diesel and gasoline vehicles, and both AM and PM hours were compiled. County data for Queens was obtained from the NYSDEC. This database included fuel distribution (and engine technology) and fuel properties, meteorology data, inspection and maintenance, and vehicle age distribution (2020 data calculated with the EPA's Age Distribution Tool).

Vehicle-related $PM_{2.5}$ emissions of dust generated by vehicles traveling on paved roadways (46th Street) were added to estimate total particulate matter emission factor for the short-term analysis (per DEP, annual fugitive dust emission is negligible). Per the *CEQR Technical Manual,* 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. Based on DEP guidance, the conservative assumptions of "dry" road conditions were used for the short-term calculation (precipitation reduced silt loading). The road dust emission factor was added to the vehicle exhaust emission factor compiled with MOVES.

Results of Parking Garage Analysis

Table 17-4 shows the results of the parking garage dispersion analysis. The background concentration of the 1-hour CO was added to the modeled concentration and the results compared with the NAAQS. The $PM_{2.5}$ and 8-hour CO modeled concentrations were compared with the NYC *de minimis* threshold criterions.

Table 17-4. 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	0.157	0.110	0.109	0.081	0.166	0.116
	Line Source	N.A.	N.A.			N.A.	N.A.
	de minimis	N.A.	4.05	N.A.	4.05	N.A.	4.05
	Background Conc.	1.78	N.A.	1.78	N.A.	1.78	N.A.
	Result Conc.	**1.94**	**0.110**	**1.89**	**0.08**	**1.95**	**0.12**
	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	0.32	0.06	0.64	0.05	0.34	0.07
	Line Source	N.A.	N.A.			N.A.	N.A.
	de minimis	7.70	0.3	7.70	0.3	7.70	0.3
	Impact	**No**		**No**		**No**	

As seen in Table 17-4, the pollutants' concentrations do not exceed the NYC Guideline threshold criterions. Therefore, no significant adverse air quality impacts are expected from the vehicle emissions associated with the parking garage traffic.

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).

Buildings' HVAC systems are defined as stationary sources (for this type of application). Accordingly, and based on CEQR guidelines, a preliminary screening analysis is to be conducted as a first step to predict whether the heat and hot water system boiler emissions would result in 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

As outlined in 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 building's HVAC system(s).

If the actual distance between a stack and the affected building is greater than the threshold distance for a building size, then that building passes the screening analysis (and no adverse significant impact is predicted). However, if the actual distance is less than the threshold distance for a building, then there is a potential for an adverse significant impact and a detailed analysis would be required. In addition, the screening analysis is only applicable to a single smokestack. However, for purposes of a cumulative analysis, emissions from multiple stacks could be combined in a single stack situated as close as possible to a receiving building. In addition, according to 15 RCNY 2-15, no new boiler or burner installations may use No. 6 or No. 4 fuel oils. Therefore, the highest-emitting fuel that could be used is No. 2 fuel oil. The following screening analyses were performed (or considered):

1. Projected Development Site 1 Building A-on-Building B and vice versa: Project-on-project screening analysis. Each building is a single residential building, 86'-6" high (the heights of the bulkheads), containing 172,953 gsf of floor area. Fuel oil #2 would be the type of fuel used in the HVAC system(s) of the Projected Development Site 1. The distance between Building A and Building B is 60 feet, allowing for backyards depths of 30 feet per the zoning requirement.

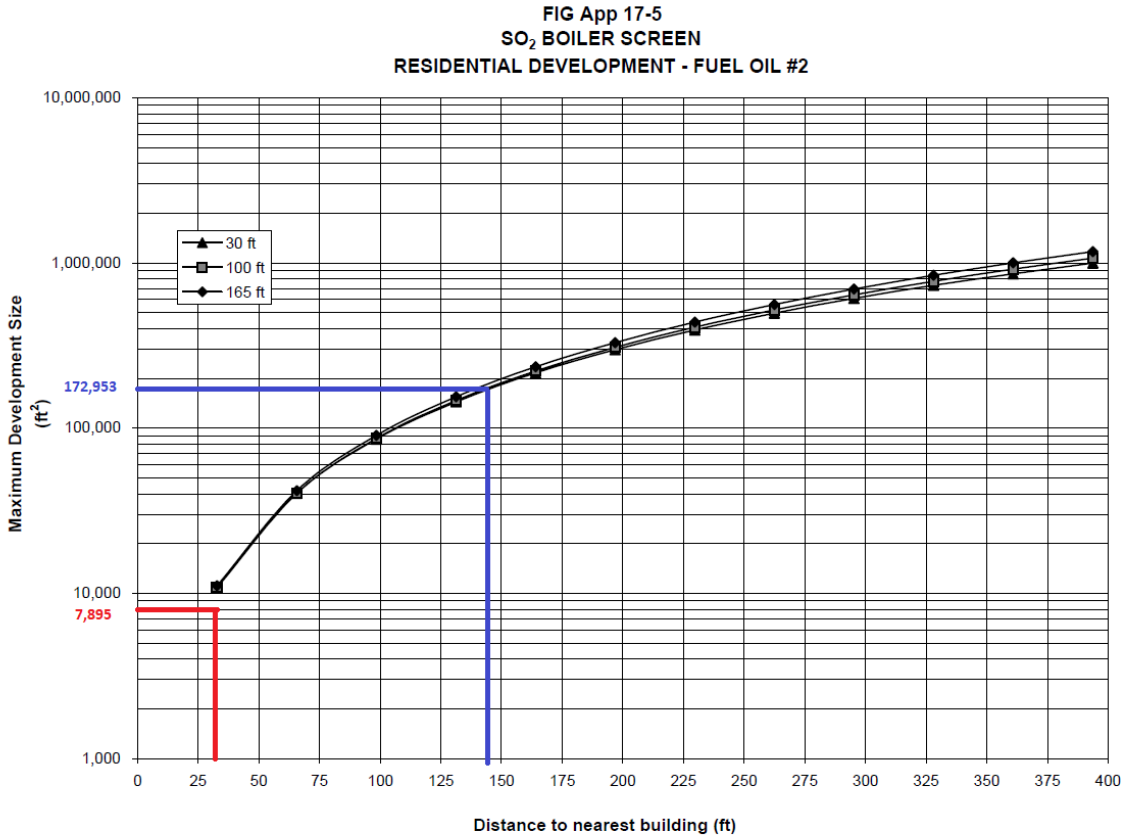
2. Projected Development Site 1: Project-on-existing screening analysis. The building is a single residential building, 86'-6" high (the heights of the bulkheads), containing 172,953 gsf of floor area. Fuel oil #2 would be the type of fuel used in the HVAC system(s) of the Projected Development Site 1.

3. Projected Development Site 2: Both project-on-existing and project-on-project screening analysis. The building is a single residential building, 35 feet high, containing 7,895 gsf of floor area. Fuel oil #2 would be the type of fuel used in the HVAC system(s) of the Projected Development Site 2.

The CEQR nomograph depicted on Figures 17-5 of the *CEQR Technical Manual Appendices* was used for the screening analyses. Figures 17-5 of the *CEQR Technical Manual Appendices* is a generic screen that considers fuel oil #2 as the type of fuel used in the HVAC system and that the HVAC system serves a residential use building. This

nomograph depicts 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 the *CEQR Technical Manual*, the distance to the nearest building of similar or greater height was assumed to be 400 feet if the actual distance is greater. Figures 17-2 shows the screening analyses scenarios 1-3.

Figure 17-2. Screening Analyses ID 1-3 - HVAC Screen Nomograph



The screening analyses Figure 17-2 nomograph shows the minimum distances from each development for which detailed analyses would be required.

As seen in Figure 17-2, detailed analysis would be required for any building that is 86'-6" feet in height and no more than 145 feet from Projected Development Site 1 and Building A or Building B of Projected Development Site 1.

As seen in Figure 17-2, detailed analysis would be required for any building that is 35 feet in height and no more than 30 feet from the Projected Development Site 2.

Table 17-5 show the screening analyses framework and results, where "Use AERMOD" indicate that a detailed analysis using AERMOD dispersion analysis was required.

Table 17-5. Screening Analysis Results

Source Building Site ID	Heated Area (sq. ft.)	Screen Distance (ft.)	Receiving Building (Site ID or Block/Lot)	Receiving Building Distance (ft.)	Pass/ Fail
Project-on-Project					
Building A	172,953	145	Building B	60	Use AERMOD
Building B	172,953	145	Building A	60	Use AERMOD
Site 2	7,895	30	Building A	50	Pass
			Building B	0	Use AERMOD
Project-on-Existing					
Site 1	172,953	145	No Existing Building	> 400	Pass
Site 2	7,895	30	43-08 23 Avenue (780/ 35)	210	Pass

As presented in Table 17-5, all the project-on-existing scenarios passed the screening analyses. Project Development Sites 1 Building A and Building B would each provide for at least 30 feet backyard spaces. Therefore, the distance between these towers is at least 60 feet. As such, the screening analysis failed the detailed analyses were required. Project Development Site 3 abuts Building B. Therefore, the screening analysis is not applicable, and a detailed analysis was required.

Detailed Analysis

Methodology

Detailed analyses were conducted using the latest version of EPA's AERMOD dispersion model 18081. In accordance with CEQR guidance, these analyses were conducted assuming stack tip downwash, urban dispersion surface roughness length of 1.0-meter, elimination of calms, and with and without downwash effect on plume dispersion. All analyses specified flat terrain and population of 2,000,000.

All analyses were conducted using the latest five consecutive years of meteorological data (2013-2017). Surface data was obtained from LaGuardia 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.

Building A and Building B were each modeled with a 30-foot backyard (per the zoning requirement) over the ground floor level. The roof heights of these buildings were set at 76'-6" and both featured 86'-6" bulkheads, per the site plans provided by the building's architect for this project. The HVAC system of each building was assumed to serve both buildings as a conservative measure.

Projected Development Site 2 was modeled as a 35 feet high rectangle shaped building, covering the entire lot.

The impact on Building A was modeled as a cumulative analysis from both Building B and Projected Development Site 2.

Per the *CEQR Technical Manual*, the pollutants of concern for oil #2 fueled boilers are NO_2, SO_2 and $PM_{2.5}$. The boilers' energy intensities were calculated from the annual fuel usage, the developments' gross floor areas, and the assumption that the developments' fuel usage would resemble that of residential buildings. Pertinent values were obtained from the *CEQR Technical Manual Appendices* for residential buildings, and the assumption that all fuel would be consumed during the 100-day (or 2,400 hour) heating season. Table 17-6 shows the calculated emission rates, both short-term and annual.

Table 17-6. The Developments' HVAC Systems' Emission Rates

Site ID	Stack Height (ft)	HVAC Equipment (MMBtu/hr)	Pollutant	Short-term Emission Factor (lb/hr)	Annual Emission Factor (lb/yr)
Building A or B	89'-6"	4.3	NO_2	0.6266	1,504
			$PM_{2.5}$	0.0667	160
			SO_2	0.1161	279
Projected Development Site 2	38	0.2	NO_2	0.0286	68.6
			$PM_{2.5}$	0.0030	7.3
			SO_2	0.0053	12.7

The diameter of the stack and the exhaust's exit velocity of Projected Development Site 2 were assumed to be 0.0 feet and 0.001 meter per second respectively, based on values obtained from the *CEQR Technical Manual*. The diameters of the stacks and exhausts' exit velocities of Building A and B were estimated based on values obtained from the New York City Department of Environmental Protection (DEP) "CA Permit" database for the corresponding boiler sizes (i.e., rated heat input or million Btu per hour). All the stacks exit temperatures were assumed to be 300°F (423°K), which is appropriate for boilers. 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[7]. These parameters were specified in the AERMOD models. In addition, the stack(s) of the source building(s) was situated as close as possible to the receiving building initially, and a stack set back distance from the receiving building was applied if an impact was predicted.

[7] https://www1.nyc.gov/assets/buildings/apps/pdf_viewer/viewer.html?file=2014CC_FGC_Chapter5_Chimneys_and_Vents.pdf&section=conscode_2014

Receptors on the receiving building were placed all around the receiving building envelope, at 10 feet horizontal increments and at all floor levels. Ground floor receptors were placed at a height of 6 feet above grade; receptors on all other floor levels were placed 6 feet above the floor levels. Floor levels were obtained from the site plans, provided by the building's architect for this project. In addition, receptors were placed above the buildings' backyards and on the rooftop.

Most AERMOD models specified generic emissions of 1 gram per second and maximum predicted concentrations. The impact concentration from each source building was added cumulatively. The 1-hour NO_2 impact on Building B was run with the calculated emission rates and the 8th highest concentration (the NAAQS). This 1-hour NO_2 model was evaluated with a Tier 2 (a Tier 2 application of NOx/NO_2 ratio of 80% to the NOx modeled concentration) approach.

In addition, Projected Development Site 2 required a stack set back distance of 35 feet from the lot line facing Building B. This stack set back distance was specified in all the AERMOD models.

Results of Dispersion Analyses

As mentioned above, 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 and SO_2 NAAQS. Result of the project-on-project HVAC analyses are shown in Table 17-7.

Table 17-7. Detailed HVAC Analyses Results

Pollutant and Averaging Time	Modeled Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Evaluated Concentration ($\mu g/m^3$)	Threshold Concentration ($\mu g/m^3$)	Threshold Standard
Building B – on - Building A					
1-hour NO_2	65.8	117.3	**183**	**188**	NAAQS
Annual NO_2	1.0	38.0	**39**	**100**	NAAQS
24-hour $PM_{2.5}$	2.12	N.A.	**2.12**	**7.70**	*de minimis*
Annual $PM_{2.5}$	0.11	N.A.	**0.11**	**0.3**	*de minimis*
1-hour SO_2	12.2	20.7	**33**	**196**	NAAQS
Annual SO_2	0.19	4.9	**5.1**	**80**	NAAQS
Building A and Site 2 – on – Building B					
1-hour NO_2	64.5	117.3	**182**[(1)]	**188**	NAAQS
Annual NO_2	2.16	38.0	**40.1**	**100**	NAAQS
24-hour $PM_{2.5}$	6.70	N.A.	**6.70**	**7.70**	*de minimis*
Annual $PM_{2.5}$	0.23	N.A.	**0.23**	**0.3**	*de minimis*
1-hour SO_2	36.7	20.7	**58**	**196**	NAAQS
Annual SO_2	0.40	4.9	**5.3**	**80**	NAAQS

1. Results evaluated with a Tier 2 approach

As seen in Table 17-7 the NO_2 and SO_2 predicted concentrations are less than the NAAQS and the $PM_{2.5}$ concentrations are less than the *de minimis*. Therefore, with (E) Designations in place, the emissions of the Development Sites HVAC systems would not pose a significant adverse impact to other buildings in the area.

As previously mentioned, Projected Development Sites 2 required a stack set back distance. This stack set back distance is specified in the E-Designation below. No E-Designation was required for Projected Development Site 1 since the worst-case scenario was assumed. Therefore, with the (E) Designation in place for Projected Development Site 2, the emissions of the Development Sites HVAC systems would not result in an adverse air quality impact to any of the other Development Site(s).

(E) Designation (E-549)

Block 769, Lot 25 (Projected Development Site 1, Building A): ***Any new residential and/or commercial development or enlargement on the above-referenced property must ensure that the heating, ventilating, air conditioning (HVAC) and hot water equipment exhaust stack(s) are located at the highest tier and at least 89'-6" above the grade, and at least 40 feet from the lot line facing 45 Street, to avoid any potential significant adverse air quality impacts.***

Block 769, Lot 42 (Projected Development Site 1, Building B): ***Any new residential and/or commercial development or enlargement on the above-referenced property must ensure that the heating, ventilating, air conditioning (HVAC) and hot water equipment exhaust stack(s) are located at the highest tier and at least 89'-6" above the grade, and at least 40 feet from the lot line facing 46 Street, to avoid any potential significant adverse air quality impacts.***

Block 769, Lots 36 and 38 (Projected Development Site 2): ***Any new residential and/or commercial development or enlargement on the above-referenced property must ensure that the heating, ventilating, air conditioning (HVAC) and hot water equipment exhaust stack(s) are located at the highest tier and at least 38 feet above the grade, and at least 35 feet from the lot line facing Ditmars Boulevard, to avoid any potential significant adverse air quality impacts.***

Industrial

Introduction

As outlined in the *CEQR Technical Manual*, 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 Affected 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 proposed project were developed using the following procedure:

A study area was developed that includes all nonresidential facilities located within 400 feet of the proposed project;

Satellite images, Google Street View, and online searches were used to identify and categorize facilities;

A fieldwork investigation/observation was conducted on August 10th, 2018 to affirm the online study findings, identify any other likely industrial source in the study area, and to obtain more information about facilities;

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 DEP to review the current and expired status processing type permits identified in the DEP online CATS database (with blocks and lot numbers).

Study Result – Industrial Sources Toxic Air Emission

Thirty (30) lots were identified as nonresidential land uses in the study area. The land survey study determined if the current uses on these lot might have the potential to significantly impact the ambient air of the proposed project. Table 17-8 shows the DEP CATS record search results of permit applications that required further screening (the backup file for this project contain data of all the permit applications identified in the DEP CATS database) and the current land uses on these lots.

Table 17-8. Land Use in the 400 Feet Study Area and DEP Record of Processing type Permits

Block	Lot	Address	CATS Processing Permit Application	Current Use (Land Survey)
768	6	23 Avenue	No Record	Residential backyard
	15	22-35 46 Street	Current PA030774 Expired PA000499 Expired PA000599 Expired PA072884 CURRENT PA072984	New 3-story storage facility under construction
	25	22-25 46 Street	Current PA081272	
	45	46-06 Ditmars Boulevard	No Record	Gas station, auto mechanic
	46	46-14 Ditmars Boulevard	No Record	Supermarket

Block	Lot	Address	CATS Processing Permit Application	Current Use (Land Survey)
	48	46-20 Ditmars Boulevard	Expired PB065603	Liquor store, restaurant, laundromat & dry-cleaning
769	25	22-60 46 Street	No Record	Projected Development Site 1
	39	45-01 23 Avenue	No Record	Restaurant/bar
	42	22-61 45 Street	No Record	Projected Development Site 2
	7501	45-02 Ditmars Boulevard	No Record	Offices, residential, parking garage/lot
771	1	45-01 Ditmars Boulevard	No Record	Restaurant
	2	45-03 Ditmars Boulevard	No Record	Deli grocery
	3	45-05 Ditmars Boulevard	No Record	Restaurant
	4	45-09 Ditmars Boulevard	No Record	Club (social and athletics)
	103	45-07 Ditmars Boulevard	No Record	Restaurant
	113		No Record	Driveway
778	40		No Record	Roadway
	50		No Record	
780	18	43-03 Astoria Boulevard N	No Record	Gas station, Dunkin Donut
781	50	43 Street	No Record	Vacant land
782	1	43-02 Ditmars Boulevard	No Record	Shopping mall
	27	22-62 45 Street	No Record	ICAS– electrical/IT contractor warehouse
	32	43-11 23 Avenue	No Record	The Alps Provision – butcher shop
	37	43-09 23 Avenue	No Record	Joe Sals Auto Body
	137	23 Avenue	No Record	Vacant land
783	33	42-19 23 Avenue	No Record	ICAS– electrical/IT contractor offices
	107	42-18 Ditmars Boulevard	No Record	Omega Dental Lab
784	11	21-57 43 Street	No Record	Parking, backyard
	64	43-13 Ditmars Boulevard	No Record	Bakery, restaurant, convenient shop, laundromat
785	63	42-11 Ditmars Boulevard	No Record	Religious facility

Data not included in Table 17-8 is of DEP permit applications with cancelled status and combustion and type permits. As DEP permit applications with cancelled status are of emission sources that no longer active and could not be renewed (a new permit application would have to be filed) and combustion type permits are associated with existing HVAC systems, analyzed as existing buildings HVAC systems, the operations associated with these permit applications did not require further screening or analysis, and therefore, are excluded from Table 17-8. In addition, the permit application associated with the gas station, located at 43-03 Astoria Boulevard N (Block 780, Lot 18), was excluded from Table 17-8 as gas stations do not require analysis under this type of land use application (gas stations are regulated differently).

The permit applications associated with the facility on Block 768, Lots 15 and 25 were for Schaller Manufacturing, a meat processing facility. As seen in Table 17-8, a new 3-story storage facility was being constructed there at the time of the fieldwork observation. Therefore, no analysis was required.

Permit application PB065603 associated with the facility at 46-20 Ditmars Boulevard (Block 768, Lot 48) is for a dry-cleaning facility. The permit indicates that the equipment is a totally enclosed non-vented machine with a built-in carbon absorber. Dry-cleaning equipment does not require analysis under this type of land use application (they are regulated differently). Therefore, no analysis was required.

In addition to the DEP permit applications, the fieldwork observation identified the auto body facility at 43-09 23 Avenue (Block 782, Lot 37) as a possible toxic air emitter based on the type of manufacturing use. The facility was visited during the fieldwork observation. The owner/manager of the facility stated that no spray-painting activity is performed at the facility; cars are sent to a facility at Steinway Street. In addition, no evidence of spray-painting activity (equipment, compound material, overspray on walls or floor, and smell) was observed in the site visit. Therefore, no toxic air emissions are expected form the facility, and no analysis was required.

Therefore, no significant adverse air quality impacts are predicted from industrial or manufacturing facilities in the 400 feet study area.

Major and Large Sources

As outlined in the *CEQR Technical Manual*, 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 Affected Area. 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. Solid waste or medical waste incinerators, asphalt and concrete plants, power generating plants, large boilers of large public facilities for example, and large industrial facilities are typical type of sources requiring these permits. 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 Affected Area were identified. In addition, no odor producing facility was identified within 1,000 feet of the Affected Area. As such, no analysis was warranted.

Conclusion

No significant adverse air quality impacts are predicted to the proposed project from existing emission sources in the area. With E-Designations on the HVAC equipment of the Projected Development Sites, no significant adverse air quality impacts are predicted to existing and currently planned land uses. As such, conditions associated with the proposed project would not result in any violations of the ambient air quality standards. Therefore, the Proposed Actions would not result in any potentially significant adverse stationary or mobile source air quality impacts, and further assessment is not warranted.

19. NOISE

Introduction

The following noise monitoring was conducted on June 12, 2018 in support of a rezoning that would rezone an M1 district to a combination of R4, R4/C2-3, and R6A/C2-3 zoning districts. The Project Area includes two Projected Development Sites, identified as Projected Development Site 1 (Block 769, Lots 25 and 42), and Projected Development Site 2 (Block 769, Lots 36 and 38) on the New York City Tax Map. The Project Area is situated between Ditmars Boulevard to the north, 23rd Avenue to the south, 46th Street to the east, and 45th Street to the west within the Astoria section of Queens Community District 1. Ditmars Boulevard is a two-way east-west street with one moving lane in each direction. 23rd Avenue is a one-way westbound street with one to two moving lanes and curbside parking. Immediately south of 23rd Avenue is Astoria Boulevard North, the westbound service road of the Brooklyn-Queens Expressway lane road. 46th Street is a one-way northbound street with one moving lane and curbside parking. 45th Street is a one-way southbound street with one moving lane and curbside parking. Traffic controls in the area are a mix of traffic signals and stop signs.

The Proposed Actions would introduce sensitive residential uses, not permitted as-of-right under the use provisions of the underlying M1 zoning district. Accordingly, an assessment of the potential for adverse effects on project occupants from ambient noise is warranted. The proposed development would not create a significant stationary noise generator. Additionally, project-generated traffic would not double vehicular traffic on nearby roadways, and therefore would not result in a perceptible increase in vehicular noise. Therefore, 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. The following Table Noise-1 lists some noise levels for typical daily activities.

Table Noise-1: Noise Levels of Common Sources

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*	

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 weighting networks used are the A- and C-weighting networks. 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-weighted network is the most commonly used, 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.

The following is typical of human response to relative changes in noise level:

- 3-dBA change is the threshold of change detectable by the human ear;
- 5-dBA change is readily noticeable; and
- 10-dBA change is perceived as a doubling or halving of the noise level.

The SPL that humans experience typically varies from moment to moment. Therefore, various descriptors are used to evaluate noise levels over time. Some typical descriptors are defined below.

- Leq is the continuous equivalent sound level. The sound energy from the fluctuating SPLs is averaged over time to create a single number to describe the mean energy, or intensity, level. High noise levels during a measurement period will have a greater effect on the L_{eq} than low noise levels. L_{eq} has an advantage over other descriptors because L_{eq} values from various noise sources can be added and subtracted to determine cumulative noise levels.
- Leq(24) is the continuous equivalent sound level over a 24-hour time period.

The sound level exceeded during a given percentage of a measurement period is the percentile- exceeded sound level (LX). Examples include L_{10}, L_{50}, and L_{90}. L_{10} is the A-weighted sound level that is exceeded 10% of the measurement period.

The decrease in sound level caused by the distance from any single noise source normally follows the inverse square law (i.e., the SPL changes in inverse proportion to the square of the distance from the sound source). In a large open area with no obstructive or reflective surfaces, it is a general rule that at distances greater than 50 feet, the SPL from a point source of noise drops off at a rate of 6 dB with each doubling of distance away from the source. For "line" sources, such as vehicles on a street, the SPL drops off at a rate of 3 dBA with each doubling of the distance from the source. Sound energy is absorbed in the air as a function of temperature, humidity, and the frequency of the sound. This attenuation can be up to 2 dB over 1,000 feet. The drop-off rate also will vary with both terrain conditions and the presence of obstructions in the sound propagation path.

In 1983, the New York City Department of Environmental Protection (NYCDEP) adopted the City Environmental Protection Order-City Environmental Quality Review (CEPO-CEQR) noise standards at the exterior façade to achieve interior noise levels of 45 dB(A) or below. CEPO-CEQR Noise Standards classify noise exposure into four categories: Acceptable, Marginally Acceptable, Marginally Unacceptable, and Clearly Unacceptable. As noted in the *CEQR Technical Manual*, these standards are the basis for classifying noise exposure into the following categories based on the L10 measured directly outside the Projected Development Sites.

Table 19-2 CEQR TM: Attenuation Values to Achieve Acceptable Interior Noise Levels

	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)

Notes:

[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.

Measurement Location and Equipment

Because the predominant noise sources in the area of the proposed project consist of vehicular movements, noise monitoring was conducted during peak vehicular travel periods (AM, Midday, and PM). Pursuant to *CEQR Technical Manual* Methodology, measurement periods of 20-minutes each AM, Midday, and PM peak hours were conducted at the street frontage of the Project Site; Location One (1) was conducted for 20-minute periods on the 46th Street frontage of Block 769, Lot 25; Location Two (2) was conducted for 20-minute monitoring periods on the 23rd Avenue frontage of Block 769, Lots 36 and 38; Location Three (3) was conducted for 20-minute monitoring periods on the 45th Street frontage in front of Block 769, Lot 42. The monitoring locations at 22-60 46th Street are identified in Figure 1.

Noise monitoring was conducted using a Type II Larson / Davis LxT2 sound meter with wind screen. 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 the Noise Appendix to this report.

Figure 1: Noise Monitoring Locations

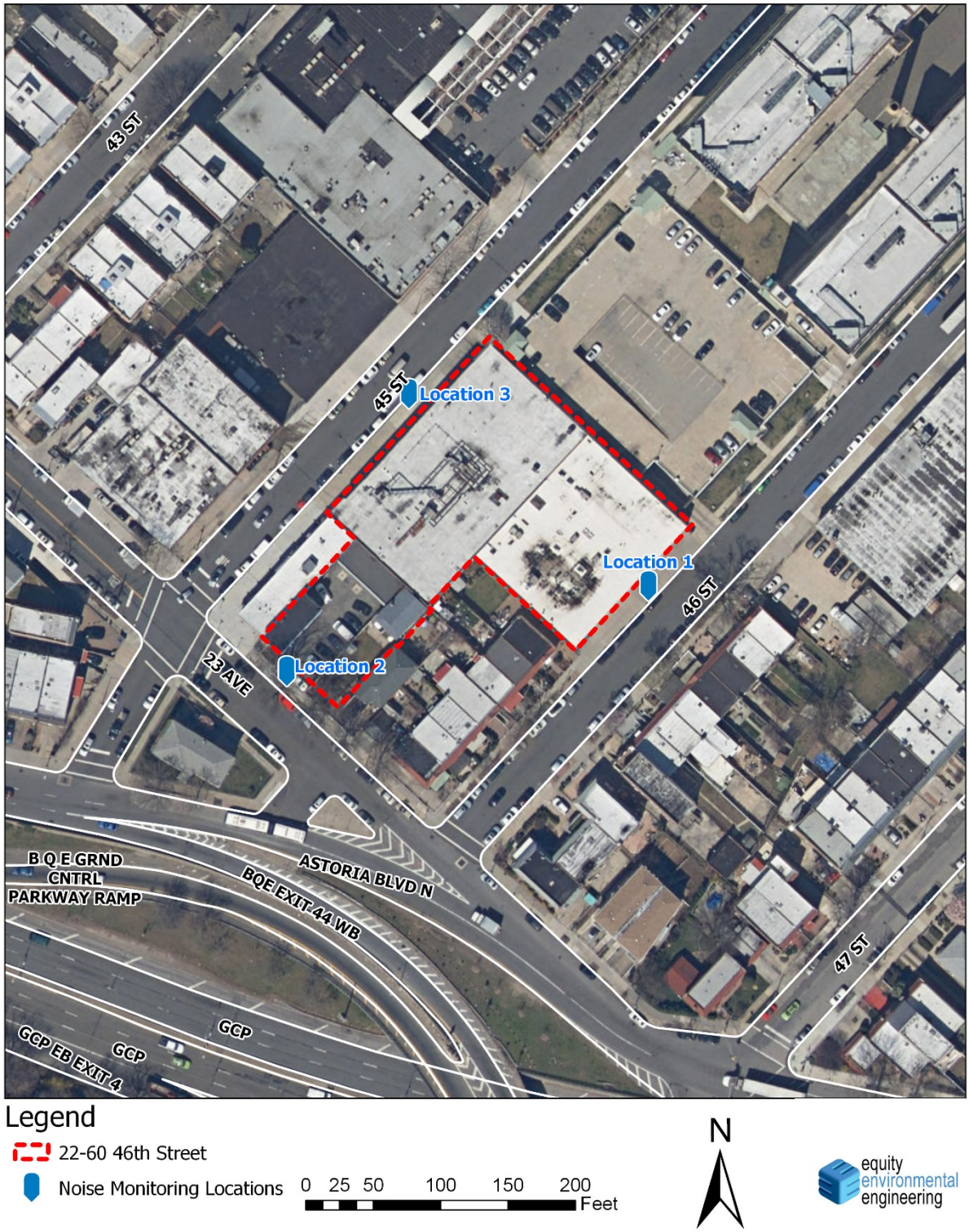


Photo 1: *Noise Monitoring Location One (1) at the Street Frontage of 46th Street*

Photo 2: *Noise Monitoring Location Two (2) at the Street Frontage of 23rd Avenue*

Photo 3: *Noise Monitoring Location Three (3) at the Street Frontage of 45th Street*

Measurement Conditions

Monitoring was conducted during typical midweek conditions, on Tuesday, June 12, 2018. The weather was dry and wind speeds were moderate during all monitoring periods. The sound meters were calibrated before and after each monitoring session.

Existing Conditions

Based on the noise measurements taken at the Projected Development Sites, the predominant source of noise is vehicular traffic. The level of traffic and its corresponding level of noise is moderate at Locations One (1), Two (2), and Three (3).

Table Noise-1 *below contains the results for the measurements taken at the Projected Development Sites:*

Note: **Bold** denotes L_{10} noise level exceedances, according to Table 19-2 of the *CEQR Technical Manual.*

Table Noise-1 (1 of 1): Noise Levels (dB)

Location 1: *Noise Levels at the Street Frontage of 46th Street*

Tuesday, June 12, 2018			
Time	8:47 am – 9:07 am	12:01 pm – 12:21 pm	4:32 pm – 4:52 pm
L_{max}	85.3	99.1	82.9
L_{10}	65.2	63.5	62.6
L_{eq}	62.6	63.1	60.8
L_{50}	56.9	55.4	57.3
L_{90}	54.5	53.5	55.5
L_{min}	51.5	51.3	54

Location 2: *Noise Levels at the Street Frontage of 23rd Avenue*

Tuesday, June 12, 2018			
Time	7:54 am – 8:15 am	12:24 pm – 12:45 pm	4:59 pm – 5:19 pm
L_{max}	94.4	93.1	82.6
L_{10}	67	66.6	65.4
L_{eq}	66.7	65.7	64
L_{50}	62.8	62.5	61.6
L_{90}	60.2	60.3	59.9
L_{min}	57.9	58.1	57.8

Location 3: *Noise Levels at the Street Frontage of 45th Street*

Tuesday, May 2nd, 2018			
Time	8:18 am – 8:38 am	12:46 pm – 1:07 pm	5:20 pm – 5:40 pm
L_{max}	84.2	86.3	78.1
L_{10}	60.5	64.5	65.4
L_{eq}	59.7	62.2	60.1
L_{50}	54.1	59.6	56.3
L_{90}	51.7	58.1	54
L_{min}	49.3	56.7	51.9

Table Vehicular-1 *below contains the traffic counts taken at the Project Site:*

Table Vehicular-1 (1 of 1): Traffic Counts and Vehicle Classifications

Location 1: *Traffic Counts at the Street Frontage of 46th Street*

	8:47 am – 9:07 am	12:01 pm – 12:21 pm	4:32 pm – 4:52 pm
Car/ Taxi	4	2	8
Van/Light Truck/SUV	5	1	14
Motorcycle	0	0	0
Heavy Truck	0	0	0
Bus	0	0	1
Train	0	0	0

Location 2: *Traffic Counts at the Street Frontage of 28 West 23rd Avenue*

	7:54 am – 8:15 am	12:24 pm – 12:45 pm	4:59 pm – 5:19 pm
Car/ Taxi	34	35	46
Van/Light Truck/SUV	82	51	24
Motorcycle	0	0	0
Heavy Truck	2	5	1
Bus	3	0	0
Train	0	0	0

Location 3: *Traffic Counts at the Street Frontage of 45th Avenue*

	8:18 am – 8:38 am	12:46 pm – 1:07 pm	5:20 pm – 5:40 pm
Car/ Taxi	22	34	37
Van/Light Truck/SUV	43	46	34
Motorcycle	0	0	0
Heavy Truck	2	5	1
Bus	0	0	1
Train	0	0	0

Conclusions

The 2014 *CEQR Technical Manual* Table 19-2 contains noise exposure guidelines. For a residential use such as would occur under the Proposed Actions, an L_{10} of between 65 and 70 dB(A) is identified as a marginally acceptable general external exposure. An L_{10} of between 70 and 73 dB(A) is identified as a marginally unacceptable general external exposure. The highest recorded L_{10} at Location One (1) was 65.2 dB during the morning monitoring period. The highest recorded L_{10} at Location Two (2) was 67 dB during the morning monitoring period. The highest recorded L_{10} at Location Three (3) was 65.4 dB during the evening monitoring period.

Therefore, the Proposed Actions 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 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.

Proposed Construction Schedule

The Proposed Actions are anticipated to result in new development on two Projected Development Sites. However, only one of these Sites, Projected Development Site 1, is controlled by the Applicant and has an actual proposal for new development. Development on Projected Development Site 2 is assumed based on the potential for new development that would occur under the proposed rezoning. All development would occur on one block, Block 769, bounded by Ditmars Boulevard, 23rd Avenue, 45th Street, and 46th Street in the Steinway neighborhood of Queens.

The Project Build Year is assumed to be 2023 as further described below. It is assumed that development on the two Projected Development Sites would occur sequentially with development on Site 2 starting after the completion of Site 1. Occupancy of each building would similarly be sequential.

Based on an estimated 12-month approval process and a 24-month construction period, the Build Year for the Applicant owned Projected Development Site 1 is assumed to be early 2022. The Proposed Actions would result in the creation of one additional development site that is not controlled by the Applicant. It is anticipated that Projected Development Site 2, which would consist of a relatively small building, would be developed over an additional 12-month period with a Build Year of 2023.

Proposed Construction Activities

Construction activities on each Projected Development Site would begin with the demolition of the existing structures on each of the two Sites. Following this, the major construction activities for each of the three buildings (two connected buildings on Projected Development Site 1 and one building on Projected Development Site 2) 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 structures would take approximately two months on Projected Development Site 1 and one month on Projected Development Site 2. The construction of the two structures on Projected Development Site 1 would include two months for site preparation and excavation, six months for the construction of the building foundations, ten months for the construction of the superstructures and building envelopes, and four months for interior fit-out work (24 months including demolition). The construction of the structure on Projected Development Site 2 would include two months for site preparation and excavation, two months for the construction of the building foundation, five months for the construction of the superstructure and building envelope, and two months for interior fit-out work (12 months including demolition). The total construction process would take approximately 36 months or less.

As the three buildings would be constructed, completed, and occupied sequentially, there is the potential for construction impacts on Projected Development Site 1 from Projected Development Site 2. There would be no building-on-building construction impacts on Projected Development Site 1 as neither building would be occupied until construction on both buildings is completed. Construction of Projected Development Site 2 would have minimal impacts on Building A of Projected Development Site 1 as Site 2 is not adjacent to this portion of Site 1 and the relevant portions of these two Sites front on different street frontages of the block.

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 Projected Development Sites are not located in a Central Business District (CBD) or along an arterial or major thoroughfare. The Projected Development Sites are located along 45th and 46th Streets, both of which are one-way local streets, and 23rd Avenue, which is also a one-way local street adjacent to the Project Area (23rd Avenue becomes two-way west of its intersection with 45th Street). Nevertheless, the construction of the projected developments may require the temporary closing of the sidewalks adjacent to the Project Area along 45th and 46th Streets and 23rd Avenue. The sidewalks adjacent to the Projected Development 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. There are no bicycle routes or bus lanes adjacent to the Projected Development Sites. 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.

Although the project would involve construction on multiple development sites on the same block over a period of 36 months or less, construction of each of the projected developments would occur over a relatively short time period of approximately 24 months or less and construction of each development is not anticipated to overlap.

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.*

Although development of the two Projected Development Sites is expected to occur over a 36 month period, development of each Site would be sequential and would take 12 to 24 months each and would therefore be considered to be short term.

Both Projected Development Sites are located adjacent to sensitive receptors including residences. In addition, as the projected buildings would be constructed, completed, and occupied sequentially, there is the potential for construction impacts on Projected Development Site 1 from Projected Development Site 2. There would be no building-on-building construction impacts on Projected Development Site 1 as neither building would be occupied until construction on both buildings is completed. Construction of Projected Development Site 2 would have minimal impacts on Building A of Projected Development Site 1 as Site 2 is not adjacent to this portion of Site 1 and the relevant portions of these two Sites front on different street frontages of the block.

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 5 to 10 months to complete on each of the Projected Development Sites. Other exterior building activities would occur over another 5 to 10 months on each of the Projected Development Sites 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 uses in the vicinity of the Projected Development Sites as further discussed below.

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 publicly 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 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 period of 36 months or less, construction of each of the two projected developments would occur over a relatively short time period of approximately 24 months or less and construction of each development is not anticipated to overlap. In addition, only 15 of these months in total would involve noisy exterior construction activities such as demolition, excavation, and foundation activities. These activities would be spread out over three separate locations on the block. Other exterior building activities would occur over another 15 months in total and would be located at three separate locations on the block. As this work would be occurring along three different street frontages of the block at different times, 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. 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 in 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

Projected Development Site 1

As explained in the Hazardous Materials section above, the Phase I ESA conducted for the Lot 25 portion of Projected Development Site 1 revealed the following recognized environmental conditions (RECs) in connection with the Site:

- The potential for site contamination from past electronics manufacturing and knitting mill operations in the subject building.
- The potential for a vapor encroachment condition to the current and future buildings at the site from past on-site manufacturing operations, and from potential off-site sources of contamination in the immediate vicinity of the project site.
- The possible presence of asbestos-containing building materials and lead-based paints in the subject building.

Based on the evidence of recognized environmental conditions presented above on the Lot 25 portion of Projected Development Site 1, Phase II testing of the site was required and has been conducted.

The results of this subsurface investigation have found urban fill soil with ideno (123-cd pyrene) and total metals (copper, lead, nickel, mercury and zinc) above unrestricted use cleanup objectives and are typically found in urban fill soils around the New York Metropolitan area. This contamination is not a result of historical spills, commercial or industrial process releases related to the prior site occupancy or uses. It is limited in vertical extent to only the fill soils found onsite. The remaining native soils are clean and meet NYSDEC Part 375 unrestricted soil cleanup standards.

No groundwater chemical impacts were found other than an elevated concentration of the PCB (Aroclor 1260) in GW-1.

Results of the soil vapor investigation identified volatile organic compounds (VOCs) related to petroleum compounds above laboratory method detection limits. The petroleum compound VOC's are likely resulting from the urban fill materials and interchange with the ambient air surrounding the project site and adjacent neighborhood. The soil vapor conditions found are typical of what is usually measured in shallow soils in the metropolitan New York neighborhoods.

The chlorinated volatile organic compounds (1,1,1-Trichloroethane, Tetrachloroethylene, and Methylene Chloride, were detected above the New York State Department of Health 2017 Soil Vapor/Indoor Air Matrix guidelines. The matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. The findings of this soil vapor investigation show that mitigation is recommended to address human exposures are needed related to chlorinated volatile compounds.

There are no recommendations for additional testing or remedial action being made at this time. Any fill soils and native soil exported off-site should be disposed in accordance with New York State Department of Environmental Conservation (NYSDEC) Part 365 regulations.

The new building construction should have an engineered polyethylene vapor barrier with a minimum thickness of 20 mils under the foundation slab and foundation sidewalls in order to prevent any potential vapor migration into the building structure. A Remedial Action Plan (RAP) detailing the installation of a vapor barrier and a Construction Health and Safety Plan (CHASP) will be written describing the means and methods for the vapor barrier installation and excavation and disposal of impacted soils. Therefore, there is no potential for the Proposed Actions to result in significant adverse construction impacts related to hazardous materials on Projected Development Site 1.

Projected Development Site 2

Projected Development Site 2 is not under the control or ownership of the Applicant and is not included in the proposed development plans for this project. An "E" designation for hazardous materials will be placed on the zoning map pursuant to Section 11-15 of the New York City Zoning Resolution for the subject properties. The "E" designation will ensure that testing and mitigation will be provided as necessary before any future development and/or soil disturbance on these properties. These applicant(s) should be directed to coordinate further hazardous materials assessments through the Mayor's Office of Environmental Remediation.

Therefore, in order to avoid any potential impacts associated with hazardous materials, an (E) designation (E-549) will be assigned for hazardous materials on the following properties:

Block 769, Lots 36 and 38

The text for the (E) designation related to hazardous materials is as follows:

Due to the possible presence of hazardous materials on the aforementioned designated sites, 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 lots restricted by this (E) designation prior to any demolition or disturbance of soil on the lots.

Task 1

The fee owners of the lots 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 lots restricted by this (E) designation must perform such remediation as determined necessary by OER. After completing the remediation, the fee owners of the lots 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 this (E) designation in place, no significant adverse impacts related to hazardous materials are expected, and no further analysis is warranted. Therefore, there is no potential for the Proposed Actions to result in significant adverse construction impacts related to hazardous materials on Projected Development Site 2.

Natural Resources

There are no natural resources (other than scattered lawns and landscaping) on the three Projected Development Sites which are nearly entirely covered by existing buildings and pavement. The Projected Development Sites are surrounded by existing streets and other developed lots on all sides and therefore are 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, although the project would involve construction on multiple development sites on the same block over a period of 36 months or less, construction of each of the three projected developments would occur over a relatively short time period of approximately 24 months or less and construction of each development is not anticipated to overlap. 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

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22-60 46th Street

Astoria, Queens, NY

Architectural Drawings
November 14, 2018

Illustrative View - 46th Street Looking North

Drawing List	
Sheet Number	Sheet Name
U-001	Cover Sheet
U-002	Illustrative Views
U-003	Zoning Analysis
U-100	Illustrative Site Plan
U-101	Illustrative Ground Floor Plan
U-102	Illustrative Floor Plans
U-103	Illustrative Floor Plans
U-104	Illustrative Floor Plans
U-200	Illustrative Building Elevations
U-201	Illustrative Building Sections

22-60 46th Street

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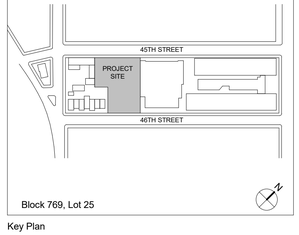
Revisions:

Issue: ULURP Application

Key Plan:



Block 769, Lot 25

Key Plan

Cover Sheet

Date	11/14/18
Scale	
Drawn By	MZ
Checked By	WS
Project No.	1729

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Sheet No.:

U-001.00

View From 45th Street Looking SE

View on 45th Street Looking E

View at Street Level on 46th Street Looking W

View From 46th Street Looking NW

22-60 46th Street
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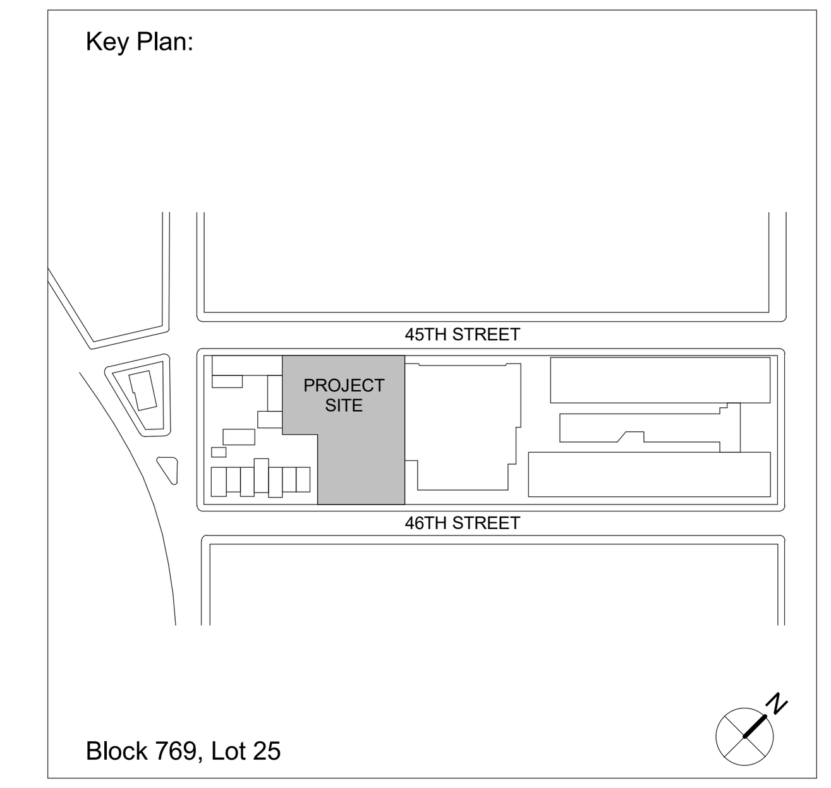

Key Plan

Illustrative Views

Date	11/14/18
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Project No.	1729

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Sheet No.: U-002.00

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SITE DATA	
Block(s)	769
Lot(s)	25 & 42
Street Address(es)	22-60 46th St, Astoria
Existing Zoning	M1-1
Community District	Queens 1
Zoning Section Map No.	9c
Zoning Lot Area	30,008 SF

ACTIONS REQUESTED
1. Zoning map amendment from an M1-1 and R4 zoning district to R4, R4/C2-3, R6A, R6A/C2-3 Zoning district
2. A zoning text amendment to designate the Project Area as a Mandatory Inclusionary Housing area in Appendix F of the Zoning Resolution.

ZR	ITEM/ DESCRIPTION		PERMITTED / REQUESTED		PROPOSED		COMPLIANCE / LACK THEREOF AND NOTES
1. Use							
22-10	Uses		1, 2, 3, 4		2, 3 or 4		Complies
2. Floor Area							
23-154	FAR	Residential	3.60		3.47		Complies
	FAR	Community Facility	3.00		0.05		Complies
	FAR	Commercial	2.00		0.06		Complies
	Floor Area	Residential	108,029	SF	104,903	SF	Complies
	Floor Area	Community Facility	37,510	SF	1,564	SF	Complies
	Floor Area	Commercial	35,010	SF	1,561	SF	Complies
	Floor Area	Maximum	108,029	SF	108,028	SF	Complies
	Cellar Floor Area	Community Facility			7,000	SF	Complies
	Cellar Floor Area	Commercial			8,400	SF	Complies
3. Lot Coverage							
23-153	Lot Coverage	Percentage	65	%	58	%	Complies
		Square Footage	19,505	SF	17,535	SF	Complies
4. Height and Setback							
23-664	Base Height	Minimum	40	Feet	57.5	Feet	Complies
	Base Height	Maximum	65	Feet	57.5	Feet	Complies
	Building Height	Maximum	80	Feet	76.5	Feet	Complies
	Number of Stories	Maximum	8	Stories	8	Stories	Complies
23-693	Height Provision for R6A district adjacent to R4 district	Maximum	45	Feet	38.5	Feet	Complies
5. Yards							
23-45	Front Yard		Not Required		Not Provided		Complies
23-46	Side Yard		8	Feet	8	Feet	Complies - Side yard west lotline on 45th Street
23-47	Rear Yard		30	Feet	40	Feet	Complies
6. Parking and Loading							
26-23, 25-251	Car Parking	Minimum	91	Spaces	105	Spaces	Complies
7. Street Tree Planting							
26-41	Street Tree Planting	Minimum	12	Trees	12	Trees	Complies; 9 planted on site, 3 planted off-site

Revisions:

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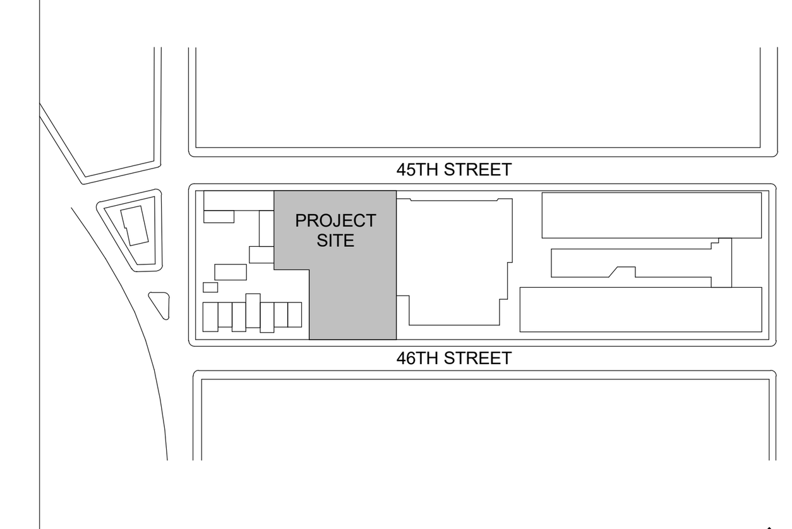

Block 769, Lot 25

Key Plan

Zoning Analysis

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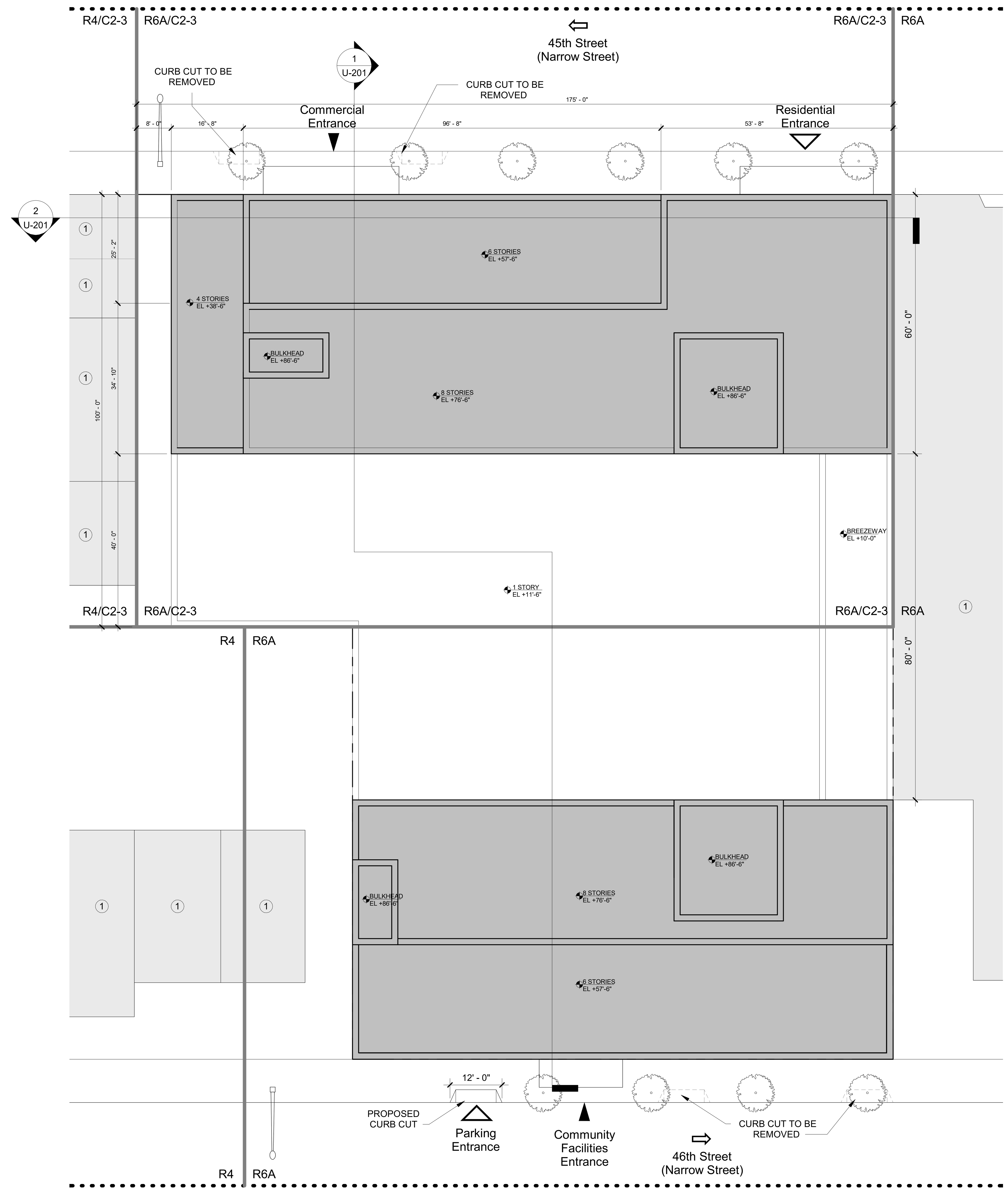
Checked By	WS
Project No.	1729

Seal

Sheet No.: U-003.00



1 Site Plan
1/16" = 1'-0"

LEGEND

- Zoning District Boundary
- Zoning Lot Line Boundary
- Project Area Boundary
- Proposed Maximum Building Envelope
- Illustrative Building Envelope
- Spot Elevation Tag From Base Plane
- Proposed Building
- Surrounding Buildings
- Community Facility Entrance
- Residential Entrance
- Existing Curb Cut
- Proposed Curb Cut
- Direction of Traffic
- Number of Stories at Existing Buildings
- R6A Zoning District
- Proposed Street Tree & Tree Pit
- Existing Street Light
- Existing Fire Hydrant

GRAPHIC SCALE APPLICABLE TO ALL NON-DIMENSIONED ELEMENTS
0 8 16 32

APPLICANT'S STAMP AND SEAL CORRESPONDS TO THE INFORMATION REGARDING THE DEVELOPMENT SITE, ZONING LOT, AND RELATED CURB CUTS. INFORMATION REGARDING THE SURROUNDING PROPERTIES AND STREET TREES IS FOR ILLUSTRATIVE PURPOSES ONLY. THE DEVELOPMENT ENVELOPE, THE SHAPE AND FOOTPRINT OF THE BUILDINGS, AND NOTATIONS ARE SUBJECT TO CHANGE. INTERIOR PARTITIONING AND LAYOUTS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY AND ARE SUBJECT TO CHANGE. LANDSCAPE AND HARDSCAPE INFORMATION IS FOR ILLUSTRATIVE PURPOSES ONLY AND IS SUBJECT TO CHANGE. BUILDING ENTRANCE LOCATIONS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY AND ARE SUBJECT TO CHANGE.

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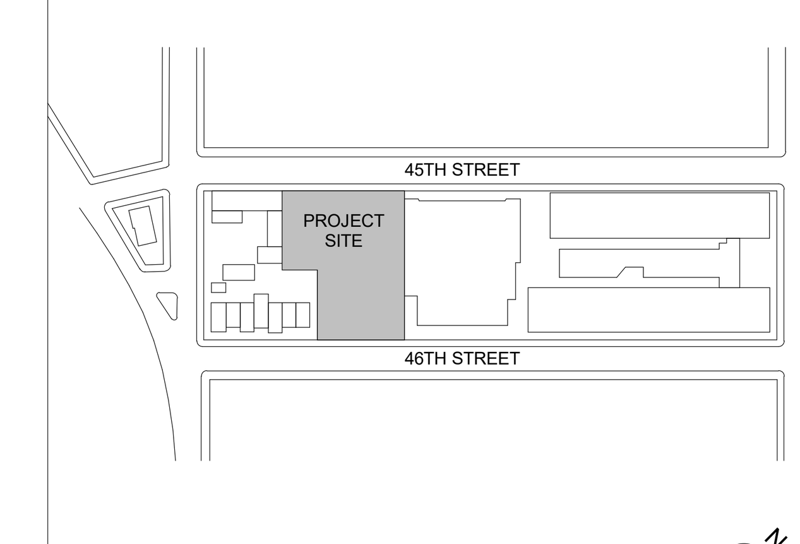

Block 769, Lot 25

Key Plan

Illustrative Site Plan

Date	11/14/18
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Checked By	WS
Project No.	1729

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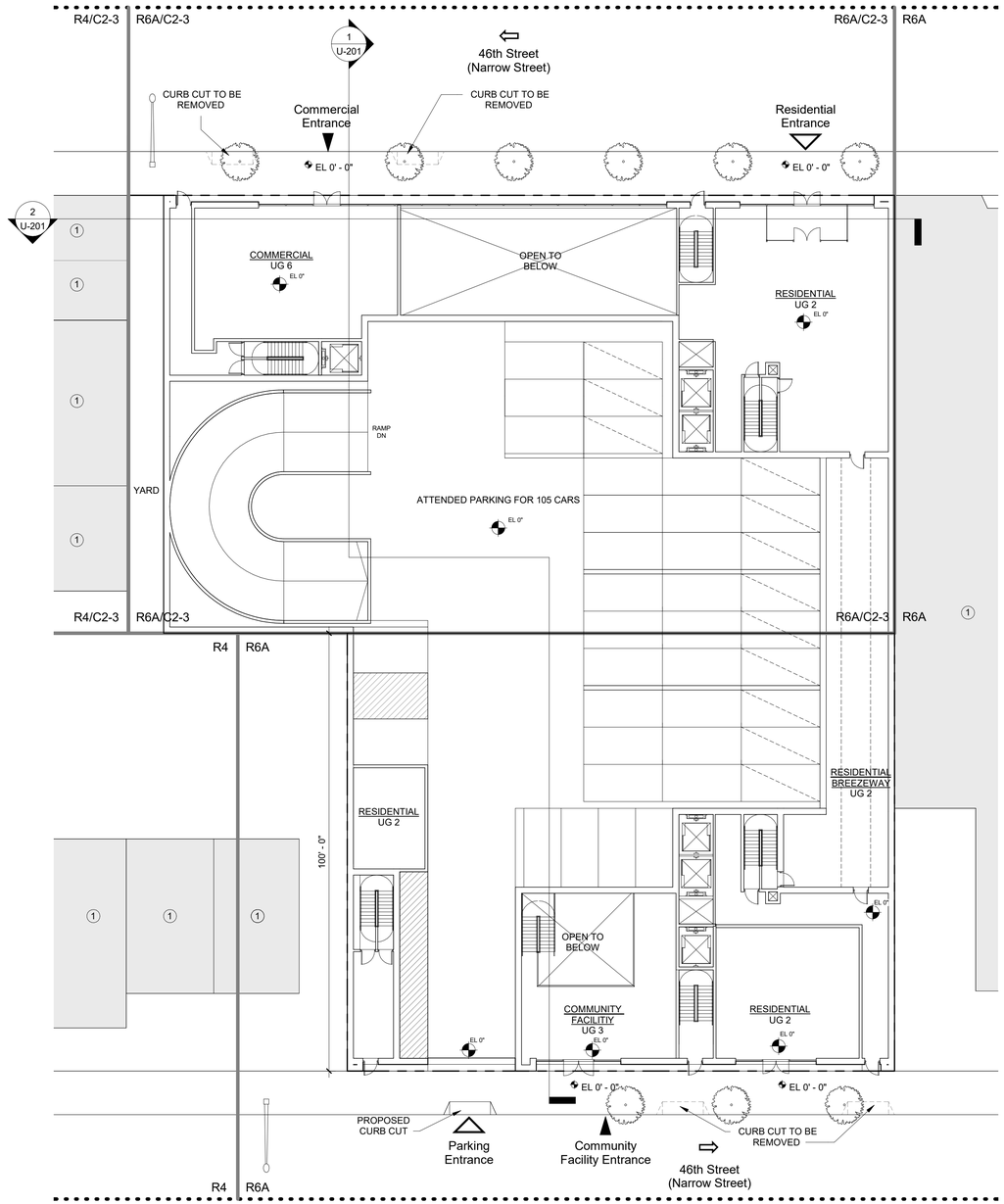

1 Ground Floor Plan
1/16" = 1'-0"

LEGEND

- Zoning District Boundary
- Zoning Lot Line Boundary
- Project Area Boundary
- Proposed Maximum Building Envelope
- Illustrative Building Envelope
- Name / Elevation — Spot Elevation Tag From Base Plane
- Proposed Building
- Surrounding Buildings
- Community Facility Entrance
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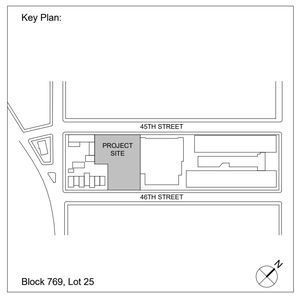

Key Plan

Illustrative Ground Floor Plan

Date	11/14/18
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Project No.	1729

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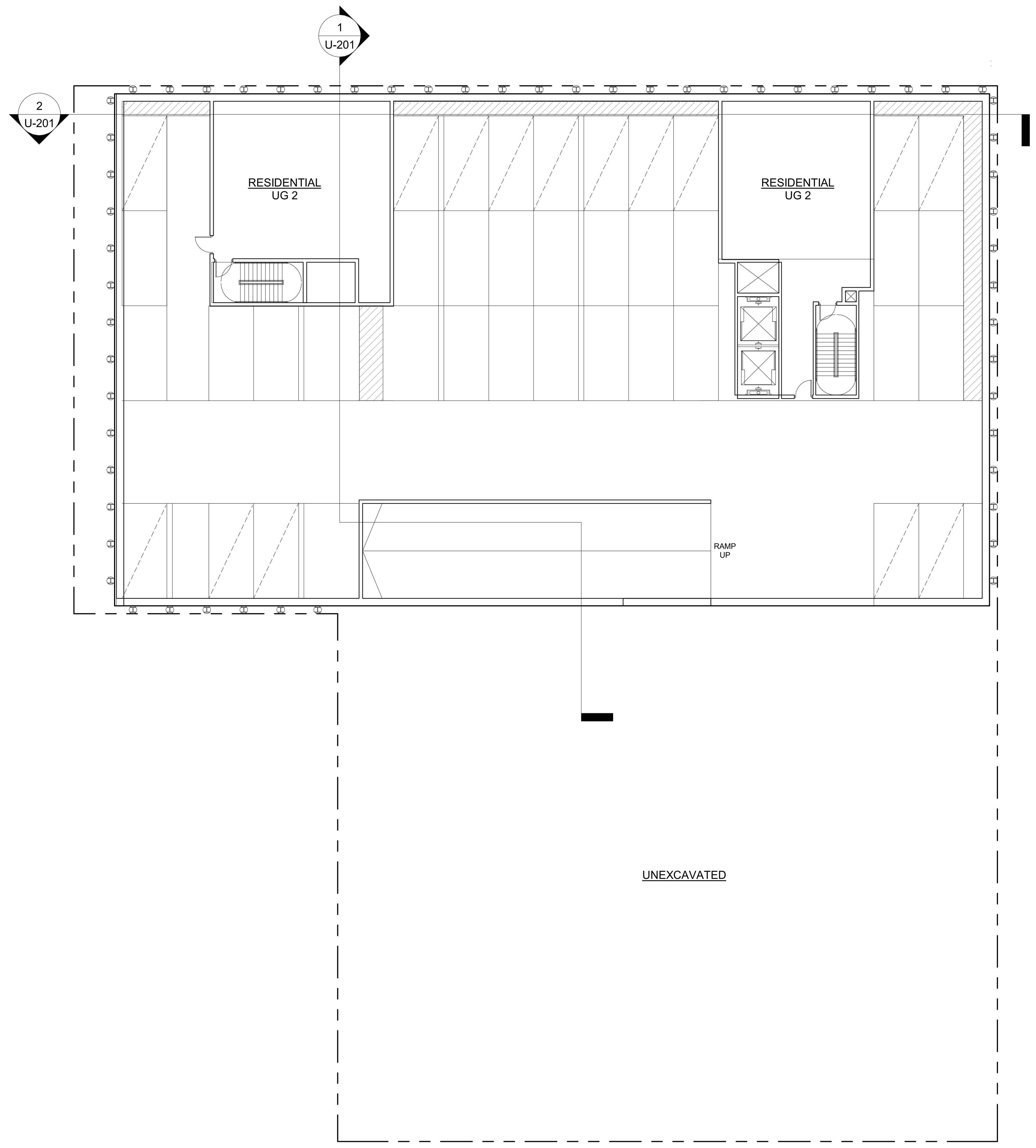

1 Sub-Cellar Plan
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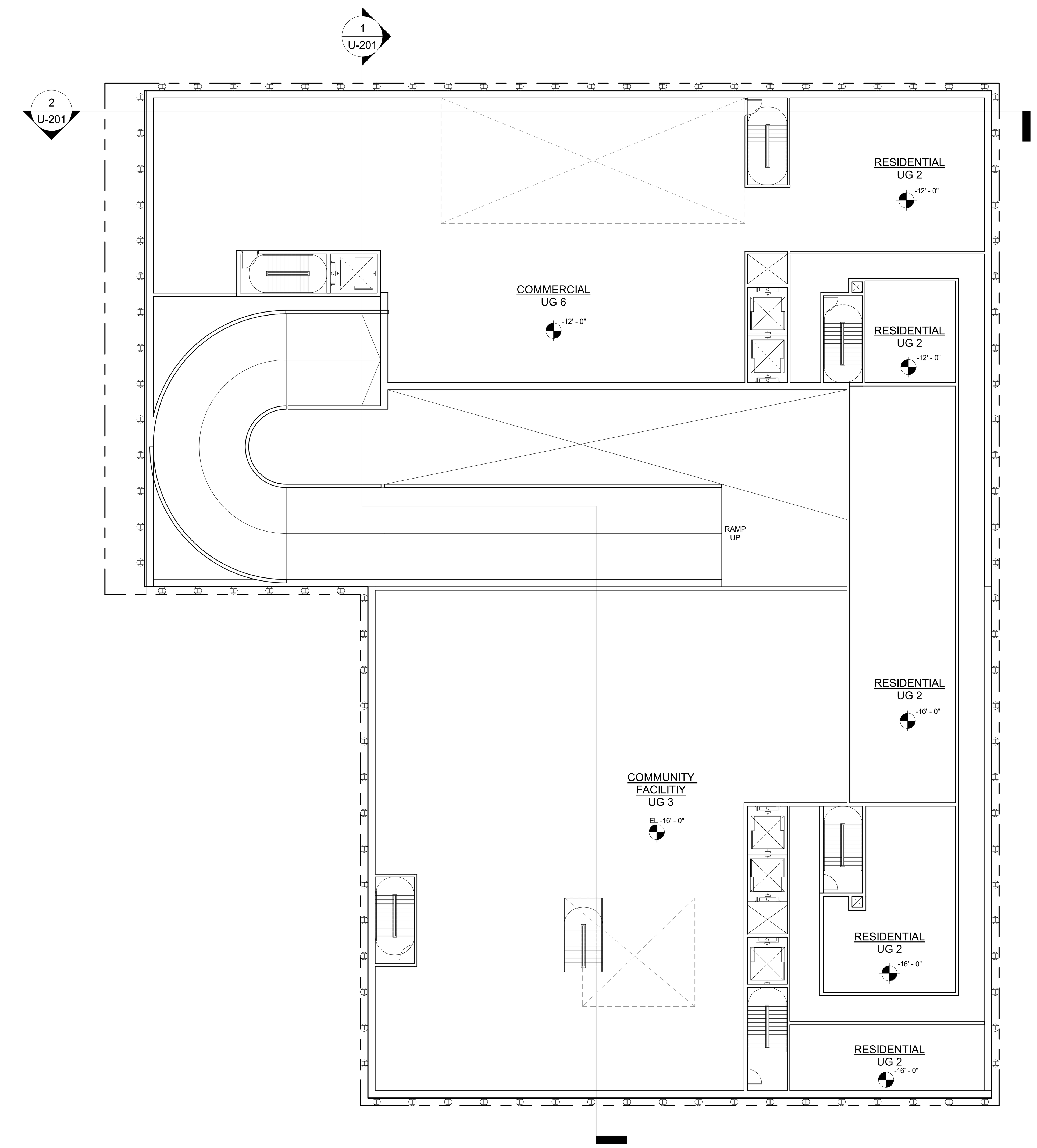
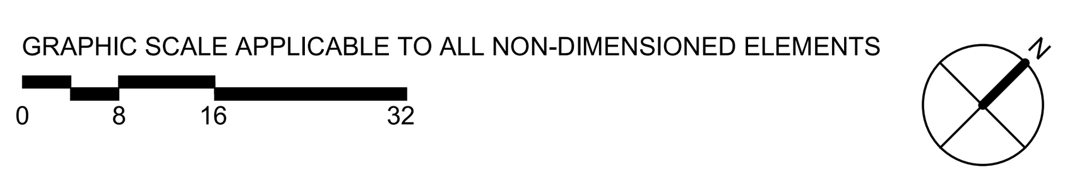


2 Cellar Plan
1/16" = 1'-0"

GRAPHIC SCALE APPLICABLE TO ALL NON-DIMENSIONED ELEMENTS



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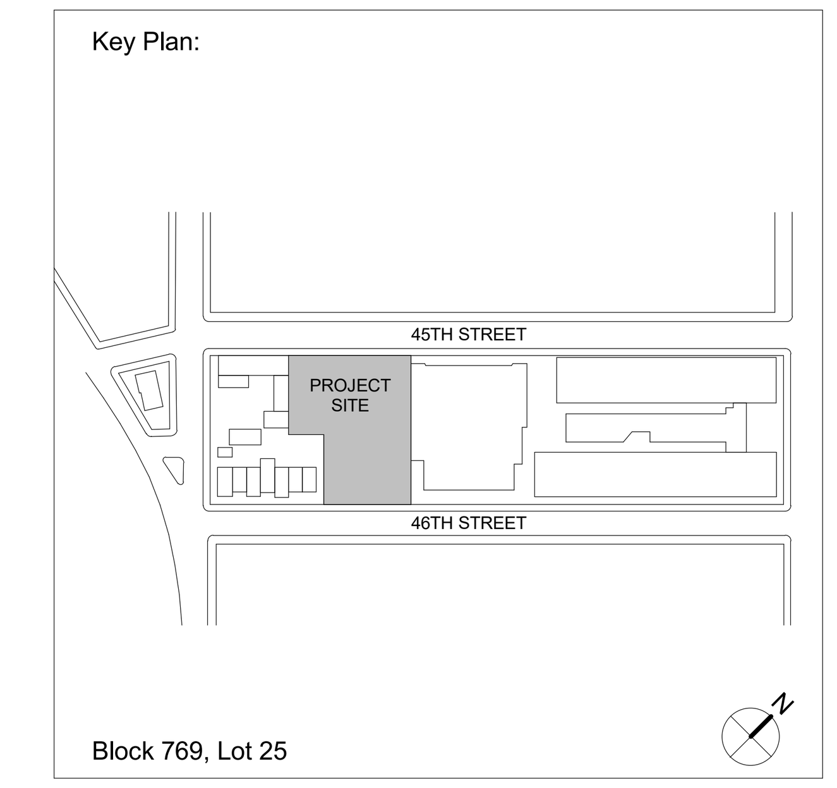

Block 769, Lot 25

Key Plan

Illustrative Floor Plans

Date	11/14/18
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Checked By	WS
Project No.	1729

Seal

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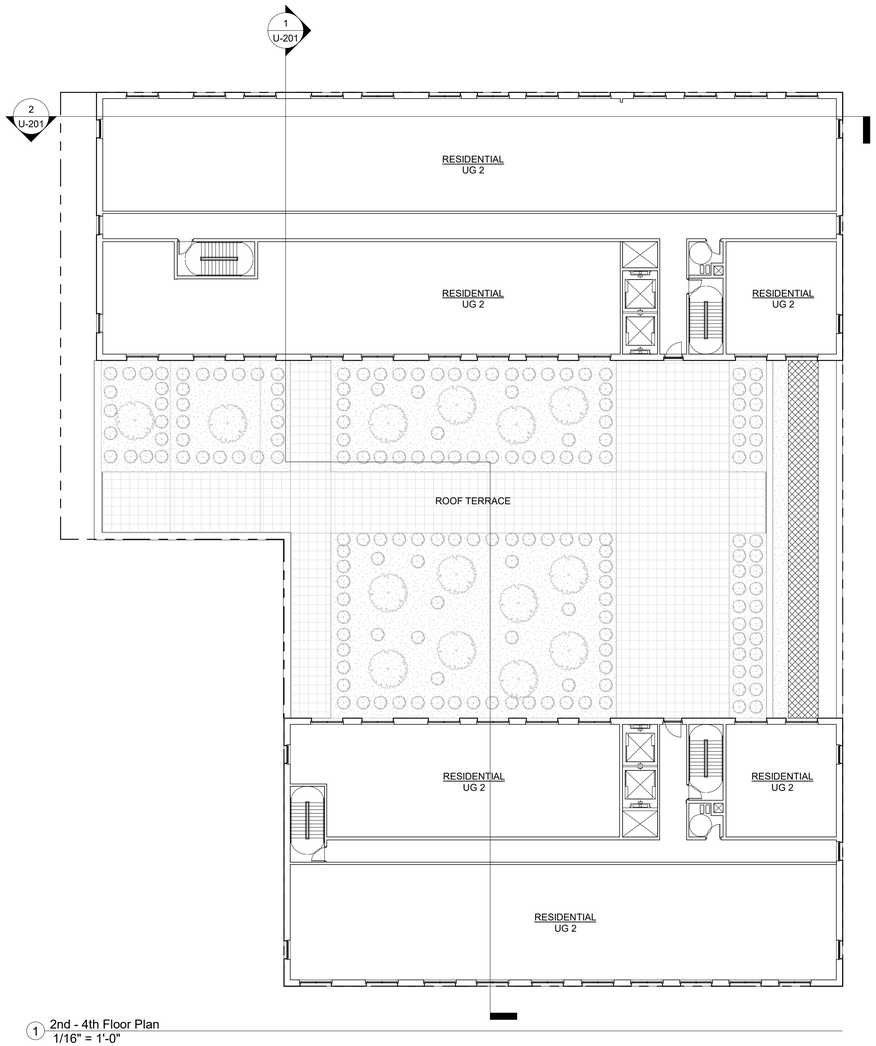
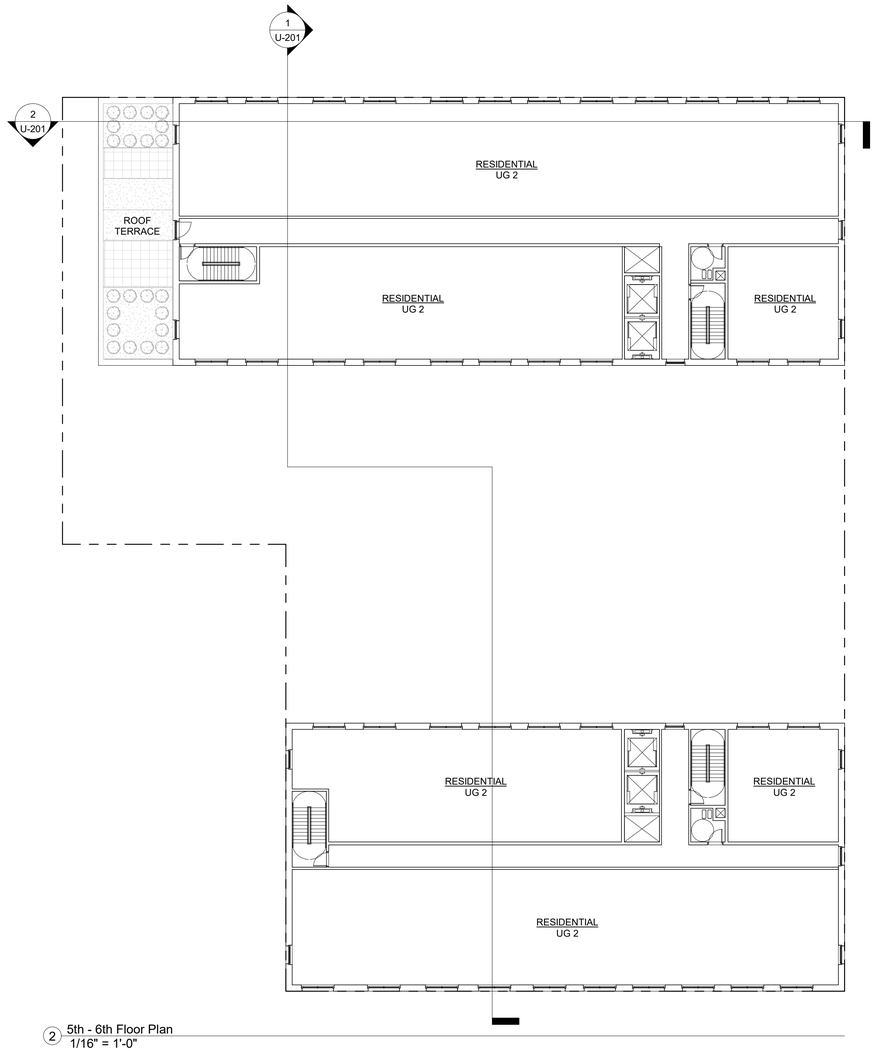


1 2nd - 4th Floor Plan
1/16" = 1'-0"



2 5th - 6th Floor Plan
1/16" = 1'-0"

GRAPHIC SCALE APPLICABLE TO ALL NON-DIMENSIONED ELEMENTS

0 8 16 32

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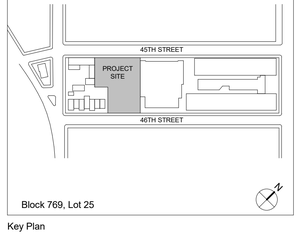

Key Plan

Illustrative Floor Plans

Date	11/14/18
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Checked By	WS
Project No.	1729

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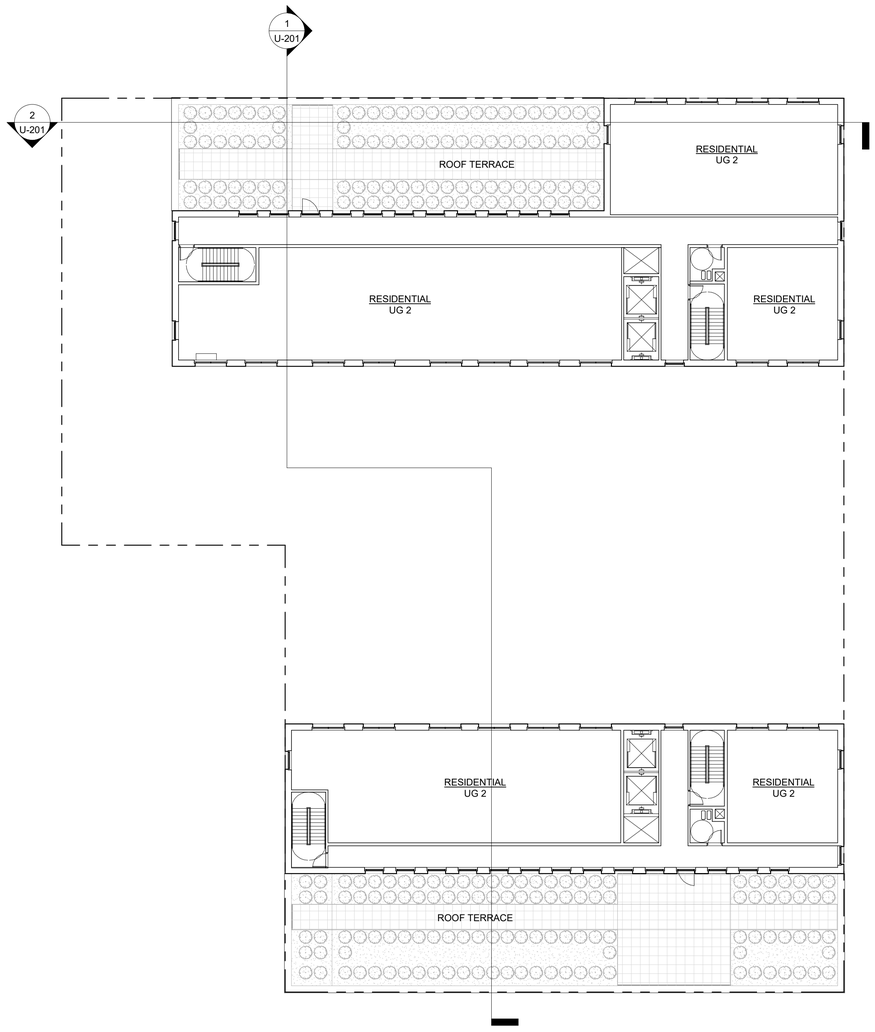
Sheet No.:

U-103.00



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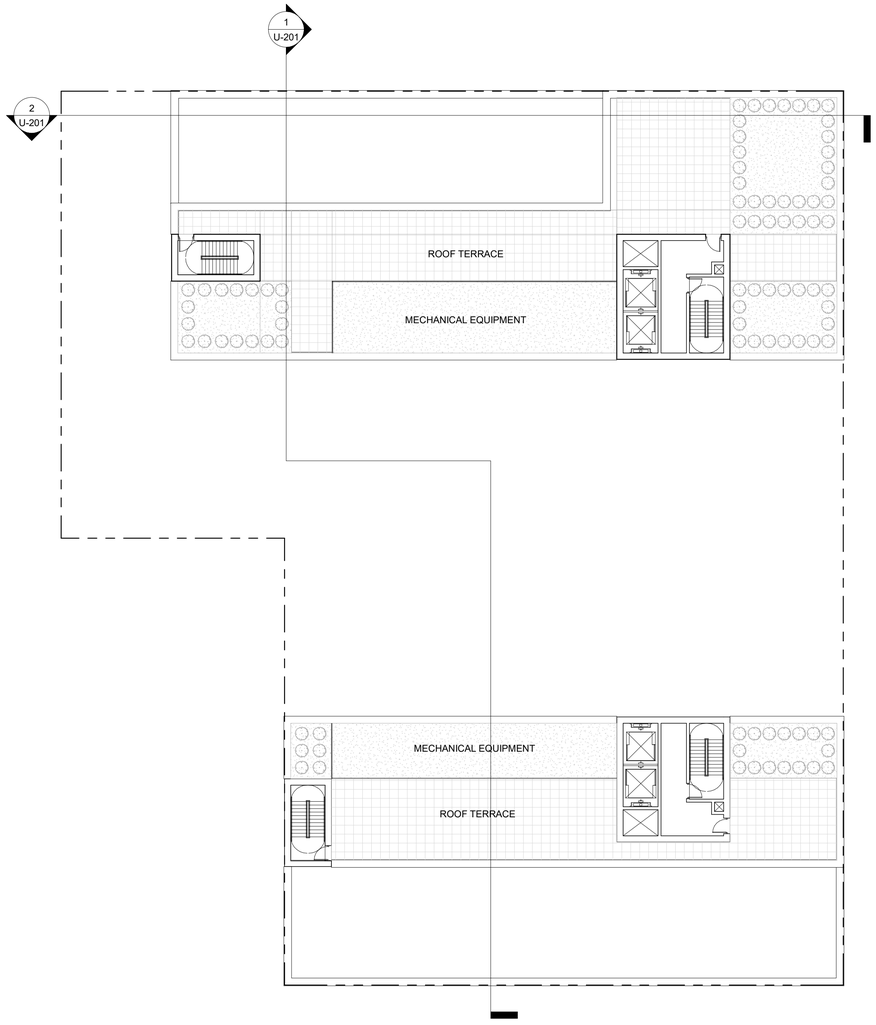


2 Roof Plan
1/16" = 1'-0"

GRAPHIC SCALE APPLICABLE TO ALL NON-DIMENSIONED ELEMENTS

0 8 16 32

APPLICANT'S STAMP AND SEAL CORRESPONDS TO THE INFORMATION REGARDING THE DEVELOPMENT SITE, ZONING LOT, AND RELATED CURB CUTS. INFORMATION REGARDING THE SURROUNDING PROPERTIES AND STREET TREES IS FOR ILLUSTRATIVE PURPOSES ONLY. THE DEVELOPMENT ENVELOPE, THE SHAPE AND FOOTPRINT OF THE BUILDINGS, AND NOTATIONS ARE SUBJECT TO CHANGE. INTERIOR PARTITIONING AND LAYOUTS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY AND ARE SUBJECT TO CHANGE. LANDSCAPE AND HARDSCAPE INFORMATION IS FOR ILLUSTRATIVE PURPOSES ONLY AND IS SUBJECT TO CHANGE. BUILDING ENTRANCE LOCATIONS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY AND ARE SUBJECT TO CHANGE.

Plotted: 11/14/2018 6:10:27 PM

22-60 46th Street

Astoria, NY

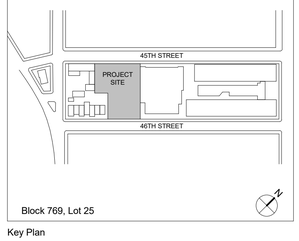
Mega Development, LLC
48-02 25th Avenue, Suite 400
Astoria, Queens, NY 11103

DattnerArchitects
1385 Broadway, 15th Floor
New York, NY 10018
tel 212 247 2660
www.dattner.com

Revisions:

Issue: ULURP Application

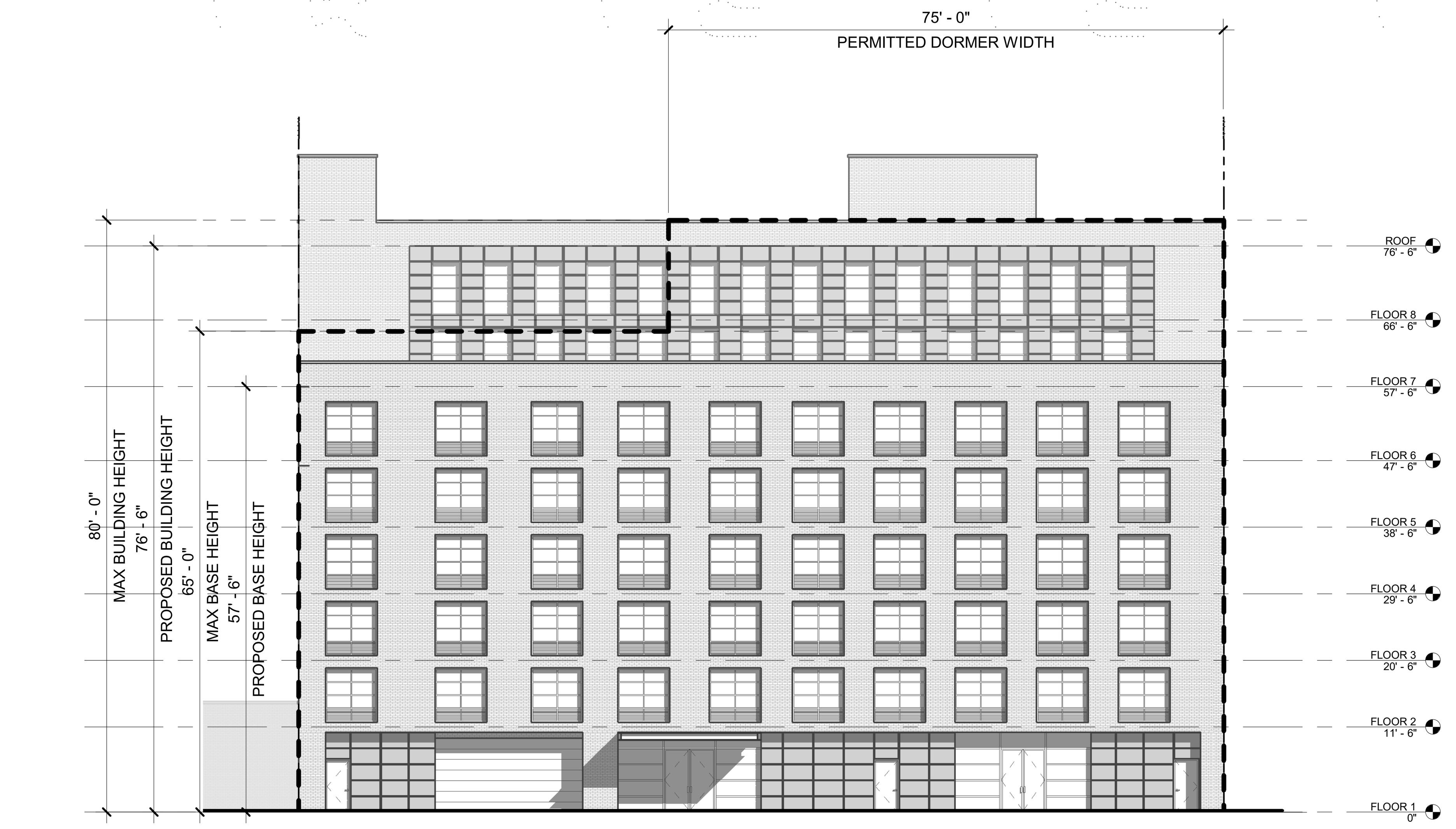
Key Plan:



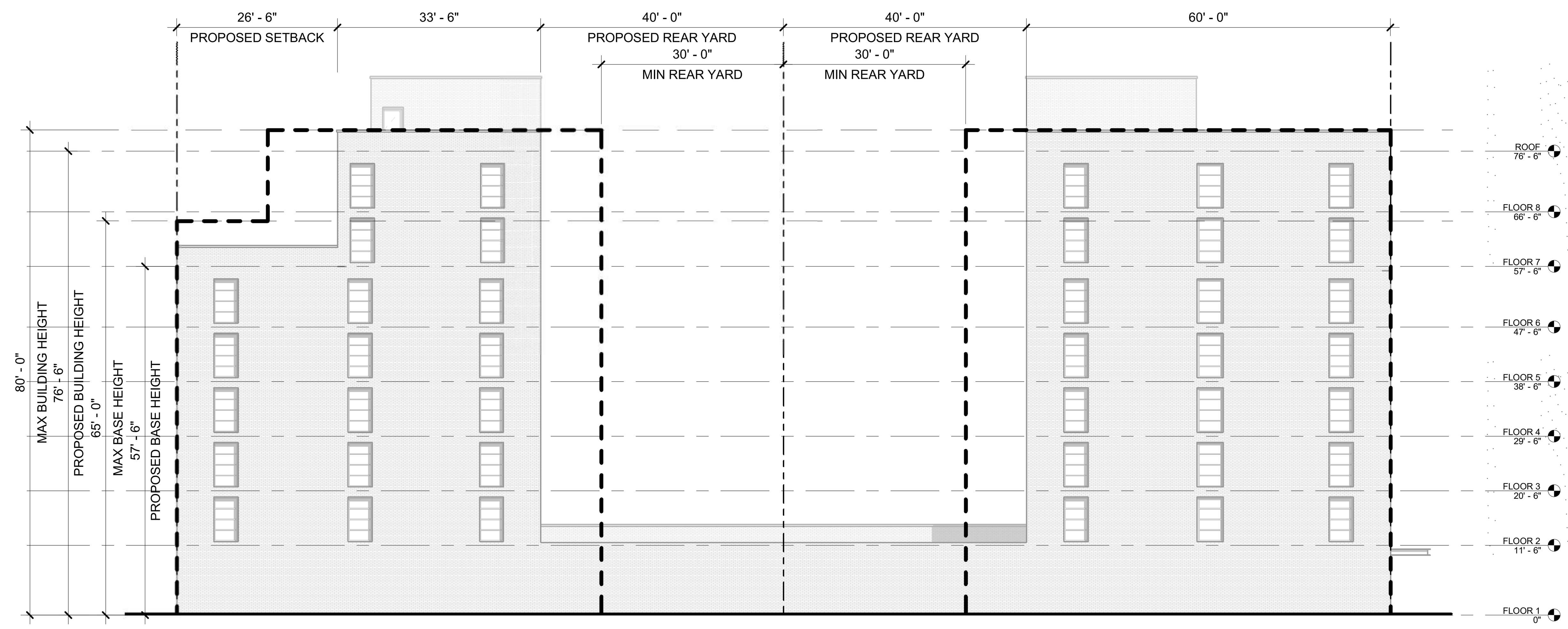
Key Plan

Illustrative Floor Plans

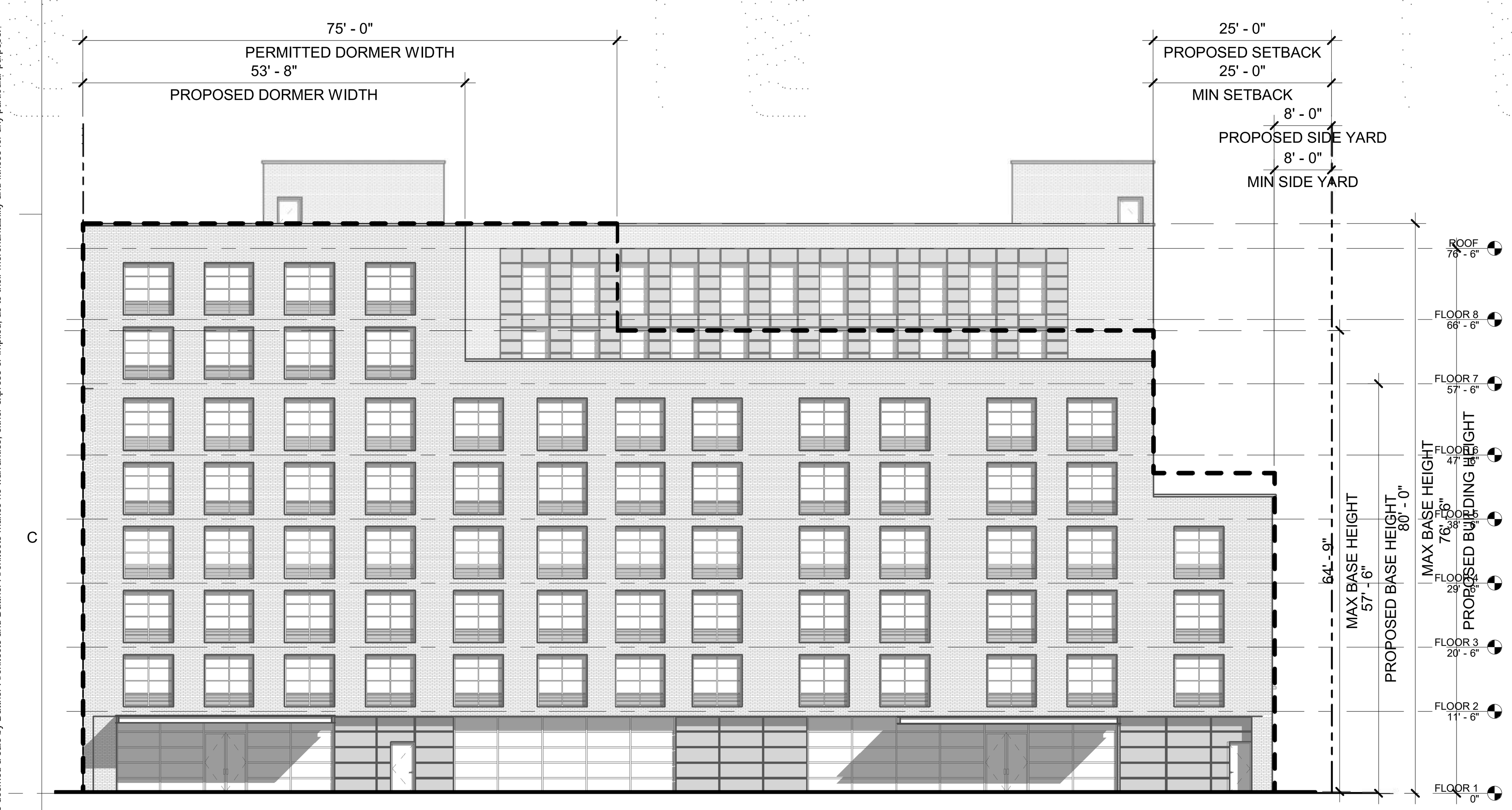
Date	11/14/18
Scale	As indicated
Drawn By	MZ
Checked By	WS
Project No.	1729 Seal
Sheet No.:	U-104.00



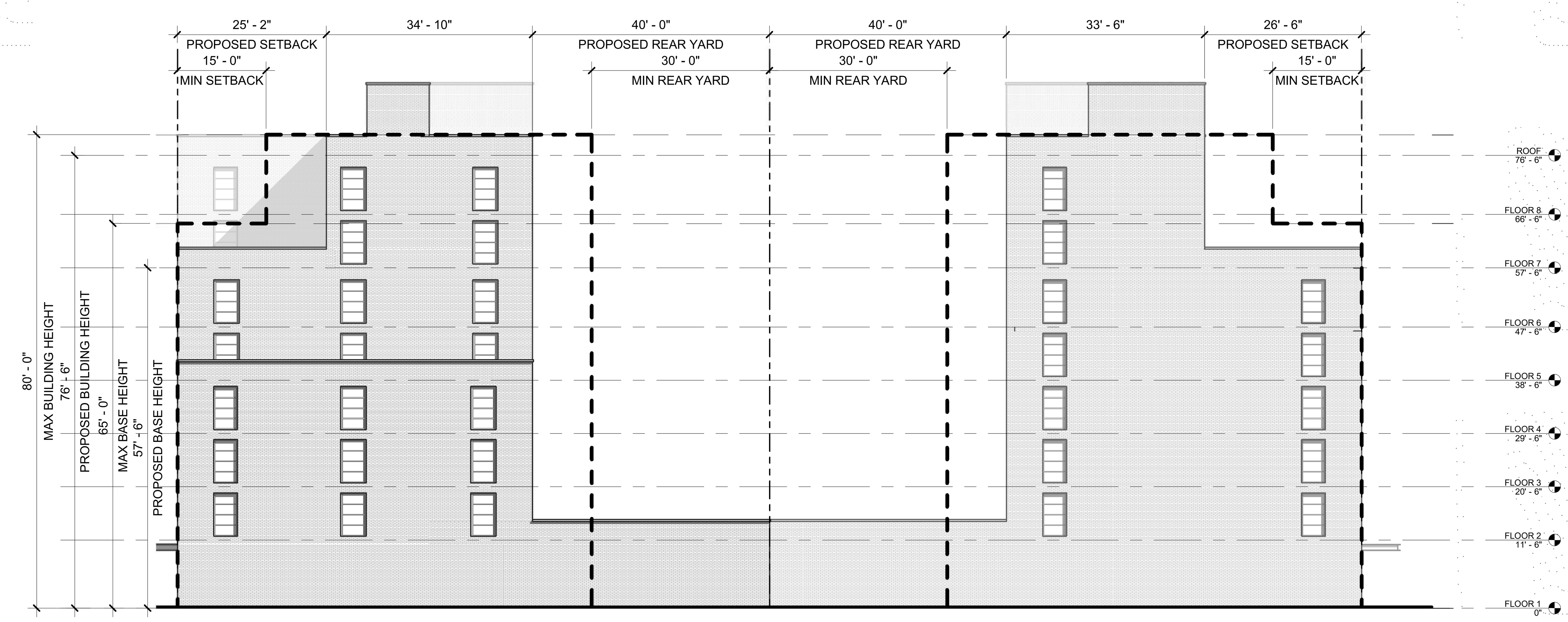
2 South Elevation (46th Street)
1/16" = 1'-0"



1 West Elevation
1/16" = 1'-0"



4 North Elevation (45th Street)
1/16" = 1'-0"



3 East Elevation
1/16" = 1'-0"

GRAPHIC SCALE APPLICABLE TO ALL NON-DIMENSIONED ELEMENTS

0 8 16 32

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LEGEND

- Street Line in Elevation
- Zoning Lot Line
- Maximum As of Right Building Elevation
- Height Above Base Plane

22-60 46th Street

Astoria, NY

Mega Development, LLC
48-02 25th Avenue, Suite 400
Astoria, Queens, NY 11103

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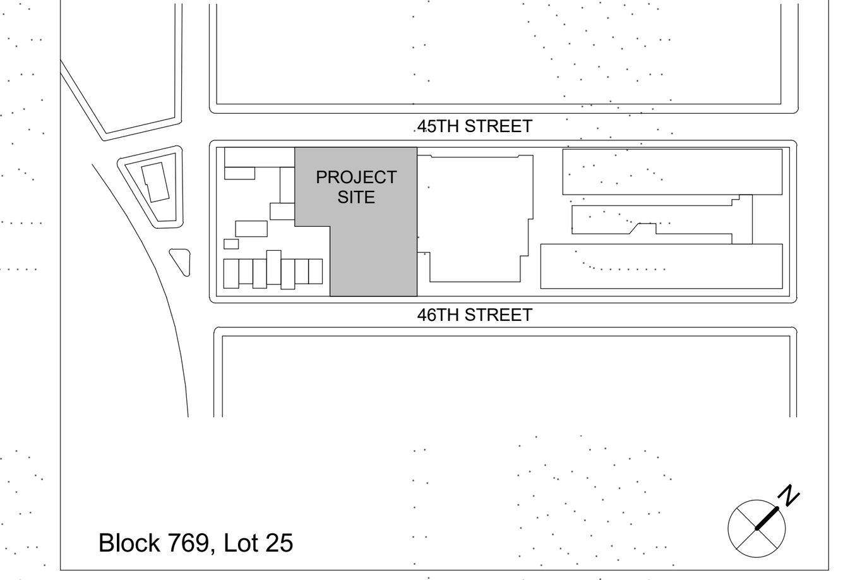
Revisions:

Issue: ULURP Application

Key Plan:



Block 769, Lot 25

Key Plan

Illustrative Building Elevations

Date	11/14/18
Scale	As indicated
Drawn By	MZ
Checked By	WS
Project No.	1729

Seal

Sheet No.:

U-200.00

22-60 46th Street

Astoria, NY

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Astoria, Queens, NY 11103

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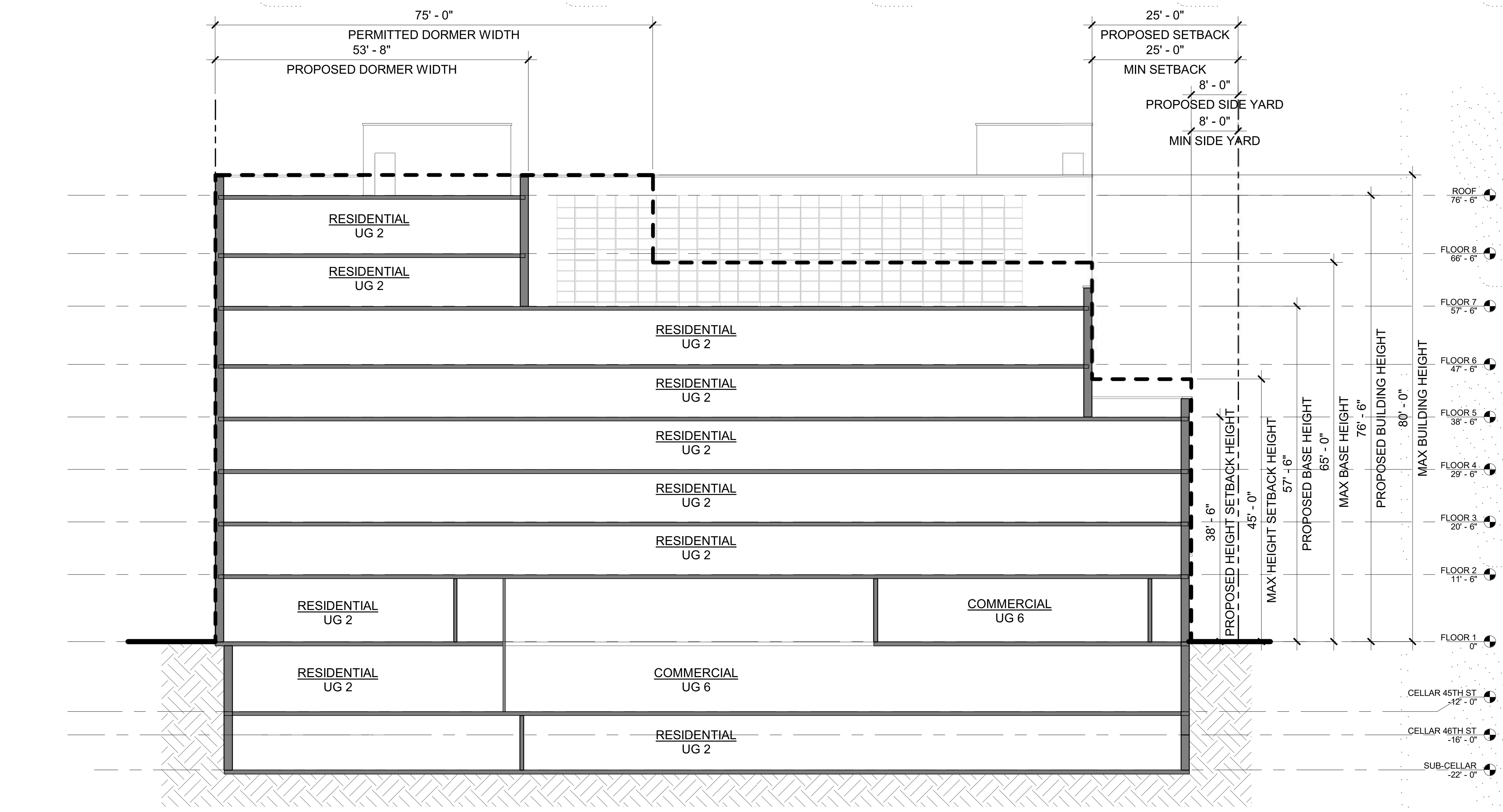
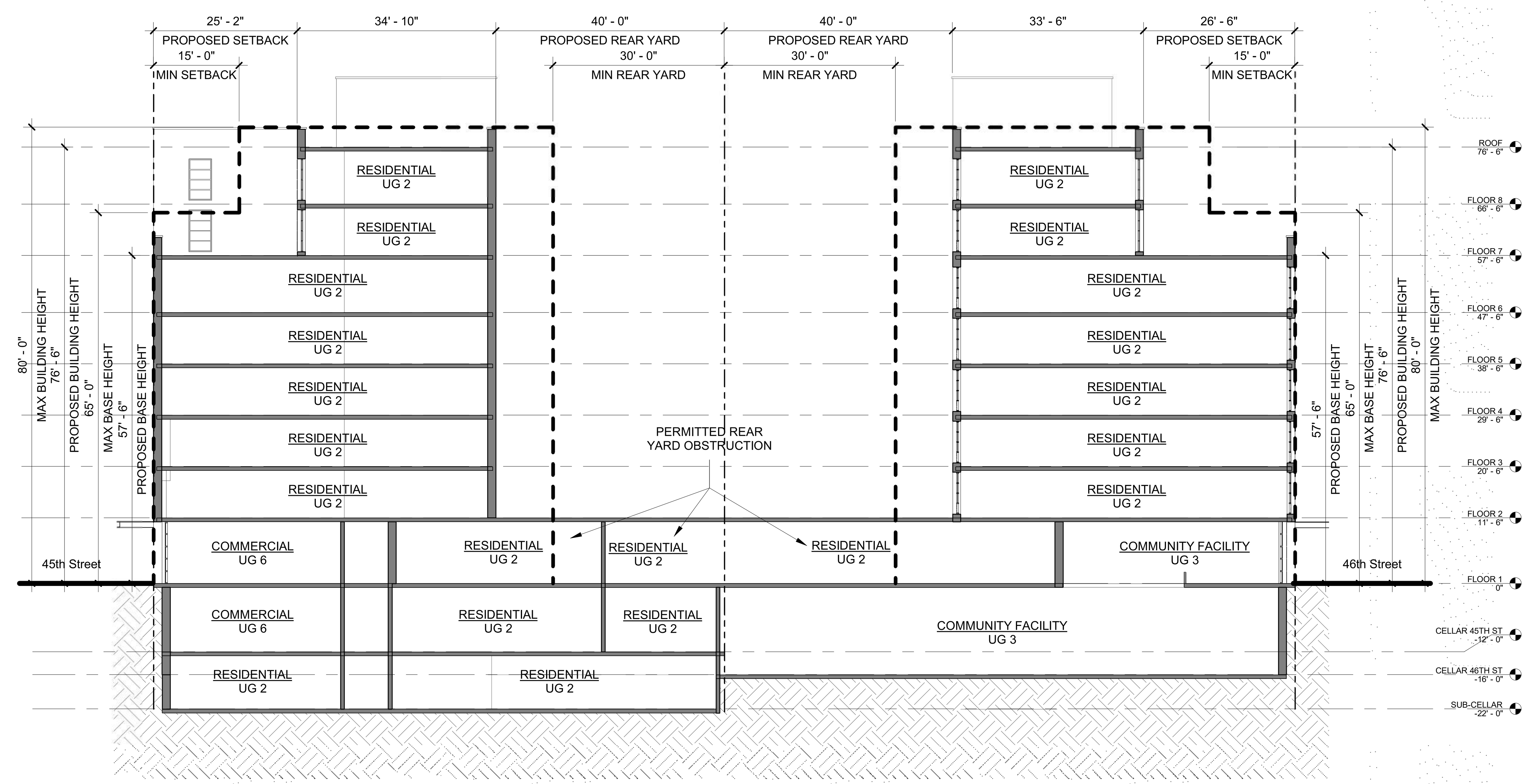


2 Section Diagram A
1/16" = 1'-0"



1 Section Diagram B
1/16" = 1'-0"

LEGEND

- Street Line in Elevation
- Zoning Lot Line
- Maximum As of Right Building Elevation
- Height Above Base Plane

GRAPHIC SCALE APPLICABLE TO ALL NON-DIMENSIONED ELEMENTS

0 8 16 32

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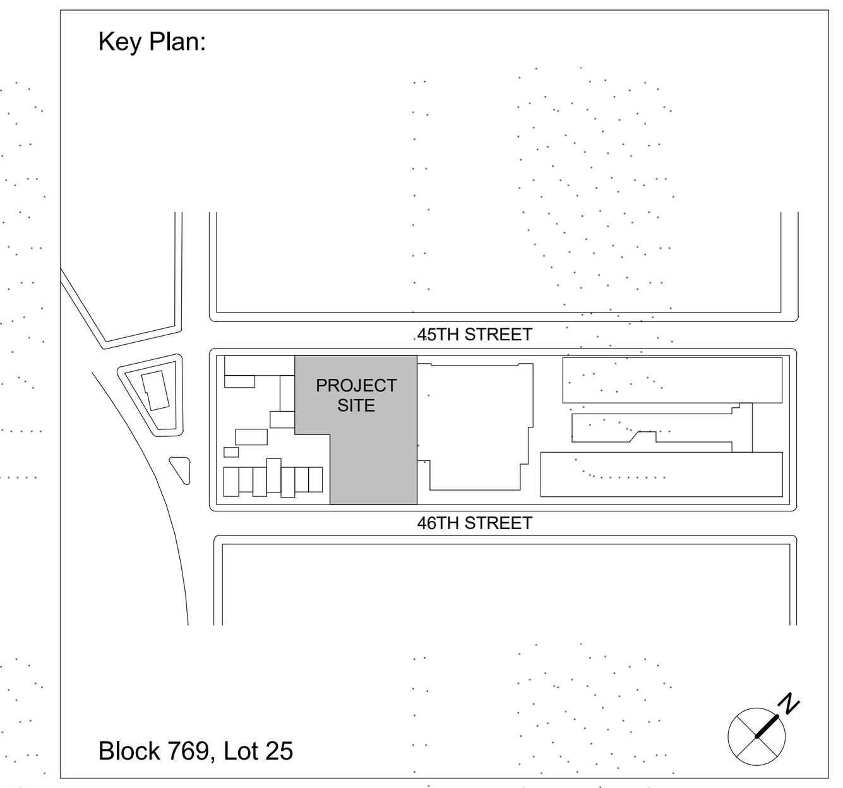
Revisions:

Issue: ULURP Application

Key Plan:



Block 769, Lot 25

Key Plan

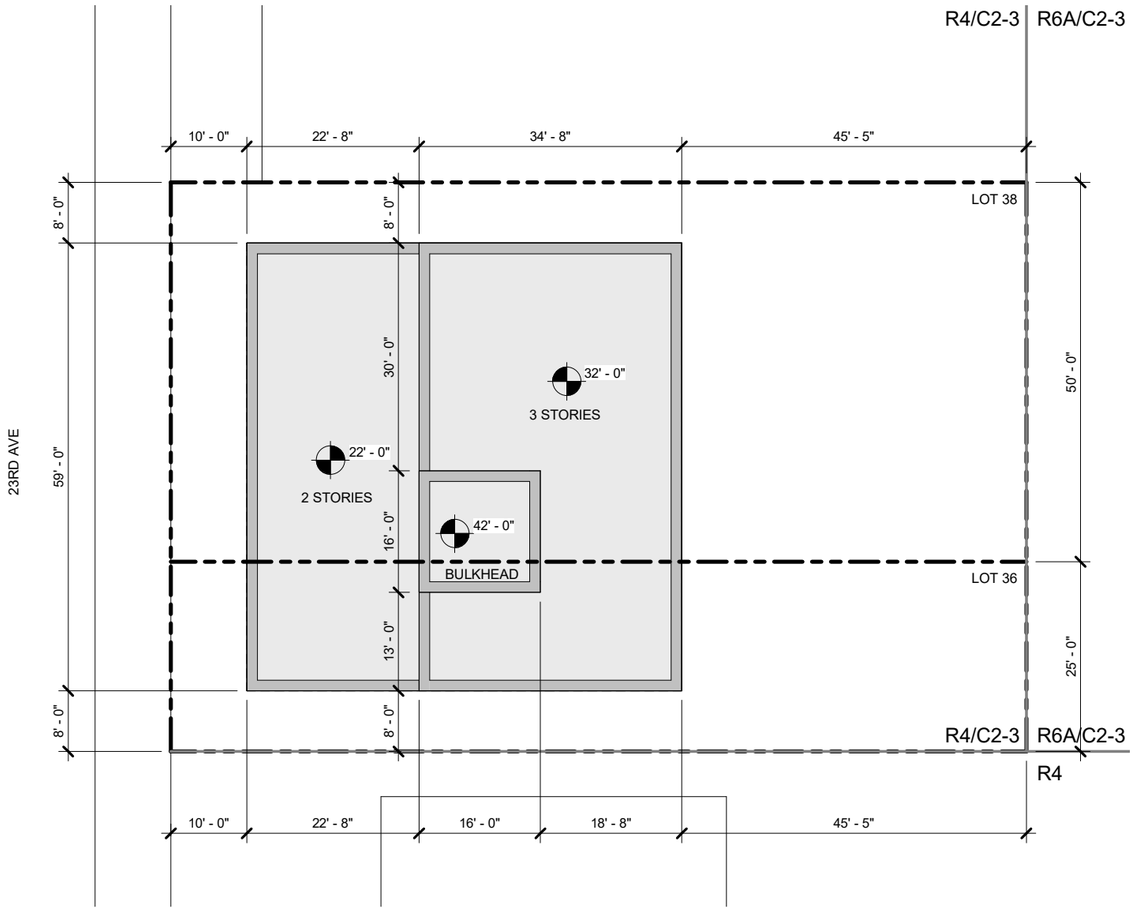
Illustrative Building Sections

Date	11/14/18
Scale	As indicated
Drawn By	MZ
Checked By	WS
Project No.	1729

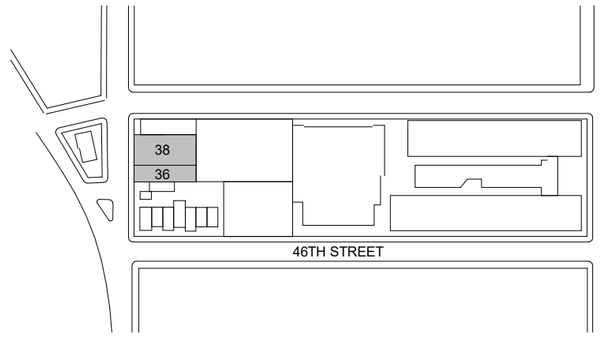
Seal

Sheet No.: U-201.00

Plotted: 11/14/2018 6:10:42 PM



SITE PLAN



KEY PLAN

22-60 46th St

DattnerArchitects |

Astoria, NY

Mega Development, LLC

LOTS 36 & 38 SITE PLAN

A-1

09/26/18

0 20

HISTORIC AND CULTURAL RESOURCES APPENDIX

NYC 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: **22-60 46 STREET**
Date received: 2/13/2018

Properties with no Architectural or Archaeological significance:

1) ADDRESS: 22 60 46 Street, BBL: 4007690025
2) ADDRESS: 22 66 46 Street, BBL: 4007690030
3) ADDRESS: 22 70 46 Street, BBL: 4007690031
4) ADDRESS: 22 74 46 Street, BBL: 4007690032
5) ADDRESS: 22 76 46 Street, BBL: 4007690033
6) ADDRESS: 22 78 46 Street, BBL: 4007690034
7) ADDRESS: 45 11 23 Avenue, BBL: 4007690035
8) ADDRESS: 45 09 23 Avenue, BBL: 4007690036
9) ADDRESS: 45 03 23 Avenue, BBL: 4007690038
10) ADDRESS: 45 01 23 Avenue, BBL: 4007690039
11) ADDRESS: 22 61 45 Street, BBL: 4007690042
12) ADDRESS: 22 68 46 Street, BBL: 4007690130
13) ADDRESS: 22 72 46 Street, BBL: 4007690131
14) ADDRESS: 45 02 Ditmars Boulevard, BBL: 4007697501

Gina Santucci

2/21/2018

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 33101_FSO_DNP_02142018.doc

HAZARDOUS MATERIALS APPENDIX

NYC Environmental Protection

Vincent Sapienza, P.E.
Commissioner

Angela Licata
Deputy Commissioner of Sustainability

59-17 Junction Blvd.
Flushing, NY 11373

Tel. (718) 595-4398
Fax (718) 595-4422
alicata@dep.nyc.gov

August 1, 2019

Anthony Howard
Project Manager
Environmental Assessment and Review Division
New York City Department of City Planning
120 Broadway, 31st Floor
New York, NY 10271

Re: 22-60 46th Street Rezoning
Block 769, Lots 25 and 42 (Projected Development Site 1)
CEQR # 19DCP145Q

Dear Mr. Howard:

The New York City Department of Environmental Protection, Bureau of Sustainability (DEP) has reviewed the June 2019 Phase II Environmental Site Investigation (Phase II) and the June 2019 Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP) prepared by Environmental Studies Corporation on behalf of Mega Contracting Group (applicant), for the above referenced project. It is our understanding that the applicant is seeking a zoning map amendment and a zoning text amendment from the New York City Department of City Planning (DCP) to rezone the applicant's property on Block 769, Lots 25 and 42 (Projected Development Site 1) in the Steinway neighborhood of Queens Community District 1 from the existing M1-1 zoning district to an R6A/C2-3 district. As part of the proposed actions, the remainder of Block 769 would also be rezoned. The southern approximately one-third of the block would be rezoned from M1-1 to a combination of R4 (Lots 31-35, 130, 131), R4/C2-3 (Lots 36, 38, 39), R6A (Lot 30), and R6A/C2-3 (Lots 25 and 42 which would be merged) zoning districts. The northern approximately two-thirds of the block would be rezoned from R4 to R6A (Lot 7501). The proposed project area comprises the entirety of Block 769, which is generally bounded by 45th and 46th Streets, 23rd Avenue, and Ditmars Boulevard. The applicant is also proposing to amend Zoning Resolution Appendix F to establish a Mandatory Inclusionary Housing Area coterminous with the R6A portion of the proposed project area. The proposed zoning map change and zoning text amendment would facilitate a proposal by the applicant to construct two, 8-story, cellar, and sub-cellar mixed-use residential, commercial, and community facility buildings totaling approximately 172,953 gross square feet (gsf) in floor area. Building A would front on 46th Street and Building B would front on 45th Street. Under the Reasonable Worst-Case Development Scenario, Projected Development Site 2 (Block 769, Lots 36 and 38) would be developed with a new 3-story, residential and commercial building with approximately 7,895 gsf of floor area. No new development is anticipated on Block 769, Lots 30, 31, 32, 33, 34, 35, 39, 130, 131, and 7501.

Projected Development Site 1: Block 769, Lots 25 and 42 (Site under the control or ownership of the applicant)

During the May 2019 fieldwork, Tri-State Drilling Technologies, Inc. advanced eight (8) soil borings (B-1 to B-8) to a depth of 17 feet below grade surface (bgs). Two soil samples were collected from each soil boring location. One soil sample was collected from a depth of 0 to 2 feet bgs, and another deeper soil sample was collected at a depth of 15 to 17 feet bgs. Groundwater was encountered at depth of 45 feet bgs. Two temporary groundwater monitoring wells (GW-1 and GW-2) were installed in soil borings B-3 and B-8 and two groundwater samples were collected. Soil and groundwater samples were analyzed for volatile organic compounds (VOCs) by United States Environmental Protection Agency (EPA) Method 8260, semi-volatile organic compounds (SVOCs) by EPA Method 8270, pesticides by EPA Method 8081, polychlorinated biphenyls (PCBs) by EPA Method 8082, and Target Analyte List metals (total and dissolved for groundwater samples). Six soil vapor samples (SV-1 to SV-6) were collected and analyzed for VOCs by EPA Method TO-15.

The soil analytical results revealed that VOCs, pesticides, and PCBs were either non-detect (ND) or below their New York State Department of Environmental Conservation (NYSDEC) 6 NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives (SCOs). One SVOC (indeno(1,2,3-cd)pyrene) and several metals (copper, lead, mercury, nickel, and zinc) were detected above their NYSDEC 6 NYCRR Part 375 Unrestricted Use SCOs.

The groundwater analytical results revealed that VOCs, SVOCs, pesticides, and metals were either ND or below their NYSDEC Technical and Operational Guidance Series (1.1.1) Class GA Ambient Water Quality Standards and Guidance Values (AWQS). One PCB (aroclor 1260) was detected above its NYSDEC Class GA AWQS.

The soil vapor analytical results revealed several VOCs (1,1,1-trichloroethane, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, 2-butanone, acetone, benzene, chloroform, chloromethane, cyclohexane, ethylbenzene, methylene chloride, n-heptane, n-hexane, o-xylene, p- & m- xylenes, tetrachloroethylene (PCE), tetrahydrofuran, and toluene) were detected. PCE was detected in the soil vapor samples at concentrations up to 4,900 $\mu g/m^3$ and above its Air Guideline Value in the New York State Department of Health October 2006 Guidance for Evaluating Soil Vapor Intrusion in the State of New York.

It should be noted that the Phase II investigation was conducted without DEP approval.

The June 2019 RAP proposes the transportation and off-site disposal of soil in accordance with applicable laws and regulations; removal of underground storage tanks, if encountered, and closure of petroleum spills in compliance with applicable local, State and Federal laws and regulations; if de-watering into New York City sewer drains is anticipated during the proposed construction, a New York City Department of Environmental Protection Sewer Discharge Permit must be obtained prior to the start of any de-watering activities at the site; dust control; performance of a community air monitoring plan; on-site soil will be stockpiled and covered with appropriately anchored plastic tarps; installation of a vapor barrier system consisting of 20-mil Stego Wrap or similar vapor barrier membrane extending throughout the area occupied by

the footprint of the new building and up the foundation sidewalls to grade; and placement of 2-feet of certified clean soil in landscaped areas (areas not capped with asphalt or concrete). The June 2019 CHASP addresses worker and community health and safety during redevelopment.

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

RAP

- DCP should inform the applicant that in addition to the proposed vapor barrier, an active sub-slab depressurization system (SSDS) should be incorporated into the design plan of the proposed construction project. Design plans and specifications of the active SSDS should be included in the RAP.

- DCP should instruct the applicant that the proposed vapor barrier system should be used unless an amendment is approved by DEP.

- DCP should instruct the applicant that the clean fill to be used within the 2 feet soil cover/cap described on pages 4 and 17 should be analyzed for Target Compound List VOCs by EPA Method 8260, SVOCs by EPA Method 8270, pesticides by EPA Method 8081, PCBs by EPA Method 8082, and Target Analyte List (not Target Compound List) metals.

- DCP should instruct the applicant that a revised RAP should be submitted to DEP for review and approval.

Future correspondence and submittals related to this project should include the following CEQR # **19DCP145Q**. If you have any questions, you may contact me at (718) 595-4358.

Sincerely,

Wei Yu

Wei Yu
Deputy Director, Hazardous Materials

c: R. Weissbard
T. Estesen
M. Wimbish
R. Lucas
O. Abinader - DCP

NYC Environmental Protection

Vincent Sapienza, P.E.
Commissioner

Angela Licata
Deputy Commissioner of Sustainability

59-17 Junction Blvd.
Flushing, NY 11373

Tel. (718) 595-4398
Fax (718) 595-4422
alicata@dep.nyc.gov

August 15, 2019

Anthony Howard
Senior Project Manager
Environmental Assessment and Review Division
New York City Department of City Planning
120 Broadway, 31st Floor
New York, NY 10271

Re: 22-60 46th Street Rezoning
Block 769, Lots 25 and 42 (Projected Development Site 1)
CEQR # 19DCP145Q

Dear Mr. Howard:

The New York City Department of Environmental Protection, Bureau of Sustainability (DEP) has reviewed the August 2019 Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP) prepared by Environmental Studies Corporation on behalf of Mega Contracting Group (applicant), for the above referenced project. It is our understanding that the applicant is seeking a zoning map amendment and a zoning text amendment from the New York City Department of City Planning (DCP) to rezone the applicant's property on Block 769, Lots 25 and 42 (Projected Development Site 1) in the Steinway neighborhood of Queens Community District 1 from the existing M1-1 zoning district to an R6A/C2-3 district. As part of the proposed actions, the remainder of Block 769 would also be rezoned. The southern approximately one-third of the block would be rezoned from M1-1 to a combination of R4 (Lots 31-35, 130, 131), R4/C2-3 (Lots 36, 38, 39), R6A (Lot 30), and R6A/C2-3 (Lots 25 and 42 which would be merged) zoning districts. The northern approximately two-thirds of the block would be rezoned from R4 to R6A (Lot 7501). The proposed project area comprises the entirety of Block 769, which is generally bounded by 45th and 46th Streets, 23rd Avenue, and Ditmars Boulevard. The applicant is also proposing to amend Zoning Resolution Appendix F to establish a Mandatory Inclusionary Housing Area coterminous with the R6A portion of the proposed project area. The proposed zoning map change and zoning text amendment would facilitate a proposal by the applicant to construct two, 8-story, cellar, and sub-cellar mixed-use residential, commercial, and community facility buildings totaling approximately 172,953 gross square feet (gsf) in floor area. Building A would front on 46th Street and Building B would front on 45th Street. Under the Reasonable Worst-Case Development Scenario, Projected Development Site 2 (Block 769, Lots 36 and 38) would be developed with a new 3-story, residential and commercial building with approximately 7,895 gsf of floor area. No new development is anticipated on Block 769, Lots 30, 31, 32, 33, 34, 35, 39, 130, 131, and 7501.

Projected Development Site 1: Block 769, Lots 25 and 42 (Site under the control or ownership of the applicant)

The August 2019 RAP proposes the transportation and off-site disposal of soil in accordance with applicable laws and regulations; removal of underground storage tanks, if encountered, and closure of petroleum spills in compliance with applicable local, State and Federal laws and regulations; if de-watering into New York City sewer drains is anticipated during the proposed construction, a New York City Department of Environmental Protection Sewer Discharge Permit must be obtained prior to the start of any de-watering activities at the site; dust control; performance of a community air monitoring plan; on-site soil will be stockpiled and covered with appropriately anchored plastic tarps; installation of a vapor barrier system consisting of 20-mil Stego Wrap or similar vapor barrier membrane extending throughout the area occupied by the footprint of the new building and up the foundation sidewalls to grade; and placement of 2-feet of certified clean soil in landscaped areas (areas not capped with asphalt or concrete). It should be noted that underground parking areas cover 100% of the building space and will be mechanically ventilated, with ventilation and exhaust provided at the second floor courtyard located in an accessory enclosure. The August 2019 CHASP addresses worker and community health and safety during redevelopment.

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

RAP

- DCP should instruct the applicant that the proposed 20-mil Stego Wrap vapor barrier system should be used unless an amendment is approved by DEP.

- DCP should instruct the applicant that the clean fill to be used within the 2 feet soil cover/cap described on page 4 (Summary of the Remedy, # 8) should be analyzed for Target Analyte List metals (not Target Compound List metals) in addition to Target Compound List volatile organic compounds by United States Environmental Protection Agency (EPA) Method 8260, semivolatile organic compounds by EPA Method 8270, pesticides by EPA Method 8081, and polychlorinated biphenyls by EPA Method 8082.

DEP finds the August 2019 RAP and CHASP for the proposed project acceptable, as long as the aforementioned information is incorporated into the RAP. DCP should instruct the applicant that at the completion of the project, a Professional Engineer (P.E.) certified Remedial Closure Report should be submitted to DEP for review and approval for the proposed project. The P.E. certified Remedial Closure Report should indicate that all remedial requirements have been properly implemented (i.e., installation of vapor barrier; transportation/disposal manifests for removal and disposal of soil in accordance with New York State Department of Environmental Conservation regulations; and two feet of DEP approved certified clean fill/top soil capping requirement in any landscaped/grass covered areas not capped with concrete/asphalt, etc.).

Future correspondence and submittals related to this project should include the following CEQR # **19DCP145Q**. If you have any questions, you may contact me at (718) 595-4358.

Sincerely,

Wei Yu

Wei Yu
Deputy Director, Hazardous Materials

c: R. Weissbard
T. Estesen
M. Wimbish
R. Lucas
O. Abinader - DCP