Environmental Assessment Statement
and
Supplemental Report

for

141-05 109th Ave. Rezoning
Queens, NY

Lead Agency: NYC Department of City Planning

CEQR No.: 22DCP151Q

ULURP Nos.: 220267ZMQ, N220268ZRQ

Prepared by:

Environmental Studies Corp.
55 Water Mill Road
Great Neck, NY 11021

November 2022

Table of Contents

EAS Form

CEQR Graphics & Photographs

Project Description……1

EAS Narrative Report

- Introduction……...9
- Land use, zoning, and public policy……...9
- Open space……25
- Shadows……34
- Historic and cultural resources……...38
- Urban design and visual resources……39
- Hazardous materials……44
- Transportation……56
- Air quality……66
- Noise……79
- Neighborhood Character……...91
- Construction……95

Appendix

- Illustrative Architectural Plans
- Historic and Cultural Resources
- Natural Resources
- Hazardous Materials
- Transportation
- Noise
- Construction

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* 141-05 109th Ave. Rezoning

3. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency)	BSA REFERENCE NUMBER (if applicable)
22DCP151Q	
ULURP REFERENCE NUMBER (if applicable)	OTHER REFERENCE NUMBER(S) (if applicable) (*e.g.*, legislative intro, CAPA)
220267ZMQ, N220268ZRQ	

4a. *Lead Agency Information*			**4b. *Applicant Information***		
NAME OF LEAD AGENCY			NAME OF APPLICANT		
NYC Department of City Planning			Mal Pal Realty Corp.		
NAME OF LEAD AGENCY CONTACT PERSON			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON		
Stephanie Shellooe, AICP, Director, Environmental Assessment & Review Division			Joseph Gaon, Akerman LLP		
ADDRESS 120 Broadway, 31st Floor			ADDRESS 666 Fifth Avenue, 20th floor		
CITY New York	STATE NY	ZIP 10271	CITY New York	STATE NY	ZIP 10103
TELEPHONE 212-720-3328	EMAIL sshellooe@planning.nyc.gov		TELEPHONE 212-259-6474	EMAIL joseph.gaon@akerman. com	

5. *Project Description*

The Applicant, Mal Pal Realty Corp., seeks to amend Zoning Sectional Maps 18c as it pertains to the Project Area, Block 10068, Lots 200, 205, 210, 213, 214, 215, 216, and 218 in the South Jamaica neighborhood of Queens, Community District 12. The Applicant owns the property located at Block 10068, Lots 200, 205, 210, 213, 214, 215 while Block 10068, Lots 216, 218 are not controlled by the Applicant. The Proposed Actions would rezone the Project Area from R3A to R6B/C2-3. The Proposed Actions also seek a Zoning Text Amendment to ZR Appendix F to establish the Project Area as a Mandatory Inclusionary Housing (MIH) Area with MIH Options 1 and 2. The final MIH Option will be chosen by the City Council through the ULURP process.

The proposed Zoning Map and Text amendments would facilitate the development on the Applicant owned Projected Development Site 1 (Block 10068, Lots 200, 205, 210, 213, 214, 215) with a 4-story and cellar, 45-foot tall, 92,779 gross square foot (gsf)/63,708 zoning square foot (zsf) mixed-use building with approximately 15,702 gsf of commercial retail, office, and community facility space comprised of 5,165 gsf of retail space, 4,587 gsf of office space, and 5,950 gsf of community facility space for a Universal Pre-K school on the first floor, 60 residential dwelling units on floors 2 through 4 (52,051 gsf), and 28 cellar level accessory parking spaces (25,026 gsf including parking ramp). Approximately 25% of the residential floor area would be designated for affordable housing under MIH Option 1 generating 15 affordable dwelling units. MIH Option 1 requires that 25% of the residential zoning floor area be for affordable housing units for residents with incomes averaging 60% Area Median Income (AMI). Option 2 would require that 30% of the residential zoning floor area must be for affordable housing units for residents with incomes averaging 80% of AMI resulting in 18 affordable units. A publicly accessible 249 square foot seating area would be provided at the corner of 109th Avenue and 142nd Street and is intended for use by parents picking up children of the Universal pre-school and for passive recreational use by employees working in the development.

The Proposed Actions would be expected to facilitate additional development within the Project Area. Therefore, the RWCDS also includes Projected Development Site 2 (Block 10068, Lots 216 and 218).

See attached Project Description.

Project Location

BOROUGH Queens	COMMUNITY DISTRICT(S) 12	STREET ADDRESS 141-05 109th Avenue
TAX BLOCK(S) AND LOT(S) Block 10068, Lots 200, 205, 210, 213, 214, 215, 216, 218		ZIP CODE 11435

DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS Between 139th and 142nd Streets

EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY R3A | ZONING SECTIONAL MAP NUMBER 18c

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

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

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

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

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION ZR Appendix F; ZR 18c

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

☐ VARIANCE (use)

☐ VARIANCE (bulk)

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

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

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

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

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

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

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

***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.): 38,088 (rezoning area); 30,088 (proposed development site)

Waterbody area (sq. ft) and type: None

Roads, buildings, and other paved surfaces (sq. ft.): 38,008 (rezoning area); 30,088 (proposed development site)

Other, describe (sq. ft.): None

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

SIZE OF PROJECT TO BE DEVELOPED (gross square feet): 92,779

NUMBER OF BUILDINGS: 1

GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): 92,779

HEIGHT OF EACH BUILDING (ft.): 45'

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: 30,088

The total square feet not owned or controlled by the applicant: 8,000

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: 38,088 sq. ft. (width x length) VOLUME OF DISTURBANCE: 190,245 cubic ft. (width x length x depth)

AREA OF PERMANENT DISTURBANCE: 38,088 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.)	52,051	9,752	5,950	0
Type (*e.g.,* retail, office, school)	60 units	retail, office	Universal Pre-K school	0

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

If "yes," please specify: NUMBER OF ADDITIONAL RESIDENTS: 225 NUMBER OF ADDITIONAL WORKERS: 55

Provide a brief explanation of how these numbers were determined: Residents: Based on average household size of 3.76 residents per dwelling unit (2014-2018 ACS data) in Census Tracts 50% or more within ¼-mile (tracts 158.01, 170, 194, 196, 198 and 202); Workers: assumes 3 workers per 1,000 sf of retail space, 4 workers per 1,000 sf of office space, 20 school employees, and .04 workers per dwelling unit (60 units).

Does the proposed project create new open space? ☒ YES ☐ NO If "yes," specify size of project-created open space: 249 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): 2026

ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: 36

WOULD THE PROJECT BE IMPLEMENTED IN A SINGLE PHASE? ☐ YES ☒ NO IF MULTIPLE PHASES, HOW MANY? 2

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE: Projected Development Site 1 would be developed over an up to 24 month construction period to be followed by Projected Development Site 2 which would be developed over an up to 12 month construction period. Construction would begin following project approval in 2023.

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

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

Part II: TECHNICAL ANALYSIS

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

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

	YES	NO
1. *LAND USE, ZONING, AND PUBLIC POLICY*: CEQR Technical Manual Chapter 4		
(a) Would the proposed project result in a change in land use different from surrounding land uses?	☐	☒
(b) Would the proposed project result in a change in zoning different from surrounding zoning?	☒	☐
(c) Is there the potential to affect an applicable public policy?	☐	☒
(d) If "yes," to (a), (b), and/or (c), complete a preliminary assessment and attach. See attached report.		
(e) Is the project a large, publicly sponsored project?	☐	☒
○ If "yes," complete a PlaNYC assessment and attach.		
(f) Is any part of the directly affected area within the City's Waterfront Revitalization Program boundaries?	☐	☒
○ If "yes," complete the Consistency Assessment Form.		
2. *SOCIOECONOMIC CONDITIONS*: CEQR Technical Manual Chapter 5		
(a) Would the proposed project:		
○ Generate a net increase of 200 or more residential units?	☐	☒
○ Generate a net increase of 200,000 or more square feet of commercial space?	☐	☒
○ Directly displace more than 500 residents?	☐	☒
○ Directly displace more than 100 employees?	☐	☒
○ Affect conditions in a specific industry?	☐	☒
3. *COMMUNITY FACILITIES*: CEQR Technical Manual Chapter 6		
(a) Direct Effects		
○ Would the project directly eliminate, displace, or alter public or publicly funded community facilities such as educational facilities, libraries, hospitals and other health care facilities, day care centers, police stations, or fire stations?	☐	☒
(b) Indirect Effects		
○ **Child Care Centers:** Would the project result in 20 or more eligible children under age 6, based on the number of low or low/moderate income residential units? (See Table 6-1 in Chapter 6)	☐	☒
○ **Libraries:** Would the project result in a 5 percent or more increase in the ratio of residential units to library branches? (See Table 6-1 in Chapter 6)	☐	☒
○ **Public Schools:** Would the project result in 50 or more elementary or middle school students, or 150 or more high school students based on number of residential units? (See Table 6-1 in Chapter 6)	☐	☒
○ **Health Care Facilities and Fire/Police Protection:** Would the project result in the introduction of a sizeable new neighborhood?	☐	☒
4. *OPEN SPACE*: CEQR Technical Manual Chapter 7		
(a) Would the proposed project change or eliminate existing open space?	☐	☒
(b) Is the project located within an under-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?	☐	☒
○ If "yes," would the proposed project generate more than 50 additional residents or 125 additional employees?	☐	☐
(c) Is the project located within a well-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?	☐	☒
○ If "yes," would the proposed project generate more than 350 additional residents or 750 additional employees?	☐	☐
(d) If the project in located an area that is neither under-served nor well-served, would it generate more than 200 additional residents or 500 additional employees?	☒	☐

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

	YES	NO
(f) Would the proposed project be located in an area that is partially sewered or currently unsewered?	☐	☒
(g) Is the project proposing an industrial facility or activity that would contribute industrial discharges to a Wastewater Treatment Plant and/or generate contaminated stormwater in a separate storm sewer system?	☐	☒
(h) Would the project involve construction of a new stormwater outfall that requires federal and/or state permits?	☐	☒
11. *SOLID WASTE AND SANITATION SERVICES*: CEQR Technical Manual Chapter 14		
(a) Using Table 14-1 in Chapter 14, the project's projected operational solid waste generation is estimated to be (pounds per week): 4,287		
○ 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): 10,195,884		
(b) Would the proposed project affect the transmission or generation of energy?	☐	☒
13. *TRANSPORTATION*: CEQR Technical Manual Chapter 16		
(a) Would the proposed project exceed any threshold identified in Table 16-1 in Chapter 16?	☐	☒
(b) If "yes," conduct the screening analyses, attach appropriate back up data as needed for each stage and answer the following questions:		
○ Would the proposed project result in 50 or more Passenger Car Equivalents (PCEs) per project peak hour?	☐	☒
If "yes," would the proposed project result in 50 or more vehicle trips per project peak hour at any given intersection? ***It should be noted that the lead agency may require further analysis of intersections of concern even when a project generates fewer than 50 vehicles in the peak hour. See Subsection 313 of Chapter 16 for more information.*	☐	☐
○ Would the proposed project result in more than 200 subway/rail or bus trips per project peak hour?	☐	☒
If "yes," would the proposed project result, per project peak hour, in 50 or more bus trips on a single line (in one direction) or 200 subway trips per station or line?	☐	☐
○ Would the proposed project result in more than 200 pedestrian trips per project peak hour?	☐	☒
If "yes," would the proposed project result in more than 200 pedestrian trips per project peak hour to any given pedestrian or transit element, crosswalk, subway stair, or bus stop?	☐	☐
14. *AIR QUALITY*: CEQR Technical Manual Chapter 17		
(a) *Mobile Sources*: Would the proposed project result in the conditions outlined in Section 210 in Chapter 17?	☐	☒
(b) *Stationary Sources*: Would the proposed project result in the conditions outlined in Section 220 in Chapter 17?	☒	☐
○ If "yes," would the proposed project exceed the thresholds in Figure 17-3, Stationary Source Screen Graph in Chapter 17? (Attach graph as needed) See attached report.	☐	☒
(c) Does the proposed project involve multiple buildings on the project site?	☐	☒
(d) Does the proposed project require federal approvals, support, licensing, or permits subject to conformity requirements?	☐	☒
(e) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to air quality that preclude the potential for significant adverse impacts?	☐	☒
15. *GREENHOUSE GAS EMISSIONS*: CEQR Technical Manual Chapter 18		
(a) Is the proposed project a city capital project or a power generation plant?	☐	☒
(b) Would the proposed project fundamentally change the City's solid waste management system?	☐	☒
(c) If "yes" to any of the above, would the project require a GHG emissions assessment based on the guidance in Chapter 18?	☐	☐
16. *NOISE*: CEQR Technical Manual Chapter 19		
(a) Would the proposed project generate or reroute vehicular traffic?	☒	☐
(b) Would the proposed project introduce new or additional receptors (see Section 124 in Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed rail line with a direct line of site to that rail line?	☒	☐
(c) Would the proposed project cause a stationary noise source to operate within 1,500 feet of a receptor with a direct line of sight to that receptor or introduce receptors into an area with high ambient stationary noise?	☐	☒
(d) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to noise that preclude the potential for significant adverse impacts?	☐	☒
17. *PUBLIC HEALTH*: CEQR Technical Manual Chapter 20		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Air Quality;	☐	☒

	YES	NO
Hazardous Materials; Noise?		
(b) If "yes," explain why an assessment of public health is or is not warranted based on the guidance in Chapter 20, "Public Health." Attach a preliminary analysis, if necessary.		
18. *NEIGHBORHOOD CHARACTER*: CEQR Technical Manual Chapter 21		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Land Use, Zoning, and Public Policy; Socioeconomic Conditions; Open Space; Historic and Cultural Resources; Urban Design and Visual Resources; Shadows; Transportation; Noise?	☒	☐
(b) If "yes," explain why an assessment of neighborhood character is or is not warranted based on the guidance in Chapter 21, "Neighborhood Character." Attach a preliminary analysis, if necessary. See attached narrative report.		
19. *CONSTRUCTION*: CEQR Technical Manual Chapter 22		
(a) Would the project's construction activities involve:		
o Construction activities lasting longer than two years?	☐	☒
o Construction activities within a Central Business District or along an arterial highway or major thoroughfare?	☐	☒
o Closing, narrowing, or otherwise impeding traffic, transit, or pedestrian elements (roadways, parking spaces, bicycle routes, sidewalks, crosswalks, corners, *etc.*)?	☐	☒
o Construction of multiple buildings where there is a potential for on-site receptors on buildings completed before the final build-out?	☒	☐
o The operation of several pieces of diesel equipment in a single location at peak construction?	☒	☐
o Closure of a community facility or disruption in its services?	☐	☒
o Activities within 400 feet of a historic or cultural resource?	☐	☒
o Disturbance of a site containing or adjacent to a site containing natural resources?	☐	☒
o Construction on multiple development sites in the same geographic area, such that there is the potential for several construction timelines to overlap or last for more than two years overall?	☒	☐
(b) If any boxes are checked "yes," explain why a preliminary construction assessment is or is not warranted based on the guidance in Chapter 22, "Construction." It should be noted that the nature and extent of any commitment to use the Best Available Technology for construction equipment or Best Management Practices for construction activities should be considered when making this determination. See attached narrative report.		

20. *APPLICANT'S CERTIFICATION*

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

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

APPLICANT/REPRESENTATIVE NAME	DATE
John Strauss, Environmental Studies Corp.	November 25, 2022

SIGNATURE

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

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

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

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

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

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

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

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

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

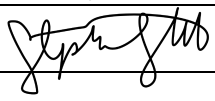
☐ **Conditional Negative Declaration:** A *Conditional Negative Declaration* (CND) may be appropriate if there is a private applicant for an Unlisted action AND when conditions imposed by the lead agency will modify the proposed project so that no significant adverse environmental impacts would result.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

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

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

TITLE	LEAD AGENCY
Director, Environmental Assessment and Review Division	City Planning Commission
NAME	**DATE**
Stephanie Shellooe, AICP	November 25, 2022

SIGNATURE



NEGATIVE DECLARATION

Statement of No Significant Effect

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

Reasons Supporting this Determination

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

Land Use, Zoning, and Public Policy

A detailed analysis of land use, zoning, and public policy is included in this EAS. The applicant, Mal Pal Realty Corp., is requesting approval of a zoning map amendment from an R3A zoning district to an R6B/C2-3 zoning district; and a zoning text amendment to Appendix F of the New York City Zoning Resolution (ZR) to designate the Proposed Rezoning Area (Queens Block 10068, Lots 200, 205, 210, 213, 214, 215, 216, and 218) as a Mandatory Inclusionary Housing (MIH) area (collectively, the "Proposed Actions"). The Proposed Actions would facilitate the development of the Proposed Project: a four-story, 45-foot tall, 92,779 gross-square foot (gsf) mixed-use development comprising 5,165 gsf of retail space; 4,587 gsf of office space; 5,950 gsf of community facility space for a Universal Pre-K school; 52,051 gsf of residential space (60 dwelling units (DUs), 15-18 of which would be affordable pursuant to MIH); and 28 cellar level accessory parking spaces at 141-05 109th Avenue (Lots 200, 205, 210, 213, 214, and 215; "Projected Development Site 1") in the South Jamaica neighborhood of Queens Community District 12. The Proposed Project would also provide a publicly accessible 249 square foot seating area at the corner of 109th Avenue and 142nd Street. The Future With-Action Scenario analyzed in the EAS conservatively assumes that the mixed-use building on Projected Development Site 1 would include five-stories (55' building height) and 61 DUs; and also considers the redevelopment of Projected Development Site 2 (Lots 216 and 218) with a 23,586 gsf mixed-use building comprising 17 DUs (5-6 of which would be affordable to MIH) and ground floor local retail. The proposed R6B zoning district would allow for an increase in bulk along 109th Avenue, a wide street; however, this change would not conflict with surrounding uses. The Proposed Actions would reinforce the area's existing residential land use patterns by promoting conforming development to replace the existing non-conforming manufacturing use within the Proposed Rezoning Area. The Proposed Actions would also be consistent with relevant public policies including the City's Housing New York 2.0 plan. The analysis concludes that no significant adverse impacts are anticipated for land use, zoning, and public policy, and no further analysis is warranted.

Open Space

A detailed analysis related to open space is included in this EAS. The Proposed Actions would result in an increase of greater than 200 residents, exceeding the threshold for an indirect open space analysis for the study area's residential population. The open space ratio for residents in the study area would decrease by less than 1% as a result of the Proposed Actions, which is below the 5% threshold for impacts to open space, and also less than a 1% decrease which may be considered if the existing open space ratio is low. In accordance with CEQR Technical Manual guidance, actions that may result in quantitative open space impacts can be further evaluated using a qualitative assessment approach to determine the overall significance of the impact. The qualitative assessment found that the Proposed Project's provision of a 249 sf publicly accessible open space area, in addition to 1,584 sf of private open that would be provided in the form of indoor and outdoor recreational space located in common areas of the proposed building, would help to ameliorate the open space shortfall in the future With-Action scenario. Further, the Proposed Actions would not have a direct effect on existing open space resources. Therefore, the analysis concludes that no significant adverse impacts to open space are anticipated, and no further analysis is required.

Urban Design and Visual Resources

A detailed analysis related to urban design and visual resources is included in this EAS. The analysis demonstrates that while the Proposed Actions would facilitate the development of two buildings that would be larger in height and bulk (scale) than that found in the immediately surrounding area, the buildings would not be incompatible with existing development patterns. In the future With-Action scenario, underbuilt property from nonconforming warehouse uses and storage yards would be redeveloped with new mixed-use residential, commercial, and community facility buildings, a continuous street wall would be created, and a public open space area featuring seating and landscaping would be introduced along the frontage of Projected Development Site 1; all of which would be expected to improve the streetscape and pedestrian experience. Comparative massing diagrams depicting the possible development with and without the Proposed Actions demonstrate that the Proposed Actions would not be incompatible with the scale and character of development within the surrounding area. In addition, the Proposed Actions would not result in significant adverse impacts on visual resources. Therefore, the analysis concludes that the Proposed Actions would not result in significant adverse impacts related to urban design or visual resources, and no further analysis is required.

Hazardous Materials, Air Quality, and Noise

An (E) designation (E-693) related to hazardous materials, air quality, and noise would be established as part of the approval of the Proposed Actions. Refer to "Determination of Significance Appendix: (E) designation" for the applicable (E) designation requirements. The hazardous materials, air quality, and noise analyses conclude that with the (E) designation in place, the Proposed Actions would not result in a significant adverse impact related to hazardous materials, air quality, or noise.

No other significant effects upon the environment that would require the preparation of a Draft Environmental Impact Statement are foreseeable. This Negative Declaration has been prepared in accordance with Article 8 of the New York State Environmental Conservation Law (SEQRA). Should you have any questions pertaining to this Negative Declaration, you may contact Stacey Barron, AICP at +1 212-720-3419.

Project Name: 141-05 109th Ave. Rezoning
CEQR # 22DCP151Q
SEQRA Classification: Unlisted

TITLE Director, Environmental Assessment and Review Division	LEAD AGENCY Department of City Planning on behalf of the City Planning Commission 120 Broadway, 31st Fl. New York, NY 10271 | 212.720.3328
NAME Stephanie Shellooe, AICP	DATE November 25, 2022
SIGNATURE	
TITLE Chair, City Planning Commission	
NAME Daniel R. Garodnick	DATE November 28, 2022
SIGNATURE	

Project Name: 141-05 109th Ave. Rezoning
CEQR # 22DCP151Q
SEQRA Classification: Unlisted

Determination of Significance Appendix

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

Development Site	Borough	Block and Lot
Projected Development Site 1	Queens	Block 10068, Lots 200, 205, 210, 213, 214, and 215
Projected Development Site 2	Queens	Block 10068, Lots 216, and 218

(E) Designation Requirements

To ensure that the Proposed Actions would not result in significant adverse impacts related to hazardous materials, air quality, and noise an (E) designation (**E-693**) would be established as part of approval of the Proposed Actions on **Projected Development Sites 1 and 2** as described below:

Development Site	Hazardous Materials	Air Quality	Noise
Projected Development Site 1		X	X
Projected Development Site 2	X	X	

Hazardous Materials

The (E) designation requirements applicable to **Projected Development Site 2 (Block 10068, Lots 216, and 218)** for hazardous materials would apply as follows:

Task 1-Sampling Protocol

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

Task 2-Remediation Determination and Protocol

A written report with findings and a summary of the data must he submitted to OER after completion of the testing phase and laboratory analysis for review and approval. After receiving such results, a determination is made by OER if the results indicate that remediation is necessary. If OER determines that no remediation is necessary, written notice shall be given by OER.

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

A construction-related health and safety plan should be submitted to OER and would be implemented during excavation and construction activities to protect workers and the community from potentially significant adverse

impacts associated with contaminated soil, groundwater and/or soil vapor. This plan would be submitted to OER prior to implementation.

Air Quality

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

Projected Development Site 1 (Block 10068, Lots 200, 205, 210, 213, 214, and 215): *Any new residential, commercial, or community facility development on the above-referenced property must ensure that the heating, ventilation, air conditioning (HVAC) and hot water system(s) stack is located at the building's highest level or at least 48 feet above grade and that the stack is located at least 125 feet from the western lot line of Lot 215 facing 139th Street to avoid any potential significant adverse air quality impacts.*

Projected Development Site 2 (Block 10068, Lots 216, and 218): *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(s), ensure that the stack is located at the building's highest level and at a minimum of 48 feet above grade, and that the stack is located at least 35 feet from the eastern lot line of Lot 216 facing 142nd Street to avoid any potential significant adverse air quality impacts.*

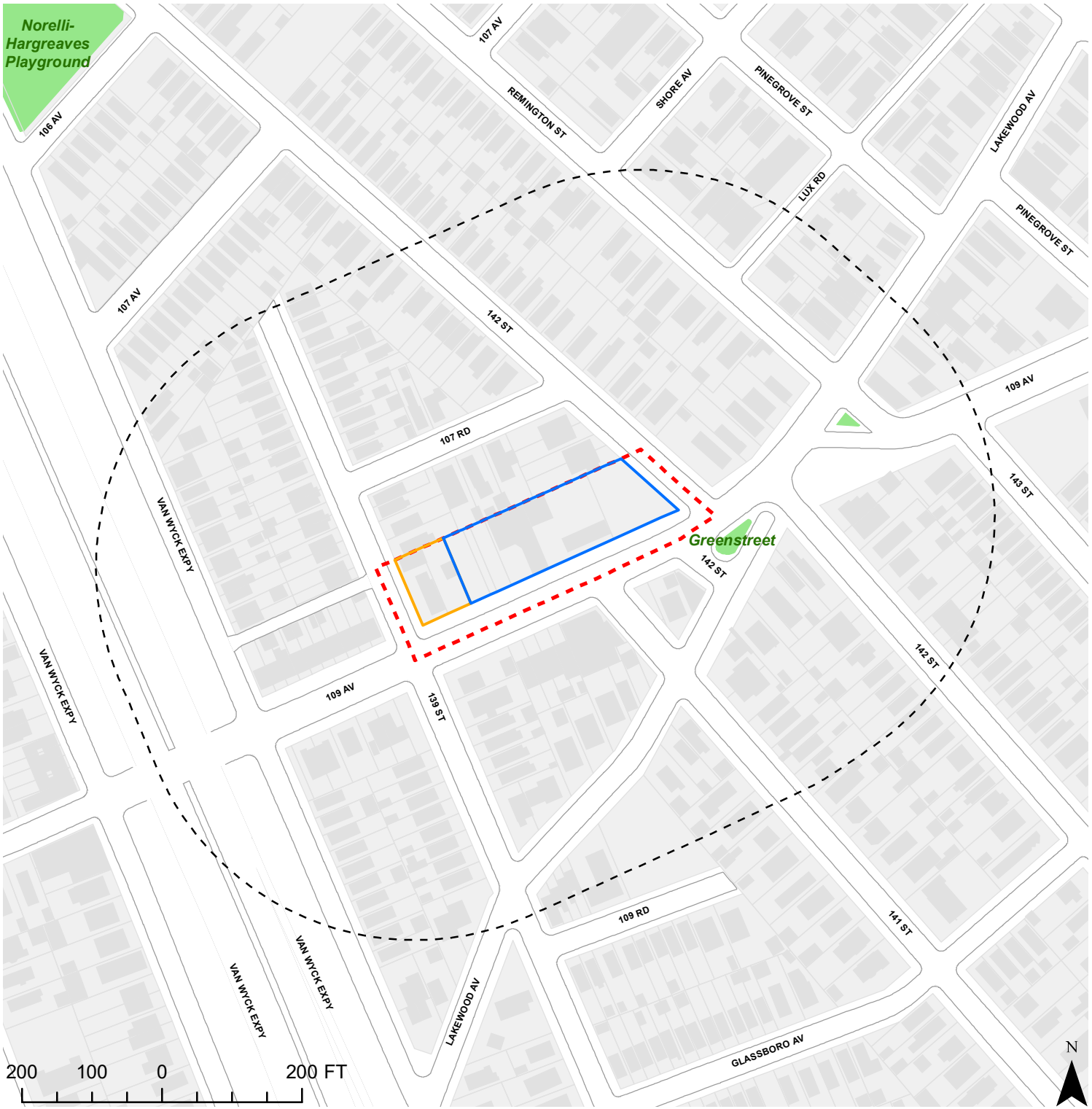
Noise

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

Projected Development Site 1 (Block 10068, Lots 200, 205, 210, 213, 214, and 215): *In order to ensure an acceptable interior noise environment, future residential/commercial/office/community facility uses must provide a closed-window condition with a minimum of 31 dB(A) window-wall attenuation on the northern façade of the building (facing 107th Road) in order to maintain an interior noise level no greater than 45 dB(A) for residential and community facility uses or no greater than 50 dB(A) for commercial office 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.*

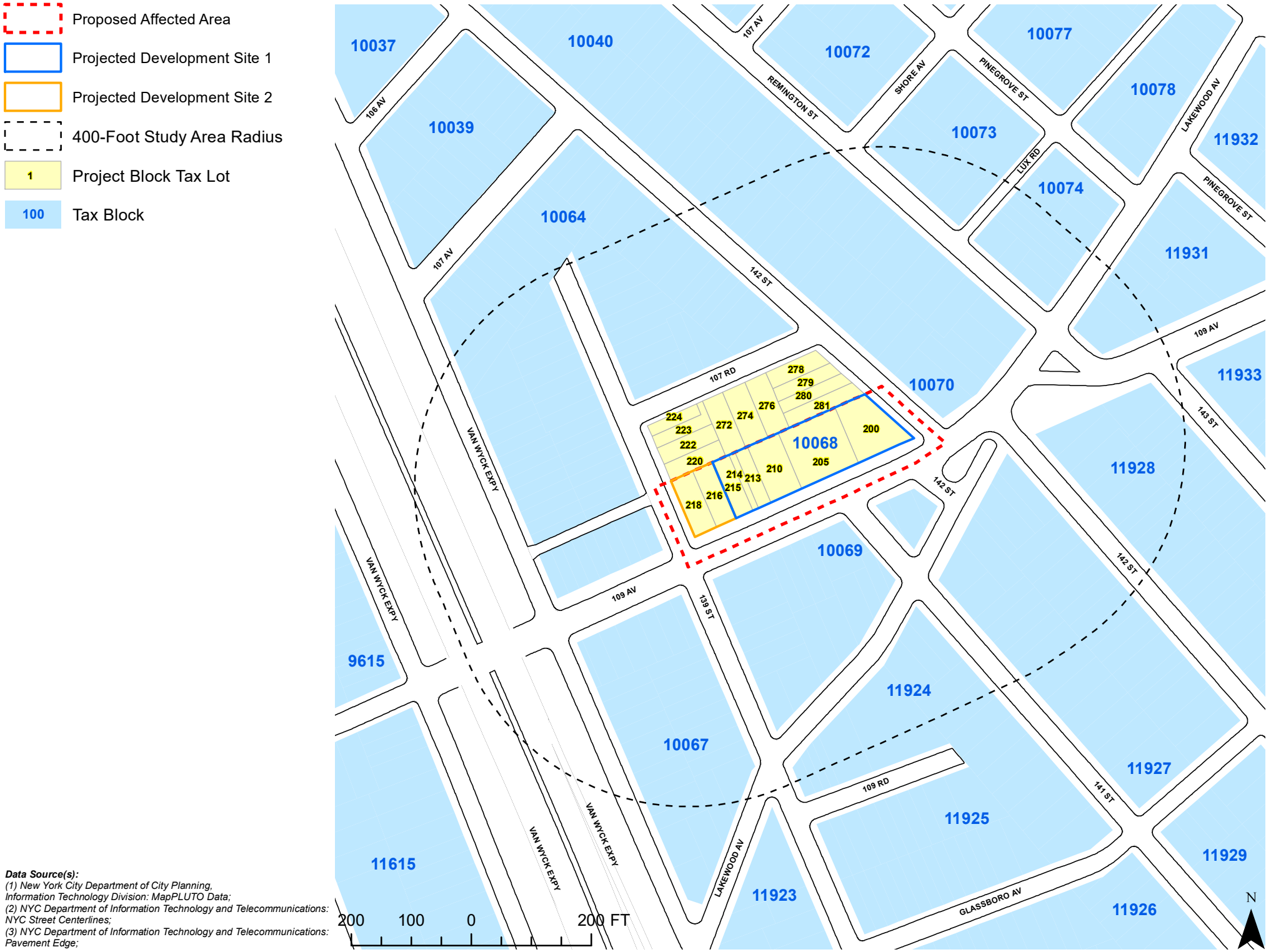
Site Location Map: 109th Avenue Jamaica Rezoning

- Proposed Affected Area
- Projected Development Site 1
- Projected Development Site 2
- 400-Foot Study Area Radius
- Open Space and Recreation



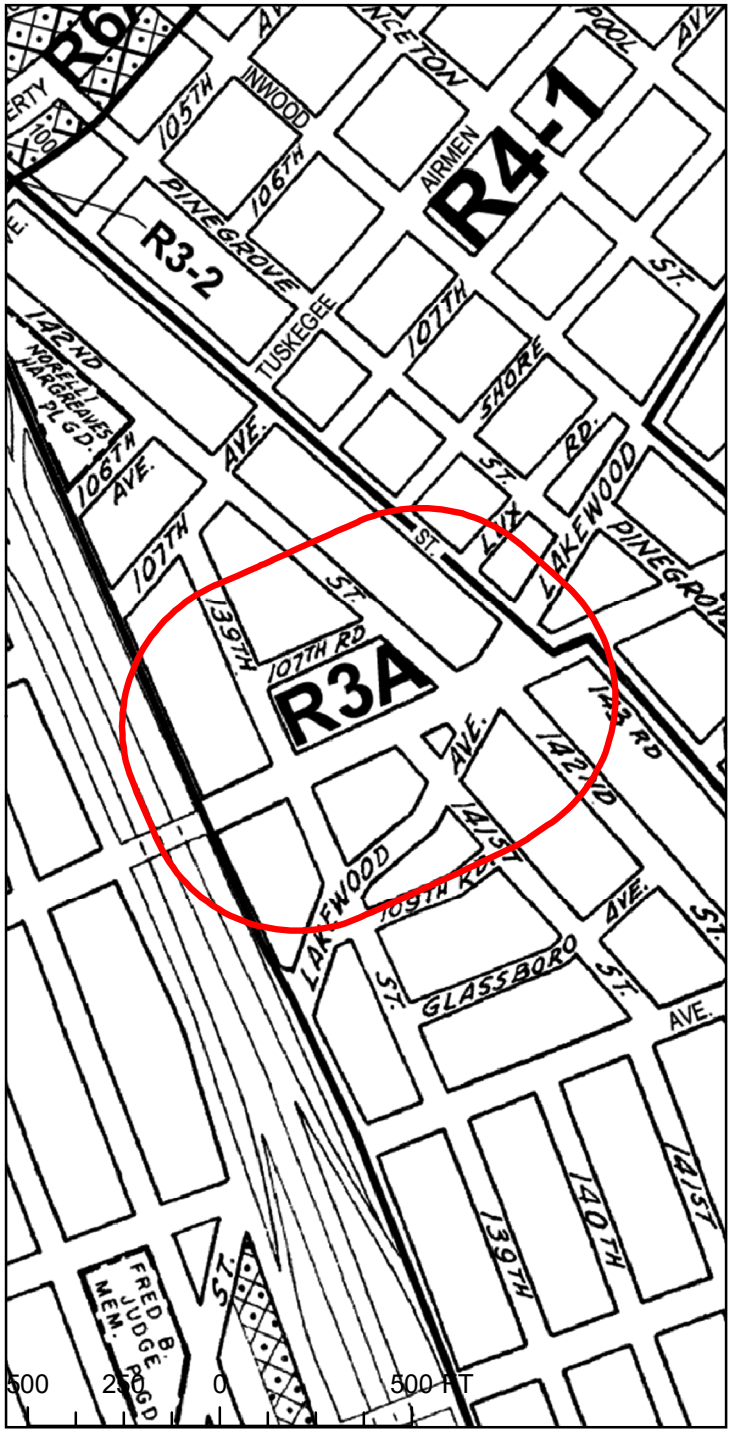
Data Source(s):
(1) New York City Department of City Planning, Information Technology Division: MapPLUTO Data;
(2) NYC Department of Information Technology and Telecommunications: NYC Street Centerlines;
(3) NYC Department of Information Technology and Telecommunications: Pavement Edge;
(4) NYC Department of Information Technology and Telecommunications: Building Footprints;
(5) NYC Department of Information Technology and Telecommunications: Open Space (Parks);
(6) NYC Department of Information Technology and Telecommunications: Hydrography;

Tax Map: 109th Avenue Jamaica Rezoning

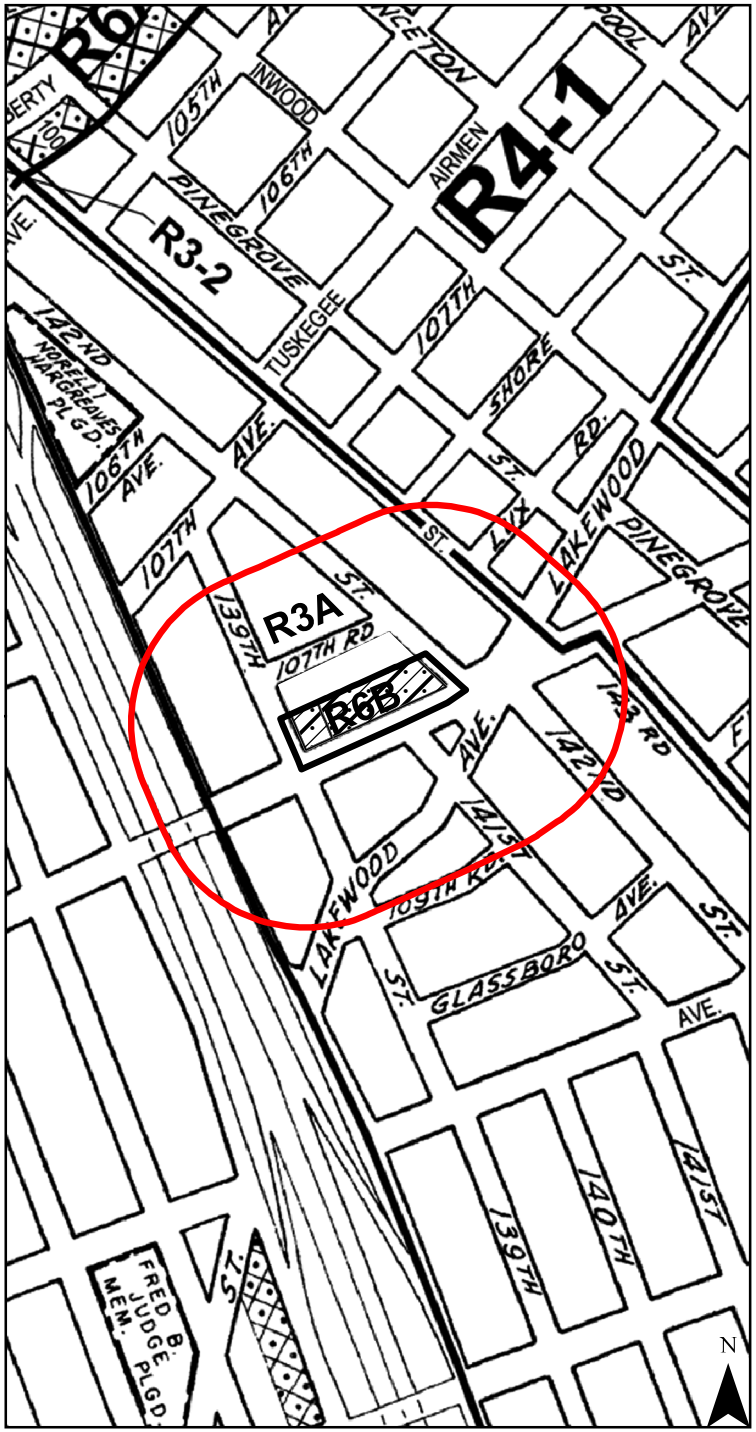


Data Source(s):
(1) New York City Department of City Planning, Information Technology Division: MapPLUTO Data;
(2) NYC Department of Information Technology and Telecommunications: NYC Street Centerlines;
(3) NYC Department of Information Technology and Telecommunications: Pavement Edge;

- 400-Foot Study Area Radius
- Zoning District Boundary
- Special Purpose District
- Area(s) Rezoned
- C1-1 Commercial Overlay
- C1-2 Commercial Overlay
- C1-3 Commercial Overlay
- C1-4 Commercial Overlay
- C1-5 Commercial Overlay
- C2-1 Commercial Overlay
- C2-2 Commercial Overlay
- C2-3 Commercial Overlay
- C2-4 Commercial Overlay
- C2-5 Commercial Overlay



Existing Zoning Map
(Portion of Panel 18c)



Proposed Zoning Map
(Portion of Panel 18c)

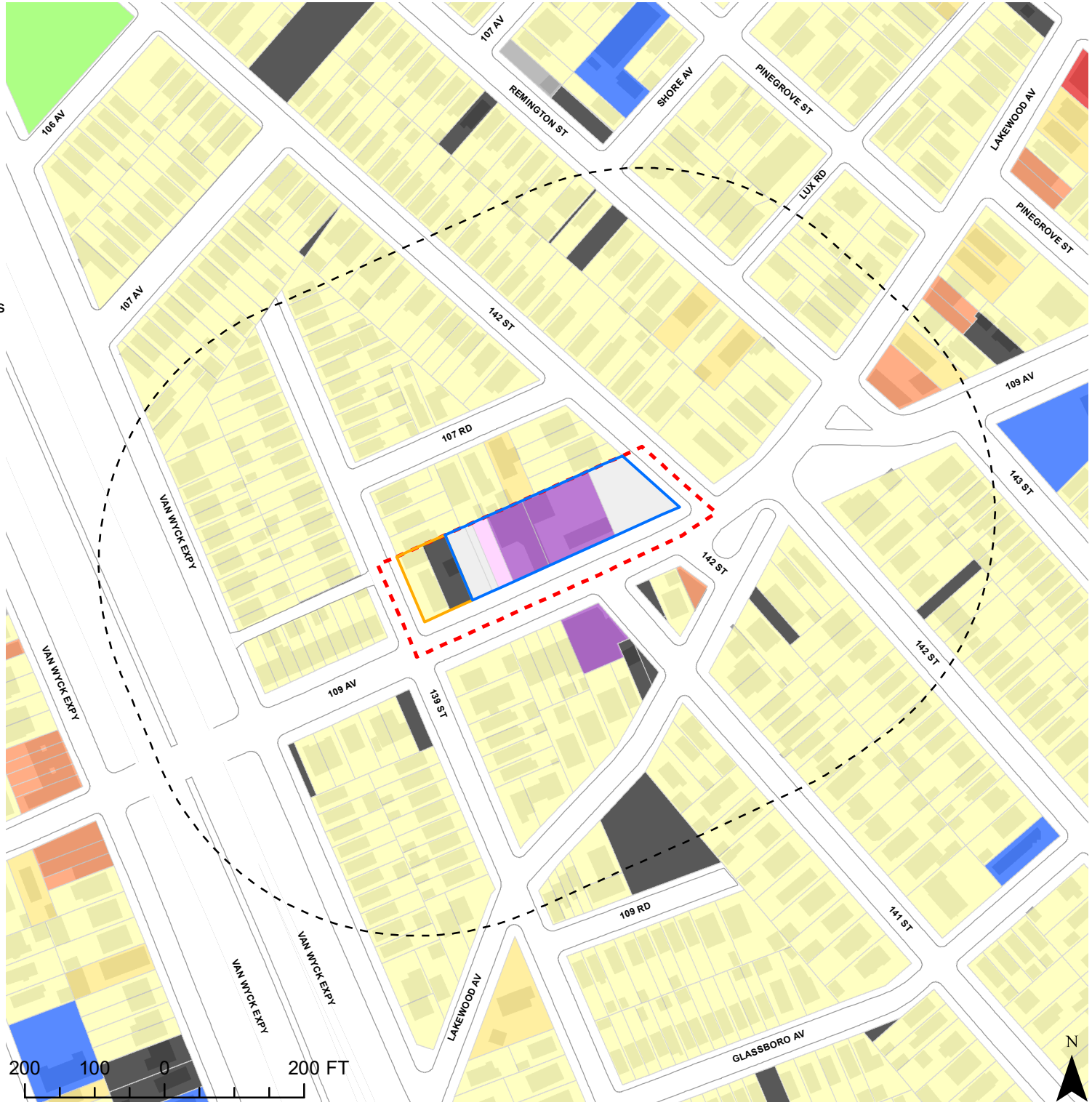
Data Source(s):
(1) New York City Zoning Map, Panel 18c; New York City Planning Commission, 2020

Existing Land Uses Map: 109th Avenue Jamaica Rezoning

- Proposed Affected Area
- Projected Development Site 1
- Projected Development Site 2
- 400-Foot Study Area Radius

Land Use

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



Data Source(s):
(1) New York City Department of City Planning, Information Technology Division: MapPLUTO Data;
(2) NYC Department of Information Technology and Telecommunications: NYC Street Centerlines;
(3) NYC Department of Information Technology and Telecommunications: Pavement Edge;
(4) NYC Department of Information Technology and Telecommunications: Building Footprints;
(5) NYC Department of Information Technology and Telecommunications: Hydrography;

Aerial Imagery: 109th Avenue Jamaica Rezoning

- Proposed Affected Area
- Projected Development Site 1
- Projected Development Site 2
- 400-Foot Study Area Radius



Data Source(s):
(1) New York City Department of City Planning, Information Technology Division: MapPLUTO Data;
(2) ESRI, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AerioGRID, IGN, and the GIS User Community



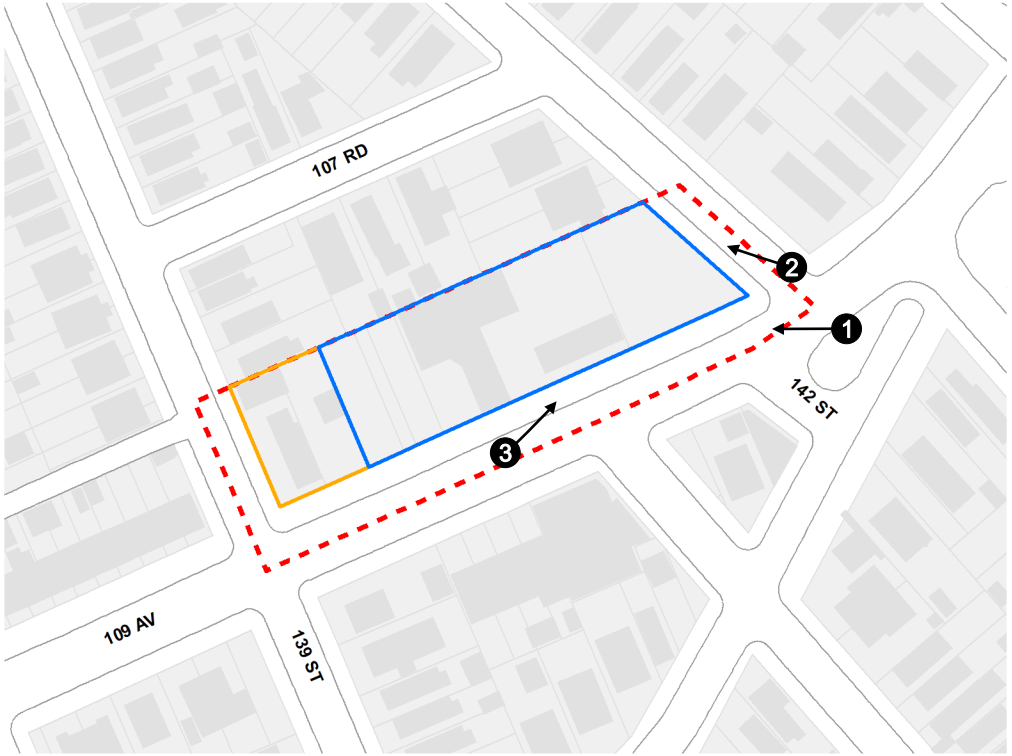
Photograph No. 1



Photograph No. 2



Photograph No. 3





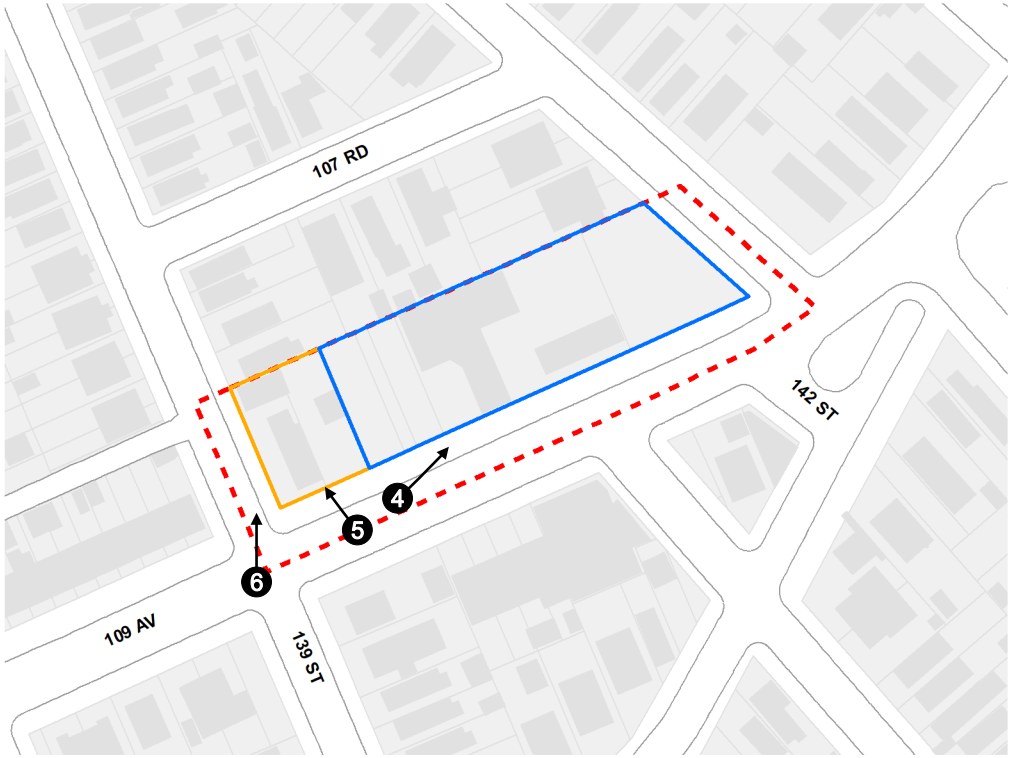
Photograph No. 4



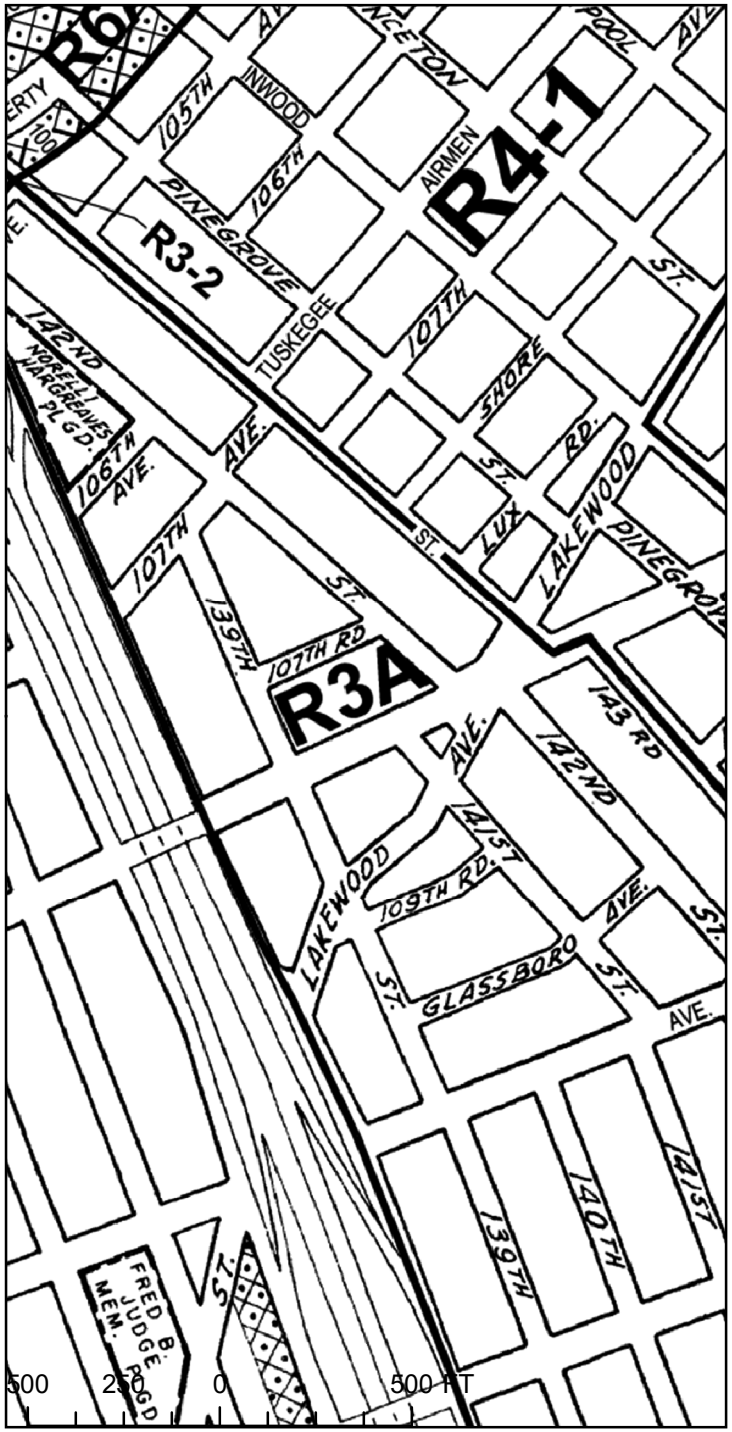
Photograph No. 5



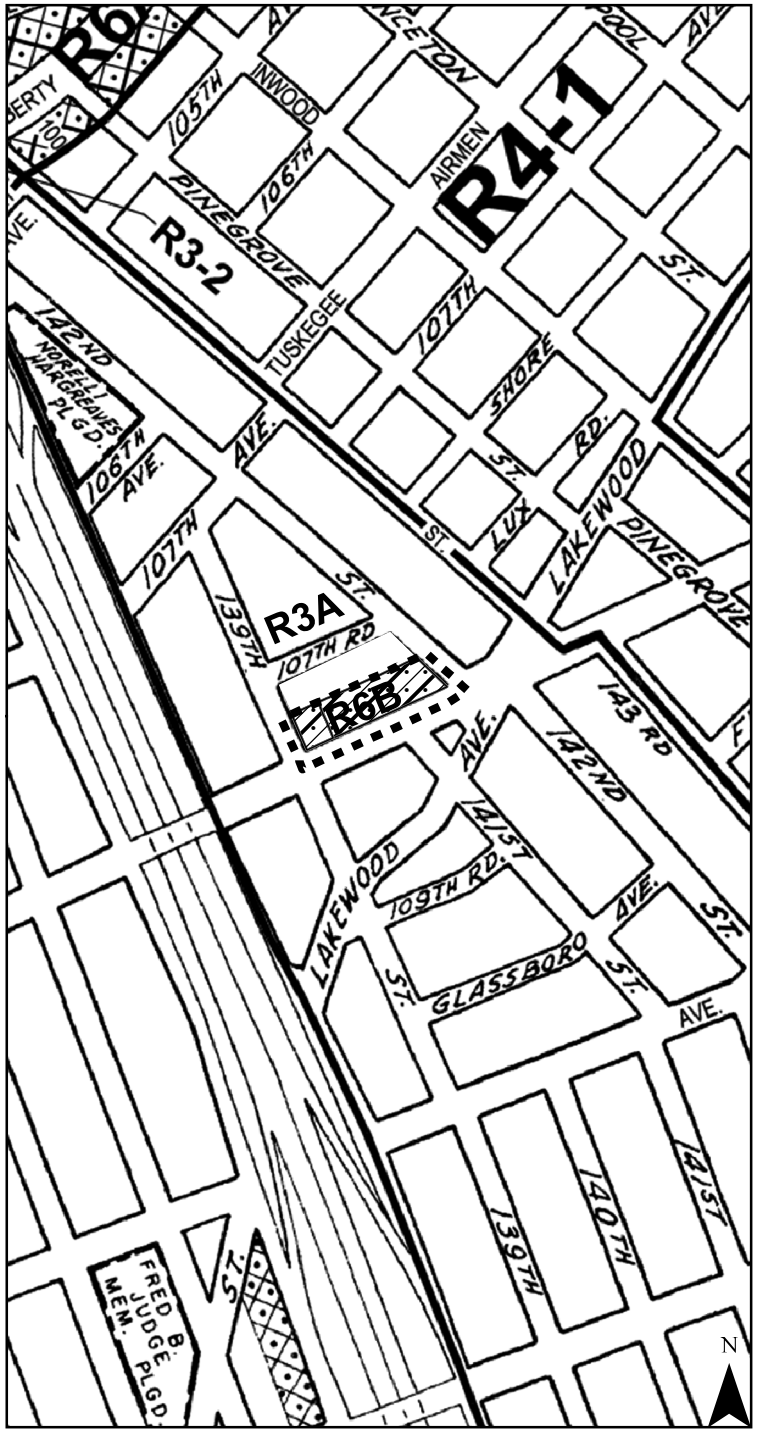
Photograph No. 6



- Zoning District Boundary
- Special Purpose District
- Areas to be Rezoned
- C1-1 Commercial Overlay
- C1-2 Commercial Overlay
- C1-3 Commercial Overlay
- C1-4 Commercial Overlay
- C1-5 Commercial Overlay
- C2-1 Commercial Overlay
- C2-2 Commercial Overlay
- C2-3 Commercial Overlay
- C2-4 Commercial Overlay
- C2-5 Commercial Overlay



Existing Zoning Map
(Portion of Panel 18c)



Proposed Zoning Map
(Portion of Panel 18c)
Rezoning R3A to R6B (MIH) / C2-3

Data Source(s):
(1) New York City Zoning Map, Panel 18c; New York City Planning Commission, 2020

141-05 109th Avenue
Community District 12, Queens

Updated, 5/3/22
Zoning Map 18c

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

* * *

APPENDIX F
Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing Areas

* * *

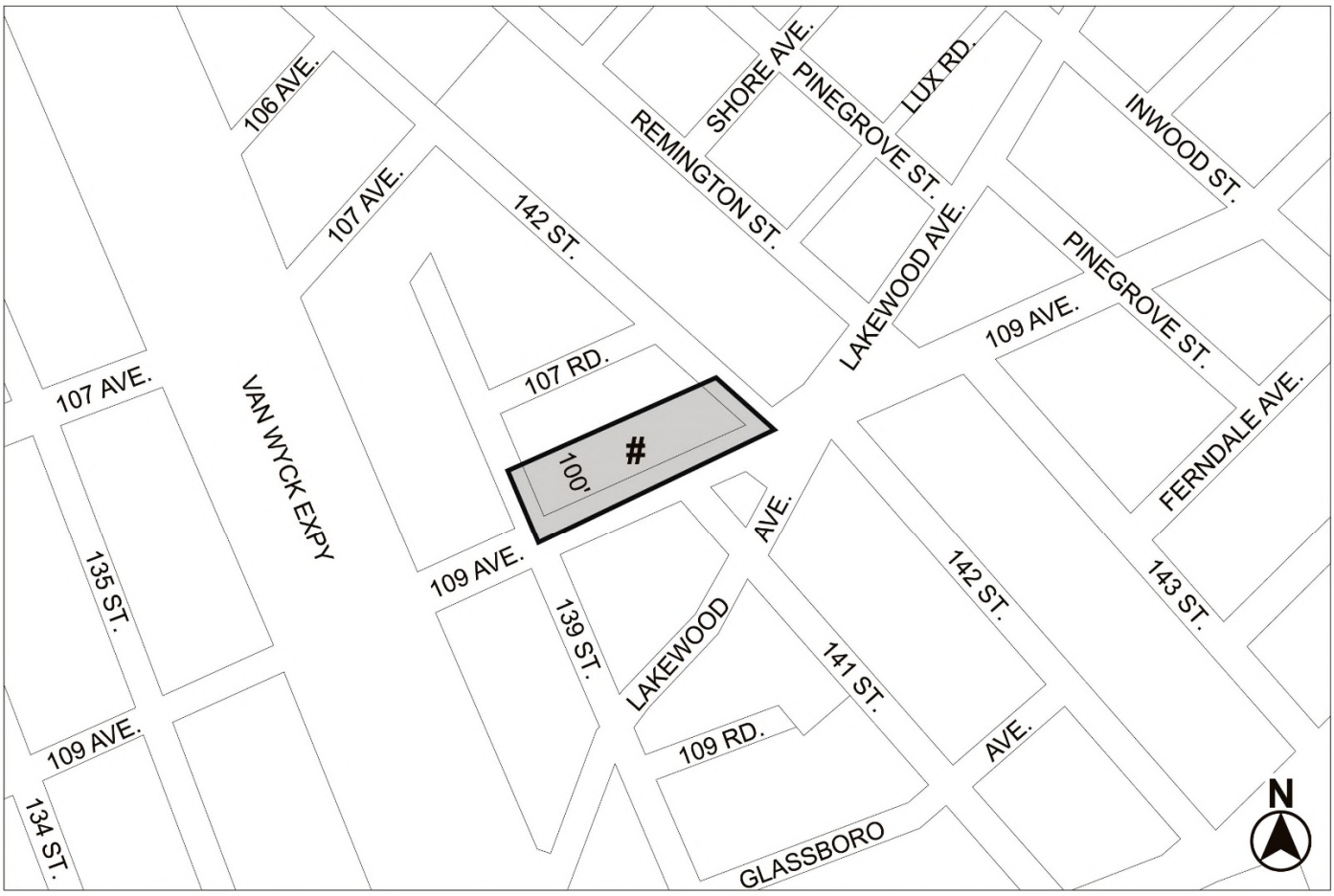
QUEENS

* * *

Queens Community District 12

* * *

Map 2 – [date of adoption]



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

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

Portion of Community District 12, Queens

* * *

141-05 109TH AVENUE JAMAICA REZONING

Project Description

INTRODUCTION

The Applicant, Mal Pal Realty Corp., seeks to amend Zoning Sectional Maps 18c as it pertains to the Project Area, Block 10068, Lots 200, 205, 210, 213, 214, 215, 216, and 218 in the South Jamaica neighborhood of Queens, Community District 12. The proposed Project Area is generally bounded by 109th Avenue to the south, 142nd Street to the east, 139th Street to the west, and existing development to the north. The Applicant owns the property located at Block 10068, Lots 200, 205, 210, 213, 214, 215 while Block 10068, Lots 216, 218 is not controlled by the Applicant. The Proposed Actions would rezone the Project Area from R3A to R6B/C2-3. The Proposed Actions also seek a Zoning Text Amendment to ZR Appendix F to establish the Project Area as a Mandatory Inclusionary Housing (MIH) Area with MIH Options 1 and 2. Option 1 has been chosen under the MIH Text Amendment provisions applicable to the Proposed Actions under which 25% of the residential zoning floor area must be for affordable housing units for residents with incomes averaging 60% Area Median Income (AMI). Option 2 would require that 30% of the residential zoning floor area must be for affordable housing units for residents with incomes averaging 80% of AMI. The final MIH Option will be chosen by the City Council through the ULURP process. Depending on the MIH Option chosen, the number of affordable housing units under the With-Action Scenario described below would range between 15 dwelling units (Option 1) and 18 dwelling units (Option 2).

The proposed Zoning Map and Text amendments would facilitate the development on the Applicant owned Projected Development Site 1 (Block 10068, Lots 200, 205, 210, 213, 214, 215) with a 4-story and cellar, 45-foot tall, 92,779 gsf/63,708 zsf mixed-use building with approximately 15,702 gsf of commercial retail, office, and community facility space comprised of 5,165 gsf of retail space, 4,587 gsf of office space, and 5,950 gsf of community facility space for a Universal Pre-K school on the first floor, 60 residential dwelling units on floors 2 through 4 (52,051 gsf), and 28 cellar level accessory parking spaces (25,026 gsf including parking ramp). A publicly accessible 249 square foot seating area would be provided at the corner of 109th Avenue and 142nd Street and is intended for use by parents picking up children of the Universal pre-school and for passive recreational use by employees working in the development. The existing structures and uses on the Site would be demolished and removed, and the individual lots would be merged into one zoning lot as part of the Proposed Actions.

ACTIONS NECESSARY TO FACILITATE THE PROPOSAL

The Applicant, Mal Pal Realty Corp., proposes the following actions to rezone an existing R3A zoning district to an R6B/C2-3 zoning district in the South Jamaica neighborhood within Queens Community District 12.

I. A Zoning Map Amendment to ZR section 18c to change the existing R3A zoning district to an R6B/C2-3 zoning district on Block 10068, Lots 200, 205, 210, 213, 214, 215, 216, and 218; and

II. A Zoning Text Amendment of ZR Appendix F: Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing ("MIH") Areas for Community District 12, Queens to establish an MIH Area coterminous with the Project Area. For the purposes of a conservative analysis under CEQR, either 25% or 30% of the residential zoning floor

area would be affordable to households with incomes at 60% of AMI or 80% of AMI, respectively, depending on the relevant analysis category.

DESCRIPTION OF THE SURROUNDING AREA

The Project Area is located approximately 1.5 miles north of John J. Kennedy Airport and approximately 250 feet east of the Van Wyck Expressway in the South Jamaica neighborhood of Queens, Community District 12. The neighborhood within 400 feet of the Project Area is primarily developed with one- and two-family homes with a few scattered walk-up multi-family dwellings, two commercially developed properties (two ground level retail stores), one light manufacturing use (food preparation facility), and several vacant lots. The Project Area is across the street from a small Greenstreet open space triangle to the south/southeast at the intersection of 142nd Street, 109th Avenue, and Lakewood Avenue.

The Project Area is in close proximity to public transportation with a stop for the Q40 bus line just east of the Development Site at Lakewood Avenue, and the Q9 bus line available to the west at the Van Wyck Expressway. These buses both provide access to the Jamaica Station transit hub approximately one mile from the Project Area.

DESCRIPTION OF THE PROPOSED PROJECT AREA

The Project Area is located entirely within an R3A zoning district. The existing R3A zoning does not permit commercial or manufacturing uses and limits residential development to an FAR of 0.6 and community facility development to an FAR of 1.0. The proposed Project Area encompasses the following properties totaling 38,088 sf in area:

1. Projected Development Site 1 (Block 10068, Lots 200, 205, 210, 213, 214, 215) – The Applicant owned property consists of 30,087.5 square feet of lot area located along 109th Avenue between 139th and 142nd Streets. The property has 324.07' of frontage on 109th Avenue and 109'-3" of frontage on 142nd Street. The property is currently developed with three 1-story warehouse buildings containing approximately 6,451 gsf of floor area. The three buildings are associated with a non-conforming building materials storage yard, including related offices (Use Group 17). The individual lots comprising the property consist of the following.

- Lot 200 – 8,100 sf lot used for the storage of building materials.

- Lot 205 – 10,000 sf lot containing two 1-story warehouse buildings totaling 2,651 gsf in floor area.

- Lot 210 – 5,600 sf lot containing a 1-story, 3,800 gsf warehouse structure.

- Lot 213 – 2,400 sf lot used for the storage of building materials.

- Lot 214 – 1,000 sf lot used for the storage of building materials.

- Lot 215 – 3,000 sf lot used for the storage of building materials.

2. Projected Development Site 2 (Block 10068, Lots 216, 218) – The non-Applicant owned property consists of 8,000 square feet of lot area located along 109th Avenue at the corner of 139th Street and 109th Avenue. The property has approximately 80' of frontage on 109th Avenue and 100' of frontage on 139th Street. The property is currently developed with one 2-story, 2-family residence containing approximately 2,194 gsf of floor area. As the two lots are under the same ownership, it is assumed they would be merged into a single lot. The individual lots comprising the property consist of the following.

- Lot 216 – 4,000 sf unimproved lot used for a non-conforming building materials/contractor's

yard.

- Lot 218 – 4,000 sf lot developed with a 2,194 sf, 2-story, 2-family residence, that was converted from a single-family residence, and a detached garage.

DESCRIPTION OF THE PROPOSED DEVELOPMENT

As stated above, the Applicant intends to rezone the existing R3A district to an R6B (MIH)/C2-3 zoning district on Block 10068, Lots 200, 205, 210, 213, 214, 215, 216, and 218, the proposed Project Area.

The Proposed Actions would permit the development, on the Applicant owned Projected Development Site 1, of a 4-story and cellar 92,779 gsf mixed-use building with approximately 15,702 gsf of commercial retail, office, and community facility space comprised of 5,165 gsf of retail space, 4,587 gsf of office space, and 5,950 gsf of community facility space for a Universal Pre-K school on the first floor, 60 residential dwelling units on floors 2 through 4 (52,051 gsf), and 28 cellar level accessory parking spaces (25,026 gsf including parking ramp). Option 1 is the preferred option under the MIH Text Amendment provisions applicable to the Proposed Actions. Under this option, 25% of the residential floor area must be for affordable housing units for residents with incomes averaging 60% AMI generating a proposed 15 affordable dwelling units. Option 2 would require that 30% of the residential zoning floor area must be for affordable housing units for residents with incomes averaging 80% of AMI resulting in 18 affordable units. The final MIH Option will be chosen by the City Council through the ULURP process. A publicly accessible 249 square foot seating area would be provided at the corner of 109th Avenue and 142nd Street and is intended for use by parents picking up children of the Universal pre-school and for passive recreational use by employees working in the development.

While no new development is proposed for the non-Applicant owned Projected Development Site 2, the Proposed Actions would facilitate the development on this Site of a 4-story and cellar 23,586 gsf mixed-use building with approximately 4,052 gsf of commercial retail space on the first floor, 17 residential dwelling units on floors 2 through 4 (14,682 gsf), and 7 cellar level accessory parking spaces (4,852 gsf including parking ramp). It is assumed that between 25% and 30% of the residential zoning floor area, or 5 to 6 units on Projected Development Site 2 would be reserved for affordable MIH units. The existing uses and structures on the Site would be demolished and removed, and the individual lots would be merged into one zoning lot as part of the Proposed Actions.

PURPOSE AND NEED OF THE PROPOSED ACTIONS

The Proposed Actions would permit the development of approximately 60 new housing units within 52,051 gsf, including 15 to 18 affordable units, and approximately 15,702 gsf of commercial retail, office, and community facility space on the Applicant owned Projected Development Site 1, and approximately 17 new housing units within 14,682 gsf, including 5 to 6 affordable units, and 4,052 gsf of commercial retail on Projected Development Site 2 in the South Jamaica neighborhood area of Queens on currently underutilized land.

The Proposed Actions, including the proposed rezoning from R3A to R6B/C2-3, are intended to reinforce existing residential land use patterns in the surrounding area by promoting conforming development to replace the existing non-conforming manufacturing use within the Project Area. The Applicant seeks to develop Projected Development Site 1 with affordable housing consistent with the standards of the Quality Housing Program as well as the MIH

Program zoning regulations. The development of the building with affordable housing is consistent with the Housing New York plan which seeks to substantially increase the amount of affordable housing. The South Jamaica neighborhood lacks sufficient unoccupied housing for new tenants as further discussed below. The provision of income-restricted housing units in the proposed development would address these community needs.

The Proposed Actions would allow for the development of new income-restricted housing in Queens Community District 12, where, according to the U.S. Census Bureau, 46.9 percent of households are rent burdened by spending 35 percent or more of their income on rent.[1] This is higher than the Borough of Queens at 46.2 percent and New York City at 44.2 percent. In addition, according to the U.S. Census Bureau, the vacancy rate for rental units in Queens Community District 12 is only 2.7 percent compared to 7.8 percent for NYC as a whole and 6.6 percent for the Borough of Queens. A low vacancy rate indicates that little unoccupied housing is available for new tenants. The provision of income-restricted housing units in the proposed development would address these community needs.

The proposed C2-3 component of the zoning would accommodate the commercial retail and office floor area proposed to be included on Projected Development Site 1 controlled by the Applicant, as well as on the non-Applicant controlled Projected Development Site 2. Permitting commercial use within the Project Area with the proposed C2-3 commercial overlay would bring non-conforming commercial uses into compliance to serve the needs of the residents in the neighborhood. The proposed C2-3 commercial overlay would allow the Applicant's business, which has been located at the Development Site for over 35 years, to maintain its offices at this location. The retention of the Applicant's business at this location would allow the Applicant to continue to employ residents who live within the South Jamaica neighborhood. Without the Proposed Actions, the existing non-conforming manufacturing use would remain as is at the Development Site which is located within a predominately residential neighborhood. The Proposed Actions would allow the relocation of the industrial aspects of the business from the Development Site, thereby eliminating potential adverse effects such as noise and disturbance from different activity patterns resulting from this non-conforming use on the surrounding area. The Development Site would improve with a contextual streetscape and closure of four curb cuts associated with the industrial use.

The provision of a universal pre-kindergarten on Projected Development Site 1 would help to address concerns in Community District 12 about co-location of schools noted in its fiscal year 2023 Statement of Needs. The existing programs are located in facilities that are shared and providing universal pre-k in this stand-alone location would allow for schools to operate independently. With respect to the proposed community facility use, the nearest universal pre-kindergarten is more than one mile away. The three daycare facilities within one-half mile of the Development Site do not provide universal pre-kindergarten. The provision of a universal pre-kindergarten at this location will help to address concerns in Community District 12 about co-location of schools noted in its Statement of Needs. The existing programs are located in facilities that are shared and providing universal pre-k in this stand-alone location will allow for schools to operate independently. Based on June 2018 Administration for Children's Services (ACS) data, Queens CD 12 contains 25 early childhood learning centers with a total enrollment of 1,410 children and a total budgeted capacity of 1,648 slots (85.6% occupancy). As shown on

[1] Based on American Community Survey 2014-2018 Five Year Estimates for Public Use Microdata Area (PUMA) 4112, which approximates Queens Community District 12, available at: https://communityprofiles.planning.nyc.gov/queens/12.

the proposed Site Plan for the Development Site, an indented pick-up and drop-off area will be provided in front of the Universal Pre-K (UPK) facility along 109th Avenue since the sidewalk is wide enough to accommodate it.

The existing R3A zoning district within the Project Area does not promote new residential development and precludes the redevelopment of the Development Site, which is occupied by a non-conforming manufacturing use. The Applicant believes that the proposed R6B/C2-3 zoning district is appropriate given the proposed uses, density, and the extent of the Project Area. The Proposed Actions would reinforce existing residential land use patterns in the surrounding area by promoting conforming development to replace the existing non-conforming manufacturing use within the Project Area. The Applicant believes that the proposed increase in density is appropriate at this location because the Development Site is located along 109th Avenue, a wide street. It also abuts open space to the south and southeast created by 142nd Street and the intersection of 109th Avenue and Lakewood Avenue. The proposed R6B zoning district would permit appropriate bulk along 109th Avenue and would permit the same uses as located in the R3A zoning area to remain on the northern portion of Block 10068 outside of the Project Area. The Proposed Actions would allow for the development of new income-restricted housing in Queens Community District 12. The proposed C2-3 component of the zoning would accommodate the commercial retail and office floor area proposed to be included on Projected Development Site 1.

The extension of the proposed zoning change from R3A to R6B/C2-3 for Projected Development Site 2 is required in order to create consistency across the block front as well as to allow for the development of new higher density residential development as well as commercial uses on this Site. The proposed R6B/C2-3 zoning is appropriate on this Site as it is located on a wide street, relatively close to mass transit, and is supportive of census-backed data showing the need for new housing in the area.

ANALYSIS FRAMEWORK

NO-ACTION SCENARIO

Under the No-Action Scenario for the Project Build Year of 2026, it is assumed that the Project Area's existing R3A zoning would remain and the Area would not be rezoned to R6B (MIH)/C2-3. No new development would occur on the two Development Sites within the Project Area. All existing uses in the Project Area would remain, including the existing legal non-conforming industrial uses and the legal non-conforming building materials/contractor's yards.

The following assumptions would apply to the two Projected Development Sites within the Project Area:

1. Projected Development Site 1 – No additional development is anticipated on Projected Development Site 1 which is developed with a buildings materials business consisting of 3 warehouse buildings and related offices with an FAR of 0.21 as well as open materials storage. Despite the existing residential zoning, the Project Area has historically been occupied by non-conforming industrial uses for approximately 35 years. Although additional floor area would be permitted on the property under the existing zoning (0.6 residential FAR and 1.0 community facility FAR), an expansion of the existing light industrial use would not be allowed as-of-right.

2. Projected Development Site 2 – No additional development is anticipated on Projected Development Site 2 which is developed with a two-story, two-family dwelling with an FAR of

0.27. The property also contains a 4,000 square foot unimproved lot used for a non-conforming building materials/contractor's yard. Although additional floor area would be permitted on the property under the existing zoning (0.6 residential FAR and 1.0 community facility FAR), an expansion of the existing residential use would not be anticipated as the location of the site adjacent to an existing warehouse and open materials storage yard would not be desirable or marketable.

Therefore, absent the Proposed Actions, the Project Area would contain a total of 2 market rate dwelling units, 800 gsf of accessory office space, and 5,651 gsf of warehouse space. It would also contain 23,649 square feet of outdoor building materials storage area and 4,000 square feet of vacant lot area.

WITH-ACTION SCENARIO

The With-Action development scenario will be analyzed in the EAS as further discussed below.

1. Projected Development Site 1

The proposed Zoning Map Amendment would facilitate the development on the Applicant owned Projected Development Site 1 of a 4-story and cellar, 92,779 gsf mixed-use building with approximately 15,702 gsf of commercial retail, office, and community facility space comprised of 5,165 gsf of retail space, 4,587 gsf of office space, and 5,950 gsf of community facility space for a Universal Pre-K school, and 840 sf of recreational space on the first floor, 61 residential dwelling units on floors 2 through 4 (52,051 gsf), and 28 cellar level accessory parking spaces (25,026 gsf including parking ramp). The development on Projected Development Site 1 would have an FAR of 2.12. The individual lots would be merged into one zoning lot as part of the Proposed Actions. A publicly accessible 249 square foot seating area would be provided at the corner of 109th Avenue and 142nd Street and is intended for use by parents picking up children of the Universal pre-school and for passive recreational use by employees working in the development.

With the exception of the number of residential dwelling units, the With-Action development scenario on Projected Development Site 1 would be the same as the proposed development described above. The With-Action development would include 61 residential dwelling units (rather than 60 units) based on the 52,051 gsf of occupiable residential floor area converting to 61 dwelling units at the standard conversion rate of 850 zsf/DU. 61 dwelling units will be assumed as the RWCDS to provide a more conservative analysis in the EAS. The Applicant is proposing to map MIH Options 1 and 2 on the property. The specific Option would be chosen by the City Council through the ULURP process. 25% of the 61 residential dwelling units on Projected Development Site 1, or 16 units (15.25 units rounded up to 16), are proposed for affordable units, and would be reserved as affordable to households with incomes at or below 60% of the AMI. If Option 2 is chosen by the City Council, it would require that 30% of the 61 residential dwelling units, or 19 units (18.3 units rounded up to 19) on Projected Development Site 1 be reserved as affordable units for households with incomes at or below 80% of the AMI.

The proposed development does not maximize floor area or bulk. An additional 2,485 square feet could be developed on the site (a proposed 2.12 FAR compared to a permitted FAR of 2.2). In addition, the proposed building would be 4 stories and 45 feet in height compared to the permitted 5 stories and 55 feet. Bulk and height have not been maximized as the cost of additional structural support due to required setbacks and extending the elevator core to reach a small partial 5th floor would not be feasible for the proposed building configuration. Additional square footage could have been added to the first floor but the increased depth for

the commercial space was deemed to be impractical and unmarketable in this area for the uses proposed. In addition, it is considered necessary to provide an open area for the UPK at ground level thus necessitating a decrease in size of 2,485 sf for the ground floor.

2. Projected Development Site 2

While no new development is proposed for the non-Applicant owned Projected Development Site 2, the Proposed Actions would facilitate the development on this Site of a 4-story and cellar 23,586 gsf mixed-use building with approximately 4,052 gsf of commercial retail space on the first floor, 17 residential dwelling units on floors 2 through 4 (14,682 gsf), and 7 cellar level accessory parking spaces (4,852 gsf including parking ramp). The 14,682 gsf of residential floor area would convert to 17 dwelling units at the standard conversion rate of 850 zsf/DU. It is assumed that between 25% and 30% of the residential dwelling units or 5 to 6 units on Projected Development Site 2 be reserved as affordable MIH units at or below 60% and 80% AMI, respectively. The development on Projected Development Site 2 would have an FAR of 2.20. The existing uses and structures on the Site would be demolished and removed, and the individual lots would be merged into one zoning lot as part of the Proposed Actions.

The proposed development maximizes floor area but does not maximize bulk. The building would be 4 stories and 45 feet in height compared to the permitted 5 stories and 55 feet. Bulk and height have not been maximized as the cost of additional structural support due to required setbacks and extending the elevator core to reach a small partial 5th floor would not be feasible for the proposed building configuration.

With the Proposed Actions, the Project Area would contain a total of 78 dwelling units (66,733 gsf), 9,217 gsf of retail space, 4,587 gsf of office space, 5,950 gsf of community facility space, and 35 accessory garage parking spaces (29,878 gsf).

BUILD YEAR/PROJECT PHASING

It is assumed that the Proposed Actions would be approved by 2023. It would take less than 24 months to construct the proposed building on the Applicant's Projected Development Site 1. The Proposed Actions would result in the creation of one additional development site that is not controlled by the Applicant, and it is anticipated that this site would be developed over an additional up to 12-month period. Therefore, a total of up to 36 months of construction would be anticipated beginning in 2023 with a Build Year of 2026.

INCREMENT

The increment between the No-Action and With-Action development scenarios would be 64,539 gsf of additional residential space for 76 additional dwelling units, 9,217 gsf of retail space, 3,787 gsf of new office space, 5,950 gsf of community facility space, a decrease of 5,651 gsf of industrial space, and 35 new accessory parking spaces (29,878 gsf). Under the With-Action development scenario, between 21 and 25 of the 76 additional dwelling units would be affordable. In order to allow for the projected developments, the existing warehouse structures on Projected Development Site 1 and the existing residential units on Projected Development Site 2 would be demolished.

Table No. 1 below presents a detailed summary of the existing conditions, Future No-Action, and Future With-Action scenarios in the Project Area and shows the incremental difference between the Future No-Action and Future With-Action scenarios.

Table 1

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

Item	Existing	No-Action	With-Action Scenario	Increment
Gross SF	8,645	8,645	116,365	107,720
DUs/ (Affordable)	2/(0)	2/(0)	78/(21-25)	76/(21-25)
Residential SF	2,194	2,194	66,733	64,539
Retail SF	0	0	9,217	9,217
Office SF	800	800	4,587	3,787
Comm Facil SF	0	0	5,950	5,950
Industrial SF	5,651	5,651	0	-5,651
Accessory Pkg Spaces	0	0	35	35

ENVIRONMENTAL ASSESSMENT STATEMENT

INTRODUCTION

Based on the analysis and the screens contained in the Environmental Assessment Statement Short Form, the analysis areas that require further explanation include land use, zoning, and public policy, open space, shadows, historic and cultural resources; urban design and visual resources, hazardous materials, transportation, air quality, noise, and construction as further detailed below. A transportation screening analysis has also been prepared.

1. LAND USE, ZONING AND PUBLIC POLICY

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

The Proposed Actions include the following on Block 10068, Lots 200, 205, 210, 213, 214, 215, 216, and 218 in Queens Community District 12:

- A Zoning Map Amendment to ZR section 18c to change the existing R3A zoning district to an R6B/C2-3 zoning district on Block 10068, Lots 200, 205, 210, 213, 214, 215, 216, and 218 (the Project Area); and

- A Zoning Text Amendment to ZR Appendix F to establish the Project Area as a Mandatory Inclusionary Housing (MIH) Area in Community District 12, Queens with MIH Options 1 and 2. Option 1 is the preferred option under the MIH Text Amendment provisions applicable to the Proposed Actions under which 25% of the residential zoning floor area must be for affordable housing units for residents with incomes averaging 60% Area Median Income (AMI). Option 2 would require that 30% of the residential zoning floor area must be for affordable housing units for residents with incomes averaging 80% of AMI. The final MIH Option will be chosen by the City Council through the ULURP process. Depending on the MIH Option chosen, the number of affordable housing units would range between 16 dwelling units (Option 1) and 19 dwelling units (Option 2) on the Applicant owned property under the With-Action scenario.

According to the *CEQR Technical Manual*, the appropriate study area for land use, zoning and public policy is related to the type and size of the project, as well as the location and context of the area that could be affected by the project. To assess the potential for project related impacts, the land use study area has been defined as the area located within a 400-foot radius of the proposed Project Area. The 400-foot radius study area is generally

bounded on the north by an area just south of 107th Avenue and Shore Avenue, on the south by an area just north of 109th Road, on the east by an area between Remington Street and Pine Grove Street, and on the west by the Van Wyck Expressway. Various sources have been used to prepare a comprehensive analysis of land use, zoning, and public policy characteristics of the area, including field surveys, studies of the neighborhood, census data, and land use and zoning maps.

LAND USE

Existing Conditions

Project Area

The Project Area (the area subject to the Zoning Map and Zoning Text Amendments) is identified as Tax Block 10068, Lots 200, 205, 210, 213, 214, 215, 216, and 218 located along the northerly side of 109th Avenue between 139th and 142nd Streets in the South Jamaica neighborhood of Queens. The proposed Project Area encompasses the following properties totaling 38,088 sf in area:

1. Projected Development Site 1 (Block 10068, Lots 200, 205, 210, 213, 214, 215) – The Applicant owned property consists of 30,087.5 square feet of lot area located along 109th Avenue between 139th and 142nd Streets. The property has approximately 324.07' of frontage on 109th Avenue and 109'-3" of frontage on 142nd Street. The property is currently developed with three 1-story warehouse buildings containing approximately 6,451 gsf of floor area. The three buildings are associated with a non-conforming building materials storage yard, including related offices (Use Group 17). The individual lots comprising the property consist of the following.

- Lot 200 – 8,100 sf lot used for the storage of building materials.
- Lot 205 – 10,000 sf lot containing two 1-story warehouse buildings totaling 2,651 gsf in floor area.
- Lot 210 – 5,600 sf lot containing a 1-story, 3,800 gsf warehouse structure.
- Lot 213 – 2,400 sf lot used for the storage of building materials.
- Lot 214 – 1,000 sf lot used for the storage of building materials.
- Lot 215 – 3,000 sf lot used for the storage of building materials.

2. Projected Development Site 2 (Block 10068, Lots 216, 218) – The non-Applicant owned property consists of 8,000 square feet of lot area located along 109th Avenue at the corner of 139th Street and 109th Avenue. The property has approximately 80' of frontage on 109th Avenue and 100' of frontage on 139th Street. The property is currently developed with one 2-story, 2-family residence containing approximately 2,194 gsf of floor area. The individual lots comprising the property consist of the following.

- Lot 216 – 4,000 sf unimproved lot used for a non-conforming building materials/contractor's yard.

- Lot 218 – 4,000 sf lot developed with a 2,194 sf, 2-story, 2-family residence, that was converted from a single-family residence, and a detached garage.

400-Foot Radius Project Study Area

The Project Area is located approximately 1.5 miles north of John J. Kennedy Airport and approximately 250 feet east of the Van Wyck Expressway in the South Jamaica neighborhood of Queens, Community District 12. The neighborhood within 400 feet of the Project Area is primarily developed with one- and two-family homes with a few scattered walk-up multi-family dwellings, two commercially developed properties (two ground level retail stores), one light manufacturing use (food preparation facility), and several vacant lots. The Project Area is across the street from a small Greenstreet open space triangle to the south/southeast at the intersection of 142nd Street, 109th Avenue, and Lakewood Avenue.

The Project Area is in close proximity to public transportation with a stop for the Q40 bus line just east of the Development Site at Lakewood Avenue, and the Q9 bus line available to the west at the Van Wyck Expressway. These buses both provide access to the Jamaica Station transit hub approximately one mile from the Project Area.

Future No-Action Scenario

Project Area

The No-Action Scenario in the Project Area would be the same as the existing condition. Under the No-Action Scenario for the Project Build Year of 2026, no new development would occur on Projected Development Sites 1 or 2 within the Project Area. All existing uses in the Project Area would remain, including the existing warehouse buildings and building materials storage yards, which are legal nonconforming uses. Therefore, absent the Proposed Actions, the Project Area would contain a total of 2 market rate dwelling units, 800 gsf of accessory office space, and 5,651 gsf of warehouse space. It would also contain 23,649 square feet of outdoor building materials storage area and 4,000 square feet of vacant lot area.

400-Foot Radius Project Study Area

No new development projects are identified for the 400-foot radius project study area based on a review of the NYC Department of City Planning's (DCP) ZAP Search of Zoning and Land Use Applications and the NYC Active Major Construction website.

No development plans are known to exist for any other undeveloped parcels, parking lots, or other uses within the project study area as identified above by the project build year of 2026.

Therefore, surrounding land uses within the immediate study area are expected to remain largely unchanged by the project build year of 2026.

Future With-Action Scenario

Project Area

The With-Action Scenario includes a Zoning Map Amendment to rezone Block 10068, Lots 200, 205, 210, 213, 214, 215, 216, and 218 (the Project Area) from R3A to R6B/C2-3. The With-Action Scenario also includes a Zoning Text Amendment of ZR Appendix F: Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing ("MIH") Areas for Community District 12, Queens to establish an MIH Area coterminous with the Project Area. The With-Action Scenario includes the following for the Project Build Year of 2026:

- Projected Development Site 1

  The Proposed Zoning Map Amendment would facilitate the development on the Applicant owned Projected Development Site 1 (Block 10068, Lots 200, 205, 210, 213, 214, 215) of a 4-story and cellar 92,779 gsf mixed-use building with approximately 15,702 gsf of commercial retail, office, and community facility space comprised of 5,165 gsf of retail space, 4,587 gsf of office space, and 5,950 gsf of community facility space for a Universal Pre-K school, and 840 sf of recreational space on the first floor, 61 residential dwelling units on floors 2 through 4 (52,051 gsf), and 28 cellar level accessory parking spaces (25,026 gsf including parking ramp). The number of 61 residential dwelling units has been determined based on the 52,051 gsf of occupiable residential floor area at the standard conversion rate of 850 zsf/DU. The development on Projected Development Site 1 would have an FAR of 2.12. The individual lots would be merged into one zoning lot as part of the Proposed Actions. A publicly accessible 249 square foot seating area would be provided at the corner of 109th Avenue and 142nd Street and is intended for use by parents picking up children of the Universal pre-school and for passive recreational use by employees working in the development.

  The Applicant is proposing to map MIH Options 1 and 2 on the property. The specific Option would be chosen by the City Council through the ULURP process. 25% of the 61 residential dwelling units or 16 units on Projected Development Site 1 are proposed as affordable, and would be reserved for households with incomes at or below 60% of the AMI. If Option 2 is chosen by the City Council, it would require that 30% of the 61 residential dwelling units or 19 units on Projected Development Site 1 be reserved as affordable for households with incomes at or below 80% of the AMI.

  The proposed development does not maximize floor area or bulk. An additional

2,485 square feet could be developed on the site (a proposed 2.12 FAR compared to a permitted FAR of 2.2). In addition, the proposed building would be 4 stories and 45 feet in height compared to the permitted 5 stories and 55 feet. Bulk and height have not been maximized as the cost of additional structural support due to required setbacks and extending the elevator core to reach a small partial 5th floor would not be feasible for the proposed building configuration. Additional square footage could have been added to the first floor but the increased depth for the commercial space was deemed to be impractical and unmarketable in this area for the uses proposed. In addition, it is considered necessary to provide an open area for the UPK at ground level thus necessitating a decrease in size of 2,485 sf for the ground floor.

- Projected Development Site 2

  While no new development is proposed for the non-Applicant owned Projected Development Site 2, the Proposed Actions would facilitate the development on this Site of a 4-story and cellar 23,586 gsf mixed-use building with approximately 4,052 gsf of commercial retail space on the first floor, 17 residential dwelling units on floors 2 through 4 (14,682 gsf), and 7 cellar level accessory parking spaces (4,852 gsf including parking ramp). The 14,682 gsf of residential floor area would convert to 17 dwelling units at the standard conversion rate of 850 zsf/DU. It is assumed that between 25% and 30% of the 17 residential dwelling units or 5 to 6 units on Projected Development Site 2 would be reserved for affordable MIH units at or below 60% and 80% AMI, respectively. The development on Projected Development Site 2 would have an FAR of 2.20. The existing uses and structures on the Site would be demolished and removed, and the individual lots would be merged into one zoning lot as part of the Proposed Actions.

  The proposed development maximizes floor area but does not maximize bulk. The building would be 4 stories and 45 feet in height compared to the permitted 5 stories and 55 feet. Bulk and height have not been maximized as the cost of additional structural support due to required setbacks and extending the elevator core to reach a small partial 5th floor would not be feasible for the proposed building configuration.

With the Proposed Actions, the Project Area would contain a total of 78 dwelling units, 9,217 gsf of retail space, 4,587 gsf of office space, 5,950 gsf of community facility space, and 35 accessory garage parking spaces (29,878 gsf).

400-Foot Radius Project Study Area

The Proposed Actions are not anticipated to result in any changes in land use within the 400-foot radius project study area. The Proposed Actions would only directly affect the Project Area. The surrounding 400-foot radius project study area is primarily a stable

one- and two-family residential neighborhood containing only 10 vacant lots, 5 of which are undersized or irregularly shaped and difficult to develop. The light manufacturing use (food preparation facility) within the project study area is a legal nonconforming use while the two commercially developed properties consist of ground level retail stores with residential uses above that would not be expected to change in the future as a result of the Proposed Actions in the Project Area.

Conclusion

No significant adverse impacts to land use in the area would be expected. The proposed Zoning Map and Zoning Text Amendment would only apply to the Project Area and would not affect lots beyond this area. The Proposed Actions would reinforce existing residential land use patterns in the surrounding area by promoting conforming development to replace the existing non-conforming manufacturing use within the Project Area. The Applicant believes that the proposed increase in density is appropriate at this location because the Development Site is located along 109th Avenue, a wide street. It also abuts open space to the south and southeast created by 142nd Street and the intersection of 109th Avenue and Lakewood Avenue.

The Proposed Actions would enable the property owner to develop a currently underdeveloped parcel with residential, commercial, and community facility floor area. The Proposed Actions would permit the construction of much needed housing, including affordable housing, in the area and provide locally oriented commercial retail and office space and community facility floor area, for a needed universal pre-school which is lacking in the nearby area, and would serve to improve and revitalize the surrounding neighborhood. The difference between the No-Action and With-Action development scenarios would constitute a notable land use change in the Project Area; however, the Applicant believes this change would be beneficial as it would fully develop an underutilized property and would provide market rate and affordable housing, local retail and office space, community facility space, and accessory parking. The Proposed Actions would reinforce existing residential land use patterns in the surrounding area by promoting conforming development to replace the existing non-conforming manufacturing use within the Project Area. The Proposed Actions would result in a substantial increase in density relative to surrounding buildings; however, the projected development would more closely align with the residential and commercial character of the neighborhood. The Applicant believes that the proposed increase in density is appropriate at this location because the Development Site is located along the 80-foot wide 109th Avenue, which is considered to be a wide street per the Zoning Resolution as it exceeds 75 feet in width. It is also across the street from a small Greenstreets open space to the south/southeast created by 142nd Street and the intersection of 109th Avenue and Lakewood Avenue. Additionally, the Project Area is in close proximity to public transportation.

The Proposed Actions are limited to the Project Area and are expected to induce development on Projected Development Site 2. Within the study area, the Actions would support the existing residential land use pattern and, as such, could contribute to the development of vacant parcels in the vicinity of the Project Area. The proposed C2-3 component of the zoning would accommodate the commercial retail and office floor area proposed to be included on Projected Development Site 1 controlled by the Applicant. Permitting commercial use within the Project Area with the proposed C2-3 commercial overlay would bring non-conforming commercial uses into compliance to serve the needs of the residents in the neighborhood. The proposed C2-3 commercial overlay would allow the Applicant's business, which has been located at the Development Site for over 35 years, to maintain its offices at this location. The retention of the Applicant's business at this location would allow the Applicant to continue to employ residents who live within the South Jamaica neighborhood. Without the Proposed Actions, the existing non-conforming manufacturing use would remain as is at the Development Site which is located within a predominately residential neighborhood. The Proposed Actions would allow the relocation of the industrial aspects of the business from the Development Site, thereby eliminating potential adverse effects such as noise and disturbance from different activity patterns resulting from this non-conforming use on the surrounding area.

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

ZONING

Existing Conditions

Project Area

The Project Area and surroundings were zoned R3-1 in 1961. The Project Area was included in the 2011 South Jamaica Rezoning (C 110145 ZMQ, effective May 11, 2011) initiated by the Department of City Planning (DCP) and comprised of 538 blocks in the South Jamaica neighborhood. The intent of the rezoning was to protect the predominant lower density character of the area while allowing for a moderate increase in residential and commercial density along the area's main corridors. The South Jamaica Rezoning also included an amendment to the Zoning Text to extend the applicable area of the "Food Retail Expansion to Support Health" (FRESH) program to Community District 12's commercial corridors. The rezoning changed the R3-1 zoning district to a contextual R3A district. Despite the existing residential zoning, the Project Area has historically been occupied by non-conforming industrial uses. The current non-conforming industrial uses have been located in the Project Area for approximately 35 years.

The R3A zoning district is mapped in many of the city's older neighborhoods, and this contextual district features modest single- and two-family detached residences on zoning lots as narrow as 25 feet in width. The amount of required open space on residential lots in R3A districts is governed by yard requirements. New detached homes must have two side yards totaling at least eight feet, but there is no minimum width requirement for either one. R3A districts also permit zero lot line buildings which are set along a side lot line and have one side yard at least eight feet wide. The front yard of a new home must be at least 10 feet deep and, to promote a unified streetscape, it must be as deep as an adjacent front yard but need not exceed a depth of 20 feet. The maximum FAR of 0.5 may be increased up to 20% by an attic allowance for the inclusion of space beneath a pitched roof for a total FAR of 0.6. The perimeter wall may rise to 21 feet before sloping or being set back to a maximum building height of 35 feet. Parking is in the side or rear yard but an in-house garage is allowed if the lot is 35 feet or wider, provided the driveway is at least 18 feet deep. One off-street parking space is required for each dwelling unit.

400-Foot Radius Project Study Area

Most of the 400-foot radius project study area is zoned R3A which is discussed under the Project Area above. The small portion of the project study area to the east of Remington Street is zoned R4-1. The small portion of the project study area located to the west within the bed of the Van Wyck Expressway is zoned R3-2.

R4-1 contextual districts permit one- and two-family detached and semi-detached houses. There is a minimum lot width of 25 feet for detached homes, and a permitted FAR of 0.75 plus an attic allowance for a total permitted FAR of 0.9. The perimeter wall may rise to 25 feet before sloping or being set back to a maximum building height of 35 feet. Two side yards that total eight feet must be provided for a detached residence. There is no minimum width for each side yard but there must be eight feet between buildings on adjacent zoning lots. One four-foot side yard is required for each semi-detached residence, which must be on a lot at least 18 feet wide. Zero lot line buildings permitted in R4-1 districts require only one eight-foot side yard. Front yards must be at least 10 feet deep and at least as deep as an adjacent front yard but need not exceed a depth of 20 feet. Parking must be within the side or rear yard or in a garage. An in-house garage is permitted within a semi-detached house, or in a detached house if the lot is 35 feet or wider. One off-street parking space is required for each dwelling unit.

R3-2 districts are general residence districts that allow a variety of housing types, including low-rise attached houses, small multifamily apartment houses, and detached and semi-detached one- and two-family residences. It is the lowest density zoning district in which multiple dwellings are permitted. The 0.5 FAR may be increased by an attic allowance of up to 20% for the inclusion of space beneath a pitched

roof for a total FAR of 0.6. The perimeter wall may rise to 21 feet before sloping or being set back to a maximum building height of 35 feet. Lots with detached homes must be at least 40 feet wide; if occupied by semi-detached and attached buildings, lots must be at least 18 feet wide. The maximum street wall length for a building on a zoning lot is 125 feet. The maximum lot coverage of any residence is 35%. Front yards must be at least 15 feet deep. Cars may park in the side or rear yard, in the garage or in the front yard within the side lot ribbon; parking is also allowed within the front yard when the lot is wider than 35 feet. One off-street parking space is required for each dwelling unit. However, requirements are lower for income-restricted housing units (IRHU) and are further modified within the Transit Zone.

Future No-Action Scenario

Project Area

In the future and absent the Proposed Actions, the Project Area would continue to be zoned R3A. Based on a review of DCP's LUCATS listings for Queens Community District 12, no rezonings are proposed for the Project Area. No rezoning actions are presently being contemplated by the DCP, as indicated on the DCP website, for the Project Area by the project build year of 2026.

400-Foot Radius Project Study Area

In the future and absent the Proposed Actions, the Project Area would continue to be zoned a combination of R3A, R4-1, and R3-2 districts. Based on a review of DCP's LUCATS listings for Queens Community District 12, no rezonings are proposed for the project study area. No new zoning initiatives are proposed for the 400-foot radius project study area by the project build year of 2026. No rezoning actions are presently being contemplated by the DCP, as indicated on the DCP website, for the surrounding study area by the project build year.

Future With-Action Scenario

Project Area

The Applicant proposes a Zoning Map Amendment and a Zoning Text Amendment on Block 10068, Lots 200, 205, 210, 213, 214, 215, 216, and 218 in Queens Community District 12. The proposed Project Area would total 38,088 square feet in size. The Proposed Actions would rezone the Project Area from the current R3A district to an R6B/C2-3 zoning district. The district will be mapped at a depth of 100 feet to the north of 109th Avenue between 139th and 142nd Streets. The Applicant also seeks a Zoning Text Amendment which would modify Appendix F of the NYC Zoning Resolution to make the newly mapped R6B/C2-3 district a Mandatory Inclusionary Housing area.

The Proposed Actions are necessary in order to allow the proposed development to proceed. The existing R3A zoning mapped on the Project Area only allows single- and two-family detached houses at a low residential FAR of 0.6 with the attic allowance. The

Applicant proposes rezoning the Project Area to an R6B/C2-3 district with Mandatory Inclusionary Housing (MIH). The proposed rezoning would allow the Applicant to develop a higher density residential development with accessory commercial and community facility space on Projected Development Site 1 which would not be allowed under the current zoning. The Proposed Actions would enable the Applicant to develop this currently underdeveloped parcel with an appropriate amount of residential, commercial, and community facility floor area at an FAR of up to 2.20. It would also facilitate a similar development in the future on the adjacent Projected Development Site 2 not controlled by the Applicant.

The proposed C2-3 commercial overlay would bring non-conforming commercial uses into compliance to serve the needs of the residents in the neighborhood. The proposed C2-3 commercial overlay would allow the Applicant's business, which has been located at the Development Site for over 35 years, to maintain its offices at this location and continue to employ residents who live within the South Jamaica neighborhood. The Proposed Actions would allow the relocation of the industrial aspects of the business from Projected Development Site 1 as well as similar nonconforming uses on Projected Development Site 2, thereby eliminating potential adverse effects such as noise and disturbance from different activity patterns resulting from this non-conforming use on the surrounding area.

The proposed residential, commercial, and community facility development would be in conformance with the use provisions of the proposed R6B/C2-3 zoning district. The proposed R6B/C2-3 zoning with MIH would permit a residential development with an FAR of 2.20, a community facility FAR of 2.0, and a commercial FAR of 2.0. A maximum of 66,193 zoning square feet (zsf) of residential floor area, 60,175 zsf of community facility floor area, and 60,175 zsf of commercial floor area would be permitted on the lot. The proposed development on Projected Development Site 1 would total 63,708 zsf (2.12 FAR) including 48,005 zsf (1.60 FAR) of residential floor area, 9,752 zsf of retail and office floor area (0.32 FAR), and 5,950 zsf of community facility floor area (0.20 FAR) which would comply with the maximum permitted development on the site.

The proposed 45-foot and 4-story total height of the project on Projected Development Site 1 would comply with the maximum permitted height in the R6B district. The proposed 45-foot base height would also comply with the maximum base height of 45 feet in the R6B district.

Height and bulk have not been maximized as the cost of additional structural support due to required setbacks and extending the elevator core to reach a small partial 5th floor would not be feasible for the proposed building configuration. Additional square footage could have been added to the first floor but the increased depth for the commercial space was deemed to be impractical in this area for the uses proposed. In

addition, the Applicant considers it necessary to provide an open area for the UPK at ground level thus necessitating a decrease in size of 2,485 sf for the ground floor.

Finally, the proposed development would comply with zoning requirements for parking. Parking would be required for one-half of the market rate units while no parking would be required for the affordable units as the Project Area is located within a Transit Zone. The assumption of 46 market rate residential dwelling units would require the provision of 23 parking spaces while 28 spaces would be provided. No parking would be required or provided for the proposed commercial retail, office, or community facility uses as the required parking falls below the minimum and is therefore waived.

The residential and commercial project on Projected Development Site 2 would be in conformance with the use provisions of the proposed R6B/C2-3 zoning district. The proposed R6B/C2-3 zoning with MIH would permit a residential development with an FAR of 2.20, a community facility FAR of 2.0, and a commercial FAR of 2.0. A maximum of 17,600 zoning square feet (zsf) of residential floor area and 16,000 zsf of commercial and/or community facility floor area would be permitted on the lot. The development on Projected Development Site 2 would total 17,599 zsf (2.20 FAR) including 12,747 zsf (1.59 FAR) of residential floor area and 4,852 zsf of retail floor area (0.61 FAR) which would comply with the maximum permitted development on the site.

The proposed 45-foot and 4-story total height of the project on Projected Development Site 2 would comply with the maximum permitted height in the R6B district. The proposed 45-foot base height would also comply with the maximum base height of 45 feet in the R6B district.

Finally, the project on Projected Development Site 2 would comply with zoning requirements for parking. Parking would be required for one-half of the market rate units while no parking would be required for the affordable units as the Project Area is located within a Transit Zone. The assumption of up to 12 market rate residential dwelling units would require the provision of 6 parking spaces and at least 6 spaces would be provided. No parking would be required or provided for the proposed commercial retail uses as the required parking falls below the minimum and is therefore waived.

400-Foot Radius Project Study Area

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

Conclusion

No significant impacts to zoning patterns in the area would be expected. The proposed Zoning Map and Zoning Text Amendment would only apply to the Project Area and

would not affect lots beyond this area. The Proposed Actions would reinforce existing residential land use patterns in the surrounding area by promoting conforming development to replace the existing non-conforming manufacturing use within the Project Area. The proposed R6B zoning district would permit appropriate bulk along 109th Avenue and would permit the same uses as located in the R3A zoning to remain on the northern portion of Block 10068 outside of the Project Area.

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

PUBLIC POLICY

Existing Conditions

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

Project Area and 400-Foot Radius Project Study Area

FRESH Program

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

The entire 400-foot radius project study area east of the Van Wyck Expressway is located within the boundaries of the FRESH program described under the Project Area above. However, the area south of 109th Avenue allows for zoning incentives related to grocery store development and operation while the area to the north of 109th Avenue allows for tax incentives.

A citywide FRESH Update Text Amendment (CEQR No. 21DCP182Y) is currently in public review. The proposed zoning text amendment, FRESH II, will update the existing program under the NYC ZR 63-00 that provides incentives for neighborhood

grocery stores to locate in underserved neighborhoods in the City. FRESH II will include an expansion of the program boundaries, mechanisms to prevent saturation of FRESH supermarkets, modification to the glazing requirement for conversions, changes to parking regulations, and zoning text clarifications. The FRESH program would not be relevant to the Proposed Actions as a grocery store is not currently located on either Projected Development Site and is not proposed.

OneNYC

In April 2015, Mayor Bill de Blasio released OneNYC, a comprehensive plan for a sustainable and resilient city for all New Yorkers that speaks to the profound social, economic, and environmental challenges faced. OneNYC is the update to the sustainability plan for the City started under the Bloomberg administration, previously known as PlaNYC 2030: A Greener, Greater New York. Growth, sustainability, and resiliency remain at the core of OneNYC, but with the poverty rate remaining high and income inequality continuing to grow, the de Blasio administration added equity as a guiding principle throughout the plan. In addition to the focuses of population growth; aging infrastructure; and global climate change, OneNYC brings new attention to ensuring the voices of all New Yorkers are heard and to cooperating and coordinating with regional counterparts. Since the 2011 and 2013 updates of PlanNYC, the City has made considerable progress towards reaching original goals and completing initiatives. OneNYC includes updates on the progress towards the 2011 sustainability initiatives and 2013 resiliency initiatives and also sets additional goals and outlines new initiatives under the organization of four visions: growth, equity, resiliency, and sustainability.

PlaNYC

In 2011, the Mayor's Office of Long Term Planning and Sustainability released an update to PlaNYC: A Greener, Greater New York. PlaNYC represents a comprehensive and integrated approach to planning for New York City's future. It includes policies to address three key challenges that the City faces over the next twenty years: population growth; aging infrastructure; and global climate change. In the 2011 update, elements of the plan were organized into ten categories—housing and neighborhoods, parks and public space, brownfields, waterways, water supply, transportation, energy, air quality, solid waste, and climate change—with corresponding goals and initiatives for each category.

Other Public Policies

The Project Area and the surrounding 400-foot radius study area are not located within the City's Coastal zone boundary, and are therefore not subject to the provisions of the City's Waterfront Revitalization Program (WRP).

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

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

Future No-Action Scenario

In the future, without the action, new development in the Project Area and within the 400-foot radius project study area would remain within the boundaries of the City's FRESH Program. No other public policy initiatives would pertain to the Project Area or to the 400-foot study area around the Area by the project build year of 2026. In addition, no changes are anticipated to any public policy documents relating to the Project Area or the surrounding study area by the project build year.

Future With-Action Scenario

Project Area

The Proposed Actions are consistent with the City's sustainability goals, including those outlined in OneNYC. Notably, the Proposed Actions would support OneNYC's land use goals of creating new housing for a range of incomes, including permanently affordable housing; redeveloping underutilized parcels with new active uses; and focusing development in areas that are served by mass transit. The Proposed Actions would not result in significant adverse impacts related to business displacement as the existing business to be displaced consists of warehouse space which exists in abundance in the surrounding area. Overall, the Proposed Actions would be supportive of the applicable goals and objectives of OneNYC.

PlaNYC

- The Proposed Actions would be consistent with PlaNYC's land use goals. The Proposed Actions would encourage increased development in an area well served by public transportation. The Proposed Actions would facilitate new affordable housing.

- The Proposed Actions would support PlaNYC's transportation goals by facilitating transit-oriented development in an area served by several public transportation options.

- The Proposed Actions would meet PlaNYC's air quality goals by promoting the use of mass transit through encouraging development in close proximity to existing transit stops.

- The Proposed Development facilitated by the Proposed Actions would have to comply with all applicable regulations regarding the implementation of low-flow,

water efficient fixtures, as per the New York City Plumbing Code, Local Law 33 of 2007 and the United Stated Environmental Protection Agency's (EPA's) WaterSense Program. In addition, any development facilitated by the Proposed Actions would comply with the City's laws and regulations. Therefore, the Proposed Actions are consistent with PlaNYC's water quality goals.

- Development facilitated by the Proposed Actions would be required to meet the more stringent green building practices established in the 2010 update to the New York City Building Code as part of the Greener, Greater Buildings Law. The updated Building Code requires energy audits and benchmarking for larger buildings, among other requirements. The 2011 Enterprise Green Communities Criteria constitute the only comprehensive green building framework designed for affordable housing and provide proven, cost-effective standards for creating healthy and energy- efficient homes.

- The Proposed Actions would not result in any significant adverse impacts to natural resources as such resources are not present in the Project Area or in the immediate surroundings.

- The Proposed Actions would not result in any significant adverse impacts to the City' solid waste system. The Proposed Development in the Project Area would be subject to mandatory recycling requirements. As such, the Proposed Actions would be consistent with PlaNYC's solid waste management goals.

- The Proposed Actions would not alter or conflict with the policies of the Industrial Action Plan. The Proposed Actions would not alter zoning within an IBZ.

- The Proposed Actions would not result in new development within an LPC designated and/or S/NR-listed historic districts.

400-Foot Radius Project Study Area

The proposed development would not have any impact on the FRESH Program within a 400-foot radius of the Project Area.

Conclusion

No impact to public policies would occur as a result of the Proposed Actions. The action would be an appropriate development in the Project Area and would be a positive contribution to Queens Community District 12 and to the surrounding neighborhood.

The proposed project would meet the City's public policy goals as explained above as well as similar State and national public policy goals related to the provision of affordable housing.

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

2. OPEN SPACE

Introduction

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

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

Direct Effects

For the purposes of the shadows analysis, the With-Action Development Scenario evaluates the maximum allowable development envelope with respect to bulk and height under the proposed R6B/C2-3 zoning as the zoning approvals sought do not lock in a specific building design. Therefore, the building heights on the two Development Sites would reach 55'-0" to their rooftops and 65'-0" to the top of their mechanical bulkheads. The maximum shadows that would be cast by these buildings would be 279.5 feet (4.3 times the maximum building height). There are two open space resources located within the maximum shadows radius of the projected development. A detailed discussion of potential shadows impacts of the Proposed Actions is presented in the Shadows section below.

Indirect Effects

Introduction

On the basis of *CEQR Technical Manual* criteria, the projected developments could potentially result in indirect effects to open space resources within the project study area and must be further assessed to determine whether significant indirect effects would be expected to occur. The Project Area is located within an open space area that is neither well served nor underserved. For projects located in such areas area, the *CEQR Technical*

Manual requires that an open space assessment be conducted if that project would generate more than 200 residents or 500 workers.

The Proposed Actions would result in the development of 76 net new dwelling units in the Project Area as well as 9,217 gsf of new retail space, 3,787 gsf of new office space, 5,950 gsf of community facility space, and a decrease of 5,651 gsf of industrial space. The 76 dwelling units are expected to generate approximately 262 residents based on the 2020 US Census average household size of 3.45 persons per household for Census Tracts within ¼-mile of the Project Area including tracts 158.01, 170, 194, 196, 198 and 202. The Proposed Actions would exceed the threshold number of 200 new residents and a preliminary quantitative analysis of indirect open space impacts is therefore required.

The Proposed Actions would generate approximately 69 workers in the Project Area based on an estimate of 3 workers per 1,000 gsf of retail space (9,217 gsf), 4 workers per 1,000 gsf of office space (4,587 gsf), 20 school employees, and 0.04 workers per dwelling unit for the 76 dwelling units noted above. (It should be noted that this is a conservative analysis as it does not take into account the existing 5,651 gsf of industrial/warehouse floor area that would be removed by projected development within the Project Area). New employees would therefore not exceed the threshold number of 500 new workers, and a quantitative analysis of indirect open space impacts for employees would not be required.

Preliminary Assessment

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

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

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

space resources. However, if the existing open space ratio is low even an open space ratio change of less than 1 percent may result in potential significant open space impacts.

The open space project study area exhibits a below average open space ratio of 0.1410 acres per 1,000 residents, based on 3.77 acres of existing open space divided by the 2020 US Census data study area population of 26,740 persons.

Existing Conditions

Study Area Population

The study area population was estimated using 2020 US Census data for the accessible census tracts located fully or at least 50 percent within the one-half mile study area. As shown in Table 7-1, in 2020 the study area contained an estimated 26,740 residents within the ten relevant census tracts.

Table 7-1

Study Area Population

Census Tract	Total Population (2020)[1]
158.01	3,817
170	2,504
172	2,224
192	2,359
194	3,015
196	3,122
198	3,682
202	1,693
204	2,278
206	2,046
Study Area Total	**26,740**

Study Area Open Space

The one-half mile open space study area is generally bounded by 101st Avenue on the north, an area between 115th and 116th Avenues on the south, 153rd Street on the east, and 129th Street on the west. Within the census tracts that are fully or at least 50 percent within this area, there are three publicly owned and accessible facilities. A fourth open space facility is located just outside the included census tracts but partially within the ½-mile

[1] Source: 2020 US Census data.

radius **(See Figure 7-1, Open Space Study Area Map and Table 7-2, Inventory of Open Space Resources)**. These three facilities within the project study area provide a total of 3.77 acres of open space resources within one-half mile of the Project Area. 1.97 acres or 52.3% of the open space resources are considered to be active open space and 2.15 acres or 47.7 % of the open space resources are considered to be passive open space.

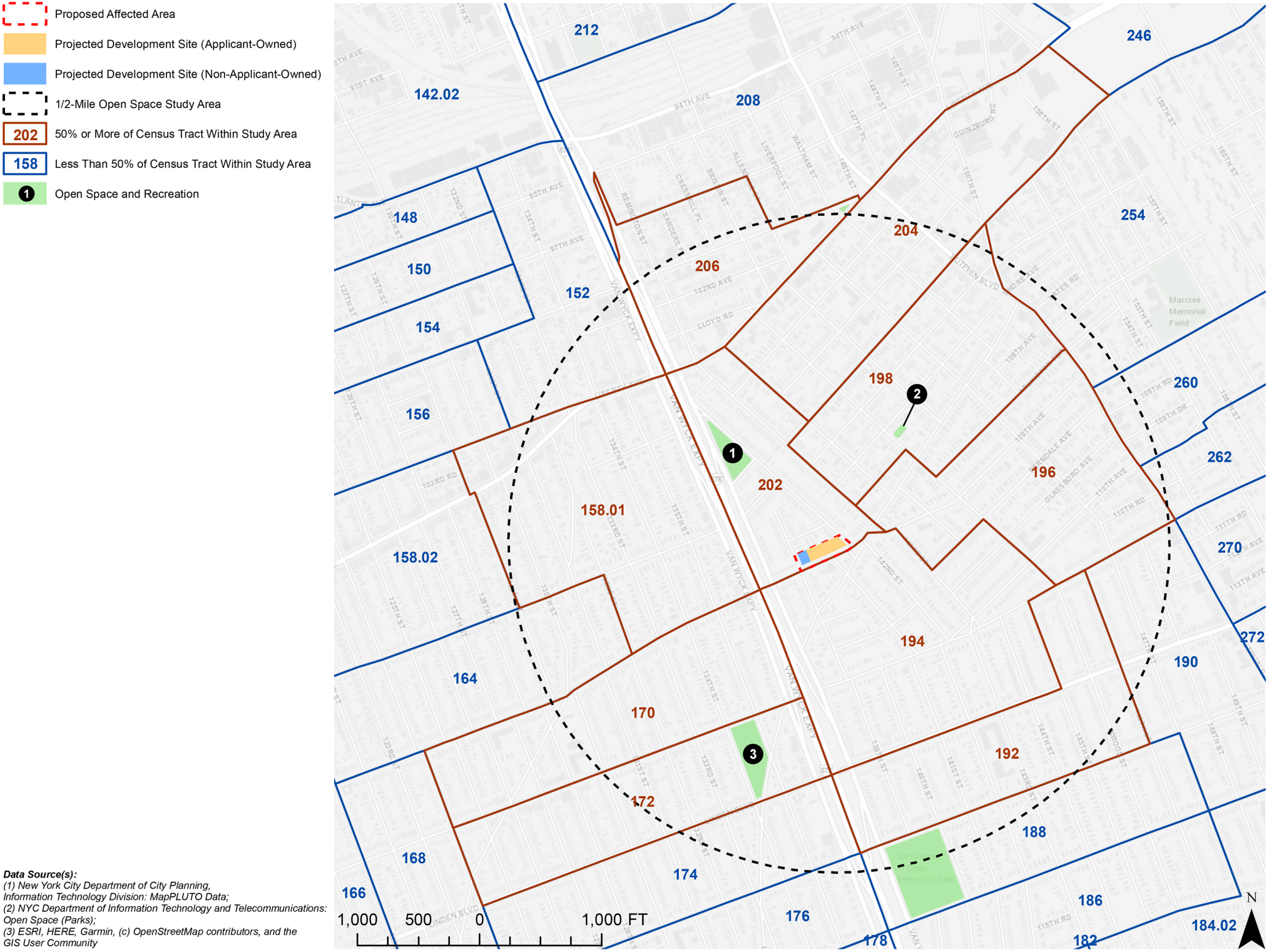
Table 7-2
Inventory of Open Space Resources

Map Key	Open Space Name & Location	Owner	Total Size (acres)	Size/ Access in Study Area (acres)	Passive Acres	Active Acres	Features
1	Norelli-Hargreaves Playground - Van Wyck Exwy. Sr. Rd. E., 142 St., 106 Ave.	DPR	1.43	1.43	0.57	0.86	Basketball courts, playground, spray shower, seating, adult fitness area, walking path, plantings
2	Block Assn #81 (Paradise Community Garden) - Inwood St. bet. Shore Ave. & Lakewood Ave.	DPR Green-thumb	0.12	0.12	0.12	0	Garden, plantings (open year round)
3	Frederick B. Judge Playground - 134 & 135 Sts., bet. 111 Ave. & Lincoln St., Linden Blvd	DPR	2.22	2.22	1.11	1.11	Baseball fields, basketball & handball courts, playgrounds, spray showers, seating, plantings
Tot			**3.77**	**3.77**	**1.8**	**1.97**	

Assessment of Open Space Adequacy

The open space ratio was calculated based on the study area population of 26,740 persons shown in Table 7-1 and the total open space acreage of 3.77 acres including 1.97 acres of active open space and 1.8 acres of passive open space shown in Table 7-2. The resultant

Figure 7-1: Open Space Study Area Map



Data Source(s):
(1) New York City Department of City Planning, Information Technology Division: MapPLUTO Data;
(2) NYC Department of Information Technology and Telecommunications: Open Space (Parks);
(3) ESRI, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS User Community

ratio is 0.1410 acres of open space per 1,000 residents comprised of 0.0737 acres of active open space per 1,000 residents and 0.0673 acres of passive open space per 1,000 residents. This ratio falls below the citywide average of 1.5 acres as well as the benchmark of 2.5 acres per 1,000 population, indicating that the area has a below average amount of public open space resources. The area's residential active open space ratio is below DCP's planning guideline of 2.0 acres per 1,000 residents. The study area's residential passive open space ratio is below DCP's goal of 0.5 acres per 1,000 residents.

Future No-Action Condition

Study Area Population

As stated above, the 2020 US Census population of the half-mile open space study area was 26,740 persons. In order to account for background growth to the 2026 project build year, a conservative annual growth rate of 0.5% per year (for 6 years) was applied to the 2020 population of the ½-mile open space study area. This growth factor would result in the addition of 802 additional residents. Therefore, as projected to 2026, the base population is projected to be 27,542 residents. No new residential development would occur in the Project Area under the future No-Action Scenario. Therefore, the open space study area would have a No-Action population of 27,542 persons in 2026.

Study Area Open Space

There would be no increase or decrease in the 3.77 acres of existing open space area including 1.97 acres of active open space and 1.8 acres of passive open space within within the project study area by the project build year of 2026.

Assessment of Open Space Adequacy

The future no-action open space ratio within a ½ mile radius of the Project Area is 0.1369 based on the area population of 27,542 persons in 2026 and the 3.77 acres of open space area. The open space project study area would have an active open space ratio of 0.0715 acres per 1,000 residents and a passive open space ratio of 0.0654 acres per 1,000 residents.

Future With-Action Scenario

Study Area Population

As discussed above, the project is expected to generate approximately 262 residents based on the 2020 US Census average household size of 3.45 persons per household for Census Tracts within ¼-mile of the Project Area including tracts 158.01, 170, 194, 196, 198 and 202. Adding these 262 residents to the future no-action population of 27,542 persons would result in a total population of 27,804 persons.

The Proposed Actions would generate approximately 69 new workers in the Project Area. (It should be noted that this is a conservative analysis as it does not take into account the existing 5,651 gsf of industrial/warehouse floor area that would be removed by projected development within the Project Area). New employees would therefore not exceed the

threshold number of 500 new workers and a quantitative analysis of indirect open space impacts for employees would not be required. The addition of 69 new workers to the Project Area relative to existing and Future No-Action conditions would not affect the conclusions of this analysis in a substantive manner.

Study Area Open Space

A publicly accessible 249 square foot seating area would be provided at the corner of 109th Avenue and 142nd Street and is intended for use by parents picking up children of the Universal pre-school and for passive recreational use by employees working in the development. While this open space would be publicly accessible, to allow for a conservative assessment, this area has not been included in the quantitative open space analysis.

The Applicant also intends to provide 840 sf of recreational space on the first floor of the building and at least 744 sf of outdoor recreational space on the roof of the structure totaling 1,584 sf on Projected Development Site 1. However, this recreational space would be for project residents only and has not been included in the quantative open space analysis.

Therefore, in 2026 with the Proposed Actions, the project study area would contain approximately 3.77 acres of open space resources including 1.97 acres of active open space and 1.80 acres of passive open space, slightly more than under currently existing and future no-action conditions.

Assessment of Open Space Adequacy

The projected open space ratio in 2026 with the Proposed Actions would be 0.1356 acres per 1,000 residents compared with the projected ratio of 0.1369 acres in the study area in the future without the project. This represents a decrease of approximately 0.0013 acres or 0.95 percent in the open space ratio. The open space project study area would have an active open space ratio of 0.0709 acres per 1,000 residents with the Proposed Actions compared to 0.0715 acres in the future without the project, a decrease of 0.0006 acres 0.84 percent. The study area would have a passive open space ratio of 0.0647 acres per 1,000 residents with the Proposed Actions compared to 0.0654 acres in the future without the project, a decrease of 0.0007 acres or 1.1 percent. Therefore, the community would continue to have a below average amount of open space compared to the City as a whole and would not meet DCP's open space planning goal.

Table 7-3 shows the calculation of open space ratios for the existing, Future No-Action, and Future With-Action Scenarios.

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

	Existing Conditions (2018)	**Future No-Action** (2026)	Future With-Action (2026)
Publicly Accessible Open Space (Total Acreage)	3.77	3.77	3.77
- Active	1.97	1.97	1.97
- Passive	1.80	1.80	1.80
Study Area Population	26,740	27,542	27,804
Open Space Ratio (Total Acres/1,000 Residents)	0.1410	0.1369	0.1356 – decrease from no-action of 0.0013 ac (0.95%)
- Active	0.0737	0.0715	0.0709– decrease from no-action of 0.0006 ac (0.84%)
- Passive	0.0673	0.0654	0.0647– decrease from no-action of 0.0007 ac (1.10%)

Impact Significance

Quantitative Impact

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

At 0.1356 acres per 1,000 population, the amount of publicly accessible open space with the Proposed Actions would be significantly below the average of 1.5 acres per 1,000 population in community districts in the City and significantly below the City's planning goal as expressed in the *CEQR Technical Manual* of 2.5 acres per 1,000 population. Nevertheless, it is recognized that this goal may not be feasible in many areas of the City, and it is not considered to be an impact threshold.

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

The Future With Action open space ratio for the ½-mile radius residential study area of 0.1356 acres per 1,000 population is considered to be very low. However, the 0.95% decrease in the open space ratio relative to Future No-Action conditions is less than 1% which would be considered to be potentially significant for study areas with a very low open space ratio. The open space ratio would not decrease substantially relative to existing and Future No-Action conditions. In addition, a small passive public open space area as well as private open space would be provided in the Project Area which may serve to meet at least a portion of the open space needs of the project's residents. In addition, these areas may also limit the usage of public open space resources by the project's residents. See the qualitative impact discussion below. Therefore, based on *CEQR Technical Manual* criteria, the proposed project would not be expected to result in a significant adverse impact on open space resources.

Qualitative Impact

The Proposed Actions would result in the creation of new public and private open space as further discussed below.

A publicly accessible 249 square foot seating area would be provided at the corner of 109th Avenue and 142nd Street and is intended for use by parents picking up children of the Universal pre-school and for passive recreational use by employees working in the development. However, to allow for a conservative analysis, this area has not been included in the quantitative open space analysis above.

The proposed rezoning of the Project Area from R3A to an R6B/C2-3 zoning district would also include open space per the Quality Housing provisions applicable to the R6B district. Quality Housing requires the provision of open space equal to 3.3 percent of the residential floor area of the project, thereby requiring approximately 1,584 square feet or 0.036 acres of open space for the proposed 48,005 zsf of residential space. The Applicant intends to provide an 840 sf indoor recreation room on the 1st floor of the building and at least 744 sf of outdoor recreational space on the roof of the structure totaling 1,584 sf as required.

The following additional open space resource is considered as part of the qualitative assessment.

- The 6.34 acre Dr. Charles R. Drew Park bounded by the Van Wyck Expressway Service Road East and 140th Street between 115th and 116th Avenues at the southern end of the project study area includes approximately 2.11 acres within the project study area, comprised of approximately 0.31 acres of passive open space and 1.8 acres of active open space. Facilities in the park include baseball fields, basketball and handball courts, playgrounds, spray showers, seating, and plantings. This resource has not been included as it is located within a census tract that is less than 50% within the study area.

The *CEQR Technical Manual* considers an action to result in significant impacts to open space resources if it would significantly increase shadows, noise, air pollutant emissions, or odors on existing public open spaces resources compared to the future without the action conditions. The project development associated with the Proposed Actions would not significantly increase such impacts on existing public open spaces resources. Based on *CEQR Technical Manual* criteria and as explained further in the Shadows section below, the proposed project would not result in any significant shadows impacts on any open space or other shadow sensitive uses.

Conclusion

Due to the absence of direct impacts on any open space resource and the minimal decrease in the future with the action open space ratio, as well as the provision of a publicly accessible plaza and the additional private open space to be provided on Projected Development Site 1 under the Proposed Actions as discussed in the qualitative impact analysis above, it is anticipated that the project would not have any potentially significant adverse open space impacts and further assessment is not warranted.

3. SHADOWS

Introduction

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

For the purposes of the shadows analysis, the With-Action Development Scenario evaluates the maximum allowable development envelope with respect to bulk and height under the proposed R6B/C2-3 zoning as the zoning approvals sought do not lock in a specific building design. Therefore, the building rooftop and mechanical bulkhead heights on the Development Sites would be as follows:

- Projected Development Site 1: rooftop: 55'-0"; mechanical bulkhead: 65'-0".

- Projected Development Site 2: rooftop: 55'-0"; mechanical bulkhead: 65'-0".

According to the *CEQR Technical Manual*, a shadows assessment is not required unless the project would include a structure or an addition to a structure at least 50 feet in height or if it would contain shorter structures that might cast substantial new shadows on an adjacent park, historic resource, or an important natural resource. A shadows analysis is required for this project since the buildings on Projected Development Site 1 and Projected Development Site 2 would exceed 50 feet in height with building bulkheads and are located in close proximity to one open space resource.

Preliminary Screening Assessment

Tier 1 Screening Assessment

There are two shadow sensitive open space resources in the vicinity of the Projected Development Sites as shown on the attached Tier 1 Screening Assessment diagram. The shadow sensitive open space resources include the following:

- Greenstreet island located between 109th Avenue, 142nd Street, and Lakewood Avenue southeast of the Project Area. The Greenstreet is labeled "1" on the attached Figure 8-1, Tier 1 Screening Assessment diagram, and consists of several trees and shrubs.

- Greenstreet island located between 109th Avenue, 143rd Street, and Remington Avenue east of the Project Area. The Greenstreet is labeled "2" on the attached Figure 8-1, Tier 1 Screening Assessment diagram, and consists of several trees and shrubs.

There are no historic resources in the vicinity of the Projected Development Sites.

The longest shadows radius is calculated as 4.3 times the maximum proposed building height including rooftop bulkheads. The longest shadow cast by the buildings on the two Projected Development Sites are as follows:

- Projected Development Site 1: mechanical bulkhead roof: 65'-0" x 4.3 = 279.5'

- Projected Development Site 2: mechanical bulkhead roof: 65'-0" x 4.3 = 279.5'

The longest shadow of 279.5 feet on the Tier 1 shadow assessment figure was calculated as 4.3 times the maximum building height of 65.0 feet including mechanical bulkheads on the roof of the five-story buildings on Projected Development Sites 1 and 2.

Due to the proximity of the Projected Development Sites to the open space resource noted above, potential shadow impacts could occur from the Proposed Actions.

Tier 2 Screening Assessment

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

The attached Figure 8-2, Tier 2 Screening Assessment diagram shows the area south of the Development Sites that cannot be shaded by the proposed project. As illustrated on the figure, the Greenstreet islands are not located within the area that cannot be shaded by the project. Therefore, the Greenstreets could experience new shadows from the project and further assessment is required.

Tier 3 Screening Assessment

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

A Tier 3 screening assessment was performed for the four representative days of the year set forth in the *CEQR Technical Manual*: December 21, the winter solstice and

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

A Tier 3 screening assessment has been performed as the Greenstreet islands identified above lie within the area that could be shaded by the proposed project.

As shown on the attached Figures 8-3a through 8-3d, Tier 3 Screening Assessment diagrams, shadows from the developments could reach the Greenstreet island no. 1 on the May 6th and June 21st analysis days.

The attached Figures 8-4a and 8-4b, detailed Tier 3 Screening Assessment diagrams, show the extent of incremental shadows on Greenstreet island no. 1 on the May 6th analysis day. New shadows from the building on Projected Development Site 1 would be cast on this open space resource for approximately 20 minutes between 4:58 and 5:18 PM[2]. The shadow would gradually extend from the northwestern edge of the Greenstreet at 4:58 PM to cover approximately 90% of the resource by 5:18 PM.

The attached Figures 8-5a through 8-5c, detailed Tier 3 Screening Assessment diagrams, show the extent of incremental shadows on the Greenstreet on the June 21st analysis day. New shadows from the building on Projected Development Site 1 would be cast on this open space resource for approximately 49 minutes between 5:12 and 6:01 PM[3]. The shadow would gradually extend from the northwestern edge of the Greenstreet at 5:12 PM to cover nearly the entirety of the resource with the exception of its easternmost tip by 6:01 PM.

Table 8-1 below presents the incremental shadows that would affect the Greenstreet island on each of the four analysis days.

The incremental shadow coverage on the Greenstreet island would not be considered significant since it would only occur during the late afternoon for between 20 and 49 minutes which would not have an adverse impact on the existing vegetation. Per the

[2] The new incremental shadow is not shown at the very start of the duration as it covers an extremely small portion of the resource at that time which cannot be clearly shown. Therefore, the visualization in the graphic shows a few minutes into the duration when the shadow is more fully on the resource.

[3] The new incremental shadow is not shown at the very start of the duration as it covers an extremely small portion of the resource at that time which cannot be clearly shown. Therefore, the visualization in the graphic shows a few minutes into the duration when the shadow is more fully on the resource.

CEQR Technical Manual, a minimum of four to six hours of sunlight per day is required for the survival of vegetation during the growing season. The Greenstreet is currently in full, direct sunlight for the entire May 6th and June 21st analysis days (there are no existing shadows falling on this resource), so it would continue to receive ample sunlight for the survival of its vegetation despite the new shadows.

Table 8-1

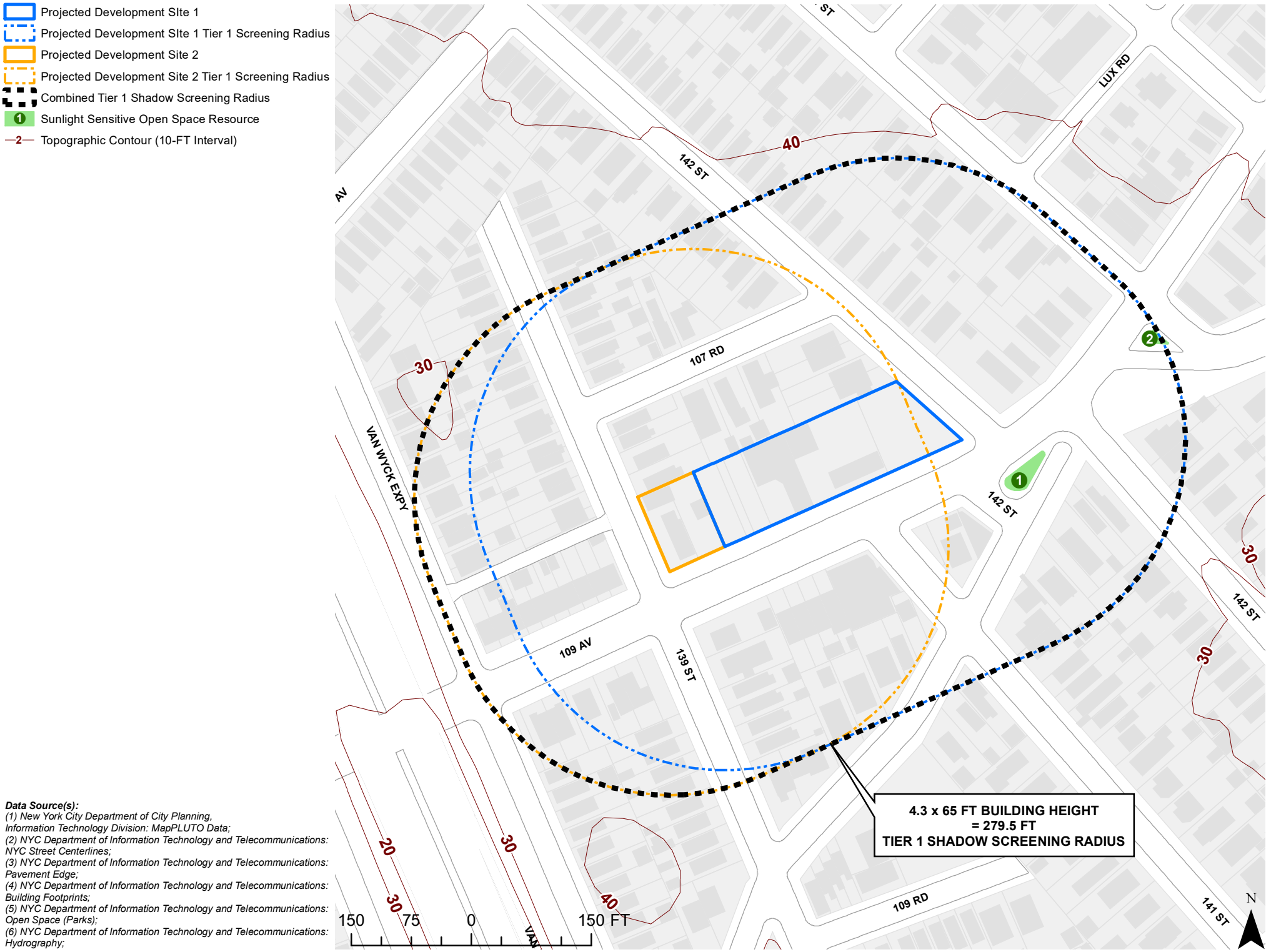
Incremental Shadows

Analysis Day	**December 21**	**March 21/ September 21**	**May 6 /August 6**	**June 21**
Timeframe Window	8:51 a.m. - 2:53 p.m.	7:36 a.m. - 4:29 p.m.	6:27 a.m. - 5:18 p.m.	5:57 a.m. - 6:01 p.m.
Shadow enter - exit times	none	none	4:58-5:18 PM	5:12-6:01 PM
Incremental shadow duration	none	none	20 minutes	49 minutes
Note: Daylight savings time not used.				

Conclusion

Buildings on Projected Development Site 1 and Projected Development Site 2 would not cast any significant adverse new shadows on shadow sensitive open space or historic resources. Therefore, the Proposed Actions would not result in any significant adverse shadows impacts, and no further assessment is needed for the project.

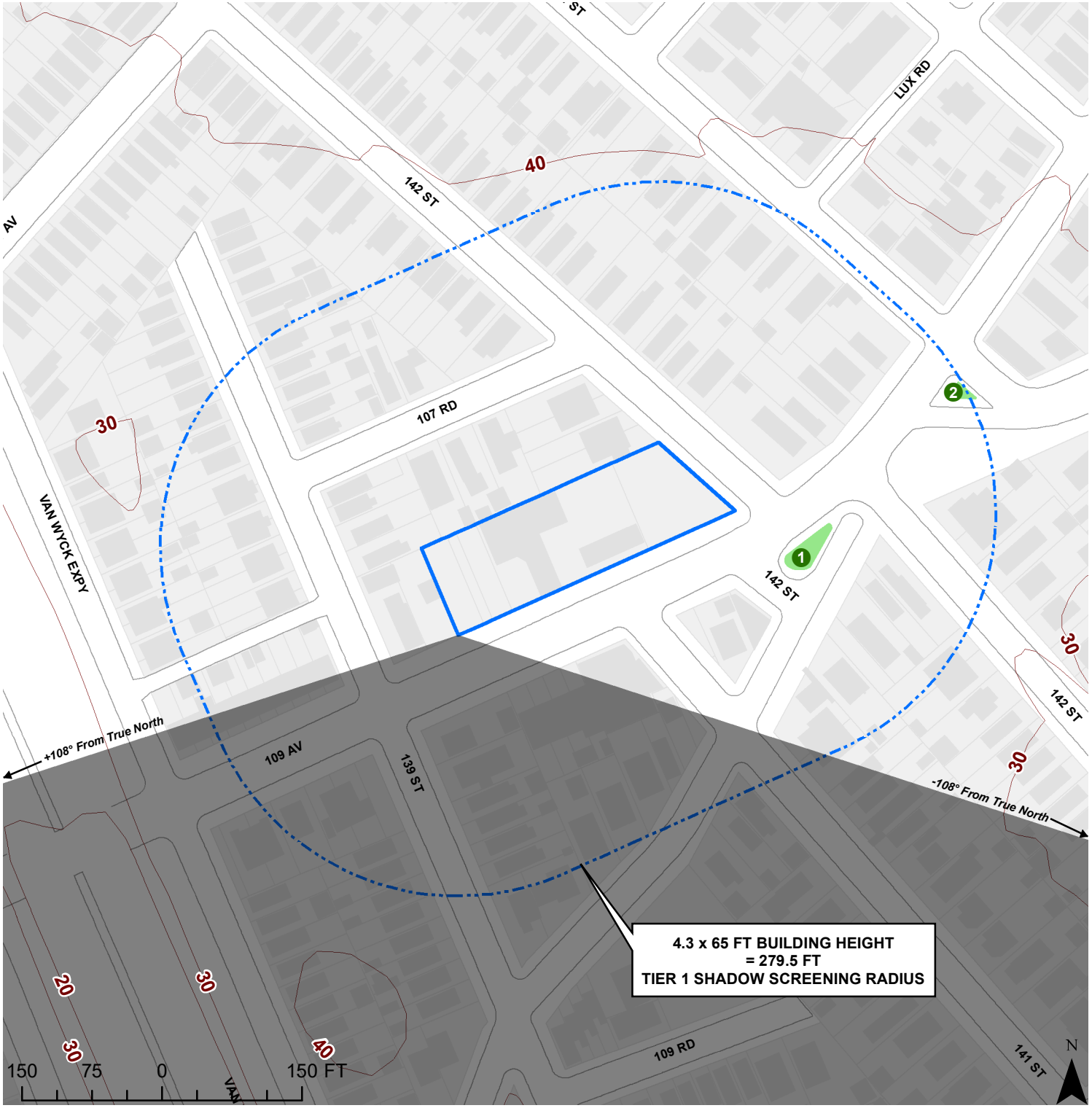
Figure 8-1 - Tier 1 Shadow Screening Analysis



Data Source(s):
(1) New York City Department of City Planning, Information Technology Division: MapPLUTO Data;
(2) NYC Department of Information Technology and Telecommunications: NYC Street Centerlines;
(3) NYC Department of Information Technology and Telecommunications: Pavement Edge;
(4) NYC Department of Information Technology and Telecommunications: Building Footprints;
(5) NYC Department of Information Technology and Telecommunications: Open Space (Parks);
(6) NYC Department of Information Technology and Telecommunications: Hydrography;

Figure 8-2 - Tier 2 Shadow Screening Analysis

Projected Development SIte 1
Projected Development SIte 1 Tier 1 Screening Radius
Area that Cannot Be Shadowed
1 Sunlight Sensitive Open Space Resource
2 Topographic Contour (10-FT Interval)



Data Source(s):
(1) New York City Department of City Planning, Information Technology Division: MapPLUTO Data;
(2) NYC Department of Information Technology and Telecommunications: NYC Street Centerlines;
(3) NYC Department of Information Technology and Telecommunications: Pavement Edge;
(4) NYC Department of Information Technology and Telecommunications: Building Footprints;
(5) NYC Department of Information Technology and Telecommunications: Open Space (Parks);
(6) NYC Department of Information Technology and Telecommunications: Hydrography;

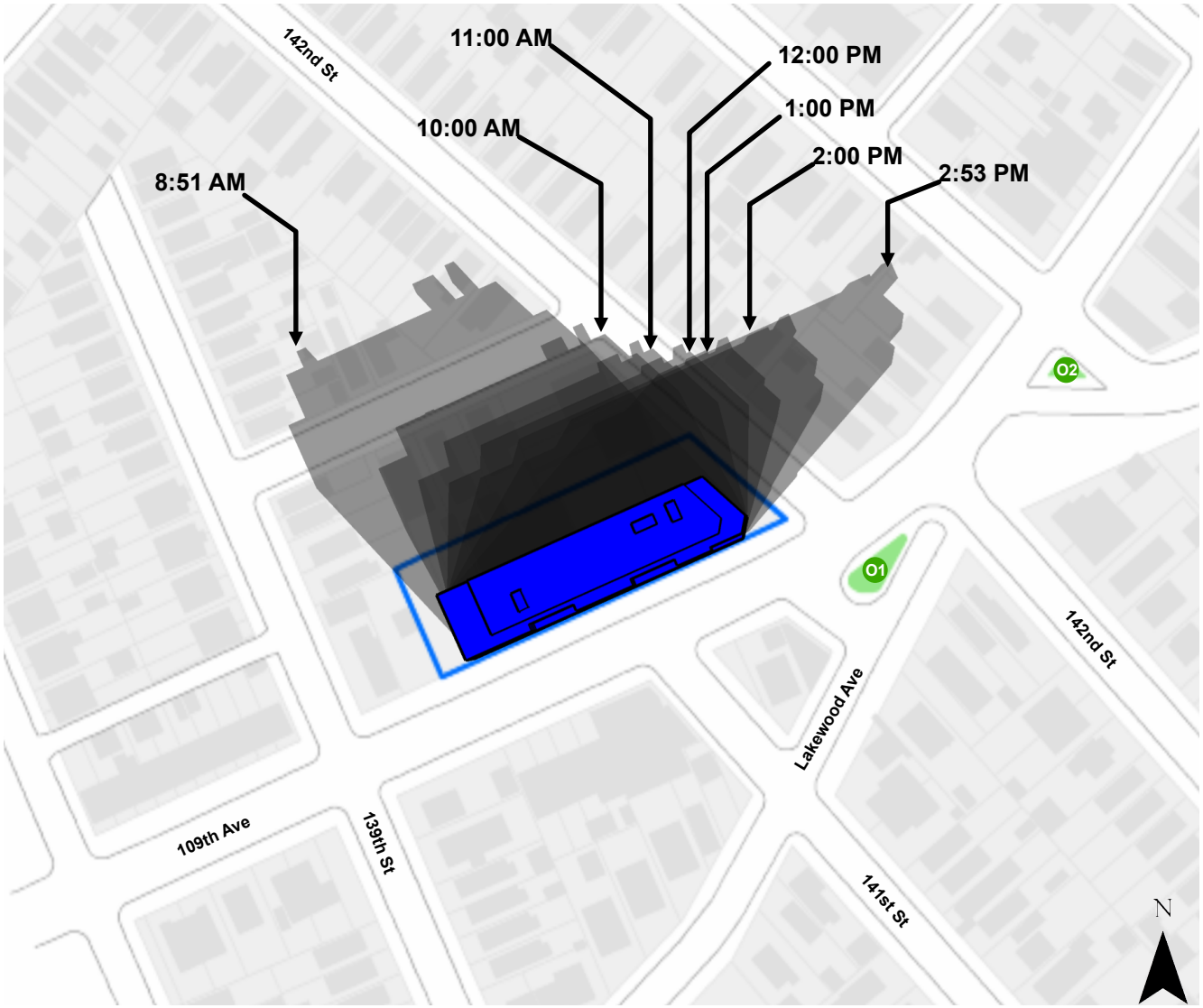
Projected Development Site 1

Proposed Development

O1 Sunlight Sensitive Open Space Resource

Projected Tier 3 Shadow

Figure 8-3a - Detailed Shadows Analysis, December 21 Analysis Day



Data Source(s):
(1) New York City Department of City Planning, Information Technology Division: MapPLUTO Data;
(2) NYC Department of Information Technology and Telecommunications: NYC Street Centerlines;
(3) NYC Department of Information Technology and Telecommunications: Pavement Edge;
(4) NYC Department of Information Technology and Telecommunications: Building Footprints;
(5) NYC Department of Information Technology and Telecommunications: Open Space (Parks);
(6) NYC Department of Information Technology and Telecommunications: Hydrography;
(7) NYC Department of Information Technology and Telecommunications: Contours;

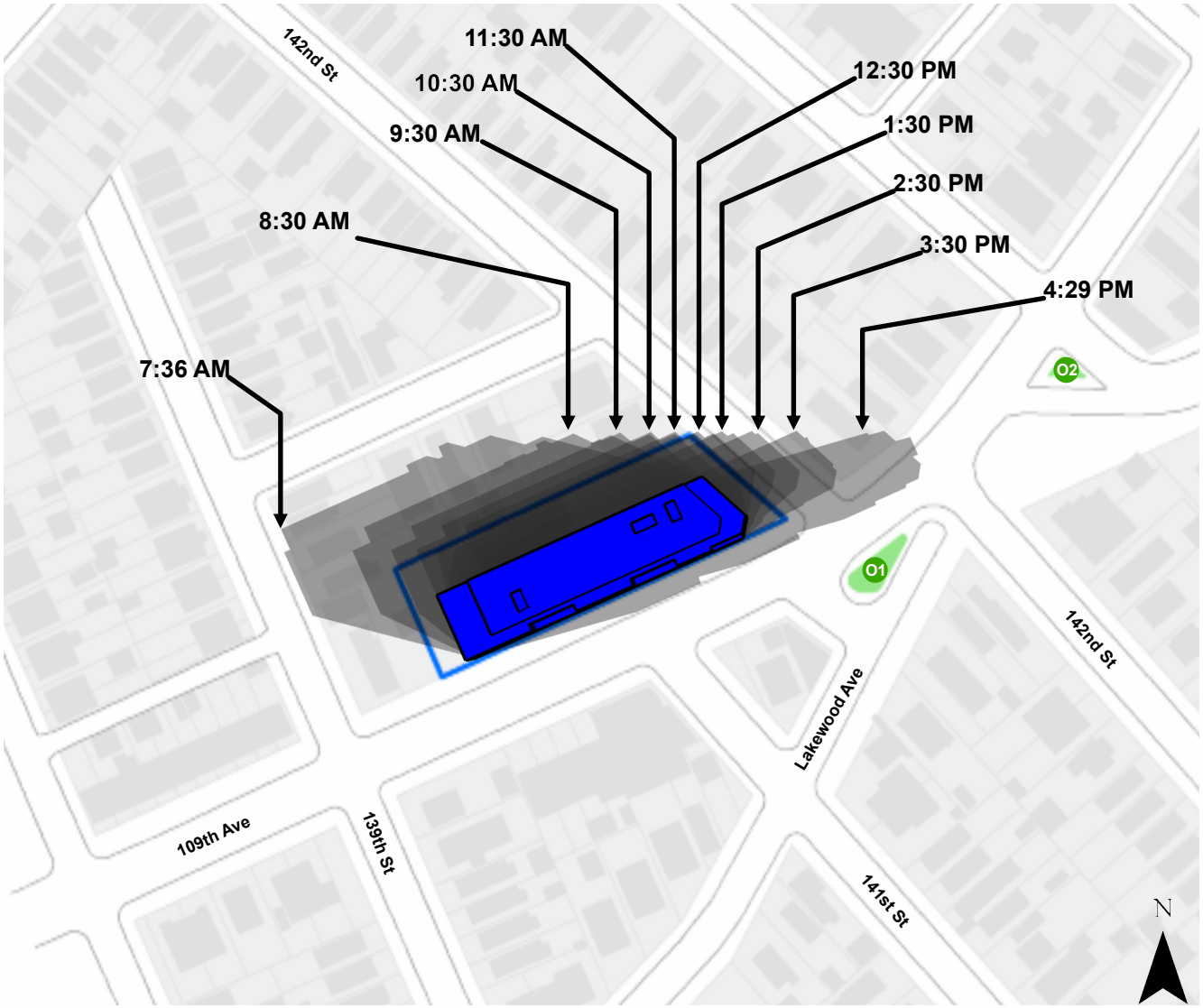
Projected Development Site 1

Proposed Development

O1 Sunlight Sensitive Open Space Resource

Projected Tier 3 Shadow

Figure 8-3b - Shadow Screening Analysis, March 21 Analysis Day



Data Source(s):
(1) New York City Department of City Planning, Information Technology Division: MapPLUTO Data;
(2) NYC Department of Information Technology and Telecommunications: NYC Street Centerlines;
(3) NYC Department of Information Technology and Telecommunications: Pavement Edge;
(4) NYC Department of Information Technology and Telecommunications: Building Footprints;
(5) NYC Department of Information Technology and Telecommunications: Open Space (Parks);
(6) NYC Department of Information Technology and Telecommunications: Hydrography;
(7) NYC Department of Information Technology and Telecommunications: Contours;

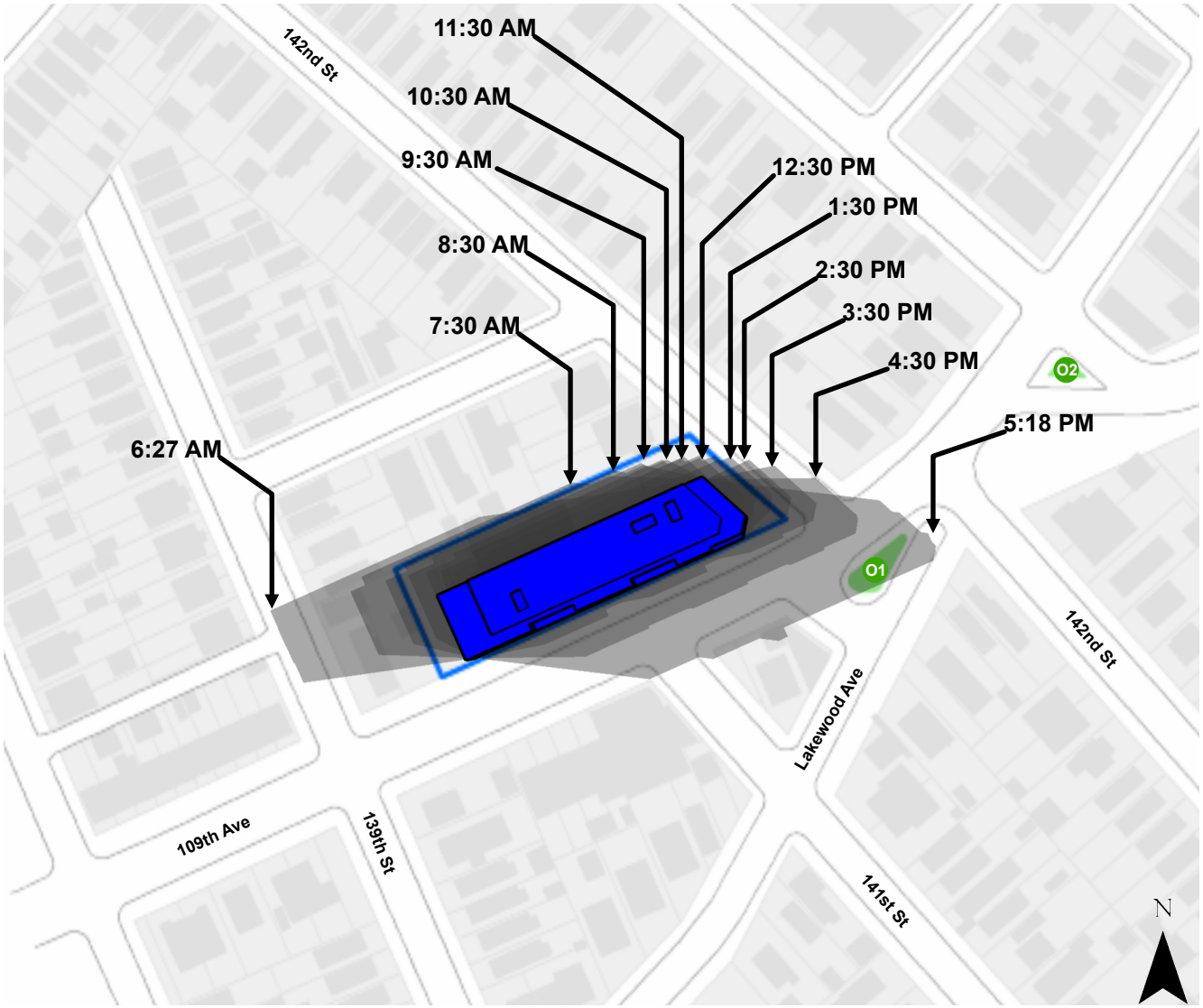
Projected Development Site 1

Proposed Development

O1 Sunlight Sensitive Open Space Resource

Projected Tier 3 Shadow

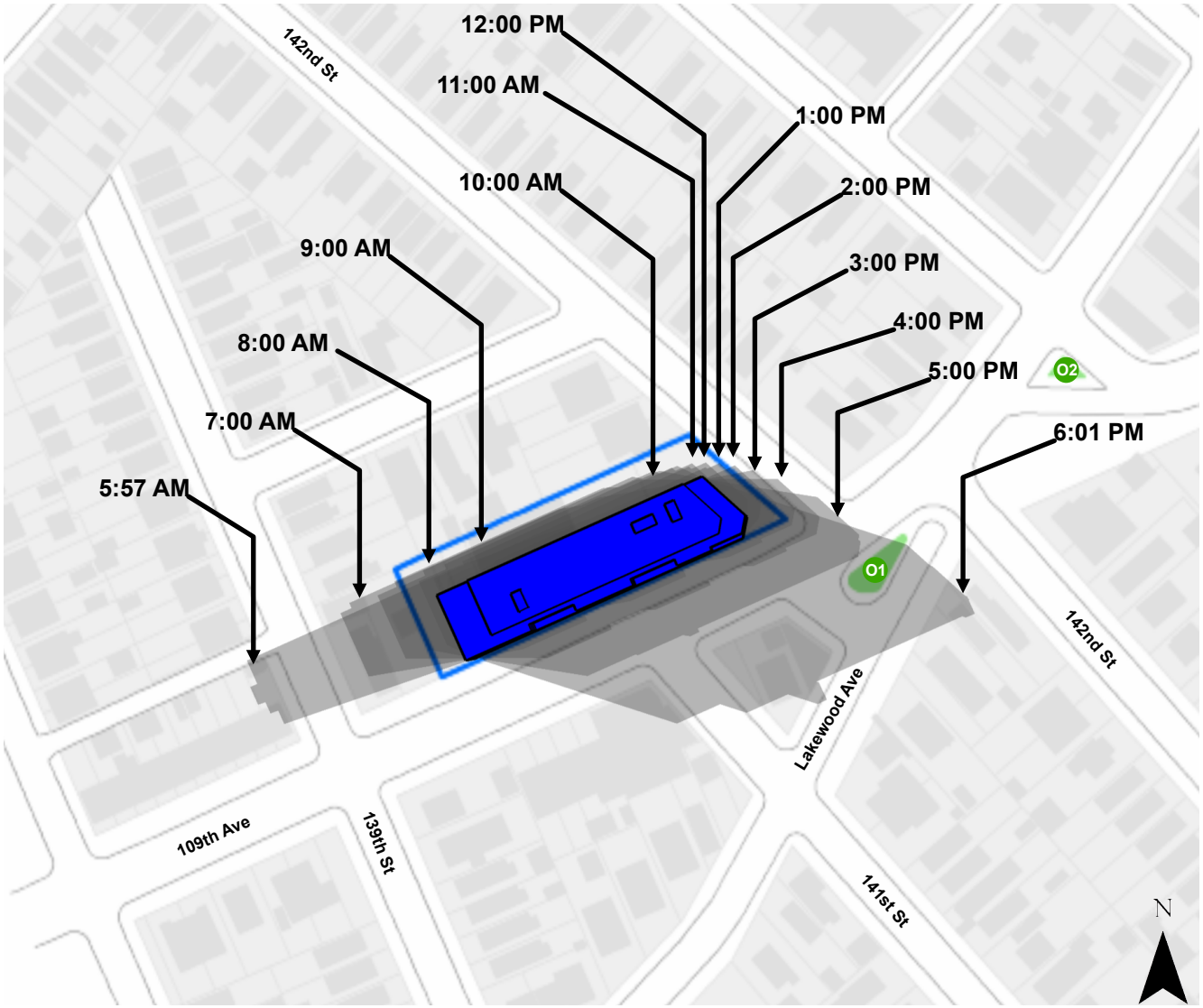
Figure 8-3c - Shadow Screening Analysis, May 6 Analysis Day



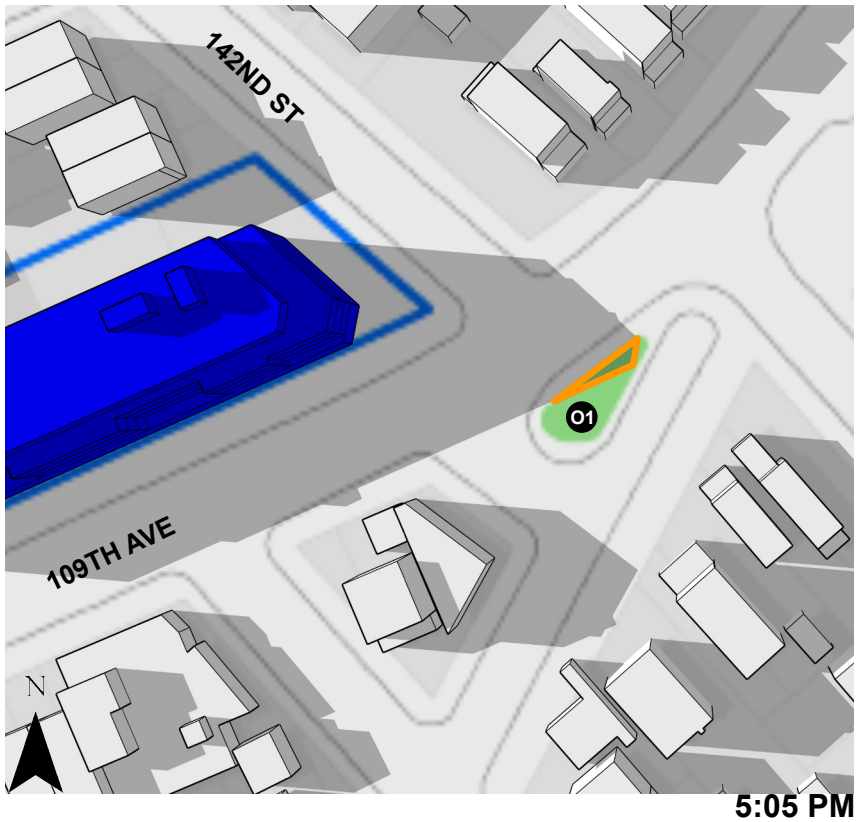
Data Source(s):
(1) New York City Department of City Planning, Information Technology Division: MapPLUTO Data;
(2) NYC Department of Information Technology and Telecommunications: NYC Street Centerlines;
(3) NYC Department of Information Technology and Telecommunications: Pavement Edge;
(4) NYC Department of Information Technology and Telecommunications: Building Footprints;
(5) NYC Department of Information Technology and Telecommunications: Open Space (Parks);
(6) NYC Department of Information Technology and Telecommunications: Hydrography;
(7) NYC Department of Information Technology and Telecommunications: Contours;

Projected Development Site 1
Proposed Development
O1 Sunlight Sensitive Open Space Resource
Projected Tier 3 Shadow

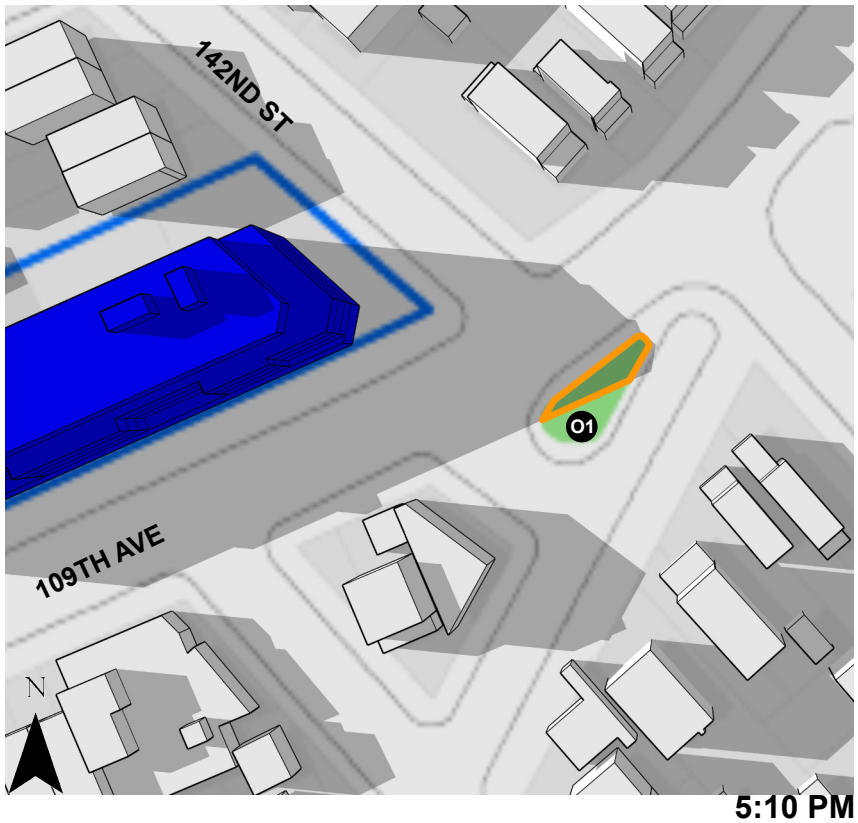
Figure 8-3d - Shadow Screening Analysis, June 21 Analysis



Data Source(s):
(1) New York City Department of City Planning, Information Technology Division: MapPLUTO Data;
(2) NYC Department of Information Technology and Telecommunications: NYC Street Centerlines;
(3) NYC Department of Information Technology and Telecommunications: Pavement Edge;
(4) NYC Department of Information Technology and Telecommunications: Building Footprints;
(5) NYC Department of Information Technology and Telecommunications: Open Space (Parks);
(6) NYC Department of Information Technology and Telecommunications: Hydrography;
(7) NYC Department of Information Technology and Telecommunications: Contours;



5:05 PM



5:10 PM

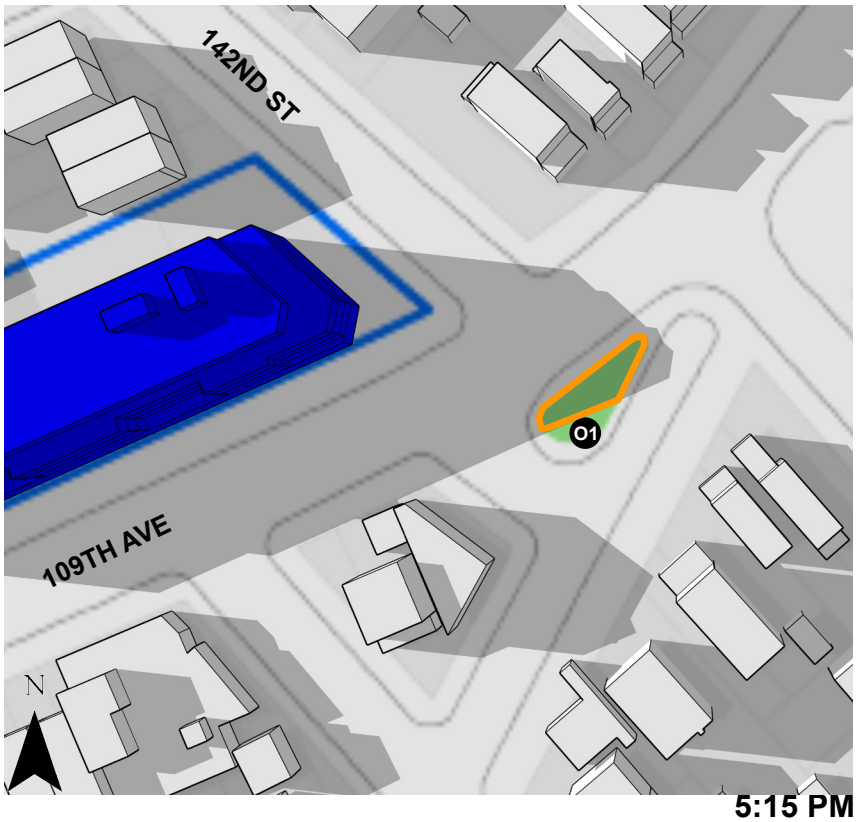
Projected Development Site 1

Proposed Development

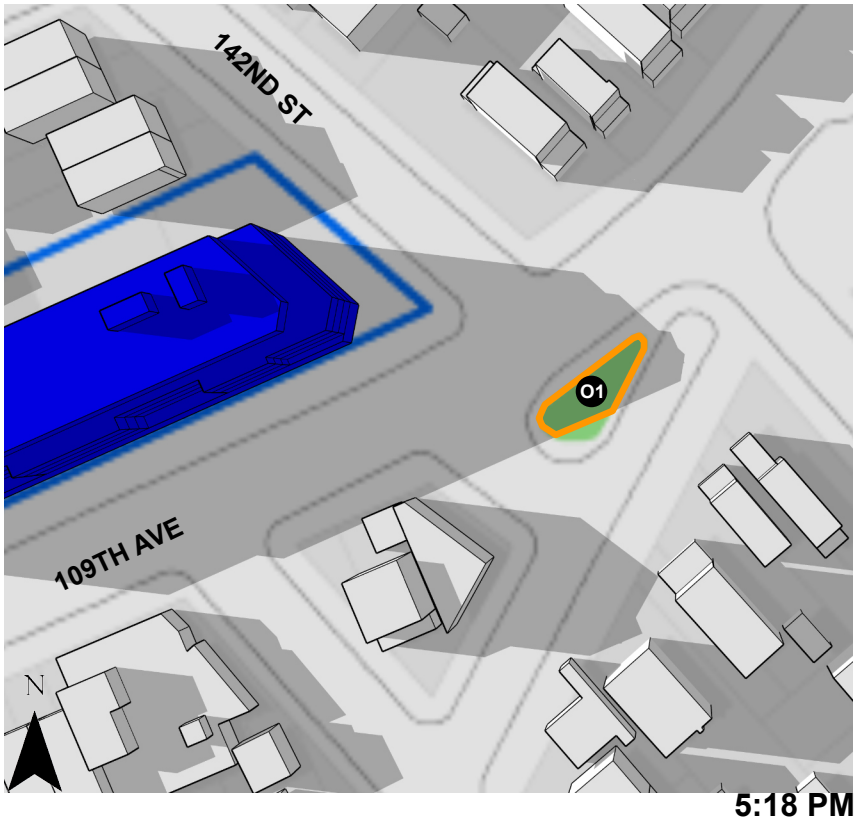
Future With-Action Shadow Condition

New Incremental Shadow on Sunlight Sensitive Features

O1 Open Space and Recreation



5:15 PM



5:18 PM

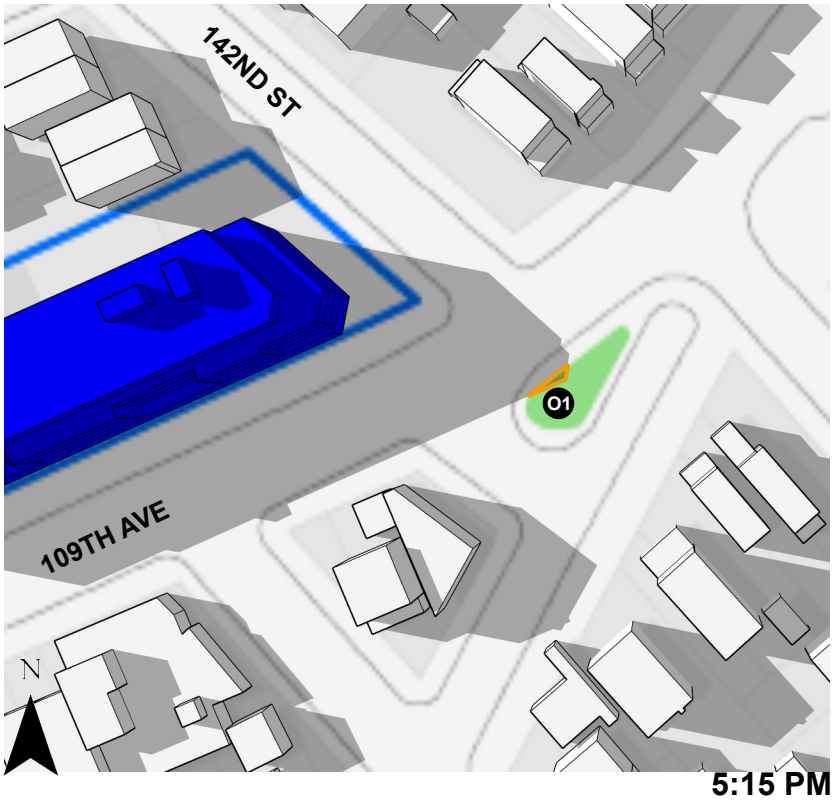
Projected Development Site 1

Proposed Development

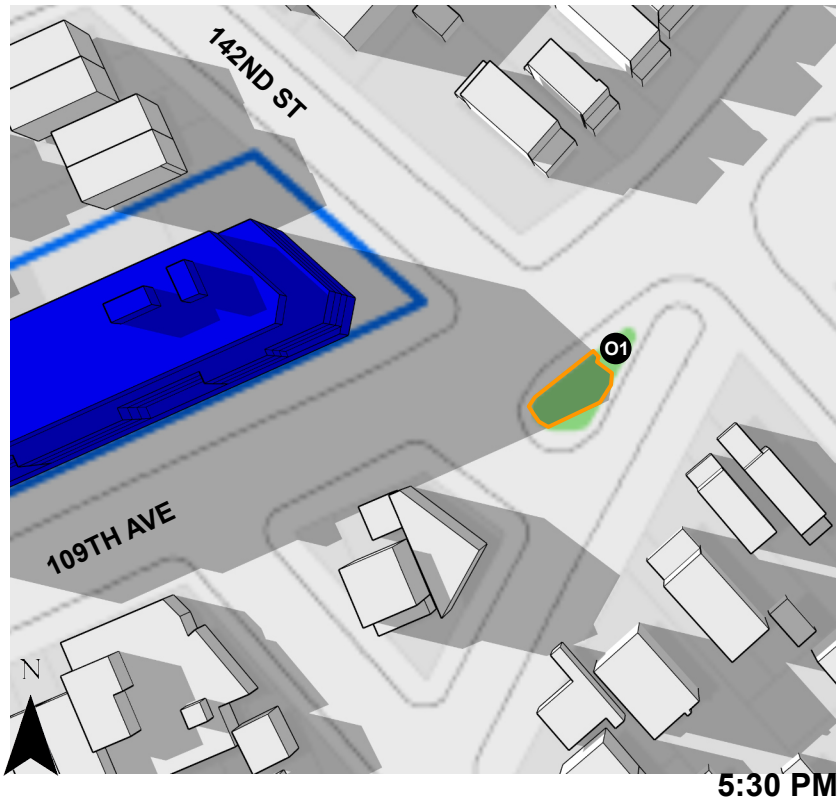
Future With-Action Shadow Condition

New Incremental Shadow on Sunlight Sensitive Features

O1 Open Space and Recreation



5:15 PM



5:30 PM

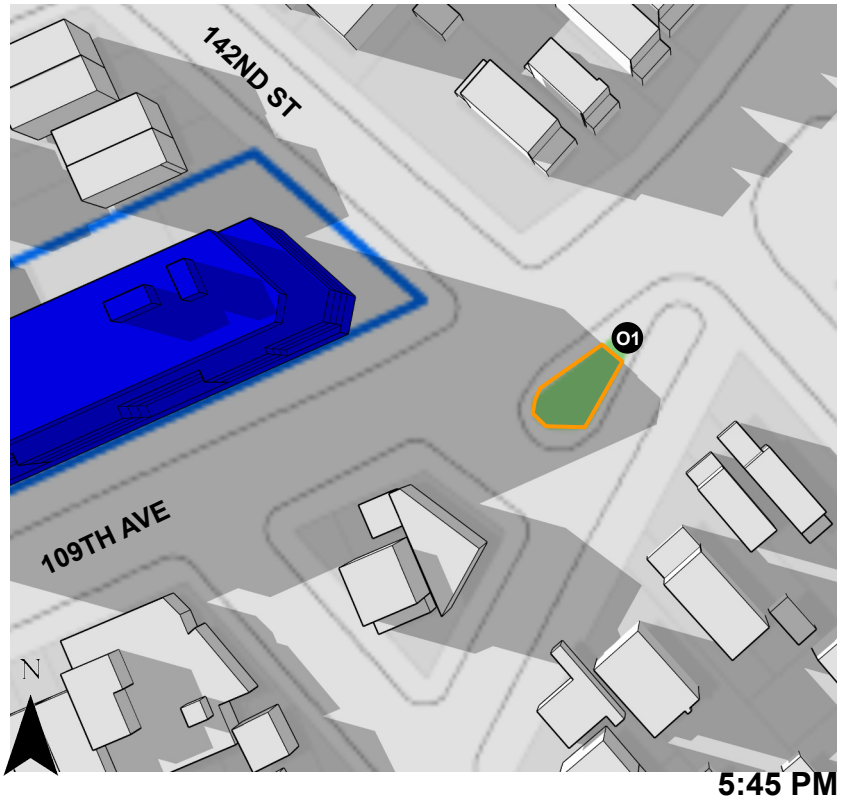
Projected Development Site 1

Proposed Development

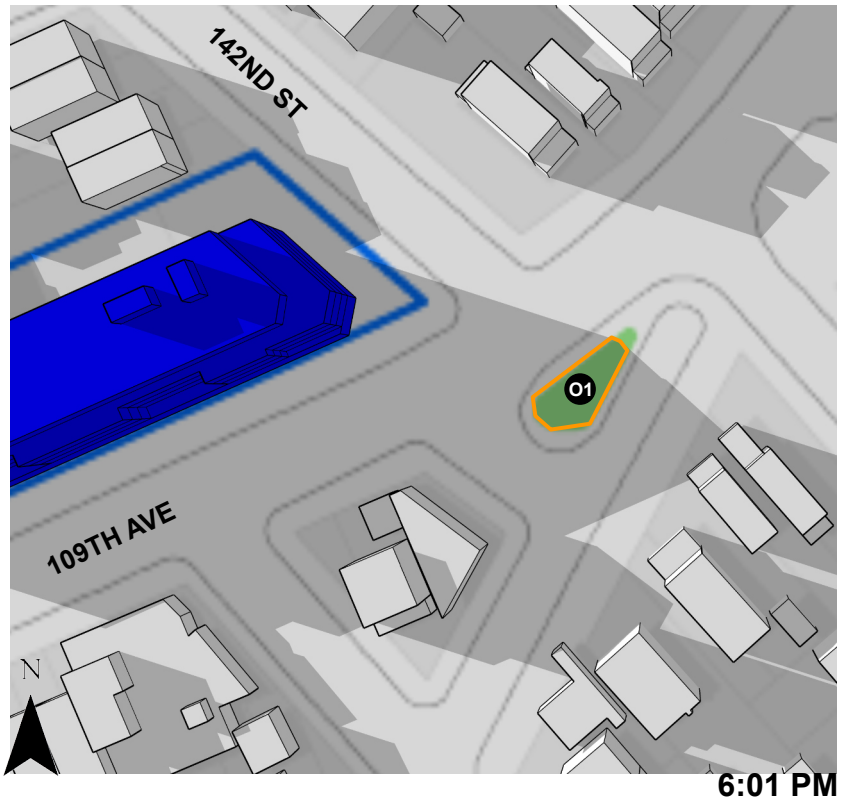
Future With-Action Shadow Condition

New Incremental Shadow on Sunlight Sensitive Features

O1 Open Space and Recreation



5:45 PM



6:01 PM

Projected Development Site 1

Proposed Development

Future With-Action Shadow Condition

New Incremental Shadow on Sunlight Sensitive Features

O1 Open Space and Recreation

4. HISTORIC AND CULTURAL RESOURCES

Introduction

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

Analysis

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

Under the Proposed Actions, new development is anticipated on Projected Development Sites 1 and 2 resulting in new soils disturbance to areas that may not have previously been excavated. New ground disturbance has the potential to result in impacts to any archaeological resources that may be present.

By letter dated 5/5/21, the New York City Landmarks Preservation Commission (LPC) has determined that Projected Development Sites 1 and 2 do not have any historic or archaeological significance (see Historic and Cultural Resources Appendix).

Conclusion

As Projected Development Sites 1 and 2 do not have any historic or archaeological significance, no further discussion of historic and cultural resources is warranted.

5. URBAN DESIGN AND VISUAL RESOURCES

Introduction

An assessment of urban design is needed when a project may have effects on any of the elements that contribute to the pedestrian experience of public space. A preliminary assessment is appropriate when there is the potential for a pedestrian to observe, from the street level, a physical alteration beyond that allowed by existing zoning, including the following:

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

2. Projects that result in an increase in built floor area beyond what would be allowed 'as-of-right' or in the future without the proposed project.

The Proposed Actions involve the request for a rezoning of the Project Area from its current R3A district to an R6B/C2-3 zoning district. The permissible residential and community facility FAR would increase from 0.6 and 1.0, respectively, under the existing R3A zoning to 2.2 and 2.0, respectively, under the proposed R6B district with the inclusion of MIH. The maximum permissible building height would increase from two-stories and 35 feet under the existing R3A zoning to five-stories and 55 feet under the proposed R6B district.

The Proposed Actions would allow the maximum development zoning floor area in the Project Area of 73,960 gsf of new residential space for 78 dwelling units, 12,944 gsf of new commercial retail and office space, 4,473 gsf of new community facility space, a decrease of 5,651 gsf of industrial space, and 22 new accessory parking spaces compared to the future without the Proposed Actions development. In order to allow for the projected developments, the existing warehouse structures on Projected Development Site 1 and the existing residential units on Projected Development Site 2 would be demolished. The Proposed Actions would also permit the modification of the existing yard, height, and setback requirements relevant to the property. A preliminary urban design assessment is therefore required.

Preliminary Assessment

Existing Conditions

The proposed Project Area encompasses the following properties totaling 38,088 sf in area.

1. Projected Development Site 1 (Block 10068, Lots 200, 205, 210, 213, 214, 215) – The Applicant owned property consists of 30,087.5 square feet of lot area located along 109th Avenue between 139th and 142nd Streets. The property has approximately 324.07' of frontage on 109th Avenue and 109'-3" of frontage on 142nd Street. The property is currently developed with three 1-story warehouse buildings containing approximately 6,451 gsf of floor area. The three buildings are associated with a non-conforming

building materials storage yard, including related offices (Use Group 17). The individual lots comprising the property consist of the following.

- Lot 200 – 8,100 sf lot used for the storage of building materials.
- Lot 205 – 10,000 sf lot containing two 1-story warehouse buildings totaling 2,651 gsf in floor area.
- Lot 210 – 5,600 sf lot containing a 1-story, 3,800 gsf warehouse structure.
- Lot 213 – 2,400 sf lot used for the storage of building materials.
- Lot 214 – 1,000 sf lot used for the storage of building materials.
- Lot 215 – 3,000 sf lot used for the storage of building materials.

2. Projected Development Site 2 (Block 10068, Lots 216, 218) – The non-Applicant owned property consists of 8,000 square feet of lot area located along 109th Avenue at the corner of 139th Street and 109th Avenue. The property has approximately 80' of frontage on 109th Avenue and 100' of frontage on 139th Street. The property is currently developed with one 2-story, 2-family residence containing approximately 2,194 gsf of floor area. As the two lots are under the same ownership, it is assumed they would be merged into a single lot. The individual lots comprising the property consist of the following.

- Lot 216 – 4,000 sf unimproved lot used for a non-conforming building materials/contractor's yard.
- Lot 218 – 4,000 sf lot developed with a 2,194 sf, 2-story, 2-family residence, that was converted from a single-family residence, and a detached garage.

The Project Area is located approximately 1.5 miles north of John J. Kennedy Airport and approximately 250 feet east of the Van Wyck Expressway in South Jamaica. The neighborhood within 400 feet of the Project Area is primarily developed with one- and two-family homes with a few scattered walk-up multi-family dwellings, two commercially developed properties (two ground level retail stores), one light manufacturing use (food preparation facility), and several vacant lots.

The Project Area is in close proximity to public transportation with a stop for the Q40 bus line just east of the Development Site at Lakewood Avenue, and the Q9 bus line available to the west at the Van Wyck Expressway. These buses both provide access to the Jamaica Station transit hub approximately one mile from the Project Area. Although there are no visual resources within the Project Area, the Area is across the street from a small Greenstreet open space triangle to the south/southeast at the intersection of 142nd Street, 109th Avenue, and Lakewood Avenue.

The Project Area and the surrounding 400-foot radius project study area do not contain or offer views of the waterfront, public parks (other than the Greenstreet open space triangle), public art/statues/sculpture, natural resources, or landmark structures or

districts. No development plans are known to exist for any other undeveloped parcels, parking lots, or other uses within the 400-foot radius project study area by the project build year of 2026.

An aerial photograph of the project study area and ground level photographs of the Project Area and the immediate context are attached which show existing conditions in the Project Area and the surroundings. Zoning calculations of the existing conditions on Projected Development Sites 1 and 2, including floor area calculations, lot coverage, and building heights, are shown in Table 10-1 below.

No-Action Scenario

The No-Action Scenario under the existing R3A zoning mapped on the Project Area would be the same as the existing conditions described above. No new development would occur on Projected Development Sites 1 and 2 within the Project Area. All existing uses in the Project Area would remain, including the existing residential, office, and warehouse uses. The warehouse and office uses are legal nonconforming uses. Therefore, under No-Action conditions, the Project Area would be developed with 2 market rate dwelling units, 800 gsf of accessory office space, and 5,651 gsf of warehouse space.

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

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

Future With-Action Scenario

The future With-Action Development Scenario in the Project Area would result in a denser development on the property as compared to the future No-Action Development Scenario. For the purposes of the urban design and visual resources analysis, the With-Action Development Scenario evaluates the maximum allowable development envelope with respect to bulk and height under the proposed R6B/C2-3 zoning as the zoning approvals sought do not lock in a specific building design. The development on Projected Development Site 1 would require the demolition of the existing warehouse structures; the development on Projected Development Site 2 would require the demolition of the existing residential units.

The difference between the No-Action and With-Action Scenarios would be the development under the With-Action Scenario of 76 additional dwelling units, 12,144 gsf of new retail and office space, 4,473 gsf of new community facility space, a decrease of

Aerial Imagery: 109th Avenue Jamaica Rezoning

- Proposed Affected Area
- Projected Development Site 1
- Projected Development Site 2
- 400-Foot Study Area Radius



Data Source(s):
(1) New York City Department of City Planning, Information Technology Division: MapPLUTO Data;
(2) ESRI, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AerioGRID, IGN, and the GIS User Community



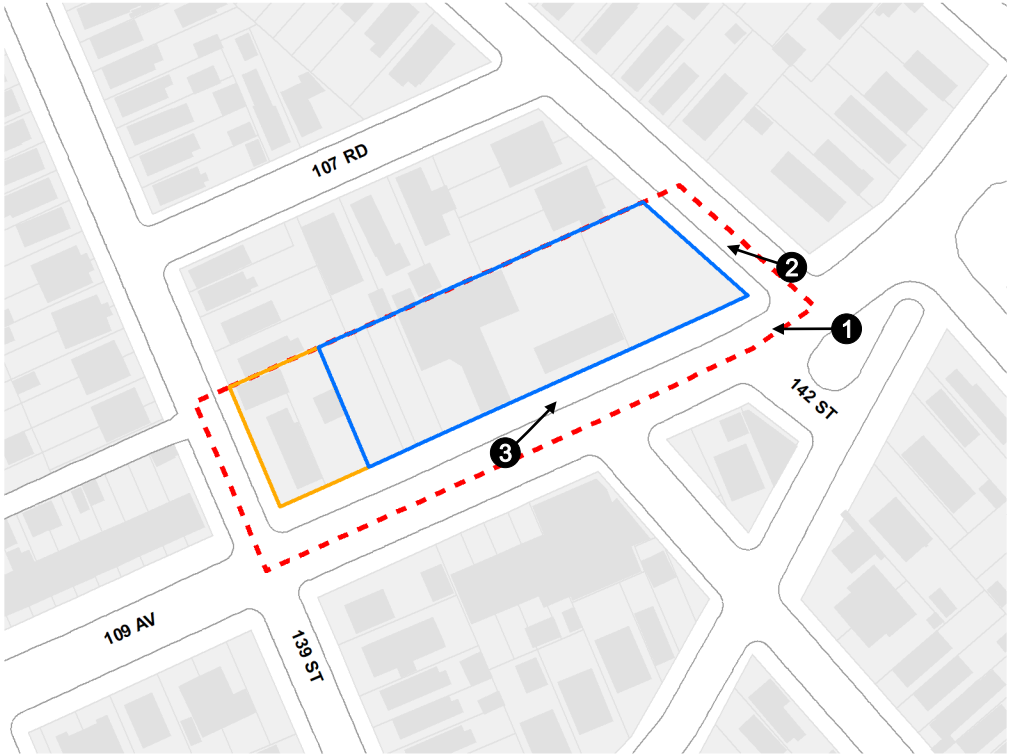
Photograph No. 1



Photograph No. 2



Photograph No. 3





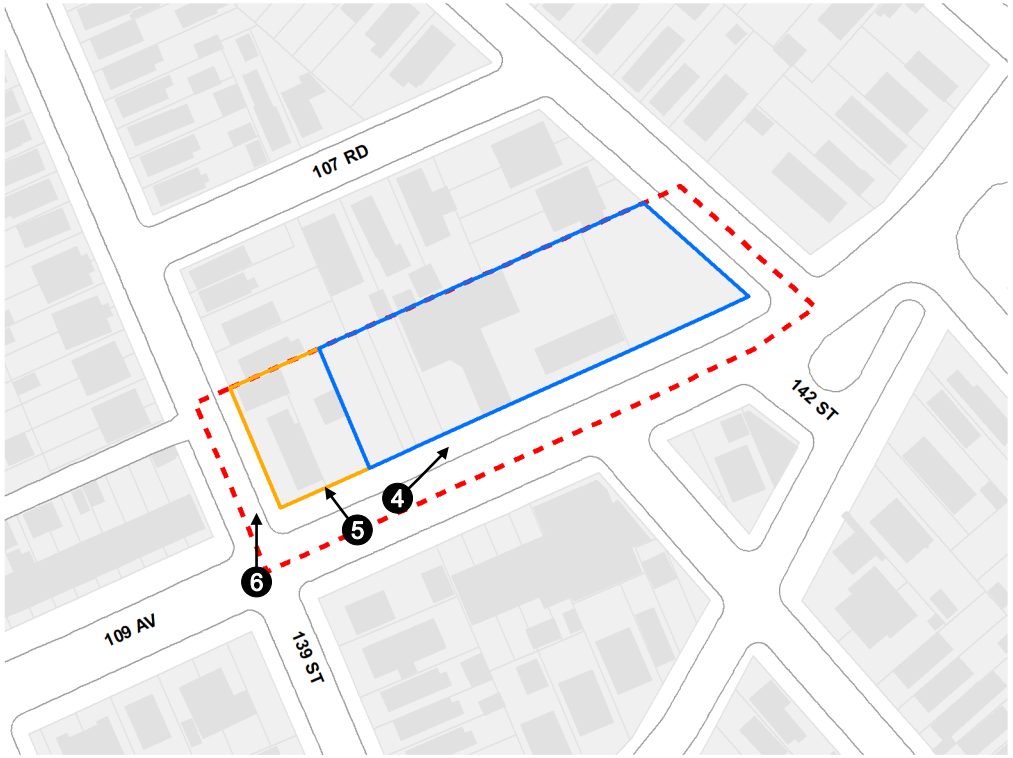
Photograph No. 4



Photograph No. 5



Photograph No. 6



5,651 gsf of industrial space, and 32 new accessory parking spaces. Building heights and lot coverage in the Project Area would be greater under the With-Action Scenario.

The development on Projected Development Site 1 would have an overall FAR of 2.12 which is the maximum permitted. It would result in the construction of a five-story, 55' tall building, the maximum permitted height.

The development on Projected Development Site 2 would have an overall FAR of 2.20, the maximum permitted. It would result in the construction of a five-story, 55' tall building, the maximum permitted height.

As detailed above, new development in the Project Area on both Projected Development Sites would have an FAR and building height significantly greater than the 1.0 maximum FAR and two-story, 35-foot maximum building height permitted under the existing R3A zoning of the Project Area.

Zoning calculations of future With-Action conditions on Projected Development Sites 1 and 2, including floor area calculations, lot coverage, and building heights, are shown in Table 10-1 below. See **Figures 10-1 and 10-2** for representative street level simulations of the No-Action and With-Action Condition Development Scenarios in the context of the surrounding built environment.

Table 10-1
Zoning Calculations Relevant to Urban Design Analysis

Item	Existing Conditions	No-Action Conditions	With-Action Conditions
Development Scenario	3 warehouse bldgs & accessory office space, bldg. materials storage yards, 2 DUs in 1 bldg	3 warehouse bldgs & accessory office space, bldg. materials storage yards, 2 DUs in 1 bldg	78 DUs in 2 bldgs; 12,944 gsf retail/office in 2 bldgs; 4,473 sf comm facil in 1 bldg; 22 cellar parking spaces in 1 bldg & 10 outdoor parking spaces for other bldg
Building Floor Area	8,645 gsf	8,645 gsf	107,560 gsf
Lot Coverage	7,548 sf (19.8%)	7,548 sf (19.8%)	18,560 sf (48.7%)
Building Heights	1-story, 12'; 2-story, 22'	1-story, 12'; 2-story, 22'	5-story, 55'

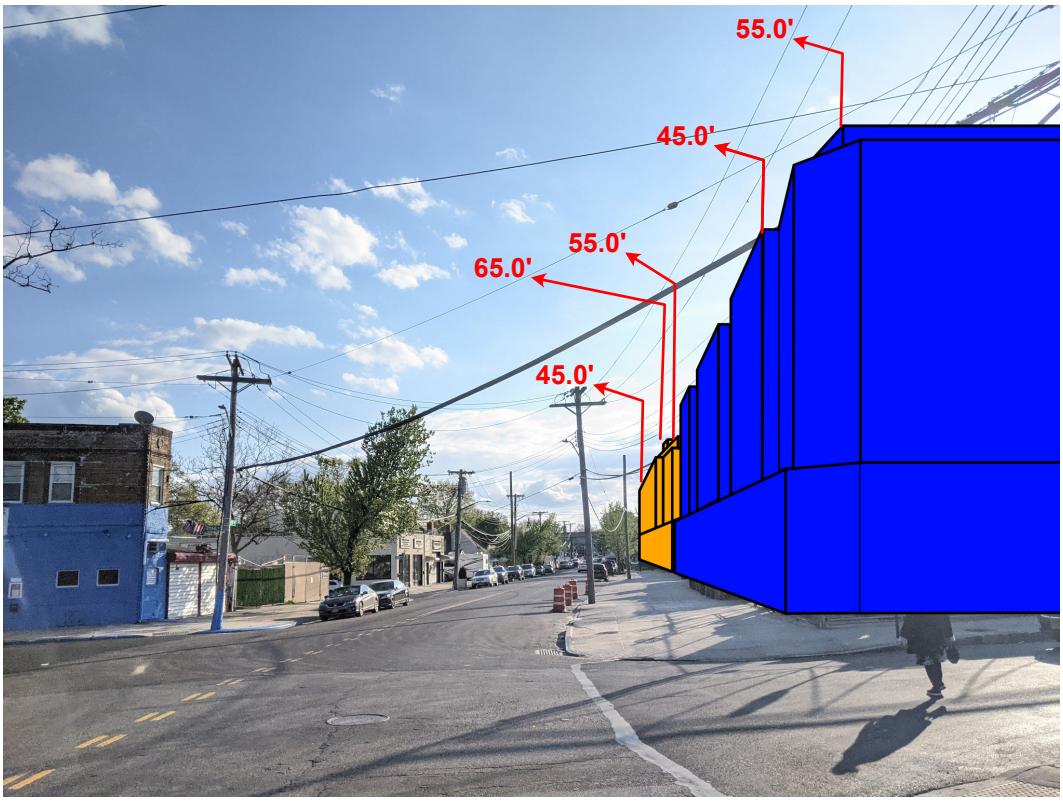
Conclusion

The Proposed Actions would result in the development of residential, local retail and office, and community facility (Universal Pre-K school) uses two Projected Development Sites located in a primarily one- and two-family residential neighborhood containing a

VIEW 1: LOOKING SOUTHWEST FROM 142ND STREET



VIEW 1: FUTURE NO-ACTION CONDITION



VIEW 1: FUTURE WITH-ACTION CONDITION

VIEW 2: LOOKING NORTHEAST FROM 139TH ST



VIEW 2: FUTURE NO-ACTION CONDITION



VIEW 2: FUTURE WITH-ACTION CONDITION

few commercial and manufacturing uses and several vacant lots. In addition, a small public passive open space area would be provided on Projected Development Site 1 for use by parents picking up children of the Universal pre-school on the Site and for passive recreational use by employees working in the development. The increased development potential (including maximum height, area, and bulk) at the Projected Development Sites under the Proposed Actions would differ from the permitted development potential found within the 400-foot radius project study area.

Overall, the development scenario considered under the Proposed Actions would redevelop underutilized and underbuilt property from nonconforming warehouse uses and building materials storage yards to new mixed-use residential, commercial, and community facility development the design of which would be required to be consistent with the existing built context of the surrounding neighborhood.

The With-Action Development Scenario in the Project Area would not result in any significant impacts to visual resources. No visual resources exist within the 400-foot project study area with the exception of a small (0.04 acre) landscaped triangle, and the projected development would not block views of this resource from public streets. The Proposed Actions would not partially or totally block a view corridor or a natural or built visual resource that is rare in the area or considered a defining feature of the neighborhood.

Based on the foregoing, the Proposed Actions would not result in any significant adverse impacts to urban design or visual resources within the study area and a detailed urban design assessment would not be required.

6. HAZARDOUS MATERIALS

PHASE I ENVIRONMENTAL SITE ASSESSMENT

Introduction

Environmental Studies Corp. has performed a Phase I Environmental Site Assessment (ESA) of the subject property referred to as the 141-05 109th Avenue Rezoning Development Site I, which consists of Lot Numbers 200, 205, 210, 213, 214 & 215 on Block 10068, in the Borough of Queens, New York City, New York. This Phase I ESA, dated February 2021, was prepared in accordance with the latest ASTM Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM Designation E 1527-13).

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

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

The Practice also defines two additional *RECs*; *Controlled Recognized Environmental Conditions* and *Historical Recognized Environmental Conditions*. The term *Controlled Recognized Environmental Conditions* means a *Recognized Environmental Condition* resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or

petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).

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

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

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

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

References to the project site in this section refer to the Applicant owned Projected Development Site 1.

Site Description

The subject property 141-05 109th Avenue, Queens, NY, consists of six adjacent tax lots with a total combined area of approximately 30,000 square feet. Lots 200 and 205 are occupied by All American Mason Supply for the storage and sale of masonry supplies such as pavers, bricks, blocks, sand, cement, aggregate, etc. Lot 200 is an asphalt-paved, 8,300+/- square-foot lot used for the storage of masonry supplies. No buildings are located on Lot 200. Lot 205 is a 10,000 square-foot, asphalt-paved parcel containing two

commercial buildings. The first is a 1-story (on slab), 1,300+/- square foot building on the south side of the lot with an office, a retail showroom, and general storage areas. The other is a 1-story (on slab), 1,030+/- square foot garage/warehouse building on the northwest corner of the lot which is used for the storage of equipment, and dry goods such as bags of cement. Exterior portions of Lot 205 are used for the parking and storage of masonry supplies.

Lots 210, 213, 214 and 215 are occupied by Malatesta Paladino, Inc., concrete and masonry contractors, for office use and the storage of construction equipment and supplies. There is a 1,000+/- square foot, 1-story (plus basement), office building located on the southeast portion of Lot 210. There is a 1-story (on slab), 900+/- square foot garage/warehouse building on the northwest part of Lot 210, which is used for storage of construction equipment and supplies. The northeast part of Lot 210 contains a 1-story (on slab), 1,500+/- square foot garage/warehouse containing a small steel fabrication shop, and general storage areas.

Lots 213, 214 & 215 consist of an asphalt and concrete-paved yard for the storage of construction equipment and supplies. There is a small, fenced enclosure containing a telecommunications tower and shed on Lot 213.

Current Operations/Hazardous Substances

At the time of the site visit, the operations at the property included the retail storage and sale of masonry supplies, and office and storage for a concrete and masonry contractor. No operations involving the storage or use of hazardous substances were observed at the project site. In addition, no indications of the past storage or use of hazardous substances were observed, such as chemical/oil-stained surfaces, discarded drums or chemical containers, etc. No routine vehicle maintenance or repair operations are performed at the site. There is a small shop on Lot 210 which is used to fabricate steel parts for masonry jobs. These operations involve the cutting, drilling, grinding and welding of steel, however, no painting or metal finishing operations are performed and no hazardous substances were observed in the shop.

Site History

Research into the history of the project site shows that the property was vacant land in 1911. Sometime between 1911 and 1926, a single-family dwelling was constructed on Lot 200. This dwelling remained on the lot until 1985, at which time it was demolished. From 1985 to 1999, Lot 200 was part of a contractor's yard which also occupied Lot 205. From 1999 to the present time, this lot has been used for the storage and sale of masonry supplies.

Sometime between 1926 and 1941, the existing buildings on Lot 205 were constructed. The identified former uses of Lot 205 since the early 1940s include an auto repair garage

(McCue Auto Service), a contractor's yard (Valdale Contracting), concrete block manufacturing, and storage and sale of masonry supplies.

Sometime between 1926 and 1941, a single-family dwelling and detached, 3-car garage were constructed on Lot 210. By the 1980s, the use of the buildings and lot were changed to a contractor's/trucking company yard. Lot 210 has been occupied by Malatesta Paladino, Inc., since 1987.

Sometime between 1926 and 1941, a single-family dwelling was constructed on Lot 213.This dwelling existed on the lot until its demolition, which occurred sometime between 1966 and 1969. This lot has been occupied by a trucking company/contractor's yard since 1969.

There were two single-family dwellings and a stable constructed on Lots 214 & 215 sometime between 1911 and 1926. By 1982, these structures had been demolished and the lots have been part of a trucking company/contractor's yard since that time.

Auto repair garages and contractor's yards/trucking companies are types of operations known to involve the storage or use of hazardous substances and petroleum products. In addition, Lot 205 was at one time used for the manufacturing of concrete blocks. Any past spills, leaks or discharges of hazardous substances or petroleum products at the project site from these former operations would represent a potential source of contamination to the property.

Site Drainage

Typical lavatory drainage structures such as sinks and toilets are located in the subject buildings. It is likely that these structures discharge to the municipal sewer system. A floor drain was observed in the fabrication shop on Lot 210 and a storm drain was present in the parking area of Lot 210. No staining or indications of past spills or discharges of hazardous substances were observed around either of these drains. The drainage destination of these structures is not known.

There are two storm drywells located on Lot 200 which were installed in 1999. These drywells discharge directly to the soil and groundwater below the property. No staining or other indications of past spills or discharges of hazardous substances were observed around the drywells on Lot 200.

Petroleum Storage Tanks

There is a 275-gallon fuel oil, aboveground storage tank (AST), and two 275-gallon diesel fuel ASTs located on a concrete floor in the garage building on Lot 205. There is a 275-gallon fuel oil AST located in the basement of the office building on Lot 210, and a 275-gallon fuel oil AST located in the garage building on the northwest side of Lot 210. All of these tanks are currently in service and appeared to be in good condition. No staining or

other indications of past spills or leaks were observed around any of the tanks at the project site. There were not any additional aboveground storage tanks (ASTs), or indications of the presence of underground storage tanks (USTs) such as fillports or vent lines, observed at the property during the site visit.

There was formerly a 2,500-gallon diesel fuel underground storage tank (UST) located on Lot 214 of the project site. This tank was removed from the property in accordance with New York State Department of Environmental Conservation (NYSDEC) and New York City Department of Buildings (NYDOB) requirements in 1999. The tank was reportedly free of holes or corrosion at the time of removal, and no indications of contamination were found in the excavation. However, no tank tightness testing results or laboratory results of soil samples collected form the tank excavation have been received to date.

The 1950 through 1991 Sanborn maps show the presence of a single buried gasoline tank on the south/central part of Lot 210. No visible indications of this tank, such as fillports or vent lines, were observed on Lot 210 during the site visit. It is not known if this tank was removed from the project site or if it remains at the property. In addition, any fuel oil (heating) tanks which were not removed from the former dwellings at the site when they were demolished may remain at the property.

Any past spills or leaks from underground storage tanks at the project site would represent a potential source of contamination to the subject property. In addition, any underground tanks discovered at the project site during re-development of the property should be properly removed in accordance with all applicable NYSDEC and NYC regulations.

Asbestos/Lead-Based Paints/PCBs

Given the age of the subject buildings, it is possible that they contain asbestos building materials and lead-based paints in underlying layers. However, no suspected asbestos-containing thermal-system insulation materials were observed at the site. Painted surfaces in the buildings were observed to be in good condition, with no large areas of chipped or peeling paint noted. No transformers or other electrical equipment suspected of containing PCBs were observed at the project site.

Regulatory Agency Database Records

The subject property does not appear in the Federal or State environmental databases reviewed including the United States Environmental Protection Agency (USEPA's) Superfund, CERCLIS or ERNS databases, the RCRA Hazardous Waste Generators list or hazardous waste Treatment/Storage/Disposal Facilities list, or the New York State Department of Environmental Conservation (NYSDEC's) Spill Logs database, Solid Waste Facilities database, or the Registry of Inactive Hazardous Waste Disposal Sites. The project site is identified in the NYSDEC PBS database.

Surrounding Land Use

The property is adjoined to the north by residential dwellings. Adjacent and to the south of the site is 109th Avenue, beyond which are commercial/retail uses, a community center, and residential dwellings. Adjacent and to the east of the site is 142nd Street, beyond which are residential dwellings. The site is adjoined to the west by a private storage yard, beyond which is a dwelling. Land uses in the immediate vicinity of the property (i.e., within approximately 500 feet of the site) are predominantly residential with commercial/retail uses located along 109th Avenue. There were not any gasoline filling stations or heavy industrial uses identified in the immediate vicinity of the project site.

A review of Sanborn historical maps shows that historical land uses in the immediate area of the subject property have been predominantly residential and commercial/retail since at least the 1930s. A gasoline filling station is shown at 141-03 Lakewood Avenue, which is located approximately 80 feet south of the project site. There is one NYSDEC-reported spill incident at this location (Spill Number 8900355), which was the result of a tank tightness test failure in 1989. The tank was repaired and Spill 8900355 was closed by the NYSDEC on 1/31/2006. This location has since been redeveloped and is currently occupied by a community center and two apartments.

The 1950 Sanborn map shows paper box glueing operations in the building at 139-18 & 139-20 109th Avenue, which is located adjacent and to the south of the project site. There are not any NYSDEC-reported spill incidents at this location. There were not any other gasoline filling stations or heavy industrial operations identified in the immediate vicinity of the project site on any of the Sanborn historical maps reviewed.

There were not any off-site, potential sources of contamination which are considered likely to have impacted the subject property identified in the information reviewed for this report.

Conclusions

Environmental Studies Corp. has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-13 of the property referred to as the 141-05 109th Avenue Rezoning, 139-09 through 141-15 109th Avenue, Queens, New York, the property. This assessment has revealed no evidence of *Historical Recognized Environmental Conditions* or *Controlled Recognized Environmental Conditions* in connection with the property. This assessment has revealed no evidence *Recognized Environmental Conditions* in connection with the property, with the following exceptions:

- The potential for contamination at the project site from past manufacturing and contractor/trucking company operations.

- The potential for contamination from past spills or leaks of petroleum products from underground storage tanks at the project site.
- The possible presence of one or more, out-of-service, underground storage tanks at the project site.

PHASE II ENVIRONMENTAL SITE ASSESSMENT, REMEDIAL ACTION PLAN (RAP), AND CONSTRUCTION HEALTH AND SAFETY PLAN (CHASP)

Introduction

Environmental Studies Corp. has performed a Phase II Environmental Site Assessment (ESA) of the subject property dated April 2021 and referred to as the 141-05 109th Avenue Rezoning Development Site I, which consists of Lot Numbers 200, 205, 210, 213, 214 & 215 on Block 10068, in the Borough of Queens, New York City, New York. Environmental Studies Corp. has also prepared a Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP), both dated May 2021.

Phase II ESA

During the March 2021 fieldwork, Tri-State Drilling Technologies, Inc. advanced six borings (B-1 through B-6) to approximately 16 - 30 feet below grade surface (bgs). Two soil samples were collected from each soil boring location. One soil sample was collected from the surface at a depth of 0 - 2 feet bgs and another deeper soil sample was collected at a depth of 10 - 12 feet bgs. Groundwater was encountered at depth of 26 feet bgs. One temporary groundwater monitoring well was installed (GW-1) and one groundwater sample was collected. Soil and groundwater samples were analyzed for volatile organic compounds (VOCs) by United States Environmental Protection Agency (EPA) Method 8260, semi-volatile organic compounds (SVOCs) by EPA Method 8270, pesticides by EPA Method 8081, polychlorinated biphenyls (PCBs) by EPA Method 8082, and Target Analyte List (TAL) metals (total and dissolved for groundwater samples). Four soil vapor samples (SV-1 through SV-4) and one outdoor air sample (OA-1) were collected and analyzed for VOCs by EPA Method TO-15. The soil analytical results revealed that VOCs were either non-detect (ND) or below their New York State Department of Environmental Conservation (NYSDEC) 6 NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives (SCOs). Several SVOCs (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene), two pesticides (4,4'-DDD and dieldrin), total PCBs, and several metals (arsenic, copper, lead, mercury, and zinc) were detected above their NYSDEC Unrestricted Use SCOs, Restricted Residential Use SCOs, Commercial Use SCOs and/or Industrial Use SCOs. The groundwater analytical results revealed that SVOCs, pesticides, and PCBs were either ND or below their NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 Class GA Ambient Water Quality Standards and Guidance Values. One VOC (chloroform) and several metals (barium, chromium, lead, manganese, nickel,

and sodium) were detected above their NYSDEC TOGS 1.1.1 Class GA Ambient Water Quality Standards and Guidance Values.

The soil vapor analytical results revealed that several VOCs (1,1,1-trichloroethane, 1,1,2-trichloro-1,2,2-trifluoroethane, 1,1-dichloroethane, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, 2-butanone, acetone, benzene, bromomethane, carbon tetrachloride, chloroform, chloromethane, cis-1,2-dichloroethylene, cyclohexane, cis-1,2-dichloroethylene, ethyl benzene, methyl methacrylate, methylene chloride, n-heptane, n-hexane, o-xylene, p- & m-xylenes, styrene, tetrachloroethylene (PCE), toluene, trichloroethylene (TCE), and trichlorofluoromethane) were detected. PCE and TCE were detected above their air guideline values (September 2013 and August 2015 updates) in the New York State Department of Health's October 2006 Guidance for Evaluating Soil Vapor Intrusion in the State of New York. The outdoor air analytical results revealed that several VOCs (1,1,2-trichloro-1,2,2- trifluoroethane, 1,2,4-trimethylbenzene, 2-butanone, acetone, benzene, bromomethane, carbon tetrachloride, chloromethane, cyclohexane, dichlorodifluoromethane, ethyl benzene, methylene chloride, n-hexane, o-xylene, p- & m- xylenes, PCE, toluene, TCE, and trichlorofluoromethane) were detected.

RAP

The May 2021 RAP proposes the excavation, transportation and off-site disposal of soil in accordance with applicable laws and regulations; removal of underground storage tanks, if encountered in compliance with applicable local, State and Federal laws and regulations; if de-watering into New York City sewer drains is anticipated during the proposed construction, a New York City Department of Environmental Protection Sewer Discharge Permit will be obtained; stockpiled soil will be covered properly anchored tarps; dust control; air monitoring; installation of a vapor barrier system consisting of 20-mil Stego Wrap, or similar beneath the building slab, on sub-grade foundation sidewalls and the elevator pit slab and sidewalls (if the type of vapor barrier is changed an amendment must first be approved by DEP); and installation of 2 feet of imported certified clean soil in landscaped areas where not capped with asphalt or concrete.

NYC DEPARTMENT OF ENVIRONMENTAL PROTECTION (NYCDEP) REVIEW

June 23, 2021 letter

The NYC Department of Environmental Protection (NYCDEP) reviewed the Phase I and Phase II reports and the RAP and CHASP discussed above and by letter dated June 23, 2021 (see Hazardous Materials Appendix) has requested the following.

Projected Development Site 1: Block 10068, Lots 200, 205, 210, 213, 214, and 215 (Site under the control or ownership of the applicant)

RAP

• DCP should instruct the applicant to explain if all the proposed uses in the below-grade level of the building are open to the outside air or ventilated in accordance with the New York City Building Code/New York City Mechanical Code. The proposed ventilation system for the sub-grade uses should also be described in the RAP.

• DCP should instruct the applicant to include the manufacturer's specifications (minimum thickness of 20-mil) of the Grace Preprufe waterproofing membrane/system that is depicted in Appendix 6. In addition to the proposed Stego Wrap 20-mil vapor barrier, the proposed Grace Preprufe waterproofing membrane/system should also be described in the RAP.

• Appendix 2 (Proposed Development Plans) depicts proposed landscaped areas on the project site such as the open yard (to be landscaped for use by UPK). Section 2.4 (Composite Cover System) states that exposure to residual soil will be prevented by an engineered cover system to be built on the Site and this cover system will be limited to the concrete building slab and two feet of certified clean soil in landscaped areas. However, Section 2.3 (Import and Reuse of Soils) states that no import or reuse of soil is planned and Appendix 5 (Soil/Materials Management Plan), Section 1.14 (Import of Clean Cover) states that import of clean cover soil will not be needed for this project. Therefore, DCP should instruct the applicant to clarify that if import of clean fill for landscaped or covered with grass (not capped) areas is anticipated it should be consistent throughout the RAP and should be revised accordingly. For all areas, which will be landscaped or covered with grass (not capped), a minimum of two feet of DEP approved clean fill/top soil must be imported from an approved facility/source and graded across all landscaped/grass covered areas of the sites not capped with concrete/asphalt. The clean fill/top soil must be segregated at the source/facility, have qualified environmental personnel collect representative samples at a frequency of one (1) sample for every 250 cubic yards, analyze the samples for Target Compound List VOCs by EPA Method 8260, SVOCs by EPA Method 8270 pesticides by EPA Method 8081, PCBs by EPA Method 8082, and TAL metals by a New York State Department of Health Environmental Laboratory Approval Program certified laboratory, compared to NYSDEC 6 NYCRR Part 375 Environmental Remediation Programs. Upon completion of the clean fill/top soil investigation activities, the applicant should submit a detailed clean soil report for DEP review and approval prior to importation and placement on-site. The report should include, at a minimum, an executive summary, narrative of the field activities, laboratory data, and comparison of soil analytical results (i.e., NYSDEC 6 NYCRR Part 375 Environmental Remediation Programs).

CHASP

• Appendix 1 (Construction Health and Safety Plan) includes only information fact sheets/safety data sheets and is not complete. DCP should instruct the applicant that a revised CHASP should be submitted for DEP review and approval. The CHASP must describe all of the potential hazards at the site and the methods to mitigate such hazards. The CHASP should also include elements such as a hospital route map, information fact sheets or safety data sheets for potential chemicals of concerns (VOCs, SVOCs, pesticides, PCBs, and heavy metals), an accident and injury report form, names and phone numbers of all pertinent project and site safety personnel, etc.

Projected Development Site 2: Block 10068, Lots 216 and 218 (Site not under the control or ownership of the applicant)

• Based on prior on-site and/or surrounding area land uses which could result in environmental contamination, DEP recommends that an (E) Designation for hazardous materials should be placed on the zoning map pursuant to Section 11-15 of the New York City Zoning Resolution for the subject property. The (E) Designation will ensure that testing and mitigation will be provided as necessary before any future development and/or soil disturbance. Further hazardous materials assessments should be coordinated through the Mayor's Office of Environmental Remediation.

• DCP should instruct the applicant that the Environmental Assessment Statement (EAS) should discuss the placement of the (E) Designation for hazardous materials.

A revised RAP, CHASP and EAS should be submitted for DEP review and approval.

August 12, 2021 letter

NYCDEP reviewed the Phase I and Phase II reports and the RAP and CHASP discussed above and by letter dated August 12, 2021 (see Hazardous Materials Appendix) has requested the following.

Projected Development Site 1: Block 10068, Lots 200, 205, 210, 213, 214, and 215 (Site under the control or ownership of the applicant)

DEP finds the July 2021 RAP and CHASP for the proposed project acceptable. DCP should instruct the applicant that at the completion of the project, a Professional Engineer (P.E.) certified Remedial Closure Report should be submitted for DEP review and approval for the proposed project. The P.E. certified Remedial Closure Report should indicate that all remedial requirements have been properly implemented (i.e., transportation/disposal manifests for removal and disposal of soil in accordance with applicable local, state, and federal laws and regulations; two feet of DEP approved certified clean fill/top soil capping requirement in any landscaped/grass covered areas not capped with concrete/asphalt; installation of vapor barrier, etc.).

Projected Development Site 2: Block 10068, Lots 216 and 218 (Site not under the control or ownership of the applicant)

Based on prior on-site and/or surrounding area land uses which could result in environmental contamination, DEP concurs that an (E) Designation for hazardous materials should be placed on the zoning map pursuant to Section 11-15 of the New York City Zoning Resolution for the subject property. The (E) Designation will ensure that testing and mitigation will be provided as necessary before any future development and/or soil disturbance. Further hazardous materials assessments should be coordinated through the Mayor's Office of Environmental Remediation.

CONCLUSIONS

Following the preparation of the above noted items and approval by DEP, no significant adverse impacts related to hazardous materials are expected as a result of the redevelopment of Applicant-owned Projected Development Site 1. On Projected Development Site 2, which is not under the control of the applicant, an (E) Designation (E-693) for hazardous materials will be placed on the zoning map for the subject property, in accordance with DEP's letter dated August 12, 2021 as follows.

Projected Development Site 2 (Block 10068, Lots 216 and 218):

Task 1-Sampling Protocol

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

Task 2-Remediation Determination and Protocol

A written report with findings and a summary of the data must he submitted to OER after completion of the testing phase and laboratory analysis for review and approval. After receiving such results, a determination is made by OER if

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

If remediation is indicated from test results, a proposed remediation plan must be submitted to OER for review and approval. The Applicant must complete such remediation as determined necessary by OER. The Applicant should then provide proper documentation that the work has been satisfactorily completed.

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

The (E) Designation will ensure that testing and mitigation will be provided as necessary before any future development and/or soil disturbance occurs. With this (E) Designation in place, no significant adverse impacts related to hazardous materials are expected as a result of the redevelopment of Projected Development Site 2. Therefore, there is no potential for the Proposed Actions to result in significant adverse impacts related to hazardous materials and no further analysis is warranted.

7. TRANSPORTATION

INTRODUCTION

To determine the potential for the Proposed Actions to result in significant adverse transportation impacts, trip generation (Level 1) and trip assignment (Level 2) screening analyses were performed pursuant to the methodologies identified in the 2021 *CEQR Technical Manual*. Based on the proposed mixed-use development trip generation (Level 1) and trip assignment screening (Level 2) analyses results, it was determined that the Proposed Actions would not result in significant adverse impacts, as further discussed below.

PROJECT AREA

The Proposed Project Area is located at 141-05 109th Avenue, in the South Jamaica neighborhood of Queens NY, Community District 12. The Proposed Project Area consists of Block 10068, Lots 200, 205, 210, 213, 214, 215 (Projected Development Site 1) Applicant-Owned, as well as Block 10068, Lots 216 and 218 (Projected Development Site 2), which is not Applicant-owned. The Proposed Project Area is located within a block bounded by 107th Road, a two-way eastbound/westbound roadway on the north; 142nd Street, a two-way northbound/southbound roadway on the east; 139th Street, a two-way northbound/southbound roadway on the west; and 109th Avenue, a two-way eastbound/westbound roadway on the south, as shown in **Figure 1** (Transportation Appendix).

PROJECTED DEVELOPMENT SITES

The transportation analyses are based on the Projected Development Sites, as listed below, and shown in **Figure 1,** and on the proposed Site Plan.

- Applicant -Owned Projected Development Site 1: Block 10068, Lots 200, 205, 210, 213, 214, and 215.
- Non-Applicant-Owned Projected Development Site 2: Block 10068, Lots 216, and 218.

NO-ACTION SCENARIO

Absent the Proposed Actions, it is assumed that the existing developments on the Projected Development Sites would remain the same as the existing condition, as described in **Table 1**.

Table 1 – Existing, No-Action Scenario, With-Action Scenario, and Increment on Projected Development Sites

Land Use	Existing	No-Action	With-Action	Increment
Residential d.u.	2 d.u. (2,194 gsf)	2 d.u. (2,194 gsf)	78 d.u. (66,733 gsf)	76 d.u. (64,539gsf)
Commercial Local Retail (gsf)	0	0	9,217gsf	9,217gsf
Commercial Office (gsf)	800 gsf	800 gsf	4,587 gsf	3,787gsf
Universal Pre-K (gsf)	0	0	5.950 gsf	5,950 gsf
Warehouse (gsf)	5,651 gsf	5,651 gsf	0	-5,651 gsf
Accessory Parking	0	0	35	35

Source: Approved RWCDS.

WITH-ACTION SCENARIO

The proposed actions would result in a total development of 78 residential dwelling units (66,733 gsf), between 21 and 25 of which would be affordable, 9,217 gsf of commercial local retail space, 4,587 gsf of commercial office space, and 5,950 gsf of universal pre-K space. The Proposed Project would also provide two on-site accessory parking garages with a total capacity of 35 spaces, as described below.

INCREMENT

The transportation analyses are based on the net difference between the proposed with action and no-action scenarios. The Proposed Actions would result in an increase of 76 net residential dwelling units (65,539 gsf), 9,217 gsf of commercial new retail (local) space, 3,787 gsf of net commercial office space, 5,950 gsf of new universal pre-K space, a decrease of 5,651gsf pf warehouse space. The Proposed Project would also provide two on-site accessory parking garages with a total capacity of 35 spaces, as summarized in **Table 1**.

PRINCIPAL CONCLUSIONS

The following detailed trip generation (Level-One Screening) and trip assignment (Level-Two Screening) analyses have been conducted for the project increment, which is summarized in **Table 1**.

Traffic and Parking

Based on the results of trip generation (Level-One) and trip assignment (Level-Two) screening analyses, it is concluded that in the future with the Proposed Actions, none of the intersections in the study area would experience 50 or more peak hour vehicle trip-ends, as summarized in **Figure 4 (**Transportation Appendix) for the AM, MD, PM, and

Saturday MD peak hours, respectively. Therefore, in accordance with the *CEQR Technical Manual* 50-vehicle trip-ends threshold, the vehicular trip-ends generated by the Proposed Actions would not result in any conditions that would require a detailed assessment of traffic and parking impacts.

Parking

The Proposed Project would provide two on-site accessory parking garages with a total capacity of 35 spaces, in the two projected sites, as described, below.

Projected Development Site 1 (Applicant-Owned): The proposed accessory parking garage would include a total of 28 parking spaces, with an egress/ingress point via 109th Avenue.

Projected Development Site 2 (Non-Applicant-Owned): The accessory parking garage would include a total of 7 parking spaces, with an egress/ingress point via 139th Street.

The proposed actions would screen for vehicular traffic as detailed below, and per the *CEQR Technical Manual,* no detailed parking assessment would be required.

Transit

Subway

Based on the results of the trip generation screening analysis (Level-One Screening), the Proposed Actions would generate fewer than 200 peak hour subway trip-ends, as summarized in **Table 3** (Transportation Appendix) for the AM, MD, PM, and Saturday peak hour periods, respectively. Therefore, in accordance with the *CEQR Technical Manual* 200 subway trip-ends threshold, the subway trip-ends generated by the Proposed Actions would not result in any conditions requiring a detailed assessment of subway impacts.

Bus

Based on the results of the trip generation screening analysis (Level-One Screening), the Proposed Actions would generate fewer than 50 peak hour bus trip-ends in one direction along a bus route during any peak hour, as summarized in **Table 3** (Transportation Appendix) for the AM, MD, PM, and Saturday peak hour periods, respectively. Therefore, in accordance with the *CEQR Technical Manual* 200 bus trip-ends threshold/50 or more peak hour bus trip-ends in one direction along a bus route during any peak hour, the bus trip-ends generated by the Proposed Actions would not result in any conditions requiring a detailed assessment of bus impacts.

Pedestrian

Based on the results of the trip generation (Level-One Screening) **Table 3** (Transportation Appendix) and trip assignment (Level-Two Screening) **Figures 5** through **19** (Transportation Appendix) analysis, it is concluded that in the future with the Proposed

Actions, none of the pedestrian elements in the study area would experience 200 or more peak hour pedestrian trip-ends, as summarized in **Table 3 (**Transportation Appendix) and shown in **Figures 5** through **19** (Transportation Appendix) for the AM, PM, and Saturday peak hours, respectively (*midday peak hour would screen with Level-One screening analysis*). Therefore, in accordance with the *CEQR Technical Manual* 200 pedestrian trip-ends threshold per pedestrian element, no detailed assessment of pedestrian impacts will be conducted as detailed below.

BUILD YEAR

It is assumed that the Proposed Actions would be approved by 2023. It would take up to approximately 24 months to construct the proposed building on the Applicant's Projected Development Site 1. The Proposed Actions would result in the creation of one additional development site that is not controlled by the Applicant, and it is anticipated that this site would be developed over an additional up to 12-month period. Therefore, a total of up to approximately 36 months of construction would be anticipated beginning in 2023 with a Build Year of 2026.

TRANSPORTATION PLANNING ASSUMPTIONS

Trip generation factors for the Proposed Actions were determined based on information from the 2021 *City Environmental Quality Review (CEQR) Technical Manual*, U.S. Census Data, trip generation and modal split data provided by the NYCDOT, and other approved EASs and EISs. The travel demand assumptions and trip generation sources are summarized in **Table 2** (Transportation Appendix) and detailed below.

Residential Development

The 2021 *CEQR Technical Manual* Table 16-2 was utilized for trip generation rates, including truck trips, and peak hours temporal distribution. The 2015-2019 American Community Survey (ACS) Journey-to Work (JTW) data for Census Tract #'s 158.01, 194, 196, 198, 202, 204, and 206 in Queens, NY was used for modal split information and auto occupancy rates, as is estimated in **Exhibit A** and summarized in **Table 2** (Transportation Appendix).

The estimated modal split data for residential use found that approximately 46.4% would travel by car, zero (0) % would travel by taxi, 15.3% would travel by bus, 32.3% would travel by subway, and 6% would travel by foot and other mode of travel, such as bicycle/motorcycle, as shown and summarized in **Exhibit A**. The auto occupancy rate would be at 1.10, based on the 2015-2019 ACS JTW data for Census Tract #'s 158.01, 194, 196, 198, 202, 204, and 206 in Queens, NY, as summarized in **Exhibit A**. Taxi occupancy rate is 1.3, based on *the recent approved DEIS for the Gowanus Neighborhood Rezoning and Related Actions, Table 14-8.*

Local Commercial Retail Development

The 2021 *CEQR Technical Manual* Table 16-2 was utilized for trip generation rates, including peak hours temporal distribution and truck trip rates. Modal split information and vehicle occupancy rates are based on NYCDOT survey results for a similar local retail space in Queens, located beyond a ¼-mile radius of a subway station (Queens Non-Transit Zone), as is summarized in **Table 2** (Transportation Appendix).

The estimated modal split results for local commercial retail use found that approximately 11% would travel by car, 0% would travel by taxi, 3% would travel by bus, 4% would travel by subway, and 82% would travel by foot, as is summarized in **Table 2** (Transportation Appendix). Vehicle occupancy rate is 2, based on *the recently approved DEIS for the Gowanus Neighborhood Rezoning and Related Actions, Table 14-8.*

Commercial Office Development

The 2021 *CEQR Technical Manual* Table 16-2 was utilized for trip generation rates, including truck trips, and peak hours temporal distribution. The 2012-2016 ACS Reverse-Journey-to-Work (RJTW) data for Census Tract #'s 158.01, 194, 196, 198, 202, 204, and 206 in Queens, NY was used for modal split information and auto occupancy rates, as is estimated in **Exhibits B, and C** and summarized in **Table 2** (Transportation Appendix).

The estimated modal split data for commercial office use found that approximately 59% would travel by car, two (2)% would travel by taxi, 12% would travel by bus, 12% would travel by subway, and 15% would travel by foot and other mode of travel, such as bicycle/motorcycle, as shown and summarized in **Exhibit B**. The auto occupancy rate would be at 1.15, based on the 2012-2016 ACS RJTW data for Census Tract #'s 158.01, 194, 196, 198, 202, 204, and 206 in Queens, NY, as summarized in **Exhibit C**. Taxi occupancy rate is 1.26, based on *the recent approved DEIS for the Gowanus Neighborhood Rezoning and Related Actions, Table 14-8.*

Universal Pre-K

The 2021 *CEQR Technical Manual* Table 16-2 was utilized for trip generation rates, including peak hours temporal distribution and truck trip rates. Mode of travel for students/parents is based on data provided by the NYCDOT, as summarized in **Exhibit D**, and for staff is based on the 2012-2016 ACS RJTW data for Census Tract #'s 158.01, 194, 196, 198, 202, 204, and 206 in Queens, NY, as summarized in **Exhibits B and C.** The above data is provided and recommended by NYCDOT.

Students/Parents Mode of Travel

The estimated modal split data for Pre-K (students/parents) is 40.0% would travel by car, zero (0) % would travel by taxi, 2.0% would travel by bus, 3.0% would travel by subway, and 55.0% would travel by foot and other mode of travel, such as bicycle/motorcycle, as shown and summarized in **Exhibit A**.

The estimated modal split data for Pre-K (staff) use found that approximately 59% would travel by car, two (2)% would travel by taxi, 12% would travel by bus, 12% would travel by subway, and 15% would travel by foot and other mode of travel, such as bicycle/motorcycle, as shown and summarized in **Exhibit B**.

Warehouse

Trip generation rates, peak hours temporal distribution, directional split, taxi occupancy rate, and truck trips are based on *the recently approved DEIS for the Gowanus Neighborhood Rezoning and Related Actions, Table 14-8,* as is summarized in **Table 2** (Transportation Appendix). Mode of travel, and auto occupancy rate are based on the 2012-2016 ACS RJTW data for Census Tract #'s 158.01, 194, 196, 198, 202, 204, and 206 in Queens, NY, as summarized in **Exhibits B and C,** and shown in **Table 2.**

The estimated modal split data for warehouse use found that approximately 59% would travel by car, two (2)% would travel by taxi, 12% would travel by bus, 12% would travel by subway, and 15% would travel by foot and other mode of travel, such as bicycle/motorcycle, as shown and summarized in **Exhibit B**. The auto occupancy rate would be at 1.15, based on the 2012-2016 ACS RJTW data for Census Tract #'s 158.01, 194, 196, 198, 202, 204, and 206 in Queens, NY, as summarized in **Exhibit C**. Taxi occupancy rate is 1.3, based on *the recent approved DEIS for the Gowanus Neighborhood Rezoning and Related Actions, Table 14-8.*

PERSON AND VEHICULAR TRIPS

Person Trips

The Proposed Actions would generate a net increase of 367, 157, 454, and 252 person trip ends during the AM, Midday, PM, and Saturday Midday peak hour time periods, respectively, as summarized in **Table 3** (Transportation Appendix).

Vehicle Trips

The Proposed Actions would generate a net increase of 93 (42 inbound and 51 outbound), 21 (10 inbound and 11 outbound), 98 (51 inbound and 47 outbound), and 38 (19 inbound and 19 outbound) vehicle trip-ends during the AM, Midday, PM, and Saturday Midday Peak hour periods, respectively, as summarized in **Table 3** (Transportation Appendix).

PRELIMINARY ANALYSIS METHODOLOGY AND SCREENING ASSESSMENTS

The *CEQR Technical Manual* recommends a two-tier screening procedure for the preparation of a "preliminary analysis" to determine if quantified analyses of transportation conditions are warranted. As discussed below, the preliminary analysis begins with a trip generation analysis (Level 1) to estimate the volume of person and vehicle trip-ends attributable to the Proposed Actions. If the Proposed Actions are expected to result in fewer than 50 peak hour vehicle trip-ends and fewer than 200 peak hour transit or pedestrian trip-ends, further quantified analyses are not warranted. When

these thresholds are exceeded, detailed trip assignments (Level 2) are performed to estimate the incremental trip-ends at specific transportation elements and to identify potential locations for further analyses. If the trip assignments show that the Proposed Actions would result in 50 or more peak hour vehicle trip-ends at an intersection, 200 or more peak hour subway trip-ends at a station, 50 or more peak hour bus trip-ends in one direction along a bus route, or 200 or more peak hour pedestrian trip-ends traversing a pedestrian element, then further quantified analyses may be warranted to assess the potential for significant adverse impacts on traffic, transit, pedestrians, and parking.

LEVEL 1 SCREENING ASSESSMENTS

A Level 1 trip generation screening assessment was conducted for the project increment, as summarized in **Table 1,** to estimate the numbers of person and vehicle trip-ends by mode of transportation, generated by the Proposed Actions during the Weekday AM, midday, PM, and Saturday peak hours, as summarized in **Table 3** (Transportation Appendix). These trip estimates were then compared to the *CEQR Technical Manual* thresholds to determine if a Level 2 screening and/or quantified operational analyses would be warranted.

The Proposed Actions would generate a total of 93 (42 inbound and 51 outbound), 21 (10 inbound and 11 outbound), 98 (51 inbound and 47 outbound), and 38 (19 inbound and 19 outbound) vehicle trip-ends; 28, 17, 30, and 27 subway trip-ends; 18, 11, 19, and 15 bus trip-ends; and 190, 100, 266, and 160 pedestrian trip-ends, during the Weekday AM, Midday, PM, and Saturday Midday peak hours, respectively. Based on the results of trips, generated by the Proposed Actions, as summarized in **Table 3** (Transportation Appendix), a level-two vehicle and pedestrian assessment would be required, per the *CEQR Technical Manual thresholds*, for Weekday AM and PM peak hours for vehicle trip-ends, and Weekday AM, PM and Saturday midday peak hours for pedestrian trip-ends, inclusive of transit trips, as described below.

LEVEL 2 SCREENING ASSESSMENTS

A Level 2 screening assessment involves the distribution and assignment of projected trips to the transportation network and the determination of whether specific locations are expected to experience incremental trips exceeding *CEQR Technical Manual* thresholds. Typically, if the results of this analysis show that the Proposed Actions would result in 50 or more peak hour vehicle trip-ends through an intersection, 50 or more peak hour bus trip-ends on a bus route in a single direction, 200 or more peak hour subway trip-ends per station, or 200 or more peak hour pedestrian trip-ends per pedestrian element, further quantified analyses may be warranted to evaluate the potential for significant adverse traffic, transit, pedestrian, and parking impacts.

VEHICLE TRIPS

Vehicular Trip-Ends

The Proposed Actions would generate a total of 93 (42 inbound and 51 outbound), 21 (10 inbound and 11 outbound), 98 (51 inbound and 47 outbound), and 38 (19 inbound and 19 outbound) net vehicle trip-ends during the AM, Midday, PM, and Saturday Midday Peak hour periods, respectively. Vehicular trips are assigned to the proposed on-site parking garages with curb cuts along on 109th Avenue, and 139th Street. The Pre-K drop-off trip-ends have been assigned based on the existing roadway conditions and the drop-off location, as shown on **Figure 2**. The remainder of the site-generated vehicle trip-ends have been routed based on a JTW model as summarized on **Exhibit E** and as shown on **Figure 3**. The total site-generated vehicle trip-ends are summarized on **Figure 4**. Based on trip assignments for Weekday AM, and PM peak hours, none of the intersections in the study area would experience 50 or more vehicle trip-ends. Therefore, in accordance with the *CEQR Technical Manual* 50-vehicle trip-end threshold, the vehicular trip-ends generated by the Proposed Actions would not result in any conditions that would require a detailed assessment of traffic and parking impacts.

TRANSIT

Bus Trip-Ends

The Proposed Actions would generate a total of 18, 11, 19, and 15 net bus trip ends during the Weekday AM, Midday, PM, and Saturday Midday peak hour time periods, respectively, as summarized in **Table 3** (Transportation Appendix). Currently two bus lines serve the Project Area, bus line Q40 and Q9; bus line Q40 which runs along 109th /Lakewood Avenues in the study area, and bus line Q9 which runs along Van Wyck Expwy Service Road (S/B) and 135th Street (N/B) in the study area The Proposed Actions would generate less than 50 or more peak hour bus trip-ends in one direction along a bus route during any peak hour period, and in accordance with the *CEQR Technical Manual* criteria, would not result in any conditions that would typically trigger the need for a detailed assessment of bus impacts.

Subway Trip-Ends

The Proposed Actions would generate a total of 28, 17, 30, and 27 net subway trip-ends during the Weekday AM, Midday, PM, and Saturday Midday peak hour time periods, respectively, as summarized in **Table 3** (Transportation Appendix). Currently there is one subway station in the study area. The Sutphin Boulevard/Archer Avenue/JFK Airport subway station for the E, J, and Z trains, located within five mile radius of the Project Area (Queens Non-Transit Zone). The Proposed Actions would generate less than 200 subway trip-ends per subway station during the AM and PM peak hour time periods, and in accordance with CEQR *Technical Manual* criteria, would not result in any conditions that would typically trigger the need for a detailed assessment of subway impacts.

Pedestrian Trip-Ends

The Proposed Actions would generate a total of 236, 128, 315, and 202 net pedestrian trip-ends during the AM, Midday, PM, and Saturday Midday peak hour periods, respectively, inclusive of bus and subway trips as well as unique pedestrian trips. Based on the results of the trip generation **Table 3** (Transportation Appendix) and trip assignment **Figures 5** through **19** (Transportation Appendix) analyses, it is concluded that in the future with the Proposed Actions, no pedestrian elements in the study area would experience 200 or more peak hour pedestrian trip-ends. Therefore, in accordance with the *CEQR Technical Manual* 200 pedestrian trip-ends threshold per pedestrian element, no detailed assessment of pedestrian impacts will be required.

VEHICULAR, PEDESTRIAN, AND CYCLIST SAFETY

According to the *CEQR Technical Manual*, a high crash location warranting a detailed safety assessment is defined as a location identified as a Vision Zero corridor/intersection, a location with 48 or more total reportable or non-reportable crashes, or a location with five (5) or more pedestrian/cyclist-related injury crashes in any consecutive 12 months of the most recent 3-year period for which data is available. Crash data for the study intersections were obtained from the NYCDOT for the time period between January 1, 2018 and December 31, 2020. The data obtained quantify the total number of reportable crashes, fatalities, and injuries during the study period, as well as a breakdown of crashes involving pedestrians and cyclists at each location. During the three (3)-year period between January 1, 2018 to December 31, 2020, a total of 38 reportable and nonreportable crashes occurred at study intersections, including 21 crashes with injuries and zero (0) crashes involving fatalities. A total of two (2) crashes involving pedestrians or cyclists occurred at study intersections during the same three (3)-year period. None of the study intersections have been identified as high crash locations in the 2018 to 2020 period based on the criteria outlined in the *CEQR Technical Manual*, and none of the intersections adjacent to the site have been identified as Vision Zero intersections which warrant analysis. **Table 4** presents the types of crashes that occurred at study intersections during the 2018 to 2020 period.

Table 4 – Crash Summary

Intersection	Control Type	Total Crashes			Total Crashes with Fatalities			Total Crashes with Injuries			Crashes Involving Pedestrians			Crashes Involving Cyclists		
		2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020
109th Avenue and Van Wyck Expressway	Signalized	7	6	5	0	0	0	6	3	2	0	0	0	0	0	1
109th Avenue and 139th Street	Unsignalized	1	1	3	0	0	0	1	0	1	0	0	0	0	0	0
109th Avenue and 141st Street	Unsignalized	1	2	0	0	0	0	1	1	0	0	0	0	0	1	0
109th Avenue and Lakewood Avenue	Unsignalized	7	3	1	0	0	0	3	2	0	0	0	0	0	0	0
109th Avenue between 139th Street and 141st Street	-	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0

CONCLUSION

In accordance with the threshold guidelines as detailed in the 2021 *CEQR Technical Manual,* the Proposed Actions are not expected to result in significant adverse impacts related to transportation. Specifically, the Proposed Actions are unlikely to have a significant effect on the neighborhood traffic, parking, transit, and pedestrian movements.

8. AIR QUALITY

Introduction

Analysis Framework

According to the 2021 *CEQR Technical Manual*, an air quality assessment determines both a proposed project's effects on ambient air quality as well as the effects of ambient air quality on the project. Ambient air quality is the quality of the surrounding air at places to which the public would have continuous access. The ambient air may be affected by air pollutants produced by motor vehicles, referred to as "mobile sources"; by fixed facilities, usually referenced as "stationary sources"; or by a combination of both.

Air Pollutants and Applicable Standards and Guidelines

Criteria Pollutants - National Air Quality Standards

The U.S. Environmental Protection Agency (EPA) has established national ambient air quality standards (NAAQS) for seven of the most common air pollutants—known as "criteria" pollutants. The presence of these pollutants in ambient air is generally due to numerous diverse and widespread sources of emissions. The NAAQS primary standards are designed to protect public health with an adequate margin of safety. The NAAQS secondary standards are designed to protect the public welfare from adverse effects, including those related to effects on soils, water, vegetation, visibility, and other aspects. As required by the Clean Air Act, EPA periodically conducts comprehensive reviews of the scientific literature on health and welfare effects associated with exposure to the criteria air pollutants. The NAAQS have been adopted as the ambient air quality standards for the State of New York.

The New York State Department of Environmental Conservation (NYSDEC) measures air pollutants at more than 50 sites across the state using continuous and/or manual instrumentation. These sites are a mix of federally-mandated and supplemental monitoring networks. The primary NAAQS and background concentrations from the nearest federally-mandated monitoring station(s) of the pollutants that a detailed analysis was conducted for are presented in **Table 17-1**.

Table 17-1: NAAQS and Background Concentration Published in the NYSDEC 2019 Report

Pollutant	Averaging Period	National and State Standards	Background Concentration	Monitoring Station
$PM_{2.5}$	24-Hour	35 µg/m^3	17.6 µg/m^3	Queens College
	Annual	12 µg/m^3	7.0 µg/m^3	
PM_{10}	24-Hour	150 µg/m^3	28 µg/m^3	
NO_2	1-Hour	188 µg/m^3	103.6 µg/m^3	
	Annual	100 µg/m^3	26.8 µg/m^3	
SO_2	1-Hour	196 µg/m^3	13.5 µg/m^3	
	Annual (2)	80 µg/m^3	1.0 µg/m^3	
Note: 2. 6 CRR-NY 257-2.3 for annual SO_2 standard: "During any 12 consecutive months, the annual average of the 24-hour average concentrations shall not exceed 0.03 ppm.				

NO_2 NAAQS

The 1-hour NO_2 NAAQS was promulgated in the United States in February 2010. The 1-hour standard is based on a percentile rank from the annual distribution of daily maximum 1-hour values, averaged across the number of years processed. The 1-hour NO_2 modeled design value is based on the 98th percentile, or 8th highest, of the daily maximum 1-hour values across the year. For typical multi-year modeling analysis based on 5 years of National Weather Service (NWS) meteorological data, the modeled design value is the 5-year average of the 8th highest values for NO_2.

Nitrogen oxide (NOx) emissions from combustion consist predominantly of nitric oxide (NO) at the source. The NOx in these emissions is then gradually converted to NO_2. For determining compliance with the 1-hour standard, the EPA has developed a three-tiered modeling approach: a) Tier 1, the most conservative approach, assumes a full (100%) conversion of NOx to NO_2. b) Tier 2 is the Ambient Ratio Method 2 (ARM2) which assumes ambient equilibrium between NO and NO_2. AERMOD multiplies Tier 1 impacts with default ambient ratios, or source-specific NO_2/NO_x in-stack ratio (ISR) data. The national default minimum and maximum ambient ratios for the primary facility are 0.5 and 0.9, respectively. c) Tier 3, which is the most precise approach, accounts for the chemical transformation of NO emitted from the stack to NO_2 within the source plume using hourly ozone background concentrations.

NYC Guidelines

The city's *de minimis* criteria are used to determine the significance of the incremental increase in CO and $PM_{2.5}$ concentrations that would result as a consequence of the proposed project. The following criteria are used for determination of significant adverse $PM_{2.5}$ incremental impacts for projects subject to CEQR:

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

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

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

Accordingly, $PM_{2.5}$ *de minimis* design values are 24-hour $PM_{2.5}$ concentration increment of 8.7 $\mu g/m^3$, and annual $PM_{2.5}$ concentration increments of 0.3 $\mu g/m^3$ for stationary source and 0.1 $\mu g/m^3$ for mobile source. As no mobile source detailed analysis is required, CO detailed analysis is not required and, therefore, CO *de minimis* is not shown.

Noncriteria Pollutants

The NYSDEC Department of Air Resources established short-term (one-hour) and annual concentrations standards for certain noncriteria pollutants. The standards are acceptable ambient levels for these pollutants, which are based on human exposure. The New York State standards for noncriteria pollutants are published in the DAR-1 guidance document (latest version dated August 10, 2016). DAR-1 presents Annual and Short-Term Guideline Concentrations (AGCs and SGCs, respectively) for contaminants that range in toxicity from high to low. The AGCs and SGCs are annual and 1-hour guideline concentrations, respectively, for potentially toxic or carcinogenic air contaminants. In addition, NYSDEC also regulates pollutants that produce discomfort due to odors, where significant discomfort is evaluated on quantity, characteristic, or duration.

Mobile Source

According to the *CEQR Technical Manual,* projects may result in significant mobile source air quality impacts when they increase or cause a redistribution of traffic, create any other mobile sources of pollutants (e.g., diesel trains, helicopters, boats), or add new uses near mobile sources (e.g., roadways, garages, parking lots). Detailed analyses are required to predict whether a proposed action could potentially result in significant adverse air quality impact if certain threshold criterions are met or exceeded. Proposed actions that do not meet or exceed the threshold criterions (screen out) are not expected to result in mobile source impacts.

Screening Analysis

Project-Generated Traffic

Screening analyses for the project's peak hour auto traffic and peak hour heavy-duty diesel vehicle (HDDVs) traffic were conducted. Per the *CEQR Technical Manual*, a detailed analysis for carbon monoxide (CO) is required if the generated peak hour auto traffic or diversion of existing peak hour traffic would result in an increment of 170 auto trips (in this area of the city). A detailed analysis for particles with an aerodynamic diameter of less than or equal to 2.5 micrometers ($PM_{2.5}$) is required if the generated peak hour HDDVs traffic or its equivalent in vehicular emissions, depending on the type of road, would be met or exceeded.

According to the transportation analysis for this project, the proposed project would generate a total of 63, 31, 72, and 34 net vehicle trip ends (inbound and outbound combined) during the AM, MD, PM, and Saturday MD peak hour periods, respectively. These total project-generated traffic would include no (0) trucks during any peak-hour period. The peak-hours project generated traffic would not exceed the threshold of 170 vehicular trips (condition outlined in Sections 210 of Chapter 17 of *the CEQR Technical Manual*). Therefore, no CO detailed analysis is required.

The $PM_{2.5}$ equivalent truck calculation in vehicular emission screen ranges from 12 to 23 HDDVs depending on the type of road. All autos were assumed to be LDGT1 class vehicles, based on guidance from the New York City Department of City Planning (DCP) on similar projects. The average annual daily traffic (AADT) on 109th Avenue is 8,248, based on the New York State Department of Transportation (NYSDOT).[4] As such, 109th Avenue was categorized as a collector roadway. For the screening assessment, all project-generated traffic was assumed to travel on 109th Avenue. 139th Street and 142nd Streets are local streets (paved roads with less than 5,000 vehicles per day). The trip assignment analysis during the AM and PM peak-hour periods (periods when the majority of traffic were predicted) was used to calculate the HDDVs or its equivalent in vehicular emissions on 139th Street and 142nd Street. **Table 17-2** shows the project-generated traffic (inbound and outbound combined) on 109th Avenue, the AM and PM trip assignment on 139th Street and 142nd Street, and the results of the *CEQR Technical Manual* Equivalent Truck Calculation.

[4] New York State Department of Transportation. <https://www.dot.ny.gov/gisapps/tdv>, accessed July 1st, 2021.

Table 17-2: *CEQR Technical Manual* Equivalent Truck Calculations

Roadway	Roadway Classification (Threshold HDDVs screen) [1]	Peak-Hour Period	Truck Per Hour	Auto Per Hour	Equivalent Truck	Pass / Fail
109th Avenue	Collector (19)	AM	0	63	12.5	Pass
		MD	0	31	6.2	Pass
		PM	0	72	14.3	Pass
		SAT MD	0	34	6.8	Pass
139th Street	Local (12)	AM	0	19	9.2	Pass
		PM	0	22	10.6	Pass
142nd Street	Local (12)	AM	0	19	9.2	Pass
		PM	0	22	10.6	Pass

As seen in **Table 17-2**, the Proposed Actions $PM_{2.5}$ equivalent truck calculation in vehicular emission does not exceed the HDDVs screening threshold criterions. The worst-case HDDVs or its equivalent in vehicular emissions would result in a maximum of 10.6 equivalent trucks traveling on a paved road (12 HDDVs threshold) and at most 14.3 equivalent trucks traveling on a collector road (19 HDDVs threshold). Therefore, the Proposed Actions' project-generated traffic screened out.

Parking Garage

Based on CEQR guidelines, the incremental capacity of parking facilities are evaluated with a threshold capacity to determine whether a detailed analysis is required. The threshold increment is an increment of 85 off-street parking spaces, based on the DCP guidance on similar projects. A detailed analysis is required if the threshold is met or exceeded. The Proposed Actions would generate 35 new off-street parking spaces. Therefore, no analysis is required.

Existing Mobile Source of Pollutants

According to the *CEQR Technical Manual*, projects that would result in new sensitive uses within 200 feet of an atypical roadway or near other major mobile source of pollutant may result in significant adverse mobile source air quality impacts. The proposed project is located approximately 330 feet east of the Van Wyck Expressway driving lanes and at a distance greater than 200 feet, and the proposed project is not located near a large parking facility. Therefore, no detailed analysis is required.

Heating and Hot Water Systems

Per the *CEQR Technical Manual*, the heating, ventilation, air conditioning and hot water system (HVAC) analysis considers the potential for emissions from the HVAC system of

the Proposed Actions to result in development that significantly impact existing land uses (project-on-existing), and the potential of the Proposed Actions to result in two or more developments that significantly impact each other (project-on-project). Based on CEQR guidance, a preliminary screening assessment is to be conducted as a first step to predict whether the potential impacts of the heat and hot water system(s) boiler emissions can be significant. The screening analysis determines the threshold of development size below which the Action would not have a significant impact. This CEQR screening procedure is applicable to buildings that are not less than 30 feet from the nearest building of similar or greater height. Otherwise, a detailed dispersion analysis is required.

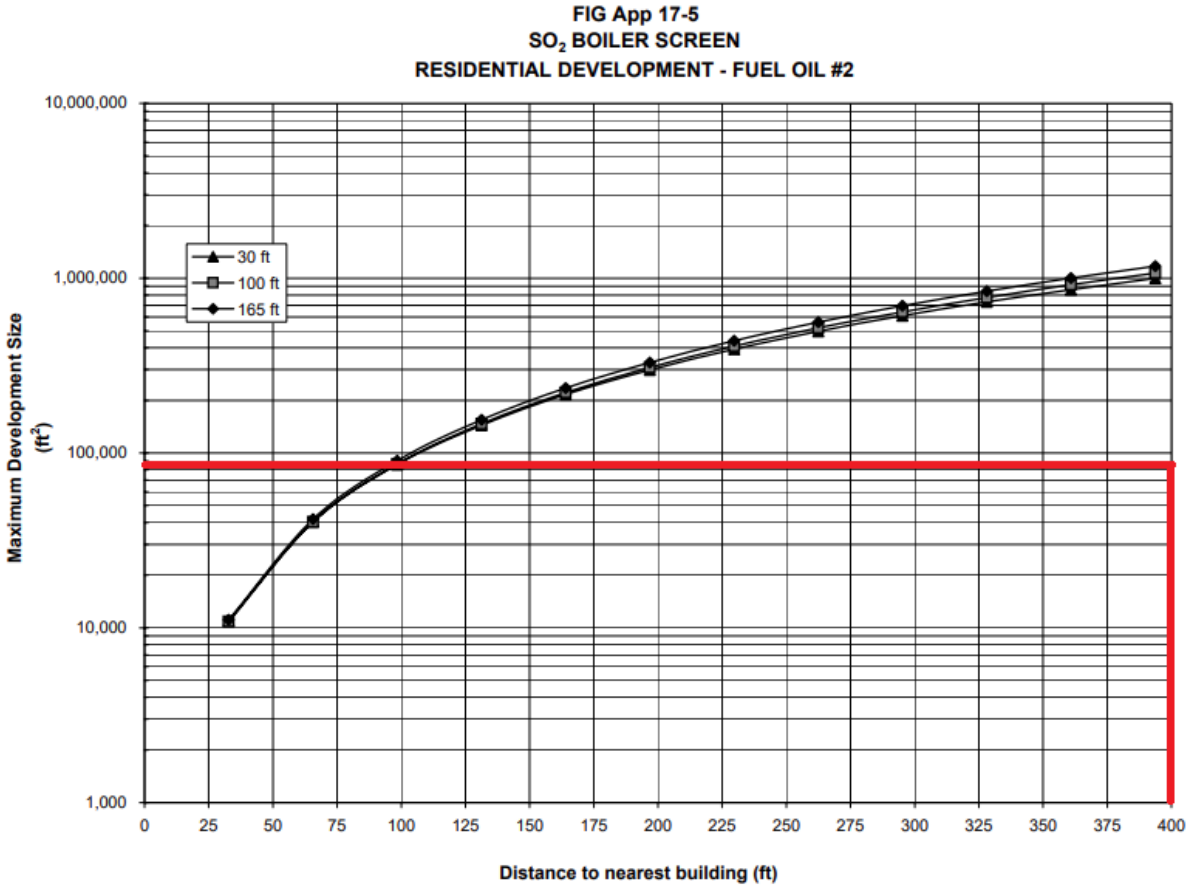
Screening Analysis

The potential for the heat and hot water system(s) to have a significant adverse impact on nearby receptors depends on the type of fuel that would be used by the HVAC system, the height of the stack venting the emissions, the distance to the nearest building of similar or greater height, the building's use and the square footage of the development that would be served by the system, which effects the amount of fossil fuel consumed. The *CEQR Technical Manual* screening analysis is based on these factors. A detailed analysis is required if the screening analysis failed.

As screening analysis is only applicable to a single smokestack, for the purposes of a cumulative screening analysis emissions from multiple stacks were combined in a single stack situated as close as possible to the receiving building. In addition, according to 15 RCNY 2-15, no new boiler or burner installations may use No. 6 or No. 4 fuel oils. Therefore, the highest-emitting fuel that could be used is No. 2 fuel oil. The following screening analyses were conducted:

- Project-on-Existing – Projected Development Sites 1 and 2 on existing land uses: Based on the methodology above, Projected Development Sites 1 and 2 were combined and analyzed as a 45-foot-tall residential building, containing 86,487 gsf. For the screening analysis purposes, it is assumed that fuel oil No. 2 would be used in the HVAC system. A distance of 400 feet (the *CEQR Technical Manual* maximum distance) was used in the analysis as there are no existing buildings located within 400 feet of the proposed project that are 45-feet or taller. **Figure 17-1** (using Figure 17-5 of the *CEQR Technical Manual Appendices*) shows the screening analysis.

Figure 17-1: Proposed Project (Cumulative) Screening Analysis on Existing Land Uses



As seen in the screening analysis **Figure 17-1**, using the nomograph provided in the *CEQR Technical Manual*, the Proposed Actions' air emissions on the closest existing building with a similar or taller building height would fall below the curve for fuel oil No. 2. As such, the Proposed Actions pass the HVAC screening analysis on existing land uses.

- Project-on-Project – Projected Development Site 1 on Projected Development Site 2 and Vice Versa: As the Projected Development Sites abut each other, the screening analysis is not applicable, and a detailed analysis is required.

Detailed Analysis

Methodology

A stationary source modeling was conducted to evaluate the potential impacts associated with the boilers stacks emissions. Lakes Environmental MPI executable was used in the analysis. The MPI executable take advantage of computers with multiple processors, reducing run-time significantly. Lakes Environmental has adjusted the US EPA

AERMOD source code and recompiled the model to parallelize the processing of receptors. The latest MPI executable (used in the analysis) modified the EPA's AERMOD latest executable model version 19191. The AERMOD model incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain. The model was run with the regulatory default option and for both with and without downwash effects options, where the Building Profile Input Program (BPIP) was run with the downwash effect enabled. All analyses were conducted using the latest five consecutive years of meteorological data (2015-2019), obtained from the NYSDEC, Division of Air Resources, BAQAR, Impact Assessment and Meteorology Section. Surface data used in the analysis is from LaGuardia Airport, upper air data is from Brookhaven station, New York. The meteorological data was processed using the latest versions of AERMINUTE, AERSURFACE and AERMET. The meteorological data provided hour-by-hour wind speeds and directions, stability states, and temperature inversion elevations over the 5-year period. The population in Queens County, obtained from the U.S. Census Bureau (July 2019), was specified to account for the effects of increased surface heating from an urban area on pollutant dispersion under stable atmospheric conditions.

The pollutants of concern of No. 2 fueled boilers are NO_2, $PM_{2.5}$, and SO_2. The pollutant of concern for natural gas fueled boilers are NO_2 and $PM_{2.5}$. The boilers' energy intensities were calculated based on their energy consumption rate, obtained from the *CEQR Technical Manual Appendices*, corresponding to residential use in the buildings. Emissions were calculated based on emission factors obtained from the EPA's AP-42 manual for external combustion sources.[5] All fuel was assumed to be consumed during the 100-day (or 2,400 hour) heating season, based on the *CEQR Technical Manual*. **Table 17-3** shows the boilers' energy intensities and pollutants emission rates.

Table 17-3: RWCDS HVAC Systems Short-term and Annual Emission Rates

Site ID	Development Site RWCDS Floor Area (gsf)	Boiler's Energy Intensity (MMBtu); Fuel Used	Pollutant	Short-term Emission Rate (g/s)	Annual Emission Rate (g/s)
Projected Development Site 1	67,753	1.70; Oil No. 2	NO_2	3.07E-02	8.42E-03
			$PM_{2.5}$	3.27E-03	8.97E-04
			SO_2	3.27E-04	8.97E-05
Projected Development Site 2	18,734	0.47; Natural gas	NO_2	5.81E-03	1.59E-03
			$PM_{2.5}$	4.42E-04	2.48E-04

[5] EPA. *Compilation of Air Pollutant Emission Factors AP-42 Fifth Edition, Vol. 1:* Chapter 1: External Combustion Sources, https://www3.epa.gov/ttn/chief/ap42/ch01/final/c01s04.pdf. July 1998.

Projected Development Site 2 applied the *CEQR Technical Manual* default stack's diameter and exhausts exit velocity (as Projected Development Site 2 predicted boiler energy intensity is less than 1 million Btu) in the analysis. Projected Development Site 1's boiler stack's diameter was estimated based on values obtained from the New York City Department of Environmental Protection (DEP) "CA Permit" database for the corresponding boiler sizes (i.e., rated heat input or million Btu per hour)[6], and the *CEQR Technical Manual* default stack's exhausts exit velocity used. The stacks' exit temperatures were assumed to be 426°K, which is appropriate for boilers. The boilers' stacks were placed 3 feet above the roof and as close as possible to the receiving building; hence, a stack set back distance was specified if exceedance of a threshold concentration standard was predicted.

The developments were modeled as buildings that cover their entire lot(s) area(s) (the wall façade located on the outer lot lines) and rise to their RWCDS heights. Buildings in the surrounding area were accounted for in the downwash effect on plumes dispersions (BPIP). Receptors on the receiving building were placed on all wall façades from the ground floor to the roof-top height in spaced intervals.

The USGS National Elevation Dataset (NED) 1/3 arc-second resolution (GeoTIFF dataset), the terrain data set recommended by the US EPA for use in the United States for regulatory purposes, was used to process buildings base elevations. The base elevations of receptors and stacks were set to their buildings base elevations. Roof heights of buildings in the area were obtained from the NYC Building Footprint database[7], and satellite imagery consulted to identify buildings that were constructed recently or are being developed.

The 1-hour NO_2 concentrations were modeled with a Tier 2 (ARM 2) approach, applying the national default in-stack and ambient ratios of 0.5 and 0.9, respectively.

Results of Dispersion Analyses

Each pollutant averaging time was modeled twice; with building wake effect enabled/disabled. The predicted concentrations are the highest concentration of these. The NO_2 and SO_2 modeled concentrations were added to the background concentrations. The $PM_{2.5}$ modeled concentrations were evaluated with the *de minimis* design values for stationary sources. The HVAC dispersions analysis results are shown in **Table 17-4**.

[6] New York City Department of Environmental Protection "CA Permit" database obtained from the New York City Department of City Planning, February 2020.

[7] City of New York, nyc-geo-metadata (May 03, 2016); https://data.cityofnewyork.us/Housing-Development/Building-Footprints/nqwf-w8eh

Table 17-4: HVAC Dispersion Analysis Results

Pollutant and Averaging Time	Modeled Concentration (μg/m³) (2)	Background Concentration (μg/m³)	Evaluated Concentration (μg/m³)	Threshold Concentration (μg/m³)	Threshold Standard
Projected Development Site 1 – on - Projected Development Site 2					
1-hour NO_2	82.49	103.59	186	188	NAAQS
Annual NO_2	1.23	26.8	28	100	NAAQS
24-hour $PM_{2.5}$	2.91	17.6	2.91	8.7	*de minimis*
Annual $PM_{2.5}$	0.13	7.0	0.13	0.3	*de minimis*
1-hour SO_2	1.0	13.5	15	196	NAAQS
Annual SO_2	0.01	1.0	1	80	NAAQS
Projected Development Site 2 – on - Projected Development Site 1					
1-hour NO_2	80.35	103.59	184	188	NAAQS
Annual NO_2	1.27	26.8	28	100	NAAQS
24-hour $PM_{2.5}$	2.42	17.6	2.4	8.7	*de minimis*
Annual $PM_{2.5}$	0.20	7.0	0.2	0.3	*de minimis*

The concentrations shown in **Table 17-4** were predicted with certain restrictions to ensure that no significant adverse air quality impact(s) would occur. The restrictions for the Proposed Actions are specified in the Air Quality E-Designations that would be placed on the Development Site(s). The E-Designation language related to the heating and hot water systems is as follows:

(E) Designation (E-693)

Block 10068 Lots 200, 205, 210, 213, 214, and 215 (Projected Development Site 1): Any new residential, commercial, or community facility development on the above-referenced property must ensure that the heating, ventilation, air conditioning (HVAC) and hot water system(s) stack is located at the building's highest level or at least 48 feet above grade and that the stack is located at least 125 feet from the western lot line of Lot 215 facing 139th Street to avoid any potential significant adverse air quality impacts.

Block 10068 Lots 216 and 218 (Projected Development Site 2): Any new residential or commercial development on the above-referenced property must exclusively use natural gas as the type of fuel for heating, ventilating, air conditioning (HVAC), and hot water system(s), ensure that the stack is located at the building's highest level and at a minimum of 48 feet above grade, and that the stack is located at least 35 feet from the eastern lot line of Lot 216 facing 142nd Street to avoid any potential significant adverse air quality impacts.

Existing Stationary Sources

Industrial Source

Emission Sources

Per the *CEQR Technical Manual*, projects that would result in new uses (particularly schools, hospitals, parks, and residences) within 400 feet of manufacturing processing facilities, may result in potentially significant adverse impacts. The analysis first determines if there are any existing manufacturing uses (in the 400 feet study area) with exhaust stacks, vents, or other emission sources that may have the potential to adversely affect the uses introduced by the project. An air dispersion analysis is then conducted for any existing industrial source(s) located in the study area; otherwise no analysis is required.

Existing manufacturing uses with exhaust stacks, vents, or other emission sources that may have the potential to adversely affect the uses introduced by the project were identified by reviewing the DEP online Clean Air Tracking System (CATS) database, the NYSDEC map application (DECinfo Locator), and through a field survey. The field survey took place on March 8th, 2021.

The study area encompasses all or part of Blocks 10064, 10067, 10068, 10069, 10070, 10073, 10074, 11924, 11927, 11928, and 11931, and includes properties along 107th Avenue, 109th Avenue, Lakewood Avenue, the Van Wyck Expressway east service road, 107th Road, 139th Street, 141st Street, 142nd Street, Henry Gates Sr. Place, and Lux Road. Land uses in the study area are predominantly residential, with commercial uses located along 109th Avenue, as well as a few contractors' storage yards. The results of the study are as follows:

- There are not any facilities with DEP Processing permits, or NYSDEC Air Registration Facility Certificates, identified in the study area.
- Dong Fang Stainless Supply, Inc., an iron works, is located in the study area at 139-20 109th Avenue (Block 10069, Lot 125). This is a small (1,700+/- square feet) facility specializing in the sale and fabrication of stainless-steel railings, awnings, gates, fences, window guards, etc. At the time of the field survey, metal cutting and griding operations were observed at this facility. No painting or metal finishing operations were observed during the field survey, and no stacks, emissions or odors were noted from this location. The analysis for this facility is presented below:

There were no additional potential sources of toxic air emission identified in the study area.

Emission Profile - Dong Fang Stainless Supply, Inc.

Representative emissions of the ironwork facility (Dong Fang Stainless Supply, Inc.) were obtained from the DEP permit PB39705. The DEP permit PB039705 is for the fabrication and welding of metal. Emissions are produced at 4 stations of welding and metal fabrication. The facility activity rate is 8 hours per day, 250 day per year. The contaminant associated with the operation is total particulate, with a New York State identification number NY149-00-0, which is particulate matter. According to the EPA AP-42 manual, most of the particulate matter produced by welding is submicron in size and, as such, is considered to be all PM_{10} (i.e., particles # 10 micrometers in aerodynamic diameter) or total particulates. The emission rates are:

- 0.002 pounds per hour, 4 pounds per year.

The daily average emission rate was calculated based on an 8-hour activity rate per day, resulting in 0.016 pounds per day.

Dong Fang Stainless Supply, Inc. Dispersion Analysis

The *CEQR Technical Manual* industrial source screen was used to predict the pollutants concentrations emitted from the Dong Fang Stainless Supply, Inc. facility. The *CEQR Technical Manual* industrial source screen can be used to estimate maximum short-term and annual average concentrations values at various distances (from 30 to 400 feet) from a single emission source. The Dong Fang Stainless Supply, Inc. facility is located 75 feet away from the proposed project. Using the *CEQR Technical Manual* industrial source screen for a distance of 65 feet (distance less than or equal to the actual distance), the concentrations of pollutants emitted from the facility were predicted.

PM_{10} NAAQS is based on 24-hour averaging time. The 24-hour *CEQR Technical Manual* industrial source screen generic concentration is 8,841 $\mu g/m^3$, which was multiplied by the facility's 24-hour average emission rate. This resulted in a maximum predicted concentration of 0.7 $\mu g/m^3$. The cumulative concentration (increment concentration of 0.7 $\mu g/m^3$ plus background concentration of 28 $\mu g/m^3$) is 29 $\mu g/m^3$, and less than the NAAQS of 150 $\mu g/m^3$.

As such, the PM_{10} concentration is within the NAAQS, and therefore, no adverse air quality impact is predicted from industrial sources in the study area.

Major and Large Source

Per the *CEQR Technical Manual*, projects that would introduce new uses near major sources, large sources, or odor producing facilities may result in potentially significant adverse air quality impacts. The study area considers major sources, large sources, and odor producing facilities within 1,000 feet of the proposed project. Major emission sources are Title V facilities; large emission sources are facilities which require Air State Facility permits. Solid waste or medical waste incinerators, asphalt and concrete plants,

power generating plants, large boilers of large public facilities for example, and large industrial facilities are typical type of sources requiring these permits. Odor producing facilities are operations that have the potential to cause discomfort, such as solid waste management facilities, water pollution control plants (i.e., sewage treatment plants), and incinerators.

No existing large combustion source(s), such as power plants, cogeneration facilities, etc., located within 1,000 feet of the Proposed Project, was identified in the study area. The nearest major/large source is the Brooklyn College Air State Facility, which is located approximately 7,000 feet of the proposed project. In addition, no odor producing facility was identified in the 1,000 feet study area. As such, no analysis was warranted, and no significant adverse air quality impact is predicted from these types of facilities.

Conclusion

Based on the analysis, conditions associated with the Proposed Actions would not result in any violations of the ambient air quality standards. Therefore, there is no reason to believe that the Proposed Actions would result in any potentially significant adverse stationary or mobile source air quality impacts, and further assessment is not warranted.

9. NOISE

Environmental Studies Corp (ESC) conducted noise monitoring on Wednesday, April 28, 2021 in support of a zoning map and a zoning text amendment. The Rezoning Area includes Block 10068, Lots 200, 205, 210, 213, 214, 215, 216, and 218 in the South Jamaica neighborhood of Queens, Community District 12.

The predominant noise source at the Affected Area is vehicular traffic on surrounding streets. Project-generated traffic would not double vehicular traffic on nearby roadways, and therefore would not result in a perceptible increase in vehicular noise. However, there would be 5,950 gsf of community facility space for a Universal Pre-K school, and 840 sf of recreational space on the first floor of the building as well as an adjacent rear yard to be used as a playground for the Universal Pre-K school on Projected Development Site 1. Therefore, this noise assessment is not only limited to an assessment of ambient noise that could adversely affect occupants of the development, but also the noise impact from the proposed recreational space to the existing and future residents nearby.

An assessment of the potential for adverse effects on project occupants from ambient noise is warranted for Projected Development Site 1 due to a children's playground proposed to be constructed on this site. Noise from this playground would not affect the development on Projected Development Site 2 due to its distance from the site. In addition, noise measurements taken in front of Projected Development Site 2 (noise measurement location 1) are less than L10 of 70 dBA which does not require any noise mitigation.

Framework of Noise Analysis

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

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

Sound is often measured and described in terms of its overall energy, taking all frequencies into account. However, the human hearing process is not the same at all frequencies. Humans are less sensitive to low frequencies (less than 250 Hz) than mid-frequencies (500 Hz to 1,000 Hz) and are most sensitive to frequencies in the 1,000- to

5,000-Hz range. Therefore, noise measurements are often adjusted, or weighted, as a function of frequency to account for human perception and sensitivities. The most common frequency weightings used are the A- and C-weightings. These weight scales were developed to allow sound level meters, which use filter networks to approximate the characteristic of the human hearing mechanism, to simulate the frequency sensitivity of human hearing. The A-weighting is the most commonly used for environmental measurements, and sound levels measured using this weighting are denoted as dBA. The letter "A" indicates that the sound has been filtered to reduce the strength of very low and very high frequency sounds, much as the human ear does. C-weighting gives nearly equal emphasis to sounds of most frequencies. Mid-range frequencies approximate the actual (unweighted) sound level, while the very low and very high frequency bands are significantly affected by C-weighting.

Table 19-1: Noise Levels of Common Sources

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

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

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

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

- 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_{max} is the highest SPL measured during a given period of time. It is useful in evaluating L_{eq}s for time periods that have an especially wide range of 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 dBA with each doubling of the distance from the source. Sound energy is absorbed in the air as a function of temperature, humidity, and the frequency of the sound. This attenuation can be up to 2 dB over 1,000 feet. The drop-off rate also will vary with both terrain conditions and the presence of obstructions in the sound propagation path.

Noise Standards and Guidelines

In 1983, the New York City Department of Environmental Protection (NYCDEP) adopted the City Environmental Quality Review (CEQR) noise exposure guidelines for exterior noise levels. As shown in Table 19-2 below, noise standards classify noise exposure into four categories based on noise level limits and land use, for vehicular traffic, rail, and aircraft noise sources: Acceptable, Marginally Acceptable, Marginally Unacceptable and Clearly Unacceptable, Table 19-3 of the *CEQR Technical Manual* defines attenuation

requirements for buildings based on exterior noise exposure levels. Recommended noise attenuation values for buildings are designed to maintain interior noise levels of 45 dBA (L_{10} *or Ldn, depending on the source*) or below.

Table 19-2: Noise Exposure Guidelines for Use in City Environmental Impact Review

Receptor Type	Time Period	Acceptable General External	Airport[3] Exposure	Marginally Acceptable General External	Airport[3] Exposure	Marginally Unacceptable General External	Airport[3] Exposure	Clearly Unacceptable General External	Airport[3] Exposure
1.Outdoor area requiring serenity and quiet[2]		$L_{10} \leq 55$ dBA	Ldn ≤ 60 dBA		60 dBA z< Ldn ≤ 65 dBA		65 dBA z< Ldn ≤ 75 dBA		Ldn> 75 dBA
2. Hospital, Nursing		$L_{10} \leq 55$ dBA		$55<L_{10}\leq 65$ dBA		$65<L_{10}\leq 80$ dBA		$L_{10}>80$dBA	
3. Residence, residential hotel or	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 – 7	L10≤55dBA		$55<L_{10}\leq 70$ dBA		$70<L_{10}\leq 80$ dBA		$L_{10}>80$dBA	
4. School, museum, library, court house of worship, transient hotel or motel, public meeting room,		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		Same as Residential Day		Same as Residential Day		Same as Residential Day	
6. Industrial, public areas only[4]	Note 4	Note 4		Note 4		Note 4		Note 4	

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

Notes:

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

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

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

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

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

Table 19-3 CEQR TM

Required **Attenuation Values to Achieve Acceptable Interior Noise Levels**

	Marginally Unacceptable				**Clearly Unacceptable**
Vehicular Traffic	$70 < L_{10} \leq 73$	$73 < L_{10} \leq 76$	$76 < L_{10} \leq 78$	$78 < L_{10} \leq 80$	$80 < L_{10}$
Aircraft[A]	65<DNL≤68	68<DNL≤71	71<DNL≤73	73<DNL≤75	75<DNL
Train	65<Ldn≤68	68<Ldn≤71	71<Ldn≤73	73<Ldn≤75	75<Ldn
Attenuation[B]	(i) 28 dB(A)	(ii) 31 dB(A)	(iii) 33 dB(A)	(iv) 35 dB(A)	See note C

Source: New York City of Environmental Protection

Notes:

A DNL descriptor based on average values of Ldn over a year period.

B The above composite window-wall attenuation values are for residential dwellings and community facility development. Commercial office spaces and meeting rooms would be 5 dB(A) less in each category. All of the above categories require a closed window situation and hence an alternate means of ventilation.

C The required attenuation value is the difference between Lbuild and Linterior,, using the appropriate noise descriptor Where:

Lbuild is the projected noise level under the build condition rounded up to the whole number

Linterior is the designed interior noise level (45 dB(A) for vehicular noise, 40 dB(A) for aircraft and train noise)

Source: New York City Department of Environmental Protection

Measurement Location and Equipment

Noise measurement was conducted during peak weekday vehicular travel periods (AM, Midday, PM) on a typical midweek day. Since the Air Train track to JFK is located approximately 400 feet west of the project area, one-hour measurement was taken at L1. The weather condition was normal with calm wind and is considered suitable for an ambient noise measurement.

A Type 1 sound level meter (Larson Davis 831) with wind shield was used to conduct the noise monitoring. The meter was calibrated prior to and following each monitoring session. The meter was placed on a tripod at a height of approximately five feet above the ground, away from any reflective surfaces.

The noise measurements were conducted at the following locations (as shown in Figure 19-1):

L1: Intersection of 109th Avenue and 139th Street (Figure 19-2); and

L2: Intersection of 109th Avenue and 142nd Street (Figure 19-3).

Due to the construction work on the property of 139-01 109th Avenue during the afternoon peak hour (16:00 pm to 17:30 pm), as shown in Figure 19-4, a jack hammer was used to break the pavement in the garden. The PM measurement of L1 was taken from 17:41 pm to 18:41 pm.

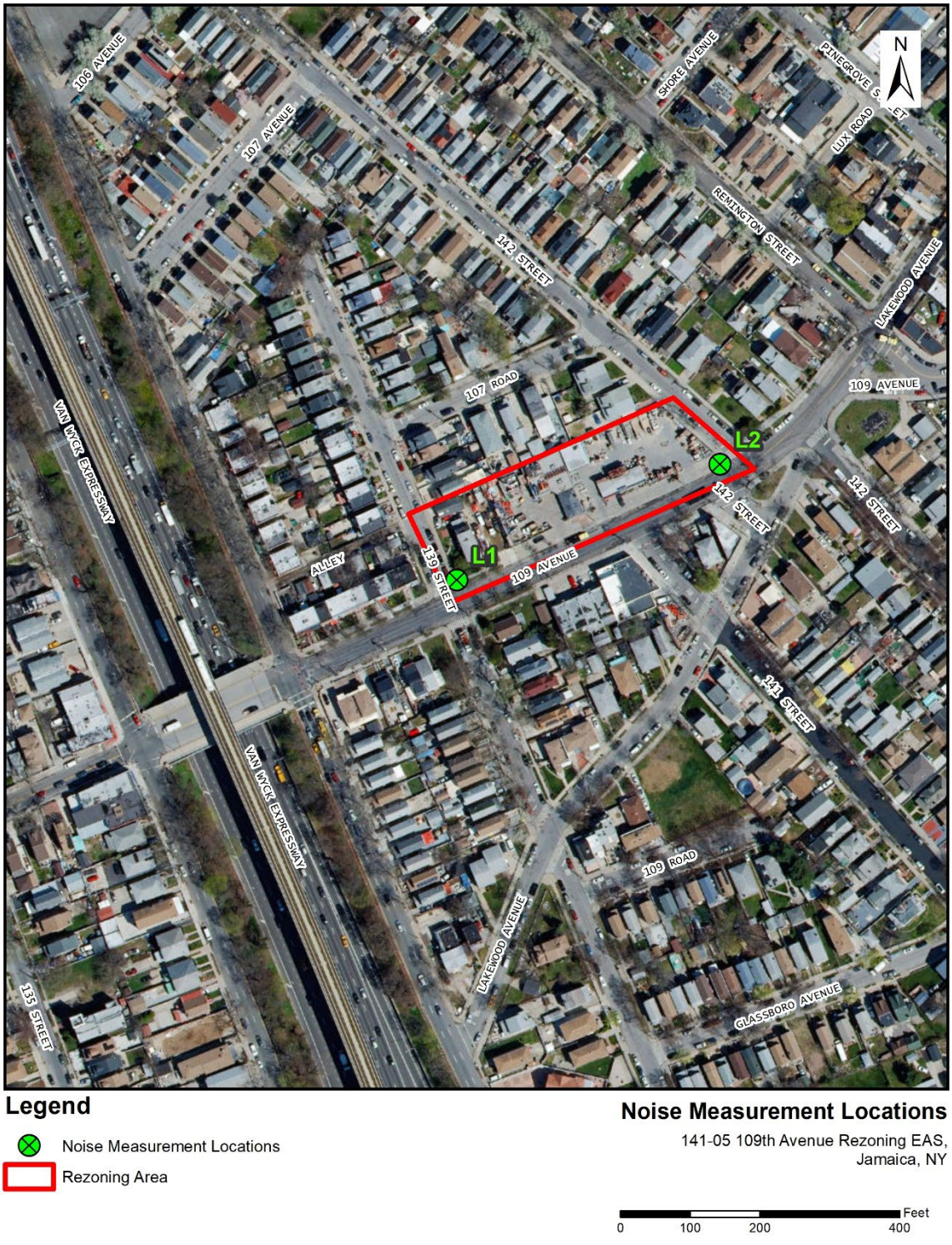


Figure 19-1: Noise Monitoring Locations



Figure 19-2: Meter Setup at Location 1



Figure 19-3: Meter Setup at Location 2

1

Figure 19-4: A jack hammer was used in the garden during PM peak period

Measurement Conditions

Monitoring was conducted during typical midweek conditions, on April 28, 2021 (Wednesday). The weather was dry and wind speeds were moderate during all monitoring periods. The sound meter was calibrated before and after each monitoring session.

Existing Conditions

Based on the noise measurements, the predominant source of noise is vehicular traffic.

Table 19-4 and 19-5 below contains the results for the measurements taken at the Projected Development Sites*:*

Table 19-4

Noise Levels (dB) at Location 1

April 28, 2021 (Wednesday)

Time	**7:19 am – 8:19 am**	**11:58 am – 12:58 pm**	**17:41 pm – 18:41 pm**
L_{eq}	63.7	63.1	67.5
L_{max}	82.8	84.0	95.2
L_{10}	66.4	65.7	67.6
L_{50}	59.7	59.1	61.2
L_{90}	55.5	54.5	56.2
L_{min}	52.6	50.8	52.4

Table 19-5

Noise Levels (dB) at Location 2

April 28, 2021 (Wednesday)

Time	**8:22 am – 8:42 am**	**13:01 pm – 13:21 pm**	**17:18 pm – 17:39 pm**
L_{eq}	64.8	64.8	66.2
L_{max}	77.2	79.6	85.1
L_{10}	68.2	68.3	67.8
L_{50}	62.2	61.4	63.0
L_{90}	54.6	52.8	56.1
L_{min}	49.3	48.1	52.1

Table 19-6 and 19-7 *below contains the traffic counts and vehicle classifications during each monitoring period:*

Table 19-6 ***Location 1:*** *Traffic volumes and vehicle classifications*			
	7:19 am – 8:19 am	**11:58 am – 12:58 pm**	**17:41 pm – 18:41 pm**
Car/ Taxi/ Van/SUV	525	452	771
Bus	11	7	0
Medium Truck	13	5	6
Heavy Truck	3	2	4
Motorcycle	0	1	5
Air Train	11	14	20

Table 19-7 ***Location 2:*** *Traffic volumes and vehicle classifications*			
	8:22 am – 8:42 am	**13:01 pm – 13:21 pm**	**17:18 pm – 17:39 pm**
Car/ Taxi/ Van/SUV	198	161	292
Bus	4	5	0
Medium Truck	3	7	4
Heavy Truck	1	1	1
Motorcycle	0	0	0

Observation and Conclusions

As mentioned above, due to the construction work on the property of 139-01 109th Avenue during the afternoon peak hour (16:00 pm to 17:30 pm), the PM measurement of L1 was taken from 17:41 pm to 18:41 pm. Between 139th Street and 142nd Street, along 109th Avenue, there are no traffic lights. Vehicles travel faster than 25 mph (city speed limit), especially close to the intersection of 142nd Street.

Stationary Source

It is assumed that the building mechanical systems (i.e., HVAC systems) would be designed to meet all applicable noise regulations (i.e., Subchapter 5, §24-227 of the New York City Noise Control Code, the New York City Department of Buildings Code) and to avoid producing levels that would result in any significant increase in ambient noise levels. Therefore, the Proposed Actions would not result in any significant adverse noise impacts related to building mechanical equipment.

Play Area Noise

While people are not usually thought of as stationary noise, children in playgrounds or spectators at outdoor sporting events or concerts can introduce additional sources of noise within communities. According to the *CEQR Technical Manual*, noise generated by children in playgrounds or people using parks is considered a stationary source of noise. As mentioned in the Project Description, there would be 5,950 gsf of community facility space for a Universal Pre-K school, and 840 sf of recreational space on the first floor of the proposed building on Projected Development Site 1, as well as an adjacent rear yard to be used as a playground for the Universal Pre-K school. As such, a playground noise analysis was conducted to determine if there would be a significant adverse noise impact at nearby receptors and whether there would be a need for additional attenuation requirement for Projected Development Site 1.

Potential noise impacts for the Proposed Actions due to the development of the proposed playground were determined using methodology based on measurements made at a series of New York City school playgrounds for the New York City School Construction Authority (SCA) per the 2021 CEQR Technical Manual. To predict potential noise impacts at a given distance from a play area boundary, the study suggests a maximum Leq noise level at the boundary of the proposed playground would be 71.5 dBA and a 4.5 dB(A) reduction in Leq noise levels per doubling of distance at a distance between 40- and 300-feet, with initial reductions of 4.8 dB(A) at 20-feet, 6.8 dB(A) at 30-feet, and 9.1 dB(A) at 40-feet. Noise levels can be estimated with the following equation at a sensitive receptor with a direct line of sight to the play area between 40- to 300-feet:

$Lp1 = Lp2 - 15*\log(d/10)$

Where:

Lp1 = the predicted noise level at a specific distance.

Lp2 = the maximum Leq at the boundary of the school play area.

d = the distance from the play area boundary to the sensitive receptor in feet.

In certain situations these values may overstate play area noise levels.

The Proposed Project, as well as residential buildings on Block 10068, would have the greatest potential for noise level impacts due to noise from the proposed playground. Specifically, the northern façade of Projected Development Site 1, the rear windows of 139-18 107th Road, and the rear windows of 107-62 142nd Street would be the most likely to experience noticeable noise level increases during certain limited periods due to the proposed playground, as they are adjacent to this proposed source of stationary noise and would have a direct line of sight to the play area.

Given that the facades most affected by the proposed playground noise would be quite far away and shielded from nearby roadways, the ambient noise levels at these facades would be much lower than traffic Leq noise levels of low- and mid-60s dBA depicted in Table 19-4 and Table 19-5. With that said, considering the maximum Leq noise level of 71.5 dBA at the boundary of the proposed playground, existing background noise levels would be expected to have minimal influence on the total build condition noise levels at these facades. Additionally, since the playground noise would be the dominant noise source at these facades, build condition L10 noise levels would be calculated by adding 2 dBA to the calculated Leq noise levels. As the northern façade of Projected Development Site 1 would be directly adjacent to the boundary of the proposed play area, the highest build condition Leq noise level would be 71.5 dBA and the highest L10 noise level would be 73.5 dBA at the northern façade of Projected Development Site 1, directly adjacent to the proposed playground. As such, a noise E-Designation with appropriate window/wall attenuation would be provided at all façades of Projected Development Site 1 that are directly adjacent to the proposed play area in order to avoid significant adverse impacts at the Project Site. As for existing receptors, the closest receptor window is the rear window of 139-18 107th Road, which is approximately 25 feet from the boundary of the proposed play area. At this distance, expected playground Leq noise level would be up to 66.7 dBA. As mentioned previously, the existing background noise level is expected to be much lower than measured Leq of low- to mid-60s dBA from the above Table 19-4 and Table 19-5 and it is expected that the existing receptor may likely experience potential significant noise increases due to the proposed playground. However, while existing receptors may experience significant noise increases, the highest build condition L10 noise level would be up to 68.7 dBA at the closest existing receptor. Given that the existing building façade would provide 25 dBA window/wall attenuation, the highest interior L10 noise level at the existing receptor would be up to 43.7 dBA, which is considered within the acceptable interior noise limit of 45 dBA for residential uses. Other existing receptors would be farther from the proposed play area and would be affected less by the proposed playground noise. Thus, the potential impact at existing receptors would be

considered fully mitigated by the existing building façade condition and, therefore, would not be considered a significant adverse noise impact.

Determination of Impacts/Building Attenuation Requirements

The 2021 *CEQR Technical Manual* Table 19-2 contains noise exposure guidelines. For a residential use such as would occur under the Proposed Actions, an L_{10} of between 65 and 70 dB(A) is identified as a marginally acceptable general external exposure. An L_{10} of between 70 and 80 dB(A) is identified as a marginally unacceptable general external exposure.

Based on the results of the noise monitoring, and calculations of noise from the proposed recreational area, 31 dBA of window/wall attenuation is required for the facades of Projected Development Site 1 that are directly adjacent to the proposed play area (see Window/Wall Attenuation figure on the following page).

An (E) Designation for noise will be placed on the zoning map for the Applicant-owned Projected Development Site 1 as follows.

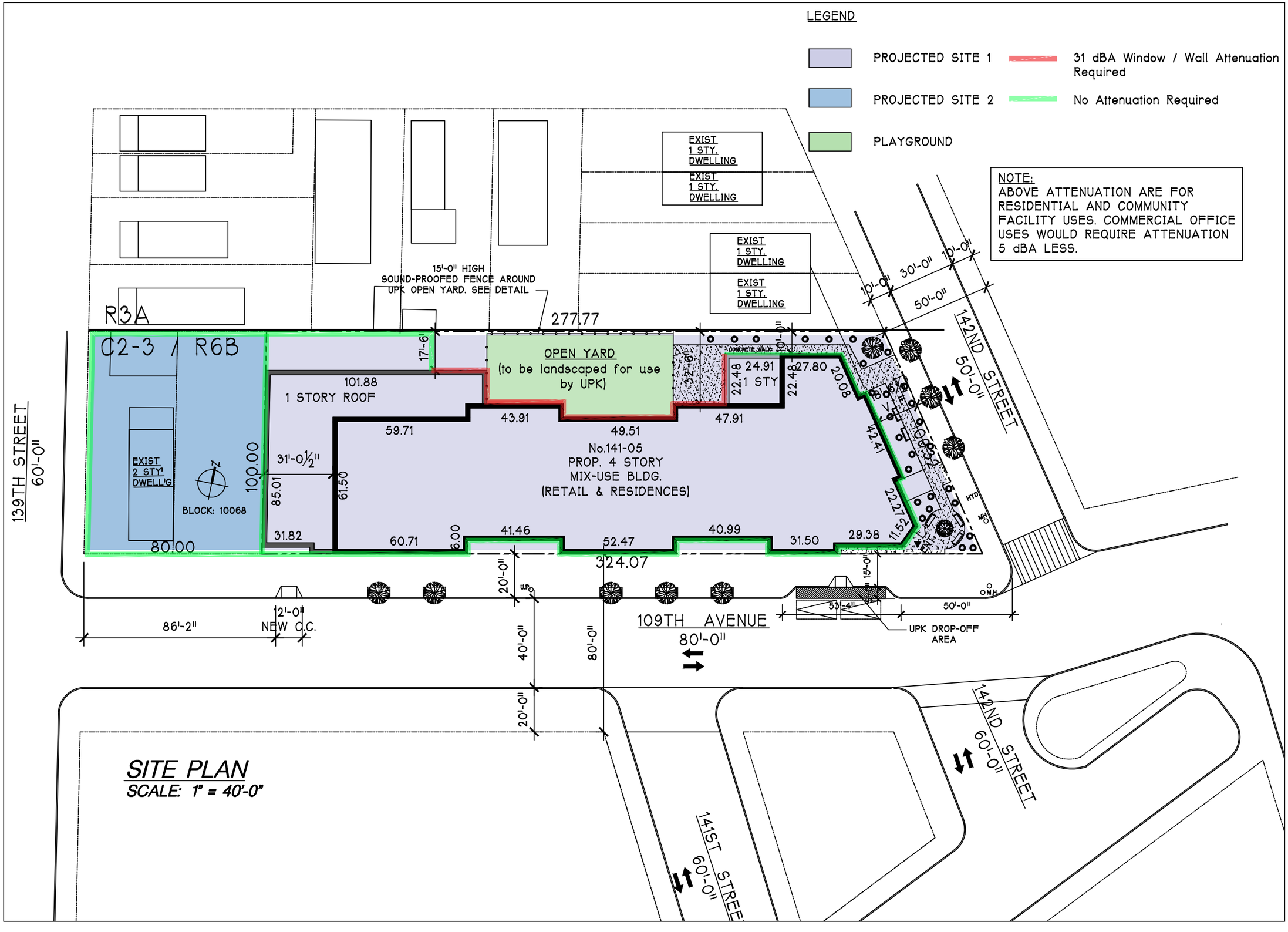
(E) Designation (E-693)

Projected Development Site 1 **(Block 10068, Lots 200, 205, 210, 213, 214, 215)*:***

In order to ensure an acceptable interior noise environment, future residential/ commercial office/community facility uses must provide a closed-window condition with a minimum of 31 dB(A) window-wall attenuation on all facades directly adjacent to the proposed play area in order to maintain an interior noise level no greater than 45 dB(A) for residential and community facility uses or no greater than 50 dB(A) for commercial office uses as illustrated in the EAS. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

No window/wall attenuation would be required for Projected Development Site 2.

With the implementation of the (E) Designation, no significant adverse impacts related to noise would occur. The Proposed Actions would not result in any potentially significant adverse stationary or mobile source noise impacts, and further assessment is not warranted.



THE ARCHITECT SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, DEVIATIONS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTIONS WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALWAYS USE DIMENSIONS AS SHOWN. DRAWINGS ARE NOT TO BE SCALED. GERALD J. CALIENDO ARCHITECT, P.C. AND ITS PRINCIPAL/EMPLOYEES WERE NOT RETAINED FOR ANY CONSTRUCTION SUPERVISION.

Gerald J. Caliendo, R.A., A.I.A.
Architect, P.C.
Architecture
Interior Design
Code Consultant
Building Dept. Expediting
138-72 Queens Boulevard
Briarwood N.Y. 11435
Tel. (718) 268-9098
Fax (718) 268-9097
www.caliendoarchitects.com

DRAWING TITLE: SITE PLAN
PREMISES: WINDOW / WALL ATTENUATION REQUIREMENTS
141-05 109TH AVENUE
JAMAICA, NY

DRAWN BY:	N.M.H.	CHECKED BY:	GJC	JOB No:	19066
SCALE:	AS NOTED	DATE:	11-10-22		

SEAL: REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

DRAWING No: 3 OF 11

Z-003.00

10. NEIGHBORHOOD CHARACTER

Although the Proposed Actions required a detailed shadows analysis and an extensive open space assessment, an assessment of neighborhood character is not warranted as further detailed below.

The Proposed Actions would not result in any significant adverse impacts to land use, zoning, and public policy. The proposed Zoning Map and Zoning Text Amendment would only apply to the Project Area and would not affect lots beyond this area. The Proposed Actions would reinforce existing residential land use patterns in the surrounding area by promoting conforming development to replace the existing non-conforming manufacturing use within the Project Area. The Applicant believes that the proposed increase in density is appropriate at this location because the Development Site is located along 109th Avenue, a wide street. It also abuts open space to the south and southeast created by 142nd Street and the intersection of 109th Avenue and Lakewood Avenue. The proposed R6B zoning district would permit appropriate bulk along 109th Avenue and would permit the same uses as located in the R3A zoning to remain on the northern portion of Block 10068 outside of the Project Area. The action would be an appropriate development in the Project Area and would be a positive contribution to Queens Community District 12 and to the surrounding neighborhood. The proposed project would meet the City's public policy goals as well as similar State and national public policy goals related to the provision of affordable housing.

The Proposed Actions did not meet the threshold for the analysis of socioeconomic conditions.

The Proposed Actions would not result in any significant adverse shadows impacts as the buildings on Projected Development Sites 1 and 2 would not cast any significant adverse new shadows on shadow sensitive open space or historic resources.

It is anticipated that the project would not result in any potentially significant adverse open space impacts as the Proposed Actions would not result in any direct impacts on any open space resources and would result in a minimal decrease in the future with the action open space ratio. In addition, public and private open space would be provided on Projected Development Site 1 to meet a portion of the open space needs of project residents on site.

The Project Area and the 400-foot radius project study area are not a Federal, State, or New York City designated Historic District and do not contain any individually designated historic resources. LPC has determined that Projected Development Sites 1 and 2 do not have any historic or archaeological significance.

Relative to urban design and visual resources, the development scenario considered under the Proposed Actions would redevelop underutilized and underbuilt property

from nonconforming warehouse uses and building materials storage yards to new mixed-use residential, commercial, and community facility development the design of which would be required to be consistent with the existing built context of the surrounding neighborhood. In addition, the With-Action Development Scenario in the Project Area would not result in any significant impacts to visual resources. No visual resources exist within the 400-foot project study area with the exception of a small (0.04 acre) landscaped triangle, and the projected development would not block views of this resource from public streets. The Proposed Actions would not partially or totally block a view corridor or a natural or built visual resource that is rare in the area or considered a defining feature of the neighborhood.

In accordance with the threshold guidelines as detailed in the 2021 *CEQR Technical Manual,* the Proposed Actions are not expected to result in significant adverse impacts related to transportation. Specifically, the Proposed Actions are unlikely to have a significant effect on the neighborhood traffic, parking, transit, and pedestrian movements.

Play Area Noise

While people are not usually thought of as stationary noise, children in playgrounds or spectators at outdoor sporting events or concerts can introduce additional sources of noise within communities. According to the *CEQR Technical Manual*, noise generated by children in playgrounds or people using parks is considered a stationary source of noise. As mentioned in the Project Description, there would be 5,950 gsf of community facility space for a Universal Pre-K school, and 840 sf of recreational space on the first floor of the proposed building on Projected Development Site 1, as well as an adjacent rear yard to be used as a playground for the Universal Pre-K school. As such, a playground noise analysis was conducted to determine if there would be a significant adverse noise impact at nearby receptors and whether there would be a need for additional attenuation requirement for Projected Development Site 1.

Potential noise impacts for the Proposed Actions due to the development of the proposed playground were determined using methodology based on measurements made at a series of New York City school playgrounds for the New York City School Construction Authority (SCA) per the 2021 CEQR Technical Manual. To predict potential noise impacts at a given distance from a play area boundary, the study suggests a maximum Leq noise level at the boundary of the proposed playground would be 71.5 dBA and a 4.5 dB(A) reduction in Leq noise levels per doubling of distance at a distance between 40- and 300-feet, with initial reductions of 4.8 dB(A) at 20-feet, 6.8 dB(A) at 30-feet, and 9.1 dB(A) at 40-feet. Noise levels can be estimated with the following equation at a sensitive receptor with a direct line of sight to the play area between 40- to 300-feet:

Lp1 = Lp2 – 15*log(d/10)

Where:

Lp1 = the predicted noise level at a specific distance.

Lp2 = the maximum Leq at the boundary of the school play area.

d = the distance from the play area boundary to the sensitive receptor in feet.

In certain situations these values may overstate play area noise levels.

The Proposed Project, as well as residential buildings on Block 10068, would have the greatest potential for noise level impacts due to noise from the proposed playground. Specifically, the northern façade of Projected Development Site 1, the rear windows of 139-18 107th Road, and the rear windows of 107-62 142nd Street would be the most likely to experience noticeable noise level increases during certain limited periods due to the proposed playground, as they are adjacent to this proposed source of stationary noise and would have a direct line of sight to the play area.

Given that the facades most affected by the proposed playground noise would be quite far away and shielded from nearby roadways, the ambient noise levels at these facades would be much lower than traffic Leq noise levels of low- and mid-60s dBA depicted in Table 19-4 and Table 19-5. With that said, considering the maximum Leq noise level of 71.5 dBA at the boundary of the proposed playground, existing background noise levels would be expected to have minimal influence on the total build condition noise levels at these facades. Additionally, since the playground noise would be the dominant noise source at these facades, build condition L10 noise levels would be calculated by adding 2 dBA to the calculated Leq noise levels. As the northern façade of Projected Development Site 1 would be directly adjacent to the boundary of the proposed play area, the highest build condition Leq noise level would be 71.5 dBA and the highest L10 noise level would be 73.5 dBA at the northern façade of Projected Development Site 1, directly adjacent to the proposed playground. As such, a noise E-Designation with appropriate window/wall attenuation would be provided at all façades of Projected Development Site 1 that are directly adjacent to the proposed play area in order to avoid significant adverse impacts at the Project Site. As for existing receptors, the closest receptor window is the rear window of 139-18 107th Road, which is approximately 25 feet from the boundary of the proposed play area. At this distance, expected playground Leq noise level would be up to 66.7 dBA. As mentioned previously, the existing background noise level is expected to be much lower than measured Leq of low- to mid-60s dBA from the above Table 19-4 and Table 19-5 and it is expected that the existing receptor may likely experience potential significant noise

increases due to the proposed playground. However, while existing receptors may experience significant noise increases, the highest build condition L10 noise level would be up to 68.7 dBA at the closest existing receptor. Given that the existing building façade would provide 25 dBA window/wall attenuation, the highest interior L10 noise level at the existing receptor would be up to 43.7 dBA, which is considered within the acceptable interior noise limit of 45 dBA for residential uses. Other existing receptors would be farther from the proposed play area and would be affected less by the proposed playground noise. Thus, the potential impact at existing receptors would be considered fully mitigated by the existing building façade condition and, therefore, would not be considered a significant adverse noise impact.

Based on the results of the noise monitoring, and calculations of noise from the proposed recreational area, 31 dBA of window/wall attenuation is required for the facades of Projected Development Site 1 that are directly adjacent to the proposed play area to mitigate potential noise impacts to future residents of the projected development. No window/wall attenuation would be required for Projected Development Site 2. An (E) Designation for noise will be placed on the zoning map for the Applicant-owned Projected Development Site 1 as follows.

(E) Designation (E-693)

Projected Development Site 1 **(Block 10068, Lots 200, 205, 210, 213, 214, 215)*:***

In order to ensure an acceptable interior noise environment, future residential/ commercial office/community facility uses must provide a closed-window condition with a minimum of 31 dB(A) window-wall attenuation on all facades directly adjacent to the proposed play area in order to maintain an interior noise level no greater than 45 dB(A) for residential and community facility uses or no greater than 50 dB(A) for commercial office uses as illustrated in the EAS. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

With the implementation of the (E) Designation, no significant adverse impacts related to noise would occur. Therefore, there would be no potentially significant adverse stationary or mobile source noise impacts from the Proposed Actions.

11 . CONSTRUCTION

Introduction

A preliminary construction analysis may be required because future development facilitated by the Proposed Actions could result in the following. Development on Projected Development Sites 1 and 2 could result in potential construction impacts.

- Construction of multiple buildings where there is a potential for on-site receptors on buildings to be completed before the final build-out;
- The operation of several pieces of diesel equipment in a single location at peak construction; and
- Construction on multiple development sites in the same geographic area, such that there is the potential for several construction timelines to overlap, and last for more than two years overall.

Proposed Construction Schedule

Construction would occur on two Development Sites including one Applicant-owned Site and one Non-Applicant owned Site as further described below. It is assumed that the Proposed Actions would be approved in 2023. The Proposed Development on the Applicant Controlled Project Development Site is expected to be completed by 2025 after an up to 24-month/2 year construction period. As the Proposed Actions would result in the creation of an additional development site that is not controlled by the Applicant, it is anticipated that this site would be developed over an additional up to 12 months/1 year period with a Build Year of 2026. The total construction period is therefore projected to be up to 36 months/3 years for the two Projected Development Sites.

Applicant-owned Site

Construction of Projected Development Site 1 is expected to begin in early 2024 and be completed within 24 months/2 years or less by late 2025. The construction sequence and timeline for Projected Development Site 1 is listed below.

Non-Applicant owned Site

It is not known when construction on the Non-Applicant owned Site would occur but it is assumed that it would occur shortly after the completion of construction on the Applicant-owned Projected Development Site 1. Construction and occupancy of the new building on Projected Development Site 2 would conservatively take up to 12 months/1 year to complete based on the floor area of the structure relative to the Applicant-owned Site (approximately 25% of the size of the building on Projected Development Site 1). Therefore, assuming a total construction and occupancy period of up to 12 months/1 year on the Non-Applicant owned Site, the final project build year would be 2026.

The construction sequence and timeline for the Non-Applicant Owned Site is listed below.

- Projected Development Site 2 – start construction January 2026; complete construction December 2026.

There would be no overlap in the construction of the buildings on Projected Development Sites 1 and 2.

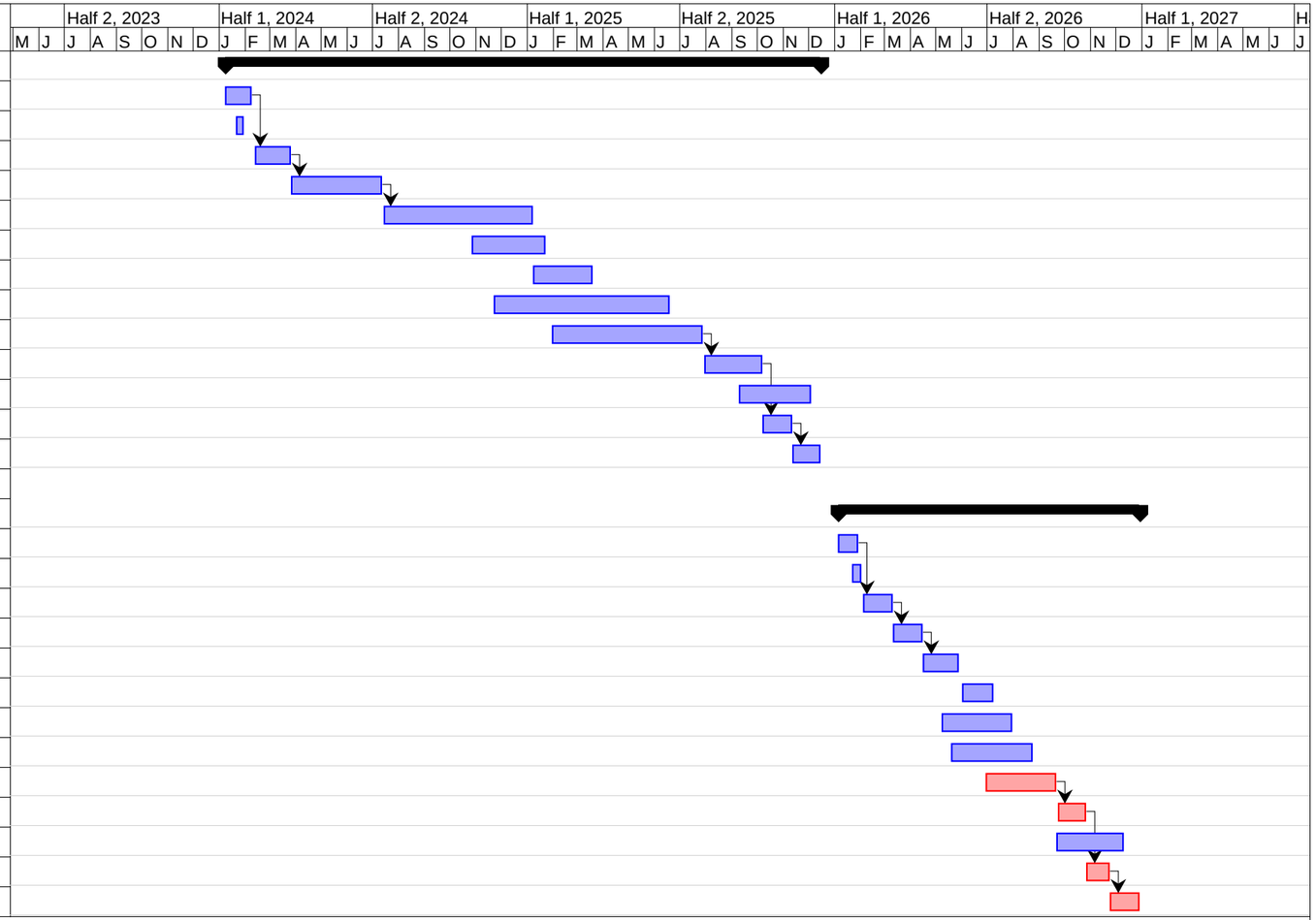
Proposed Construction Activities

Applicant-owned Site

Construction activities on Projected Development Site 1 would be as detailed below and illustrated in the Construction Timeline graphic which follows (see construction schedule letter in the Construction Appendix). Approximately 14 months would involve exterior construction activities on the proposed building and approximately 13 months would be required for interior fit-out activities. There would be an approximately 3 month overlap between exterior and interior work so that the total construction period would be less than 24 months.

- Demolition is scheduled to last approximately 30 days or 1 month (January 2024 to February 2024);
- Support of excavation and foundation work is scheduled for approximately 150 days or 5 months (February 2024 to July 2024);
- Superstructure will start approximately 1 month prior to completion of all excavation and foundation work and last approximately 6 months (July 2024 to January 2025);
- Facade enclosure work will run approximately 3 months and start approximately 2 months before completion of all superstructure work (October 2024 to January 2025);
- Roofing and waterproofing would run approximately 60 days and start approximately 1 month before the end of facade enclosure work (January 2025 to March 2025);
- The elevator will be installed upon completion of the superstructure with some overlap - commencing approximately 2 months prior to completion of the superstructure and running a total of approximately 7 months (November 2024 to June 2025);
- Construction of the interior core and shell would commence at the end of superstructure work and be completed within approximately 6 months (January 2025 to July 2025);
- Finishes will take place over approximately 3 months and conclude

	Name	Duration	Start	Finish
1	**CONSTRUCTION APPLICANT SITE**	**507 days**	**1/8/24 8:00 AM**	**12/16/25 5:00 PM**
2	DEMOLITION AND SITE CLEARING	25 days	1/8/24 8:00 AM	2/9/24 5:00 PM
3	SITE MOBILIZATION/TEMP FAC/LOGISTICS	8 days	1/22/24 8:00 AM	1/31/24 5:00 PM
4	EXCAVATION AND SOE	32 days	2/12/24 8:00 AM	3/26/24 5:00 PM
5	FOUNDATION	78 days	3/27/24 8:00 AM	7/12/24 5:00 PM
6	SUPERSTRUCTURE CONCRETE	128 days	7/15/24 8:00 AM	1/8/25 5:00 PM
7	FACADE ENCLOSURE	63 days	10/28/24 8:00 AM	1/22/25 5:00 PM
8	ROOFING AND WATERPROOFING	50 days	1/9/25 8:00 AM	3/19/25 5:00 PM
9	ELEVATOR	150 days	11/22/24 8:00 AM	6/19/25 5:00 PM
10	INTERIOR CORE AND SHELL	128 days	1/31/25 8:00 AM	7/29/25 5:00 PM
11	SPECIAL INSPECTIONS	50 days	7/30/25 8:00 AM	10/7/25 5:00 PM
12	INTERIOR FINISHES	64 days	9/9/25 8:00 AM	12/5/25 5:00 PM
13	COMPLETED INSPECTIONS AND TESTING	25 days	10/8/25 8:00 AM	11/11/25 5:00 PM
14	TCO/CO	25 days	11/12/25 8:00 AM	12/16/25 5:00 PM
15	**CONSTRUCTION NON-APPLICANT SITE**	**257 days**	**1/5/26 8:00 AM**	**12/29/26 5:00 PM**
16	DEMOLITION AND SITE CLEARING	20 days	1/5/26 8:00 AM	1/30/26 5:00 PM
17	SITE MOBILIZATION/TEMP FAC/LOGISTICS	8 days	1/22/26 8:00 AM	2/2/26 5:00 PM
18	EXCAVATION AND SOE	25 days	2/5/26 8:00 AM	3/11/26 5:00 PM
19	FOUNDATION	25 days	3/12/26 8:00 AM	4/15/26 5:00 PM
20	SUPERSTRUCTURE CONCRETE	32 days	4/16/26 8:00 AM	5/29/26 5:00 PM
21	FACADE ENCLOSURE	28 days	6/1/26 8:00 AM	7/8/26 5:00 PM
22	ROOFING AND WATERPROOFING	61 days	5/8/26 8:00 AM	7/31/26 5:00 PM
23	ELEVATOR	71 days	5/19/26 8:00 AM	8/25/26 5:00 PM
24	INTERIOR CORE AND SHELL	61 days	6/30/26 8:00 AM	9/22/26 5:00 PM
25	SPECIAL INSPECTIONS	25 days	9/23/26 8:00 AM	10/27/26 5:00 PM
26	INTERIOR FINISHES	59 days	9/21/26 8:00 AM	12/10/26 5:00 PM
27	COMPLETED INSPECTIONS AND TESTING	20 days	10/28/26 8:00 AM	11/24/26 5:00 PM
28	TCO/CO	25 days	11/25/26 8:00 AM	12/29/26 5:00 PM



approximately 2 months after interior core and shell are complete (September 2025 to December 2025); and

- Inspection, sign offs, and TCO will take approximately 2 months concurrent with the finishes and conclude approximately 1 month after interior finishes (October 2025 to December 2025).

Non-Applicant owned Site

Construction activities on the Non-Applicant owned Site would be similar to those on the Applicant-owned Site described above. Construction activities on Projected Development Site 2 would be as detailed below and illustrated in the Construction Timeline graphic which follows (see construction schedule letter in the Construction Appendix). Approximately 7 months would involve exterior construction activities on the proposed building and approximately 7 months would be required for interior fit-out activities. There would be an approximately 2 month overlap between exterior and interior work so that the total construction period would be less than 12 months.

- Demolition is assumed to last approximately 30 days or 1 month (January 2026);
- Support of excavation and foundation work is assumed to last approximately 60 days or 2 months (February 2026 to April 2026);
- Superstructure is assumed to start shortly prior to completion of all excavation and foundation work and last approximately 2 months (April 2026 to May 2026);
- Facade enclosure work is assumed to run approximately 1 month and start before completion of all superstructure work (June 2026 to July 2026);
- Roofing and waterproofing is assumed to run approximately 60 days and start before the end of facade enclosure work (May 2026 to July 2026);
- The elevator is assumed to be installed upon completion of the superstructure, commencing prior to completion of the superstructure and running a total of approximately 3 months (May 2026 to August 2026);
- Construction of the interior core and shell is assumed to commence at the end of superstructure work and be completed within approximately 3 months (June 2026 to September 2026);
- Finishes are assumed to take place over approximately 3 months (September 2026 to December 2026); and
- Inspection, sign offs, and TCO are assumed to take approximately 1 month concurrent with the finishes and conclude approximately I month after interior finishes (November 2026 to December 2026).

Project construction activities are expected to be typical for larger building construction projects in New York City. Construction activities would predominantly occur Monday through Friday, although limited delivery of certain critical pieces of equipment (e.g., cranes) may be necessary on weekend days if required in order to minimize traffic disruptions. Any weekend work would be contingent upon any conditions that may be imposed by City agencies that approve and monitor construction activities such as the NYC Department of Buildings (DOB) and the NYC Department of Transportation (DOT). DOB also regulates the permitted hours of construction. In accordance with those regulations, typical construction activities in New York City begin no earlier than 7 AM during the week, and workers typically arrive and begin to prepare work areas between 6 and 7 AM. The standard weekday construction workday ends by 3:30 PM with an occasional extended shift until 6 PM.

Potential Construction Impacts

In accordance with the 2021 *CEQR Technical Manual*, the proposed project was reviewed to determine whether further analysis of the proposed construction activities is needed for any technical area, as follows.

Transportation

According to the *CEQR Technical Manual*, a number of factors should be considered before determining whether a preliminary assessment of the effect of construction on transportation is needed including:

- *Whether the project's construction would be located in a Central Business District (CBD) or along an arterial or major thoroughfare;*

- *Whether the project's construction activities would require closing, narrowing, or otherwise impeding moving lanes, roadways, key pedestrian facilities, parking lanes and/or parking spaces, bicycle routes and facilities, bus lanes or routes, or access points to transit; and*

- *Whether the project would involve construction on multiple development sites in the same geographic area, such that there is the potential for several construction timelines to overlap, and last for more than two years overall.*

New buildings on Projected Development Sites 1 and 2 would be constructed along 109th Avenue, which is a local two-way collector road consisting of one travel lane in each direction and curbside parking on both sides of the street. It is not anticipated that the construction on Projected Development Sites 1 and 2 would require the closing of any transportation elements adjacent to these Sites as access to these Sites can also be obtained from 139th and 142nd Streets which are minor streets adjoining these Sites. In addition, it is anticipated that there would be adequate space on both Projected Development Sites, which are currently largely used as open storage, to accommodate construction vehicles without blocking any transportation elements along 109th Avenue.

Although the project would involve construction on multiple Development Sites in the same geographic area and is anticipated to last more than two years overall, it is not anticipated that the construction on each Development Site would overlap as described in the proposed construction schedule above.

On the basis of the above, construction of the proposed project would not be expected to result in significant adverse impacts on transportation.

Air Quality and Noise

According to the *CEQR Technical Manual*, an assessment of air quality and noise for construction activities is likely not warranted if the project's construction activities:

- *Are considered short-term (less than two years);*
- *Are not located near sensitive receptors; and*
- *Do not involve construction of multiple buildings where there is a potential for on-site receptors on buildings to be completed before the final built-out.*

Construction of the proposed development on the Applicant-owned Projected Development Site 1 would be completed in less than two years. Although it is not known when construction on the Non-Applicant owned Site would occur, it is assumed that this Site would be developed over an additional up to one-year period resulting in a total construction period of up to 36 months/3 years for the two Projected Development Sites. It is assumed that there would be an approximately one-month gap between the completion of the development on Projected Development Site 1 and demolition of the existing uses on Projected Development Site 2.

Sensitive receptors are located near the two Projected Development Sites as the surrounding area consists primarily of single-family homes. The new building on Projected Development Site 1 would be separated from the nearest existing single-family dwellings on the block by a rear yard measuring between 10 feet and 32.5 feet. Only one existing single-family dwelling is located adjacent to the proposed 10-foot rear yard area and this dwelling also has an approximately 10-foot yard separating it from Projected Development Site 1 thereby resulting in a 20-foot distance from the proposed development. All other adjacent dwellings have much deeper rear yards. The new building on Projected Development Site 2 would be separated from the nearest existing single-family dwelling by a rear yard measuring approximately 25 feet.

As exterior construction activities on Projected Development Sites 1 and 2 would be limited to approximately 14 months and 7 months, respectively, significant air quality and noise impacts to sensitive receptors are anticipated to be minimal.

It is not known when construction on the Non-Applicant owned Site would actually occur. As discussed above, it is anticipated that construction on Projected Development Site 2 would occur shortly after completion and occupancy of Projected Development Site 1. Therefore, the Proposed Actions could potentially result in the construction of Projected Development Site 2 where there is a potential for on-site receptors on Projected Development Site 1 to be affected before the final build-out.

Any air quality and noise impacts from the construction on Projected Development Site 2 on Projected Development Site 1 (which would complete construction before construction is anticipated to start on Projected Development Site 2) would be unlikely by the relatively short period of 12 months of construction activities that would occur on Projected Development Site 2. No significant noise or air quality impacts would be anticipated from construction activities occurring within the interiors of the buildings.

The *CEQR Technical Manual* states that if a project meets one or more of the criteria above, a preliminary air quality or noise assessment is not automatically required. Instead, various factors should be considered, such as the types of construction equipment (*e.g.*, gas, diesel, electric), the nature and extent of any commitment to use the Best Available Technology (BAT) for construction equipment, the physical relationship of the Projected Development Sites to nearby sensitive receptors, the type of construction activity, and the duration of any heavy construction activity. These measures are discussed below.

Demolition, excavation, and foundation activities, which often generate the highest levels of air emissions, would be temporary and limited in duration and would take up to approximately 21 months out of a total construction period of up to 36 months to complete. These activities would be spread out over two separate locations in the Project Area and would not overlap as discussed above. In addition, any heavy equipment associated with the construction of the buildings (such as a crane) would operate from at least two different locations during construction.

Air Quality

The project would make use of the Best Available Technology to minimize impacts to sensitive receptors in the vicinity of the Projected Development Sites as further discussed below.

As with most construction projects in the City, the proposed project would require the operation of several pieces of diesel equipment at one time during the heavier periods of construction, such as demolition and excavation. The Applicant would implement the following measures that would minimize air quality and noise impacts on the surrounding community.

• *Diesel Equipment Reduction.* Construction of the proposed project would minimize the use of diesel engines and use electric engines, to the extent practicable. This would reduce

the need for on-site generators, and require the use of electric engines in lieu of diesel where practicable.

• *Clean Fuel.* To the extent practicable, ultra-low sulfur diesel (ULSD) would be used for diesel engines on the Projected Development Sites.

• *Best Available Tailpipe Reduction Technologies.* To the extent practicable, non-road diesel engines with a power rating of 50 horsepower (hp) or greater would utilize the best available tailpipe (BAT) technology for reducing diesel particulate matter (DPM) emissions. Diesel particle filters (DPF) have been identified as being the tailpipe technology currently proven to have the highest PM reduction capability.

To the extent practicable, construction contracts would specify that all diesel non-road engines rated at 50 hp or greater would utilize DPFs, either installed on the engine by the original equipment manufacturer (OEM) or retrofit with a DPF verified by EPA or the California Air Resources Board, and may include active DPFs if necessary; or other technology proven to reduce DPM by at least 90 percent.

• *Utilization of Newer Equipment.* EPA's Tier 1 through 4 standards for non-road engines regulate the emission of criteria pollutants from new engines, including PM, CO, NOx, and hydrocarbons (HC). To the extent practicable, all non-road construction equipment in the project would meet at least the Tier 2 emissions standard, and construction equipment meeting Tier 3 and/or Tier 4 emissions standards would be used where conforming equipment is widely available, and the use of such equipment is practicable.

• *Dust Control.* Fugitive dust control plans will be implemented as part of the construction process. For example, stabilized truck exit areas would be established for washing off the wheels of all trucks that exit the construction sites. Truck routes within the Sites would be watered as needed to avoid the re-suspension of dust. All trucks hauling loose material will be equipped with tight fitting tailgates and their loads securely covered prior to leaving the Sites. In addition to regular cleaning by the City, streets adjacent to the Site would be cleaned as frequently as needed by the construction contractor. Water sprays will be used for all transfer of spoils to ensure that materials are dampened as necessary to avoid the suspension of dust into the air.

• *Restrictions on Vehicle Idling.* In addition to adhering to local laws restricting unnecessary idling on roadways, on-site vehicle idle time will also be restricted to three minutes, to the extent practicable, for all equipment and vehicles that are not using their engines to operate a loading, unloading, or a processing device (e.g., concrete mixing trucks) or otherwise required for the proper operation of the engine.

Overall, these air emission control commitments would significantly reduce DPM emissions to a level otherwise achieved by applying the currently defined best available control technologies under NYC Local Law 77, which are required only for publicly

funded City capital projects. In addition, as stated in the *CEQR Technical Manual*, all the necessary measures would be implemented to ensure compliance with the NYC Air Pollution Control Code regulating construction-related dust emissions. Based on the project size and the construction work involved, construction activities for the proposed project would not be considered out of the ordinary or exceptional in terms of intensity. Therefore, based on above and with the implementation of an emissions control program, the proposed project would not result in any significant adverse impacts on air quality.

Noise

While increases in ambient noise levels due to construction for two years or less may be noisy and intrusive, detailed construction noise analysis is not always required, given the short period of construction anticipated for the Projected Development Sites and the one month gap between completion of Projected Development Site 1 and the start of construction on Development Site 2. As described above, construction activities would be less than 24 months for each development site. Furthermore, construction on Projected Development Site 2 would occur approximately 1 month after the completion of Projected Development Site 1. These activities would be spread out over two separate locations in the Project Area and would not overlap. Projected Development Site 1 would require 14 months of exterior construction activities while exterior construction activities on Projected Development Site 2 would be limited to approximately 7 months.

Construction noise is regulated by the NYC Noise Control Code and by EPA's noise emission standards for construction equipment. These local and federal requirements mandate that certain classifications of construction equipment and motor vehicles meet specified noise emission standards; that construction activities be limited to weekdays between the hours of 7 AM and 6 PM; and that construction materials be handled and transported in such a manner as not to create unnecessary noise. If weekend or after hour work is necessary, permits would be required to be obtained, as specified in the NYC Noise Control Code. In addition, the Applicant would commit to a preparing a noise control plan that would be implemented during project construction. The measures to be contained in the plan would avoid noise impacts on the community. The plan would be prepared to be compliant with the NYC Noise Control Code (which requires a "Construction Noise Mitigation Plan") and would include such measures as construction noise source controls, path controls, and receiver controls. With these measures in place, no significant noise impacts are expected to occur as a result of the project construction.

Historic and Cultural Resources

No construction activities would occur within 400 feet of a historic resource as no such resources are located within this distance from the Affected Area. LPC has determined that no historic or archaeological resources are located within the Project Area.

Hazardous Materials

As explained in the Hazardous Materials section above, DEP finds the July 2021 RAP and CHASP for Projected Development Site 1 to be acceptable. The RAP and CHASP will manage any hazardous materials concerns that would arise during construction of the project. As agreed to by DEP, an (E) Designation (E-693) for hazardous materials will be placed on the zoning map pursuant to Section 11-15 of the Zoning Resolution for Projected Development Site 2 to ensure that testing and mitigation will be provided as necessary before any future development and/or soil disturbance on the property.

Following the preparation of the above noted items and approval by DEP, no significant adverse impacts related to hazardous materials during construction are expected as a result of the redevelopment of Projected Development Sites 1 and 2.

Natural Resources

According to the *CEQR Technical Manual*, a construction assessment is not needed for natural resources unless the construction activities would disturb a site or be located adjacent to a site containing natural resources. The Projected Development Sites and the adjacent properties are fully developed and do not contain any natural resources. Therefore, there is no potential for significant adverse construction impacts on natural resources.

Open Space, Socioeconomic Conditions, Community Facilities, Land Use and Public Policy, Neighborhood Character, and Infrastructure

According to the *CEQR Technical Manual*, a preliminary construction assessment is generally not needed for these technical areas unless the following are true:

- *The construction activities are considered "long-term" (more than 2 years);*

- *Short-term construction activities would not directly affect a technical area, such as impeding the operation of a community facility.*

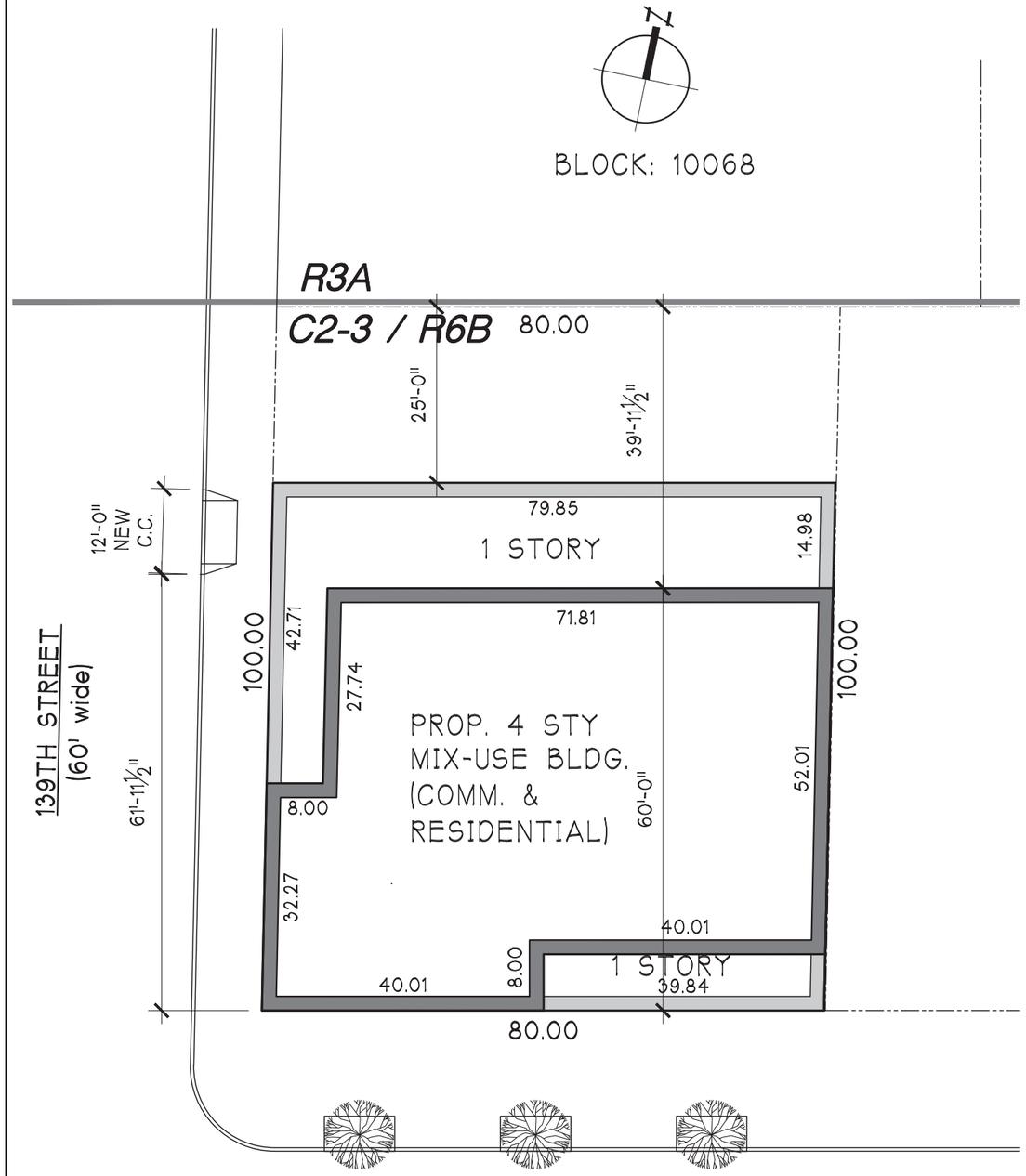
As discussed above, construction activities on the Applicant controlled Projected Development Site 1 would be considered short term as they would occur over a period of less than 24 months. Although construction activities on the non-Applicant controlled Projected Development Site 2 would extend the total construction period to more than two years (3 years), construction on these Sites would not have any significant direct effects on open space areas, socioeconomic conditions, community facilities, or infrastructure conditions, and would not have cumulative impacts on land use or neighborhood character. Therefore, construction of the proposed project would not be expected to result in any significant adverse construction impacts on these technical areas.

Conclusion

On the basis of the above analysis, the Proposed Actions would not have any potentially significant adverse construction impacts, and further analysis would not be warranted.

APPENDIX

Illustrative Architectural Plans



ZONING ANALYSIS - DEVELOPMENT SITE #2
PROP. ZONE: C2-3 / R6B
MAP No.: 18c
LOT #216 & 218
LOT AREA = 8,000 SF

MAX. F.A.R.:
COMMERCIAL = 2.00
COMM. FAC. = 2.00
RESIDENTIAL = 2.20

MAX. F.A. = 2.20 x 8,000 = 17,600 SF

PROP. F.A.:	COMMERCIAL		RESIDENTIAL
1st FL	4,051.86 SF		800 SF
2nd FL.			4,249.06 SF
3rd FL.			4,249.06 SF
4th FL.			4,249.06 SF
TOTAL =	4,051.86 SF	+	13,547.18 SF = *17,599 SF - COMPLIES

*REDUCED BY 1,135 RAMP (not floor area)

MAX. LOT COV. = 100% CORNER LOT = 8,000 SF
PROP. LOT COV. = 4,249.06 SF < 8,000 SF - COMPLIES

DENSITY FACTOR = 680
MAX. No. OF D.U'S = 17,600 - 4851.66 = 12,748.34 / 680 = 18 D.U's
PROP. No. OF D.U's = 18

REQUIRED YARDS:	PROPOSED YARDS
FRONT = SAME AS ADJ. WITHIN 25' OF R3A BOUNDARY	N.A.
SIDE = 0 OR MIN. 8'-0"	0 & 39'-11"
REAR = NONE W/IN 100' OF CORNER	N.A.
ALONG DISTRICT BOUNDARY = 8'-0"	25'-0"

MAX. HEIGHT :	PROPOSED HEIGHT:
MIN. BASE HT. = 30'-0"	N.A.
MAX. BASE HT. = 45'-0"	45'-0"
MAX. BLDG. HT. = 55'-0" OR 5 STY	45'-0"

PARKING REQ'D.
GENERAL RETAIL & SERVICE USES = 1 PER 400 SF
4,051.86 SF / 400 = 10 SPACES < 25 WAIVER (SECT. 36-231 ZR) = NONE REQ'D.
RESIDENTIAL:
MIH UNITS = 18 x 30% = 5 UNITS - IN TRANSIT ZONE = NONE REQ'D.
MARKET RATE UNITS = 18 - 5 MIH = 13 x 50% = 7 SPACES (PROVIDED IN CELLAR)

THE ARCHITECT SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTIONS WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALWAYS USE DIMENSIONS AS SHOWN. DRAWINGS ARE NOT TO BE SCALED. GERALD J. CALIENDO ARCHITECT, P.C. AND ITS PRINCIPAL/EMPLOYEES WERE NOT RETAINED FOR ANY CONSTRUCTION SUPERVISION.

Gerald J. Caliendo, R.A., A.I.A.
Architect, P.C.
Architecture
Interior Design
Code Consultant
Building Dept. Expediting
138-72 Queens Boulevard
Briarwood N.Y. 11435
Tel. (718) 268-9098
Fax (718) 268-9097
www.caliendoarchitects.com

DRAWING TITLE: ZONING ANALYSIS - C2-3 / R6B
FOR ILLUSTRATIVE PURPOSES ONLY

PREMISES: DEVELOPMENT SITE #2
109TH AVENUE
JAMAICA, NY

DRAWN BY:	CHECKED BY:	JOB No:	SCALE:	DATE:
N.M.H.	GJC	19066	AS NOTED	8-28-20

REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

DRAWING No: 2 OF 6

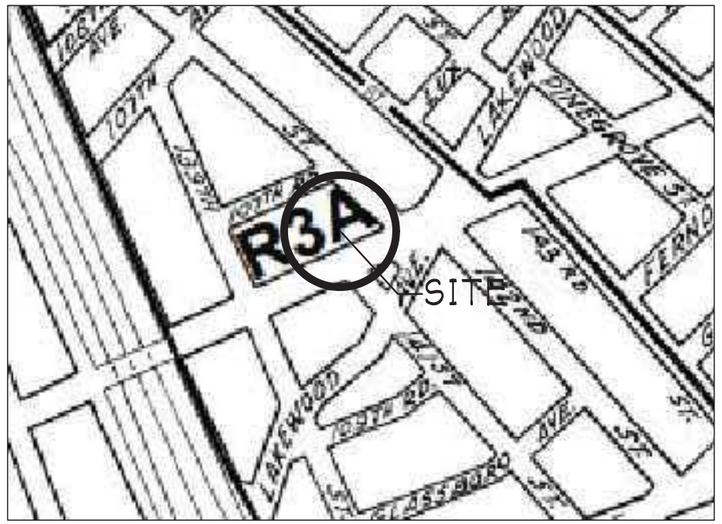
Z-001.00

ZONING ANALYSIS

FOR ZONING CHANGE TO C2-3 / R6B

141-05 109TH AVENUE

JAMAICA, QUEENS



ZONING MAP OF AREA

NTS



AREA MAP

NTS



AERIAL PHOTO

NTS

THE ARCHITECT SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, DEVIATIONS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTIONS WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALWAYS USE DIMENSIONS AS SHOWN. DRAWINGS ARE NOT TO BE SCALED. GERALD J. CALIENDO ARCHITECT, P.C. AND ITS PRINCIPAL/EMPLOYEES WERE NOT RETAINED FOR ANY CONSTRUCTION SUPERVISION.

Gerald J. Caliendo, R.A., A.I.A.
Architect, P.C.
Architecture
Interior Design
Code Consultant
Building Dept. Expediting
138-72 Queens Boulevard
Briarwood N.Y. 11435
Tel. (718) 268-9098
Fax (718) 268-9097
www.caliendoarchitects.com

DRAWING TITLE: ZONING ANALYSIS - C2-3 / R6B FOR ILLUSTRATIVE PURPOSES ONLY

PREMISES: 141-05 109TH AVENUE JAMAICA, NY

DRAWN BY:	N.M.H.
CHECKED BY:	GJC
JOB No:	19066
SCALE:	AS NOTED
DATE:	8-28-20

REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

DRAWING No: 1 OF 11

Z-001.00

Zoning Analysis

Site Data		List of Required Actions
Block(s)	10068	1. Zoning Map Amendment
Lot(s)	200, 205, 210, 213 - 215	
Street Address(es)	141-05 109th Avenue	
Existing Zoning District	R3A	
Proposed Zoning District	C2-3 / R6B	
Community District	412	
Zoning Section Map No.	18c	
Total Zoning Lot Area	30,087.5 sf	

Item	Zoning Section	Permitted/Required	Proposed	Compliance/Notes
Uses Permitted	22-00 & 33-00	1 - 9 & 14	2, 3 & 6	Yes
Max. F.A.R.				
Commercial	33-121	2.00	0.32	Yes
Community Facility	33-121	2.00	0.20	Yes
Residential (QH)	23-154 & 35-65	2.20	1.60	Yes
Total F.A.R.		2.20	2.12	Yes
Max. Floor Area				
Commercial	33-121	60,175 sf	9,752.16 sf	Yes
Community Facility	33-121	60,175 sf	5,950.32 sf	Yes
Residential (MIH)	23-154 & 35-65	66,192.5 sf	*48,005.34 sf	Yes
Total Floor Area		66,192.5 sf	63,707.82 sf	Yes
Max. Lot Coverage				
Residential (Interior portion of lot)	23-153	60% x 17,155.97 sf int. lot = 10,293.58 sf	10,270.24 sf or 60%	Yes
Yards				
Front	35-51	N.A.	N.A.	Yes
Side	35-52	0 or 8'-0" min.	0 & 10'-0"	Yes
Rear	33-26 & 35-53	30 ft. (Res.) & 20 ft. (Commercial)	32'-6" (Res.) & 10'-0"	Yes
Req'd. yard along district boundary	35-54	8'-0"	10'-0"	Yes
Density				
No. of D.U's	23-22 & 35-40	(66,192.5 - 19,262.17) / 680 = 69	60	Yes
Max. Height & Setback				
Min. Base Height	23-662 & 35-652	30'-0"	N.A.	Yes
Max. Base Height		45'-0"	45'-0"	
Max. Building Height		55'-0" - 5 stories	45'-0" or 4 stories	
Setback Narrow Street	23-662 & 35-652	15'-0"	N.A.	
Setback Wide Street		10'-0"	N.A.	
Req'd. Parking - In Transit Zone				
Commercial (General Retail & Service uses)	36-20	1 per 400 sf = 9,752.16 / 400 = 24 spaces = 0**	0	Yes
Residential - Market rate	25-251 & 36-35	50% x 45 units = 23 spaces	28	
Residential - Affordable units (AIRS)		15 D.U's = none req'd. in Transit Zone	0	Yes
Req'd. Bicycle Parking				
Commercial & Community Fac.	36-70	1 per 10,000 sf = 15,702.48 sf / 10,000 = 2	2	Yes
Residential		1 per 2 D.U.'s = 30 bikes	30	Yes
Req'd. Loading				
Retail or Service Uses	36-62	First 8,000 sf = None	0	Yes

*Reflects Zoning Floor Area (gross F.A. reduced by Quality Housing and mechanical deductions)

** waiver (ZR 36-231): 24 required < 25; therefore none required

THE ARCHITECT SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, DEVIATIONS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTIONS WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALWAYS USE DIMENSIONS AS SHOWN. DRAWINGS ARE NOT TO BE SCALED. GERALD J. CALIENDO ARCHITECT, P.C. AND ITS PRINCIPAL/EMPLOYEES WERE NOT RETAINED FOR ANY CONSTRUCTION SUPERVISION.

Gerald J. Caliendo, R.A., A.I.A.
Architect, P.C.
Architecture
Interior Design
Code Consultant
Building Dept. Expediting
138-72 Queens Boulevard
Briarwood N.Y. 11435
Tel. (718) 268-9098
Fax (718) 268-9097
www.caliendoarchitects.com

DRAWING TITLE: ZONING ANALYSIS - C2-3 / R6B FOR ILLUSTRATIVE PURPOSES ONLY

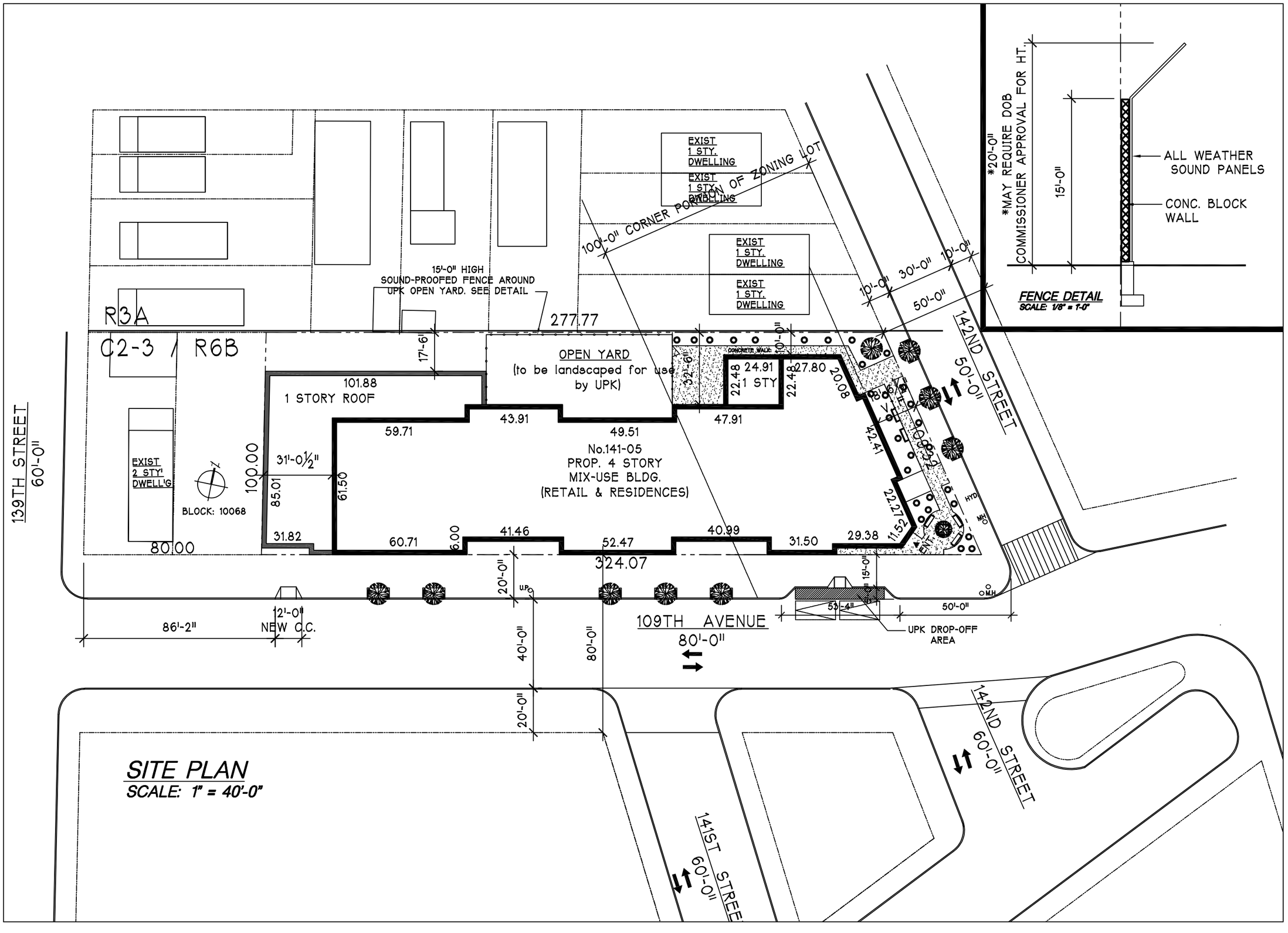
PREMISES: 141-05 109TH AVENUE JAMAICA, NY

DRAWN BY:	CHECKED BY:	JOB No:	SCALE:	DATE:
N.M.H.	GJC	19066	AS NOTED	8-28-20

REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

DRAWING No: 2 OF 11

Z-002.00



SITE PLAN
SCALE: 1" = 40'-0"

THE ARCHITECT SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, DEVIATIONS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTIONS WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALWAYS USE DIMENSIONS AS SHOWN. DRAWINGS ARE NOT TO BE SCALED. GERALD J. CALIENDO ARCHITECT, P.C. AND ITS PRINCIPAL/EMPLOYEES WERE NOT RETAINED FOR ANY CONSTRUCTION SUPERVISION.

Gerald J. Caliendo, R.A., A.I.A.
Architect, P.C.
Architecture
Interior Design
Code Consultant
Building Dept. Expediting
138-72 Queens Boulevard
Briarwood N.Y. 11435
Tel. (718) 268-9098
Fax (718) 268-9097
www.caliendoarchitects.com

DRAWING TITLE: SITE PLAN - C2-3 / R6B
FOR ILLUSTRATIVE PURPOSES ONLY

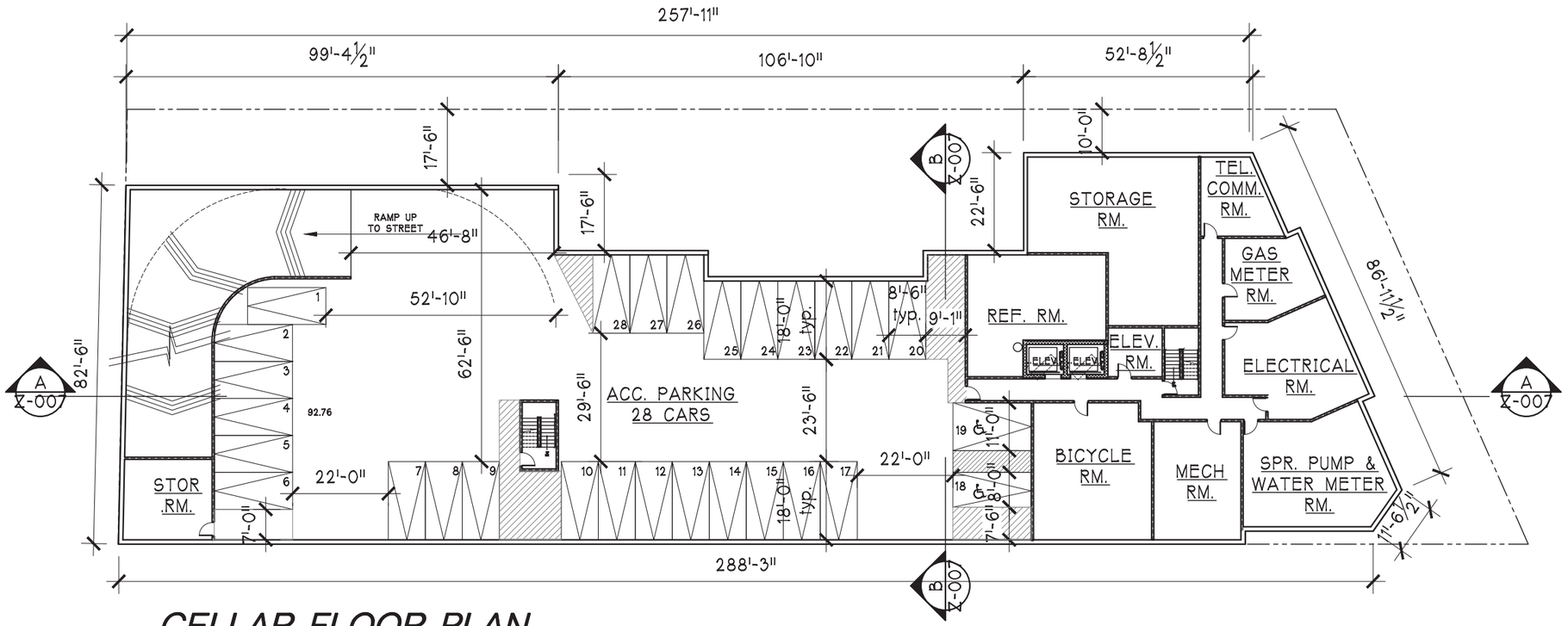
PREMISES: 141-05 109TH AVENUE
JAMAICA, NY

DRAWN BY:	N.M.H.	JOB No:	19066
CHECKED BY:	GJC	SCALE:	AS NOTED
		DATE:	8-19-22

SEAL: REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

DRAWING No: 3 OF 11

Z-003.00



CELLAR FLOOR PLAN
SCALE: 1" = 30'-0"

THE ARCHITECT SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, DEVIATIONS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTIONS WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALWAYS USE DIMENSIONS AS SHOWN. DRAWINGS ARE NOT TO BE SCALED. GERALD J. CALIENDO ARCHITECT, P.C. AND ITS PRINCIPAL/EMPLOYEES WERE NOT RETAINED FOR ANY CONSTRUCTION SUPERVISION.

Gerald J. Caliendo, R.A., A.I.A.
Architect, P.C.
Architecture
Interior Design
Code Consultant
Building Dept. Expediting
138-72 Queens Boulevard
Briarwood N.Y. 11435
Tel. (718) 268-9098
Fax (718) 268-9097
www.caliendoarchitects.com

DRAWING TITLE: CELLAR FLOOR PLAN
FOR ILLUSTRATIVE PURPOSES ONLY

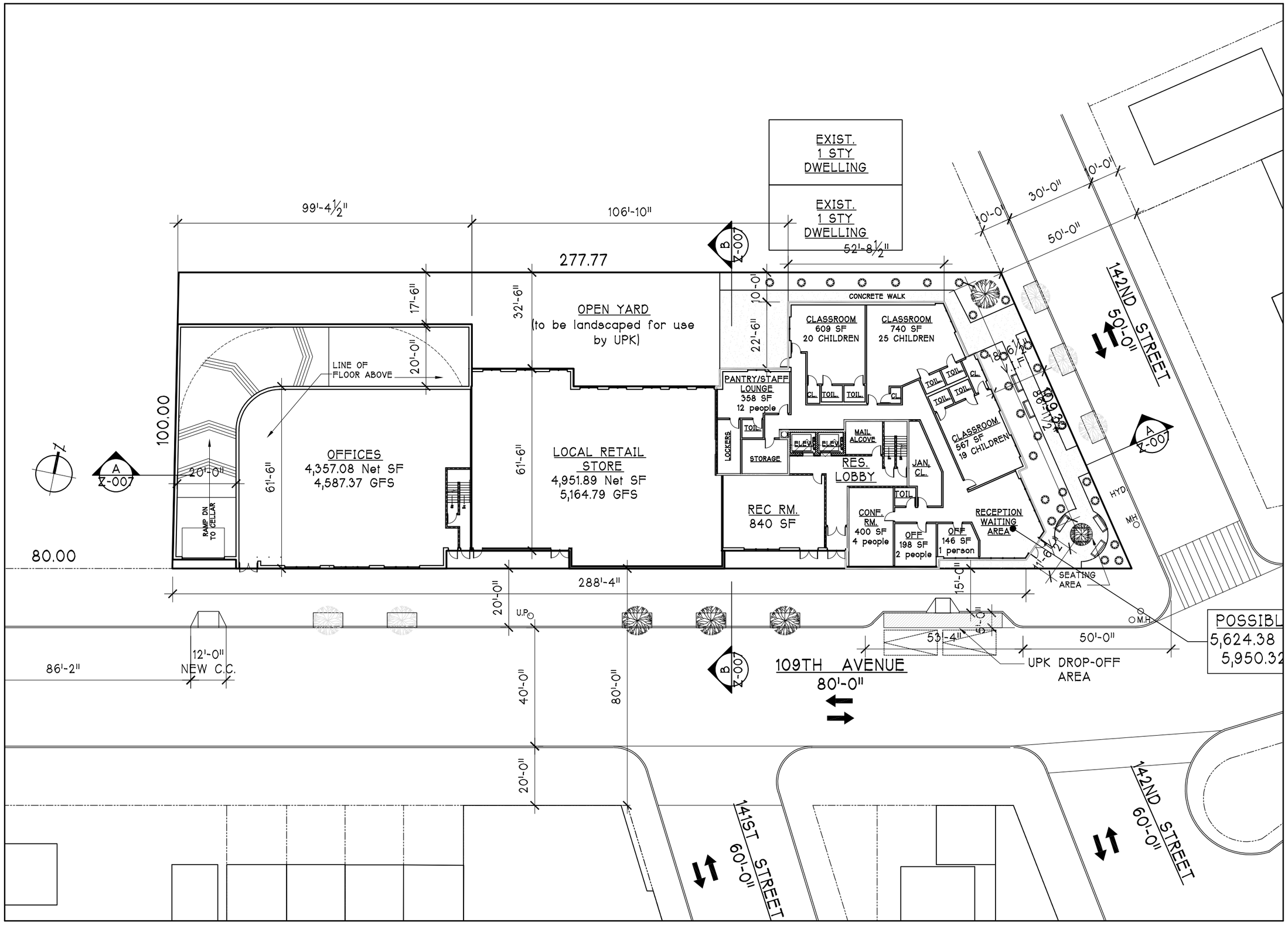
PREMISES: 141-05 109TH AVENUE
JAMAICA, NY

DRAWN BY:	N.M.H.
CHECKED BY:	GJC
JOB No:	19066
SCALE:	AS NOTED
DATE:	8-28-20

SEAL: REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

DRAWING No.: 4 OF 11

Z-004.00



THE ARCHITECT SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, DEVIATIONS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTIONS WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALWAYS USE DIMENSIONS AS SHOWN. DRAWINGS ARE NOT TO BE SCALED. GERALD J. CALIENDO ARCHITECT, P.C. AND ITS PRINCIPAL/EMPLOYEES WERE NOT RETAINED FOR ANY CONSTRUCTION SUPERVISION.

Gerald J. Caliendo, R.A., A.I.A.
Architect, P.C.

Architecture
Interior Design
Code Consultant
Building Dept.
Expediting

138-72 Queens Boulevard
Briarwood N.Y. 11435

Tel. (718) 268-9098
Fax (718) 268-9097

www.caliendoarchitects.com

DRAWING TITLE: FIRST FLOOR PLAN - C2-3 / R6B
FOR ILLUSTRATIVE PURPOSES ONLY

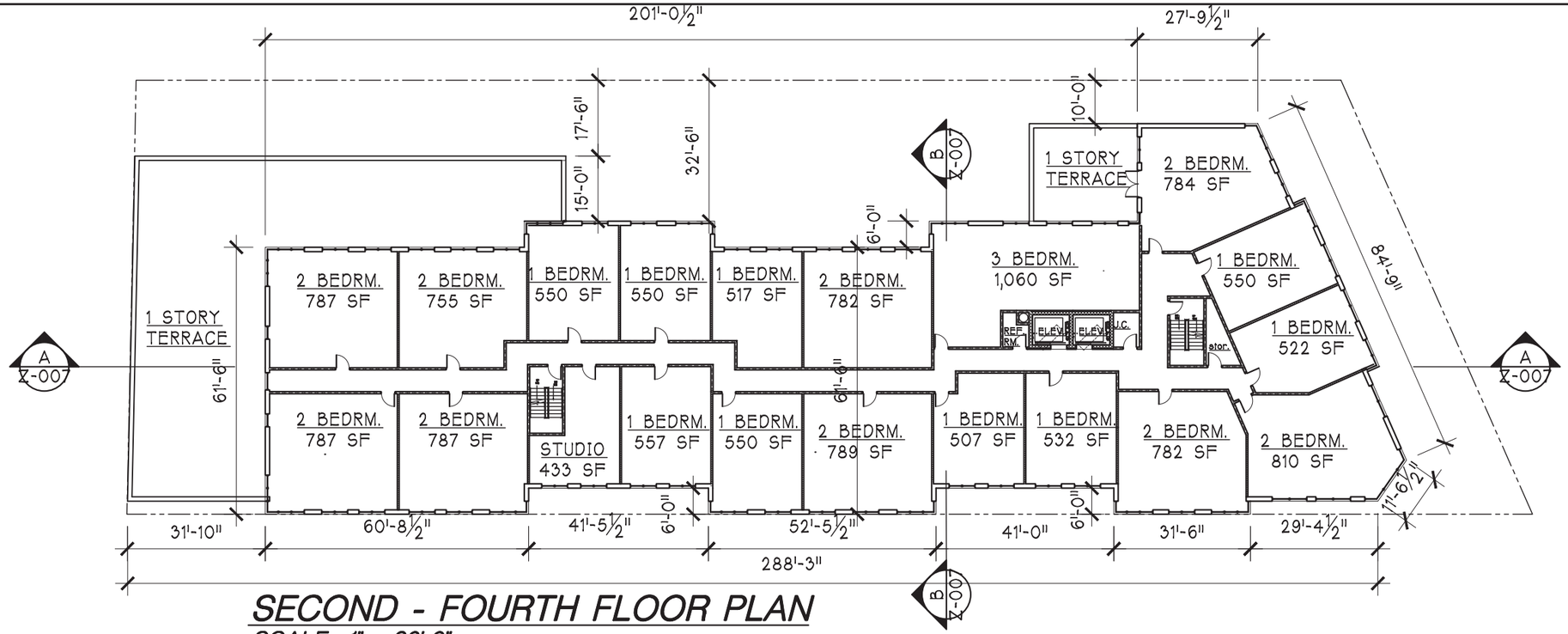
PREMISES: 141-05 109TH AVENUE
JAMAICA, NY

DRAWN BY:	N.M.H.	JOB No:	19066
CHECKED BY:	GJC	SCALE:	AS NOTED
		DATE:	9-20-22

SEAL: REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

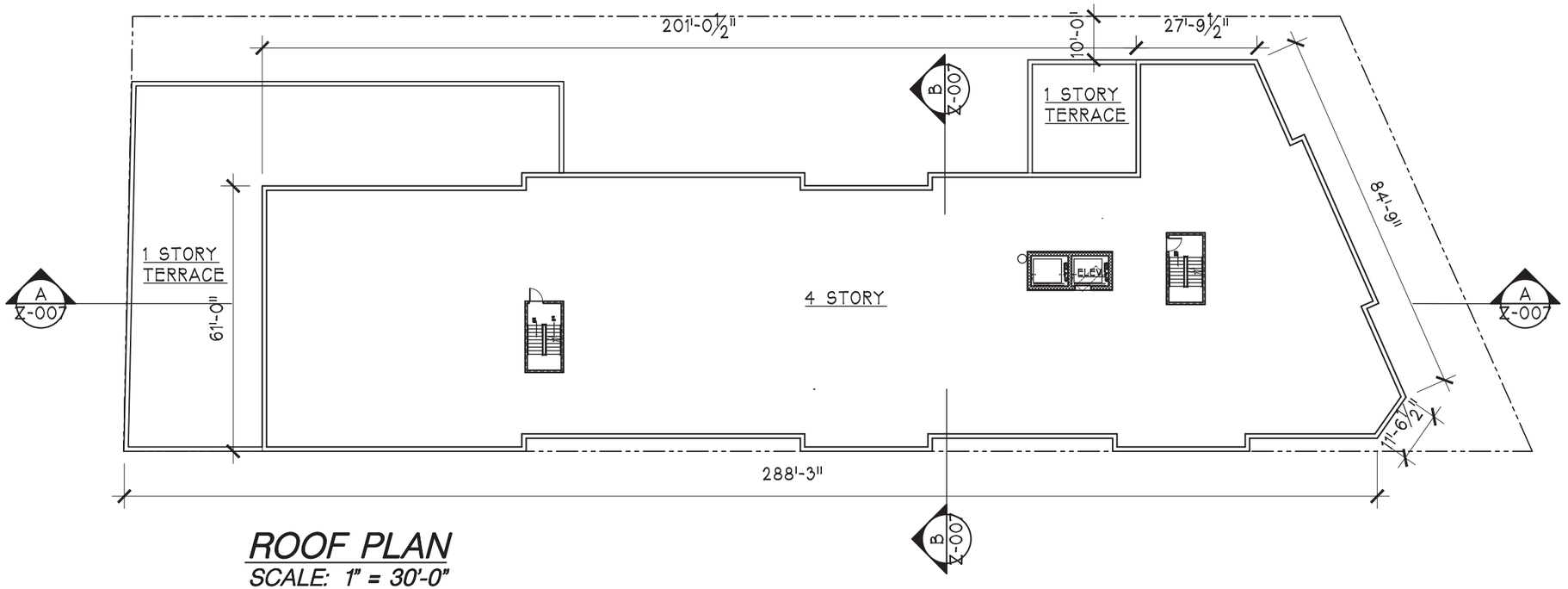
DRAWING No.: 5 OF 11

Z-005.00



SECOND - FOURTH FLOOR PLAN

SCALE: 1" = 30'-0"



ROOF PLAN

SCALE: 1" = 30'-0"

THE ARCHITECT SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, DEVIATIONS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTIONS WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALWAYS USE DIMENSIONS AS SHOWN. DRAWINGS ARE NOT TO BE SCALED. GERALD J. CALIENDO ARCHITECT, P.C. AND ITS PRINCIPAL/EMPLOYEES WERE NOT RETAINED FOR ANY CONSTRUCTION SUPERVISION.

Gerald J. Caliendo, R.A., A.I.A.
Architect, P.C.
Architecture
Interior Design
Code Consultant
Building Dept. Expediting
138-72 Queens Boulevard
Briarwood N.Y. 11435
Tel. (718) 268-9098
Fax (718) 268-9097
www.caliendoarchitects.com

DRAWING TITLE: FLOOR PLANS - C2-3 / R6B FOR ILLUSTRATIVE PURPOSES ONLY

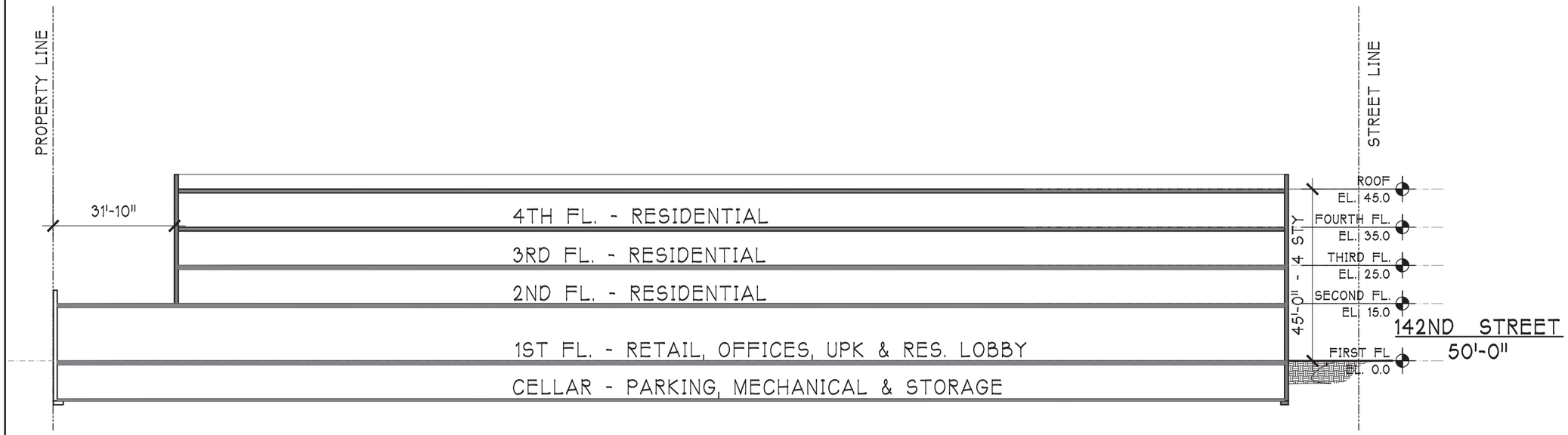
PREMISES: 141-05 109TH AVENUE JAMAICA, NY

DRAWN BY:	N.M.H.	JOB No:	19066
CHECKED BY:	GJC	SCALE:	AS NOTED
		DATE:	8-28-20

SEAL: REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

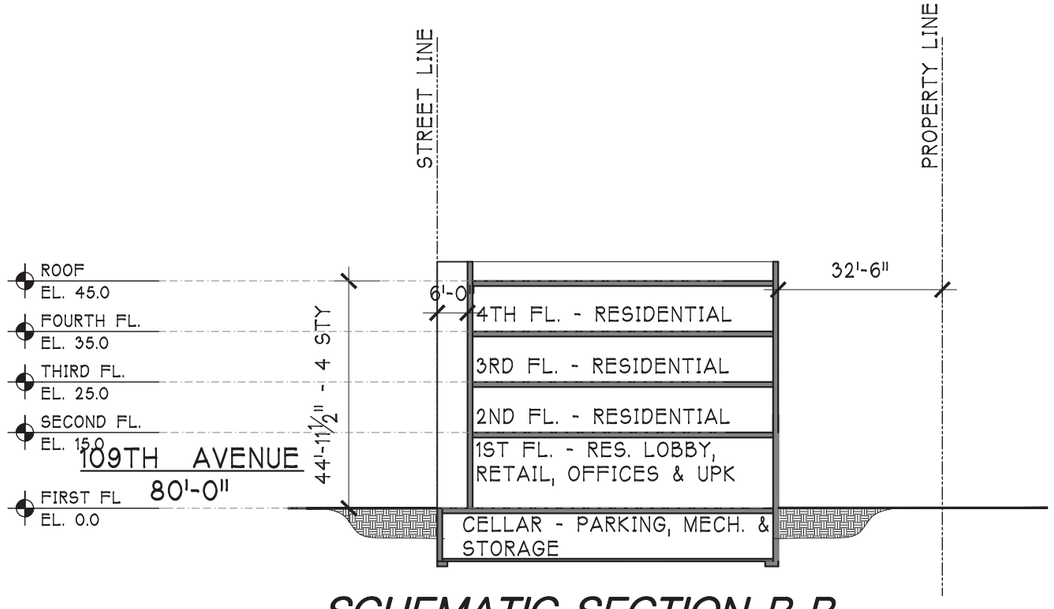
DRAWING No: 6 OF 11

Z-006.00



SCHEMATIC SECTION A-A

SCALE: 1" = 30'-0"



SCHEMATIC SECTION B-B

SCALE: 1" = 30'-0"

THE ARCHITECT SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, DEVIATIONS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTIONS WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALWAYS USE DIMENSIONS AS SHOWN. DRAWINGS ARE NOT TO BE SCALED. GERALD J. CALIENDO ARCHITECT, P.C. AND ITS PRINCIPAL/EMPLOYEES WERE NOT RETAINED FOR ANY CONSTRUCTION SUPERVISION.

Gerald J. Caliendo, R.A., A.I.A.
Architect, P.C.
Architecture
Interior Design
Code Consultant
Building Dept. Expediting
138-72 Queens Boulevard
Briarwood N.Y. 11435
Tel. (718) 268-9098
Fax (718) 268-9097
www.caliendoarchitects.com

DRAWING TITLE: DIAGRAMMATIC SECTIONS - C2-3 / R6B FOR ILLUSTRATIVE PURPOSES ONLY

PREMISES: 141-05 109TH AVENUE JAMAICA, NY

DRAWN BY:	N.M.H.
CHECKED BY:	GJC
JOB No:	19066
SCALE:	AS NOTED
DATE:	8-28-20

SEAL: REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

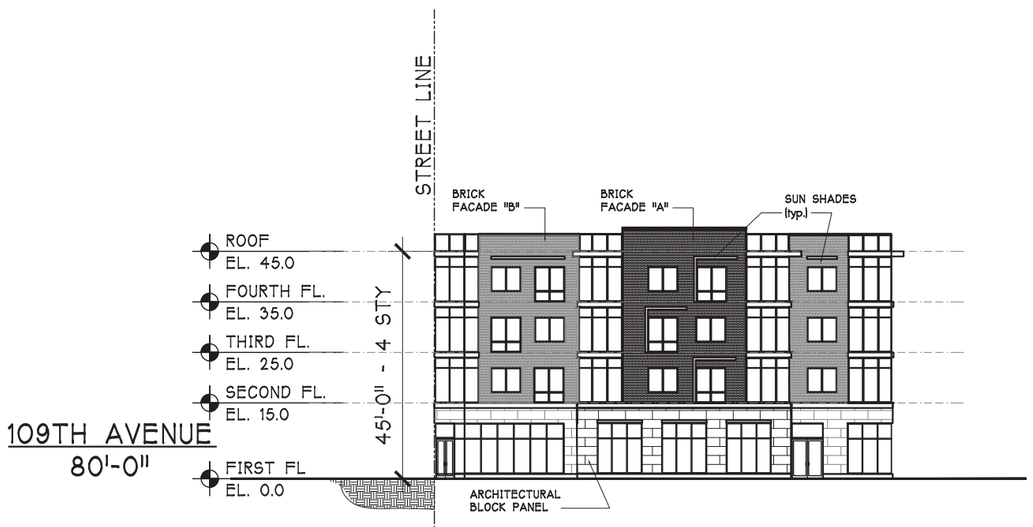
DRAWING No: 7 OF 11

Z-007.00



SOUTH (109th AVENUE) ELEVATION

SCALE: 1" = 30'-0"



EAST (142nd STREET) ELEVATION

SCALE: 1" = 30'-0"

THE ARCHITECT SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, DEVIATIONS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTIONS WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALWAYS USE DIMENSIONS AS SHOWN. DRAWINGS ARE NOT TO BE SCALED. GERALD J. CALIENDO ARCHITECT, P.C. AND ITS PRINCIPAL/EMPLOYEES WERE NOT RETAINED FOR ANY CONSTRUCTION SUPERVISION.

Gerald J. Caliendo, R.A., A.I.A.
Architect, P.C.
Architecture
Interior Design
Code Consultant
Building Dept. Expediting
138-72 Queens Boulevard
Briarwood N.Y. 11435
Tel. (718) 268-9098
Fax (718) 268-9097
www.caliendoarchitects.com

DRAWING TITLE: BUILDING ELEVATIONS FOR ILLUSTRATIVE PURPOSES ONLY

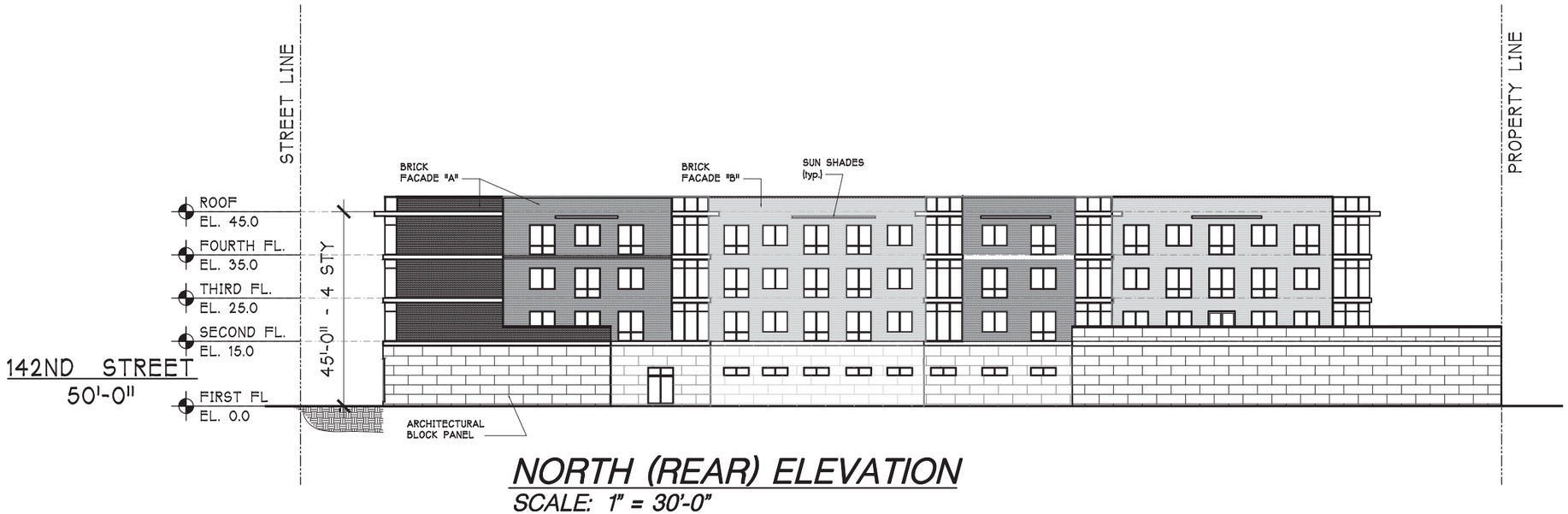
PREMISES: 141-05 109TH AVENUE JAMAICA, NY

DRAWN BY:	N.M.H.	JOB No:	19066
CHECKED BY:	GJC	SCALE:	AS NOTED
		DATE:	8-28-20

SEAL: REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

DRAWING No: 8 OF 11

Z-008.00



NORTH (REAR) ELEVATION

SCALE: 1" = 30'-0"

THE ARCHITECT SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, DEVIATIONS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTIONS WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALWAYS USE DIMENSIONS AS SHOWN. DRAWINGS ARE NOT TO BE SCALED. GERALD J. CALIENDO ARCHITECT, P.C. AND ITS PRINCIPAL/EMPLOYEES WERE NOT RETAINED FOR ANY CONSTRUCTION SUPERVISION.

Gerald J. Caliendo, R.A., A.I.A.
Architect, P.C.
Architecture
Interior Design
Code Consultant
Building Dept. Expediting
138-72 Queens Boulevard
Briarwood N.Y. 11435
Tel. (718) 268-9098
Fax (718) 268-9097
www.caliendoarchitects.com

DRAWING TITLE: BUILDING ELEVATION
FOR ILLUSTRATIVE PURPOSES ONLY

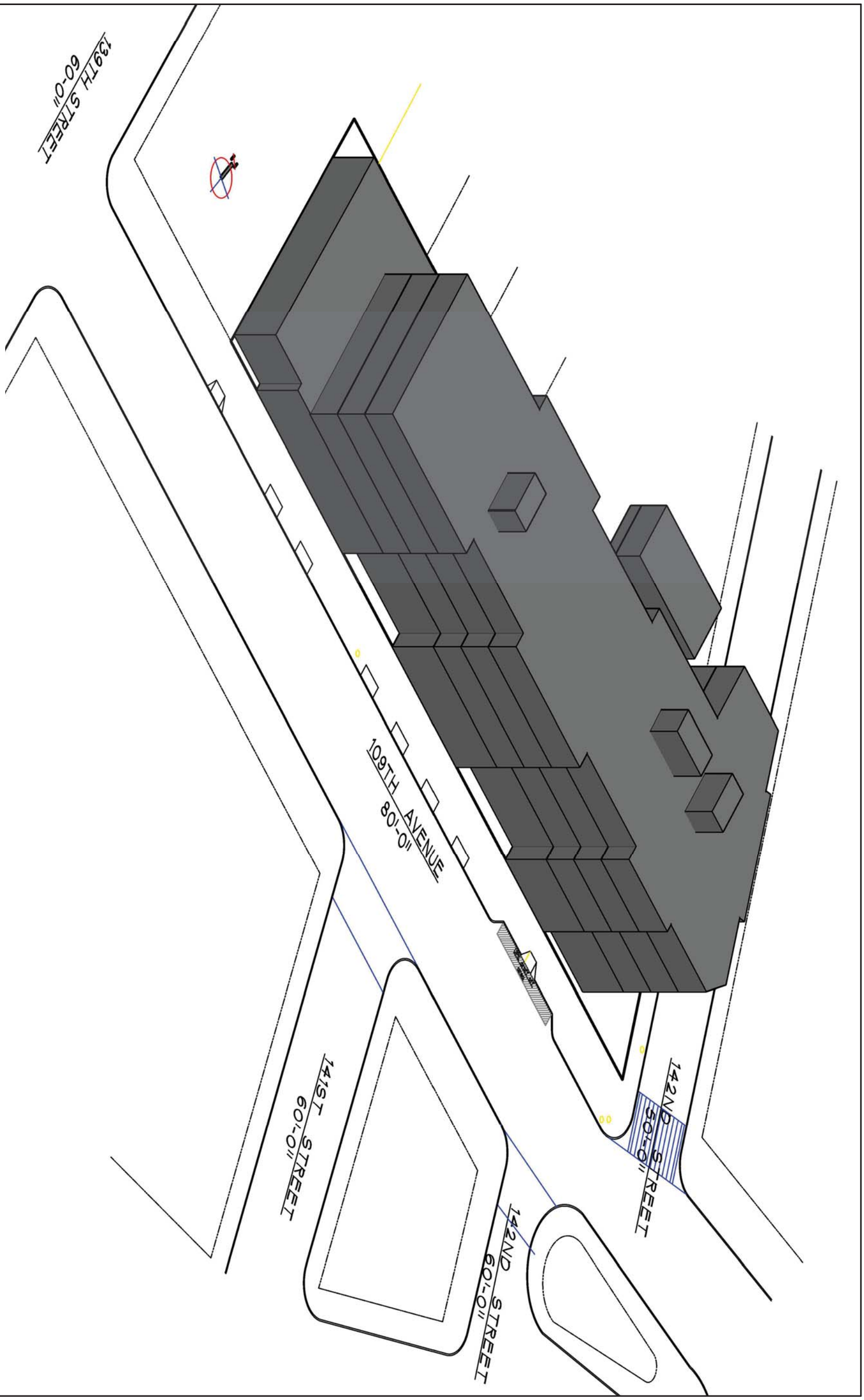
PREMISES: 141-05 109TH AVENUE
JAMAICA, NY

DRAWN BY:	N.M.H.
CHECKED BY:	GJC
JOB No:	19066
SCALE:	AS NOTED
DATE:	8-28-20

SEAL: REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

DRAWING No: 9 OF 11

Z-009.00



THE ARCHITECT SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, DEVIATIONS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTIONS WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALWAYS USE DIMENSIONS AS SHOWN. DRAWINGS ARE NOT TO BE SCALED. GERALD J. CALIENDO ARCHITECT, P.C. AND ITS PRINCIPAL/EMPLOYEES WERE NOT RETAINED FOR ANY CONSTRUCTION SUPERVISION.

Z-010.00

DRAWING No: 10 OF 11

SEAL: REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

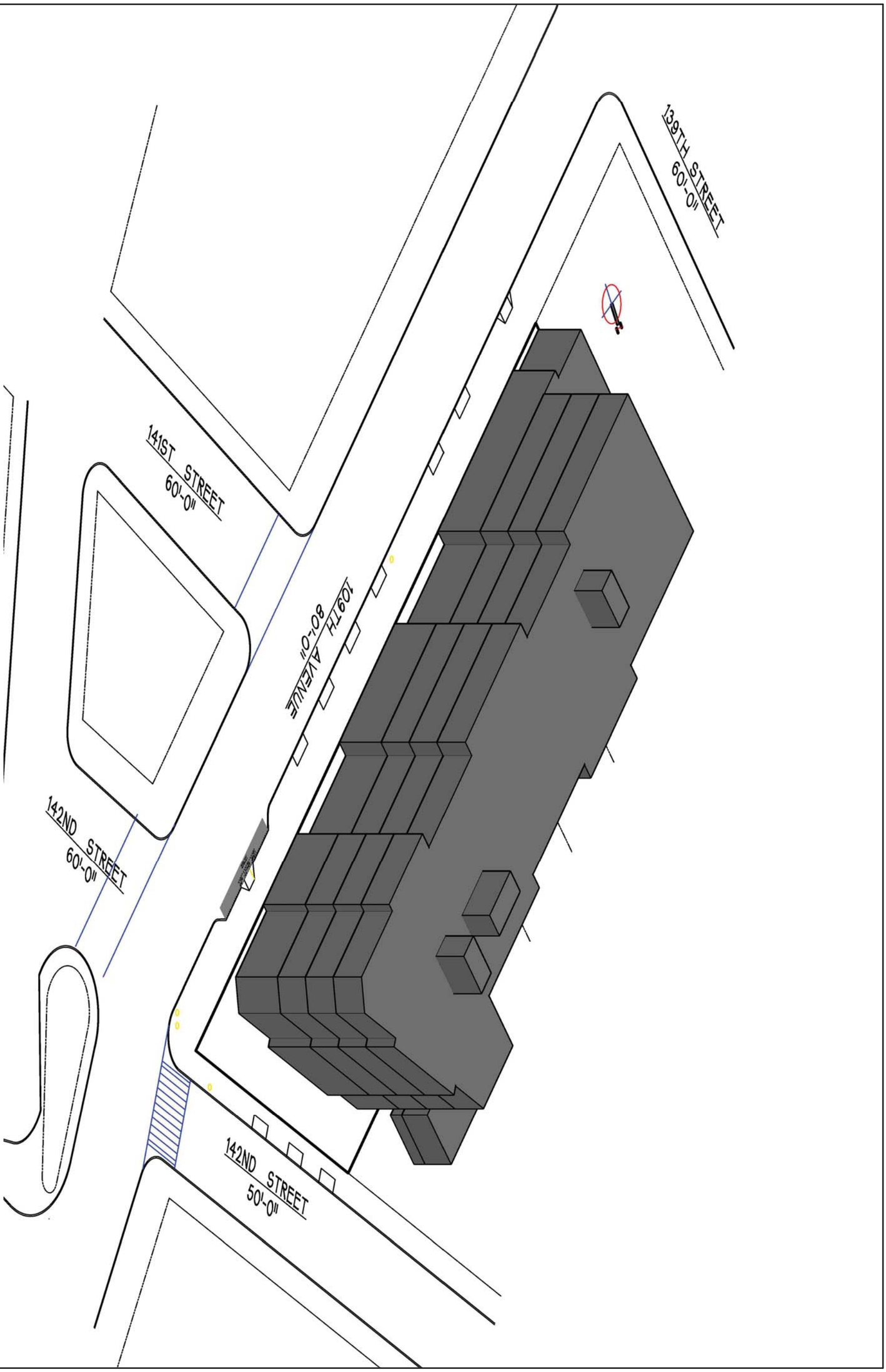
DRAWN BY:	N.M.H.
CHECKED BY:	GJC
JOB No:	19066
SCALE:	AS NOTED
DATE:	8-28-20

DRAWING TITLE: MASSING DIAGRAM - C2-3 / R6B
FOR ILLUSTRATIVE PURPOSES ONLY

PREMISES:

141-05 109TH AVENUE
JAMAICA, NY

Gerald J. Caliendo, R.A., A.I.A.
Architect, P.C.
138-72 Queens Boulevard
Briarwood N.Y. 11435
Tel (718) 268-9098
Fax (718) 286-9097
www.caliendoarchitects.com
Architecture
Interior Design
Code Consultant
Building Dept.
Expediting



THE ARCHITECT SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRIUCTION MEANS, METHODS, DEVIATIONS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTIONS WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALWAYS USE DIMENSIONS AS SHOWN. DRAWINGS ARE NOT TO BE SCALED. GERALD J. CALIENDO ARCHITECT, P.C. AND ITS PRINCIPAL/EMPLOYEES WERE NOT RETAINED FOR ANY CONSTRUCTION SUPERVISION.

Z-011.00

DRAWING No: 11 OF 11

SEAL: REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

DRAWN BY:	N.M.H.
CHECKED BY:	GJC
JOB No:	19066
SCALE:	AS NOTED
DATE:	8-28-20

DRAWING TITLE: MASSING DIAGRAM - C2-3 / R6B
FOR ILLUSTRATIVE PURPOSES ONLY

PREMISES:

141-05 109TH AVENUE
JAMAICA, NY

Gerald J. Caliendo, R.A., A.I.A.
Architect, P.C.
138-72 Queens Boulevard
Briarwood N.Y. 11435
Tel (718) 268-9098
Fax (718) 268-9097
www.caliendoarchitects.com
Architecture
Interior Design
Code Consultant
Building Dept
Expediting

HISTORIC AND CULTURAL RESOURCES APPENDIX

Landmarks Preservation Commission

1 Centre Street
9th Floor North
New York, NY 10007

Voice (212)-669-7700
Fax (212)-669-7960
http://nyc.gov/landmarks

ENVIRONMENTAL REVIEW

Project number: DEPARTMENT OF CITY PLANNING / LA-CEQR-Q
Project: 109 AVE REZONING
Date Received: 4/29/2021

Properties with no Architectural or Archaeological significance:

1) 109 AVENUE, BBL: 4100680200
2) 141-05 109 AVENUE, BBL: 4100680205
3) 139-19 109 AVENUE, BBL: 4100680210
4) 109 AVENUE, BBL: 4100680213
5) 109 AVENUE, BBL: 4100680214
6) 139-09 109 AVENUE, BBL: 4100680215
7) 109 AVENUE, BBL: 4100680216
8) 139-01 109 AVENUE, BBL: 4100680218



5/5/2021

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 35581_FSO_DNP_05052021.docx

NATURAL RESOURCES APPENDIX

Jamaica Bay Watershed Protection Plan
Project Tracking Form

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

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

A. GENERAL PROJECT INFORMATION

1. CEQR Number: _____ 1a. Modification ☐
2. Project Name: _____
3. Project Description:

_____

4. Project Sponsor: _____
5. Required approvals: _____
6. Project schedule (build year and construction schedule): _____

B. PROJECT LOCATION:

1. Street address: _____
2. Tax block(s): _____ Tax Lot(s): _____
3. Identify existing land use and zoning on the project site: _____
4. Identify proposed land use and zoning on the project site: _____
5. Identify land use of adjacent sites (include any open space): _____
6. Describe existing density on the project site and the proposed density:

Existing Condition	Proposed Condition

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):
2. Will soil be removed (if so, what is the volume in cubic yards)?
3. Subsurface soil classification:
   (per the New York City Soil and Water Conservation Board):
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:

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?

E. SURFACE COVERAGE AND CHARACTERISTICS

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

	Existing Condition	Proposed Condition
1. ***Surface area:***		
Roof:		
Pavement/walkway:		
Grass/softscape:		
Other (describe):		
2. ***Wetland*** (regulated or non-regulated) area and classification:		
3. ***Water surface area:***		

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

Existing – how is the site drained?

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

HAZARDOUS MATERIALS APPENDIX

Environmental Protection

Vincent Sapienza, P.E.
Commissioner

Angela Licata
Deputy Commissioner of Sustainability

59-17 Junction Blvd.
Flushing, NY 11373

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

June 23, 2021

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

Re: 141-05 Jamaica Avenue
Block 10068, Lots 200, 205, 210, 213, 214, 215, 216, and 218
CEQR # 77DCP801Q

Dear Ms. Barron:

The New York City Department of Environmental Protection, Bureau of Sustainability (DEP) has reviewed the February 2021 Phase I Environmental Site Assessment (Phase I), the April 2021 Phase II Environmental Site Assessment (Phase II), and the May 2021 Remedial Action Plan (RAP) and May 2021 Construction Health and Safety Plan (CHASP) prepared by Environmental Studies Corporation, Inc. on behalf of Mal Pal Realty Corp. (applicant) for the above referenced project. It is our understanding that the applicant is seeking a zoning map amendment and a zoning text amendment from the New York City Department of City Planning (DCP) to rezone Block 10068, Lots 200, 205, 210, 213, 214, 215, 216, 218 (the Project Area) from R3A to R6B/C2-3 and to establish a Mandatory Inclusionary Housing (MIH) area (Proposed Actions). The Proposed Actions would allow new development on two Projected Development Sites. No new development would occur on any other properties. The proposed zoning map amendment would facilitate the development on the applicant owned Projected Development Site 1 (Block 10068, Lots 200, 205, 210, 213, 214, and 215) of a 4-story and cellar 92,779 gsf mixed-use building with commercial retail, office, and community facility space for a Universal Pre-K school on the first floor, 60 residential dwelling units on floors 2 through 4, and 28 cellar level accessory parking spaces. The Proposed Actions include a zoning text amendment of ZR Appendix F: Inclusionary Housing Designated Areas and MIH Areas for Queens Community District 12, to establish an MIH Area coterminous with the Project Area. The development would include an approximately 840 square feet (sf) interior recreation room at the first floor for tenant meetings and other gatherings. The required Recreation Space for Quality Housing purposes is 1,584.18 sf of which 840 sf is a portion. The remaining space will be outdoors. Approximately 3,769 sf of open space with some minor playground equipment would be provided at grade at the rear of the building for use by the Universal Pre-K (UPK) school. The individual lots would be merged into one zoning lot as part of the Proposed Actions. The proposed zoning map amendment would also facilitate the development on the non-applicant owned Projected Development Site 2 (Block 10068, Lots 216 and

218) of a 4-story and cellar 23,586 gsf mixed-use building with approximately 4,052 gsf of commercial retail space on the first floor, 17 residential dwelling units on floors 2 through 4, and 7 cellar level accessory parking spaces. The individual lots would be merged into one zoning lot as part of the Proposed Actions.

Block 10068, Lots 200, 205, 210, 213, 214, and 215

The February 2021 Phase I report revealed that historical on-site and surrounding area land uses consisted of a variety of residential, commercial, and industrial uses including offices, concrete and masonry contractors, a retail showroom, storage of construction equipment and supplies, a steel fabrication shop, an auto repair garage, a contractor's yard, concrete block manufacturing, storage and sale of masonry supplies, residential dwellings, a contractor's/trucking company yard, a gasoline filling station, paper box glueing operations, a community center, etc. Regulatory databases identified 10 spills and 1 historical cleaner site within 1/8 mile; 3 underground storage tank sites, 1 dry cleaner, and 1 aboveground storage tank site within 1/4 mile; 18 leaking storage tank sites and 4 voluntary cleanup program sites within a 1/2 mile; and 1 manufactured gas plant site within 1 mile of the subject property.

During the March 2021 fieldwork, Tri-State Drilling Technologies, Inc. advanced six borings (B-1 through B-6) to approximately 16 - 30 feet below grade surface (bgs). Two soil samples were collected from each soil boring location. One soil sample was collected from the surface at a depth of 0 - 2 feet bgs and another deeper soil sample was collected at a depth of 10 - 12 feet bgs. Groundwater was encountered at depth of 26 feet bgs. One temporary groundwater monitoring well was installed (GW-1) and one groundwater sample was collected. Soil and groundwater samples were analyzed for volatile organic compounds (VOCs) by United States Environmental Protection Agency (EPA) Method 8260, semi-volatile organic compounds (SVOCs) by EPA Method 8270, pesticides by EPA Method 8081, polychlorinated biphenyls (PCBs) by EPA Method 8082, and Target Analyte List (TAL) metals (total and dissolved for groundwater samples). Four soil vapor samples (SV-1 through SV-4) and one outdoor air sample (OA-1) were collected and analyzed for VOCs by EPA Method TO-15.

The soil analytical results revealed that VOCs were either non-detect (ND) or below their New York State Department of Environmental Conservation (NYSDEC) 6 NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives (SCOs). Several SVOCs (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene), two pesticides (4,4'-DDD and dieldrin), total PCBs, and several metals (arsenic, copper, lead, mercury, and zinc) were detected above their NYSDEC Unrestricted Use SCOs, Restricted Residential Use SCOs, Commercial Use SCOs and/or Industrial Use SCOs.

The groundwater analytical results revealed that SVOCs, pesticides, and PCBs were either ND or below their NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 Class GA Ambient Water Quality Standards and Guidance Values. One VOC (chloroform) and several metals (barium, chromium, lead, manganese, nickel, and sodium) were detected above their NYSDEC TOGS 1.1.1 Class GA Ambient Water Quality Standards and Guidance Values.

The soil vapor analytical results revealed that several VOCs (1,1,1-trichloroethane, 1,1,2-trichloro-1,2,2-trifluoroethane, 1,1-dichloroethane, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, 2-butanone, acetone, benzene, bromomethane, carbon tetrachloride, chloroform, chloromethane, cis-1,2-dichloroethylene, cyclohexane, cis-1,2-dichloroethylene, ethyl benzene, methyl methacrylate, methylene chloride, n-heptane, n-hexane, o-xylene, p- & m-xylenes, styrene, tetrachloroethylene (PCE), toluene, trichloroethylene (TCE), and trichlorofluoromethane) were detected. PCE and TCE were detected above their air guideline values (September 2013 and August 2015 updates) in the New York State Department of Health's October 2006 Guidance for Evaluating Soil Vapor Intrusion in the State of New York.

The outdoor air analytical results revealed that several VOCs (1,1,2-trichloro-1,2,2-trifluoroethane, 1,2,4-trimethylbenzene, 2-butanone, acetone, benzene, bromomethane, carbon tetrachloride, chloromethane, cyclohexane, dichlorodifluoromethane, ethyl benzene, methylene chloride, n-hexane, o-xylene, p- & m- xylenes, PCE, toluene, TCE, and trichlorofluoromethane) were detected.

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

The May 2021 RAP proposes the excavation, transportation and off-site disposal of soil in accordance with applicable laws and regulations; removal of underground storage tanks, if encountered in compliance with applicable local, State and Federal laws and regulations; if de-watering into New York City sewer drains is anticipated during the proposed construction, a New York City Department of Environmental Protection Sewer Discharge Permit will be obtained; stockpiled soil will be covered properly anchored tarps; dust control; air monitoring; installation of a vapor barrier system consisting of 20-mil Stego Wrap, or similar beneath the building slab, on sub-grade foundation sidewalls and the elevator pit slab and sidewalls (if the type of vapor barrier is changed an amendment must first be approved by DEP); and installation of 2 feet of imported certified clean soil in landscaped areas where not capped with asphalt or concrete.

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

Projected Development Site 1: Block 10068, Lots 200, 205, 210, 213, 214, and 215 (Site under the control or ownership of the applicant)

RAP

- DCP should instruct the applicant to explain if all the proposed uses in the below-grade level of the building are open to the outside air or ventilated in accordance with the New York City Building Code/New York City Mechanical Code. The proposed ventilation system for the sub-grade uses should also be described in the RAP.

- DCP should instruct the applicant to include the manufacturer's specifications (minimum thickness of 20-mil) of the Grace Preprufe waterproofing membrane/system that is depicted in Appendix 6. In addition to the proposed Stego Wrap 20-mil vapor barrier, the

proposed Grace Preprufe waterproofing membrane/system should also be described in the RAP.

- Appendix 2 (Proposed Development Plans) depicts proposed landscaped areas on the project site such as the open yard (to be landscaped for use by UPK). Section 2.4 (Composite Cover System) states that exposure to residual soil will be prevented by an engineered cover system to be built on the Site and this cover system will be limited to the concrete building slab and two feet of certified clean soil in landscaped areas. However, Section 2.3 (Import and Reuse of Soils) states that no import or reuse of soil is planned and Appendix 5 (Soil/Materials Management Plan), Section 1.14 (Import of Clean Cover) states that import of clean cover soil will not be needed for this project. Therefore, DCP should instruct the applicant to clarify that if import of clean fill for landscaped or covered with grass (not capped) areas is anticipated it should be consistent throughout the RAP and should be revised accordingly. For all areas, which will be landscaped or covered with grass (not capped), a minimum of two feet of DEP approved clean fill/top soil must be imported from an approved facility/source and graded across all landscaped/grass covered areas of the sites not capped with concrete/asphalt. The clean fill/top soil must be segregated at the source/facility, have qualified environmental personnel collect representative samples at a frequency of one (1) sample for every 250 cubic yards, analyze the samples for Target Compound List VOCs by EPA Method 8260, SVOCs by EPA Method 8270 pesticides by EPA Method 8081, PCBs by EPA Method 8082, and TAL metals by a New York State Department of Health Environmental Laboratory Approval Program certified laboratory, compared to NYSDEC 6 NYCRR Part 375 Environmental Remediation Programs. Upon completion of the clean fill/top soil investigation activities, the applicant should submit a detailed clean soil report for DEP review and approval prior to importation and placement on-site. The report should include, at a minimum, an executive summary, narrative of the field activities, laboratory data, and comparison of soil analytical results (i.e., NYSDEC 6 NYCRR Part 375 Environmental Remediation Programs).

CHASP

- Appendix 1 (Construction Health and Safety Plan) includes only information fact sheets/safety data sheets and is not complete. DCP should instruct the applicant that a revised CHASP should be submitted for DEP review and approval. The CHASP must describe all of the potential hazards at the site and the methods to mitigate such hazards. The CHASP should also include elements such as a hospital route map, information fact sheets or safety data sheets for potential chemicals of concerns (VOCs, SVOCs, pesticides, PCBs, and heavy metals), an accident and injury report form, names and phone numbers of all pertinent project and site safety personnel, etc.

Projected Development Site 2: Block 10068, Lots 216 and 218 (Site not under the control or ownership of the applicant)

- Based on prior on-site and/or surrounding area land uses which could result in environmental contamination, DEP recommends that an (E) Designation for hazardous

materials should be placed on the zoning map pursuant to Section 11-15 of the New York City Zoning Resolution for the subject property. The (E) Designation will ensure that testing and mitigation will be provided as necessary before any future development and/or soil disturbance. Further hazardous materials assessments should be coordinated through the Mayor's Office of Environmental Remediation.

- DCP should instruct the applicant that the Environmental Assessment Statement (EAS) should discuss the placement of the (E) Designation for hazardous materials.

A revised RAP, CHASP and EAS should be submitted for DEP review and approval. Future correspondence and submittals related to this project should include the following CEQR # **77DCP801Q.** If you have any questions, you may contact Mohammad Khaja-Moinuddin at (718) 595-4445.

Sincerely,

Wei Yu
Deputy Director, Hazardous Materials

c: R. Weissbard
M. Khaja-Moinuddin
T. Estesen
M. Wimbish
R. Lucas
O. Abinader – DCP
A. Meunier – DCP

Environmental Protection

Vincent Sapienza, P.E.
Commissioner

Angela Licata
Deputy Commissioner of Sustainability

59-17 Junction Blvd.
Flushing, NY 11373

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

August 12, 2021

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

Re: 141-05 Jamaica Avenue
Block 10068, Lots 200, 205, 210, 213, 214, 215, 216, and 218
CEQR # 77DCP801Q

Dear Ms. Barron:

The New York City Department of Environmental Protection, Bureau of Sustainability (DEP) has reviewed the July 2021 Environmental Assessment Statement (EAS) and the July 2021 Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP) prepared by Environmental Studies Corporation, Inc. on behalf of Mal Pal Realty Corp. (applicant) for the above referenced project. It is our understanding that the applicant is seeking a zoning map amendment and a zoning text amendment from the New York City Department of City Planning (DCP) to rezone Block 10068, Lots 200, 205, 210, 213, 214, 215, 216, 218 (the Project Area) from R3A to R6B/C2-3 and to establish a Mandatory Inclusionary Housing (MIH) area (Proposed Actions). The Proposed Actions would allow new development on two Projected Development Sites. No new development would occur on any other properties. The proposed zoning map amendment would facilitate the development on the applicant owned Projected Development Site 1 (Block 10068, Lots 200, 205, 210, 213, 214, and 215) of a 4-story and cellar 92,779 gsf mixed-use building with commercial retail, office, and community facility space for a Universal Pre-K school on the first floor, 60 residential dwelling units on floors 2 through 4, and 28 cellar level accessory parking spaces. The Proposed Actions include a zoning text amendment of ZR Appendix F: Inclusionary Housing Designated Areas and MIH Areas for Queens Community District 12, to establish an MIH Area coterminous with the Project Area. The development would include an approximately 840 square feet (sf) interior recreation room at the first floor for tenant meetings and other gatherings. The required Recreation Space for Quality Housing purposes is 1,584.18 sf of which 840 sf is a portion. The remaining space will be outdoors. Approximately 3,769 sf of open space with some minor playground equipment would be provided at grade at the rear of the building for use by the Universal Pre-K (UPK) school. The individual lots would be merged into one zoning lot as part of the Proposed Actions. The proposed zoning map amendment would also facilitate the development on the non-applicant owned Projected Development Site 2 (Block 10068, Lots 216 and

218) of a 4-story and cellar 23,586 gsf mixed-use building with approximately 4,052 gsf of commercial retail space on the first floor, 17 residential dwelling units on floors 2 through 4, and 7 cellar level accessory parking spaces. The individual lots would be merged into one zoning lot as part of the Proposed Actions.

The July 2021 RAP proposes the excavation, transportation and off-site disposal of soil in accordance with applicable laws and regulations; removal of underground storage tanks, if encountered in compliance with applicable local, State and Federal laws and regulations; if de-watering into New York City sewer drains is anticipated during the proposed construction, a New York City Department of Environmental Protection Sewer Discharge Permit will be obtained; stockpiled soil will be covered properly anchored tarps; dust control; air monitoring; installation of a vapor barrier system consisting of 20-mil Stego Wrap or similar vapor barrier membrane below the slab throughout the full building area and a minimum 20-mil Grace Preprufe waterproofing membrane system on outside and all sub-grade and elevator pit foundation sidewalls (if the type of vapor barrier is changed an amendment must first be approved by DEP); ventilation of the parking garage in the cellar of the building in accordance with the New York City Mechanical Code; and installation of 2 feet of imported certified clean soil in landscaped areas where not capped with asphalt or concrete. The July 2021 CHASP addresses worker and community health and safety during construction.

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

Projected Development Site 1: Block 10068, Lots 200, 205, 210, 213, 214, and 215 (Site under the control or ownership of the applicant)

- DEP finds the July 2021 RAP and CHASP for the proposed project acceptable. DCP should instruct the applicant that at the completion of the project, a Professional Engineer (P.E.) certified Remedial Closure Report should be submitted for DEP review and approval for the proposed project. The P.E. certified Remedial Closure Report should indicate that all remedial requirements have been properly implemented (i.e., transportation/disposal manifests for removal and disposal of soil in accordance with applicable local, state, and federal laws and regulations; two feet of DEP approved certified clean fill/top soil capping requirement in any landscaped/grass covered areas not capped with concrete/asphalt; installation of vapor barrier, etc.).

Projected Development Site 2: Block 10068, Lots 216 and 218 (Site not under the control or ownership of the applicant)

- Based on prior on-site and/or surrounding area land uses which could result in environmental contamination, DEP concurs that an (E) Designation for hazardous materials should be placed on the zoning map pursuant to Section 11-15 of the New York City Zoning Resolution for the subject property. The (E) Designation will ensure that testing and mitigation will be provided as necessary before any future development and/or soil disturbance. Further hazardous materials assessments should be coordinated through the Mayor's Office of Environmental Remediation.

Future correspondence and submittals related to this project should include the following CEQR **# 77DCP801Q.** If you have any questions, you may contact Mohammad Khaja-Moinuddin at (718) 595-4445.

Sincerely,

Wei Yu
Deputy Director, Hazardous Materials

c: R. Weissbard
M. Khaja-Moinuddin
T. Estesen
M. Wimbish
R. Lucas
O. Abinader – DCP
A. Meunier – DCP
M. Bertini – OER

TRANSPORTATION APPENDIX

TECHNICAL APPENDIX - TRANSPORTATION

TABLES

STONEFIELD

Proposed Mixed-Use Development
141-05 109th Avenue Queens, NY
SE&D #: NYC-220236

Table 2: Travel Demand Factors

		Existing Use			Proposed Use					
		Residential	**Commercial Office**	**Warehouse**	**Residential**	**Commercial Local Retail**	**Commercial Office**	**Universal Pre-K (Public School)**		
Program Size	Size	-2.0	-0.8	-5.7	78.0	9.2	4.6	78	8	78
	Unit	*dwelling units*	*1,000 Square Feet*	*1,000 Square Feet*	*dwelling units*	*1,000 Square Feet*	*1,000 Square Feet*	*Students*	*Staff*	*Parents*
Daily Person Trip Rate	Weekday	12.60	18.00	10.40	8.18	329.00	18.00	2.000	2.000	4.000
	Saturday	13.70	3.90	3.60	9.08	358.00	3.90	0.000	0.000	0.000
	Unit	*per dwelling unit* [1]	*per 1,000 square foot* [1]	*per 1,000 square foot* [2]	*per dwelling unit* [1]	*per 1,000 square foot* [1]	*per 1,000 square foot* [1]	*per 1,000 square foot* [1]	*per 1,000 square foot* [1]	*per 1,000 square foot* [1]
Daily Truck Trip Rate	Weekday	0.06	0.32	0.67	0.06	0.35	0.32	0.04	0.00	0.00
	Saturday	0.02	0.01	0.02	0.02	0.04	0.01	0.00	0.00	0.00
	Unit	*per dwelling unit* [1]	*per 1,000 square foot* [1]	*per 1,000 square foot* [2]	*per 1,000 square foot* [1]	*per 1,000 square foot* [1]	*per 1,000 square foot* [1]	*per student* [1]	*per student* [1]	*per student* [1]
Modal Split		All Periods[3]	All Periods[4]	All Periods[4]	All Periods[3]	All Periods[5]	All Periods[4]	All Periods[5]	All Periods[4]	All Periods[5]
	Auto	46.4%	59.0%	59.0%	46.4%	11.0%	59.0%	40.0%	59.0%	40.0%
	Taxi	0.0%	2.0%	2.0%	0.0%	0.0%	2.0%	0.0%	2.0%	0.0%
	Bus	15.3%	12.0%	12.0%	15.3%	3.0%	12.0%	2.0%	12.0%	3.0%
	Subway/Railroad	32.3%	12.0%	12.0%	32.3%	4.0%	12.0%	3.0%	12.0%	2.0%
	Walk/Bike	6.0%	15.0%	15.0%	6.0%	82.0%	15.0%	55.0%	15.0%	55.0%
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Vehicle Occupancy		(2&3)	(2&4)	(2)	(2&3)	(2)	(2&4)	(6)	(6)	(6)
	Auto	1.10	1.15	1.15	1.10	2.00	1.15	1.00	1.00	1.00
	Taxi	1.30	1.26	1.30	1.30	2.00	1.26	1.00	1.00	1.00
Linked Trips		0%	0%	0%	0%	0%	0%	0%	0%	0%
Temporal Distribution		(1)	(1)	(2)	(1)	(1)	(1)	(1)	(6)	(1)
	Weekday AM	9.3%	12.4%	13.2%	9.3%	4.8%	12.4%	49.5%	40.0%	49.5%
	Weekday MID	5.6%	11.0%	11.0%	5.6%	8.0%	11.0%	0.0%	0.0%	0.0%
	Weekday PM	8.5%	10.5%	14.1%	8.5%	10.9%	10.5%	49.5%	40.0%	49.5%
	Saturday	8.4%	14.1%	11.0%	8.4%	11.7%	14.1%	0.0%	0.0%	0.0%
Truck Temporal Distribution		(1)	(1)	(2)	(1)	(1)	(1)	(1)	(6)	(1)
	Weekday AM	12.0%	10.0%	14.0%	12.0%	8.0%	10.0%	9.7%	0.0%	0.0%
	Weekday MID	9.0%	11.0%	9.0%	9.0%	11.0%	11.0%	0.0%	0.0%	0.0%
	Weekday PM	2.0%	2.0%	1.0%	2.0%	2.0%	2.0%	5.1%	0.0%	0.0%
	Saturday	9.0%	11.0%	9.0%	9.0%	11.0%	11.0%	0.0%	0.0%	0.0%
Directional Distribution		*IN* [1]	*OUT* [1]	*IN* [1]	*OUT* [1]	*IN* [2]	*OUT* [2]	*IN* [1]	*OUT* [1]	*IN* [1]	*OUT* [1]	*IN* [1]	*OUT* [1]	*IN* [1]	*OUT* [1]	*IN* [6]	*OUT* [6]	*IN* [1]	*OUT* [1]
	Weekday AM	22%	78%	89%	11%	88%	12%	22%	78%	53%	47%	89%	11%	100%	0%	100%	0%	50%	50%
	Weekday MID	50%	50%	48%	52%	50%	50%	50%	50%	50%	50%	48%	52%	0%	0%	0%	0%	0%	0%
	Weekday PM	63%	37%	17%	83%	12%	88%	63%	37%	50%	50%	17%	83%	0%	100%	0%	100%	50%	50%
	Saturday	51%	49%	50%	50%	50%	50%	51%	49%	50%	50%	50%	50%	0%	0%	0%	0%	0%	0%
Truck Directional Distribution		*IN* [1]	*OUT* [1]	*IN* [1]	*OUT* [1]	*IN* [2]	*OUT* [2]	*IN* [1]	*OUT* [1]	*IN* [1]	*OUT* [1]	*IN* [1]	*OUT* [1]	*IN* [1]	*OUT* [1]	*IN* [6]	*OUT* [6]	*IN* [1]	*OUT* [1]
	Weekday AM	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
	Weekday MID	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
	Weekday PM	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
	Saturday	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%

[1] CEQR Technical Manual (December 2021), Chapter 16, Table 16-2.
[2] Gowanus Neighborhood Rezoning and Related Actions, Table 14-8.
[3] 2015-2019 American Community Survey (ACS)-Journey-To-Work (JTW) data for Census Tract #'s 158.01, 194, 196, 198, 202, 204, and 206 in Queens N.Y.
[4] 2012-2016 American Community Survey (ACS)-Reverse-Journey-To-Work (RJTW) data for Census Tract #'s 158.01, 194, 196, 198, 202, 204, and 206 in Queens N.Y.
[5] Based on data provided by NYCDOT.
[6] 11-11 40th Avenue, Q346 EAF, Table N-2.

STONEFIELD

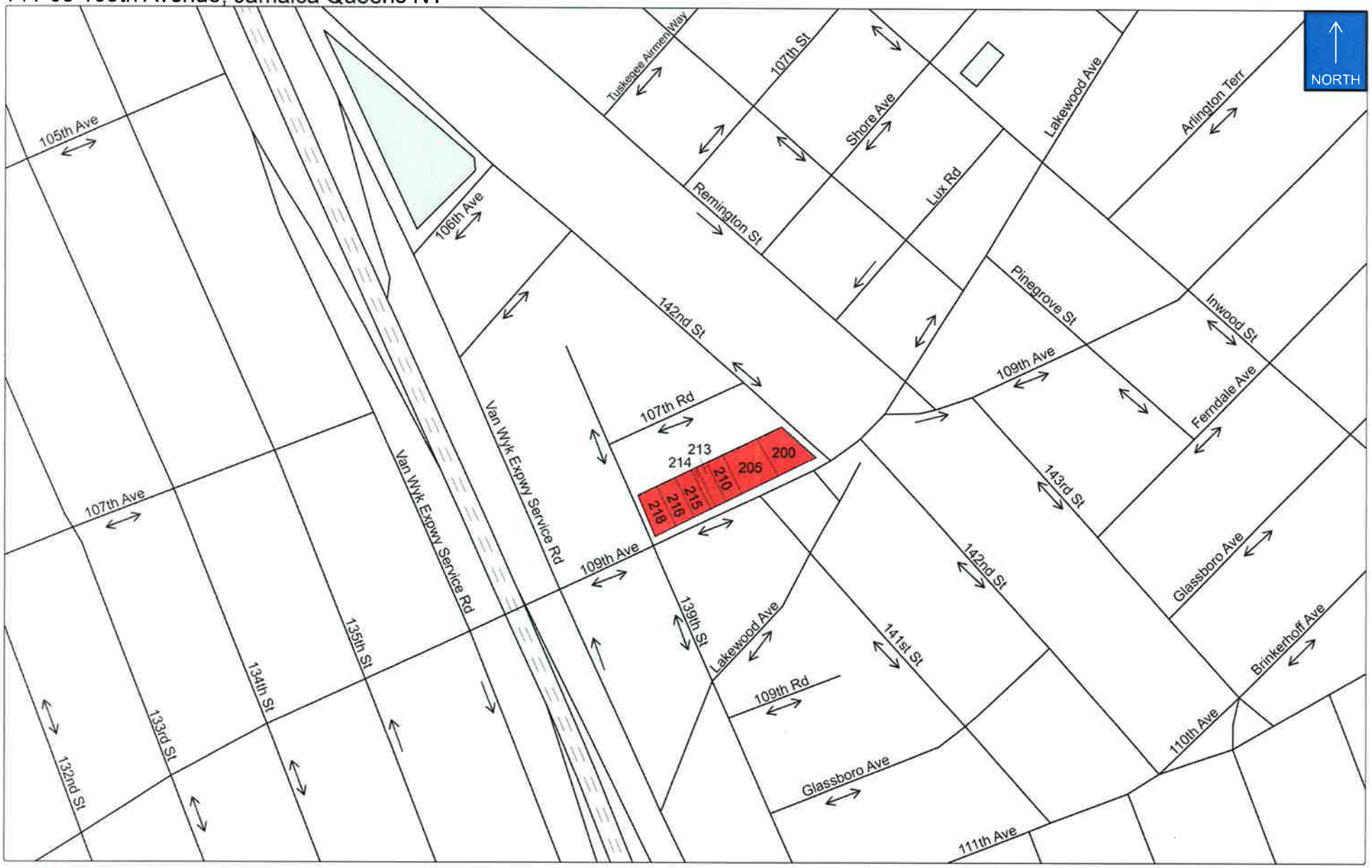
Proposed Mixed-Use Development
141-05 109th Avenue Queens, NY
SE&D #: NYC-220236

Table 3: Trip Generation Estimates

		Existing Use									Proposed Use												Proposed Total			Net Total		
		Residential			Commercial Office			Warehouse			Residential			Commercial Local Retail			Commercial Office			Universal Pre-K(Public School)											

FIGURES

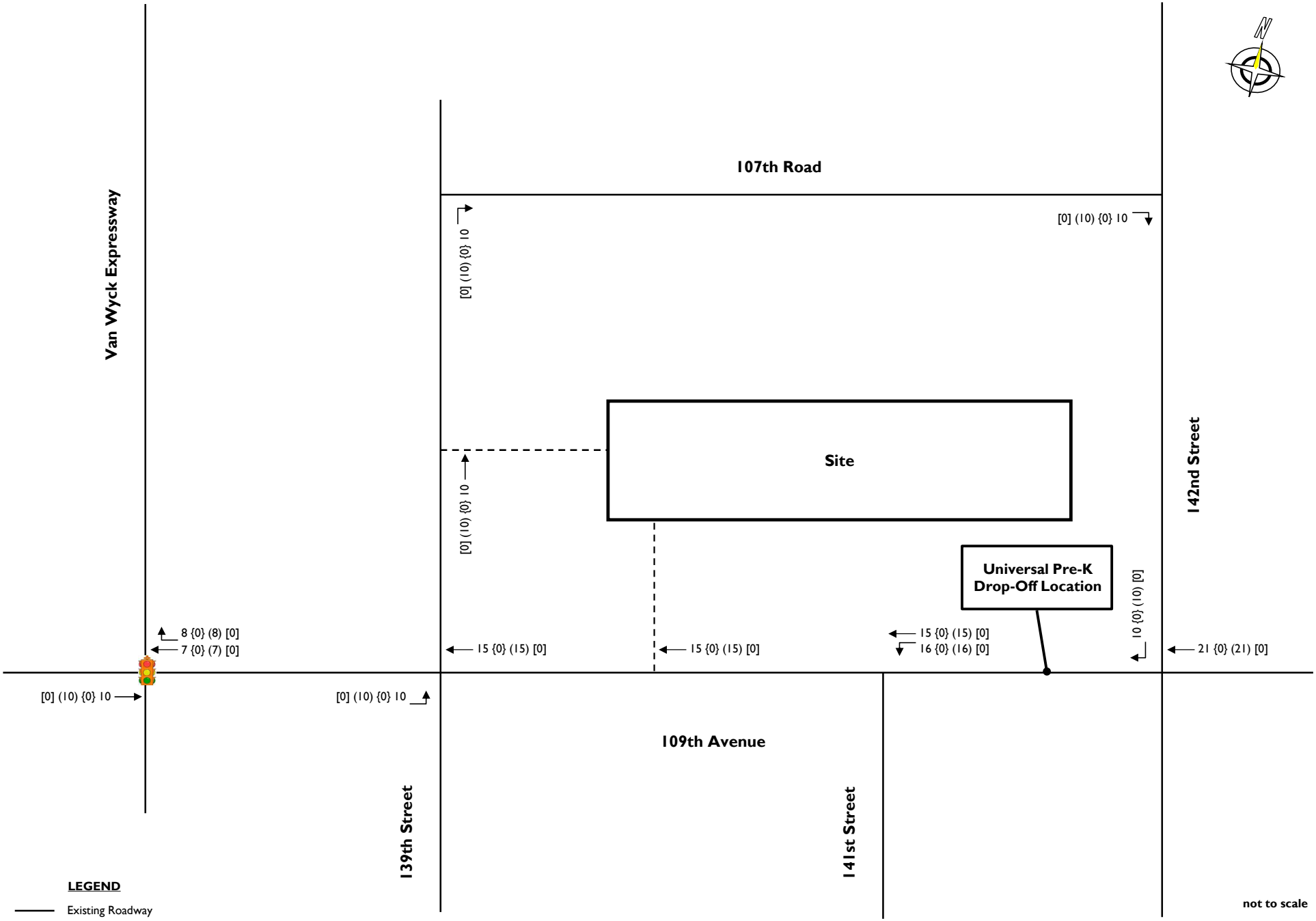
141-05 109th Avenue, Jamaica Queens NY



Projected Sites: Block 10067, Lots 200, 205, 210, 213, 214, 215, 216, & 218

Projected Sites & Street Direction

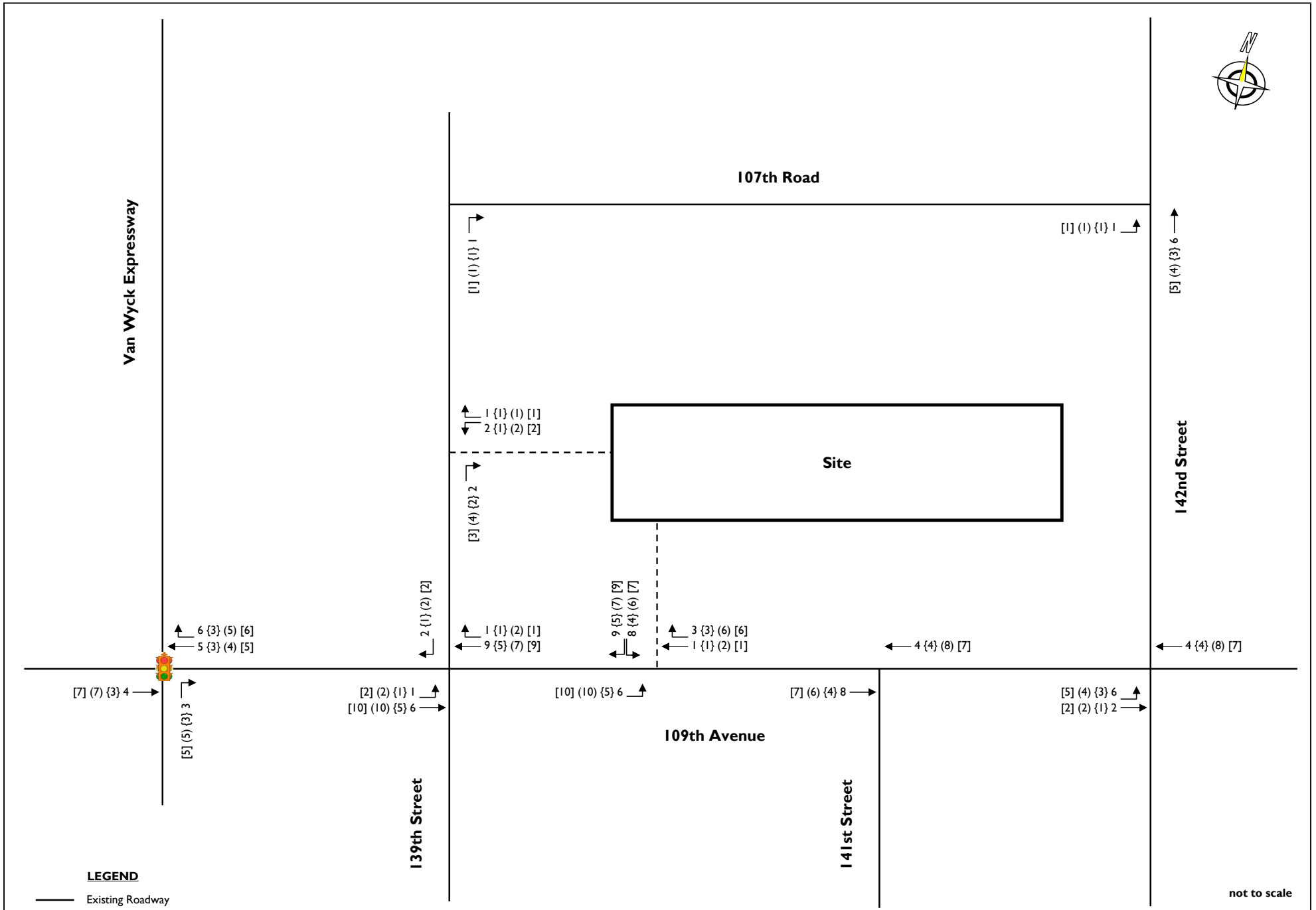
Figure 1



STONEFIELD

141-05 109th Avenue Rezoning
Borough of Queens, New York
Environmental Assessment Statement

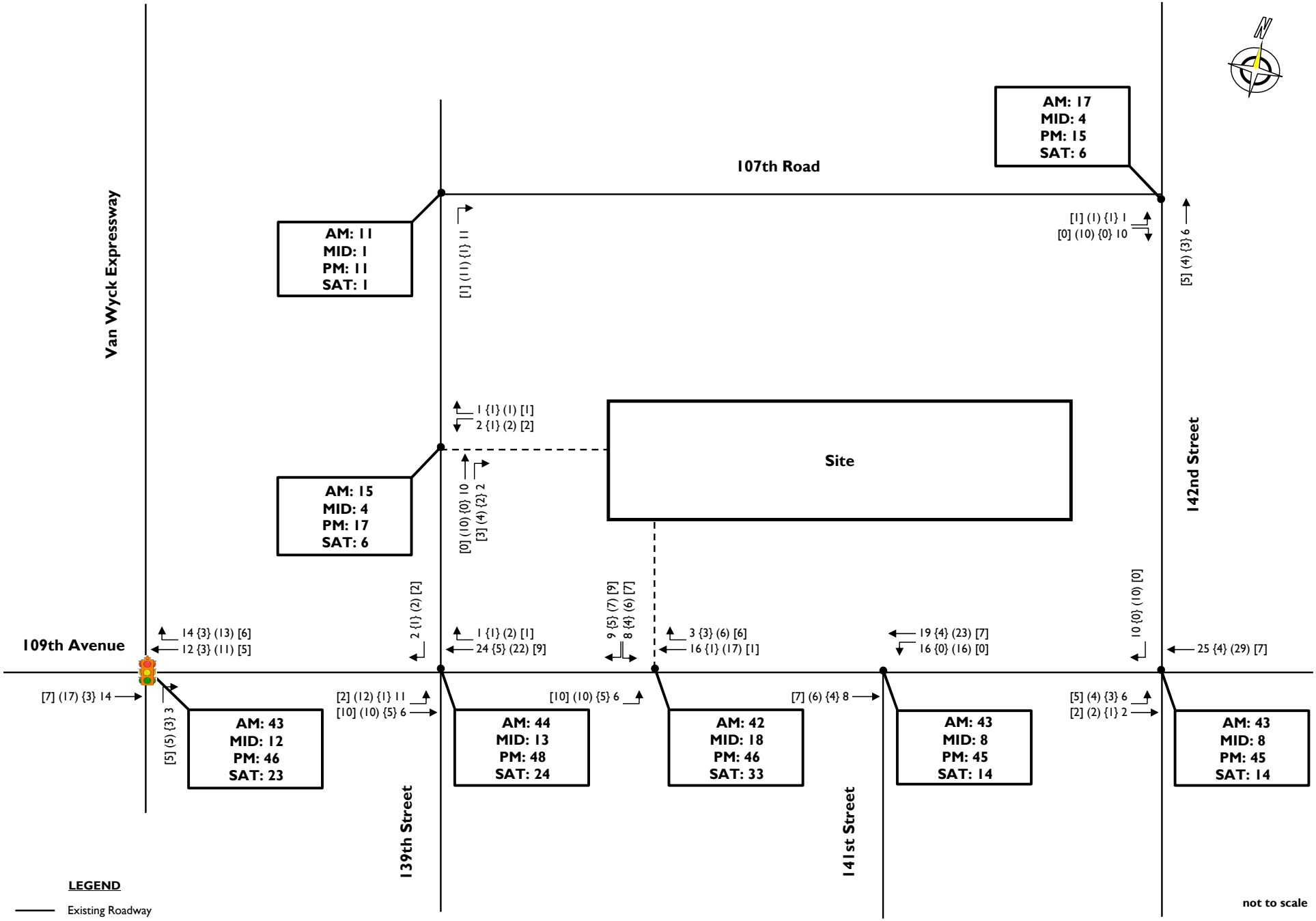
FIGURE 2
Site-Generated UPK Drop-Off Traffic Volumes



STONEFIELD

141-05 109th Avenue Rezoning
Borough of Queens, New York
Environmental Assessment Statement

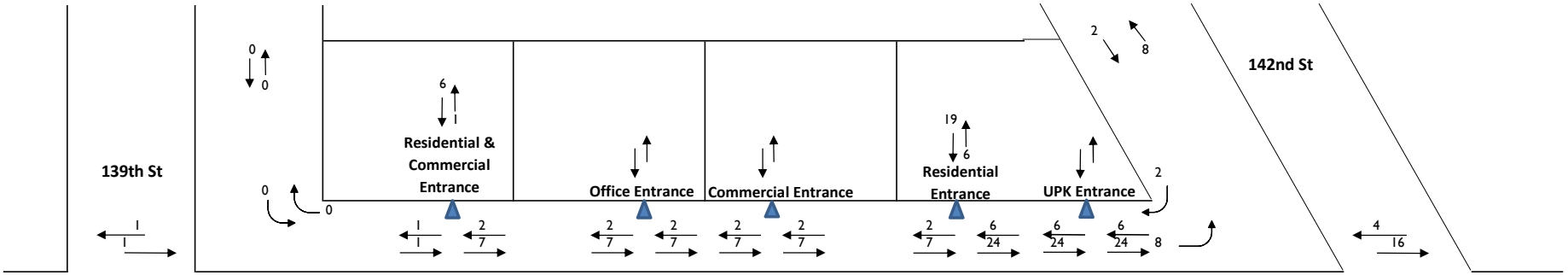
FIGURE 3
Site-Generated Residential/Commercial/Staff Traffic Volumes



STONEFIELD

141-05 109th Avenue Rezoning
Borough of Queens, New York
Environmental Assessment Statement

FIGURE 4
Total Site-Generated Traffic Volumes

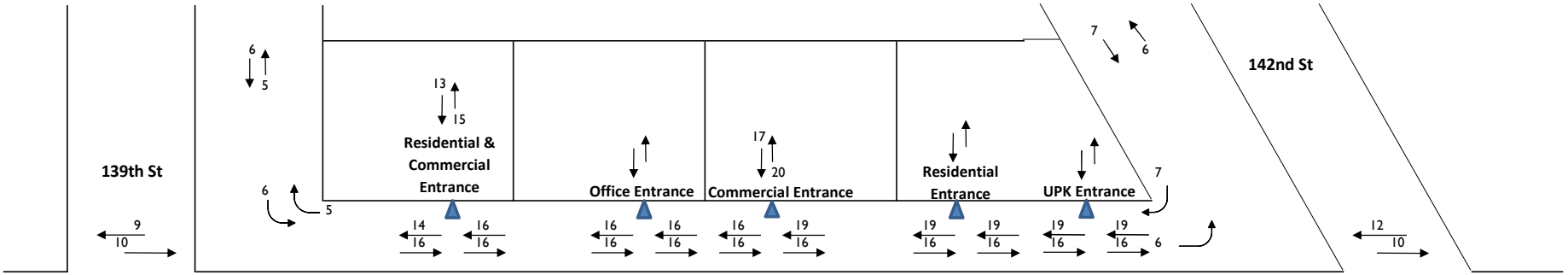


not to scale

STONEFIELD

141-05 109th Avenue Rezoning
Borough of Queens, New York
Environmental Assessment Statement

FIGURE 5
Weekday Morning Residential Pedestrian Trip Ends

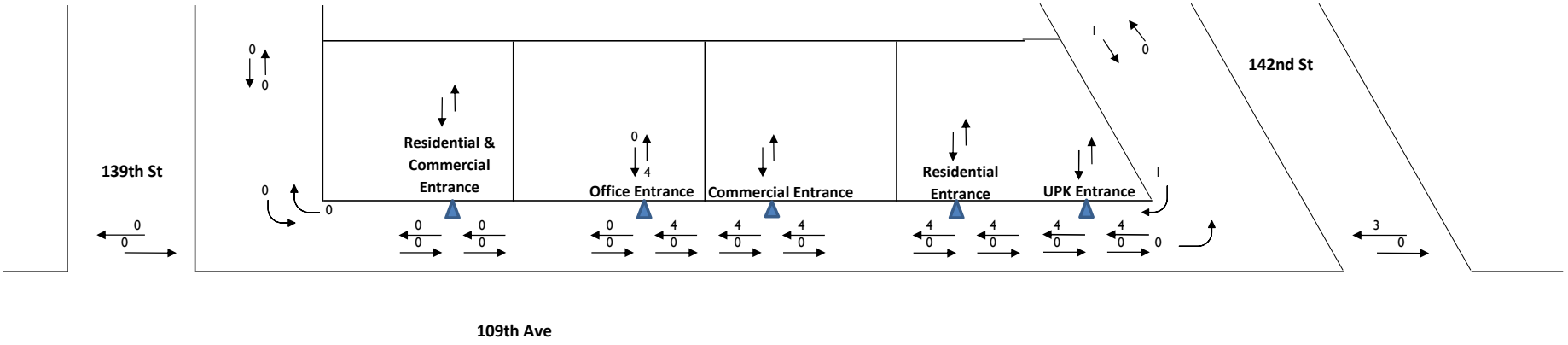


not to scale

STONEFIELD

141-05 109th Avenue Rezoning
Borough of Queens, New York
Environmental Assessment Statement

FIGURE 6
Weekday Morning Retail
Pedestrian Trip Ends

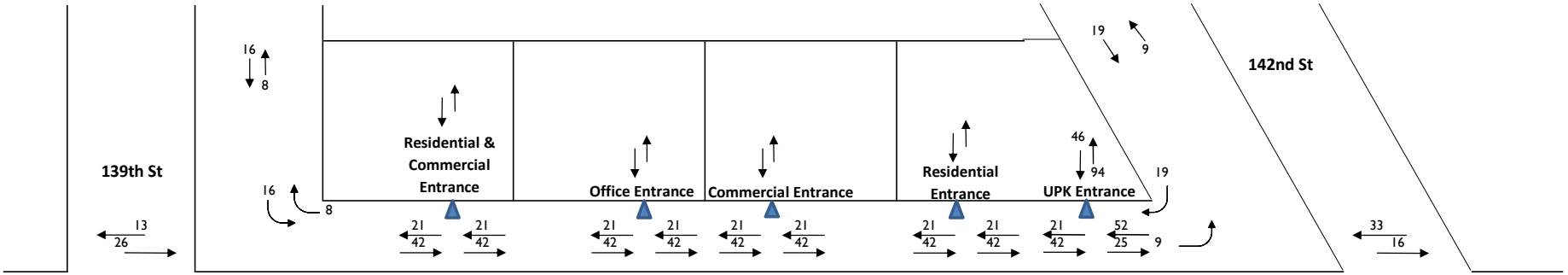


not to scale

STONEFIELD

141-05 109th Avenue Rezoning
Borough of Queens, New York
Environmental Assessment Statement

FIGURE 7
Weekday Morning Office
Pedestrian Trip Ends

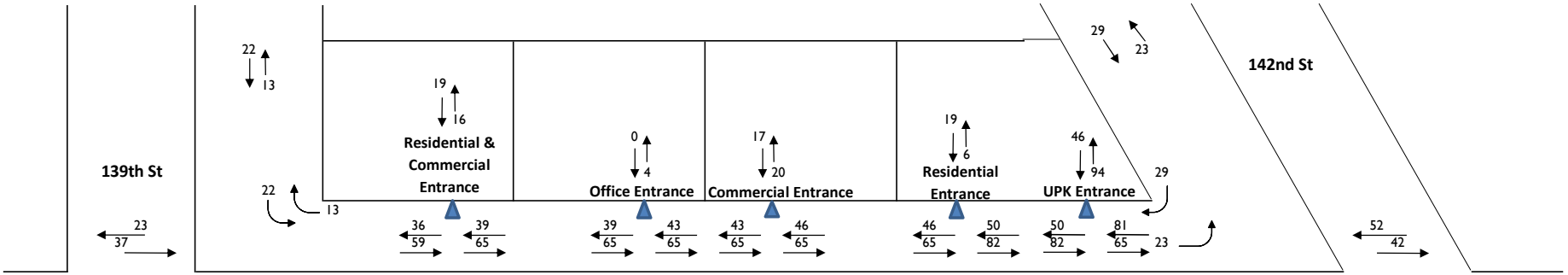


not to scale

STONEFIELD

141-05 109th Avenue Rezoning
Borough of Queens, New York
Environmental Assessment Statement

FIGURE 8
Weekday Morning Universal Pre-K Pedestrian Trip Ends

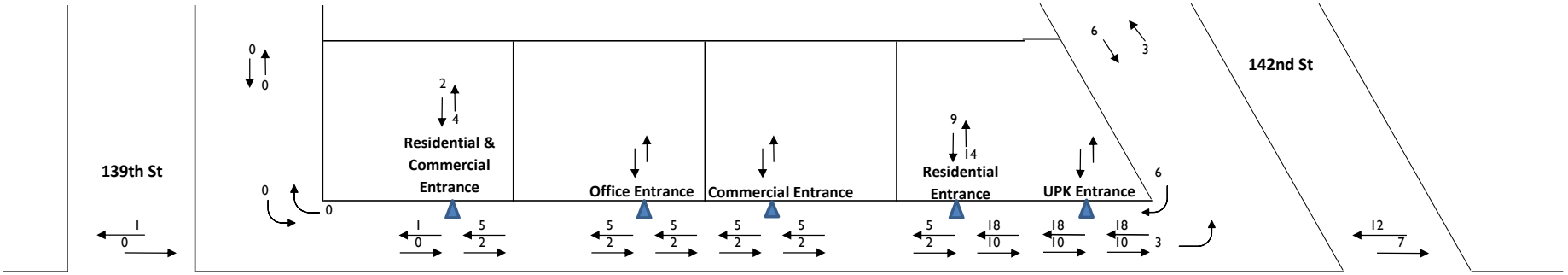


not to scale

STONEFIELD

141-05 109th Avenue Rezoning
Borough of Queens, New York
Environmental Assessment Statement

FIGURE 9
Weekday Morning Total Pedestrian Trip Ends

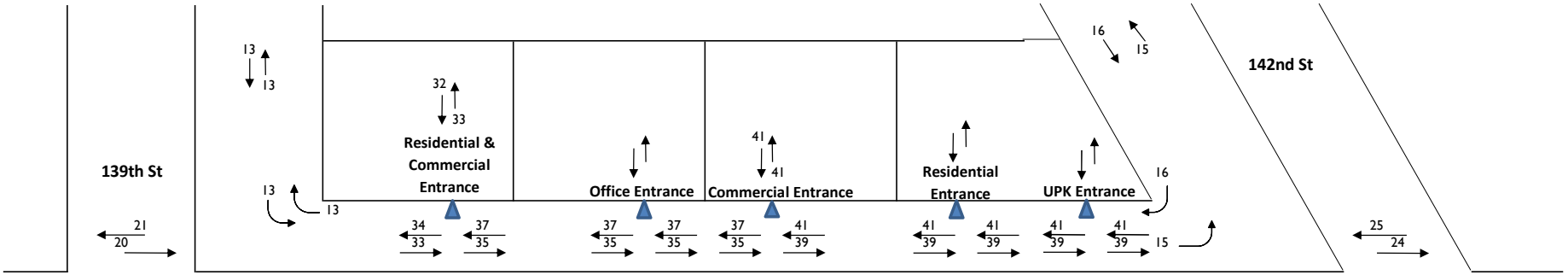


not to scale

STONEFIELD

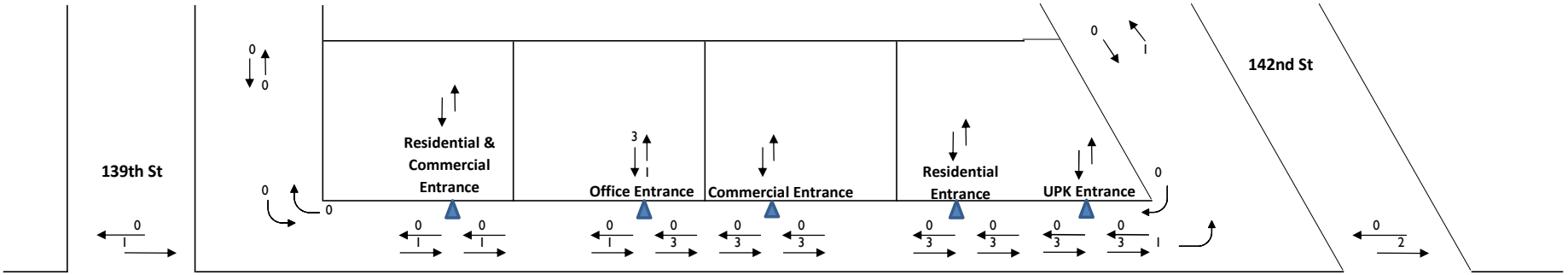
141-05 109th Avenue Rezoning
Borough of Queens, New York
Environmental Assessment Statement

FIGURE 10
Weekday Evening Residential Pedestrian Trip Ends



not to scale

STONEFIELD	141-05 109th Avenue Rezoning Borough of Queens, New York Environmental Assessment Statement	FIGURE 11 Weekday Evening Retail Pedestrian Trip Ends

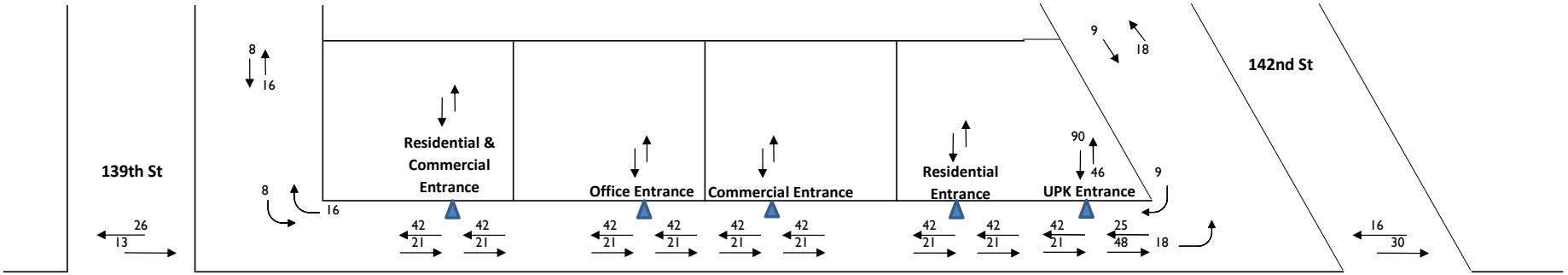


not to scale

STONEFIELD

141-05 109th Avenue Rezoning
Borough of Queens, New York
Environmental Assessment Statement

FIGURE 12
Weekday Evening Office Pedestrian Trip Ends

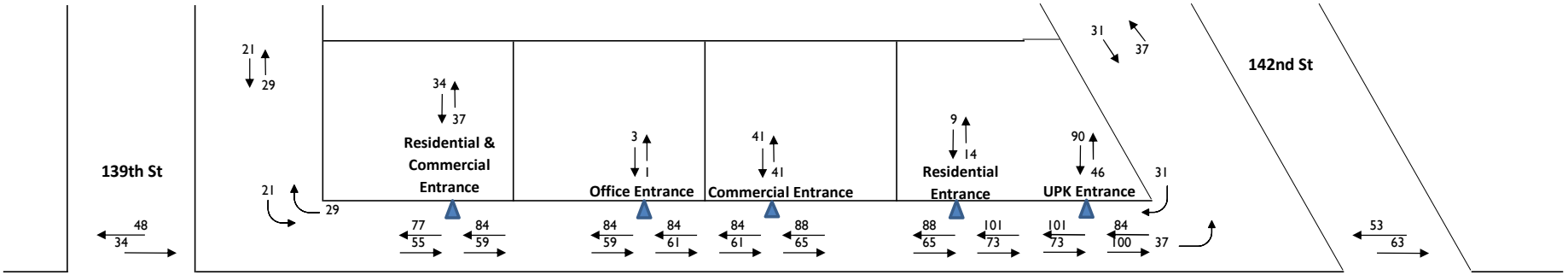


not to scale

STONEFIELD

141-05 109th Avenue Rezoning
Borough of Queens, New York
Environmental Assessment Statement

FIGURE 13
Weekday Evening Universal Pre-K Pedestrian Trip Ends

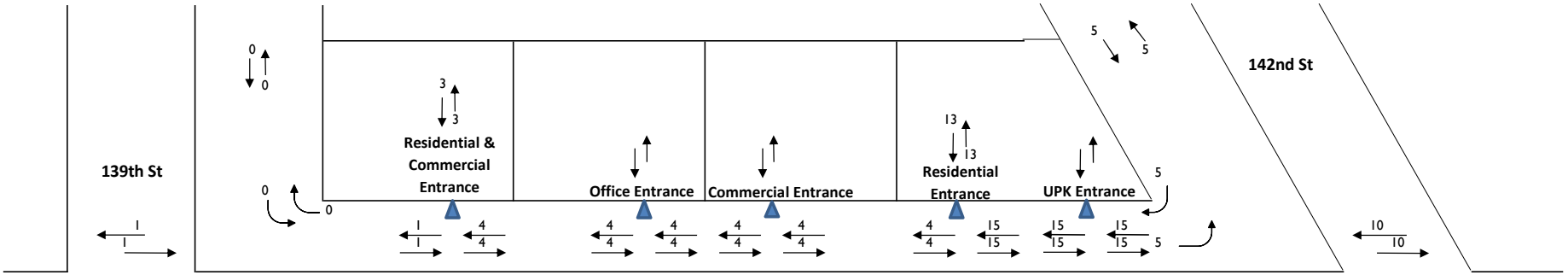


not to scale

STONEFIELD

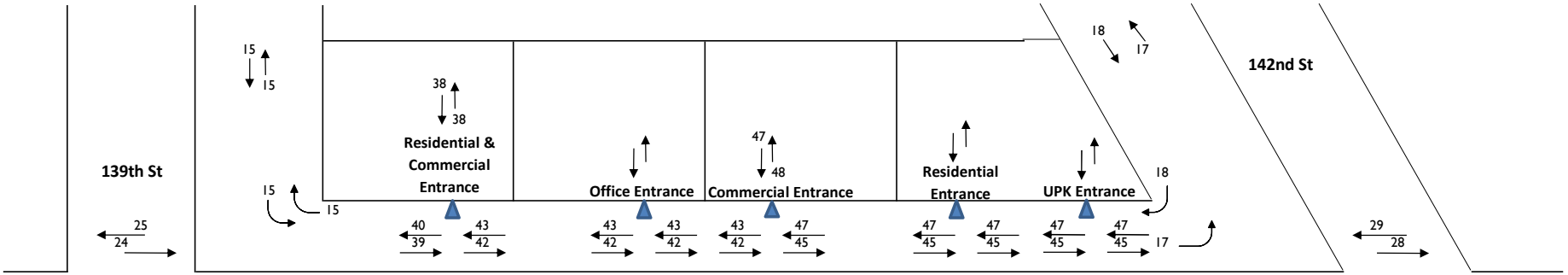
141-05 109th Avenue Rezoning
Borough of Queens, New York
Environmental Assessment Statement

FIGURE 14
Weekday Evening Total Pedestrian Trip Ends



not to scale

STONEFIELD	141-05 109th Avenue Rezoning Borough of Queens, New York Environmental Assessment Statement	FIGURE 15 Saturday Residential Pedestrian Trip Ends

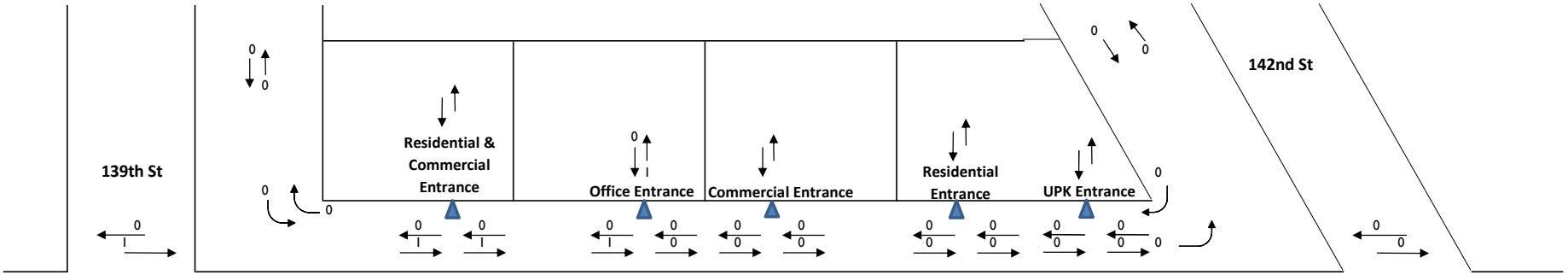


not to scale

STONEFIELD

141-05 109th Avenue Rezoning
Borough of Queens, New York
Environmental Assessment Statement

FIGURE 16
Saturday Retail Pedestrian Trip Ends

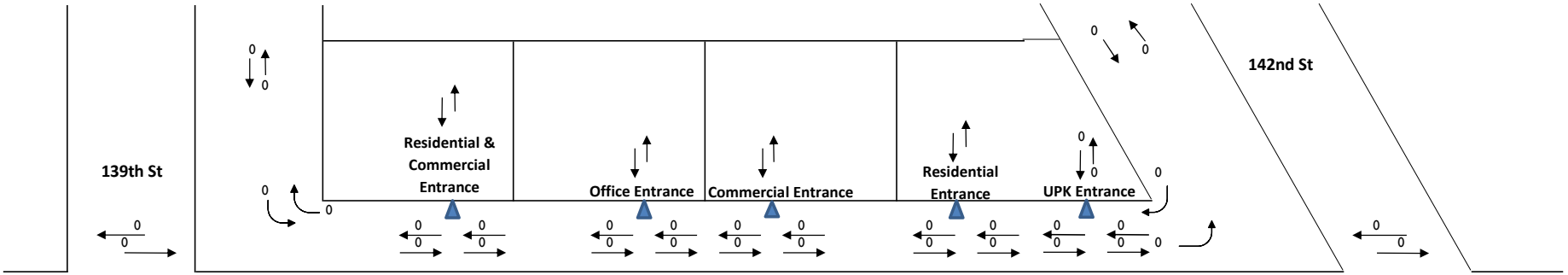


not to scale

STONEFIELD

141-05 109th Avenue Rezoning
Borough of Queens, New York
Environmental Assessment Statement

FIGURE 17
Saturday Office Pedestrian Trip Ends

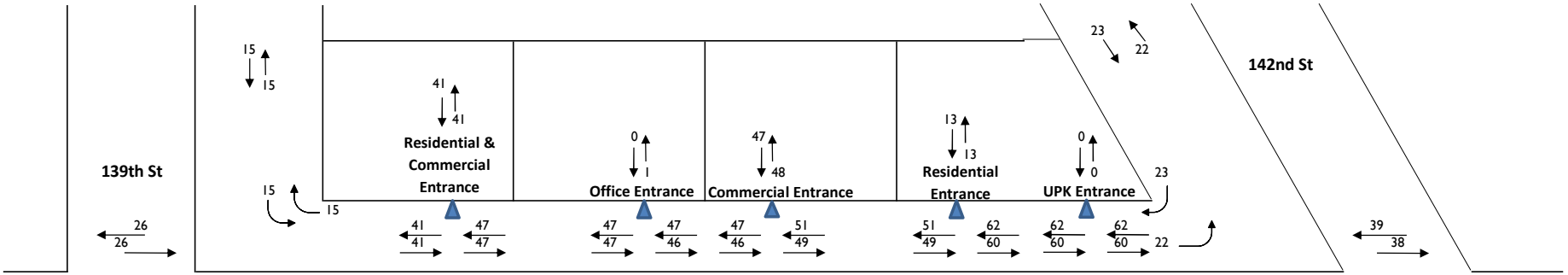


not to scale

STONEFIELD

141-05 109th Avenue Rezoning
Borough of Queens, New York
Environmental Assessment Statement

FIGURE 18
Saturday Universal Pre-K
Pedestrian Trip Ends



not to scale

STONEFIELD	141-05 109th Avenue Rezoning Borough of Queens, New York Environmental Assessment Statement	FIGURE 19 Saturday Total Pedestrian Trip Ends

EXHIBITS

EXHIBIT A

141-05 109th Avenue, Jamaica Queens NY

2015-2019 JERNEY TO WORK (JTW) Census Tract numbers 158.01, 194, 196, 198, 202, 204 and 206 in Jamaica Queens, NY

	Queens	Queens	Queens	Queens	Brooklyn	Brooklyn		Total		
CENSUS TRACT	**158.01**	**194**	**196**	**198**	**202**	**204**	**206**		total cars	total persons
TOTAL	1763	1333	1588	1304	710	1146	913	8757		
Car-truck, or van	964	775	620	546	438	296	421	4060		
drove alnoe	879	641	533	491	326	251	243	3364	3364	
carpooled	85	134	87	55	112	45	178	696		
in 2-person carpooled	85	66	86	45	88	24	172	566	283	
in 3-person carpooled	0	49	0	6	24	0	0	79	26	
in 4-person carpooled	0	19	1	4	6	21	6	57	14	
in 5 or 6-person carpooled	0	0	0	0	0	0	0	0	0	
in 7-or more person carpooled	0	0	0	0	0	0	0	0	0	
bus	198	171	250	212	66	246	198	1341		
subway or elevated rail	488	240	519	492	159	513	227	2638		
long-distance train or commuter rail	40	26	79	8	16	18	0	187		
light rail- street car or trolley	0	9	0	0	0	0	0	9		
ferry boat	0	0	0	0	0	0	0	0		
taxi cab	0	0	0	0	0	0	0	0		
motorcycle	0	0	0	0	0	0	0	0		
bicycle	0	0	0	0	0	0	0	0		
walked	5	75	95	34	9	69	57	344		
other means	6	13	0	0	0	4	0	23		
worked from home	62	24	25	12	22	0	10	155		
TOTAL	1763	1333	1588	1304	710	1146	913	8757	3688	4060

Mode of Transportation Summary

Auto Share	0.464
Taxi Share	0.00
Bus Share	0.153
Subway Share	0.323
Walk Share	0.04
Other	0.02
total	1.00
Auto Occupancy Rate	1.10

Exhibit B

Modal Split Data

2012-2016 ACS 5-YEAR Reverse-Journey-to-Work (R JTW) for Census Tract #'s 158.01, 194, 196, 198, 202, 204, and 206 in Jamaica, Queer

141-05 109th Avenue, Jamaica Queens New York

2012-2016 ACS 5-Year, Reverse-Journey-to-Work:

Census Tract	Total Workers	Car or Van Drive-Alone	Carpool	Bus	Street Car	Subway	R.R.	Ferry	Bicycle	walk	taxi	motor cycle	Other Means	Worked @ Home	Total
158.01	485	270	20	45	0	25	0	0	0	90	0	0	10	25	485
194	30	20	0	0	0	0	0	0	0	0	0	0	0	10	30
196	114	10	10	30	0	40	0	0	0	4	0	0	0	20	114
198	18	0	0	4	0	4	0	0	0	0	0	0	0	10	18
202	84	80	0	0	0	0	0	0	0	0	0	0	0	4	84
204	774	305	180	110	0	105	0	0	0	20	30	0	20	4	774
206	122	45	20	4	0	15	0	0	20	4	4	0	0	10	122
Total	1,627	730	230	193	0	189	0	0	20	118	34	0	30	83	1,627
% Mode of Travel		*0.449*	*0.141*	*0.119*	*0.00*	*0.116*	*0.000*	*0.00*	*0.01*	*0.07*	*0.02*	*0.000*	*0.02*	*0.051*	*1.00*

Exhibit C

Vehicle Occupancy Rate Data

2012-2016 ACS 5-YEAR Reverse-Journey-to-Work (R JTW) for Census Tract #'s 158.01, 194, 196, 198, 202, 204, and 206 in Jamaica, Queens N

2012-2016 ACS-5 Year (RJTW), auto Occupancy Rate:

Census Tract	Total Drove Alone & Car Pool	Drove alone	Total car pool	2person carpool	3 Person carpool	4 Person carpool	5 or 6 Person carpool	7 or more Person carpool	Total
158.01	290	270	20	0	0	20	0	0	20
194	20	20	0	0	0	0	0	0	0
196	20	10	10	0	10	0	0	0	10
198	0	0	0	0	0	0	0	0	0
202	80	80	0	0	0	0	0	0	0
204	485	305	180	165	15	0	0	0	180
206	65	45	20	20	0	0	0	0	20
Persons	960	730	230	185	25	20	0	0	230
Cars		730		93	8	5	0	0	836

Vehicle Occupancy = 1.15

Modal Split summary

Auto	**0.59**
Taxi	**0.02**
Bus	**0.12**
Subway	**0.12**
Walk	**0.07**
Other	**0.08**
Total	**1.00**

Exhibit D

Universal Pre-K – Student Modal Split – Provided by NYCDOT

Mode Choice	
Auto	40%
Walk	55%
Subway/Rail	3%
Bus	2%
% School Bus	0%
Total	**100%**

STONEFIELD

Journey-To-Work Model - Trip Routing Summary Tables
Proposed Mixed-Use Development
141-05 109th Avenue Queens, NY

Exhibit E
Routings to Nearby Census Tracts

Census Tract	Restricted Share	Routing
Census Tract 716 (Queens, NY)	15.34%	To/From South via Van Wyck Expressway
Census Tract 334.02 (Queens, NY)	7.95%	To/From East via 109th Avenue
Census Tract 11 (Kings, NY)	5.68%	To/From North via Van Wyck Expressway/142nd Street/Remington Street/109th Avenue
Census Tract 1471 (Queens, NY)	4.55%	To/From North via Van Wyck Expressway/142nd Street/Remington Street/109th Avenue
Census Tract 3036 (Nassau, NY)	3.98%	To/From North via Van Wyck Expressway/142nd Street/Remington Street/109th Avenue
Census Tract 4110 (Nassau, NY)	3.98%	To/From South via Van Wyck Expressway
Census Tract 76 (New York, NY)	3.98%	To/From North via Van Wyck Expressway/142nd Street/Remington Street/109th Avenue
Census Tract 208 (Queens, NY)	3.98%	To/From East via 109th Avenue
Census Tract 711 (Queens, NY)	3.98%	To/From North via Van Wyck Expressway/142nd Street/Remington Street/109th Avenue
Census Tract 3018 (Nassau, NY)	3.41%	To/From North via Van Wyck Expressway/142nd Street/Remington Street/109th Avenue
Census Tract 7 (New York, NY)	3.41%	To/From North via Van Wyck Expressway/142nd Street/Remington Street/109th Avenue
Census Tract 88 (New York, NY)	3.41%	To/From North via Van Wyck Expressway/142nd Street/Remington Street/109th Avenue
Census Tract 104 (New York, NY)	3.41%	To/From North via Van Wyck Expressway/142nd Street/Remington Street/109th Avenue
Census Tract 840 (Queens, NY)	3.41%	To/From West via 109th Avenue
Census Tract 889.01 (Queens, NY)	3.41%	To/From North via Van Wyck Expressway/142nd Street/Remington Street/109th Avenue
Census Tract 3028 (Nassau, NY)	2.84%	To/From North via Van Wyck Expressway/142nd Street/Remington Street/109th Avenue
Census Tract 4117 (Nassau, NY)	2.84%	To/From South via Van Wyck Expressway
Census Tract 82 (New York, NY)	2.84%	To/From North via Van Wyck Expressway/142nd Street/Remington Street/109th Avenue
Census Tract 113 (New York, NY)	2.84%	To/From North via Van Wyck Expressway/142nd Street/Remington Street/109th Avenue
Census Tract 142.02 (Queens, NY)	2.84%	To/From North via Van Wyck Expressway/142nd Street/Remington Street/109th Avenue
Census Tract 864 (Queens, NY)	2.84%	To/From West via 109th Avenue
Census Tract 3016 (Nassau, NY)	2.27%	To/From North via Van Wyck Expressway/142nd Street/Remington Street/109th Avenue
Census Tract 4073.01 (Nassau, NY)	2.27%	To/From South via Van Wyck Expressway
Census Tract 4123.01 (Nassau, NY)	2.27%	To/From South via Van Wyck Expressway
Census Tract 9 (New York, NY)	2.27%	To/From North via Van Wyck Expressway/142nd Street/Remington Street/109th Avenue
	100.00%	

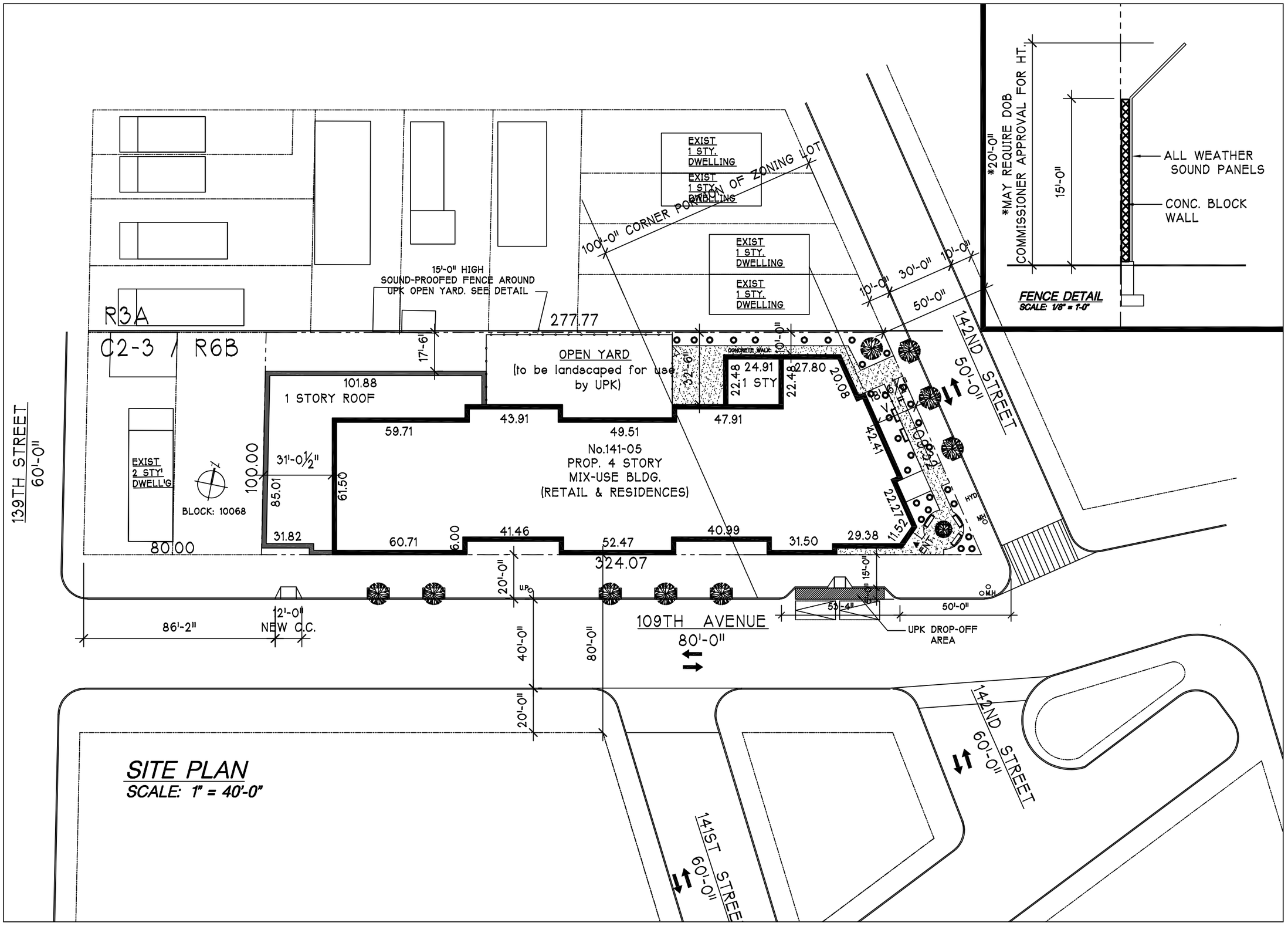
Split Routings for Tracts 11, 1471, 3036, 76, 711, 3018, 7, 88, 104, 889.01, 3028, 82, 113, 142.02, 3016, and 9

Direction	Restricted Share	Routing
To/From North	27.56%	To/From North via Van Wyck Expressway/142nd Street/Remington Street
To/From North	27.55%	To/From North via Van Wyck Expressway/109th Avenue
	55.11%	

Journey-To-Work Summary Table

	Calculated	Assumed
To/From North via 142nd Street/Van Wyck	27.56%	28%
To/From North via 109th Avenue/Van Wyck	27.55%	27%
To/From South via Van Wyck	26.70%	27%
To/From East via 109th Avenue	11.93%	12%
To/From West via 109th Avenue	6.25%	6%
	100.00%	100%

NOISE
APPENDIX



SITE PLAN
SCALE: 1" = 40'-0"

THE ARCHITECT SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, DEVIATIONS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTIONS WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALWAYS USE DIMENSIONS AS SHOWN. DRAWINGS ARE NOT TO BE SCALED. GERALD J. CALIENDO ARCHITECT, P.C. AND ITS PRINCIPAL/EMPLOYEES WERE NOT RETAINED FOR ANY CONSTRUCTION SUPERVISION.

Gerald J. Caliendo, R.A., A.I.A.
Architect, P.C.
Architecture
Interior Design
Code Consultant
Building Dept. Expediting
138-72 Queens Boulevard
Briarwood N.Y. 11435
Tel. (718) 268-9098
Fax (718) 268-9097
www.caliendoarchitects.com

DRAWING TITLE: SITE PLAN - C2-3 / R6B
FOR ILLUSTRATIVE PURPOSES ONLY

PREMISES: 141-05 109TH AVENUE
JAMAICA, NY

DRAWN BY:	N.M.H.	JOB No:	19066
CHECKED BY:	GJC	SCALE:	AS NOTED
		DATE:	8-19-22

SEAL: REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

DRAWING No: 3 OF 11

Z-003.00

L1	Noise Level (dBA) without playground			Noise Level (dBA) with playground		
	AM	Midday	PM	AM	Midday	PM
L_{eq}	63.7	63.1	67.5	72.2	72.1	73.0
L_{10}	66.4	65.7	67.6	74.9	74.7	73.1
L_{10}-L_{eq}	2.7	2.6	0.1			

L2	Noise Level (dBA) without playground			Noise Level (dBA) with playground		
	AM	Midday	PM	AM	Midday	PM
L_{eq}	64.8	64.8	66.2	72.3	72.3	72.6
L_{10}	68.2	68.3	67.8	75.7	75.8	74.2
L_{10}-L_{eq}	3.4	3.5	1.6			

Playground noise level = 71.5 dBA

General Information

Serial Number	03819
Model	Model 831
Firmware Version	2.301
Filename	109TH_AV.002
User	
Job Description	
Location	
Measurement Description	L1
Start Time	Wednesday, 2021 April 28 07:19:36
Stop Time	Wednesday, 2021 April 28 08:19:43
Duration	01:00:06.4
Run Time	01:00:06.4
Pause	00:00:00.0
Pre Calibration	Thursday, 2019 September 26 18:08:19
Post Calibration	None
Calibration Deviation	---

Note

Overall Data

LAeq		63.7	dB
LASmax	2021 Apr 28 07:40:39	82.8	dB
LApeak (max)	2021 Apr 28 08:07:26	105.5	dB
LASmin	2021 Apr 28 08:17:18	52.6	dB
LCeq		75.7	dB
LAeq		63.7	dB
LCeq - LAeq		12.0	dB
LAIeq		66.0	dB
LAeq		63.7	dB
LAIeq - LAeq		2.3	dB
Ldn		63.7	dB
LDay 07:00-22:00		63.7	dB
LNight 22:00-07:00		---	dB
Lden		63.7	dB
LDay 07:00-19:00		63.7	dB
LEvening 19:00-22:00		---	dB
LNight 22:00-07:00		---	dB
LAE		99.2	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		0	
OBA Overload Duration		0.0	s

Statistics

LAS1.00	74.0	dBA
LAS10.00	66.4	dBA
LAS33.30	62.2	dBA
LAS50.00	59.7	dBA
LAS66.60	57.7	dBA
LAS90.00	55.5	dBA
LAS > 65.0 dB (Exceedence Counts / Duration)	130 / 824.8	s
LAS > 85.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

Settings

RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamp	PRM831	
Microphone Correction	Off	
Integration Method	Linear	
OBA Range	Normal	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	Z Weighting	
OBA Max Spectrum	Bin Max	
Gain	+0	dB
Under Range Limit	26.3	dB
Under Range Peak	76.6	dB
Noise Floor	17.2	dB
Overload	144.1	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LZeq	62.3	67.0	72.7	72.6	68.9	63.2	58.7	59.5	55.5	49.8	45.6	47.5
LZSmax	89.8	86.3	90.8	91.9	91.0	87.2	78.7	77.2	75.1	70.3	68.9	72.1
LZSmin	53.0	58.2	63.8	63.0	57.9	51.2	48.4	48.3	43.3	39.1	40.5	43.9

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LZeq	55.9	56.6	59.4	61.4	61.7	63.5	66.9	69.1	67.7	68.2	67.5	67.9
LZSmax	85.5	84.9	83.6	82.2	81.0	79.7	80.2	86.8	89.7	89.5	85.9	92.0
LZSmin	41.9	44.0	46.8	50.8	52.1	53.6	51.9	56.9	58.9	53.6	57.0	56.3

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LZeq	64.9	64.1	63.0	60.5	57.1	56.5	54.4	53.7	53.5	55.1	55.4	53.5
LZSmax	85.8	89.8	87.5	86.6	75.0	81.7	75.9	73.3	71.8	73.2	75.3	71.2
LZSmin	54.1	52.2	49.1	47.1	44.8	44.0	43.2	41.8	42.5	43.6	43.6	41.6

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LZeq	52.4	50.5	48.3	46.3	44.9	43.3	41.7	41.0	39.5	43.0	41.2	43.8
LZSmax	70.5	71.9	68.3	66.4	66.1	64.4	64.8	65.4	62.7	71.7	63.7	71.3
LZSmin	40.1	38.0	35.9	34.8	32.0	33.9	34.5	33.7	35.9	37.7	38.6	40.5

Calibration History

Preamp	Date	dB re. 1V/Pa
PRM831	26 Sep 2019 18:08:19	-26.2
PRM831	28 Apr 2021 07:14:21	-26.7
PRM831	20 Apr 2021 17:46:44	-26.6
PRM831	20 Apr 2021 17:21:23	-26.7
PRM831	20 Apr 2021 16:58:31	-26.7
PRM831	20 Apr 2021 16:29:19	-26.4
PRM831	20 Apr 2021 13:35:07	-26.6
PRM831	20 Apr 2021 13:08:55	-26.6
PRM831	20 Apr 2021 12:44:40	-26.7
PRM831	20 Apr 2021 12:16:50	-26.6
PRM831	20 Apr 2021 08:39:03	-26.7
PRM831	20 Apr 2021 08:10:58	-26.7

General Information

Serial Number	03819
Model	Model 831
Firmware Version	2.301
Filename	109TH_AV.003
User	
Job Description	
Location	
Measurement Description	L2
Start Time	Wednesday, 2021 April 28 08:22:14
Stop Time	Wednesday, 2021 April 28 08:42:16
Duration	00:20:02.0
Run Time	00:20:02.0
Pause	00:00:00.0
Pre Calibration	Thursday, 2019 September 26 18:08:19
Post Calibration	None
Calibration Deviation	---

Note

Overall Data

LAeq		64.8	dB
LASmax	2021 Apr 28 08:31:02	77.2	dB
LApeak (max)	2021 Apr 28 08:40:52	97.7	dB
LASmin	2021 Apr 28 08:22:14	49.3	dB
LCeq		73.5	dB
LAeq		64.8	dB
LCeq - LAeq		8.7	dB
LAIeq		68.2	dB
LAeq		64.8	dB
LAIeq - LAeq		3.4	dB
Ldn		64.8	dB
LDay 07:00-22:00		64.8	dB
LNight 22:00-07:00		---	dB
Lden		64.8	dB
LDay 07:00-19:00		64.8	dB
LEvening 19:00-22:00		---	dB
LNight 22:00-07:00		---	dB
LAE		95.6	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		0	
OBA Overload Duration		0.0	s

Statistics

LAS1.00	73.7	dBA
LAS10.00	68.2	dBA
LAS33.30	64.4	dBA
LAS50.00	62.2	dBA
LAS66.60	59.8	dBA
LAS90.00	54.6	dBA
LAS > 65.0 dB (Exceedence Counts / Duration)	66 / 453.8	s
LAS > 85.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

Settings

RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamp	PRM831	
Microphone Correction	Off	
Integration Method	Linear	
OBA Range	Normal	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	Z Weighting	
OBA Max Spectrum	Bin Max	
Gain	+0	dB
Under Range Limit	26.3	dB
Under Range Peak	76.6	dB
Noise Floor	17.2	dB
Overload	144.1	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LZeq	60.7	64.6	68.0	69.9	67.2	63.7	59.9	61.1	56.9	51.7	45.8	44.8
LZSmax	75.8	83.2	87.1	84.5	83.2	86.4	74.3	75.0	69.6	72.6	61.9	62.2
LZSmin	52.5	57.1	60.3	60.8	44.8	44.1	46.7	43.7	38.7	37.8	40.2	43.5

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LZeq	54.2	54.8	57.9	59.7	60.3	59.6	61.8	63.4	64.3	65.0	66.1	64.1
LZSmax	70.6	70.1	74.8	79.0	79.9	80.3	80.1	84.3	81.4	83.6	81.9	81.0
LZSmin	41.2	43.9	47.9	49.6	42.1	46.2	50.2	54.3	55.2	54.7	56.1	40.4

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LZeq	64.0	62.2	60.3	61.7	56.9	55.9	55.0	54.9	55.5	56.9	56.7	55.2
LZSmax	80.5	82.5	77.0	86.3	71.2	72.3	70.6	71.9	69.6	69.9	72.9	69.7
LZSmin	50.2	47.9	45.0	35.7	37.3	42.5	41.7	41.4	38.8	40.2	38.7	36.2

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LZeq	53.9	51.7	50.0	48.8	46.5	44.2	42.5	40.8	39.1	39.0	39.8	41.2
LZSmax	67.9	65.8	65.2	72.3	69.6	63.2	59.0	57.2	54.2	54.5	59.6	58.9
LZSmin	34.6	33.6	32.3	32.9	32.9	33.3	34.3	34.9	36.6	37.8	38.6	39.8

Calibration History

Preamp	Date	dB re. 1V/Pa
PRM831	26 Sep 2019 18:08:19	-26.2
PRM831	28 Apr 2021 07:14:21	-26.7
PRM831	20 Apr 2021 17:46:44	-26.6
PRM831	20 Apr 2021 17:21:23	-26.7
PRM831	20 Apr 2021 16:58:31	-26.7
PRM831	20 Apr 2021 16:29:19	-26.4
PRM831	20 Apr 2021 13:35:07	-26.6
PRM831	20 Apr 2021 13:08:55	-26.6
PRM831	20 Apr 2021 12:44:40	-26.7
PRM831	20 Apr 2021 12:16:50	-26.6
PRM831	20 Apr 2021 08:39:03	-26.7
PRM831	20 Apr 2021 08:10:58	-26.7

General Information

Serial Number	03819
Model	Model 831
Firmware Version	2.301
Filename	109TH_AV.004
User	
Job Description	
Location	
Measurement Description	L1
Start Time	Wednesday, 2021 April 28 11:58:41
Stop Time	Wednesday, 2021 April 28 12:58:44
Duration	01:00:02.9
Run Time	01:00:02.9
Pause	00:00:00.0
Pre Calibration	Wednesday, 2021 April 28 11:36:22
Post Calibration	None
Calibration Deviation	---

Note

Overall Data

LAeq		63.1	dB
LASmax	2021 Apr 28 11:59:49	84.0	dB
LApeak (max)	2021 Apr 28 11:59:49	101.0	dB
LASmin	2021 Apr 28 12:35:40	50.8	dB
LCeq		73.6	dB
LAeq		63.1	dB
LCeq - LAeq		10.5	dB
LAIeq		65.8	dB
LAeq		63.1	dB
LAIeq - LAeq		2.7	dB
Ldn		63.1	dB
LDay 07:00-22:00		63.1	dB
LNight 22:00-07:00		---	dB
Lden		63.1	dB
LDay 07:00-19:00		63.1	dB
LEvening 19:00-22:00		---	dB
LNight 22:00-07:00		---	dB
LAE		98.7	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		0	
OBA Overload Duration		0.0	s

Statistics

LAS1.00	72.4	dBA
LAS10.00	65.7	dBA
LAS33.30	61.4	dBA
LAS50.00	59.1	dBA
LAS66.60	57.1	dBA
LAS90.00	54.5	dBA
LAS > 65.0 dB (Exceedence Counts / Duration)	123 / 652.8	s
LAS > 85.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

Settings

RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamp	PRM831	
Microphone Correction	Off	
Integration Method	Linear	
OBA Range	Normal	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	Z Weighting	
OBA Max Spectrum	Bin Max	
Gain	+0	dB
Under Range Limit	26.3	dB
Under Range Peak	76.6	dB
Noise Floor	17.2	dB
Overload	144.1	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LZeq	60.7	64.7	68.9	70.2	68.4	61.1	58.5	59.3	54.9	49.9	46.9	45.0
LZSmax	74.7	82.0	88.0	90.0	93.7	84.1	82.1	79.3	77.1	74.4	72.7	65.5
LZSmin	52.9	58.0	61.2	61.6	54.8	49.1	44.7	46.4	41.9	38.7	40.5	43.9

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LZeq	54.7	55.0	57.6	59.0	59.6	60.9	62.8	63.7	65.5	66.2	66.0	63.7
LZSmax	71.2	69.7	73.8	73.4	77.0	80.3	76.4	78.8	87.9	86.1	89.9	86.3
LZSmin	42.3	44.1	47.8	49.0	51.0	51.8	52.7	55.4	56.6	56.1	55.4	53.8

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LZeq	65.1	64.5	59.4	57.6	56.2	54.6	55.3	52.4	52.9	55.0	55.0	53.5
LZSmax	85.9	93.6	85.6	80.4	78.6	82.4	82.2	74.1	73.7	78.0	75.7	76.3
LZSmin	50.5	49.0	46.2	44.9	44.1	40.3	39.3	38.9	41.0	42.4	41.5	39.8

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LZeq	52.1	49.6	48.0	46.8	44.4	43.5	42.6	41.7	41.8	39.3	40.5	40.9
LZSmax	74.8	72.8	72.7	71.2	68.6	70.3	69.7	67.4	69.4	62.6	64.8	57.6
LZSmin	38.5	36.6	35.2	33.6	33.6	33.8	34.5	35.5	36.6	37.7	38.8	40.5

Calibration History

Preamp	Date	dB re. 1V/Pa
PRM831	26 Sep 2019 18:08:19	-26.2
PRM831	28 Apr 2021 11:36:21	-26.6
PRM831	28 Apr 2021 08:47:55	-26.7
PRM831	28 Apr 2021 07:14:21	-26.7
PRM831	20 Apr 2021 17:46:44	-26.6
PRM831	20 Apr 2021 17:21:23	-26.7
PRM831	20 Apr 2021 16:58:31	-26.7
PRM831	20 Apr 2021 16:29:19	-26.4
PRM831	20 Apr 2021 13:35:07	-26.6
PRM831	20 Apr 2021 13:08:55	-26.6
PRM831	20 Apr 2021 12:44:40	-26.7
PRM831	20 Apr 2021 12:16:50	-26.6

General Information

Serial Number	03819
Model	Model 831
Firmware Version	2.301
Filename	109TH_AV.005
User	
Job Description	
Location	
Measurement Description	L2
Start Time	Wednesday, 2021 April 28 13:01:38
Stop Time	Wednesday, 2021 April 28 13:21:43
Duration	00:20:04.4
Run Time	00:20:04.4
Pause	00:00:00.0
Pre Calibration	Thursday, 2019 September 26 18:08:19
Post Calibration	None
Calibration Deviation	---

Note

Overall Data

LAeq		64.8	dB
LASmax	2021 Apr 28 13:11:50	79.6	dB
LApeak (max)	2021 Apr 28 13:18:24	98.9	dB
LASmin	2021 Apr 28 13:14:06	48.1	dB
LCeq		75.4	dB
LAeq		64.8	dB
LCeq - LAeq		10.6	dB
LAIeq		68.3	dB
LAeq		64.8	dB
LAIeq - LAeq		3.5	dB
Ldn		64.8	dB
LDay 07:00-22:00		64.8	dB
LNight 22:00-07:00		---	dB
Lden		64.8	dB
LDay 07:00-19:00		64.8	dB
LEvening 19:00-22:00		---	dB
LNight 22:00-07:00		---	dB
LAE		95.6	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		0	
OBA Overload Duration		0.0	s

Statistics

LAS1.00	74.3	dBA
LAS10.00	68.3	dBA
LAS33.30	64.0	dBA
LAS50.00	61.4	dBA
LAS66.60	58.4	dBA
LAS90.00	52.8	dBA
LAS > 65.0 dB (Exceedence Counts / Duration)	64 / 401.3	s
LAS > 85.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

Settings

RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamp	PRM831	
Microphone Correction	Off	
Integration Method	Linear	
OBA Range	Normal	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	Z Weighting	
OBA Max Spectrum	Bin Max	
Gain	+0	dB
Under Range Limit	26.3	dB
Under Range Peak	76.6	dB
Noise Floor	17.2	dB
Overload	144.1	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LZeq	61.7	64.6	68.5	72.4	70.3	63.9	60.2	60.5	56.0	52.5	47.7	46.8
LZSmax	81.9	84.6	86.5	91.1	89.4	81.0	78.0	74.5	70.7	76.7	72.5	70.0
LZSmin	50.9	54.6	48.4	53.4	53.4	50.1	42.9	42.5	38.9	38.0	40.5	44.0

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LZeq	55.8	56.2	58.3	59.0	59.9	60.7	60.8	62.6	66.0	66.3	68.7	67.7
LZSmax	75.9	78.3	80.9	79.9	83.4	76.9	74.8	77.1	86.6	87.3	89.8	91.0
LZSmin	40.4	41.1	34.1	47.6	48.8	48.5	50.2	53.4	49.5	53.3	53.4	52.8

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LZeq	65.2	66.6	64.1	61.0	58.8	56.5	55.1	55.9	55.1	56.2	56.5	54.3
LZSmax	86.3	87.6	85.1	79.9	75.6	77.7	72.2	76.7	72.0	73.8	69.8	67.4
LZSmin	50.5	47.6	46.7	45.5	46.3	39.2	38.3	37.2	37.3	32.9	37.5	36.5

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LZeq	52.9	51.0	49.2	49.7	48.2	44.9	43.8	43.1	41.7	41.7	41.6	42.9
LZSmax	67.7	66.2	68.0	76.3	72.1	68.3	67.8	68.0	67.4	67.2	64.8	66.7
LZSmin	35.4	33.5	32.3	32.6	33.0	33.5	34.5	35.6	36.7	37.1	38.9	40.5

Calibration History

Preamp	Date	dB re. 1V/Pa
PRM831	26 Sep 2019 18:08:19	-26.2
PRM831	28 Apr 2021 11:36:21	-26.6
PRM831	28 Apr 2021 08:47:55	-26.7
PRM831	28 Apr 2021 07:14:21	-26.7
PRM831	20 Apr 2021 17:46:44	-26.6
PRM831	20 Apr 2021 17:21:23	-26.7
PRM831	20 Apr 2021 16:58:31	-26.7
PRM831	20 Apr 2021 16:29:19	-26.4
PRM831	20 Apr 2021 13:35:07	-26.6
PRM831	20 Apr 2021 13:08:55	-26.6
PRM831	20 Apr 2021 12:44:40	-26.7
PRM831	20 Apr 2021 12:16:50	-26.6

General Information

Serial Number	03819
Model	Model 831
Firmware Version	2.301
Filename	109TH_AV.008
User	
Job Description	
Location	
Measurement Description	L1
Start Time	Wednesday, 2021 April 28 17:17:56
Stop Time	Wednesday, 2021 April 28 17:39:05
Duration	00:21:06.4
Run Time	00:20:44.8
Pause	00:00:21.6
Pre Calibration	Thursday, 2019 September 26 18:08:19
Post Calibration	None
Calibration Deviation	---

Note

Overall Data

LAeq		66.2	dB
LASmax	2021 Apr 28 17:24:11	85.1	dB
LApeak (max)	2021 Apr 28 17:28:41	101.3	dB
LASmin	2021 Apr 28 17:23:16	52.1	dB
LCeq		75.9	dB
LAeq		66.2	dB
LCeq - LAeq		9.7	dB
LAIeq		68.8	dB
LAeq		66.2	dB
LAIeq - LAeq		2.6	dB
Ldn		66.2	dB
LDay 07:00-22:00		66.2	dB
LNight 22:00-07:00		---	dB
Lden		66.2	dB
LDay 07:00-19:00		66.2	dB
LEvening 19:00-22:00		---	dB
LNight 22:00-07:00		---	dB
LAE		97.1	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		0	
OBA Overload Duration		0.0	s

Statistics

LAS1.00	77.4	dBA
LAS10.00	67.8	dBA
LAS33.30	64.5	dBA
LAS50.00	63.0	dBA
LAS66.60	61.0	dBA
LAS90.00	56.1	dBA
LAS > 65.0 dB (Exceedence Counts / Duration)	51 / 494.5	s
LAS > 85.0 dB (Exceedence Counts / Duration)	1 / 0.9	s
LApeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

Settings

RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamp	PRM831	
Microphone Correction	Off	
Integration Method	Linear	
OBA Range	Normal	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	Z Weighting	
OBA Max Spectrum	Bin Max	
Gain	+0	dB
Under Range Limit	26.3	dB
Under Range Peak	76.5	dB
Noise Floor	17.2	dB
Overload	144.0	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LZeq	61.9	63.2	68.5	72.0	71.5	65.7	62.2	61.7	58.0	51.0	45.5	44.5
LZSmax	77.4	81.6	78.5	87.1	92.4	85.6	80.9	80.2	79.3	71.0	63.1	57.4
LZSmin	52.4	56.5	62.8	62.1	58.7	51.9	48.1	47.3	41.3	38.2	40.5	43.5

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LZeq	57.4	56.9	57.2	57.6	58.9	58.8	63.1	62.7	65.1	67.2	67.1	67.4
LZSmax	73.5	75.9	71.6	76.9	79.3	73.9	69.1	76.7	76.9	85.2	84.5	85.3
LZSmin	43.3	43.4	48.0	47.5	42.6	50.6	55.3	38.3	56.6	57.1	56.0	54.7

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LZeq	67.8	66.2	66.1	62.9	59.4	59.8	57.5	57.5	57.3	57.1	57.3	56.4
LZSmax	92.7	87.4	88.4	86.3	80.6	83.3	77.5	78.4	78.8	74.6	75.1	78.6
LZSmin	46.9	51.5	42.7	48.2	46.3	43.9	44.1	42.1	42.5	42.8	42.9	40.8

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LZeq	55.0	53.5	49.8	48.0	45.7	44.2	41.9	40.5	39.3	39.1	39.4	40.8
LZSmax	76.3	76.5	70.2	68.1	65.3	64.5	60.8	57.5	54.5	56.3	50.6	55.0
LZSmin	38.5	35.6	34.1	33.3	33.3	33.7	34.6	35.6	36.7	36.9	38.5	40.2

Calibration History

Preamp	Date	dB re. 1V/Pa
PRM831	26 Sep 2019 18:08:19	-26.2
PRM831	28 Apr 2021 16:41:00	-26.5
PRM831	28 Apr 2021 13:25:48	-26.4
PRM831	28 Apr 2021 11:36:21	-26.6
PRM831	28 Apr 2021 08:47:55	-26.7
PRM831	28 Apr 2021 07:14:21	-26.7
PRM831	20 Apr 2021 17:46:44	-26.6
PRM831	20 Apr 2021 17:21:23	-26.7
PRM831	20 Apr 2021 16:58:31	-26.7
PRM831	20 Apr 2021 16:29:19	-26.4
PRM831	20 Apr 2021 13:35:07	-26.6
PRM831	20 Apr 2021 13:08:55	-26.6

General Information

Serial Number	03819
Model	Model 831
Firmware Version	2.301
Filename	109TH_AV.009
User	
Job Description	
Location	
Measurement Description	L1
Start Time	Wednesday, 2021 April 28 17:41:15
Stop Time	Wednesday, 2021 April 28 18:41:49
Duration	01:00:34.2
Run Time	00:59:54.8
Pause	00:00:39.4
Pre Calibration	Thursday, 2019 September 26 18:08:19
Post Calibration	None
Calibration Deviation	---

Note

Overall Data

LAeq		67.5	dB
LASmax	2021 Apr 28 18:31:20	95.2	dB
LApeak (max)	2021 Apr 28 18:31:20	111.8	dB
LASmin	2021 Apr 28 18:32:04	52.4	dB
LCeq		77.2	dB
LAeq		67.5	dB
LCeq - LAeq		9.8	dB
LAIeq		72.0	dB
LAeq		67.5	dB
LAIeq - LAeq		4.5	dB
Ldn		67.5	dB
LDay 07:00-22:00		67.5	dB
LNight 22:00-07:00		---	dB
Lden		67.5	dB
LDay 07:00-19:00		67.5	dB
LEvening 19:00-22:00		---	dB
LNight 22:00-07:00		---	dB
LAE		103.0	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		0	
OBA Overload Duration		0.0	s

Statistics

LAS1.00	77.0	dBA
LAS10.00	67.6	dBA
LAS33.30	63.4	dBA
LAS50.00	61.2	dBA
LAS66.60	59.2	dBA
LAS90.00	56.2	dBA
LAS > 65.0 dB (Exceedence Counts / Duration)	132 / 1049.7	s
LAS > 85.0 dB (Exceedence Counts / Duration)	3 / 9.0	s
LApeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

Settings

RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamp	PRM831	
Microphone Correction	Off	
Integration Method	Linear	
OBA Range	Normal	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	Z Weighting	
OBA Max Spectrum	Bin Max	
Gain	+0	dB
Under Range Limit	26.3	dB
Under Range Peak	76.5	dB
Noise Floor	17.2	dB
Overload	144.0	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LZeq	60.8	64.5	70.4	74.6	70.6	66.0	67.0	62.4	56.6	50.8	45.3	48.1
LZSmax	75.9	77.3	90.9	100.3	91.0	92.2	95.5	91.2	78.7	74.2	67.1	78.9
LZSmin	51.0	58.3	62.6	62.6	58.5	50.8	46.9	48.4	43.2	38.4	40.2	43.8

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LZeq	55.0	55.2	57.5	58.6	59.1	61.2	64.5	64.7	67.2	72.2	68.1	67.6
LZSmax	73.2	70.5	74.4	70.0	75.0	73.8	74.5	84.9	89.2	101.1	91.6	88.0
LZSmin	40.6	39.9	45.9	48.5	49.4	52.8	54.6	55.6	58.0	57.1	56.9	55.9

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LZeq	67.0	66.2	63.6	61.8	61.6	60.2	60.4	65.1	57.6	58.2	58.4	56.0
LZSmax	89.5	86.6	83.4	89.3	91.6	86.3	88.3	95.1	82.5	86.9	88.1	83.7
LZSmin	53.9	52.4	50.2	47.8	41.4	41.8	41.5	41.7	41.7	44.4	43.7	41.4

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LZeq	53.7	51.3	49.3	47.5	45.8	44.2	41.8	40.2	39.2	46.3	39.6	40.9
LZSmax	76.9	72.8	70.7	71.8	69.4	67.0	62.3	63.0	61.7	78.7	59.7	56.6
LZSmin	40.2	38.0	35.2	33.8	33.3	33.3	34.5	34.5	36.5	37.6	38.6	40.4

Calibration History

Preamp	Date	dB re. 1V/Pa
PRM831	26 Sep 2019 18:08:19	-26.2
PRM831	28 Apr 2021 16:41:00	-26.5
PRM831	28 Apr 2021 13:25:48	-26.4
PRM831	28 Apr 2021 11:36:21	-26.6
PRM831	28 Apr 2021 08:47:55	-26.7
PRM831	28 Apr 2021 07:14:21	-26.7
PRM831	20 Apr 2021 17:46:44	-26.6
PRM831	20 Apr 2021 17:21:23	-26.7
PRM831	20 Apr 2021 16:58:31	-26.7
PRM831	20 Apr 2021 16:29:19	-26.4
PRM831	20 Apr 2021 13:35:07	-26.6
PRM831	20 Apr 2021 13:08:55	-26.6

West Caldwell Calibration Laboratories Inc.

Certificate of Calibration

for

PRECISION INTEGRATING SLM

Manufactured by:	LARSON DAVIS
Model No:	831
Serial No:	0003819
Calibration Recall No:	31548

Submitted By:

Customer:

Company:
Address:

The subject instrument was calibrated to the indicated specification using standards traceable to the SI through the National Institute of Standards and Technology or to accepted values of natural physical constants. This document certifies that the instrument met the following specification upon its return to the submitter.

West Caldwell Calibration Laboratories Procedure No. 831 LARS

Upon receipt for Calibration, the instrument was found to be:

Within (X)

tolerance of the indicated specification. See attached Report of Calibration.
The information supplied relates to the calibrated item listed above and statement of conformance for ALL given specifications and standards fall under the decision rule: A= (L-(U95)*M), where A is acceptance limit, L is manufacturer specifications, U95 is confidence level of 95% at k=2, and M is managed guard-band mulitiplier. The guard-band multiplier increases false-accept risk in favor of decreasing false-reject risk. Although the false accept risk increases, it is still below the Z540.3 2% risk requirement. The decision rule has been communicated and approved by customer during contract review.

West Caldwell Calibration Laboratories' calibration control system meets the following requirements, ISO 10012-1 MIL STD 45662A, ANSI/NCSL Z540-1, IEC Guide 25, ISO 9001:2015, and ISO 17025

Note: With this Certificate, Report of Calibration is included.

Approved by:

James Zhu

Quality Manager
ISO/IEC 17025:2017

Calibration Date: 08-Jan-21

Certificate No: 31548 - 1

West Caldwell Calibration Laboratories, Inc.
uncompromised calibration
1575 State Route 96, Victor, NY 14564, U.S.A.

ACCREDITED
Calibration Lab. Cert. # 1533.01

ISO/IEC 17025: 2017

ACCREDITED
Calibration Lab. Cert. # 1533.01

West Caldwell Calibration Laboratories, Inc.
uncompromised calibration
1575 State Route 96, Victor NY 14564

REPORT OF CALIBRATION

Larson Davis for
Precision Integrating Sound Level Meter **Model No.: 831**

Serial No.: 0003819

ID No.: XXXX

Company:

The procedure from IEC 61672-3-2013 were used to perform the periodic test. (Test limits are from IEC 61672-1-2013)
Instrument submitted for testing has successfully completed the Class 1 periodic test of IEC 61672-3-2013 listed below.
Also meets the requirements of ANSI/ASA S1.4 - 2014 / Part 3.
Fulfils 1/1-Octave and 1/3-Octave Filter ANSI/ASA S1.11 -1-2004 and IEC61260-1 : 2014 requirements.

Absolute Acoustical Sensitivity Level, IEC 61672 - 3 (9)	Pass
Electrical Inherent Noise Level, Freq. Weig. Lin, IEC 61672-3 (10)	Pass
Determining Electrical Level for 1 V at 1 kHz	Pass
Frequency Response measured with Electrical Signal, Freq. Weig. A with HP filter, IEC 61672 Class 1 (12)	Pass
Frequency Response measured with Electrical Signal, Freq. Weig. C with HP filter, IEC 61672 Class 1 (12)	Pass
Frequency Response measured with Electrical Signal, Freq. Weig. Z with HP filter, IEC 61672 Class 1 (12)	Pass
Frequency Weightings at A - Weighting 1 kHz, IEC 61672-3 (13)	Pass
Frequency Weightings at C - Weighting 1 kHz, IEC 61672-3 (13)	Pass
Frequency Weightings at Z - Weighting 1 kHz, IEC 61672-3 (13)	Pass
Linearity Range at 1 kHz, IEC61672 - 3 (14)	Pass
Range Level at 1 kHz, IEC61672 - 3 (15)	Pass
Time Weighting Response to Single Burst, 4 kHz, 200 ms, F Class 1, IEC61672 - 3 (16)	Pass
Time Weighting Response to Single Burst, 4 kHz, 2 ms, F Class 1, IEC61672 - 3 (16)	Pass
Time Weighting Response to Single Burst, 4 kHz, 0.25 ms, F Class 1, IEC61672 - 3 (16)	Pass
Time Weighting Response to Single Burst, 4 kHz, 200 ms, S Class 1, IEC61672 - 3 (16)	Pass
Time Weighting Response to Single Burst, 4 kHz, 2 ms, S Class 1, IEC61672 - 3 (16)	Pass
Overload Indication IEC 61672 - 3 (18)	Pass
Octave and 1/3 Octave level IEC 61260 - 5.3	Pass

Measurements performed by: .....
Matthew Smith

Calibrated on WCCL system type 9700

This document shall not be reproduced, except in full, without the written approval from West Caldwell Cal. Labs. Inc.

Calibration results:

Before & after data same:	...X...
Reading with mic.:	**Pass**
Level accuracy:	**Pass**
Attenuator Accuracy:	**Pass**
Meter linearity:	**Pass**
Freq. Resp. w/ Mic.:	**Pass**
Frequency Response:	**Pass**
Functions:	**Pass**
Crest Factor:	**Pass**
Time Constant:	**Pass**
Noise:	**Pass**
1/3 Octave Filters:	**Pass**
1/1 Octave Filters:	**Pass**
All tests:	**Pass**

Ambient Temperature:	**20.1**	**°C**
Ambient Humidity:	**25.6**	**% RH**
Ambient Pressure:	**99.886**	**kPa**
Calibration Date:	**8-Jan-2021**	
Calibration Due:	**8-Jan-2022**	
Report Number:	**31548 -1**	
Control Number:	**31548**	

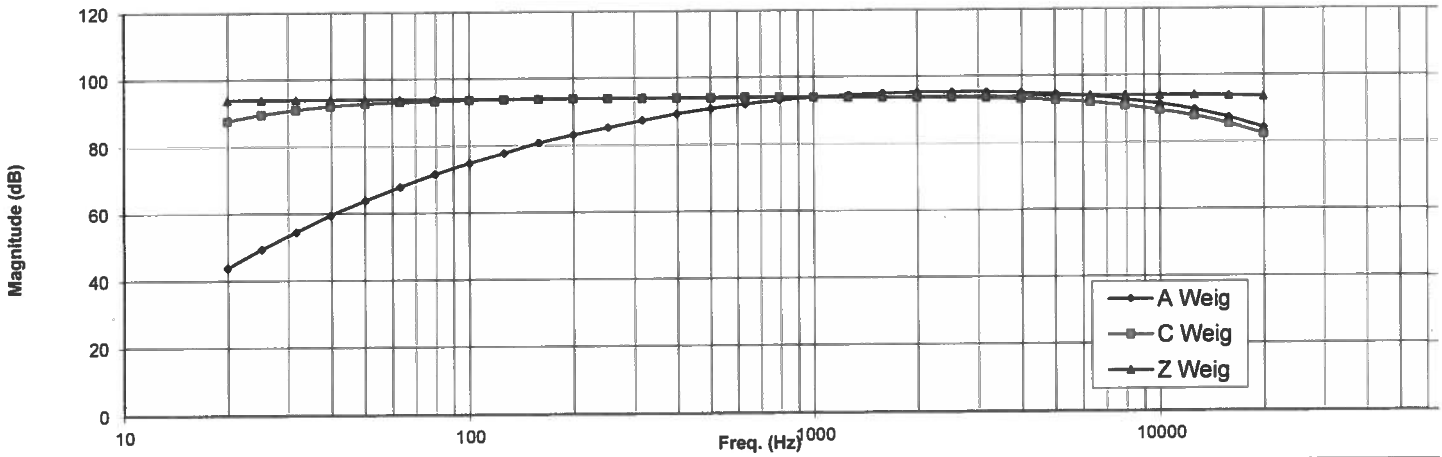
The above listed instrument meets or exceeds the tested manufacturer's specifications.
IEC 61672-1:2013 Class 1, IEC 61260:1995 w.Am.1, 1/1 and 1/3 Oct. Band Class 0 specification passed.
IEC 60804:2000 Type 1, IEC 60651:1979 w.Am.1&2 Type 1 specification passed.
IEC 61672-1:2013 Class 1 specification passed.
IEC 60804:2000 Type 1 specification passed.
The absolute uncertainty of calibration: See last page. Unless otherwise noted, the reported values are both "as found" and "as left" data.

This Calibration is traceable through NIST test numbers: ,610119

The above listed instrument was checked using calibration procedure documented in West Caldwell Calibration Laboratories Inc. procedure : **Rev. 7.0 Jan. 24, 2014 Doc. # 1038 831LD**

Calibration was performed by West Caldwell Calibration Laboratories Inc. under Operating Procedures intended to implement the requirements of ISO10012-1, IEC Guide 25, ANSI/NCSL Z540-1, (MIL-STD-45662A) and ISO 9001:2015, ISO 17025

Frequency Response



Instruments used for calibration:			Date of Cal.	Traceability No.	Re-cal. Due Date
HP	34401A	S/N US361025	3-Jul-2020	,610119	3-Jul-2021
HP	33120A	S/N SG400116	3-Jul-2020	,610119	3-Jul-2021
Brüel & Kjær	4226	S/N 2220624	9-Jul-2020	684.07/O-0000001126-20	9-Jul-2021

This document shall not be reproduced, except in full, without the written approval from West Caldwell Cal. Labs. Inc.

West Caldwell Calibration Laboratories Inc.

1575 State Route 96, Victor NY 14564
Tel. (585) 586-3900 FAX (585) 586-4327

Calibration Data Record

for

Larson Davis
Precision Integrating Sound Level Meter

Model No.: 831 — **S/N: 0003819**
Mic Model No.: 377B02 — **S/N: 150512**
Preamp Model No.: PRM831 — **S/N: 036739**

Test	Function	Tolerance Min	Tolerance Max		Measured values Data	Out
,0.	**Reading with 94dB SPL** Absolute Acoustical Sensitivity Level, IEC 61672 - 3 (9) ANSI/ASA S1.4 - 2014 / Part 3. -10	93.7	94.3	94dB	94.0	
,0.	Determining Electrical Level for 1 V at 1 kHz	119.7	120.3		120.1	
				FSD (dB)		
,1.	**Level accuracy**	93.7	94.3	94	94.2	
	ANSI/ASA S1.4 - 2014 / Part 3.-10	103.7	104.3	104	104.2	
		113.7	114.3	114	114.1	
,1.	**Attenuator accuracy**	117.5	118.5	118	118.0	
	Linearity Range at 1 kHz, IEC61672 - 3 (14)	112.5	113.5	113	113.0	
	ANSI/ASA S1.4 - 2014 / Part 3.-17	107.5	108.5	108	108.0	
	Gain: 0 dB	102.5	103.5	103	103.0	
		97.5	98.5	98	98.0	
		92.5	93.5	93	93.0	
		87.5	88.5	88	88.0	
		82.5	83.5	83	83.0	
		77.5	78.5	78	78.0	
		72.5	73.5	73	73.0	
		67.5	68.5	68	68.0	
		62.5	63.5	63	63.0	
		57.5	58.5	58	58.0	
		52.5	53.5	53	53.0	
	Gain: +20 dB	97.5	98.5	108	98.0	
		92.5	93.5	103	93.0	
		87.5	88.5	98	88.0	
		82.5	83.5	93	83.0	
		77.5	78.5	88	78.0	
		72.5	73.5	83	73.0	
		67.5	68.5	78	68.0	
		62.5	63.5	73	63.0	
		57.5	58.5	68	58.0	
		52.5	53.5	63	53.0	
		47.5	48.5	58	48.0	
		42.5	43.5	53	43.0	
		37.5	38.5	48	38.0	

This document shall not be reproduced, except in full, without the written approval from West Caldwell Cal. Labs. Inc.

Test	Function	Tolerance Min	Tolerance Max		Measured values Data	Measured values Out
				FSD (dB)		
,1.	**Meter Linearity**	117.5	118.5	118	118.0	
	Linearity Range at 1 kHz, IEC61672 - 3 (14)	112.5	113.5	113	113.0	
	ANSI/ASA S1.4 - 2014 / Part 3.-17	107.5	108.5	108	108.0	
		102.5	103.5	103	103.0	
		97.5	98.5	98	98.0	
		92.5	93.5	93	93.0	
		87.5	88.5	88	88.0	
		82.5	83.5	83	83.0	
		77.5	78.5	78	78.0	
		72.5	73.5	73	73.0	
		67.5	68.5	68	68.0	
		62.5	63.5	63	63.0	
		57.5	58.5	58	58.0	
		52.5	53.5	53	53.0	
		47.5	48.5	48	48.0	
		42.5	43.5	43	43.0	
		37.5	38.5	38	38.0	
,2a	**Frequency Response with mic.**			(Hz)		
	A Weighting	0.0	90.3	16000.0	88.8	
	Frequency Weightings at A - Weighting 1 kHz, IEC 61672-3 (13)	83.8	92.6	12500.0	90.5	
	ANSI/ASA S1.4 - 2014 / Part 3. -12	90.0	94.3	8000.0	93.3	
		94.1	95.9	4000.0	95.2	
		94.3	96.1	2000.0	95.4	
		93.1	94.9	1000.0	94.2	
		89.9	91.7	500.0	90.8	
		84.5	86.3	250.0	85.5	
		77.0	78.8	125.0	78.1	
		66.9	68.7	63.0	68.0	
		53.2	56.0	31.5	54.8	
	C Weighting	0.0	88.4	16000.0	86.9	
	Frequency Weightings at C - Weighting 1 kHz, IEC 61672-3 (13)	81.9	90.7	12500.0	88.6	
	ANSI/ASA S1.4 - 2014 / Part 3. -12	88.1	92.4	8000.0	91.4	
		92.3	94.1	4000.0	93.4	
		92.9	94.7	2000.0	94.0	
		93.1	94.9	1000.0	94.2	
		93.1	94.9	500.0	94.1	
		93.1	94.9	250.0	94.2	
		92.9	94.7	125.0	94.0	
		92.3	94.1	63.0	93.4	
		89.6	92.4	31.5	91.2	
	Z Weighting	0.0	96.9	16000.0	95.2	
	Frequency Weightings at Z - Weighting 1 kHz, IEC 61672-3 (13)	88.1	96.9	12500.0	94.9	
	ANSI/ASA S1.4 - 2014 / Part 3. -12	91.1	95.4	8000.0	94.4	
		93.1	94.9	4000.0	94.2	
		93.1	94.9	2000.0	94.2	
		93.1	94.9	1000.0	94.2	
		93.1	94.9	500.0	94.1	
		93.1	94.9	250.0	94.2	
		93.1	94.9	125.0	94.2	
		93.1	94.9	63.0	94.2	
		92.6	95.4	31.5	94.2	

This document shall not be reproduced, except in full, without the written approval from West Caldwell Cal. Labs. Inc.

Test	Function	Tolerance			Measured values	
		Min	Max		Data	Out
,2b	A Weighting Response (Direct input without mic.)			(Hz)		
	ANSI/ASA S1.4 - 2014 / Part 3. -13	0.0	27.1	10.0	24.2	
		0.0	33.6	12.5	30.6	
		32.8	39.8	16.0	37.7	
		41.0	46.0	20.0	43.7	
		47.3	51.8	25.1	49.3	
		52.6	56.6	31.6	54.5	
		57.9	60.9	39.8	59.5	
		62.3	65.3	50.1	63.8	
		66.3	69.3	63.1	67.8	
		70.0	73.0	79.4	71.6	
		73.4	76.4	100.0	74.9	
		76.4	79.4	125.9	77.8	
		79.1	82.1	158.5	80.8	
		81.6	84.6	199.5	83.2	
		84.0	86.8	251.2	85.3	
		86.0	88.8	316.2	87.4	
		87.8	90.6	398.1	89.3	
		89.4	92.2	501.2	90.8	
		90.7	93.5	631.0	92.1	
		91.8	94.6	794.3	93.2	
		92.9	95.1	1000.0	94.0	
		93.2	96.0	1258.9	94.6	
		93.4	96.6	1584.9	95.0	
		93.6	96.8	1995.3	95.3	
		93.7	96.9	2511.9	95.3	
		93.6	96.8	3162.3	95.3	
		93.4	96.6	3981.1	95.0	
		92.4	96.6	5011.9	94.6	
		91.3	96.0	6309.6	94.0	
		89.8	95.0	7943.3	92.9	
		87.9	94.1	10000.0	91.5	
		83.7	92.7	12589.3	89.8	
		70.4	90.9	15848.9	87.4	
		0.0	88.7	19952.6	84.3	
Frequency Response measured with Electrical Signal, Freq. Weig. A with HP filter, IEC 61672 Class 1 (12)						

This document shall not be reproduced, except in full, without the written approval from West Caldwell Cal. Labs. Inc.

Test	Function	Tolerance			Measured values	
		Min	Max		Data	Out
	C Weighting response (Direct input without mic.)			(Hz)		
	ANSI/ASA S1.4 - 2014 / Part 3. -13	0.0	83.2	10.0	79.7	
		0.0	85.8	12.5	82.7	
		81.0	88.0	16.0	85.6	
		85.3	90.3	20.0	87.8	
		87.6	92.1	25.1	89.6	
		89.0	93.0	31.6	91.0	
		90.5	93.5	39.8	92.1	
		91.2	94.2	50.1	92.8	
		91.7	94.7	63.1	93.2	
		92.0	95.0	79.4	93.5	
		92.2	95.2	100.0	93.7	
		92.3	95.3	125.9	93.9	
		92.4	95.4	158.5	93.9	
		92.5	95.5	199.5	94.0	
		92.6	95.4	251.2	94.0	
		92.6	95.4	316.2	94.0	
		92.6	95.4	398.1	94.1	
		92.6	95.4	501.2	94.1	
		92.6	95.4	631.0	94.1	
		92.6	95.4	794.3	94.1	
		92.9	95.1	1000.0	94.0	
		92.6	95.4	1258.9	94.0	
		92.3	95.5	1584.9	94.0	
		92.2	95.4	1995.3	93.9	
		92.1	95.3	2511.9	93.8	
		91.9	95.1	3162.3	93.6	
		91.6	94.8	3981.1	93.2	
		90.6	94.8	5011.9	92.8	
		89.4	94.1	6309.6	92.1	
		87.9	93.1	7943.3	91.0	
		86.0	92.2	10000.0	89.6	
		81.8	90.8	12589.3	87.9	
		68.5	89.0	15848.9	85.5	
		0.0	86.8	19952.6	82.4	
Frequency Response measured with Electrical Signal, Freq. Weig. C with HP filter, IEC 61672 Class 1 (12)						

This document shall not be reproduced, except in full, without the written approval from West Caldwell Cal. Labs. Inc.

Test	Function	Tolerance Min	Tolerance Max	(Hz)	Measured values Data	Out
	Z Weighting response (Direct input without mic.)					
	ANSI/ASA S1.4 - 2014 / Part 3. -13	0.0	97.5	10.0	93.9	
		0.0	97.0	12.5	93.9	
		89.5	96.5	16.0	93.9	
		91.5	96.5	20.0	94.0	
		92.0	96.5	25.1	94.0	
		92.0	96.0	31.6	94.0	
		92.5	95.5	39.8	94.0	
		92.5	95.5	50.1	94.0	
		92.5	95.5	63.1	94.0	
		92.5	95.5	79.4	94.0	
		92.5	95.5	100.0	94.0	
		92.5	95.5	125.9	94.0	
		92.5	95.5	158.5	94.0	
		92.5	95.5	199.5	94.0	
		92.6	95.4	251.2	94.0	
		92.6	95.4	316.2	94.0	
		92.6	95.4	398.1	94.0	
		92.6	95.4	501.2	94.0	
		92.6	95.4	631.0	94.0	
		92.6	95.4	794.3	94.0	
		92.9	95.1	1000.0	94.0	
		92.6	95.4	1258.9	94.0	
		92.4	95.6	1584.9	94.0	
		92.4	95.6	1995.3	94.0	
		92.4	95.6	2511.9	94.0	
		92.4	95.6	3162.3	94.0	
		92.4	95.6	3981.1	94.0	
		91.9	96.1	5011.9	94.1	
		91.4	96.1	6309.6	94.1	
		90.9	96.1	7943.3	94.1	
		90.4	96.6	10000.0	94.1	
		88.0	97.0	12589.3	94.1	
		77.0	97.5	15848.9	94.0	
		0.0	98.0	19952.6	93.7	
	Frequency Response measured with Electrical Signal, Freq. Weig. Z with HP filter, IEC 61672 Class 1 (12)					

This document shall not be reproduced, except in full, without the written approval from West Caldwell Cal. Labs. Inc.

Test	Function	Tolerance Min	Tolerance Max		Measured values Data	Measured values Out
,3	**Functions**					
	ANSI/ASA S1.4 - 2014 / Part 3. -12					
	SPL	93.5	94.5	94.0	94.0	
	Leq	93.5	94.5	94.0	94.0	
	Max	93.5	94.5	94.0	94.0	
	Min	93.5	94.5	94.0	93.9	
	Peak	96.0	98.0	97.0	97.2	
	SEL	103.4	104.4	103.9	104.0	
Frequency Weightings at A - Weighting 1 kHz, IEC 61672-3 (13)		93.5	94.5	A_{Fast}	94.2	
Frequency Weightings at C - Weighting 1 kHz, IEC 61672-3 (13)		93.5	94.5	C_{Fast}	94.2	
Frequency Weightings at Z - Weighting 1 kHz, IEC 61672-3 (13)		93.5	94.5	Z_{Fast}	94.2	
		93.6	94.4	Fast	94.0	
		93.6	94.4	Slow	94.0	
		93.6	94.4	Impulse	94.0	
,5.	**Crest Factor**					
		89.5	90.5	Fast	90.0	
		89.5	90.5	Slow	89.9	
,6a	**Time Constant**					
Time Weighting Response to Single Burst, 4 kHz, 200 ms, F Class 1, IEC61672 - 3 (16)		-1.5	0.5		-1.0	
Time Weighting Response to Single Burst, 4 kHz, 2 ms, F Class 1, IEC61672 - 3 (16)		-19.5	-17		-18.0	
Time Weighting Response to Single Burst, 4 kHz, 0.25 ms, F Class 1, IEC61672 - 3 (16)		-30	-26		-27.0	
Time Weighting Response to Single Burst, 4 kHz, 200 ms, S Class 1, IEC61672 - 3 (16)		-7.9	-6.4		-7.5	
Time Weighting Response to Single Burst, 4 kHz, 2 ms, S Class 1, IEC61672 - 3 (16)		-27.5	-26.5		-27.1	
ANSI/ASA S1.4 - 2014 / Part 3. -18						
	Acoustic test at 2kHz.	88.0	90.0	Fast	88.7	
		84.9	86.9	Slow	85.5	
,7	**Inherent noise level**	Less than	19	A Slow	12.3	
	Gain: 0 dB	Less than	23	C Slow	11.7	
	ANSI/ASA S1.4 - 2014 / Part 3. -11	Less than	26	F Slow	17.5	
		Less than	17	A Slow	5.5	
	Gain: +20 dB	Less than	19	C Slow	5.9	
		Less than	26	F Slow	14.9	
Electrical Inherent Noise Level, Freq. Weig. Lin, IEC 61672-3 (10)						
	Overload Indication IEC 61672 - 3 (18)				Pass	

This document shall not be reproduced, except in full, without the written approval from West Caldwell Cal. Labs. Inc.

,8 **1/3 Octave Filter Test**

Filter Hz	88.9 to 91.8	93.5 to 94.5	88.9 to 91.8	Out
20	91.0	94.0	91.0	
25	91.0	94.0	91.1	
31.5	91.0	94.0	91.2	
40	90.9	94.0	91.1	
50	91.0	94.0	91.1	
63	91.0	94.0	91.1	
80	91.0	94.0	91.1	
100	91.0	94.0	90.9	
125	91.1	94.0	91.0	
160	91.1	94.0	91.1	
200	91.0	94.0	91.0	
250	91.0	94.0	91.1	
315	91.0	94.0	91.2	
400	90.9	94.0	91.1	
500	91.0	94.0	91.1	
630	91.0	94.0	91.1	
800	91.0	94.0	91.1	
1K	91.0	94.0	90.9	
1.25K	91.1	94.0	91.0	
1.6K	91.1	94.0	91.1	
2K	91.0	94.0	91.0	
2.5k	91.0	94.0	91.1	
3.15k	91.0	94.0	91.2	
4k	90.9	94.0	91.1	
5k	91.0	94.0	91.1	
6.3k	91.1	94.0	91.1	
8k	91.0	94.0	91.1	
10k	90.9	94.0	90.9	
12.5k	91.1	94.0	90.9	
16k	91.1	94.0	90.9	
20k	91.1	94.0	90.6	

,9 **1/1 Octave Filter Test**

Filter Hz	88.9 to 91.8	93.5 to 94.5	88.9 to 91.8	Out
31.5	90.9	94.0	90.8	
63	90.9	94.0	90.9	
125	90.8	94.0	90.9	
250	90.9	94.0	90.8	
500	90.9	94.0	90.9	
1K	90.9	94.0	90.8	
2K	90.9	94.0	90.8	
4k	90.9	94.0	91.0	
8k	90.8	94.0	90.9	
16k	91.0	94.0	90.1	

1/1-Octave and 1/3-Octave Filter Fulfils ANSI/ASA S1.11 -1-2004 and IEC61260-1 : 2014 specification.

This document shall not be reproduced, except in full, without the written approval from West Caldwell Cal. Labs. Inc.

The expanded uncertainty of calibration at 95% confidence level with a coverage factor of k=2.

Parameter	Test Instrumentation Uncertainty	DUT Uncertainty	Total DUT Uncertainty
Acoustic Level ([114 & 94] dB @ 1 kHz):	0.20	0.1	0.30
Meter linearity (Attenuation Generation):	0.46	0.1	0.56
Attenuator accuracy (Attenuation Measure):	0.46	0.1	0.56
Acoustic Freq. Response: 63 Hz to 8 kHz	0.20	0.1	0.30
Acoustic Freq. Response: 12.5 kHz & 16 kHz	0.22	0.1	0.32
Electrical Freq. Resp.: 20 Hz to 20 kHz	0.01	0.1	0.11
Inherent noise level:	0.30	0.1	0.40
Crest Factor:	0.20	0.1	0.30
Time Constant:	0.20	0.1	0.30
Overload:	0.20	0.1	0.30
Functions:	0.20	0.1	0.30
Sensitivity:	0.20	0.1	0.30
1/3 & 1/1 Octave Filters:	0.01	0.1	0.11

Measurements performed by:

Calibration Date: 8-Jan-2021

Matthew Smith

West Caldwell Calibration Laboratories Inc.

Certificate of Calibration

for

MICROPHONE

Manufactured by:	PCB PIEZOTRONICS
Model No:	377B02
Serial No:	150512
Calibration Recall No:	31548

Submitted By:

Customer:

Company:
Address:

The subject instrument was calibrated to the indicated specification using standards traceable to the SI through the National Institute of Standards and Technology or to accepted values of natural physical constants. This document certifies that the instrument met the following specification upon its return to the submitter.

West Caldwell Calibration Laboratories Procedure No. 377B02 PCB PI

Upon receipt for Calibration, the instrument was found to be:

Within (X)

tolerance of the indicated specification. See attached Report of Calibration.
The information supplied relates to the calibrated item listed above and statement of conformance for ALL given specifications and standards fall under the decision rule: A= (L-(U95)*M), where A is acceptance limit, L is manufacturer specifications, U95 is confidence level of 95% at k=2, and M is managed guard-band mulitiplier. The guard-band multiplier increases false-accept risk in favor of decreasing false-reject risk. Although the false accept risk increases, it is still below the Z540.3 2% risk requirement. The decision rule has been communicated and approved by customer during contract review.

West Caldwell Calibration Laboratories' calibration control system meets the following requirements, ISO 10012-1 MIL STD 45662A, ANSI/NCSL Z540-1, IEC Guide 25, ISO 9001:2015, and ISO 17025

Note: With this Certificate, Report of Calibration is included.

Approved by:

Calibration Date: 08-Jan-21

James Zhu

Quality Manager
ISO/IEC 17025:2017

Certificate No: 31548 - 3

West Caldwell Calibration Laboratories, Inc.
uncompromised calibration
1575 State Route 96, Victor, NY 14564, U.S.A.

ACCREDITED
Calibration Lab. Cert. # 1533.01

ISO/IEC 17025: 2017

West Caldwell Calibration Laboratories, Inc.
uncompromised calibration

ACCREDITED
Calibration Lab. Cert. # 1533.01

1575 State Route 96, Victor NY 14564

REPORT OF CALIBRATION

for

PCB Piezotronics Microphone **Model No.: 377B02** **Serial No.: 150512**

Company: **ID No.: XXXX**

Calibration results:

Before & after data same: ...X...

Sensitivity @ **250** **Hz** **and pressure of** **99.886** **kPa**

0 Volts Polarization voltage (External):

-26.18 dB re.1V/Pascal

49.08 mV/Pascal

0.18 Ko (- dB re 50 mV/Pascal)

Sensitivity: **Pass**

Freq. Response: **Pass**

All tests: **Pass**

Ambient Temperature:	20.1	°C
Ambient Humidity:	25.6	% RH
Ambient Pressure:	99.886	kPa
Calibration Date:	8-Jan-2021	
Calibration Due:	8-Jan-2022	
Report Number:	31548	-3
Control Number:	31548	

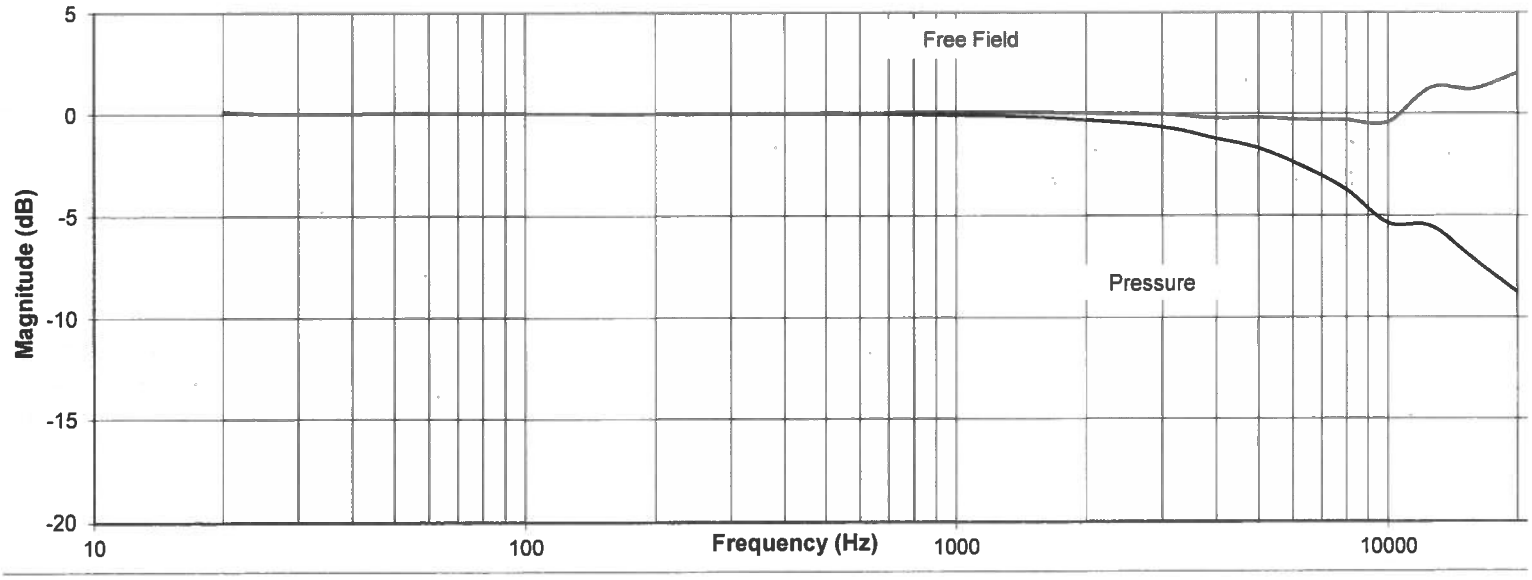
The above listed instrument meets or exceeds the tested manufacturer's specifications.

This Calibration is traceable through NIST test numbers: 684.07/O-0000001126-20

The expanded uncertainty of calibration: 0.19 dB at 95% confidence level with a coverage factor of k=2.

The pressure response recorded with electroacoustic method.

Frequency Response



The above listed instrument was checked using calibration procedure documented in West Caldwell Calibration Laboratories Inc. procedure : **Rev. 7.0 Jan. 24, 2014 Doc. # 1038 P377B02PCB**

Calibration was performed by West Caldwell Calibration Laboratories Inc. under Operating Procedures intended to implement the requirements of ISO10012-1, IEC Guide 25, ANSI/NCSL Z540-1, (MIL-STD-45662A) and ISO 9001:2015, ISO 17025

Measurements performed by: MS

Matthew Smith

Calibrated on WCCL system type 9700

This document shall not be reproduced, except in full, without the written approval from West Caldwell Cal. Labs. Inc.

West Caldwell Calibration Laboratories Inc.
1575 State Route 96, Victor NY 14564
Tel. (585) 586-3900 FAX (585) 586-4327

Calibration Data Record

for

PCB Piezotronics Microphone **Model No.: 377B02** **Serial No.: 150512**
Company: **ID No.: XXXX**

Frequency Response (Reference = 0 dB @ 250Hz)

Frequency [Hz]	Pressure [dB]	Free Field [dB]
19.95	0.09	0.09
25.12	0.01	0.01
31.62	0.01	0.01
39.81	0.01	0.01
50.12	0.04	0.04
63.10	0.03	0.03
79.43	0.02	0.02
100.00	0.02	0.02
125.89	0.01	0.01
158.49	0.00	0.00
199.53	0.00	0.00
251.19	0.00	0.00
316.23	0.00	0.01
398.11	0.00	0.01
501.19	-0.01	0.03
630.96	-0.02	0.02
794.33	-0.03	0.06
1000.00	-0.07	0.05
1258.93	-0.10	0.06
1584.89	-0.17	0.04
1995.26	-0.31	0.00
2511.89	-0.47	-0.01
3162.28	-0.73	-0.05
3981.07	-1.22	-0.22
5011.87	-1.72	-0.19
6309.57	-2.59	-0.30
7943.28	-3.71	-0.32
10000.00	-5.37	-0.42
12589.25	-5.52	1.25
15848.93	-7.15	1.20
19952.62	-8.75	1.98

Freq. response: Expanded Uncertainty (dB) with coverage factor K = 2
20 to 63Hz 0.22 dB, 63 to 12.5kHz 0.20 dB, 12.5k to 16kHz 0.22 dB, 16k to 20kHz 0.5 dB.

Instruments used for calibration:			Date of Cal.	Traceability No.	Re-cal. Due Date
Brüel & Kjær	4226	S/N 1445428	9-Jul-2020	684.07/O-0000001126-20	9-Jul-2021
Brüel & Kjær	3560	S/N 2241893	30-Jun-2020	684.07/O-0000001126-20	30-Jun-2021
HP	33120A	S/N US360089	9-Jul-2020	,610119	9-Jul-2021
HP	34401A	S/N US360942	9-Jul-2020	,610119	9-Jul-2021

Cal. Date: 8-Jan-2021 **Tested by: Matthew Smith**

Calibrated on WCCL system type 9700

This document shall not be reproduced except in full without the written approval from West Caldwell Cal. Labs. Inc.

West Caldwell Calibration Laboratories Inc.

Certificate of Calibration

for

PRECISION ACOUSTIC CALIBRATOR

Manufactured by:	LARSON DAVIS
Model No:	CAL200
Serial No:	10241
Calibration Recall No:	31548

Submitted By:

Customer:

Company:
Address:

The subject instrument was calibrated to the indicated specification using standards traceable to the SI through the National Institute of Standards and Technology or to accepted values of natural physical constants. This document certifies that the instrument met the following specification upon its return to the submitter.

West Caldwell Calibration Laboratories Procedure No. CAL200 LARS

Upon receipt for Calibration, the instrument was found to be:

Within (X)

tolerance of the indicated specification. See attached Report of Calibration.
The information supplied relates to the calibrated item listed above and statement of conformance for ALL given specifications and standards fall under the decision rule: A= (L-(U95)*M), where A is acceptance limit, L is manufacturer specifications, U95 is confidence level of 95% at k=2, and M is managed guard-band mulitiplier. The guard-band multiplier increases false-accept risk in favor of decreasing false-reject risk. Although the false accept risk increases, it is still below the Z540.3 2% risk requirement. The decision rule has been communicated and approved by customer during contract review.

West Caldwell Calibration Laboratories' calibration control system meets the following requirements, ISO 10012-1 MIL STD 45662A, ANSI/NCSL Z540-1, IEC Guide 25, ISO 9001:2015, and ISO 17025

Note: With this Certificate, Report of Calibration is included.

Approved by:

James Zhu

Quality Manager
ISO/IEC 17025:2017

Calibration Date: 08-Jan-21

Certificate No: 31548 - 2

West Caldwell Calibration Laboratories, Inc.
uncompromised calibration
1575 State Route 96, Victor, NY 14564, U.S.A.

ACCREDITED
Calibration Lab. Cert. # 1533.01

West Caldwell Calibration Laboratories, Inc.
uncompromised calibration
1575 State Route 96, Victor NY 14564

ISO/IEC 17025: 2017
ACCREDITED
Calibration Lab. Cert. # 1533.01

REPORT OF CALIBRATION

for

Larson Davis Precision Acoustic Calibrator **Model No.: CAL200** **Serial No.: 10241**
Company: **ID No.: XXXX**

Calibration results:

Before data: ...X..... **After data:** .....
Before & after data same: .....

Sound Pressure Level at 995.8 Hz and pressure of 1013 hPa (mbar) was 113.94 dB re 20 µPa

IEC 1094-4 Type WS 2 P Microphone was used for measurement.

	114 dB	94 dB
Sound Pressure Level:	**Pass**	**Pass**
Frequency:	**Pass**	**Pass**
Distortion:	**Pass**	**Pass**
Stability:	**Pass**	**Pass**
All tested parameters:		**Pass**

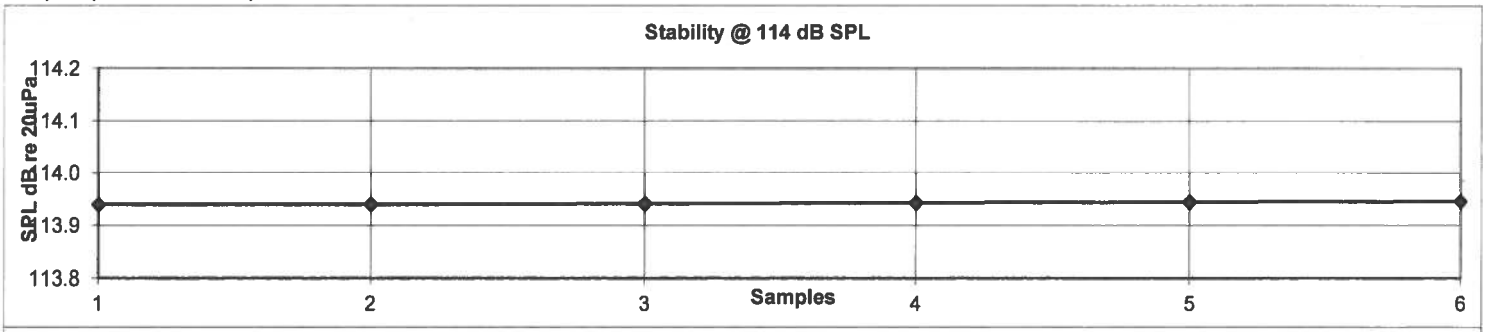
Laboratory Environment:		
Ambient Temperature:	**20.1**	°C
Ambient Humidity:	**25.6**	% RH
Ambient Pressure:	**99.886**	kPa
Calibration Date:	**8-Jan-2021**	
Calibration Due:	**8-Jan-2022**	
Report Number:	**31548 -2**	
Control Number:	**31548**	

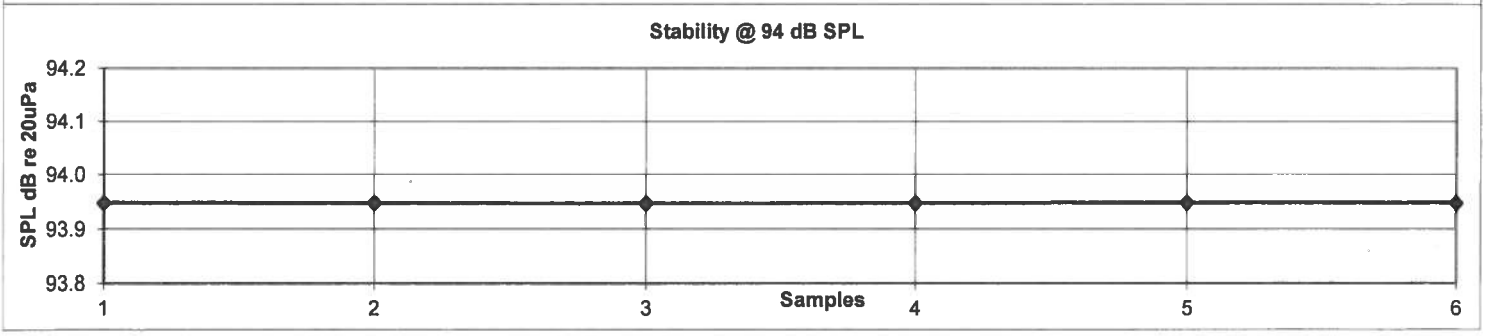
The above listed instrument meets or exceeds the manufacturer's specifications.
The IEC 60942:1997 Class 1 specifications, passed.
The ANSI S1.4-1984 specifications, passed.

This Calibration is traceable through NIST test numbers: 684.07/O-0000001126-20

The absolute uncertainty of calibration: See last page. Unless otherwise noted, the reported values are both "as found" and "as left" data.

Graph represents six samples of Sound Pressure Level measured at 5 sec. interval.





The above listed instrument was checked using calibration procedure documented in West Caldwell Calibration Laboratories Inc. procedure : **Rev. 7.0 Jan. 24, 2014 Doc. # 1038 CAL200LD**

Calibration was performed by West Caldwell Calibration Laboratories Inc. under Operating Procedures intended to implement the requirements of ISO10012-1, IEC Guide 25, ANSI/NCSL Z540-1, (MIL-STD-45662A), ISO 9001:2015 and ISO 17025

Cal. Date: 8-Jan-2021 Measurements performed by: .....
Calibrated on WCCL system type 9700 **Matthew Smith**

This document shall not be reproduced, except in full, without the written approval from West Caldwell Cal. Labs. Inc.

West Caldwell Calibration Laboratories Inc.
1575 State Route 96, Victor NY 14564
Tel. (585) 586-3900 FAX (585) 586-4327

Calibration Data Record

for

Larson Davis Precision Acoustic Calibrator **Model No.: CAL200** **Serial No.: 10241**
Company:

All tested parameters: Pass

Measured Sound Pressure Level (Six samples measured at 5 sec. interval)

Sample	1	113.94	dB re 20 µPa	93.95	dB re 20 µPa
	2	113.94		93.95	
	3	113.94		93.95	
	4	113.94		93.95	
	5	113.94		93.95	
	6	113.95		93.95	
	Average	**113.94**	Spec. 114 dB ± 0.2 dB	**93.95**	Spec. 94 dB ± 0.2 dB

Frequency measured (Three samples at 30 sec. Interval)

Sample	1	995.82 Hz	995.86 Hz	
	2	995.83	995.85	
	3	995.84	995.84	
	Average	**995.83**	**995.85**	Spec. 1000 Hz ± 1.0%

Distortion measured	-48.1 dB	-50.8 dB	Spec. ≤-32 dB

The expanded uncertainty of calibration at 95% confidence level with a coverage factor of k=2.

Parameter	Test Instrumentation Uncertainty	DUT Uncertainty	Total DUT Uncertainty
Acoustic Level ([114 & 94] @ 1 kHz):	**0.18**	**0.1**	**0.28**
Attenuator accuracy (Attenuation Measure):	**0.46**	**0.1**	**0.56**
Frequency Measure (DC to 10 MHz):	**6.0 parts in [10^6] Hz**		

Instruments used for calibration:			Date of Cal.	Traceability No.	Re-cal. Due Date
Brüel & Kjær	4231	S/N 2205492	2-Jul-2020	684.07/O-0000001126-20	2-Jul-2021
Brüel & Kjær	4134	S/N 1222616	2-Jul-2020	684.07/O-0000001126-20	2-Jul-2021
Brüel & Kjær	2669	S/N 1835080	2-Jul-2020	684.07/O-0000001126-20	2-Jul-2021
HP	34401A	S/N US361025	3-Jul-2020	,610119	3-Jul-2021
Brüel & Kjær	2636	S/N 1487493	3-Jul-2020	684.07/O-0000001126-20	3-Jul-2021
HP	33120A	S/N SG400116	3-Jul-2020	,610119	3-Jul-2021

Cal. Date: 8-Jan-2021 **Tested by: Matthew Smith**

Calibrated on WCCL system type 9700

This document shall not be reproduced, except in full, without the written approval from West Caldwell Cal. Labs. Inc.

West Caldwell Calibration Laboratories, Inc.
uncompromised calibration
1575 State Route 96, Victor NY 14564

ISO/IEC 17025: 2017
ACCREDITED
Calibration Lab. Cert. # 1533.01

REPORT OF CALIBRATION

for

Larson Davis Precision Acoustic Calibrator **Model No.: CAL200** **Serial No.: 10241**
Company: **ID No.: XXXX**

Calibration results:

Before data: ..... **After data:** ...X.....
Before & after data same: .....

Sound Pressure Level at 995.9 Hz and pressure of 1013 hPa (mbar)
was 114.01 dB re 20 µPa

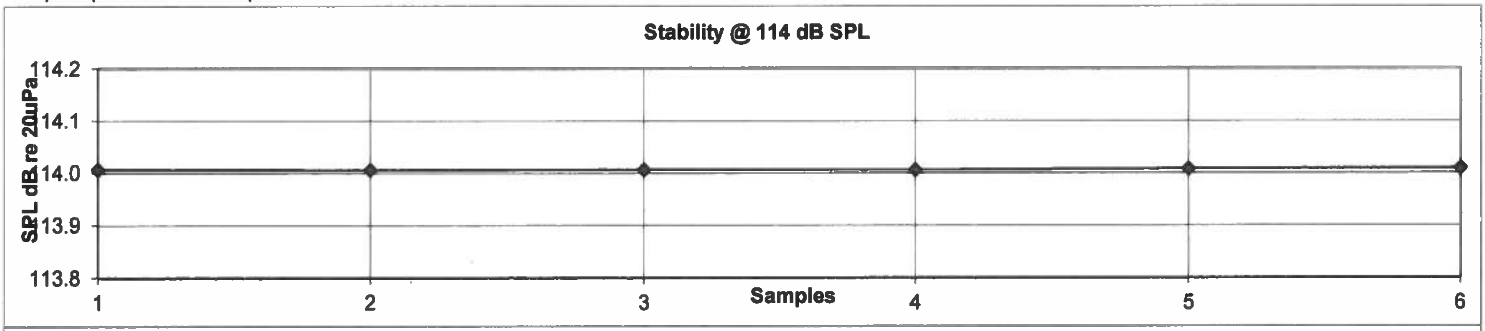
IEC 1094-4 Type WS 2 P Microphone was used for measurement.

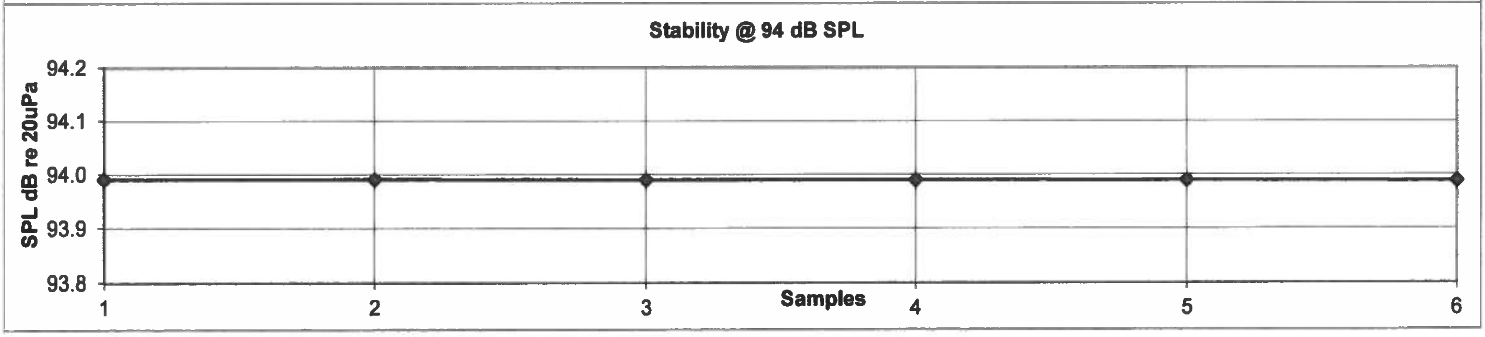
	114 dB	94 dB
Sound Pressure Level:	**Pass**	**Pass**
Frequency:	**Pass**	**Pass**
Distortion:	**Pass**	**Pass**
Stability:	**Pass**	**Pass**
All tested parameters:		**Pass**

Laboratory Environment:		
Ambient Temperature:	20.1	°C
Ambient Humidity:	25.6	% RH
Ambient Pressure:	99.886	kPa
Calibration Date:	8-Jan-2021	
Calibration Due:	8-Jan-2022	
Report Number:	31548 -2	
Control Number:	31548	

The above listed instrument meets or exceeds the manufacturer's specifications.
The IEC 60942:1997 Class 1 specifications, passed.
The ANSI S1.4-1984 specifications, passed.
This Calibration is traceable through NIST test numbers: 684.07/O-0000001126-20
The absolute uncertainty of calibration: See last page. Unless otherwise noted, the reported values are both "as found" and "as left" data.

Graph represents six samples of Sound Pressure Level measured at 5 sec. interval.





The above listed instrument was checked using calibration procedure documented in West Caldwell Calibration Laboratories Inc. procedure : **Rev. 7.0 Jan. 24, 2014 Doc. # 1038 CAL200LD**

Calibration was performed by West Caldwell Calibration Laboratories Inc. under Operating Procedures intended to implement the requirements of ISO10012-1, IEC Guide 25, ANSI/NCSL Z540-1, (MIL-STD-45662A), ISO 9001:2015 and ISO 17025

Cal. Date: 8-Jan-2021 Measurements performed by: MS
Matthew Smith

Calibrated on WCCL system type 9700

This document shall not be reproduced, except in full, without the written approval from West Caldwell Cal. Labs. Inc.

West Caldwell Calibration Laboratories Inc.
1575 State Route 96, Victor NY 14564
Tel. (585) 586-3900 FAX (585) 586-4327

Calibration Data Record

for

Larson Davis Precision Acoustic Calibrator **Model No.: CAL200** **Serial No.: 10241**
Company:

All tested parameters: Pass

Measured Sound Pressure Level (Six samples measured at 5 sec. interval)

Sample	1	114.01	dB re 20 µPa	93.99	dB re 20 µPa
	2	114.01		93.99	
	3	114.01		93.99	
	4	114.01		93.99	
	5	114.01		93.99	
	6	114.01		93.99	
	Average	**114.01**	Spec. 114 dB ± 0.2 dB	**93.99**	Spec. 94 dB ± 0.2 dB

Frequency measured (Three samples at 30 sec. Interval)

Sample	1	995.89	Hz	995.90	Hz
	2	995.90		995.93	
	3	995.90		995.91	
	Average	**995.90**		**995.91**	Spec. 1000 Hz ± 1.0%

Distortion measured	-48.0 dB	-50.7 dB	Spec. ≤-32 dB

The expanded uncertainty of calibration at 95% confidence level with a coverage factor of k=2.

Parameter	Test Instrumentation Uncertainty	DUT Uncertainty	Total DUT Uncertainty
Acoustic Level ([114 & 94] @ 1 kHz):	**0.18**	**0.1**	**0.28**
Attenuator accuracy (Attenuation Measure):	**0.46**	**0.1**	**0.56**
Frequency Measure (DC to 10 MHz):	**6.0 parts in [10^6] Hz**		

Instruments used for calibration:			Date of Cal.	Traceability No.	Re-cal. Due Date
Brüel & Kjær	4231	S/N 2205492	2-Jul-2020	684.07/O-0000001126-20	2-Jul-2021
Brüel & Kjær	4134	S/N 1222616	2-Jul-2020	684.07/O-0000001126-20	2-Jul-2021
Brüel & Kjær	2669	S/N 1835080	2-Jul-2020	684.07/O-0000001126-20	2-Jul-2021
HP	34401A	S/N US361025	3-Jul-2020	,610119	3-Jul-2021
Brüel & Kjær	2636	S/N 1487493	3-Jul-2020	684.07/O-0000001126-20	3-Jul-2021
HP	33120A	S/N SG400116	3-Jul-2020	,610119	3-Jul-2021

Cal. Date: 8-Jan-2021 **Tested by: Matthew Smith**

Calibrated on WCCL system type 9700

This document shall not be reproduced, except in full, without the written approval from West Caldwell Cal. Labs. Inc.

CONSTRUCTION APPENDIX

(718) 523-5656 Fax (718) 523-6408

Malatesta Paladino inc.

CONCRETE & MASONRY CONTRACTORS
139-19 109th AVENUE JAMAICA, NEW YORK 11435

June 9, 2022

Re: Development of Construction Schedule
141 – 05 109th Avenue
Jamaica, NY 11435

To Whom It May Concern:

At the request of the New York City Department of City Planning, Mal – Pal Realty ("MPR" or the "Applicant") has retained an experienced construction management firm, Malatesta Paladino, Inc. (www.malatestapaladino.com) to prepare a detailed construction schedule for the project located at 141 – 05 109th Avenue (Block 10068, Lots 200, 205, 210, 213, 214, 215) in Jamaica, New York. The construction schedule also includes outparcels not included in our development proposal (Block 10068, Lots 216, 218). Malatesta Paladino, Inc. is led by John Novello and Patrick Pallentino, two experienced construction managers with over 30 years of experience in the New York City market.

MPR and Malatesta Paladino, Inc. performed a detailed review of the architectural plans and have developed the construction schedule included herein. Provided below is further information about the assumptions relied upon for development of the schedule.

Assumptions

The following assumptions from the draft Environmental Assessment Statement (EAS) dated March 22, 2022 were used in developing the construction schedule:

Projected Development Site 1
Projected Development Site 1 will be redeveloped with a 92,779 gsf (2.12 FAR), 4 story (45 foot) building with 61 residential dwelling units (52,051 gsf), approximately 5,165 gsf of retail space, 4,587 gsf of office space, 5,950 gsf of community facility space for a Universal Pre – K school, 840 gsf recreational space, and 28 parking spaces (25,062 gsf including parking ramp) on the cellar level. The existing structures on the site would be demolished and the site cleared in order to facilitate construction of Projected Development Site 1.

Projected Development Site 2 (Non-Applicant Controlled)
Projected Development Site 2 is assumed to be redeveloped with a 23,586 gsf (2.2 FAR), 4 story (45 foot) building with 17 residential dwelling units (14,682 gsf), approximately 4,052 gsf of commercial retail space, and 7 parking spaces (4,852 gsf including parking ramp) on the cellar level. The existing structures on the site would be demolished and the site cleared in order to facilitate construction of Projected Development Site 2.

(718) 523-5656 Fax (718) 523-6408

Malatesta Paladino inc.

CONCRETE & MASONRY CONTRACTORS
139-19 109th AVENUE JAMAICA, NEW YORK 11435

Additionally, there are a number of considerations that were included in developing a schedule for this project:

- Review of geotechnical analysis in the area indicates that dewatering is unnecessary and that no special measures are required for SOE or foundation work.

- The fact that the entire block is to be redeveloped and is accessible from all three sides, in an area with relatively low vehicular and pedestrian activity will greatly facilitate access and mobilization and construction term activities at site. The projected development sites are immediately accessible from 109th Avenue which is a minor arterial, while 142nd Street, 109th Avenue and 107th Road are major collectors. Construction access and ability to control and mobilize the entire block frontage will greatly assist in the coordination of the development and provide more efficient staging and sequencing of material delivery and maintenance of traffic thereby positively affecting the overall construction schedule.

- The overall size of the projected development sites allows significant flexibility for mobilization and staging the work and on-site storage of materials. The width and length and overall size and relative isolation of the block from adjacent buildings of allows for multiple teams to work on each floor with minimal interference which will assist in expediting construction processes.

- Projected Development Site 1, the larger of the two sites, has a simple rectilinear floor plate and a single floor of excavation to accommodate a single floor standard layout underground parking facility. The parking cellar along with the shell for the one floor of commercial office will require minimal finish work and will provide the base for standard residential floors to be built.

- Projected Development Site 2 provides an even more basic structure compared to Projected Development Site 1, including one floor of standard cellar parking with a simple warehouse structure and an open ground floor plan located directly above the garage. The commercial shell for local retail also shares the ground floor. All of the anticipated uses have minimal finish work, would be built to suit, and would allow for expedited completion.

- Projected Development Site 1 will utilize a concrete cast-in-place structural framing method, which results in time efficiencies over precast concrete and structural steel systems, minimizing dependence on off-site fabrication and the availability of materials.

(718) 523-5656 Fax (718) 523-6408

Malatesta Paladino inc.

CONCRETE & MASONRY CONTRACTORS
139-19 109th AVENUE JAMAICA, NEW YORK 11435

- Dewatering measures will not be required as groundwater is well below 40' of the site grade.

- The construction of Projected Development Site 1's façade will be a panelized system that minimizes construction time.

Schedule

A preliminary schedule outlining the sequence of work is enclosed with this letter. As described in greater detail below, construction of Projected Development Site 1 will take less than 24 months (January 2024 to December 2025) and will be followed by an approximately 12 month construction period (January 2026 to December 2026) at Projected Development Site 2. The total construction duration is expected to be less than 36 months.

Projected Development Site 1

- Demolition is scheduled to last approximately 30 days or 1 month (January 2024 to February 2024)

- Support of excavation and foundation work is scheduled for approximately 150 days or 5 months (February 2024 to July 2024)

- Superstructure will start approximately 1 month prior to completion of all excavation and foundation work and last approximately 6 months (July 2024 to January 2025)

- Façade enclosure work will run approximately 3 months and start approximately 2 months before completion of all superstructure work (October 2024 to January 2025)

- Roofing and waterproofing would run approximately 60 days and start approximately 1 month before the end of façade enclosure work (January 2025 to March 2025)

- The elevator will be installed upon completion of the superstructure with some overlap – commencing approximately 2 months prior to completion of the superstructure and running a total of approximately 7 months (November 2024 to June 2025)

- Construction of the interior core and shell would commence at the end of superstructure work and be completed within approximately 6 months (January 2025 to July 2025)

- Finishes will take place over approximately 3 months and conclude approximately 2 months after interior core and shell are complete (September 2025 to December 2025)

(718) 523-5656 Fax (718) 523-6408

Malatesta Paladino inc.

CONCRETE & MASONRY CONTRACTORS
139-19 109th AVENUE JAMAICA, NEW YORK 11435

- Inspection, sign offs, and TCO will take approximately 2 months concurrent with the finishes and conclude approximately 1 month after interior finishes (October 2025 to December 2025)

Projected Development Site 2 (Non-Applicant Controlled)

- Demolition is assumed to last approximately 30 days or 1 month (January 2026)
- Support of excavation and foundation work is assumed to last approximately 60 days or 2 months (February 2026 to April 2026)
- Superstructure is assumed to start shortly prior to completion of all excavation and foundation work and last approximately 2 months (April 2026 to May 2026)
- Façade enclosure work is assumed to run approximately 1 month and start before completion of all superstructure work (June 2026 to July 2026)
- Roofing and waterproofing is assumed to run approximately 60 days and start before the end of façade enclosure work (May 2026 to July 2026)
- The elevator is assumed to be installed upon completion of the superstructure, commencing prior to completion of the superstructure and running a total of approximately 3 months (May 2026 to August 2026)
- Construction of the interior core and shell is assumed to commence at the end of superstructure work and be completed within approximately 3 months (June 2026 to September 2026)
- Finishes are assumed to take place over approximately 3 months (September 2026 to December 2026)
- Inspection, sign offs, and TCO are assumed to take approximately 1 month concurrent with the finishes and conclude approximately 1 month after interior finishes (November 2026 to December 2026)

Sincerely,

John Novello

Patrick Pallentino