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* 273 Avenue U Rezoning

3. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency)	BSA REFERENCE NUMBER (if applicable)
my5 / tмлпY	
ULURP REFERENCE NUMBER (if applicable) bмулмср ½wY∑ мулмсп ½aY	OTHER REFERENCE NUMBER(S) (if applicable) (*e.g.*, legislative intro, CAPA)

4a. *Lead Agency Information*			**4b. *Applicant Information***		
NAME OF LEAD AGENCY NYC City Planning Commission			NAME OF APPLICANT CiaraFour Realty, LLC		
NAME OF LEAD AGENCY CONTACT PERSON Olga Abinader, Acting Director, EARD			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON Hiram 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 hrothkrug@environmentalstudiescorp.com	

5. *Project Description*

The Applicant, CiaraFour Realty, LLC. , seeks a zoning map amendment to extend an existng R6A/C2-3 district west to encompass the southern part of Block 7103 within the Gravesend neighborhood of Brooklyn CD 11 and (2) a zoning text amendment to map an MIH area that is coterminous with the proposed rezoning area. The proposed project area, currently zoned R5B/C2-3, consists of three tax lots in their entirety (Lots 40, 42, and 138,) and portions of three tax lots (Lots 36, 49, and 7501). The proposed actions would facilitate the vertical enlargement of the existing one-story commercial building on Lot 42, which would add three stories with 11,899 gsf of residential space.The resulting four-story (40-foot-tall) mixed-use building would contain 5,031 sf of ground floor retail space and nine dwelling units (all market rate) within 12,300 gsf (11,236 zsf) of residential space: a total of 17,331 gsf (16,267 zsf), for an FAR of 3.00. Note that the proposed project is not the development scenario addressed in this EAS. Under the RWCDS, the enlargement would create an 8-story (85') building with 20,628 gsf (5,031 retail and 15,597 residential) and 19,555 zsf (3.60 FAR) with 15 dwelling units (5 income-restricted and 10 market rate).

Project Location

BOROUGH Brooklyn	COMMUNITY DISTRICT(S) 11	STREET ADDRESS 273 Avenue U, 275 and 279 Lake St., and 2260, 2266, and 2272 McDonald Ave.
TAX BLOCK(S) AND LOT(S) Block 7103, Lots 36 (p/o), 40, 42, 49 (p/o), 138, and 7501 (p/o)		ZIP CODE 11223
DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS north side of Avenue U from McDonald Ave. to Lake St.		
EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY R5B/C2-3		ZONING SECTIONAL MAP NUMBER 28c

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

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

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

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

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

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

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

☐ PERMITS FROM DOT'S OFFICE OF CONSTRUCTION MITIGATION AND COORDINATION (OCMC)
☐ LANDMARKS PRESERVATION COMMISSION APPROVAL
☒ OTHER, explain: building permit from DOB

***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.): 14,829
Waterbody area (sq. ft) and type: 0
Roads, buildings, and other paved surfaces (sq. ft.): 14,760
Other, describe (sq. ft.): 69 (landscaping)

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): 17,331
(RWCDS: 20,628 sf, 8 stories, 85')
NUMBER OF BUILDINGS: 1
GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): 17,331
HEIGHT OF EACH BUILDING (ft.): 40
NUMBER OF STORIES OF EACH BUILDING: 4

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: 5,432
The total square feet not owned or controlled by the applicant: 9,397

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: cubic ft. (width x length x depth)
AREA OF PERMANENT DISTURBANCE: 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.)	12,300 (new)	5,031 (existing)	0	0
Type (*e.g.,* retail, office, school)	9 units	retail		

Does the proposed project increase the population of residents and/or on-site workers? ☒ YES ☐ NO
If "yes," please specify: NUMBER OF ADDITIONAL RESIDENTS: 25 NUMBER OF ADDITIONAL WORKERS: 0
Provide a brief explanation of how these numbers were determined: 2.78 persons per household (average household size in census tract 400)

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): 2020
ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: 12
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:

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 the attached.		
(e) Is the project a large, publicly sponsored project?	☐	☒
○ If "yes," complete a PlaNYC assessment and attach.		
(f) Is any part of the directly affected area within the City's Waterfront Revitalization Program boundaries?	☐	☒
○ If "yes," complete the Consistency Assessment Form.		
2. *SOCIOECONOMIC CONDITIONS*: CEQR Technical Manual Chapter 5		
(a) Would the proposed project:		
○ Generate a net increase of 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.		
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. Attached		
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:	☐	☐
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): 369		
○ 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): 1,507,603,300		
(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)	☐	☒
(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.		

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
Brian Kintish	February 8, 2019

SIGNATURE *Brian Kintish*

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

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

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

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

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

2. Are there any aspects of the project relevant to the determination of whether the project may have a significant impact on the environment, such as combined or cumulative impacts, that were not fully covered by other responses and supporting materials? ☐ ☒

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

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

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

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

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

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

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

SIGNATURE

NEGATIVE DECLARATION

Statement of No Significant Effect

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

Reasons Supporting this Determination

The above determination is based on information contained in this EAS, which finds the proposed actions sought before the City Planning Commission would have no significant effect on the quality of the environment. Reasons supporting this determination are noted below.

Air Quality and Noise

1. An (E) designation (E-525) for air quality and noise has been incorporated into the proposed actions. Refer to "Determination of Significance Appendix: (E) Designation" for a list of the sites affected by the proposed (E) designation and applicable (E) designation requirements. The analyses conducted for air quality and noise conclude that with these (E) Designation requirements in place, the proposed actions would not result in significant adverse impacts to air quality or noise.

Land Use, Zoning and Public Policy

2. This EAS includes a detailed Land Use, Zoning and Public Policy section, which analyzes the potential significance of the proposed actions on land use, zoning and public policy in the study area. The proposed rezoning from R5B/C2-3 to R6A/C2-3 would facilitate the vertical enlargement of an existing one-story building in an area characterized by diverse uses including residential, commercial, and mixed residential/commercial. The existing R5B/C-2-3 zoning district is bordered by an R6B/C2-3 district that would be extended to include the affected area. The proposed rezoning would not generate new land uses that would be incompatible with existing land uses within the study area. The analysis concludes that no significant adverse impacts related to Land Use, Zoning and Public Policy would result from the proposed actions.

Shadows

3. This EAS includes a CEQR Tier 2 Shadow Screening Assessment to determine if there is a potential for the proposed actions to result in significant shadow impacts on Lady Moody Triangle, a landscaped sitting area located southwest of the project site. The assessment concludes that the open space resource is located outside of the arc in which action-induced development could cast shadows. Therefore, no significant adverse impacts related to shadows would result from the proposed actions.

TITLE	LEAD AGENCY
Acting Director, Environmental Assessment and Review Division	Department of City Planning, acting on behalf of the City Planning Commission
NAME	DATE
Olga Abinader	2/8/2019
SIGNATURE	

TITLE Chair, City Planning Commission	
NAME Marisa Lago	DATE 2/11/2019
SIGNATURE	

Project Name: 273 Avenue U Rezoning
CEQR #: 18DCP104K
SEQRA Classification: Unlisted

Determination of Significance Appendix: (E) Designation (E-525)

To ensure that there would be no significant adverse air quality or noise impacts associated with the proposed project, an (E) designation (E-525) will be placed on the Development Site (Block 7103, Lot 42).

Noise

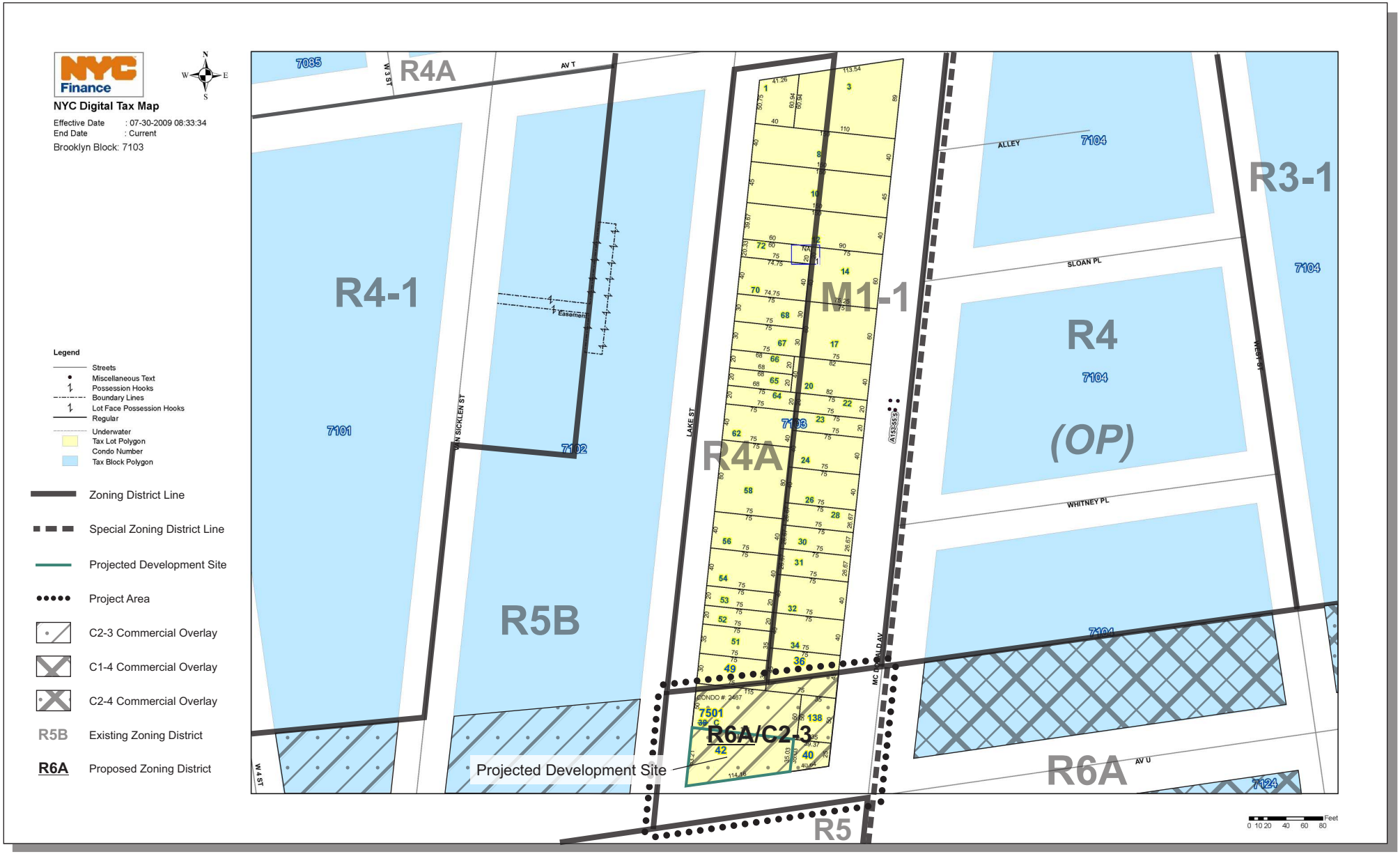
To ensure an acceptable interior noise environment, future residential/commercial/community facility uses must provide a closed-window condition with a minimum of 28 dB(A) window/wall attenuation on facades facing west (Lake Street) and 35 dB(A) of attenuation on the first floor of all other facades and 31 dB(A) of attenuation on all upper floors of all other facades to ensure an interior noise level not greater than 45 dB(A) for residential and community facility uses or not greater than 50 dB(A) for commercial uses. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Air Quality

Any new residential or commercial development on the above-referenced property must exclusively use natural gas as the type of fuel for heating, ventilating, air conditioning (HVAC) and hot water system to avoid any potential significant adverse air quality impacts. Stack shall be located at the highest tier and at a minimum of 46 feet above grade to avoid any potential significant adverse air quality impact.

Figure 1 - Site Location




NYC Finance
NYC Digital Tax Map
Effective Date : 07-30-2009 08:33:34
End Date : Current
Brooklyn Block: 7103
Legend
Streets
Miscellaneous Text
Possession Hooks
Boundary Lines
Lot Face Possession Hooks
Regular
Underwater
Tax Lot Polygon
Condo Number
Tax Block Polygon
Zoning District Line
Special Zoning District Line
Projected Development Site
Project Area
C2-3 Commercial Overlay
C1-4 Commercial Overlay
C2-4 Commercial Overlay
R5B Existing Zoning District
R6A Proposed Zoning District
R4A
R4-1
R5B
M1-1
R4
(OP)
R3-1
R6A/C2-3
R6A
R5
7085
7101
7102
7103
7104
7124
7501
AV T
AV U
W 3 ST
W 4 ST
ALLEY
SLOAN PL
WHITNEY PL
LAKE ST
N SICKLEN ST
MC DONALD AV
Projected Development Site
Feet
0 10 20 40 60 80

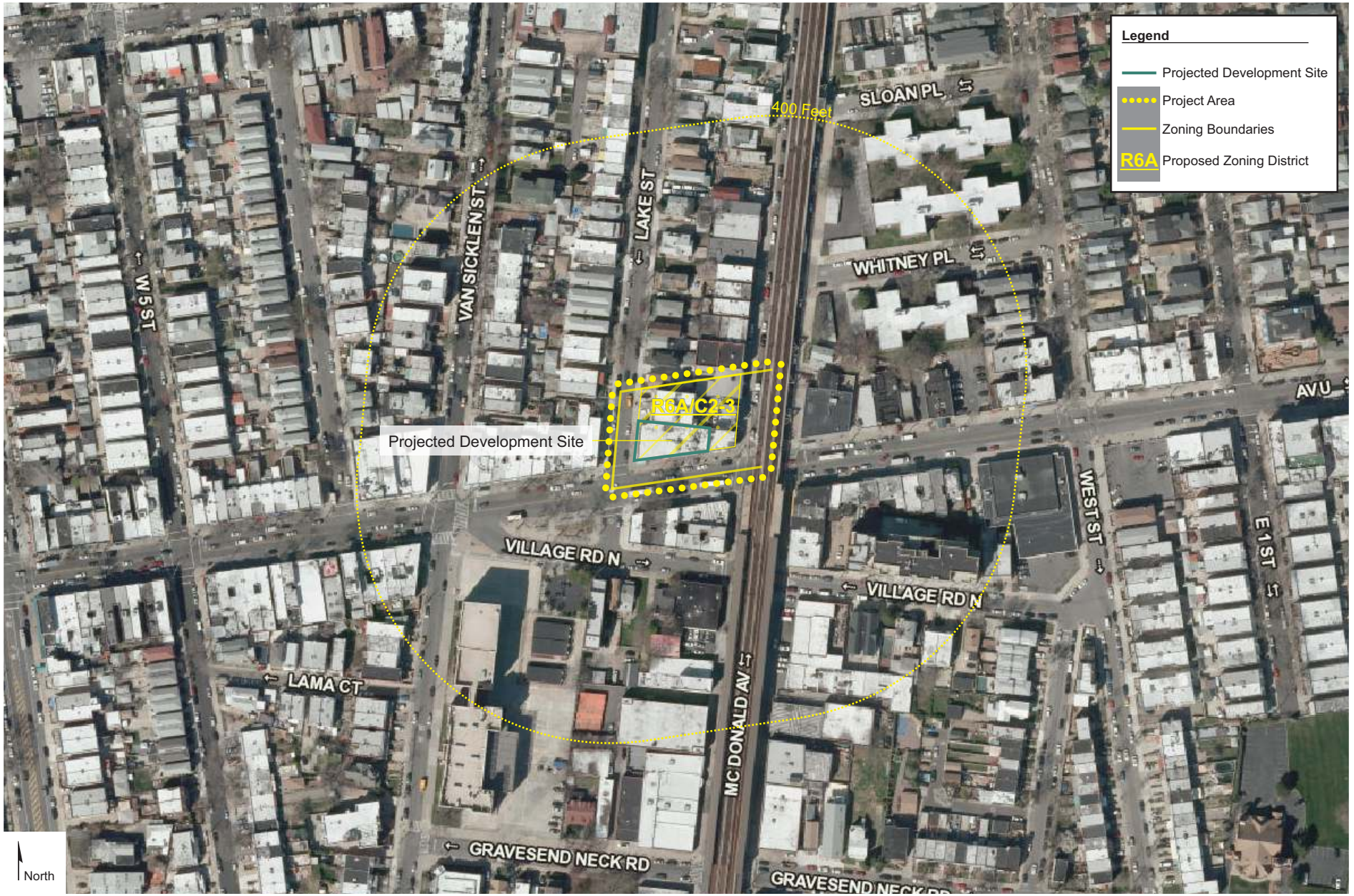
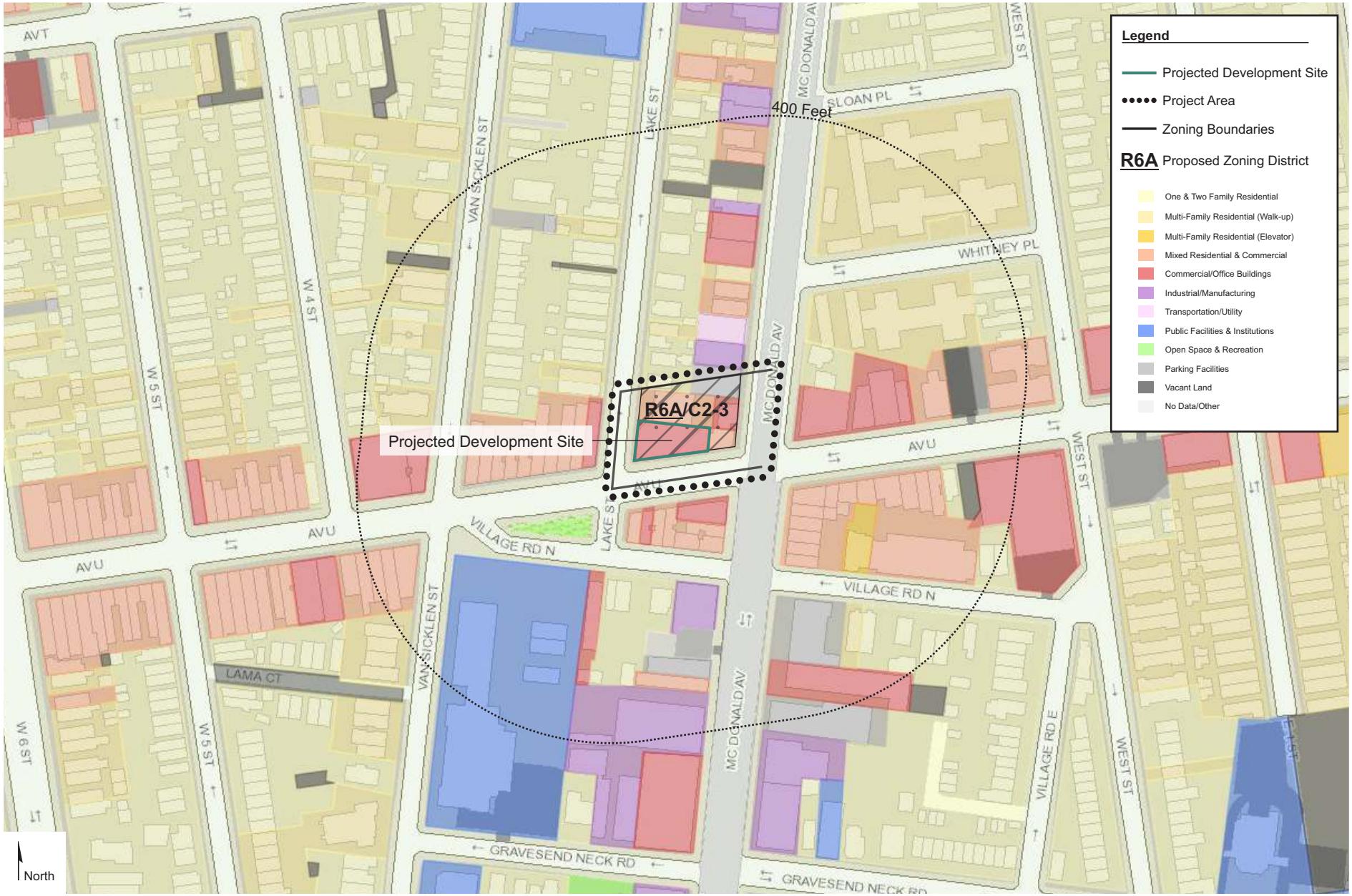
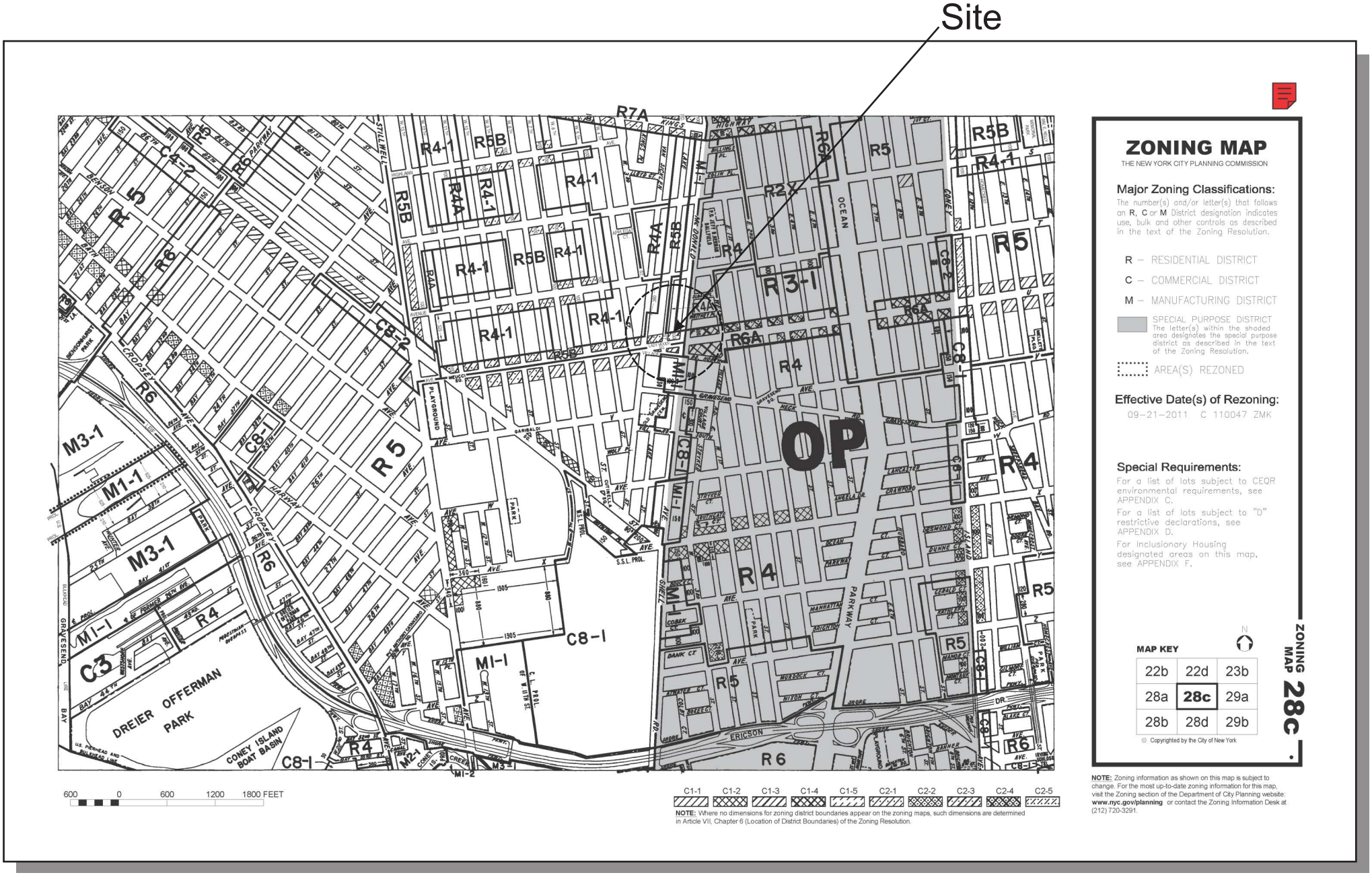
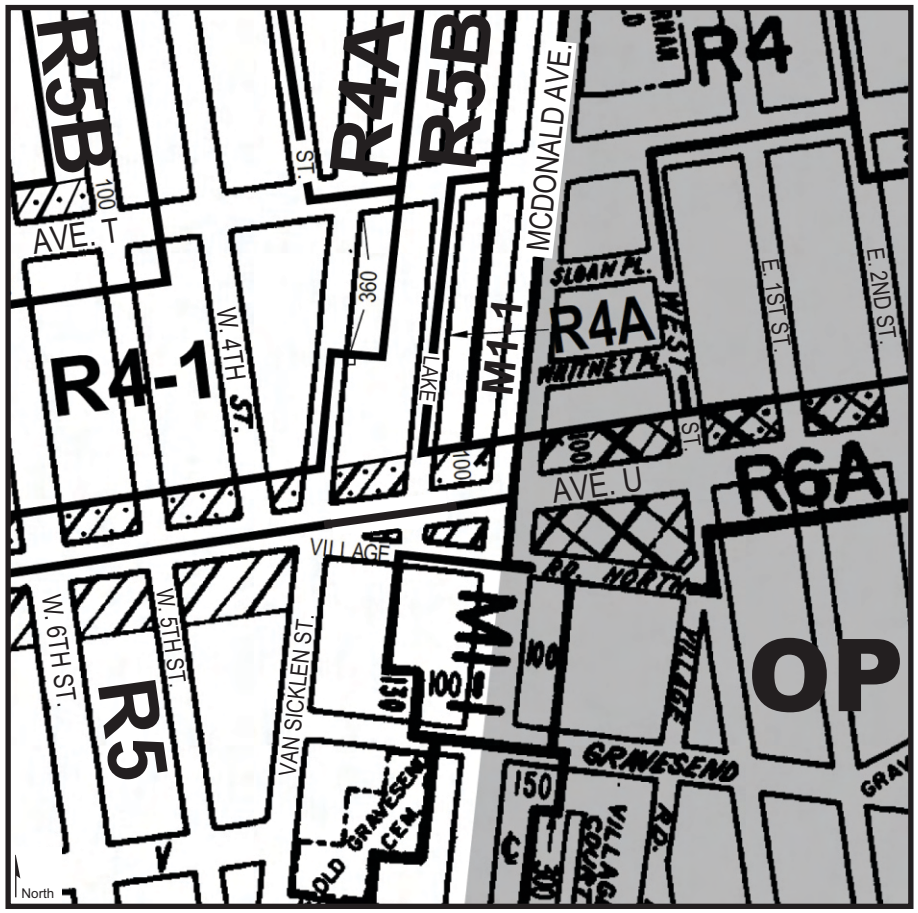

Legend
Projected Development Site
Project Area
Zoning Boundaries
R6A Proposed Zoning District
400 Feet
R6A/C2-3
Projected Development Site
SLOAN PL
WHITNEY PL
LAKE ST
VAN SICKLEN ST
W 5 ST
AV U
WEST ST
E 1 ST
VILLAGE RD N
LAMA CT
MC DONALD AV
GRAVESEND NECK RD
North
0
200
400
600 Feet

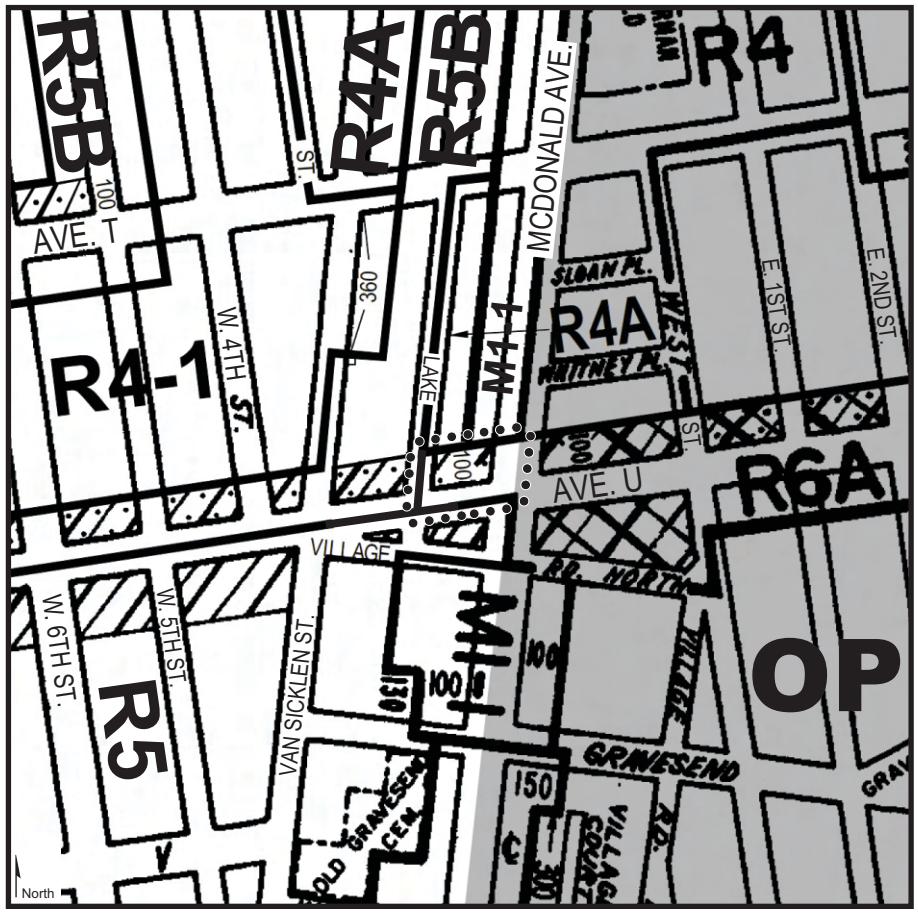
Figure 3 - Land Use Map




Site
ZONING MAP
THE NEW YORK CITY PLANNING COMMISSION
Major Zoning Classifications:
The number(s) and/or letter(s) that follows an R, C or M District designation indicates use, bulk and other controls as described in the text of the Zoning Resolution.
R – RESIDENTIAL DISTRICT
C – COMMERCIAL DISTRICT
M – MANUFACTURING DISTRICT
SPECIAL PURPOSE DISTRICT
The letter(s) within the shaded area designates the special purpose district as described in the text of the Zoning Resolution.
AREA(S) REZONED
Effective Date(s) of Rezoning:
09-21-2011 C 110047 ZMK
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.
MAP KEY
22b 22d 23b
28a 28c 29a
28b 28d 29b
© Copyrighted by the City of New York
ZONING MAP 28c
OP
DREIER OFFERMAN PARK
CONEY ISLAND BOAT BASIN
600 0 600 1200 1800 FEET
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.
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.



Current Zoning Map (28c)



Proposed Zoning Map (28c):
Area being rezoned is outlined with dotted lines
Rezoning from R5B/C2-3 to R6A/C2-3

273 AVENUE U REZONING

PROJECT DESCRIPTION

PROPOSED ACTIONS

The Applicant, CiaraFour Realty, LLC, seeks a zoning map amendment to extend an existing R6A district west to encompass the southern end of Block 7103, located within the Gravesend neighborhood of Brooklyn Community District 11. (See Figure 1, Site Location, and Figure 6, Zoning.) The existing R6A district is paired with a C1-4 local retail overlay; its extension would be paired with a C2-3 local commercial overlay. The proposed project area, currently zoned R5B/C2-3, consists of three tax lots in their entirety (Lots 40, 42, and 138,) and portions of three tax lots (Lots 36, 49, and 7501). (See Figure 2, Tax Map.) In addition to the zoning map amendment, a zoning text amendment to Appendix F of the Zoning Resolution (ZR) is sought to map a Mandatory Inclusionary Housing (MIH) area that would be coterminous with the rezoning area. (Together, these are the "proposed actions.")

The proposed actions would facilitate a vertical enlargement of an existing one-story commercial building on Block 7103, Lot 42 (the "development site," at the northeast corner of Avenue U and Lake Street) to create a four-story mixed-use building (the "proposed development") to contain approximately 11,236 square feet of floor area (12,300 gsf) for residential use (9 dwelling units) and 5,031 square feet of floor area for commercial use (in both zoning and gross square feet) to total 16,267 zoning square feet (for a floor area ratio (FAR) of 3.00) and 17,331 gsf.

ZONING COMPARISON

The proposed project area is currently zoned R5B/C2-3. R5B/C2-3 pairs a residential zone that permits the full range of residential and community facility uses listed in Use Groups 1, 2, 3, and 4 (ZR Section 22-10) with a local commercial overlay district that permits commercial uses listed in Use Groups 5, 6, 7, 8, 9, and 14 (ZR Section 32-10). Maximum permitted FARs are 1.35 for residential use (ZR Section 23-142), 2.00 for community facility use (ZR Section 24-11), and 1.00 for commercial use (ZR Section 33-121). Front and rear yards are required for residential, community facility, and mixed-use developments (ZR Sections 23-40 and 24-30), and rear yards are required for commercial developments (ZR Section 33-20). For a residential building or residential stories in a mixed-use building, the maximum permitted height is 33 feet (ZR Section 23-631(e)). For a community facility, the maximum permitted front wall height is 35 feet, at which point a setback is required, and above that height the building may not penetrate a sky exposure plane that extends upwards and rearwards over the lot from a line 35 feet above the front yard line at a 45 degree angle (ZR Section 24-521).

The proposed actions would rezone the project area to R6A/C2-3 and would map an MIH area coterminous with the rezoning area. Use regulations would be the same as they are now, but the bulk regulations would change. The maximum permitted FAR under R6A/C2-3 is 2.00 for commercial uses (ZR Section 33-121), 3.00 for community facility uses (ZR Section 24-11), and generally 3.00 for residential development (ZR Section 153), but 3.60 for residential development that is within an MIH area (ZR Section 154(d)(2)) or that is within an Inclusionary Housing designated area and satisfies the applicable Inclusionary Housing program requirements (ZR Section 23-154(b)). Rear yards are required,

but front and side yards are not (ZR Sections 23-40 and 24-30). For community facility development, the maximum permitted base (street wall) height is 60 feet, and the maximum permitted building height is 70 feet (ZR Sections 23-662(a) and 24-50). For a residential building or a mixed-use building that combines residential use with either community facility or commercial use, the maximums are also 60 feet and 70 feet if it does not include affordable housing or a qualifying ground floor (ZR Section 23-662(a)), 65 feet and 75 feet if it includes a qualifying ground floor but not affordable housing (ZR Section 23-662(b)), 65 feet and 80 feet if it satisfies the provisions of the Inclusionary Housing program but does not include a qualifying ground floor (ZR Section 223-664(b)), or 65 feet and 85 feet if it satisfies the provisions of the Inclusionary Housing program and includes a qualifying ground floor (ZR Section 23-664(b)).

DEVELOPMENT SITE

The development site is identified as Block 7103, Lot 42, and as 273 Avenue U. It occupies the southwest corner of Block 7103, with 114.2 feet of frontage along Avenue U and 63.2 feet of frontage along Lake Street. The northern property line extends 110.6 feet from Lake Street, and the eastern property line extends 35 feet from Avenue U. The site measures 5,432 square feet.

The site is developed with a single-story commercial retail building with 5,432 square feet of floor area (1.00 FAR). The building is ten feet tall and covers the entire lot.

PROJECT AREA

The proposed project area encompasses 14,829 square feet of lot area and consists of a parallelogram extending northwestward from Avenue U between McDonald Avenue (on the east) and Lake Street (on the west), to a depth of 100 feet from the avenue frontage. The area has 154.8 feet of frontage along Avenue U and 103.5 feet of frontage along both McDonald Avenue and Lake Street. (Note that Avenue U is not perpendicular to McDonald Avenue and Lake Street. The two lots that front on Avenue U (Lots 40 and 42) are therefore irregularly shaped; the other affected lots are rectangular.) It consists of the portion of Block 7103 that is currently zoned R5B/C2-3. On its north it abuts an R4A district on the western half of the block and an M1-1 district on the eastern half of the block. Lot 42 is under the control of the Applicant, while the remaining lots are under separate ownership.

In addition to the development site, the five other parcels wholly or partly within the project area are the following:

- Lot 40 (2272 McDonald Avenue) contains 1,015 square feet of lot area and is developed with a two-story mixed-use building with ground floor commercial retail and one residential unit above. The lot occupies the southeast corner of Block 7103, with 40.6 feet of frontage along Avenue U and 25 feet of frontage along McDonald Avenue. The northern property line extends 39.4 feet from McDonald Avenue, and the western property line extends 35 feet from Avenue U. The property contains 2,000 square feet of floor area (1.97 FAR) where 1.35 FAR is currently permitted for mixed residential and commercial buildings. The building is legally noncomplying as the current building was constructed prior to 1961.
- Lot 138 (2266 McDonald Avenue) is located to the north of Lot 40 and has 50 feet of frontage along McDonald Avenue and a depth of 35 feet. It contains 1,750 square feet of lot area and is developed with a two-story building containing 3,538 square feet of floor area (2.00 FAR). The building opened in 2008 with a Certificate of Occupancy for medical diagnostic and treatment facilities (a community facility use). The building now contains commercial uses (in violation of

not only the Certificate of Occupancy but of zoning regulations, which restrict commercial uses to an FAR of 1.00).[1]

- Lot 7501 (279 Lake Street) is located to the north of Lot 42 and has 50 feet of frontage along Lake Street and a depth of 115 feet. It contains 5,750 square feet of lot area, of which 5,414 square feet are within the proposed project area. The remaining 336 square foot portion of the lot is zoned R4A. The lot is developed with a four-story mixed-use building containing 11,336 square feet of floor area (1.97 FAR) with ground floor commercial use and 12 residential units above. The building opened in 2007 and belatedly received a Certificate of Occupancy in 2009 for residential apartments above ground floor medical offices (a community facility use), even though the residential square footage exceeds what the zoning allows.[2]
- Lot 36 (2260 McDonald Avenue), which is the northernmost affected lot on the eastern side of the block, has 45 feet of frontage along McDonald Avenue and a depth of 75 feet. It contains 3,375 square feet of lot area, of which 1,149 square feet are in the project area. The other 2,226 square feet are zoned M1-1. The lot is developed with a legally nonconforming 3,375 square foot automotive service establishment (Use Group 16), which has existed since before 1961, according to the Certificate of Occupancy.
- Lot 49 (275 Lake Street), which is the northernmost affected lot on the western side of the block, has 30 feet of frontage along Lake Street and a depth of 75 feet. It contains 2,250 square feet of lot area, but only a 69-square-foot triangle in the southeastern part of the lot is within the proposed project area and the existing R5B/C2-3 district. The excluded 2,181 square foot portion of the lot is zoned R4A. The lot is developed with a single-family residential building containing 735 square feet (0.33 FAR).

Table 1 summarizes information about the six affected lots.

1 The permitted FAR for community facility use is 2.00, which translates to 3,500 sf on this lot. Although the estimate of actual square footage slightly exceeds this number, it may be presumed that, with mechanical space deductions, the zoning floor area would comply if the building were used as a community facility.
2 When the New Building permit was issued in 2003, current Lots 138 and 7501 were combined as Lot 38. The residential floor area would have been complying on the 7,500 sf Lot 38. The lot was subdivided after the building permit was issued.

Table 1: Affected Lots on Block 7103

Lot	Address	SF within Project Area	SF outside Project Area	Total Lot Area	Current Development
36	2260 McDonald Ave.	1,149	2,226	3,375	3,375 sf, 1-story auto repair shop
40	2272 McDonald Ave.	1,015	0	1,015	2,000 sf, 2-story retail and residential
42	273 Avenue U	5,432	0	5,432	5,432 sf, 1-story retail building
49	275 Lake Street	69	2,181	2,250	735 sf single-family home
138	2266 McDonald Ave.	1,750	0	1,750	3,538 sf, 2-story commercial building
7501	279 Lake Street	5,414	336	5,750	11,336 sf, 4-story retail and residential
Total		14,829	4,743	19,572	

PROPOSED DEVELOPMENT

The proposed actions would facilitate a vertical enlargement of the existing one-story (10-foot-tall) commercial building, adding three stories containing 11,899 gsf of residential space. The first floor would remain commercial, except for a 401-square-foot residential entrance and lobby. The resulting four-story (40-foot-tall) mixed-use building would contain 5,031 square feet of ground floor retail space and nine dwelling units within 12,300 gsf (11,236 zsf) of residential space. There would be a total of 17,331 gsf, of which 16,267 square feet would count for zoning purposes, for an FAR of 3.00.

ZR Section 23-154(d)(4)(i) specifies that within an MIH area the inclusionary housing requirement applies only to projects with at least ten dwelling units or at least 12,500 square feet of residential floor area, and the proposed project would be below the specified thresholds. The nine dwelling units would all be market rate.

Because the required number of accessory off-street parking spaces (equal to 50 percent of the number of market rate dwelling units) would be five and ZR Section 25-261 waives the requirement for five or fewer spaces in an R6A district, no parking spaces would be provided.

For purposes of a conservative analysis, a reasonable worst-case development scenario (RWCDS) has been defined for the development site, as described below under Analysis Framework. Part II of this report, Technical Analyses, assesses the RWCDS rather than the actual proposed development.

PURPOSE AND NEED

The Applicant believes that a high demand for housing exists in the Gravesend area, but that development is restricted by the limited floor area permitted under the current R5B/C2-3 zoning. With maximum permitted FARs of 1.35 for residential uses and 1.00 for commercial uses, the existing zoning would restrict a residential enlargement of the existing building to 1,901 sf rather than the

proposed 11,899 sf. The proposed enlargement would be permitted in an R6A/C2-3 district, and an R6A/C1-4 district is mapped to the immediate east of the project area (along Avenue U on the opposite side of McDonald Avenue). Like the existing R6A/C1-4 district, the project area supports a mix of residential and commercial uses, abuts the intersection of two vibrant and busy mixed-use streets (Avenue U and McDonald Avenue), and is in close proximity to public transit (the Avenue U station of the NYCT F Train, accessible by stairways located at the southern corners of the intersection, as well as a bus route along Avenue U). The proposed actions would also serve to bring existing buildings into compliance with zoning bulk regulations on three lots (Lots 40, 138, and 7501) within the project area.

ANALYSIS FRAMEWORK

Existing Conditions

As is discussed above, the development site is developed with a single-story commercial retail building with 5,432 square feet of floor area (1.00 FAR). The building is ten feet tall and covers the entire lot.

As is also discussed above, five out parcels are wholly or partly within the project area, Lot 36 is developed with a legally nonconforming 3,375 square foot automotive service establishment (Use Group 16). Lot 40 is developed with a two-story mixed-use building with ground floor commercial retail and one residential unit above. Lot 49 is developed with a single-family residential building. Lot 138 is developed with a two-story building containing commercial uses. Lot 7501 is developed with a four-story mixed-use building containing residential units above ground floor commercial space.

The Future without the Proposed Actions

Absent the proposed actions, the property owner would not enlarge the existing building or redevelop the site. The lot is already developed with the maximum permitted commercial square footage, and only 1,901 square feet of residential floor area (0.35 FAR) could be added, which would not be worth the cost and disruption.

It is assumed that the noncompliance on Lot 138 would be corrected. Currently, the development on that lot, a building with two commercial spaces, exceeds the FAR permitted for commercial use (1.00) but not the maximum permitted FAR for any permitted use (2.00, for community facility use). One of the two commercial spaces (1,769 gsf) would be converted to a medical office.

No changes are anticipated on any of the other four lots located at least partially within the project area. As discussed above, Lots 40 and 7501 are already overbuilt relative to the current zoning, and additional floor area would not be permitted. Lot 36 contains an active use, and the lot is developed with the maximum permitted commercial floor area. Because residential and most community facility uses are not permitted on the M1-1 portion of the split lot, redevelopment to include these uses would not be practical. Lot 49 contains an owner-occupied single-family home.

The Future with the Proposed Actions

In the future with the proposed actions, the existing one-story commercial building on the development site (Lot 42) would be enlarged with residential stories. To ensure a conservative analysis, the EAS would not address the proposed project described above, but rather a reasonable worst-case development scenario (RWCDS) consisting of the maximum potential development under the proposed zoning. This would be a mixed-use building with an FAR of 3.60. The ground floor, which would be

vertically enlarged to a height of at least 13 feet, would contain 5,301 square feet of commercial floor area and a 401 square foot residential entrance and lobby. The enlarged building would contain 5,031 square feet of ground floor retail space and 15 dwelling units within 15,597 gsf (14,524 zsf) of residential space. There would be a total of 20,628 gsf, of which 19,555 square feet would count for zoning purposes. The building would be up to eight stories (85 feet) in height, with setbacks at 65 feet.

With 15 dwelling units, the enlargement would be subject to the MIH requirements. The RWCDS projects that the project would satisfy the requirements of MIH Option 2, under which at least 30 percent of the residential floor area must be associated with income-restricted residential units marketed exclusively to qualifying households, all of whom would have incomes not exceeding 130 percent of the income index cited in ZR Section 23-911, and with the weighted average of the income bands for the affordable units not exceeding 80 percent of the index. Of the 15 dwelling units, five would be income- restricted, and ten would be market rate.

For CEQR purposes, dwelling units are considered "affordable" if they are available exclusively to low- and moderate-income households with income not exceeding 80 percent of the Area Median Income (AMI). Because the income-restricted Inclusionary Housing units may include ones available to middle- income households within specified income bands, not all of the income-restricted units would be considered affordable housing. It is conservatively assumed that three (20 percent) of the 15 units would be affordable.

No parking spaces would be provided. Because the project area is within a Transit Zone, the accessory off-street parking requirement would apply only to the ten market rate units. The required number of accessory off-street parking spaces (equal to 50 percent of the number of market rate dwelling units) would be five, and ZR Section 25-261 waives the requirement for five or fewer spaces in an R6A district.

Because the rezoning would increase the permitted commercial FAR from 1.00 to 2.00, the 2.00 FAR commercial building on Lot 138 would become a complying development. There would be no need for either of the building's two commercial spaces to be converted to community facility use, and it is assumed that no such change would occur.

No other enlargements, redevelopments, or other land use changes are expected to result from the proposed actions. Lot 40 is developed with a mixed-use building having an FAR of 1.97, which is more than 50 percent of the 3.60 FAR that would be permitted under the proposed zoning. The lot would therefore not be a projected development site. Lots 138 and 7501 are developed with buildings constructed less than a decade ago, which would not be expected to be demolished for further redevelopment. Lot 36 is a split lot, the majority of which is outside the rezoning area and within an M1-1 district that does not permit residential development. The proposed actions would have no practical effect on the development potential of Lot 49 because only a 69-square-foot portion of the lot is within the project area.

In determining whether the project area contains any projected or potential development sites aside from the project site, the analysis also considered the possibility that individual lots might be merged to form an assemblage. In particular, the analysis focused on a hypothetical merger of Lots 40 and 138 to form a 2,765 sf lot with 40.6 feet of frontage along Avenue U and 75 feet of frontage along McDonald Avenue. The assemblage would have two existing buildings with a combined 7,307 gsf (1,000 gsf of residential space, with one dwelling unit, and 6,307 gsf of commercial space), including

5,500 zsf (1,000 zsf of residential floor area and 4,500 zsf of commercial floor area), for an FAR of 1.99 (0.36 residential and 1.63 commercial). Because the two lots are under separate ownership, because their merger would yield a lot that is itself quite small, because the assemblage would not be substantially underutilized relative to the proposed zoning (generally considered to be the case if it is developed to less than 50 percent of what would be the permitted FAR or if the existing buildings are functionally obsolescent), and because one of the two buildings was constructed within the past decade, the assemblage would not be considered a likely candidate for redevelopment under the with-action scenario (that is, a projected development site). Moreover, the property owners' gain from redevelopment would be small at best. Any new development on the assemblage would probably consist of residential stories above a commercial ground floor. Assuming the maximum permitted FAR of 3.60, with a full coverage ground floor containing retail space and a small residential lobby and assuming the same gsf-to-zsf ratio for the above-grade residential floor area as that for the proposed project, the result would be seven dwelling units (one per floor within seven residential stories) and about 2,500 sf of ground floor retail space (including cellar storage area, an estimated 3,715 gsf of commercial space). In return, the property owners would demolish buildings with one dwelling unit and 6,307 gsf (4,500 zsf) of commercial floor area. The net result would be a gain of six dwelling units and a loss of about 2,500 gsf (2,000 zsf) of commercial space. Add the time spent without any revenue from the property, the development costs, and the risk, and considering the assemblage's location directly facing an elevated train trestle and adjacent to a row of three contiguous automotive repair shops in what would remain an M1-1 zoning district, and it can be concluded that the assemblage would not constitute a potential development site

Tables 2 and 3 present the existing and projected future no-action and with-action conditions. Table 2 presents this information for the development site, and Table 3 presents the information for the six lots wholly or partly within the project area.

REQUIRED APPROVALS

The proposed project would require an amendment to zoning sectional map 28c to rezone a 14,829 square foot area from R5B/C2-3 to R6A/C2-3 and a Zoning Text Amendment to Appendix F to map an MIH area coterminous with the rezoning area. The actions would be subject to the Uniform Land Use Review Procedure (ULURP).

BUILD YEAR

The proposed project would be completed in a single phase. Based on an estimated 12-month approval process and an 18-month construction period, the Build Year is assumed to be 2020.

Table 2: Existing and Future Conditions on the Development Site

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
LAND USE				
Residential	NO	NO	YES	
If "yes," specify the following:				
Describe type of residential structures			Multifamily Units	
No. of dwelling units			15	+15
No. of low- to moderate-income units			3	+3
Gross floor area (sq. ft.)			15,597	+15,597
Commercial	YES	YES	YES	
If "yes," specify the following:				
Describe type (retail, office, other)	Retail	Retail	Retail	
Gross floor area (sq. ft.)	5,432	5,432	5,031	-401
Manufacturing/Industrial	NO	NO	NO	
If "yes," specify the following:				
Type of use				
Gross floor area (sq. ft.)				
Open storage area (sq. ft.)				
If any unenclosed activities, specify:				
Community Facility	NO	NO	NO	
If "yes," specify the following:				
Type				
Gross floor area (sq. ft.)				
Vacant Land	NO	NO	NO	
If "yes," describe:				
Other Land Uses	NO	NO	NO	
If "yes," describe:				
Garages	NO	NO	NO	
If "yes," specify the following:				
No. of public spaces				
No. of accessory spaces				
Lots	NO	NO	NO	
If "yes," specify the following:				
No. of public spaces				
No. of accessory spaces				
ZONING				
Zoning classification	R5B/C2-3	R5B/C2-3	R6A/C2-3	
Maximum amount of floor area that can be developed	1.35 Residential 1.00 Commercial 2.00 Community Facility	1.35 Residential 1.00 Commercial 2.00 Community Facility	3.60 Residential 2.00 Commercial 3.00 Community Facility	+2.25 R. +1.00 C +1.00 CF
Predominant land use and zoning classifications within land use study area(s) or a 400 ft. radius of proposed project area	Residential and Commercial; R5B/C2-3, R6A/C2-3, R4A, M1-1	Same	Same	

Table 3: Existing and Future Conditions on All Project Area Lots

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
LAND USE				
Residential	YES	YES	YES	
If "yes," specify the following:				
Describe type of residential structures	Apts; single-family	Apts; single-family	Apts; single-family	
No. of dwelling units	14	14	29	+15
No. of low- to moderate-income units	0	0	3	+3
Gross floor area (sq. ft.)	10,637	10,637	26,234	+15,597
Commercial	YES	YES	YES	
If "yes," specify the following:				
Describe type (retail, office, other)	Retail; auto repair	Retail; auto repair	Retail; auto repair	
Gross floor area (sq. ft.)	16,179	14,410	15,778	+1.368
Manufacturing/Industrial	NO	NO	NO	
If "yes," specify the following:				
Type of use				
Gross floor area (sq. ft.)				
Open storage area (sq. ft.)				
If any unenclosed activities, specify:				
Community Facility	NO	YES	NO	
If "yes," specify the following:				
Type		Medical office		
Gross floor area (sq. ft.)		1,769		-1,769
Vacant Land	NO	NO	NO	
If "yes," describe:				
Other Land Uses	NO	NO	NO	
If "yes," describe:				
Garages	NO	NO	NO	
If "yes," specify the following:				
No. of public spaces				
No. of accessory spaces				
Lots	NO	NO	NO	
If "yes," specify the following:				
No. of public spaces				
No. of accessory spaces				
ZONING				
Zoning classification	R5B/C2-3, R4A, M1-1	R5B/C2-3, R4A, M1-1	R6A/C2-3, R4A, M1-1	
Maximum amount of floor area that can be developed	R: 1.35, .75, 0 C: 1.0, 0, 1.0 CF: 2.0, 2.0, 2.4	R: 1.35, .75, 0 C: 1.0, 0, 1.0 CF: 2.0, 2.0, 2.4	R: 3.60, .75, 0 C: 2.0, 0, 1.0 CF: 3.0, 2.0, 2.4	+2.25 R. +1.00 C +1.00 CF
Predominant land use and zoning classifications within land use study area(s) or a 400 ft. radius of proposed project area	Residential and Commercial; R5B/C2-3, R6A/C2-3, R4A, M1-1	Same	Same	

PART II: TECHNICAL ANALYSES

INTRODUCTION

Based on the criteria in Part II of the Environmental Assessment Statement Full Form, the following technical areas require further analysis: land use, zoning, and public policy; shadows; urban design and visual resources; transportation; air quality; and noise. These analyses, which follow the guidance in the *CEQR Technical Manual*, are presented below. The heading numbers correlate with the relevant chapters of the *CEQR Technical Manual*.

4. LAND USE, ZONING, AND PUBLIC POLICY

Introduction

A land use analysis characterizes the uses and development trends in the area that may be affected by an action and determines whether a proposed project is compatible with those conditions or whether it may adversely affect them. The analysis also considers the proposed project's compliance with, and effect on, the area's zoning and other applicable public policies.

According to the *CEQR Technical Manual*, a preliminary assessment that includes a basic description of existing and future land uses, as well as basic zoning information, is provided for most projects, regardless of their anticipated effects. Regarding public policy, the *CEQR Technical Manual* states, "Large, publicly-sponsored projects are assessed for their consistency with PlaNYC, the City's sustainability plan." An assessment of an action's consistency with the Waterfront Revitalization Program is required if an action would occur within the designated Coastal Zone. Public policy assessments are also appropriate if an action would occur within an area covered by an Urban Renewal Plan or a 197-A Plan.

Study Area

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 proposed project, as well as the location and context of the area that could be affected by the project. Study area radii vary according to these factors, with suggested study areas ranging from 400 feet for a small project to 0.5 miles for a very large project.

Because of the modest size of the proposed project, the land use and zoning assessment for the proposed action considers a study area extending 400 feet around the proposed rezoning area. As shown in the Land Use Map, the study area extends northward approximately two-thirds of the way to Avenue T, eastward to West Street, southward to the middle of the block between Village Road North and Gravesend Neck Road, and westward to West 4th Street.

Need for a Preliminary Assessment

A land use and zoning assessment is appropriate for the proposed actions, which include a zoning map amendment.

The proposed project is neither large nor publicly sponsored. No portion of the proposed rezoning area is within an urban renewal area, an area covered by a 197-a Plan, or the Coastal Zone. This section therefore focuses exclusively on land use and zoning.

Land Use

<u>Existing Conditions within the Project Area</u>

The proposed project area encompasses 14,829 square feet of lot area and consists of a parallelogram extending northwestward from Avenue U between McDonald Avenue (on the east) and Lake Street (on the west), to a depth of 100 feet from the avenue frontage. The area has 154.8 feet of frontage along Avenue U and 103.5 feet of frontage along both McDonald Avenue and Lake Street. (Note that Avenue U is not perpendicular to McDonald Avenue and Lake Street. The two lots that front on Avenue U (Lots 40 and 42) are therefore irregularly shaped; the other affected lots are rectangular.)

The development site is identified as Block 7103 Lot 42, and as 273 Avenue U. It occupies the southwest corner of Block 7103, with 114.2 feet of frontage along Avenue U and 63.2 feet of frontage along Lake Street. The northern property line extends 110.6 feet from Lake Street, and the eastern property line extends 35 feet from Avenue U. The site measures 5,432 square feet.

The site is developed with a single-story commercial retail building with 5,432 square feet of floor area (1.00 FAR). The building is ten feet tall and covers the entire lot.

In addition to the development site, the five other parcels wholly or partly within the project area are the following:

- Lot 40 (2272 McDonald Avenue) contains 1,015 square feet of lot area and is developed with a two-story mixed-use building with ground floor commercial retail and one residential unit above. The lot occupies the southeast corner of Block 7103, with 40.6 feet of frontage along Avenue U and 25 feet of frontage along McDonald Avenue. The northern property line extends 39.4 feet from McDonald Avenue, and the western property line extends 35 feet from Avenue U. The property contains 2,000 square feet of floor area (1.97 FAR) where 1.35 FAR is currently permitted for mixed residential and commercial buildings. The building is legally noncomplying as the current building was constructed prior to 1961.
- Lot 138 (2266 McDonald Avenue) is located to the north of Lot 40 and has 50 feet of frontage along McDonald Avenue and a depth of 35 feet. It contains 1,750 square feet of lot area and is developed with a two-story building containing 3,538 square feet of floor area (2.00 FAR). The building opened in 2008 with a Certificate of Occupancy for medical diagnostic and treatment facilities (a community facility use). The building now contains commercial uses (in violation of not only the Certificate of Occupancy but of zoning regulations, which restrict commercial uses to an FAR of 1.00).[3]
- Lot 7501 (279 Lake Street) is located to the north of Lot 42 and has 50 feet of frontage along Lake Street and a depth of 115 feet. It contains 5,750 square feet of lot area, of which 5,414 square feet are within the proposed project area. The remaining 336 square foot portion of the lot is zoned R4A. The lot is developed with a four-story mixed-use building containing 11,336 square feet of floor area (1.97 FAR) with ground floor commercial use and 12 residential units above. The building opened in 2007 and belatedly received a Certificate of Occupancy in 2009 for residential apartments above ground floor medical offices (a community facility use), even though the residential square footage exceeds what the zoning allows.[4]
- Lot 36 (2260 McDonald Avenue), which is the northernmost affected lot on the eastern side of the block, has 45 feet of frontage along McDonald Avenue and a depth of 75 feet. It contains 3,375 square feet of lot area, of which 1,149 square feet are in the project area. The other 2,226 square feet are zoned M1-1. The lot is developed with a legally nonconforming 3,375 square foot automotive service establishment (Use Group 16), which has existed since before 1961, according to the Certificate of Occupancy.

3 The permitted FAR for community facility use is 2.00, which translates to 3,500 sf on this lot. Although the estimate of actual square footage slightly exceeds this number, it may be presumed that, with mechanical space deductions, the zoning floor area would comply if the building were used as a community facility.
4 When the New Building permit was issued in 2003, current Lots 138 and 7501 were combined as Lot 38. The residential floor area would have been complying on the 7,500 sf Lot 38. The lot was subdivided after the building permit was issued.

- Lot 49 (275 Lake Street), which is the northernmost affected lot on the western side of the block, has 30 feet of frontage along Lake Street and a depth of 75 feet. It contains 2,250 square feet of lot area, but only a 69-square-foot triangle in the southeastern part of the lot is within the proposed project area and the existing R5B/C2-3 district. The excluded 2,181 square foot portion of the lot is zoned R4A. The lot is developed with a single-family residential building containing 735 square feet (0.33 FAR).

Existing Conditions in the 400-Foot Study Area

Land uses within the study area are mixed. They include one- and two-family homes, residential apartment buildings, local retail and service establishments, mixed-use buildings with residential units above ground floor commercial establishments, automotive repair shops, a bakery, a post office, and a school.

On Block 7103 (the project area block, bounded by Lake Street, Avenue U, McDonald Avenue, and Avenue T), the Lake Street blockfront is solidly residential, with one-family homes, one multifamily walkup, and a small vacant lot (Lot 64, 241 Lake Street). Uses along the McDonald Avenue blockfront (facing an elevated subway trestle) are mixed. They include, from south to north, an auto repair shop, a two-story building with a dance studio above an auto repair shop, three-story buildings with residential above commercial units, a three-story residential building, one-story retail establishments, a heating and air conditioning systems sales and installation establishment, a two-family home, and a welding and plumbing establishment.

To the west, one-and two-family homes and three-story multifamily walkups line the streets north of Avenue U. Two-story buildings with commercial ground floors and either residential or commercial second floors line the north side of Avenue T between Lake Street and West 4th Street.

To the east, on Block 7104 (consisting of two physical blocks bounded by Avenue U, McDonald Avenue, Sloan Place, and West Street), residential uses prevail except along Avenue U, which supports both commercial and residential uses. Three-story apartment buildings and accessory garage buildings occupy the northern block and the north side of the southern block (on Whitney Place). One- and two-family homes occupy the McDonald Avenue and West Street midblocks. Along the north side of Avenue U are a bank, a dental office, a butcher shop, a furniture and design showroom, a funeral home with a residential second story, a vacant lot (Lot 263, 331 Avenue U), and a four-story building with residential apartments above stores.

In the southeastern part of the study area, Block 7124 (bounded by McDonald Avenue, Avenue U, West Street, and Village Road North) contains two-story residential over commercial buildings, two-family homes, a small vacant lot (Lot 17, 326 Avenue U), and two elevator apartment fronting on Village Road North (a seven-story building completed in 2005 with a 3.74 FAR and a six-story building completed in 2006 with a 3.25 FAR). The study area also includes a small part of the block to the south of Block 7124, with residential buildings along the south side of Village Road North and two auto repair shops and a door store on the east side of McDonald Avenue.

The southwestern part of the study area consists of two small blocks and portions of two larger blocks. Directly across Avenue U from the project area is a small block bounded by McDonald Avenue, Village Road North, Lake Street, and Avenue U, containing two-story residential over commercial buildings and two commercial buildings. To its west is a small triangular block consisting of a landscaped sitting area known as Lady Moody Triangle. On the block located across Village Road North from these two small blocks, a four-story public school occupies the entire western half of the block along Van Sicklen

Street, a four-story office building and one-and two-family homes occupy the Village Road North midblock, a two-story commercial bakery occupies the southwest corner of McDonald Avenue and Village Road North, and a residential over commercial building and a two-story warehouse are located to the south of the bakery on McDonald Avenue. Finally, southwest of the intersection of Avenue U and Van Sicklen Street, two-story residential over commercial buildings face Avenue U, and residential buildings face Van Sicklen Street.

Future Conditions without the Proposed Actions

Absent the proposed actions, the property owner would not enlarge the existing building or redevelop the site. The lot is already developed with the maximum permitted commercial square footage, and only 1,901 square feet of residential floor area (0.35 FAR) could be added, which would not be worth the cost and disruption.

It is assumed that the noncompliance on Lot 138 would be corrected. Currently, the development on that lot, a building with two commercial spaces, exceeds the FAR permitted for commercial use (1.00) but not the maximum permitted FAR for any permitted use (2.00, for community facility use). One of the two commercial spaces (1,769 gsf) would be converted to a medical office.

No changes are anticipated on any of the other four lots located at least partially within the project area. As discussed above, Lots 40, 138, and 7501 are already overbuilt relative to the current zoning, and additional floor area would not be permitted. Lot 36 contains an active use, and the lot is developed with the maximum permitted commercial floor area. Because residential and most community facility uses are not permitted on the M1-1 portion of the split lot, redevelopment to include these uses would not be practical. Lot 49 contains an owner-occupied single-family home.

Two land use changes are anticipated within the study area. The vacant lot on the north side of Avenue U between McDonald Avenue and West Street (331 Avenue U) will be redeveloped with a seven-story building with 13 dwelling units above two retail stores. The smaller vacant lot on the south side of that block (326 Avenue U), directly across the street from the other lot, will be redeveloped with a six-story building with ten dwelling units above one retail store. The Department of Buildings has issued New Building (NB) permits for both developments.

Future Conditions with the Proposed Actions

In the future with the proposed actions, the existing one-story commercial building on the project site (Lot 42) would be enlarged with residential stories. Assuming the maximum potential development under the proposed zoning, the result would be a mixed-use building with an FAR of 3.60. The ground floor, which would be vertically enlarged to a height of at least 13 feet, would contain 5,301 square feet of commercial floor area and a 401 square foot residential entrance and lobby. The enlarged building would contain 5,031 square feet of ground floor retail space and 15 dwelling units within 15,597 gsf (14,524 zsf) of residential space. There would be a total of 20,628 gsf, of which 19,555 square feet would count for zoning purposes. The building would be up to eight stories (85 feet) in height, with setbacks at 65 feet.

Because the rezoning would increase the permitted commercial FAR from 1.00 to 2.00, the 2.00 FAR commercial building on Lot 138 would become a complying development. There would be no need for either of the building's two commercial spaces to be converted to community facility use, and it is assumed that no such change would occur.

No other redevelopments, enlargements or other land use changes are anticipated as a result of the proposed actions.

A mixed-use building with residential units above commercial storefronts would be consistent with the existing land uses along Avenue U, and residential development would be consistent with the land use along Lake Street and throughout the study area. The proposed actions would therefore not have a significant adverse impact on land use.

Zoning

Existing Conditions

The proposed project area is currently zoned R5B/C2-3. R5B/C2-3 pairs a residential zone that permits the full range of residential and community facility uses listed in Use Groups 1, 2, 3, and 4 (ZR Section 22-10) with a local commercial overlay district that permits commercial uses listed in Use Groups 5, 6, 7, 8, 9, and 14 (ZR Section 32-10). Maximum permitted FARs are 1.35 for residential use (ZR Section 23-142), 2.00 for community facility use (ZR Section 24-11), and 1.00 for commercial use (ZR Section 33-121) and, for community facility development, 55 percent on an interior or through lot and 60 percent on a corner lot (ZR Section 24-11). The maximum permitted lot coverage is 55 percent for residential development (ZR Section 23-142. Front and rear yards are required for residential, community facility, and mixed-use developments (ZR Sections 23-40 and 24-30), and rear yards are required for commercial developments (ZR Section 33-20). For a residential building or residential stories in a mixed-use building, the maximum permitted height is 33 feet (ZR Section 23-631(e)). For a community facility, the maximum permitted front wall height is 35 feet, at which point a setback is required, and above that height the building may not penetrate a sky exposure plane that extends upwards and rearwards over the lot from a line 35 feet above the front yard line at a 45 degree angle (ZR Section 24-521).

Only two of the six lots wholly or partly within the project area fully comply with the R5B/C2-3 zoning: Block 7103, Lot 42 (the project site) and Lot 49. Lot 36 (a split lot) contains a legally nonconforming auto repair shop. Lots 40, 138, and 7501 are developed with conforming uses but are overbuilt relative to the current zoning.

Within the study area, the R5B/C2-3 zoning extends westward along the north side of Avenue U. On the block to the west, the R5B district without the commercial overlay – which does not permit commercial uses – extends northward along Lake and Van Sicklen Streets.

An R4A resident district is mapped to the north of the project area along Lake Street. Two of the three lots partially located within the project area, Lots 49 and 7501, are divided between the R5B/C2-3 and R4A districts. Residential and community facility uses are permitted in the R4A district (ZR Section 22-10). Maximum permitted FARs are 0.75 for residential use (ZR Section 23-442) and 2.00 for community facilities (ZR Section 24-11). Front, side, and rear yards are required (ZR Sections 23-40 and 24-30). For a residential building, the maximum permitted height of the perimeter walls is 21 feet, and the maximum permitted height at the peak of the roof is 35 feet (ZR Section 23-631(b)). For a community facility building, the height and setback regulations are the same as in an R5B district (ZR Section 24-521).

An M1-1 light manufacturing district is mapped to the north of the project area along the west side of McDonald Avenue, as well as on both sides of McDonald Avenue south of Village Road North. The third lot partially within the project area, Lot 36, is divided between the R5B/C2-3 and M1-1 districts. The M1-1 district permits most but not all commercial uses, light manufacturing uses listed in Use

Group 17, and certain specified community facility uses but precludes all residential and most community facility uses (ZR Section 42-10). The maximum permitted FAR is 1.00 for commercial or manufacturing uses (ZR Section 43-12) and 2.40 for community facility uses (ZR Section 43-122). Rear yards are required (ZR Section 43-20). The maximum street wall height is 30 feet or two stories, whichever is less, for a commercial or manufacturing building and 35 feet or three stories, whichever is less, for a community facilities building (ZR Section 43-43). At that height a setback from the street line is required, and above that height the building may not penetrate a sky exposure plane that begins at 30 feet above the front lot line and slopes upwards and rearwards at a 45 degree angle (ZR Section 43-43).

An R5 residential district covers the portion of the study area south of Avenue U and west of McDonald Avenue, except for the portion zoned M1-1. R5 has the same use regulations as R5B but somewhat different bulk regulations. The maximum permitted FAR is 1.25 for residential use (ZR Section 23-142) and 2.00 for community facility use (ZR Section 24-11). Front and rear yards are required (ZR Sections 23-40 and 24-30). For residential buildings the maximum permitted street wall height is 30 feet, and the maximum permitted building height is 40 feet (ZR Section 23-631(e)). For community facility buildings, the maximum permitted street wall is 35 feet, and above that height the building may not penetrate a sky exposure plane beginning at a line 35 feet above the front yard line and sloping upwards and rearwards across the lot at a 45 degree angle (ZR Section 24-521).

The northwestern part of the study area, along Van Sicklen and West 4th Streets, is zoned R4-1. R4-1 is a lower density contextual residential district with regulations similar to those for R4A. The major difference is that for a residential building the maximum permitted perimeter wall height is 25 feet rather than 21 feet.

An R6A/C1-4 district is mapped on both sides of Avenue U east of McDonald Avenue. C1-4 is a local retail overlay district that is more restrictive than C2-3, permitting only Use Groups 5 and 6 (ZR Section 32-10). R6A is a medium density residential district that allows more bulk, height, and lot coverage than R5 or R5B. The maximum permitted FAR under R6A/C2-3 is 2.00 for commercial uses (ZR Section 33-121), 3.00 for community facility uses (ZR Section 24-11), and (except for developments within an MIH area or an Inclusionary Housing designated area that satisfy the requirements of the Inclusionary Housing program) 3.00 for residential development (ZR Section 153). For residential development the maximum permitted lot coverage is 65 percent on an interior or through lot and 100 percent on a corner lot. For community facility development, the respective percentages are 60 percent and 80 percent. Rear yards are required, but front and side yards are not (ZR Sections 23-40 and 24-30). For community facility development, the maximum permitted base (street wall) height is 60 feet, and the maximum permitted building height is 70 feet (ZR Sections 23-662(a) and 24-50). For a residential building or a mixed-use building that combines residential use with either community facility or commercial use, the maximums are also 60 feet and 70 feet if it does not include a qualifying ground floor (ZR Section 23-662(a)), or 65 feet and 75 feet if it includes a qualifying ground floor (ZR Section 23-662(b)).

Outside of the R6A/C1-4 and M1-1 districts, the portion of the study area east of McDonald Avenue is zoned R4. The regulations described for R4-1 all apply in the R4 district as well.

Finally, the portion of the study area to the east of McDonald Avenue is within the Special Ocean Parkway District, which is addressed in Article 11, Chapter 3, of the Zoning Resolution. Most of the special district regulations are applicable either along Ocean Parkway or within a subdistrict located outside the study area. Within the study area, the underlying district regulations govern.

Future Conditions without the Proposed Actions

No zoning map changes are anticipated in the study area in the future without the proposed actions.

Future Conditions with the Proposed Actions

The proposed actions would consist of a zoning map amendment to extend the existing R6A zoning district across McDonald Avenue onto the project area, which is now zoned R5B/C2-3, plus a zoning text amendment to map an MIH area that is coterminous with the rezoning area. The C2-3 overlay would remain in place. The actions would not change the range of land uses permitted in the project area but would change the bulk regulations to permit greater floor area, lot coverage, and building height than is now possible. For residential development the actions would also permit more floor area and height than in the existing R6A district because the project area would also be an MIH area. The maximum permitted residential FAR would be 3.60 (ZR Section 154(d)(2), and the maximum permitted base and building heights would be 65 feet and 85 feet respectively if the development both satisfies the provisions of the Inclusionary Housing program and includes a qualifying ground floor (ZR Section 23-664(b)). Aside from these differences, the regulations for residential and community facility development would be as described for the R6A district under Existing Conditions. Because the permitted FAR for commercial uses in C1 and C2 overlays depends on the residential district in which they are mapped, the maximum permitted commercial FAR would increase from 1.00 to 2.00 (ZR Section 33-121).

The proposed actions would not introduce a new zoning district within the study area; rather they would extend an existing district from the eastern side of an intersection to the western side of the intersection. The R6A district is appropriate for this location, given the mixed-use commercial nature of the project area, which, like the existing R6A/C1-4 district, abuts the intersection of Avenue U and McDonald Avenue, both vibrant and busy mixed-use streets in close proximity to public transit (the Avenue U station of the NYCT F Train, accessible by stairways located at the southern corners of the intersection, and a bus route along Avenue U). The character of the project area differs from that of most of Gravesend, where low density residential zoning would continue to prevail.

The proposed actions would also serve to bring existing buildings into compliance with zoning bulk regulations on three lots (Block 7103, Lots 40, 138, and 7501) within the project area. As noted under Existing Conditions, these lots are overbuilt relative to tahe existing zoning.

For these reasons, the proposed action would not have a significant adverse impact related to zoning.

8. SHADOWS

Introduction

A detailed shadow analysis is generally required only if a proposed action would result in one or more buildings that would be (a) at least 50 feet in height and close enough to a sunlight-sensitive resource of concern to cast a shadow on it or (b) less than 50 feet in height but directly adjacent to or across from a sunlight-sensitive use. Such resources of concern are public open spaces, greenstreets, natural resources if the introduction of shadows might alter their condition or microclimate, and historic resources that depend on direct sunlight for their appreciation by the public.

The development resulting from the proposed actions would be up to 85 feet in height.

Tier 1 Assessment

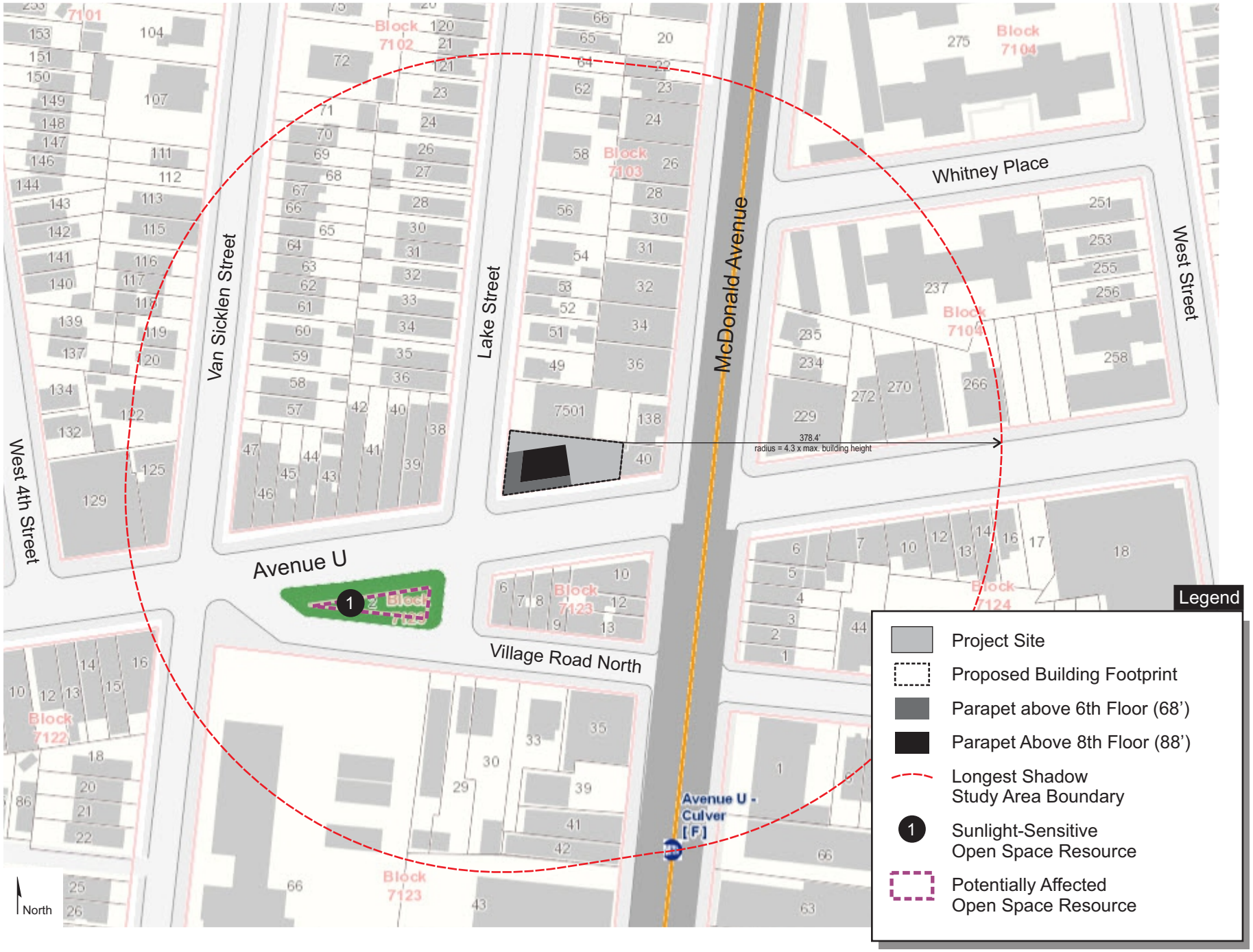
Shadow lengths vary by time of day, being longest in the early morning and late afternoon and shortest at noon, and by time of year, being longest at the winter solstice and shortest at the summer solstice. According to the *CEQR Technical Manual*, the longest shadow cast by a building is 4.3 times the building's height. The development resulting from the proposed actions would consist of a building with a rooftop height of 85 feet. A three-foot parapet above the roof would reach a height of 88 feet. The longest shadow cast by the proposed project would therefore be 378.4 feet in length.

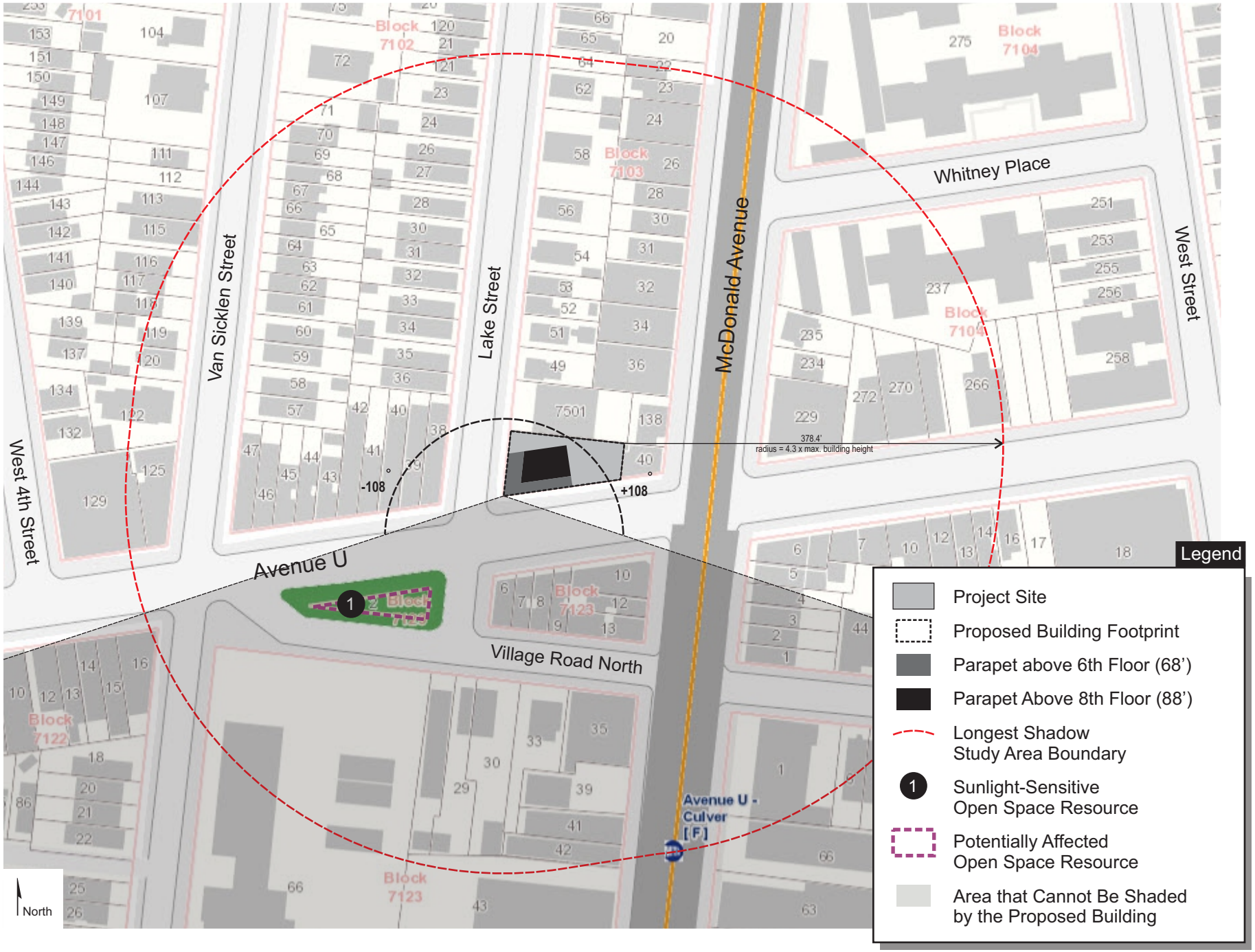
The Tier 1 Screening Assessment figure shows the area within a 378.4-foot radius of the project site. One public open space is located within the area: a landscaped sitting area known as Lady Moody Triangle, located southwest of the project site and bounded by Avenue U, Lake Street, and Village Road North.

Tier 2 Assessment

The next step is to determine whether the sunlight-sensitive resources are within the arc in which shadows can be cast. That arc excludes the triangular area to the south of the action-induced development that extends from +108 degrees to -108 degrees from true north. As the Tier 2 Screening Assessment figure shows, Lady Moody Triangle is located outside of the arc in which action-induced development would cast shadows.

No additional assessment is required. The proposed actions would not have a significant adverse shadows impact.


Van Sicklen Street
Lake Street
McDonald Avenue
West Street
West 4th Street
Whitney Place
Avenue U
Village Road North
Block 7102
Block 7103
Block 7104
Block 7122
Block 7123
Block 7124
7501
378.4'
radius = 4.3 x max. building height
Avenue U - Culver [F]
North
Legend
Project Site
Proposed Building Footprint
Parapet above 6th Floor (68')
Parapet Above 8th Floor (88')
Longest Shadow Study Area Boundary
Sunlight-Sensitive Open Space Resource
Potentially Affected Open Space Resource


Van Sicklen Street
Lake Street
McDonald Avenue
West Street
West 4th Street
Whitney Place
Avenue U
Village Road North
Block 7102
Block 7103
Block 7104
Block 7105
Block 7106
Block 7122
Block 7123
7501
378.4'
radius = 4.3 x max. building height
-108
+108
Avenue U - Culver [F]
North
Legend
Project Site
Proposed Building Footprint
Parapet above 6th Floor (68')
Parapet Above 8th Floor (88')
Longest Shadow Study Area Boundary
Sunlight-Sensitive Open Space Resource
Potentially Affected Open Space Resource
Area that Cannot Be Shaded by the Proposed Building

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.

A preliminary urban design and visual resources assessment is required because the proposed actions would include a zoning map change that would alter the rules regulating development within the proposed rezoning area, allowing the construction of buildings that are different in use and scale from those that would be allowed under existing zoning regulations. The proposed actions would rezone a 14,829 sf area from R5B/C2-3 to R6A/C2-3 and would map a Mandatory Inclusionary Housing (MIH) area coterminous with the rezoning area. Use regulations would be the same as they are now - residential and community facility uses listed in Use Groups 1, 2, 3, and 4 with a local commercial overlay district that permits commercial uses listed in Use Groups 5, 6, 7, 8, 9, and 14 - but the bulk regulations would change. The maximum permitted FAR under R6A/C2-3 is 2.00 for commercial uses, 3.00 for community facility uses, and generally 3.00 for residential development, but 3.60 for residential development within an MIH area or Inclusionary Housing designated area that satisfies the applicable Inclusionary Housing program requirements. For community facility development, the maximum permitted base (street wall) height is 60 feet, and the maximum permitted building height is 70 feet. For a residential building or a mixed-use building that combines residential use with either community facility or commercial use, the maximums are also 60 feet and 70 feet if it does not include affordable housing or a qualifying ground floor, 65 feet and 75 feet if it includes a qualifying ground floor but not affordable housing, 65 feet and 80 feet if it satisfies the provisions of the Inclusionary Housing program but does not include a qualifying ground floor, or 65 feet and 85 feet if it satisfies the provisions of the Inclusionary Housing program and includes a qualifying ground floor.

If the proposed actions are taken, the Applicant intends to enlarge existing one-story (10-foot-tall) commercial building, adding residential stories. The first floor would remain commercial, except for a 401 square foot residential entrance and lobby. Although the Applicant is proposing a four-story building, the RWCDS assumes a 20,628 gsf building with 15 dwelling units above 5,031 square feet of retail space and a height of eight stories and 85 feet, with setbacks at a height of 65 feet.

Pedestrian Wind Conditions

The *CEQR Technical Manual* calls for a separate preliminary assessment to determine whether an analysis of pedestrian wind conditions is appropriate, since the construction of large buildings at locations that experience high wind conditions may result in channelization or downwash effects that could affect pedestrian safety.

The proposed rezoning area is not subject to unusual wind conditions. It is not in an exposed area fronting on the waterfront, and it is not on high ground or on the upper portion of an exposed slope. It is within a fully developed inland area.

The action-induced development would consist of an eight-story building with a 13-foot-tall ground floor that covers the entire lot. There would therefore not be a freestanding tower with open areas at street level to cause pedestrian level vortex effects.

For these reasons, the proposed actions would not have a significant adverse impact on pedestrian wind conditions, and a detailed wind conditions assessment is not required.

Existing Conditions

The Proposed Rezoning Area

The project site (identified as Block, 7103 Lot 42, and as 273 Avenue U, and located at the block's southwest corner, with frontage along both Avenue U and Lake Street) is currently improved with a single-story, 10-foot-tall commercial retail building that is divided into several commercial spaces of different sizes. The 5,432 square foot building covers the entire lot. The façade on fronting Avenue U has broad signage bands above showcase windows. (See Photos 2 and 3.) In contrast, the façade facing Lake Street is a mostly blank brick wall. (See Photos 7 and 8.)

Lot 40 (to the immediate east of the project site along Avenue U) is developed with a two-story mixed-use building with ground floor commercial retail and one residential unit above. The building covers the entire lot. (See Photo 21.)

Lot 138 is located to the north of Lot 40 on McDonald Avenue and is developed with a two-story commercial building. (See Photo 20.)

Lot 36 is the northernmost affected lot on the eastern (McDonald Avenue) side of the block. The lot is developed with an automotive service establishment.

Lot 7501 is located to the north of Lot 42 on Lake Street and is developed with a four-story mixed-use building with ground floor commercial use and 12 residential units above. The design is that of a completely residential building, however. There are no commercial signs or show windows; the building is set back from the street behind parking spaces and steps leading to the elevated first floor; the commercial units are entered from the lobby rather than from separate exterior doorways; and a large projecting entrance canopy obscures the windows of the commercial units. (See Photo 19.)

Lot 49 is the northernmost affected lot on the western (Lake Street) side of the block. The lot is developed with a single-family home.

Urban Design in the Vicinity of the Rezoning Area

The area surrounding the proposed rezoning area, within the Gravesend neighborhood, is a well-developed urban area that contains a range of building types and uses (one- and two-family homes, residential apartment buildings, local retail and service establishments, mixed-use buildings with residential units above ground floor commercial establishments, automotive repair shops, a bakery, a post office, and a school). Lake Street is primarily a residential street with one- and two-family homes, as are the streets to its west in the corridor between Avenue T and Avenue U. (See Photos 4, 5, and 16.) McDonald Avenue has a markedly different character, which is influenced by its greater width and the elevated subway trestle that looms above it. (See Photo 15.) The avenue is lined with one- to three-story buildings that include residential-over-commercial mixed-use buildings, auto repair shops, appliance and electronics dealerships, a few older homes (at least one of which is vacant and in disrepair), a commercial bakery, a warehouse, and various commercial establishments. Avenue U is a tree-lined



1. View of Avenue U facing southwest from McDonald Avenue (Development Site at right).



2. View of the Development Site facing northwest from Avenue U.



3. View of the Development Site facing north from Avenue U.





4. View of Lake Street facing north from Avenue U (Development Site at right).



5. View of the Development Site facing northeast from the intersection of Avenue U and Lake Street.



6. View of Avenue U facing northeast from Lake Street (Development Site at left).





7. View of the Development Site facing east from Lake Street.



8. View of the Development Site facing southeast from Lake Street.



9. View of Lake Street facing south (Development Site at left).





10. View of the sidewalk along the east side of Lake Street facing south (Development Site at left).



11. View of the sidewalk along the east side of Lake Street facing north from Avenue U (Development Site at right).



12. View of the west side of Lake Street facing west.





13. View of the sidewalk along the north side of Avenue U facing northeast from Lake Street (Development Site at left).



14. View of the sidewalk along the north side of Avenue U facing southwest (Development Site at right).



15. View of McDonald Avenue facing south from the Project Area.





16. View of the west side of Lake Street facing northwest from the Development Site.



17. View of the intersection of Avenue U and Lake Street facing southwest from the Development Site.



18. View of the south side of Avenue U facing southeast from the Development Site.





19. View of the Project Area facing northeast from Lake Street.



20. View of the Project Area facing southwest from McDonald Avenue.



21. View of the Project Area facing northeast from Avenue U.



street lined with buildings that are predominantly two stories in height but that range from one to four stories. The ground floors have commercial retail occupancy, and the upper floors are either commercial or residential. (See Photo 1.)

There are no significant topographic features. The topography is fairly flat.

The street grid is irregular. Block dimensions vary, with east-west dimensions ranging from 102 to 410 feet and north-south dimensions from 45 to 760 feet. Approximately half of all streets are perpendicular to one another. East-west streets are mostly 50-60 feet wide, and north-south through streets (such as Lake Street) are 60 feet wide. Avenue U and McDonald Avenue are wider: 75 and 100 feet respectively.

Visual Resources

According to the *CEQR Technical Manual*, "A visual resource is the connection from the public realm to significant natural or built features, including views of the waterfront, public parks, landmark structures or districts, otherwise distinct buildings or groups of buildings, or natural resources." As noted above, there are no significant topographical features. The area is fully developed, with no natural resources. The study area contains one landscaped sitting area but no large or distinctive landscapes. There are no designated architectural resources. There are no significant view corridors in the vicinity of the proposed rezoning area.

Future Conditions without the Proposed Actions

Absent the proposed actions, the property owner would not enlarge the existing building or redevelop the project site. No changes are anticipated on any of the other five lots located at least partially within the project area.

Within the study area, a vacant lot on the north side of Avenue U between McDonald Avenue and West Street (331 Avenue U) will be redeveloped with a seven-story building with 13 dwelling units above two retail stores. The smaller vacant lot on the south side of that block (326 Avenue U), directly across the street from the other lot, will be redeveloped with a six-story building with ten dwelling units above one retail store. The Department of Buildings has issued New Building (NB) permits for both developments.

No other changes that would affect urban design and visual resources are anticipated.

Future Conditions with the Proposed Actions

Zoning Map Amendment

The proposed zoning map amendment would replace part of an R5B/C2-3 district with an R6A/C2-3 district, which would be coterminous with a Mandatory Inclusionary Housing (MIH) area. The proposed rezoning area measures 14,829 square feet and is parallelogram in shape, with 155 feet of frontage along Avenue U and 100 feet of frontage along Lake Street and McDonald Avenue.

The existing R5B/C2-3 and proposed R6A/C2-3 districts have the same use regulations - residential and community facility uses listed in Use Groups 1, 2, 3, and 4 and commercial uses listed in Use Groups 5, 6, 7, 8, 9, and 14.

However, the bulk regulations would change with the proposed actions. Maximum permitted FAR under R5B/C2-3 is 1.35 for residential use, 2.00 for community facility use, and 1.00 for commercial use. The maximum permitted FAR under R6A/C2-3 is 2.00 for commercial uses, 3.00 for community facility

uses, and generally 3.00 for residential development, but 3.60 for residential development within an MIH area or Inclusionary Housing designated area that satisfies the applicable Inclusionary Housing program requirements. The proposed rezoning area would be coterminous with an MIH area in which any development of more than ten dwelling units or more than 12,500 sf of residential floor area must comply with requirements set forth in ZR Section 23-154(d), which provides the minimum percentage of the residential square footage that must be associated with income-restricted affordable dwelling units and the income ranges applicable to those dwellings.

Also, height regulations are different. For a residential building or residential stories in a mixed-use building, the maximum permitted height is 33 feet (ZR Section 23-631(e)). For a community facility, the maximum permitted front wall height is 35 feet, at which point a setback is required, and above that height the building may not penetrate a sky exposure plane that extends upwards and rearwards over the lot from a line 35 feet above the front yard line at a 45 degree angle (ZR Section 24-521). Under R6A/C2-3 for community facility development, the maximum permitted base (street wall) height is 60 feet, and the maximum permitted building height is 70 feet. For a residential building or a mixed-use building that combines residential use with either community facility or commercial use, the maximums are also 60 feet and 70 feet if it does not include affordable housing or a qualifying ground floor, 65 feet and 75 feet if it includes a qualifying ground floor but not affordable housing, 65 feet and 80 feet if it satisfies the provisions of the Inclusionary Housing program but does not include a qualifying ground floor, or 65 feet and 85 feet if it satisfies the provisions of the Inclusionary Housing program and includes a qualifying ground floor.

Lot coverage restrictions apply under both zoning districts. Under R5B/C2-3 the maximum permitted lot coverage is 55 percent for any lot. Under R6A/C2-3 the maximum permitted lot coverage is 65 percent on an interior or through lot and 100 percent on a corner lot (such as the project site).

Development Scenario

In the future with the proposed actions, the existing one-story commercial building on the project site would be enlarged with residential stories. Assuming the maximum potential development under the proposed zoning, the result would be a mixed-use building with an FAR of 3.60. The ground floor, which would be vertically enlarged to a height of at least 13 feet, would contain 5,301 square feet of commercial floor area and a 401 square foot residential entrance and lobby. The enlarged building would contain 5,031 square feet of ground floor retail space and 15 dwelling units within 15,597 gsf (14,524 zsf) of residential space. There would be a total of 20,628 gsf, of which 19,555 square feet would count for zoning purposes. The building would be up to eight stories (85 feet) in height, with setbacks at 65 feet.

No other redevelopments, enlargements or other land use changes are anticipated as a result of the proposed actions.

Table 10-1 compares the development characteristics of the project site under existing, future no-action, and future with-action conditions.

Table 10-1
Comparison of Existing, No-Action, and With-Action Conditions

Item	Existing Conditions	No-Action Conditions	With-Action Conditions
Development Scenario	Retail building (5,432 sf)	Retail building (5,432 sf)	Mixed-use building with 15 DUs and 5,031 sf retail
Gross/(Net) Bldg. Floor Area	5,432 gsf/(5,432 zsf, 1.00 FAR)	5,432 gsf/(5,432 zsf, 1.00 FAR)	20,628 gsf/(19,555 zsf, 3.60 FAR)
Lot Coverage	5,432 sf (100&)	5,432 sf (100%)	5,432 sf (100%)
Building Height	One story (10 feet)	One story (10 feet)	8 stories (85 feet)

Urban Design

As a building with a retail ground floor with residential apartments above it, the new development would be consistent with the urban design of Avenue U. At the pedestrian level, the development would maintain the commercial street wall along the avenue.

Under the RWCDS the enlarged building would be eight stories (85 feet) in height, taller than its neighbors and the tallest building in the study area. This is shown in the Urban Design Diagram. As the diagram also shows, setbacks above the sixth story would reduce the visual impact of the building's overall height. From the west or from any perspective along Lake Street, the building would have the profile of a six-story, 65-foot-tall building. From the west – although this cannot be seen from the Urban Design Diagram – the view of the building would be partially obscured by the elevated train trestle and the 100-foot width of McDonald Avenue. With its eight-story height and six-story street wall, the building would be similar in scale to the six- and seven-story developments that have received building permits and will be constructed on the block to the east, at 326 and 331 Avenue U.

As discussed above under Existing Conditions, the urban design characteristics of Avenue U, McDonald Avenue, and the narrower residential streets to the northeast (including Lake Street) differ from one another. The character of Avenue U in the immediate vicinity of McDonald Avenue is changing; whether or not the proposed actions are taken, six- and seven-story residential-over-retail buildings will be constructed on Avenue U within a block of that intersection. The proposed vertical enlargement would thus be consistent with development trends along that part of Avenue U. It would not alter the character of the narrower residential streets, which are lined mainly with one- and two-family homes, where development would continue to be regulated in accordance with low density contextual zoning. Along Lake Street heights would step down from an eight-story building with a six-story street wall at the corner of Avenue U to the existing four-story apartment building (with an elevated ground floor) to its immediate north to the smaller homes further north.

The proposed actions would not affect the topography, street system, block forms, or building arrangements within the area including and surrounding the proposed rezoning area.

The proposed actions would not result in a significant adverse urban design impact, and further analysis is not warranted.

Visual Resources

No visual resources have been identified within the vicinity of the project area. The proposed actions would therefore not result in a significant adverse impact to visual resources.

Avenue U facing east (Site at left)



Existing Site and Context

Avenue U facing east (Site at left)



Proposed Project

Avenue U facing west (Site at right)



Existing Site and Context

Avenue U facing west (Site at right)



Proposed Project

16. TRANSPORTATION

Introduction

In order to determine the potential for the proposed action to result in significant adverse transportation impacts, a trip generation screening analysis was performed pursuant to the methodologies identified in the *CEQR Technical Manual*.

The Applicant seeks a zoning map amendment to extend an existing R6A district west to encompass the southern end of Block 7103, located within the Gravesend neighborhood of Brooklyn Community District 11. The existing R6A district is paired with a C1-4 local retail overlay; its extension would be paired with a C2-3 local commercial overlay. In addition to the zoning map amendment, a zoning text amendment to Appendix F of the Zoning Resolution is sought to map a Mandatory Inclusionary Housing (MIH) area that would be coterminous with the rezoning area.

Under the RWCDS, the proposed actions would affect land use in two ways. First, it would facilitate the vertical enlargement of an existing one-story multi-tenant commercial building at 273 Avenue U (the Project Site, at the northeast corner of Avenue and Lake Street). The alteration would add 15 residential units and would eliminate one 401 sf commercial space, which would be replaced by the residential lobby. Second, it would legalize the use of the two-story building at 2266 McDonald Avenue, on the west side of the avenue one lot to the north of Avenue U. The two-unit, 2.00 FAR building now contains two commercial spaces, even though the maximum permitted FAR under the existing zoning is 2.00 for community facilities but only 1.00 for commercial use. The RWCDS therefore assumes that the noncompliance would be corrected under future no-action conditions through the conversion of one of the units (1,769 gf) to a medical office. Under future with-action conditions, the permitted commercial FAR would increase to 2.00 and both commercial uses would remain. The cumulative effect of the proposed actions would be to add 15 residential units and 1,368 sf of commercial space and to eliminate 1,769 sf of medical office space.

Trip Generation

A preliminary Level 1 trip generation was performed for the addition of 15 residential apartments in a multistory building and 1,368 sf of local retail space and the subtraction of 1,769 sf of medical office space. Analysis was performed for four peak travel hours: the weekday morning, midday, and late afternoon peak hours and the Saturday midday peak hour. The daily and peak hour person trip generation assumptions and truck trip assumptions for residential and retail uses were from Table 16-2 of the *CEQR Technical Manual*. The modal split and vehicle occupancy assumptions for all uses, as well as the daily and peak hour person and truck trip assumptions for medical offices, were those used for the East New York Rezoning Proposal FEIS (CEQR # DCP102K) completed in February 2016. The assumptions are shown in Table 16-1.

The results are shown in Tables 16-2 and 16-3. Table 16-2 calculates the number of person trips to or from the site during each of the four peak hours and the breakdown by principal travel mode (car, taxi, subway, bus, or walking). Table 16-3 translates the number of person trips by car and taxi into the number of added vehicle trips (by dividing the number of persons traveling by vehicle by the average number of persons traveling together in a vehicle, and in the case of taxis doubling that number because, for every taxi trip residents or shoppers make to or from the site, the cab driver makes two trips (one to the site and the other from the site)). Table 16-3 also calculates the number of truck trips to or from the site during each peak hour (expressed as passenger car equivalents, with one truck being the equivalent of two passenger cars) and adds the truck, taxi, and car trips to determine the number of vehicle trips

per hour.

As Table 16-3 shows, the proposed actions would add two vehicle trips during the weekday morning peak hour and would result in a net decrease in the number of vehicle trips during all other peak hours. As Table 16-2 shows, the proposed actions would add four subway trips during the weekday morning peak hour and would result in a net decrease in the number of subway trips during the other peak hours, and the proposed actions would not increase the number of bus trips during any peak hour. The proposed actions would add a maximum of 41 pedestrian trips during any peak hour (during the weekday midday peak hour).

The number of action-generated trips would not equal or exceed the CEQR thresholds of 200 trip ends for transit and pedestrians and 50 vehicle trip ends during any peak hour. No further transportation analysis would be warranted.

Conclusion

The proposed actions would not result in 50 or more vehicle trips, 200 or more transit trips, or 200 or more pedestrian trips during any single hour. A significant adverse transportation impact is not anticipated.

Table 16-1: Trip Generation Assumptions

	Residential (Per Unit)	Local Retail (Per 1,000 SF)	Medical Office (Per 1,000 SF)
Daily Person Trips			
Weekday	8.075	205	127
Saturday	9.6	240	127
Temporal Distribution			
Weekday: AM peak hour	10%	3%	4%
Weekday: midday peak hour	5%	19%	11%
Weekday: PM peak hour	11%	10%	12%
Saturday: midday peak hour	8%	10%	11%
Modal Split			
Car	30.7%	5.0%	30.0%
Taxi	0.9%	1.0%	2.0%
Subway	54.3%	3.0%	33.0%
Bus	8.9%	6.0%	18.0%
Walk	5.2%	85.0%	17.0%
Vehicle Occupancy			
Car			
AM and PM hours	1.065	2.00	1.50
Midday hours	1.49	2.00	1.50
Taxi	1.30	2.00	1.50
Daily Truck Trips			
Weekday	0.06	0.35	0.29
Saturday	0.02	0.04	0.29
Temporal Distribution			
Weekday: AM peak hour	12%	8%	3%
Weekday: midday peak hour	9%	11%	11%
Weekday: PM peak hour	2%	2%	1%
Saturday: midday peak hour	9%	11%	0%

Sources

For daily person and truck trips and temporal distribution for residential and retail uses, 2014 *CEQR Technical Manual*, Table 16-2.

For daily person and truck trips and temporal distribution for medical office use, and for modal splits and vehicle occupancy for all uses, East New York Rezoning Proposal FEIS, Table 13-8 (CEQR # DCP102K, February 2016).

Table 16-2: Person Trips

	Residential	Local Retail	Medical Office	Net Total
Dwelling units/ thousands of SF	15	1.368	1.769	Res+Ret-Med
Daily Person Trips				
Weekday	121	280	225	177
Saturday	144	328	225	248
Temporal Distribution				
Weekday: AM peak hour	12	8	9	12
Weekday: midday peak hour	6	53	25	35
Weekday: PM peak hour	13	28	27	14
Saturday: midday peak hour	12	33	25	20
Trips by Travel Mode				
Weekday AM peak hour				
Car	4	0	3	1
Taxi	0	0	0	0
Subway	7	0	3	4
Bus	1	1	2	0
Walk	1	7	2	6
Weekday midday peak hour				
Car	2	3	7	-3
Taxi	0	1	0	0
Subway	3	2	8	-3
Bus	1	3	4	-1
Walk	0	45	4	41
Weekday PM peak hour				
Car	4	1	8	-3
Taxi	0	0	1	0
Subway	7	1	9	-1
Bus	1	2	5	-2
Walk	1	24	5	20
Saturday midday peak hour				
Car	4	2	7	-2
Taxi	0	0	0	0
Subway	6	1	8	-1
Bus	1	2	4	-1
Walk	1	28	4	24

Note: For presentation purposes, each computed value has been rounded to the nearest whole number. Because the actual rather than the rounded values are used in the computation of totals, and the computed total is then itself rounded, the resulting number may not appear to be the sum of the constituent values.

Table 16-3: Vehicle Trips

	Residential	Local Retail	Medical Office	Net Total
Weekday AM Peak Hour				
Car trips (1)	3	0	2	2
Taxi trips (2)	0	0	0	0
Truck trips (PCEs)	0	0	0	0
Total	4	0	2	2
Weekday Midday Peak Hour				
Car trips	1	1	5	-2
Taxi trips	0	1	1	0
Truck trips (PCEs)	0	0	0	0
Total	1	2	6	-2
Weekday PM Peak Hour				
Car trips	4	1	5	-1
Taxi trips	0	0	1	0
Truck trips (PCEs)	0	0	0	0
Total	4	1	6	-1
Saturday Midday Peak Hour				
Car trips	3	1	5	-1
Taxi trips	0	0	1	0
Truck trips (PCEs)	0	0	0	0
Total	4	1	6	-1

Notes

(1) Car trips equal person trips by car divided by vehicle occupancy.

(2) Because each trip by taxi means both a trip to the site and a trip from the site, the number of trips is doubled.

17. AIR QUALITY

INTRODUCTION

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

- The potential for changes in vehicular travel associated with proposed development activities to result in significant mobile source (vehicular related) air quality impacts.
- The potential for an atypical (*e.g.*, not at-grade) source of vehicular pollutants to significantly impact the proposed development.
- The potential for emissions from the heating, ventilation and air conditioning (HVAC) systems of the proposed development to significantly impact nearby existing land uses.
- The potential for air toxic emissions released from existing industrial facilities to significantly impact the proposed development.
- The potential for significant air quality impacts from the emissions of existing HVAC systems with a 20 or more million Btu per hour (MMBtu/hr) design capacity to significantly impact the proposed development.
- The potential for significant air quality impacts from the emissions of facilities that require Prevention of Significant Deterioration permits (Title V), and facilities which require a state facility permit to significantly impact the proposed development.
- The potential for facilities' malodorous emissions to unreasonably interfere with the proposed project's occupant's comfortable enjoyment of life or their property.

The Proposed Project

The Project Area is located in the Gravesend neighborhood of Brooklyn Community District 11. One Development Site was identified in the With Action Scenario; the other properties in the Project Area are not projected for development, and therefore not included in the Air Quality section.

The Proposed Development (Block 7103, Lot 42)

The Proposed Development located at 273 Avenue U (Block 7103, Lot 42) would facilitate the enlargement of the existing one-story building. Two scenarios are considered: the development Reasonable Worst Case Development Scenario (RWCDS), and the actual building dimension provided by the building architect.

The development RWCDS would facilitate an 8-story, 85 feet tall building, containing 20,628 gsf of floor area.

The actual planned building, per the building architect, would facilitate a 4-story, 43 feet high building, which includes a 3 feet parapet wall above the roofline. The building would contain 17,732 gsf of floor area. The building's HVAC system would operate on natural gas.

AIR POLLUTANTS AND APPLICABLE STANDARDS/GUIDELINES

National Air Quality Standards

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

- Carbon Monoxide (CO) is mainly produced by motor vehicles from the incomplete combustion of gasoline. The impact of CO on the ambient air is analyzed next to roadways, intersections, parking lots, and parking garages vents as these locations are the most affected.
- Nitrogen Dioxide (NO_2) is a main concern related to the burning of natural gas. Emitted NOx from the burning of fossil fuel gradually convert to NO_2 in a chemical reaction that is affected by ozone concentration and the presence of sunlight. In a micro scale analysis, buildings HVAC systems are analyzed for NO_2 impact.
- Ozone (O_3) is formed by chemical reaction between hydrocarbons and nitrogen oxides and its impact is analyzed on a regional scale by monitoring stations.
- Lead (Pb) in the ambient air is monitored on a regional level. In a project scale analysis, impact due to Lead concentration levels are analyzed if a new source, such as lead smelters, is introduced into the environment or if a project is located next to a lead emitter.
- Particulate Matter emissions are associated with both stationary sources and mobile sources. Two sizes of particulate matters are analyzed: Inhalable Particles (PM_{10}) and Fine Particulate Matter ($PM_{2.5}$), where the subscript number refers to the diameter of the particulate matter in micrometers.
- Sulfur Dioxide (SO_2) emission is principally associated with stationary sources that burn oil or coal. These fuels contain sulfur that bond to oxygen atoms in the burning process.

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 standards together with their health-related averaging periods are presented in Table 17-1.

Table 17-1 National AND New York States Ambient Air Quality

Pollutant	Averaging Period	National and State Standards
NO_2	1-Hour Concentration	0.10 ppm (188 µg/m^3)
	Annual Arithmetic Average	0.053 ppm (100 µg/m^3)
$PM_{2.5}$	24-Hour Concentration	35 µg/m^3
	Average of 3 Consecutive Annual Means	12 µg/m^3
PM_{10}	24-Hour Concentration	150 µg/m^3
Lead	Rolling 3-month Average	0.15 µg/m^3
Ozone	8-Hour	0.07 ppm
CO	8-Hour	9 ppm
	1-Hour	35 ppm
SO_2	1-Hour Concentration	0.075 ppm (196 µg/m^3)
	24-Hour Concentration	0.14 ppm (365 µg/m^3)
	Annual Arithmetic Means	0.03 ppm (80 µg/m^3)

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 July 14, 2016.

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

NYC Guidelines

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

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

Per *CEQR TM,* $PM_{2.5}$ significant impacts from stationary sources are evaluated as follow:

- Predicted 24-hour maximum $PM_{2.5}$ concentration increase of more than half the difference between the 24-hour background concentration and the 24-hour standard; or
- Predicted annual average $PM_{2.5}$ concentration increments greater than 0.3 µg/m^3 at any receptor location for stationary sources.

Background Concentrations

Determination of significant impact criteria is evaluated by adding the background concentrations at the nearest NYSDEC monitoring station to the concentrations of criteria pollutants in the ambient air of the project area.

Background concentrations of criteria pollutants were obtained from the NYSDEC's annual report for 2016 at the nearest monitoring stations. Table 17-2 shows the background concentrations.

Table 17-2: Background Concentration at the Queens College and JHS 126 Monitoring Stations (NYSDEC 2016 Report)

Pollutant	Averaging Period	Background Concentration	Monitoring Station
NO_2	1-Hour Concentration	120.9 µg/m^3	Queens College
	Annual Arithmetic Average	33 µg/m^3	
$PM_{2.5}$	24-Hour Concentration	20.5 µg/m^3	JHS126
	Average of 3 Consecutive Annual Means	8.6 µg/m^3	
PM_{10}	24-Hour Concentration	44 µg/m^3	Queens College
CO	1-Hour	1.59 ppm	Queens College
	8-Hour	1.4 ppm	
SO_2	1-Hour Concentration	24.7 µg/m^3	Queens College
	Annual Arithmetic Means	2.0 µg/m^3	

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

- 8-hour CO 3.8 ppm
- 24-hour $PM_{2.5}$ 7.25 µg/m^3
- Annual $PM_{2.5}$ 0.3 µg/m^3

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 concentrations—the mobile source pollutants of concern—and compare the modeled concentrations with the applicable air quality standard.

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, 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.

Per the transportation analysis for this project, the Proposed Actions would generate a total of 2 (2 cars and 0 trucks) net vehicle trip ends during the AM peak hour period and all other peak hour periods would result in a net decrease (decrease cars and 0 trucks) in the number of vehicle trips. As such, the maximum trip generation would not exceed the 170 net vehicles trips at any given hour and would not exceed the 12 or more HDDV for paved roads with average daily traffic fewer than 5,000 vehicles (the most stringent road type). Therefore, the proposed action passes the CO and $PM_{2.5}$ screening analyses.

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 new off-street parking spaces. If the threshold is met or exceeded, a detailed analysis is warranted. As the proposed project would not contain a parking garage or any off-street parking spaces, no detailed air quality analysis is required.

PROJECTS HVAC SYSTEMS ANALYSIS

Per *CEQR TM*, 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). As outlined in the *CEQR TM*, the analysis of buildings' HVAC systems follows stationary sources methodology, and based on CEQR recommendations, a preliminary screening analysis is to be conducted as a first step to predict whether the potential impacts of the heat and hot water system boiler emissions can be significant. 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 TM,* 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 height of the stack venting the emissions, the distance to the nearest building whose height is at least as great as the venting stack height, the building residential or non-residential use, and the square footage of the development that would be served by the system. The *CEQR TM* provides a screening analysis based on these factors, which was utilized to determine the potential for significant impacts from the proposed project's HVAC system.

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 significant impact is predicted). However, if the actual distance is less than the threshold distance for a building, then there is a potential for a significant impact and a detailed analysis would be required.

The RWCDS Proposed Development would not be restricted to the use of natural gas. Therefore, the CEQR nomograph depicted on Figure 17-3 of the *CEQR TM* was applied (as the 30 feet curve height is closest to but not higher than the proposed stack height, as the CEQR screening procedure requires).

The Proposed Development actual building plan would exclusively use natural gas as the type of fuel for heating, ventilating, air conditioning (HVAC) and hot water system. As such, the actual Proposed Development screening analysis was performed for natural gas use and environmental designations added to specify use of natural gas only. As such, the CEQR natural gas nomograph depicted on Figure 17-7 of the *CEQR TM Appendix* for a 30-foot stack height was applied (as the 30 feet curve height is closest to but not higher than the proposed stack height, as the CEQR screening procedure requires).

These screening analyses are as follows:

1. The Proposed Development RWCDS impact on existing land uses that are at least 85 feet high.
2. The Proposed Development impact on existing land uses that are at least 43 feet high, and the building's HVAC system operates on natural gas.

Figure 17-1 depict the RWCDS screening analysis of the Proposed Development on existing land uses, where the square footage of the Proposed Development is 20,628 gsf, and the stack would be located above the building's highest tier at a height of 85 feet.

Figure 17-1: The Proposed Development Minimum Distance – HVAC Screen Residential All Fuel Nomograph

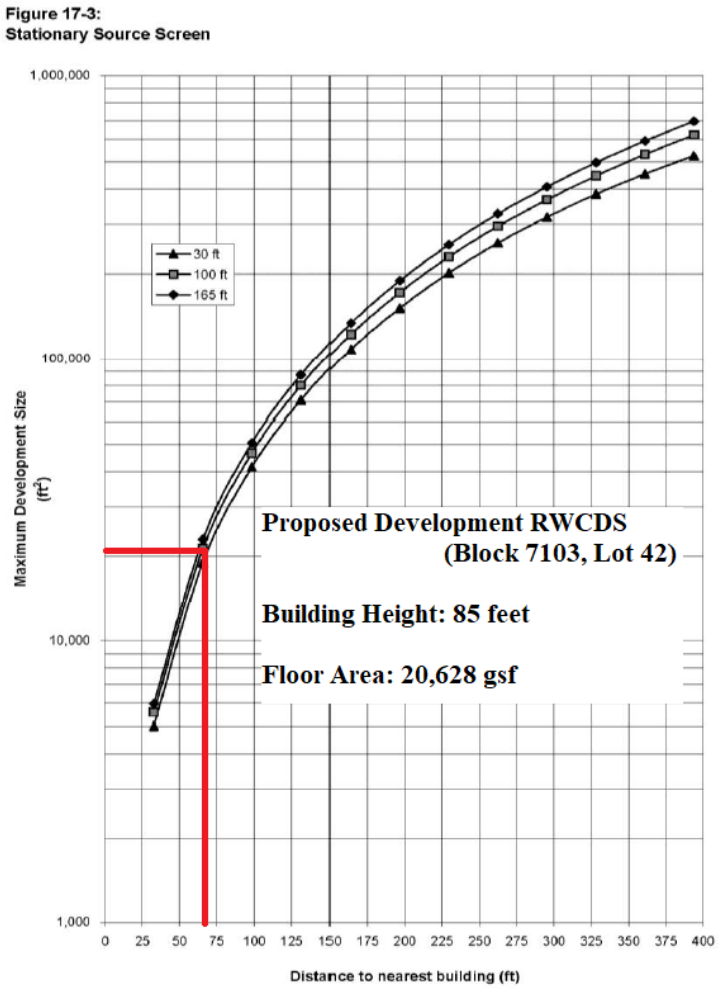


Figure 17-2 depict the screening analysis of the Proposed Development on existing land uses, where the square footage of the Proposed Development is 17,331 gsf, and the stack would be located above the building's 43 feet parapet wall.

Figure 17-2: The Proposed Development Minimum Distance – HVAC Screen Residential Natural Gas Nomograph

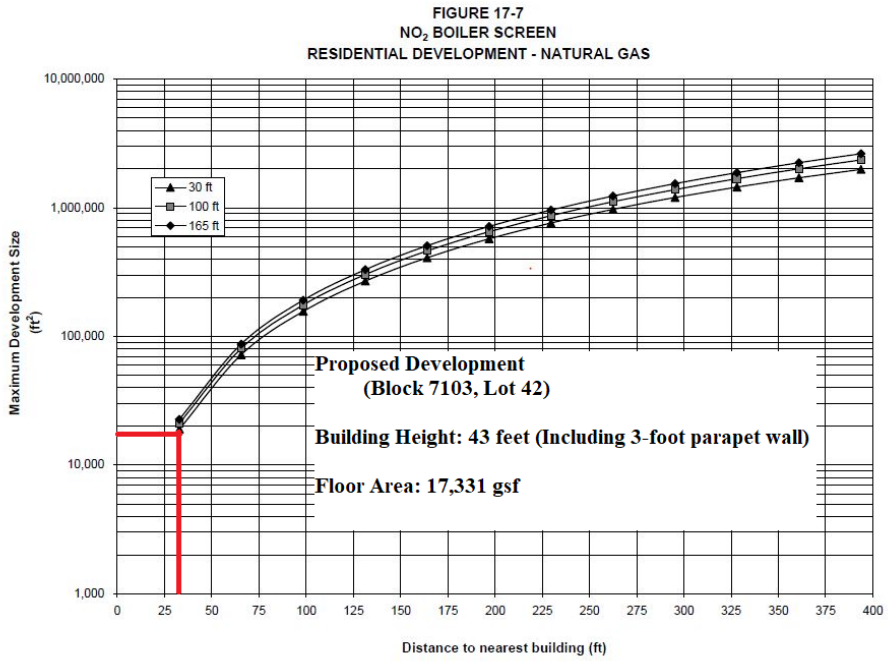


Table 17-3 depict the building's height and the screening analysis results, where "Use AERMOD" indicate that a detailed analysis using AERMOD dispersion analysis is required.

Table 17-3: Screening Analysis Results

Projected Development Site ID	Block/ Lot	Building Height (ft.)	Heated Area (sq. ft.)	Screen Distance (ft.)	Receptor Building (Site ID or Block/Lot)	Receiving Building Distance (ft.)	Pass/ Fail
Proposed Development RWCDS	7103/ 42	85	20,628	70	No Building Within 400 feet	> 400	Screens Out
Proposed Development	7103/ 42	43	17,331	32	Existing 4-Story (Block 7103, Lot 7501)	0	Use AERMOD

Figure 17-1 screening analysis shows that a detailed analysis would be required for any existing or planned land uses that is 85 feet or higher and at a distance of less than 70 feet from the Proposed Development. The tallest building within 400-foot is the 7-story, 83 feet high, building at 61 Village Road North (Block 7124, Lot 44) and 240 feet from the Proposed Development. Therefore, the Proposed Development RWCDS passes the screening analysis on existing land uses

Figure 17-2 screening analysis shows that a detailed analysis would be required for any existing or planned land uses that is 43 feet or higher and at a distance of less than 30 feet from the Proposed Development. A review of existing land uses showed that the nearest building of similar or greater height is the adjacent 4-story, 45 feet high, residential building. This 4-story building is located at 279 Lake Street (Block 7103, Lot 7501). Therefore, the screening analysis is not applicable, and a detailed analysis was conducted.

Figure 17-3 shows the Proposed Development with a 400-foot buffer zone plotted on the NYC Building Footprint map, where the buildings' roof heights are indicted. This geo metadata was obtained from the NYC Housing and Development through the NYC Open Data site.

Figure 17-3: The Proposed Development with a 400-foot Buffer Zone Plotted in the NYC-Planimetric Buildings Footprint Shapefile and Displaying the Buildings' Roof Heights



Source: Housing and Development October 2017
https://github.com/CityOfNewYork/nyc-geo-metadata/blob/master/Metadata/Metadata_BuildingFootprints.md

Detailed Analysis

Dispersion modeling analyses were conducted to estimate impacts from the stack emissions of the Proposed Development on the existing 4-story residential building located at 279 Lake Street (Block 7103, Lot 7501), using the latest version of EPA's AERMOD dispersion model 16216r. 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. AERMOD's Plume Volume Molar Ratio Method (PVMRM) module was utilized for the 1-hour NO_2 analysis to account for NOx to NO_2 conversion.

HVAC Emissions

Emission rates were estimated as follows:

- The Development Site is expected to be heated by natural gas, emission rates of NOx and $PM_{2.5}$ were calculated based on annual natural gas usage corresponding to the gross floor area of the buildings, EPA AP-42 emission factors for natural gas combustion in small boilers, and gross heating values of natural gas (1,020 Btu per million cubic feet).
- $PM_{2.5}$ emissions from natural gas combustion accounted for both filterable and condensable particulate matter.
- The natural gas fuel usage factor (59.1 cubic foot per square foot per year) was used to estimate the annual natural gas usage for the residential portion of the development, and was calculated by dividing the energy consumption rate of 60.3 thousand Btu/ft^2 by the natural gas heating value of 1020 Btu/ft^3.

Table 17-4 shows the development sites NO_2 and $PM_{2.5}$ emission rates, both short-term and annual. The diameter of the stack and the exhaust's exit velocity were estimated based on values obtained from the NYCDEP "CA Permit" database for the corresponding boiler sizes (i.e., rated heat input or million Btu per hour). Boiler sizes were estimated based on the assumption that all fuel was consumed during the 100 day (or 2,400 hour) heating season. The stack exit temperature was assumed to be 300°F (423°K), which is appropriate for boilers.

Table 17-4: Estimated Short-term and Annual Emission Rates of Each Building

Projected Development Site ID	Floor Area Residential	NO_2 Emission Rate (2) g/sec		$PM_{2.5}$ Emission Rate (1) g/sec	
	ft^2	1-hour	Annual	24-hour	Annual
Proposed Development	17,331	5.50E-03	1.51E-03	4.18E-04	1.15E-04

HVAC Meteorological Data

All analyses were conducted using the latest five consecutive years of meteorological data (2012-2016). Surface data was obtained from La Guardia Airport and upper air data was obtained from Brookhaven station, New York. Data was processed by Lakes Environmental Software, Inc. using the current EPA AERMET version (14134) and EPA procedures. 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.

Per Lakes Environmental Inc., $PM_{2.5}$ special procedure which is incorporated into AERMOD calculates concentrations at each receptor for each year modeled, averages those concentrations across the number of years of data, and then selects the highest values across all receptors of the 5-year averaged highest values.

HVAC AERMOD Setting

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

$PM_{2.5}$: The Summary of Maximum 1st-Highest 24-Hr Results Averaged Over 5 years; Group ID 24Hour.

NO_2: The Summary of Maximum 8th-Highest Max Daily 1-Hr Results Averaged Over 5 years; Group ID 1_Hour.

In addition, all dispersion analyses used the calculated emission factors, Building Profile Input Program (BPIP) was run with the downwash effect enabled, and all models specified elevated terrain and population of 2,000,000. The other parameters of each pollutant corresponding to the scenario modeled were:

1-hour NO_2: NAAQS option enabled, Tier 1 conversion method and 8th highest value output.

Annual NO_2: NO_2 pollutant selected and Report Maximum Annual Average for Each Met Year enabled.

24-hour $PM_{2.5}$ NAAQS: Based on a multi-year average of ranked maximum daily values enabled and 1st highest value output.

Annual $PM_{2.5}$: $PM_{2.5}$ pollutant selected and Report Maximum Annual Average for Each Met Year enabled.

HVAC Stack and Receptor Locations

The New York City Building Code (Building Code) requires that a rooftop stack should be at least 10 feet away from the edge of the roof and at least 3 feet higher than the roofline. As such, the HVAC stack was located on the building's highest tier, 10 feet from the edge of the roof, and as close as possible to the receiving building. If the modeled pollutant concentration exceeded the significant impact criteria, the stack distance from the receiving building was increased, until the dispersion model showed no significant impact.

Receptors on the receiving building were placed all around the building envelope, at 10 feet increments and at all floor levels. The floor heights indicated were 10-40 feet above grade, in 10

feet increments. As such, the highest receptors were placed at 40 feet above grade all around the building envelope. This height is 5 feet below the roofline, representing the top of the 4th floor windows.

Results of Dispersion Analyses

The 1-hour NO_2 models were run using a Tier 1 approach, accounting for a full NOx to NO_2 conversion. Both NO_2 1-hour and annual averaging times modeled concentrations were added to the background concentration at the NYSDEC Queens College monitoring station. The reported concentrations are the maximum predicted concentrations of the building wake effects abled/disabled scenarios. The $PM_{2.5}$ 24-hour and annual averaging times modeled concentrations were compared with the NYC Guidelines threshold criterions. Result of the HVAC dispersion NO_2 and $PM_{2.5}$ analyses are shown in Table 17-5.

Table 17-5: The Development Site HVAC Dispersion Analysis Results With a 20-foot Setback Distance

Project Development Site ID	Receptor Site	24-hr $PM_{2.5}$ Impact	Annual $PM_{2.5}$ Impact	1-hr NO_2 Impact	Annual NO_2 Impact
		µg/m³	µg/m³	µg/m³	µg/m³
Proposed Development Site	4-Story residential (Block 2374, Lot 106)	0.20	0.02	125	33.2
NAAQS / *de minimis* µg/m³		**7.25**	**0.3**	**188**	**100**

The results are compared with the 24-hour/annual $PM_{2.5}$ significant impact criteria, and the 1-hour/annual NO_2 NAAQS. The $PM_{2.5}$ impacts are less than the significant impact criteria for $PM_{2.5}$ of 7.25 µg/m³ and 0.3 µg/m³, respectively, and both the 1-hour and annual NO_2 concentrations estimated are less than the 1-hour and annual NO_2 NAAQS of 188 µg/m³and 100 µg/m³, respectively.

Therefore, with (E) Designations in place, the emissions of the proposed project HVAC systems would not significantly impact any of the other proposed project buildings.

(E) Designation

The HVAC analysis for the Proposed Action concluded that fuel would need to be restricted to the exclusive use of natural gas in its HVAC system and stack's height would need to be specified. No stack setback distance is required.

The (E) Designation (E-525) language is as follows:

Block 7103, Lot 42 (Proposed Development): Any new residential or commercial development on the above-referenced property must exclusively use natural gas as the type of fuel for heating, ventilating, air conditioning (HVAC) and hot water system to avoid any potential significant adverse air quality impacts. Stack shall be located at the highest tier and at a minimum of 46 feet above grade to avoid any potential significant adverse air quality impact.

INDUSTRIAL AND MAJOR SOURCES

As outlined in the CEQR TM, projects that would introduce new uses near industrial sources, major sources, large sources, and odor producing facilities may result in potentially significant adverse air quality impacts. The study area considers industrial sources within 400 feet of the Proposed Development and major sources, large sources, and odor producing facilities within 1,000 feet of the Proposed Development. These sources are categorized as follows:

Industrial sources are identified as commercial, industrial, or processing facilities that are likely to have NYCDEP operational permits.

Major emission sources are identified as those sources located at Title V facilities that require Prevention of Significant Deterioration permits.

Large emission sources are identified as sources located at facilities which require a State facility permit, such as solid waste or medical waste incinerators, asphalt and concrete plants, or large printing facilities.

HVAC system with a 20 or more million Btu per hour (MMBtu/hr) design capacity that are not located at a Title V or State facility are considered major sources too. However, as outlined in the *CEQR TM*, the study area considers these sources within 400 feet of the Project Area.

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.

Land Survey Methodology

Information regarding potential emissions of toxic air pollutants from existing industrial sources within 400 feet of the Project Area, and emissions of air pollutants from existing major and large sources within 1,000 feet of the Project Area were developed using the following procedure:

A study area was developed that includes all none residential facilities with potential air toxic emissions located within 400 feet of the Project Site using the Zoning and Land Use application (ZoLa);

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

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

The NYCDEP online Clean Air Tracking System (CATS) was consulted to determine whether air emissions permits had been issued for any of the nonresidential lots;

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

A land survey was conducted to identify any other likely industrial source in the study area.

Study Result – Major and Large Sources and Odor Producing Facilities

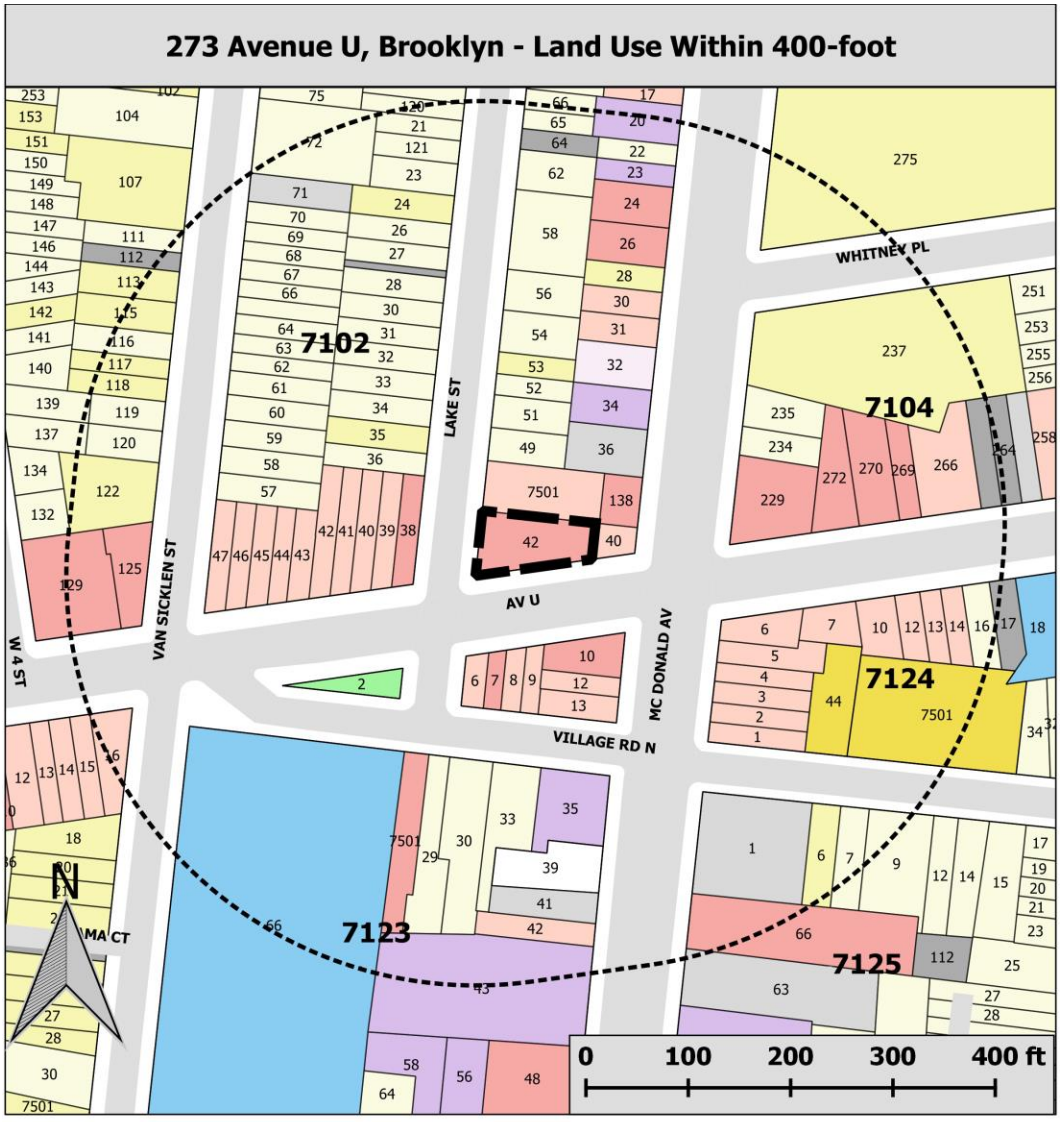
No existing large combustion sources, such as power plants, cogeneration facilities, etc., located within 1,000 feet of the Project Area were identified. In addition, no odor producing facility was identified within 1,000 feet of the Project Area. As such, no analysis was warranted.

Study Result – Industrial Sources Toxic Air Emission

The land survey study identified 73 commercial, industrial, or processing facilities that are likely to have NYC operational permits. The permits listed in Table 17-6a and 17-6b show operational permits and boiler permits, where industrial operational permits start with a "P" and boiler permits with a "C". A list of these facilities and the NYCDEP record search are presented in Table 17-6.

Figure 17-4 shows the 400-foot study area from the Proposed Development and those uses that include a non-residential use and may therefore have uses that require air quality permit issued by NYCDEP.

Figure 17-4: Potential Industrial or manufacturing Uses within 400 feet of the Project Site



Legend

- 400-foot Buffer
- Development Site
- BXMapPLUTO
- No Land Use
- One & Two Family Residence
- Multi-Family Residence (Walkup)
- Multi-Family Residence (Elevator)
- Mixed Residential & Commercial
- Commercial Use
- Industrial/Manufacturing
- Transportation/Utility
- Public Facilities & Institutions
- Open Space & Recration
- Parking
- Vacant Land

Source: New York City Department of City Planning - Map PLUTO September 2016
http://www1.nyc.gov/site/planning/data-maps/open-data/dwn-pluto-mappluto.page#mappluto

Table 17-6: Land Survey Study of Industrial Sources Within 400 Feet of the Proposed Development

Block	Lot	Land Use (Lots within 400 feet)	CATS info	Current Use (Land Survey)
7103	20	2222 McDonald Avenue	No Record	2-story warehouse. No emissions noted
	23	2226 McDonald Avenue	No Record	Ground floor commercial, residential above
	24	2232 McDonald Avenue	No Record	1-story auto repair - No body repairs noted
	26	2234 McDonald Avenue	No Record	Altech Electronics-Radio Sales and Service
	28	2236 McDonald Avenue	No Record	The Art of Stainless Steel, Inc. Metal Fabrication
	30	2238 McDonald Avenue	PA033592	Mastercraft Cabinets - Woodworking
	31	2240 McDonald Avenue	No Record	3-story building, evidence of 1st floor commercial
	32	2250 McDonald Avenue	PW001217	Alex's Auto Body - active auto body repair
	34	2256 McDonald Avenue	No Record	
	36	2260 McDonald Avenue	No Record	
	40	2272 McDonald Avenue	No Record	Ground floor retail, residential above
	42	273 Avenue U	No Record	Retail stores
	64	241 Lake Street	No Record	Parking lot
	138	2266 McDonald Avenue	No Record	2-story retail stores
	7501	279 Lake Street	No Record	4-story condominium
7104	258	2080 West Street	No Record	Ground floor retail, residential above
	263	329 Avenue U	No Record	Parking lot
	264	329 Avenue U	No Record	Parking lot
	265	325 Avenue U	No Record	Parking lot
	266	323 Avenue U	No Record	Sabatino Funeral Home, Inc.
	269	315 Avenue U	No Record	Commercial/retail - Ako Design Center
	270	311 Avenue U	No Record	1-story retail building
	272	309 Avenue U	No Record	Dental Office
	229	301 Avenue U	No Record	Retail bank
7124	1	2281 McDonald Avenue	No Record	Ground floor retail, residential above
	2	2279 McDonald Avenue	No Record	Ground floor retail, residential above
	3	2277 McDonald Avenue	No Record	Ground floor retail, residential above
	4	2275 McDonald Avenue	No Record	Ground floor retail, residential above
	5	2273 McDonald Avenue	No Record	Ground floor retail, residential above
	6	2271 McDonald Avenue	No Record	Ground floor retail, residential above
	7	302-308 Avenue U	No Record	Ground floor retail - laundromat and cleaner (drop off only), residential above
	10	310 Avenue U	No Record	Ground floor retail, residential above
	12	314 Avenue U	No Record	Ground floor retail, residential above
	13	316 Avenue U	No Record	Ground floor retail, residential above
	14	320 Avenue U	No Record	Ground floor retail, residential above
	17	326 Avenue U	No Record	Parking
7125	1	2287-2291 McDonald Avenue	No Record	Active auto repair - no auto body repairs noted
	63	2307 McDonald Avenue	No Record	Active auto repair - no auto body repairs noted
	66	2299 McDonald Avenue	No Record	Commercial door company
7123	6	274 Avenue U	No Record	Ground floor retail, residential above

	7	276 Avenue U	No Record	Ground floor retail, residential above
	8	278 Avenue U	No Record	Ground floor retail, residential above
	9	282 Avenue U	No Record	Ground floor retail, residential above
	10	2274 McDonald Avenue	No Record	Grocery store and deli
	12	2280 McDonald Avenue	No Record	Ground floor retail, residential above
	13	2284 McDonald Avenue	No Record	Ground floor dry cleaner (drop off service only), residential above
	27	28 Village Road North	No Record	2-story commercial office building
	35	2288 McDonald Avenue	PA008097	Active bakery - David's Bread
			PA027995	Active bakery - David's Bread
			PA028095	Active bakery - David's Bread
			PB082401	Active bakery - David's Bread
			PB082901	Active bakery - David's Bread
	39	2296 McDonald Avenue	No Record	Parking lot
	41	2304 McDonald Avenue	No Record	1-story warehouse
	42	2306 McDonald Avenue	No Record	Ground floor bakery (Master Sweets), residential above
	43	2308 McDonald Avenue	No Record	2-story commercial building - no emissions noted
	66	245 Gravesend Neck Road	CW018616	Public school
7122	16	246 Avenue U	No Record	Ground floor retail, residential above
7101	112	260 Van Sicklen Street	No Record	Parking
	125	247 Avenue U	No Record	Retail bank
	129	243 Avenue U	No Record	Ground floor retail, office above
7102	38	271 Avenue U	No Record	2-story retail
	39	269 Avenue U	No Record	Ground floor retail, residential above
	40	265 Avenue U	No Record	Ground floor retail, residential above
	41	263 Avenue U	No Record	Ground floor retail, residential above
	42	261 Avenue U	No Record	Ground floor retail, residential above
	43	259 Avenue U	No Record	Ground floor retail, residential above
	44	257 Avenue U	No Record	Ground floor retail, residential above
	45	253 Avenue U	No Record	Ground floor retail, residential above
	46	251 Avenue U	No Record	Ground floor retail, residential above
	47	249 Avenue U	No Record	Ground floor retail, residential above
	71	253 Van Sicklen Street	No Record	Parking
	127	256 Lake Street	No Record	Parking

The record search results show that four facilities have or had operational permits from the NYCDEP. Operational permits for boilers are treated as HVAC systems of existing land uses, hence no analysis is required. The Mastercraft Cabinets industrial/processing certificate PA033592 has expired in 2007. However, the land survey study determined that the facility is still operating. In addition to the NYCDEP CATs permit search, the land survey study explored whether there are any other facilities that are likely to emit toxic air operate in the 400 feet influence zone, but no other facility was identified. Table 17-7 shows the facilities categorized as possible toxic air emitter in the land survey study.

Table 17-7: Likely Toxic Air Emitters Identified in the Land Survey Study

Block	Lot	CATS info	Street Address	Current Use (Land Survey)
7103	30	PA033592 (Expired)	2238 McDonald Avenue	Mastercraft Cabinets - Woodworking
7103	32	PW001217 (Current)	2250 McDonald Avenue	Alex's Autobody
7123	35	PA008097 (Current) PA027995 (Current) PA028095 (Current) PB082401 (Current) PB082901 (Current)	2288 McDonald Avenue	David's Bread

As seen in Table 17-7, the facilities identified as toxic air emitters all have NYCDEP permits. As such, the permits were obtained from the NYCDEP and the emissions from these facilities analyzed. The facilities emissions are discussed here.

Mastercraft Cabinets (PA033592)

Mastercraft Cabinets located at 2238 McDonald Avenue (Block 7103, Lot 30), has an operational permit PA033592 for woodworking equipment. The facility is situated on the 1st floor of the building located 204 feet from the Proposed Development. The pollutant associated with the activity is sawdust (NY identification number NY075-00-0), which is $PM_{2.5}$ and PM_{10} combined. The equipment operates 8 hours per day and 240 days per year. Per the certificate, the equipment emits indoor at a height of 4 feet above grade. The emission point exit velocity of 1,100 C.F.M, 6-inch diameter, and 70 degree Fahrenheit were obtained from the certificate.

The source emission rate, as specified in the operational permit, is 0.001 lb/hr and 0.937 lb/yr with the use of a 99.9% fabric filter. The particle size distribution of 32.1 percent and 14.3 percent of $PM_{10}/PM_{2.5}$ respectively were obtained from the EPA AP-42, Appendix B1, Page B-1.48, Particle Size Distribution Data and Sized Emission Factors for Selected Sources, Table Woodworking Waste Collection Operations: Belt Sander Hood Exhaust Cyclone. Table 17-8 shows the woodworking equipment emission rates.

Table 17-8: $PM_{10}/PM_{2.5}$ Estimated Emission rate from Woodworking Without Control Equipment

Contaminant	Emission Rate		Fraction of Particle Size	Emission Rate			
				Short-term		Annual	
	lb/hr	lb/yr	Percent	lb/hr	g/s	lb/yr	g/s
$PM_{2.5}$	0.001	0.937	14.3	1.43E-04	1.80E-05	0.134	1.93E-06
PM_{10}			32.1	3.21E-04	4.04E-05	0.301	4.33E-06

Alex's Autobody (PW001217)

Alex's Autobody has an operational permit for an industrial spray booth with an activity rate of 8 hours per day and 275 days per year. The certificate, PW001217, situate the stack 20 feet above grade and 12 feet above the roofline of the Lot 32 building located 135 feet from the Proposed Development. The certificate indicates the quantities of paint, clear coats, reducer, and thinner consumed in a maximum of 1 hour and annually, as well as the compounds densities and mixture of chemicals.

Conventional coatings—paints, varnishes, lacquers, sealers, stains, and water thinned paints—comprises of compounds grouped into solids and volatile organic compounds (VOCs), which are mostly solvents. The coatings contain 30 to 85 percent solvents by volume and this amount is regulated by the EPA and NYSDEC. Per NYCDEP guidance and as outlined in the EPA AP-42, the analysis assumes that all VOCs are emitted. Each VOC contaminant is analyzed with the SGC/AGC guideline concentration. Particulates are fluid or solids particles grouped together. Per NYSDEC DAR-1, particulates are collectively analyzed with the more stringent concentration guideline. These two groups, VOC and particulates, are discussed here:

The chemicals listed in PW001217 certificate that make up the VOC, along with their Chemical Abstract Service (CAS) number, and the hourly and annual emission rates are presented in Table 17-9.

Table 17-9: Alex's Autobody VOC Short-term and Annual Emission Rates from the Spray Booth Operation as Shown in PW001217

Contaminant name	CAS No.	1-Hour		Annual	
		lb/hr	g/s	lb/yr	g/s
Toluene	108-88-3	0.053	6.68E-03	144	2.07E-03
Xylene	1330-20-7	0.015	1.89E-03	42	6.04E-04
Ethylbenzene	100-41-4	0.003	3.78E-04	7	1.01E-04
Acetone	67-64-1	0.071	8.95E-03	192	2.76E-03
N-Butyl Acetate	123-86-4	0.152	1.92E-02	410	5.90E-03
Ligroine	8032-32-4	0.015	1.89E-03	41	5.90E-04
Butanone (Methyl Ethyl Ketone)	78-93-3	0.026	3.28E-03	69	9.92E-04
Ethyl 3-Ethoxypropionate	763-69-9	0.005	6.30E-04	14	2.01E-04
Benzyl Butyl Phthalate	85-68-7	0.003	3.78E-04	9	1.29E-04
2-(2h-Benzotriazol-2-Yl)-4,6-Ditertpentylphenol	25973-55-1	0.002	2.52E-04	5	7.19E-05
4-Methylpentan-2-One (Methyl Isobutyl Ketone)	108-10-1	0.002	2.52E-04	5	7.19E-05
2-Methoxy-1 (Methoxypropylacetate) – Methylethyl Acetate	108-65-6	0.015	1.89E-03	41	5.90E-04
Heptan-2-One (Methyl Amyl Ketone)	110-43-0	0.001	1.26E-04	2	2.88E-05
Solvent Naptha (Naphtha Light Aliphatic)	64742-89-8	0.004	5.04E-04	10	1.44E-04
"Methylcyclohexan	108-87-2	0.009	1.13E-03	24	3.45E-04
Heptane	142-82-5	0.026	3.28E-03	70	1.01E-03
Isobutyl Acetate	110-19-0	0.011	1.39E-03	30	4.32E-04
Isopropyl Alcohol	67-63-0	0.006	7.56E-04	15	2.16E-04

The quantity of solids emitted were not provided in the certificate. However, the quantity of each coating material consumed and its solid percent by weight is shown in the certificate. These amounts were used to calculate the solids emission rate as follows. Per NYCDEP and as outlined in the Solow Report, 40 percent of the solids sprayed are transferred to the sprayed article, hence 60 percent of the solids are overspray. Per the EPA 40 CFR 63.11173€(2)(i) (Maximum Achievable Control Technology) spray booths have to be fitted with a control equipment that demonstrate at least 98 percent capture of paint overspray. These factors were used to calculate the solids emission rates. Table 17-10 shows the solids emission rates.

Table 17-10: Alex's Autobody Solids Short-term and Annual Emission Rates Calculated from the Spray Booth Operation as Shown in PW001217

	Percent Solids	Density	Hourly Usage	Solids Emission	Annual Usage	Solids Emission
Product	**(% w/w)**	**(lb/gal)**	**(gal/hr)**	**(lb/hr)**	**(gal/yr)**	**(lb/yr)**
Paint DMD619	47.00%	8.1	0.18	**0.68526**	100	380.7
Clear Coat DCA468	39.68%	7.84	0.033	**0.1026601**	12	37.3
Clear Coat DC4000	39.68%	7.84	0.016	**0.0497746**	8	24.9
Reducer DRR1150	3.55%	6.68	0.06	**0.0142284**	15	3.6
Thiner DTL876	0.00%	6.68	0.129	**0**	45	0.0
Solids Sprayed (lb/time)			**0.418**	**0.8519**	**180**	**446.5**
Transfer Efficiency			40%			
Control Efficiency			98%			
				lb/hr		**lb/yr**
Solids Emitted (lb/time)				**0.01022308**		**5.35770408**

In accordance with NYCDEP, emissions of solids are analyzed as PM_{10} and $PM_{2.5}$, and the particle size distribution was obtained from the EPA AP-42, Appendix B1, Page B.1-12, Particle Size Distribution Data and Sized Emission Factors for Selected Sources, Table 4.2.2.8 Automobile and Light-Duty Track Surface Coating Operations, Automobile Spray Booths. Table 17-11 shows the PM_{10} and $PM_{2.5}$ emission rates.

Table 17-11: PM_{10}/$PM_{2.5}$ Estimated Emission Rates from the Alex's Autobody Spray Booth

Contaminant	Permitted Emission Rate		Fraction of Particle Size	Emission rate			
				Short-term		Annual	
	lb/hr	lb/yr	Percent	lb/hr	g/s	lb/yr	g/s
$PM_{2.5}$	0.0102	5.36	28.6	2.92E-03	3.68E-04	1.53	2.20E-05
PM_{10}			46.7	4.77E-03	6.02E-04	2.5	3.60E-05

David's Bread (PA008097, PA027995, PA028095, PB082401, PB082901)

David's Bread is a bakery located at 2288 McDonald Avenue (Block 7123, Lot 35). The bakery operates 4 natural gas burners supplying heat to bread making ovens. The facility is situated 233 feet south of the Proposed Development. The burners activity rates, sizes, and height above grade as displayed in the certificate are shown in Table 17-12.

Table 17-12: David's Bread Natural Gas Burners by Certificate Number

Certificate	MMBtu/hr	Height Above Grade (ft.)	Operation Time	
			(Hour/day)	(Day/year)
PA027995	0.298	28.5	8	300
PB082401	0.4	30	6	360
PA008097	0.48	28.5	6	300
PB082901	0.4	28.5	6	360

Per the certificate, the contaminants emitted because of the gas burner are particulates, Carbon Dioxide (CO_2), CO, Nitrogen Oxides (NOx), SO_2. In addition, Ethanol is emitted from the bread product. The cumulative emissions from each oven by contaminant are shown in Table 17-13.

Table 17-13: David's Bread Emission Rates by Contaminant

Contaminant	CAS Number	Emission Rate			
		Short-term		Annual	
		lb/hr	g/s	lb/yr	g/s
Particulate (Assume $PM_{2.5}$)	NY075-00-0	1.83E-02	2.31E-03	38.3	5.50E-04
CO	630-08-0	3.76E-02	4.73E-03	81.3	1.17E-03
NOx	11104-93-1	1.52E-01	1.92E-02	319	4.59E-03
SO_2	7446-09-5	8.57E-04	1.08E-04	1.94	2.79E-05
CO_2	124-38-9	1.88E+02	2.37E+01	396,000	5.69E+00
Ethanol	64-17-5	3.09E+00	3.89E-01	6530	9.39E-02

The particulate emission was assumed to all $PM_{2.5}$ and alternatively all PM_{10} as the particle size distribution was not provided in the certificates. The Nitrogen Oxides (NOx) was assumed to be NO_2, similar to the methodology of the HVAC analysis. From these 6 contaminants, CO_2 and Ethanol are not criteria pollutants.

Air Dispersion Analysis

As outlined in the *CEQR TM Air Pollutants and Applicable Standards/Guidelines* section, the predicted concentrations are compared with the maximum allowable concentration. If the predicted concentrations are below the allowable maximum concentrations, no significant adverse air quality impacts are expected, else a cumulative detailed analysis and 24-hour peak load emission during work period using AERSCREEN or AERMOD dispersion models are performed. As such, the predicted concentrations of the criteria pollutants were compared with the NAAQS or the *de minimis.* All other contaminants' concentrations were compared with the DAR-1 SGC and AGC threshold criteria.

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

CEQR Screening Analysis

The facilities minimum distance to the Proposed Development were obtained from ZoLa. The CEQR pre-tabulated concentrations corresponding to distances less than or equal to the measure distance were utilized. The pre-tabulated concentrations are displayed in Table 17-14.

Table 17-14: CEQR TM Table 17-3 Industrial Source Screen Pre-Tabulated Concentrations

Facility Name	Distance from Source (ft) Actual/ CEQR Distance	1-Hour (µg/m^3)	8-Hour (µg/m^3)	24-Hour (µg/m^3)	Annual (µg/m^3)
Mastercraft Cabinets	204/ 200	3,335	2,153	1,174	167
Alex's Autobody	135/ 130	7,345	4,469	2,511	367
David's Bread	233/ 230	2,657	1,720	924	131

The impact of pollutants emitted from multiple sources were cumulatively added to predict the combined concentration at the proposed Development. If a contaminant concentration exceeded the threshold standard, detailed analysis using AERMOD dispersion model was utilized.

Air Dispersion Results

The *CEQR TM* Table 17-3 Industrial Source Screen short-term and annual maximum predicted concentrations of the 1 gram per second dispersion analyses were multiplied by the calculated emission rates, and the predicted concentrations from each facility were added and the cumulative results compared with the respective threshold criteria. The cumulative results of the criteria pollutants are displayed in Table 17-15.

Table 17-15: Criteria Pollutants Dispersion Analysis Results

Criteria Pollutant – Averaging Time	Threshold Standard	Predicted Concentration (µg/m^3)	Background Concentration (µg/m^3)	Total Concentration (µg/m^3)	Threshold Criteria (µg/m^3)
PM_{10} - 24-Hour	NAAQS	3.7	44	**48**	**150**
$PM_{2.5}$ - 24-Hour	*de minimis*	3.1	N.A.	**3.1**	**7.25**
$PM_{2.5}$ – Annual	*de minimis*	0.08	N.A.	**0.08**	**0.3**
CO - 1-hour	NAAQS	12.6	1,817 (1.59 ppm)	**1,830 (1.6 ppm)**	**40,000 (35 ppm)**
CO - 8-hour	*de minimis*	8.14	N.A.	**8.14 (0.007 ppm)**	**4,222 (3.8 ppm)**
NO_2 - 1-hour	NAAQS	51.0	120.9	**172**	**188**
NO_2 - Annual	NAAQS	0.60	33	**34**	**100**
SO_2 - 1-hour	NAAQS	0.29	24.7	**25**	**196**
SO_2 - Annual	NAAQS	0.004	4.8	**5**	**80**

As displayed in Table 17-15, the facilities cumulative impact concentrations, with the background concentration added were applicable, are below the threshold criterions. As such, it follows that each facility independent impact concentrations for each pollutant is less than its respective threshold criterion.

The *CEQR TM* Table 17-3 Industrial Source Screen was used to evaluate the solvents, VOC, impact. The predicted concentrations of the 1 gram per second dispersion analyses were multiplied by the calculated emission rates, and the predicted concentrations compared with the NYSDEC SGC/AGC guidelines where applicable (some contaminants do not have short-term

guideline). Each facility independent results of the non-criteria pollutants analysis are displayed in Table 17-16.

Table 17-16: Non-Criteria Pollutants Dispersion Analysis Results

Contaminant name	CAS No.	1-Hour	SGC	Annual	AGC
		µg/m³	µg/m³	µg/m³	µg/m³
Alex's Autobody					
Toluene	108-88-3	49.0	37000	0.8	5000
Xylene	1330-20-7	13.9	22000	0.2	100
Ethylbenzene	100-41-4	2.8	--	0.0	1000
Acetone	67-64-1	65.7	180000	1.0	30000
N-Butyl Acetate	123-86-4	140.7	95000	2.2	17000
Ligroine	8032-32-4	13.9	--	0.2	900
Butanone (Methyl Ethyl Ketone)	78-93-3	24.1	13000	0.4	5000
Ethyl 3-Ethoxypropionate	763-69-9	4.6	140	0.1	64
Benzyl Butyl Phthalate	85-68-7	2.8	--	0.0	0.42
2-(2h-Benzotriazol-2-Yl)-4,6-Ditertpentylphenol	25973-55-1	1.9	--	0.0	--
4-Methylpentan-2-One (Methyl Isobutyl Ketone)	108-10-1	1.9	31000	0.0	3000
2-Methoxy-1 (Methoxypropylacetate) – Methylethyl Acetate	108-65-6	13.9	55000	0.2	2000
Heptan-2-One (Methyl Amyl Ketone)	110-43-0	0.9	--	0.0	550
Solvent Naptha (Naphtha Light Aliphatic)	64742-89-8	3.7	--	0.1	3200
"Methylcyclohexan	108-87-2	8.3	--	0.1	3800
Heptane	142-82-5	24.1	210000	0.4	3900
Isobutyl Acetate	110-19-0	10.2	--	0.2	17000
Isopropyl Alcohol	67-63-0	5.6	98000	0.1	7000
David's Bread					
Carbon Dioxide	124-38-9	N.A.	--	745.3	21000
Ethanol	64-17-5	N.A.	--	12.3	45000

As displayed in Table 17-16, the predicted concentrations of the contaminants emitted from the industrial sources are below the NYSDEC SGC/AGC guidelines, and no contaminant is emitted from multiple sources.

As the VOCs predicted concentrations are below the AGC/SGC standards, and the criteria pollutants concentrations are below the NAAQS and *de minimis* guidelines, no significant toxic air quality impacts are expected as a result of the industrial sources facilities to the proposed project.

CONCLUSION

Air quality analyses addressed mobile sources, stationary HVAC systems, and air toxics. The results of the analyses are summarized below.

- Emissions from project-related vehicle trips would not cause significant adverse air quality impacts to receptors at the local or neighborhood scale;
- Emissions from project-related heating, ventilation, and air conditioning systems (HVACs) would not cause significant adverse air quality impacts to receptors at the local scale.

- No significant air quality impacts to the proposed project are anticipated from air toxics; and
- As no existing large or major sources are located within 1,000 feet of the Proposed Development, emissions from these types of existing stationary sources would not cause a significant adverse air quality impact to the proposed project.

19. NOISE

Introduction

The purpose of a noise assessment under CEQR is to determine whether an action would (1) raise noise levels significantly at existing or anticipated sensitive noise receptors (such as residences or schools) or (2) introduce new sensitive uses (such residential buildings or schools) at locations subject to unacceptably high ambient noise levels.

The assessment is concerned with both mobile and stationary noise sources. Mobile sources are those that move in relation to a noise-sensitive receptor. They include automobiles, buses, trucks, aircraft, and trains. Stationary sources of noise do not move in relation to a noise-sensitive receptor. Typical stationary noise sources of concern include machinery or mechanical equipment associated with industrial and manufacturing operations; building heating, ventilating, and air conditioning (HVAC) systems; speakers for public address and concert systems; playground noise; and spectators at concerts or sporting events. An action could raise noise levels either by introducing new stationary noise sources (such as outdoor playgrounds or rooftop air conditioning compressors) or by increasing mobile source noise (generally by generating additional traffic). Similarly, an action could introduce new residences or other sensitive receptors that would be subject to noise from either stationary or mobile sources.

The proposed actions would include a zoning map amendment to extend an existing R6A zoning district onto the project area, which is now zoned R5B/C2-3, as well as a zoning text amendment to map an MIH area that is coterminous with the rezoning area. The actions would facilitate a vertical enlargement of the existing one-story commercial building on the project site, adding up to 15 residential units. The proposed actions would thus result in new development, which could potentially generate either stationary or mobile source noise, and that would include noise-sensitive residences.

Noise Fundamentals

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. Table 19-1 lists some noise levels for typical daily activities.

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-dB(A) change is the threshold of change detectable by the human ear;
- 5-dB(A) change is readily noticeable; and
- 10-dB(A) 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.

- L_{eq} 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.
- $L_{eq(24)}$ 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 (L_X). 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 dB(A) 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.

Impact Determination and Noise Standards and Guidelines

In 1983 the New York City Department of Environmental Protection (DEP) adopted the City Environmental Protection Order-City Environmental Quality Review (CEQR) noise standards for exterior noise levels. These standards are the basis for classifying noise exposure into four categories based on the L_{10}: Acceptable, Marginally Acceptable, Marginally Unacceptable, and Clearly Unacceptable, as shown in Table 19-2.

For sensitive receptors introduced by the proposed action, with-action condition noise levels in dB(A) $L_{10(1)}$ are compared with the values contained in the Noise Exposure Guidelines. If these noise levels would exceed the Marginally Acceptable levels, a significant impact would occur unless the building design provides a composite building attenuation that would be sufficient to reduce these levels to an acceptable interior noise level. These values are shown in Table 19-3.

For noise increases caused by project-induced traffic, or for stationary noise sources introduced by the proposed action, if the no-action levels are less than 60 dB(A) $L_{eq(1)}$ and the analysis period is not at nighttime, an increase of 5 dB(A) $L_{eq(1)}$ or more in the future with the project would be considered a significant impact. In order for the 5 dB(A) threshold to be valid, the resultant action condition noise level would have to be equal to or less than 65 dB(A). If the No-Action noise level is equal to or greater than 62 dB(A) $L_{eq(1)}$, or if the analysis period is a nighttime analysis period, the incremental significant impact threshold would be 3 dB(A) $L_{eq(1)}$. If the No-Action noise level is 61dB(A) $L_{eq(1)}$, the maximum incremental increase would be 4 dB(A), since an increase higher than this would result in a noise level higher than the 65 dB(A) $L_{eq(1)}$ threshold and be considered significant.

Table 19-2
CEQR Noise Exposure Guidelines for use in City Environmental Impact Review[1]

Receptor Type	Time Period	Acceptable General External Exposure	Airport[3] Exposure	Marginally Acceptable General External Exposure	Airport[3] Exposure	Marginally Unacceptable General External Exposure	Airport[3] Exposure	Clearly Unacceptable General External Exposure	Airport[3] Exposure
1.Outdoor area requiring serenity and quiet[2]		$L_{10} \leq 55$ dBA	$L_{dn} \leq 60$ dBA		$L_{dn} \leq 60$ dBA		$L_{dn} \leq 60$ dBA		$L_{dn} \leq 75$ dBA
2. Hospital, Nursing Home		$L_{10} \leq 55$ dBA		$55 < L_{10} \leq 65$ dBA		$65 < L_{10} \leq 80$ dBA		$L_{10} > 80$ dBA	
3. Residence, residential hotel or motel	7 am to 10 pm	$L_{10} \leq 65$dBA		$65 < L_{10} \leq 70$dBA		$70 < L_{10} \leq 80$ dBA		$L_{10} > 80$ dBA	
	10 pm to 7 am	$L_{10} \leq 55$dBA		$55 < L_{10} \leq 70$dBA		$70 < L_{10} \leq 80$ dBA		$L_{10} > 80$ dBA	
4. School, museum, library, court house of worship, transient hotel or motel, public meeting room, auditorium, out-patient public health facility		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM- 10 PM)		Same as Residential Day (7 AM –10 PM)	
5. Commercial or office		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM –10 PM)		Same as Residential Day (7 AM-10 PM)	
6. Industrial, public areas only[4]	Note 4	Note 4		Note 4		Note 4		Note 4	

Notes:

) In addition, any new activity shall not increase the ambient noise level by 3 dBA or more;

1 Measurements and projections of noise exposures are to be made at appropriate heights above site boundaries as given by American National Standards Institute (ANSI) Standards; all values are for the worst hour in the time period.

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

3 One may use the FAA-approved L_{dn} contours supplied by the Port Authority, or the noise contours may be computed from the federally approved INM Computer Model using flight data supplied by the Port Authority of New York and New Jersey.

4 External Noise Exposure standards for industrial areas of sounds produced by industrial operations other than operating motor vehicles or other transportation facilities are spelled out in the New York City Zoning Resolution, Sections 42-20 and 42-21. The referenced standards apply to M1, M2, and M3 manufacturing districts and to adjoining residence districts (performance standards are octave band standards).

Source: New York City Department of Environmental Protection (adopted policy 1983).

Table 19-3
Required Attenuation Values to Achieve Acceptable Interior Noise Levels

	Marginally Unacceptable				**Clearly Unacceptable**
Noise level with proposed action	$70 < L_{10} \leq 73$	$73 < L_{10} \leq 76$	$76 < L_{10} \leq 78$	$78 < L_{10} \leq 80$	$80 < L_{10}$
Attenuation[A]	(I) 28 dBA	(II) 31 dBA	(III) 33 dBA	(IV) 35 dBA	$36 + (L_{10} - 80)$[B] dBA

Note: [A]The above composite window-wall attenuation values are for residential dwellings and community facility development. Commercial office spaces and meeting rooms would be 5 dBA less in each category. All the above categories require a closed window situation and hence alternate means of ventilation.
[B]Required attenuation values increase by 1 dBA increments for L_{10} values greater than 80 dBA.
Source: New York City Department of Environmental Protection, 2012.

Potential for Additional Stationary Source Noise

The proposed actions would result in new residential development. Unlike playgrounds, truck loading docks, loudspeaker systems, car washes, stationary diesel engines, or similar uses, residential apartment buildings are not substantial stationary noise sources. All rooftop mechanical equipment, including air conditioner compressors, would be enclosed and would comply with New York City Noise Code requirements, which limit noise levels generated by such equipment to 65 dBA during the daytime (7AM to 10 PM) and 55 dBA during the nighttime. The proposed actions would therefore not have the potential to cause a significant adverse stationary source noise impact.

Potential for Additional Mobile Source Noise

The anticipated action-induced development (15 residential units) is below the CEQR threshold for a traffic impact assessment. It can therefore be assumed that the additional traffic volumes would be too low to cause a 3 dBA increase in $L_{eq(1)}$ noise levels, which would require a doubling of PCE traffic volumes along an adjacent street. The proposed actions would therefore not have the potential to cause a significant adverse mobile source noise impact.

Potential for Existing Noise Levels to Adversely Affect New Residents

Noise monitoring was conducted originally at two locations on the sidewalks adjacent to the project area. Location 1 was on the north side of Avenue U, approximately 45 feet from the intersection with McDonald Avenue. Location 2 was on the east side of Lake Street, approximately 35 feet from the intersection with Avenue U.

Because the predominant noise sources in the area of the proposed project are vehicular and rail movements, noise monitoring was conducted during peak travel periods, 7:30 am-9:00 am, 12:00 pm-1:30 pm, and 4:30 pm-6:00 pm. Pursuant to *CEQR Technical Manual* methodology, readings on the Lake Street frontage (Location 2) were conducted for periods of 20 minutes during each peak hour, and readings on Avenue U (Location 1) were conducted for periods of one hour, to properly document rail noise from the elevated subway line.

Location 1 on Avenue U



Location 2 on Lake Street



Noise monitoring was conducted using a Type 1 Casella CEL-63X sound meter with wind screen. The monitors were placed on tripods 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 and train traffic around the subject site constitute a worst-case condition for noise at the project site.

Monitoring was conducted during typical midweek conditions, on Thursday, June 1, 2017. The weather was approximately 65 to 70 degrees Fahrenheit, dry, with mild wind speeds during monitoring.

Location 1 was in proximity to a bus stop, located across the street on Avenue U; therefore, bus brakes and engine noises were audible from this monitoring location. Additionally, rail movements were audible from this location. Location 2 on Lake street had very low traffic volumes and associated noise levels, although rail movements were audible from this location as well. Traffic volumes and vehicle classification were documented during the noise monitoring.

Tables 19-4 and 19-5 show the noise monitoring results for the two monitoring locations. **Bold** denotes an L_{10} noise level that exceeds 70 dB(A), which is the upper limit of the "marginally acceptable" range as defined for residential use in Table 19-2 of the *CEQR Technical Manual*. Tables 19-6 through 19-8 show the vehicle counts and classifications for the three monitoring periods.

Table 19-4

Noise Levels at Location 1 on Avenue U

Thursday, June 1, 2017			
Time	07:19 am – 08:19 am	12:00 pm– 1:00 pm	4:31 pm – 5:31 pm
L_{max}	93.2	93.1	93.5
L_5	82.5	81.0	81.0
L_{10}	**78.5**	**75.5**	**76.0**
L_{eq}	75.0	73.0	73.5
L_{50}	67.5	64.0	65.0
L_{90}	60.5	59.0	61.5
L_{min}	54.4	54.5	55.7

Table 19-5

Noise Levels at Location 1 on Lake Street

Thursday, June 1, 2017			
Time	08:21 am– 08:41 am	1:02 pm – 1:22 pm	5:34 pm – 5:54 pm
L_{max}	94.7	89.6	85.4
L_5	73.0	71.5	68.5
L_{10}	69.5	**71.0**	66.5
L_{eq}	71.8	66.3	62.3
L_{50}	60.5	58.0	58.0
L_{90}	53.5	53.5	54.5
L_{min}	49.6	50.6	52.0

Table 19-6

Morning Vehicle Counts and Classifications

	Location 1	Location 2
Car/ Taxi	106	6
Van/Light Truck/SUV	236	6
Motorcycle	0	0
Heavy Truck	32	0
Bus	38	1
Train	18	0

Table 19-7

Midday Vehicle Counts and Classifications

	Location 1	Location 2
Car/ Taxi	134	4
Van/ Light Truck/SUV	194	12
Motorcycle	0	0
Heavy Truck	38	1
Bus	15	0
Train	15	0

Table 19-8
Evening Vehicle Counts and Classifications

	Location 1	Location 2
Car/ Taxi	169	8
Van/ Light Truck/SUV	253	11
Motorcycle	1	0
Heavy Truck	16	0
Bus	16	0
Train	20	0

Because a direct line of site exists between the project site and the elevated rail line above McDonald Avenue, and because the rail line and the existing building's roof are at approximately the same height, noise monitoring was subsequently conducted at the southeastern edge of the building's roof (Location 3), which is the location closest to the Avenue U station. As on the earlier occasion, monitoring was conducted using a Type 1 Casella CEL-63X sound meter with wind screen. The monitor was secured to the top of the three-foot-high parapet so that it extended over the parapet's edge. Monitoring was conducted during typical midweek conditions, on Wednesday, November 7, 2018. The temperature was between 55 and 60 degrees Fahrenheit, the weather was dry, and wind speeds were mild. Train movements were the primary noise source at this location, with low audible noise levels from traffic. Table 19-9 shows the monitoring results at thislocation.

Location 3 on the Roof of 273 Avenue U



Table 19-9
Noise Levels at Location 3 on the Rooftop

Wednesday, November 7, 2018			
Time	7:54 am – 8:54 am	12:00 pm – 1:01 pm	4:30 pm – 5:30 pm
L_{max}	87.0	95.4	88.5
L_{10}	**75.5**	**75.0**	**74.0**
L_{eq}	72.5	73.2	71.7
L_{50}	67.5	67.0	67.0
L_{90}	64.0	64.0	63.5
L_{min}	61.0	62.1	65.7
Trains	13	9	13

The 2014 *CEQR Technical Manual* Table 19-2 contains noise exposure guidelines. For a residential use, noise levels between 70 and 80 dB(A) are identified as "marginally unacceptable." The highest recorded L_{10} noise levels were 78.5 dB(A) at Location 1 during the morning period, 71.0 dB(A) at Location 2 during the midday period, and 75.5 dB(A) at Location 3 during the morning period. All are in the marginally unacceptable category.

Window-wall noise attenuation would therefore be required to ensure an acceptable indoor noise level. Based on Table 19-3 of the *CEQR Technical Manual*, a composite window-wall attenuation level of 28 dB(A) for residential levels of the building facade facing west onto Lake Avenue, and a composite window-wall attenuation level of 31 dB(A) would be required for residential levels above the ground floor of all other building facades. A minimum attenuation of 35 dB(A) would be required for ground floor residential use on any façade not fronting on Lake Street, but that is not contemplated.

With this level of noise attenuation incorporated into future development of the project site, there would be no potential for significant adverse impacts related to noise.

To ensure that the required noise attenuation is provided, an (E) designation would be placed on the project site (Block 7103, Lot 42). The text of the (E) designation (E-525) will state the following:

> To ensure an acceptable interior noise environment, future residential/commercial/community facility uses must provide a closed-window condition with a minimum of 28 dB(A) window/wall attenuation on facades facing west (Lake Street) and 35 dB(A) of attenuation on the first floor of all other facades and 31 dB(A) of attenuation on all upper floors of all other facades to ensure an interior noise level not greater than 45 dB(A) for residential and community facility uses or not greater than 50 dB(A) for commercial uses. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Conclusion

For the reasons cited above, the proposed actions would not result in a significant adverse noise impact.

Figure 19-1: Noise Monitoring Locations



Appendix

Print Form

Jamaica Bay Watershed Protection Plan
Project Tracking Form

The Jamaica Bay Watershed Protection Plan, developed pursuant to Local Law 71 of 2005, mandates that the New York City Department of Environmental Protection (DEP) work with the Mayor's Office of Environmental Coordination (MOEC) to review and track proposed development projects in the Jamaica Bay Watershed (http://www.nyc.gov/html/oec/downloads/pdf/ceqr/Jamaica_Bay_Watershed_Map.jpg) that are subject to CEQR in order to monitor growth and trends. If a project is located in the Jamaica Bay Watershed, (the applicant should complete this form and submit it to DEP and MOEC. This form must be updated with any project modifications and resubmitted to DEP and MOEC.

The information below will be used for tracking purposes only. It is not intended to indicate whether further CEQR analysis is needed to substitute for the guidance offered in the relevant chapters of the CEQR Technical Manual.

A. GENERAL PROJECT INFORMATION

1. CEQR Number: Pending 1a. Modification ☐
2. Project Name: 273 Avenue U Rezoning
3. Project Description:

The proposed actions would facilitate the vertical enlargement of the existing one-story, 5,432 sf commercial building on Brooklyn Block 7103, Lot 42, which would add three stories with nine dwelling units within 11,899 gsf of residential space.

4. Project Sponsor: architect Walter C. Maffei, on behalf of the property owner
5. Required approvals: zoning map and text amendments
6. Project schedule (build year and construction schedule): 2020; 18 months of construction

B. PROJECT LOCATION:

1. Street address: 273 Avenue U
2. Tax block(s): 7103 Tax Lot(s): 42
3. Identify existing land use and zoning on the project site: 1-story retail; R5B/C2-3
4. Identify proposed land use and zoning on the project site: residential above retail; R6A/C2-3
5. Identify land use of adjacent sites (include any open space): residential above retail; R5B/C2-3
6. Describe existing density on the project site and the proposed density:

Existing Condition	Proposed Condition
5,432 gsf of retail on a 5,432 sf lot	17,331 gsf (5,031 retail; 12,300 res.

7. Is project within 100 or 500 year floodplain (specify)? ☐ **100 Year** ☐ **500 Year** ☒ **No**

C. GROUND AND GROUNDWATER

1. Total area of in-ground disturbance, if any (in square feet): none
2. Will soil be removed (if so, what is the volume in cubic yards)? no
3. Subsurface soil classification:
   (per the New York City Soil and Water Conservation Board): 211. Pavement & buildings-Flatbush-
4. If project would change site grade, provide land contours (**attach** map showing existing in 1' contours and proposed in 1' contours).
5. Will groundwater be used (list volumes/rates)? ☐ **Yes** ☒ **No**

   Volumes: Rates:

6. Will project involve dewatering (list volumes/rates)? ☐ **Yes** ☒ **No**

   Volumes: Rates:

7. Describe site elevation above seasonal high groundwater:

   TBD

D. HABITAT

1. Will vegetation be removed, particularly native vegetation? ☐ **Yes** ☒ **No**

   If YES,
   - **Attach** a detailed list (species, size and location on site) of vegetation to be removed (including trees >2" caliper, shrubs, understory planting and groundcover).
   - **List** species to remain on site.
   - **Provide** a detailed list (species and sizes) of proposed landscape restoration plan (including any wetland restoration plans).

2. Is the site used or inhabited by any rare, threatened or endangered species? ☐ **Yes** ☒ **No**
3. Will the project affect habitat characteristics? ☐ **Yes** ☒ **No**

   If YES, describe existing wildlife use and habitat classification using "Ecological Communities of New York State." at http://www.dec.ny.gov/animals/29392.html.

4. Will pesticides, rodenticides or herbicides be used during construction? ☐ **Yes** ☒ **No**

   If YES, estimate quantity, area and duration of application.

5. Will additional lighting be installed? ☒ **Yes** ☐ **No**

   If YES and near existing open space or natural areas, what measures would be taken to reduce light penetration into these areas?

   N/A

E. SURFACE COVERAGE AND CHARACTERISTICS

(describe the following for both the existing and proposed condition):

	Existing Condition	Proposed Condition
1. Surface area:		
Roof:	5,432 sf	5,432 sf
Pavement/walkway:	none	none
Grass/softscape:	none	none
Other (describe):	none	none
2. ***Wetland*** (regulated or non-regulated) area and classification:	none	none
3. Water surface area:	none	none

4. ***Stormwater management*** (describe):

Existing – how is the site drained?

evaporation and runoff into sewers

Proposed – describe, including any infrastructure improvements necessary off-site:

same