455 First Avenue

Environmental Assessment Statement

PREPARED FOR

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

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

Part I: GENERAL INFORMATION

PROJECT NAME 455 First Avenue

1. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency)	BSA REFERENCE NUMBER (if applicable)
23DME012M	N/A
ULURP REFERENCE NUMBER (if applicable)	OTHER REFERENCE NUMBER(S) (if applicable)
240342ZMM; 240343ZSM; 240344ZRM	(*e.g.*, legislative intro, CAPA) N/A

2a. *Lead Agency Information*			**2b. *Applicant Information***		
NAME OF LEAD AGENCY Deputy Mayor for Housing, Economic Development, and Workforce			NAME OF APPLICANT 455 First Avenue Associates LLC		
NAME OF LEAD AGENCY CONTACT PERSON Hilary Semel, Director			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON Benjamin Baccash		
ADDRESS 100 Gold Street, 2nd Floor			ADDRESS 111 Fifth Avenue, Floor 9		
CITY New York	STATE NY	ZIP 10038	CITY New York	STATE NY	ZIP 10003
TELEPHONE 212-788-6831	EMAIL hsemel@cityhall.nyc.gov		TELEPHONE 212-704-3822	EMAIL BBaccash@tacon.com	

3. *Action Classification and Type*

SEQRA Classification

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

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

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

4. *Project Description*

455 First Avenue Associates LLC and the New York City Economic Development Corporation (NYCEDC) (the Applicants), in collaboration with New York University (NYU) on behalf of NYU Grossman School of Medicine, as subtenant, are seeking several discretionary actions (the Proposed Actions) to facilitate the redevelopment of Manhattan Block 932, Lot 17 (the Development Site) located at 455 First Avenue. The Proposed Actions would include a zoning map amendment to rezone the Development Site from a R8 district (with a C2-5 commercial overlay over a portion of the Development Site) to a C6-4 district, a zoning text amendment to map a Mandatory Inclusionary Housing (MIH) area on the Development Site as required with any zoning change to a district that allows for residential use, a special permit pursuant to Section 74-901 of the Zoning Resolution (ZR) of the City of New York to modify certain bulk regulations, and a mayoral approval of lease terms pursuant to Section 384(b)(4) of the New York City Charter.

Approval of the Proposed Actions would facilitate a 13-story, approximately 270-foot-tall life sciences building (the Proposed Project). The Proposed Project would total approximately 609,988 gross square feet (gsf), of which approximately 521,988 gsf would be life sciences space, up to approximately 5,000 gsf would be retail space, and 83,000 gsf would be mechanical space. The life sciences space would consist of space for start-ups, graduation space for life science businesses, space for established firms, and anchor space for NYU Grossman School of Medicine. As part of the Proposed Project, a small portion of the life sciences space, known as Life Sciences Multi-Purpose Programming Space, would be for use by building tenants for internal meetings and events. This space would also be used for life-science-related events (e.g., lectures or symposia) where the public may participate. The mechanical space would consist of basement and other full-floor and large sections of the building used for infrastructure, equipment, lab support areas, and back-of-house needs. The retail space would serve the Proposed Project's tenants and others in the neighborhood. No parking would be provided.

The building would rise to a height up to 270 feet inclusive of rooftop bulkheads, mechanical equipment, and associated equipment screens. Loading would occur from Mt. Carmel Place, and the main entry would be from First Avenue.

Project Location

BOROUGH Manhattan	COMMUNITY DISTRICT(S) 06	STREET ADDRESS 455 First Avenue
TAX BLOCK(S) AND LOT(S) Block 932; Lot 17		ZIP CODE 10016

DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS The Development Site is bounded by First Avenue to the east, East 26th Street to the south, Mt. Carmel Place to the west, and the pedestrianized East 27th Street to the north.

EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY R8; C2-5 | ZONING SECTIONAL MAP NUMBER 8d

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

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

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

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

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION ZR Section 74-901

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

☐ VARIANCE (use)

☐ VARIANCE (bulk)

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

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

***Department of Environmental Protection*:** ☐ YES ☒ NO ☐ Cogeneration Facility ☐ Title V Permit

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

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

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

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

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

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

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

☒ SITE LOCATION MAP	☒ ZONING MAP	☒ SANBORN OR OTHER LAND USE MAP
☒ TAX MAP	☐ FOR LARGE AREAS OR MULTIPLE SITES, A GIS SHAPE FILE THAT DEFINES THE PROJECT SITE(S)	

☒ PHOTOGRAPHS OF THE PROJECT SITE TAKEN WITHIN 6 MONTHS OF EAS SUBMISSION AND KEYED TO THE SITE LOCATION MAP

Physical Setting (both developed and undeveloped areas)

Total directly affected area (sq. ft.): 44,368	Waterbody area (sq. ft.) and type: N/A
Roads, buildings, and other paved surfaces (sq. ft.): 44,368	Other, describe (sq. ft.): N/A

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

SIZE OF PROJECT TO BE DEVELOPED (gross square feet): approx. 609,988 gsf

NUMBER OF BUILDINGS: 1	GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): approx. 609,988 gsf
HEIGHT OF EACH BUILDING (ft.): up to approx. 270 (including bulkhead)	NUMBER OF STORIES OF EACH BUILDING: 13

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: 44,368

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

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

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

AREA OF TEMPORARY DISTURBANCE: 49,362 sq. ft. (width x length)

VOLUME OF DISTURBANCE: up to approximately 246,810 cubic ft. (width x length x depth)

AREA OF PERMANENT DISTURBANCE: 44,368 sq. ft. (width x length)

8. *Analysis Year* CEQR Technical Manual Chapter 2

ANTICIPATED BUILD YEAR (date the project would be completed and operational): 2030

ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: 11 months for building demolition and 31 months for building construction

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

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE: Construction will include demolition of the existing laboratory building (anticipated 11 months) and construction of the Proposed Project (anticipated 31 months).

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

☒ RESIDENTIAL ☐ MANUFACTURING ☒ COMMERCIAL ☒ PARK/FOREST/OPEN SPACE ☒ OTHER, specify: Institutional; Mixed Use

DESCRIPTION OF EXISTING AND PROPOSED CONDITIONS

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

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
LAND USE				
Residential	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
Describe type of residential structures				
No. of dwelling units				
No. of low- to moderate-income units				
Gross floor area (sq. ft.)				
Commercial	☐ YES ☒ NO	☐ YES ☒ NO	☒ YES ☐ NO	
If "yes," specify the following:				
Describe type (retail, office, other)			Life Sciences; Retail; Mechanical	
Gross floor area (sq. ft.)	City Laboratory Space (Life Sciences): 317,296 Mechanical: 41,704	City Laboratory Space (Life Sciences): 165,000 Office: 152,296 Mechanical: 41,704	Life Sciences: 521,988 Retail: 5,000 Mechanical: 83,000	Life Sciences: +356,988 Office: -152,296 Retail: +5,000 Mechanical: +41,926
Manufacturing/Industrial	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
Type of use				
Gross floor area (sq. ft.)				
Open storage area (sq. ft.)				
If any unenclosed activities, specify:				
Community Facility	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
Type				
Gross floor area (sq. ft.)				
Vacant Land	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," describe:				
Publicly Accessible Open Space	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify type (mapped City, State, or Federal parkland, wetland—mapped or otherwise known, other):				
Other Land Uses	☒ YES ☐ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," describe:				
PARKING				
Garages	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
No. of public spaces				
No. of accessory spaces				
Operating hours				
Attended or non-attended				
Lots	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
No. of public spaces				
No. of accessory spaces				
Operating hours				
Other (includes street parking)	☐ YES ☐ NO	☐ YES ☐ NO	☐ YES ☒ NO	
If "yes," describe:				

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
POPULATION				
Residents	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify number:				
Briefly explain how the number of residents was calculated:				
Businesses	☐ YES ☒ NO	☐ YES ☒ NO	☒ YES ☐ NO	
If "yes," specify the following:				
No. and type			Life Sciences; Retail	
No. and type of workers by business	See "Other" for existing worker population	See "Other" for No Action worker population	Life Sciences: 1,099 Retail: 15	Life Sciences: +1,099 Retail: +15
No. and type of non-residents who are not workers			N/A	
Briefly explain how the number of businesses was calculated:	Assumes 1 employee per 475 gsf of life science space and 1 employee per 333.3 gsf of commercial retail space.			
Other (students, visitors, concert-goers, *etc.*)	☒ YES ☐ NO	☒ YES ☐ NO	☐ YES ☒ NO	
If any, specify type and number:	City Laboratory Space (Life Sciences): 268+ employees	City Laboratory Space (Life Sciences): 347 employees City Office: 609 employees		City Laboratory Space (Life Sciences): -347 employees City Office: -609 employees
Briefly explain how the number was calculated:	Existing conditions: Existing PHL has 268 employees (Public Health Lab Environmental Assessment Statement); there are additional workers associated with the other City uses and leased spaces within the existing building. No Action and With Action: Assumes 1 employee per 475 gsf of life science space and 1 employee per 250 gsf of office.			
ZONING				
Zoning classification	R8; C2-5	R8; C2-5	C6-4	
Maximum amount of floor area that can be developed	Residential: 6.02 Commercial: 2.0	Residential: 6.02 Commercial: 2.0	Residential: 10 Commercial: 10	
Predominant land use and zoning classifications within land use study area(s) or a 400 ft. radius of proposed project	Institutional; Residential; Mixed Commercial & Residential; Open Space	Institutional; Residential; Mixed Commercial & Residential; Open Space	Institutional; Residential; Mixed Commercial & Residential; Open Space	
Attach any additional information that may be needed to describe the project. If your project involves changes that affect one or more sites not associated with a specific development, it is generally appropriate to include total development projections in the above table and attach separate tables outlining the reasonable development scenarios for each site.				

Part II: TECHNICAL ANALYSIS

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

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

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

	YES	NO
iv. Indirect Business Displacement		
○ Would the project potentially introduce trends that make it difficult for businesses to remain in the area?	☐	☒
○ Would the project capture retail sales in a particular category of goods to the extent that the market for such goods would become saturated, potentially resulting in vacancies and disinvestment on neighborhood commercial streets?	☐	☒
v. Effects on Industry		
○ Would the project significantly affect business conditions in any industry or any category of businesses within or outside the study area?	☐	☒
○ Would the project indirectly substantially reduce employment or impair the economic viability in the industry or category of businesses?	☐	☒
3. *COMMUNITY FACILITIES*: CEQR Technical Manual Chapter 6		
(a) Direct Effects		
○ Would the project directly eliminate, displace, or alter public or publicly funded community facilities such as educational facilities, libraries, health care facilities, day care centers, police stations, or fire stations?	☐	☒
(b) Indirect Effects		
i. Early Childhood Programs		
○ Would the project result in 20 or more eligible children under age 6, based on the number of low or low/moderate income residential units? (See Table 6-1 in Chapter 6)	☐	☒
○ If "yes," would the project result in a collective utilization rate of the Early Childhood Programs in the study area that is greater than 100 percent?	☐	☐
○ If "yes," would the project increase the collective utilization rate by 5 percent or more from the No-Action scenario?	☐	☐
ii. Public Schools		
○ Would the project result in 50 or more elementary or middle school students, or 150 or more high school students based on number of residential units? (See Table 6-1 in Chapter 6)	☐	☒
○ If "yes," would the project result in a utilization rate of the elementary or middle schools that is equal to or greater than 100 percent?	☐	☐
○ If "yes," would the project generate 100 or more elementary or middle school students past the 100% utilization rate?	☐	☐
○ If "yes," would the project result in a utilization rate of the high schools that is equal to or greater than 100 percent?	☐	☐
○ If "yes," would the project increase the high school utilization rate by 5 percent or more from the No-Action scenario?	☐	☐
iii. Libraries		
○ Would the project result in a 5 percent or more increase in the ratio of residential units to library branches? (See Table 6-1 in Chapter 6)	☐	☒
○ If "yes," would the project increase the study area population by 5 percent or more from the No-Action levels?	☐	☐
○ If "yes," would the additional population impair the delivery of library services in the study area?	☐	☐
iv. Health Care Facilities		
○ Would the project result in the introduction of a sizeable new neighborhood?	☐	☒
○ If "yes," would the project affect the operation of health care facilities in the area?	☐	☐
v. Fire and Police Protection		
○ Would the project result in the introduction of a sizeable new neighborhood?	☐	☒
○ If "yes," would the project affect the operation of fire or police protection in the area?	☐	☐
4. *OPEN SPACE*: CEQR Technical Manual Chapter 7		
(a) Would the project change or eliminate existing open space?	☐	☒
(b) Would the project generate more than 200 additional residents or 500 additional employees?	☐	☒
5. *SHADOWS*: CEQR Technical Manual Chapter 8		
(a) Would the proposed project result in a net height increase of any structure of 50 feet or more?	☒	☐
(b) Would the proposed project result in any increase in structure height and be located adjacent to or across the street from a sunlight-sensitive resource?	☒	☐
(c) If "yes" to either of the above questions, attach supporting information explaining whether the project's shadow would reach any sunlight-sensitive resource at any time of the year. See attached.		
6. *HISTORIC AND CULTURAL RESOURCES*: CEQR Technical Manual Chapter 9		

	YES	NO
(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.		
7. *URBAN DESIGN AND VISUAL RESOURCES*: CEQR Technical Manual Chapter 10		
(a) Would the proposed project introduce a new building, a new building height, or result in any substantial physical alteration to the streetscape or public space in the vicinity of the proposed project that is not currently allowed by existing zoning?	☒	☐
(b) Would the proposed project result in obstruction of publicly accessible views to visual resources not currently allowed by existing zoning?	☐	☒
(c) If "yes" to either of the above, please provide the information requested in Chapter 10. See attached.		
8. *NATURAL RESOURCES*: CEQR Technical Manual Chapter 11		
(a) Does the proposed project site or a site adjacent to the project contain natural resources as defined in Section 100 of Chapter 11?	☐	☒
○ If "yes," list the resources and attach supporting information on whether the project would affect any of these resources.		
(b) Is any part of the directly affected area within the Jamaica Bay Watershed?	☐	☒
○ If "yes," complete the Jamaica Bay Watershed Protection Plan Project Tracking Form and submit according to its instructions.		
9. *HAZARDOUS MATERIALS*: CEQR Technical Manual Chapter 12		
(a) Would the proposed project allow commercial or residential uses in an area that is currently, or was historically, a manufacturing area that involved hazardous materials?	☒	☐
(b) Would the proposed project introduce new activities or processes using hazardous materials and increase the risk of human or environmental exposure?	☐	☒
(c) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to hazardous materials that preclude the potential for significant adverse impacts?	☐	☒
(d) Would the project require soil disturbance in a manufacturing area or any development on or near a manufacturing area or existing/historic facilities listed in the Hazardous Materials Appendix (including nonconforming uses)?	☒	☐
(e) Would the project result in the development of a site where there is reason to suspect the presence of hazardous materials, contamination, illegal dumping or fill, or fill material of unknown origin?	☒	☐
(f) Would the project result in development on or near a site that has or had underground and/or aboveground storage tanks (*e.g.*, gas stations, oil storage facilities, heating oil storage)?	☒	☐
(g) Would the project result in renovation of interior existing space on a site with the potential for compromised air quality; vapor intrusion from either on-site or off-site sources; or the presence of asbestos, PCBs, mercury or lead-based paint?	☐	☒
(h) Would the project result in development on or near a site with potential hazardous materials issues such as government-listed voluntary cleanup/brownfield site, current or former power generation/transmission facilities, coal gasification or gas storage sites, railroad tracks or rights-of-way, or municipal incinerators?	☐	☒
(i) Has a Phase I Environmental Site Assessment been performed for the site?	☒	☐
○ If "yes," were Recognized Environmental Conditions (RECs) identified? Briefly identify: Phase I idenfied two RECs -- 1) a nearby historical drycleaner at 486 Second Avenue; 2) historical on-site manufacturing and auto repair that have the potential to have impacted the subsurface at or near the site.	☒	☐
(j) Based on the Phase I Assessment, is a Phase II Investigation needed? The implementation of DEP-approved Phase II Investigation Plan (dated January 2024) consisting of soil, groundwater, and soil vapor testings will be required by NYCEDC and reviewed by DEP to determine whether remedial action is required prior to redevelopment.	☒	☐
10. *WATER AND SEWER INFRASTRUCTURE*: CEQR Technical Manual Chapter 13		
(a) Would the project result in water demand of more than one million gallons per day?	☐	☒
(b) If the proposed project located in a combined sewer area, would it result in at least 1,000 residential units or 250,000 square feet or more of commercial space in Manhattan, or at least 400 residential units or 150,000 square feet or more of commercial space in the Bronx, Brooklyn, Staten Island, or Queens?	☐	☒
(c) If the proposed project located in a separately sewered area, would it result in the same or greater development than that listed in Table 13-1 in Chapter 13?	☐	☒
(d) Would the project involve development on a site that is 5 acres or larger where the amount of impervious surface would increase?	☐	☒

	YES	NO
(e) If the project is located within the Jamaica Bay Watershed or in certain specific drainage areas, including Bronx River, Coney Island Creek, Flushing Bay and Creek, Gowanus Canal, Hutchinson River, Newtown Creek, or Westchester Creek, would it involve development on a site that is 1 acre or larger where the amount of impervious surface would increase?	☐	☒
(f) Would the proposed project be located in an area that is partially sewered or currently unsewered?	☐	☒
(g) Is the project proposing an industrial facility or activity that would contribute industrial discharges to a Wastewater Treatment Plant and/or contribute contaminated stormwater to a separate storm sewer system?	☐	☒
(h) Would the project involve construction of a new stormwater outfall that requires federal and/or state permits?	☐	☒
(i) If "yes" to any of the above, conduct the appropriate preliminary analyses and attach supporting documentation.		
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): 3,031		
○ Would the proposed project have the potential to generate 100,000 pounds (50 tons) or more of solid waste per week?	☐	☒
(b) Would the proposed project involve a reduction in capacity at a solid waste management facility used for refuse or recyclables generated within the City?	☐	☒
○ If "yes," would the proposed project comply with the City's Solid Waste Management Plan?	☐	☒
12. *ENERGY*: CEQR Technical Manual Chapter 15		
(a) Using energy modeling or Table 15-1 in Chapter 15, the project's projected energy use is estimated to be (annual BTUs): 54,288,704		
(b) Would the proposed project affect the transmission or generation of energy?	☐	☒
13. *TRANSPORTATION*: CEQR Technical Manual Chapter 16		
(a) Would the proposed project exceed any threshold identified in Table 16-1 in Chapter 16?	☒	☐
(b) If "yes," conduct the appropriate screening analyses, attach back up data as needed for each stage, and answer the following questions:		
○ Would the proposed project result in 50 or more Passenger Car Equivalents (PCEs) per project peak hour?	☒	☐
If "yes," would the proposed project result in 50 or more vehicle trips per project peak hour at any given intersection? ***It should be noted that the lead agency may require further analysis of intersections of concern even when a project generates fewer than 50 vehicles in the peak hour. See Subsection 313 of Chapter 16 for more information.*	☐	☒
○ Would the proposed project result in more than 200 subway/rail, bus trips, or 50 Citywide Ferry Service ferry trips per project peak hour?	☐	☒
If "yes," would the proposed project result, per project peak hour, in 50 or more bus trips on a single line (in one direction), 200 subway/rail trips per station or line, or 25 or more Citywide Ferry Service ferry trips on a single route (in one direction), or 50 or more passengers at a Citywide Ferry Service landing?	☐	☐
○ Would the proposed project result in more than 200 pedestrian trips per project peak hour?	☐	☒
If "yes," would the proposed project result in more than 200 pedestrian trips per project peak hour to any given pedestrian or transit element, crosswalk, subway stair, bus stop, or Citywide Ferry Service landing?	☐	☒
14. *AIR QUALITY*: CEQR Technical Manual Chapter 17		
(a) *Mobile Sources*: Would the proposed project result in the conditions outlined in Section 210 in Chapter 17?	☒	☐
(b) *Stationary Sources*: Would the proposed project result in the conditions outlined in Section 220 in Chapter 17?	☒	☐
○ If "yes," would the proposed project exceed the thresholds in Figure 17-3, Stationary Source Screen Graph in Chapter 17? (Attach graph as needed) See attached.	☐	☐
(c) Does the proposed project involve multiple buildings on the project site?	☐	☒
(d) Does the proposed project require federal approvals, support, licensing, or permits subject to conformity requirements?	☐	☒
(e) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to air quality that preclude the potential for significant adverse impacts?	☐	☒
(f) If "yes" to any of the above, conduct the appropriate analyses and attach any supporting documentation. See attached		
15. *GREENHOUSE GAS EMISSIONS*: CEQR Technical Manual Chapter 18		
(a) Is the proposed project a city capital project or a power generation plant?	☐	☒
(b) Would the proposed project fundamentally change the City's solid waste management system?	☐	☒
(c) Would the proposed project result in the development of 350,000 square feet or more?	☐	☒
(d) If "yes" to any of the above, would the project require a GHG emissions assessment based on guidance in Chapter 18?	☐	☒
○ If "yes," would the project result in inconsistencies with the City's GHG reduction goal? (See Local Law 22 of 2008; § 24-803 of the Administrative Code of the City of New York). Please attach supporting documentation.	☐	☐
16. *NOISE*: CEQR Technical Manual Chapter 19		

	YES	NO
(a) Would the proposed project generate or reroute vehicular traffic?	☒	☐
(b) Would the proposed project introduce new or additional receptors (see Section 114 in Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed rail line with a direct line of site to that rail line?	☒	☐
(c) Would the proposed project cause a stationary noise source to operate within 1,500 feet of a receptor with a direct line of sight to that receptor or introduce receptors into an area with high ambient stationary noise?	☐	☒
(d) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to noise that preclude the potential for significant adverse impacts?	☐	☒
(e) If "yes" to any of the above, conduct the appropriate analyses and attach any supporting documentation. See attached.		
17. *PUBLIC HEALTH*: CEQR Technical Manual Chapter 20		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Air Quality; Hazardous Materials; Noise?	☒	☐
(b) If "yes," explain why an assessment of public health is or is not warranted based on the guidance in Chapter 20, "Public Health." Attach a preliminary analysis, if necessary. See attached		
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		
19. *CONSTRUCTION*: CEQR Technical Manual Chapter 22		
(a) Would the project's construction activities involve:		
○ Construction activities lasting longer than two years?	☒	☐
○ Construction activities within a Central Business District or along an arterial highway or major thoroughfare?	☒	☐
○ Closing, narrowing, or otherwise impeding traffic, transit, or pedestrian elements (roadways, parking spaces, bicycle routes, sidewalks, crosswalks, corners, *etc.*)?	☐	☒
○ Construction of multiple buildings where there is a potential for on-site receptors on buildings completed before the final build-out?	☐	☒
○ The operation of several pieces of diesel equipment in a single location at peak construction?	☐	☒
○ Closure of a community facility or disruption in its services?	☐	☒
○ Activities within 400 feet of a historic or cultural resource?	☒	☐
○ Disturbance of a site containing or adjacent to a site containing natural resources?	☐	☒
○ Construction on multiple development sites in the same geographic area, such that there is the potential for several construction timelines to overlap or last for more than two years overall?	☐	☒
(b) If any boxes are checked "yes," explain why a preliminary construction assessment is or is not warranted based on the guidance in Chapter 22, "Construction." It should be noted that the nature and extent of any commitment to use the Best Available Technology for construction equipment or Best Management Practices for construction activities should be considered when making this determination. See attached.		

20. *APPLICANT'S CERTIFICATION*

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

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

APPLICANT/REPRESENTATIVE NAME	SIGNATURE	DATE
Colleen Wenke on behalf of 455 First Avenue Associates LLC	Colleen Wenke	Jun 20 2024

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.

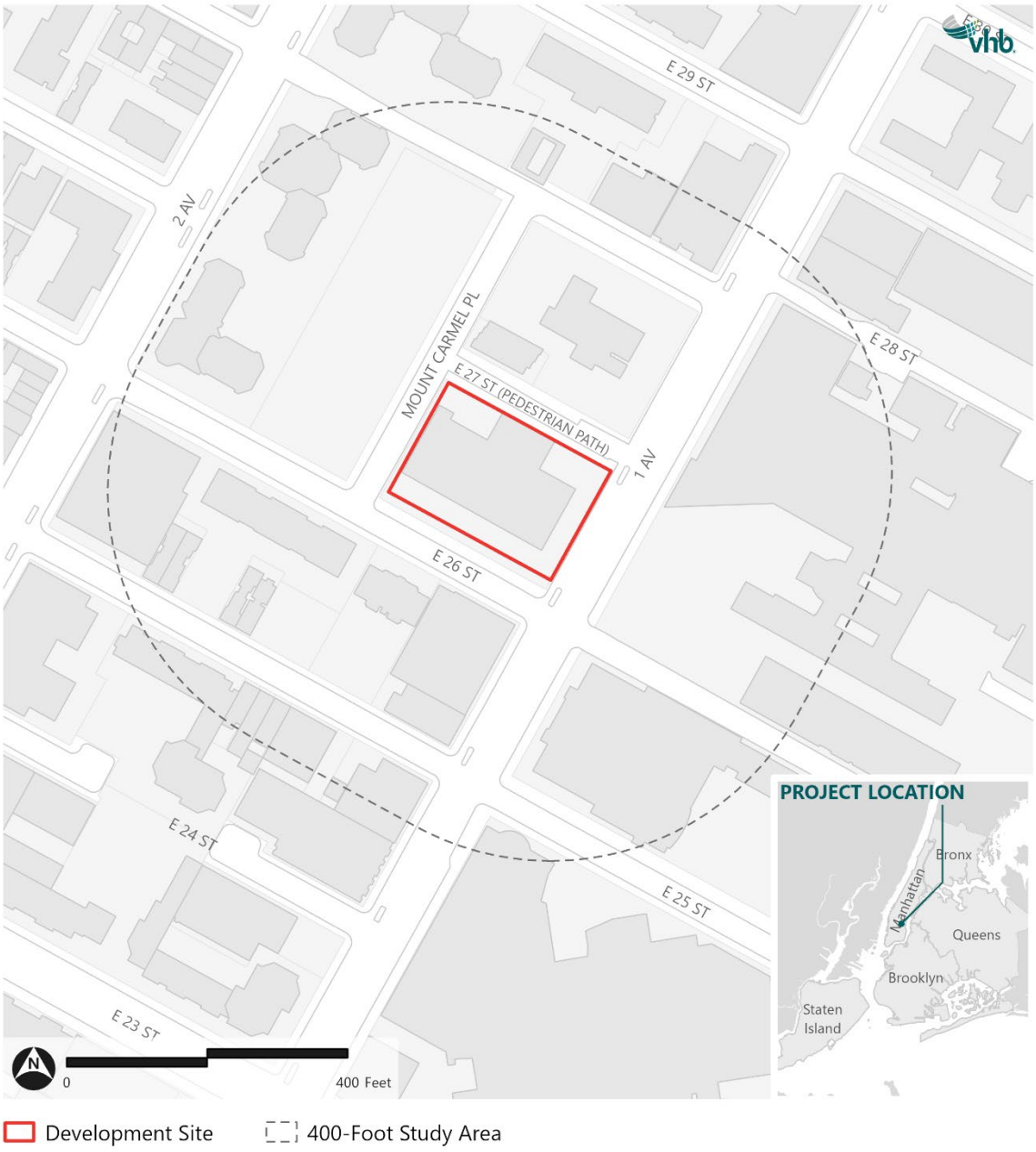
☒ **Negative Declaration:** If the lead agency has determined that the project would not result in potentially significant adverse environmental impacts, then the lead agency issues a *Negative Declaration*. The *Negative Declaration* may be prepared as a separate document (see template) or using the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

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

TITLE Assistant to the Mayor	LEAD AGENCY Deputy Mayor for Housing, Economic Development & Workforce
NAME Hilary Semel	DATE June 21, 2024
SIGNATURE Hilary Semel	

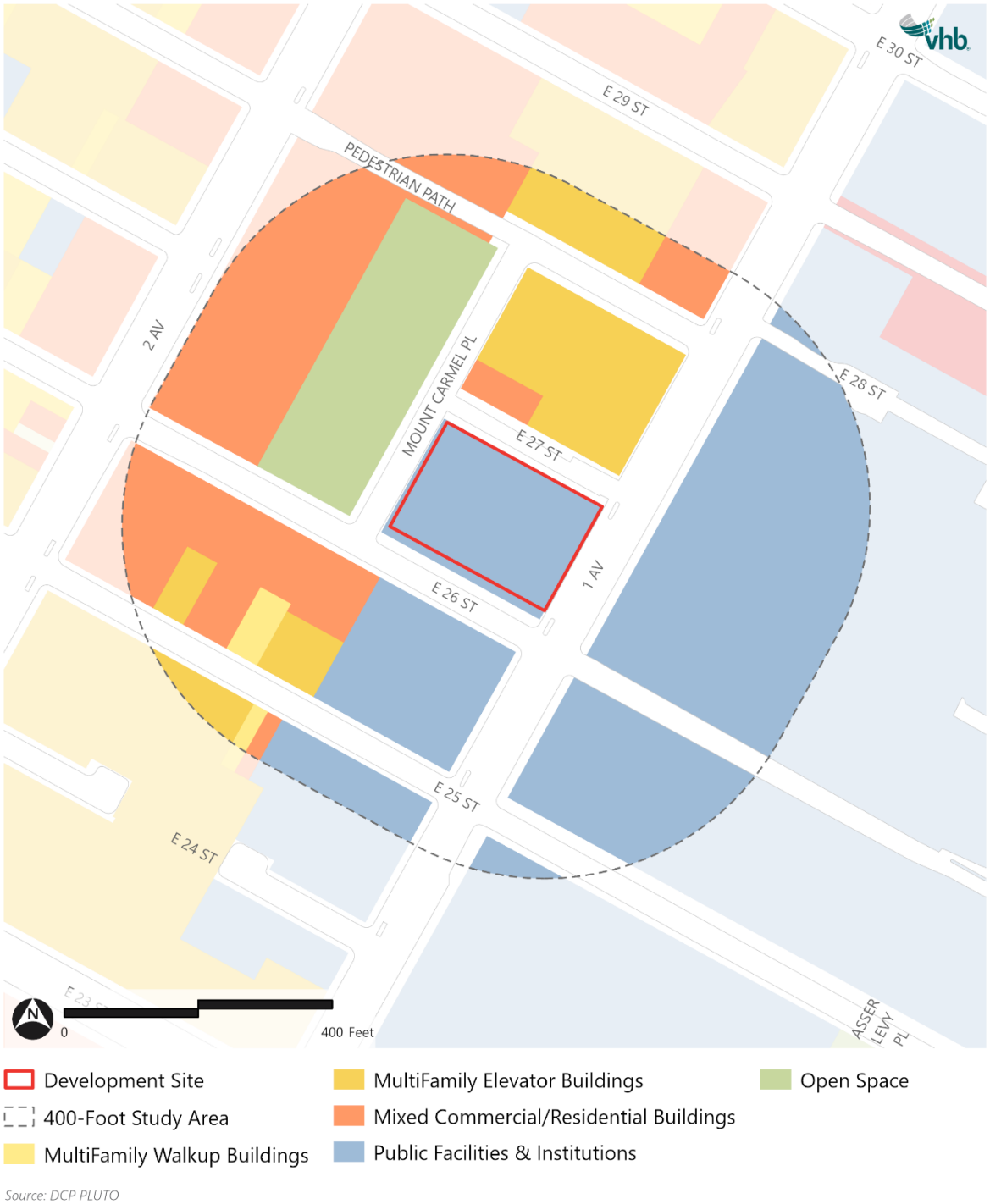
EAS Figures

Figure 1 Site Location



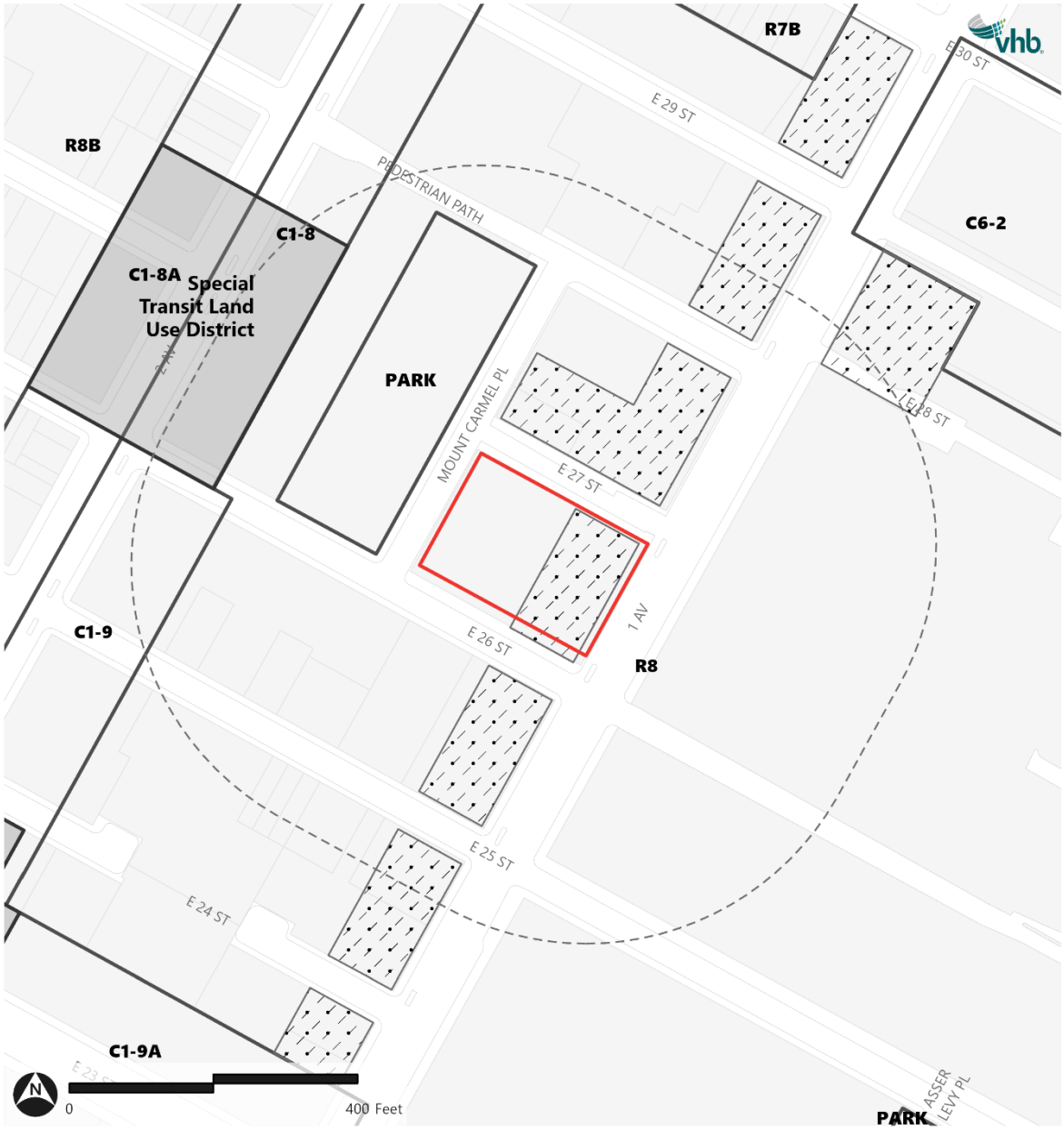
Source: DCP PLUTO

Figure 2 Land Use Map



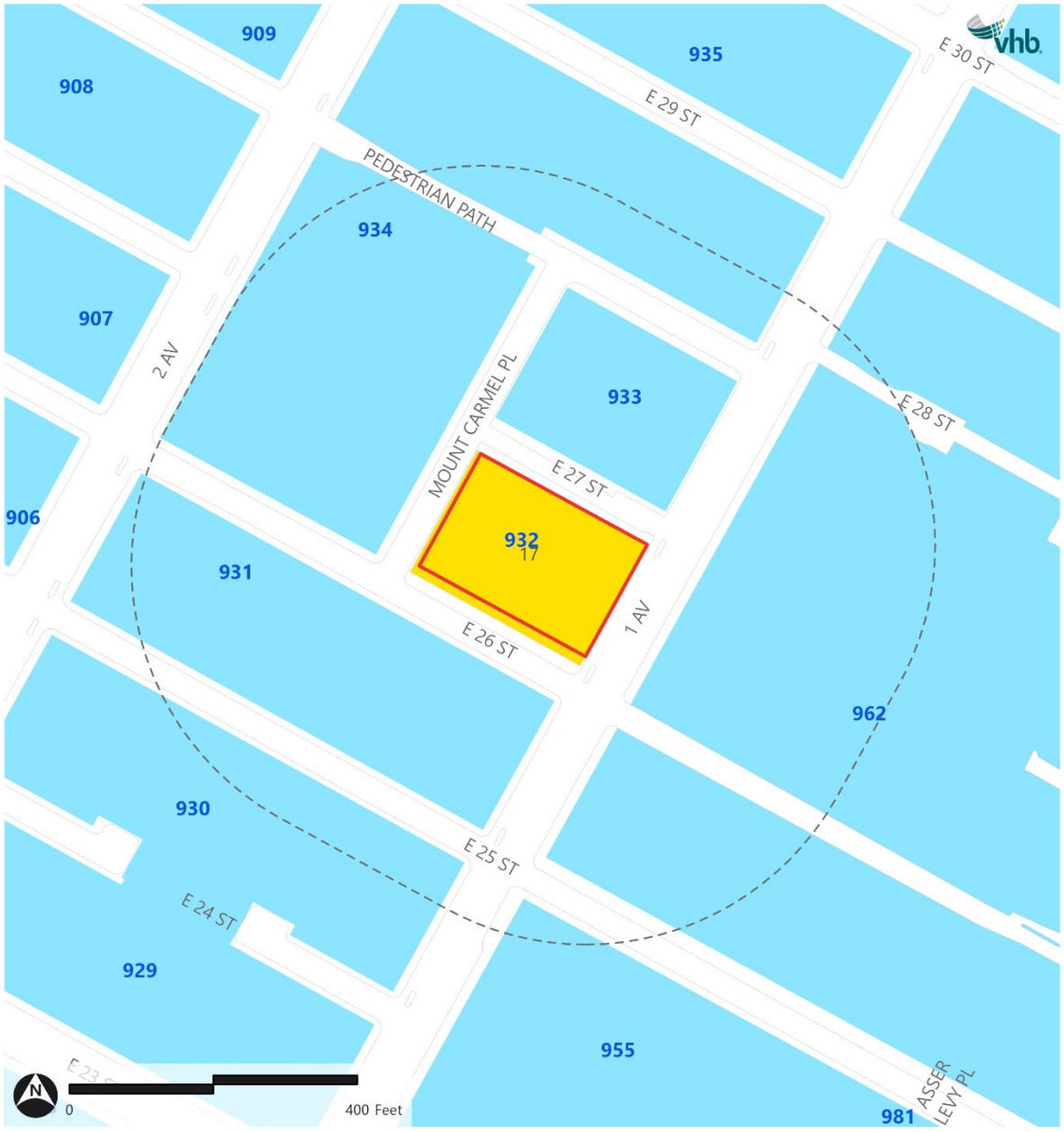
Source: DCP PLUTO

Figure 3 Existing Zoning Map



Source: DCP PLUTO

Figure 4 Tax Map



Source: DCP PLUTO

Figure 5 Photo Key Map



Photo 1 Development Site, View 1



First Ave and E 26th Street, Looking Northwest
Photo Captured: 5/12/2023

Photo 2 Development Site, View 2



E 26th Street, Looking Northeast
Photo Captured: 5/12/2023

Photo 3 Development Site, View 3



Mount Carmel Place, Looking South
Photo Captured: 5/12/2023

Photo 4 Development Site, View 4



First Ave Between E 27th Street and E 28th Street, Looking Southeast
Photo Captured: 5/12/2023

Part I: Project Description

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

Introduction

455 First Avenue Associates LLC and the New York City Economic Development Corporation (NYCEDC) (the Applicants), in collaboration with New York University (NYU) on behalf of NYU Grossman School of Medicine, as subtenant, are seeking several discretionary actions (see **Proposed Actions**) to redevelop Manhattan Block 932, Lot 17 (the Development Site) located at 455 First Avenue in the Kips Bay neighborhood of Manhattan Community District 6. The Development Site would be redeveloped with an approximately 13-story, 270-foot-tall, 609,988 gross square foot (gsf) life sciences building (the Proposed Project). The Proposed Actions are subject to the City's Uniform Land Use Review Procedure (ULURP) and City Environmental Quality Review (CEQR). NYCEDC will facilitate the review, with the Deputy Mayor for Housing, Economic Development, and Workforce serving as lead agency.

Project Area and Development Site

The Development Site is located at 455 First Avenue and is bounded by First Avenue to the east, East 26th Street to the south, Mt. Carmel Place to the west, and the pedestrianized East 27th Street to the north (see **Figure I-1**). The Development Site is currently occupied by a 14-story, approximately 191-foot-tall, 359,000 gsf building, which is primarily occupied by the City's Public Health Laboratory (PHL). The building also contains other City uses and some leased spaces. The PHL will be relocated uptown to a new, purpose-built facility at a site adjacent to Harlem Hospital. The Development Site is currently zoned R8 with a C2-5 overlay along the First Avenue frontage.

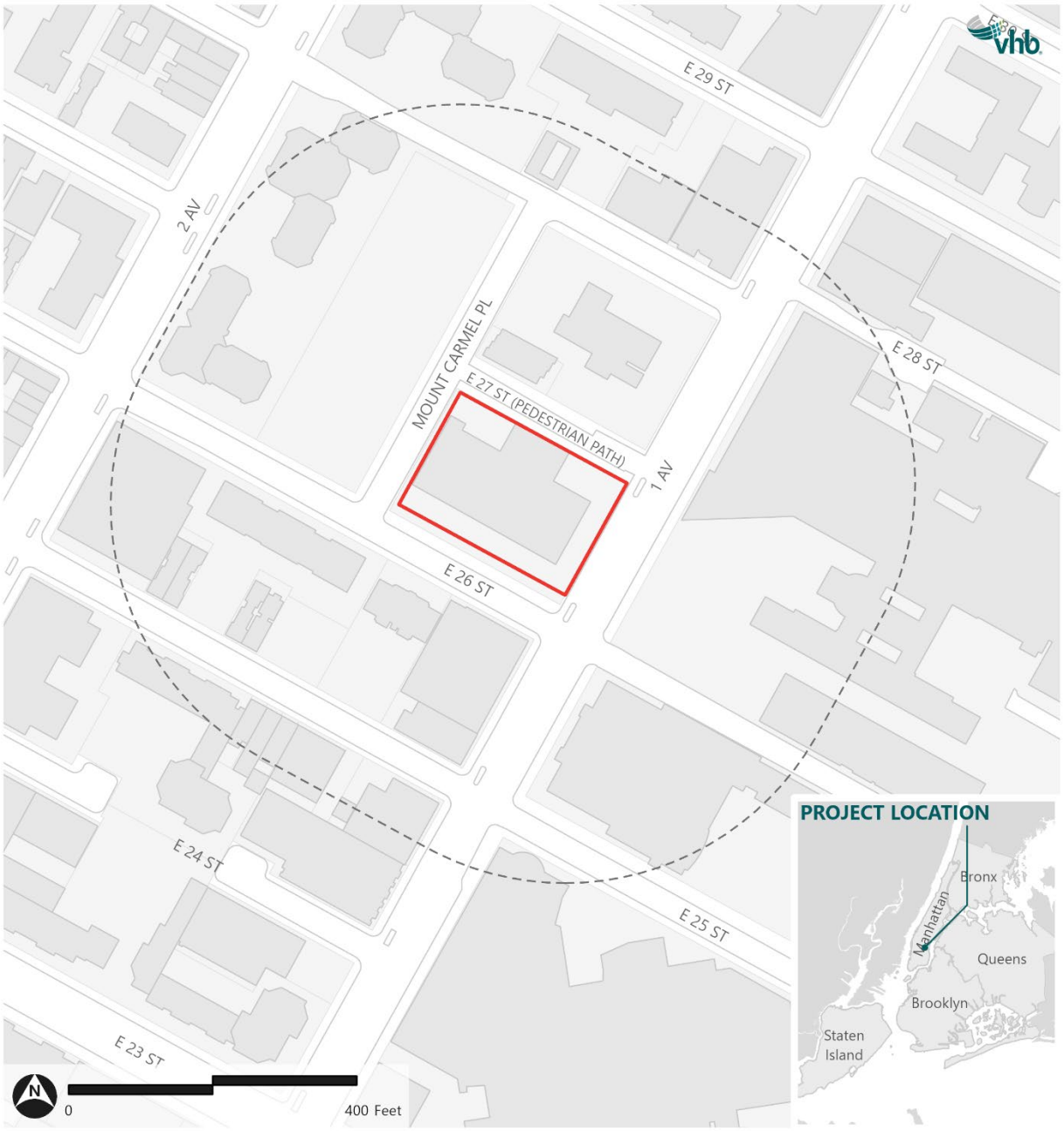
The Development Site is located in the First Avenue Health & Sciences Corridor, one of the fastest-growing clusters of commercial life science activity in the City. This area contains a mix of health and academic institutions and commercial life science uses, including various spaces occupied by NYU Langone Health throughout the Corridor and the NYU College of Nursing, Dentistry & Engineering, located across East 26th Street from the Development Site. To the east of the Development Site across First Avenue is Bellevue Hospital and the Hirsch Center for Forensic Sciences. South of these facilities is the CUNY Hunter College's Brookdale Campus, which is the site of the future Science Park and Research Campus (SPARC) Kips Bay life sciences project (discussed below). There are additional academic and medical campuses beyond the study area such as the Tisch Hospital, which is part of NYU Langone Health located to the north, additional NYU Langone Health buildings two blocks

northwest of the Development Site (i.e., Medical Center Radiology, School of Medicine, and Pulmonary + Critical Care Associates), the Shiel Medical Laboratory, and the Alexandria Launch Labs located to the northeast of the Development Site along East 29th Street. To the southwest of the Development Site is CUNY Baruch College.

The City's LifeSci NYC initiative is a $1 billion investment in life sciences Research and Development (R&D) and related innovation in an effort to grow the life sciences sector in New York City. The initiative seeks to capitalize on the City's increasing concentration of commercial life science activity along the First Avenue Health & Sciences Corridor by encouraging the development of additional commercial life science facilities. As part of that strategy, NYCEDC issued a Request for Expressions of Interest (RFEI) to experienced life science developers to create new life sciences laboratories on the Development Site.[1] The Proposed Project is the result of this RFEI.

[1] On May 29, 1985, the Board of Estimate approved the disposition of the Development Site via a long-term lease for medical research and related uses (C 850485 PNM). This prior approval grants authority to the City to enter into a long-term lease with 455 First Avenue Associates LLC for the Proposed Project.

Figure I-1 Site Location Map



Source: DCP PLUTO

Proposed Actions

The following actions, collectively the Proposed Actions, to facilitate the Proposed Project would be required:

- Zoning map amendment to rezone the Development Site from a R8 district (with a C2-5 commercial overlay over a portion of the Development Site) to a C6-4 district;
- Zoning text amendment to map a Mandatory Inclusionary Housing (MIH) area on the Development Site[2];
- Special permit pursuant to Section 74-901 of the Zoning Resolution (ZR) of the City of New York to modify bulk regulations; and
- Mayoral approval of the lease terms pursuant to Section 384(b)(4) of the New York City Charter.

As the Development Site is City-owned, the Proposed Project will also require design approval by the Public Design Commission (PDC), which is not subject to environmental review.

Proposed Project and With-Action Condition

The Proposed Project would total approximately 609,988 gsf, of which approximately 521,988 gsf would be life sciences space, up to approximately 5,000 gsf would be retail space, and 83,000 gsf would be mechanical space.[3]

The life sciences space would consist of space for start-ups, graduation space for life science businesses, space for established R&D firms, and anchor space for NYU Grossman School of Medicine. As part of the Proposed Project, a small portion of the life sciences space, known as Life Sciences Multi-Purpose Programming Space, would be for use by building tenants for internal meetings and events. [4] This space would also be used for life-science-related events (e.g., lectures or symposia) where the public may participate. This space would be used for programs to help fulfill the project's commitment to Life Science Community Programming and Workforce Development. Workforce Development events and programs aim to recruit, train, and attract a commercial life sciences workforce, in partnership with local not-for-profit organizations and academic institutions, such as local public high schools and colleges.

The mechanical space would consist of space for equipment and infrastructure required to support the life-science program, including appropriate resiliency and redundancy measures. The retail space would serve the Proposed Project's tenants and others in the neighborhood.[5] No parking would be provided.

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[2] The mapping of a MIH area is required for any rezoning that increases the permitted residential floor area ratio. However, the Proposed Project would not include any residential use.

[3] Mechanical space would occupy the basement, a full floor at the top of the building, and substantial portions of the ground and second floors.

[4] The Life Science Multi-Purpose Programming Space is expected to vary in terms of number of attendees, time of day, and frequency over the course of the year, therefore, it is considered as life science space for purposes of environmental review.

[5] The retail space would be accessed from both the 27th Street Pedestrian Way and from the proposed building's lobby. If a future tenant of the ground-floor retail space, such as a café, would want to use the 27th Street Pedestrian Way for seating, the future tenant would apply for such use through New York City's Dining Out NYC outdoor dining program. This program sets forth requirements for how sidewalk and roadway cafes are designed, built, and operated.

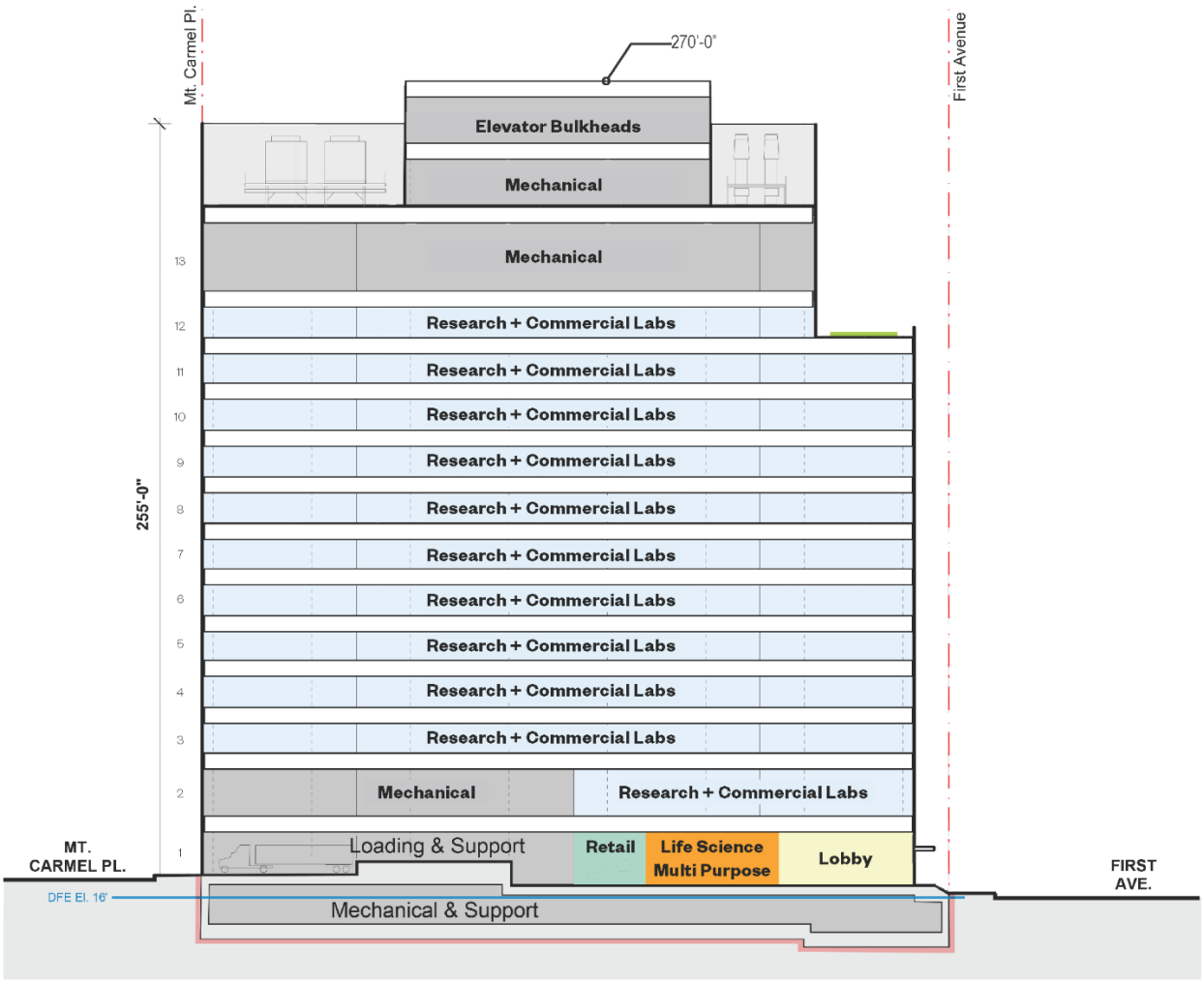
Figure I-2 Illustrative Rendering of the Proposed Project



Source: Ennead Architects LLP

The Proposed Project would replace the existing building on the Development Site with a new, modern building purpose built for commercial life sciences space (see **Figure I-2**). The building would rise to a height of approximately 255 feet and would have additional height up to approximately 270 feet to accommodate rooftop bulkheads, mechanical equipment, and associated equipment screens. As currently contemplated, the building would feature a setback along the eastern façade facing First Avenue (see **Figure I-3**).

Figure I-3 Proposed Project East-West Elevation

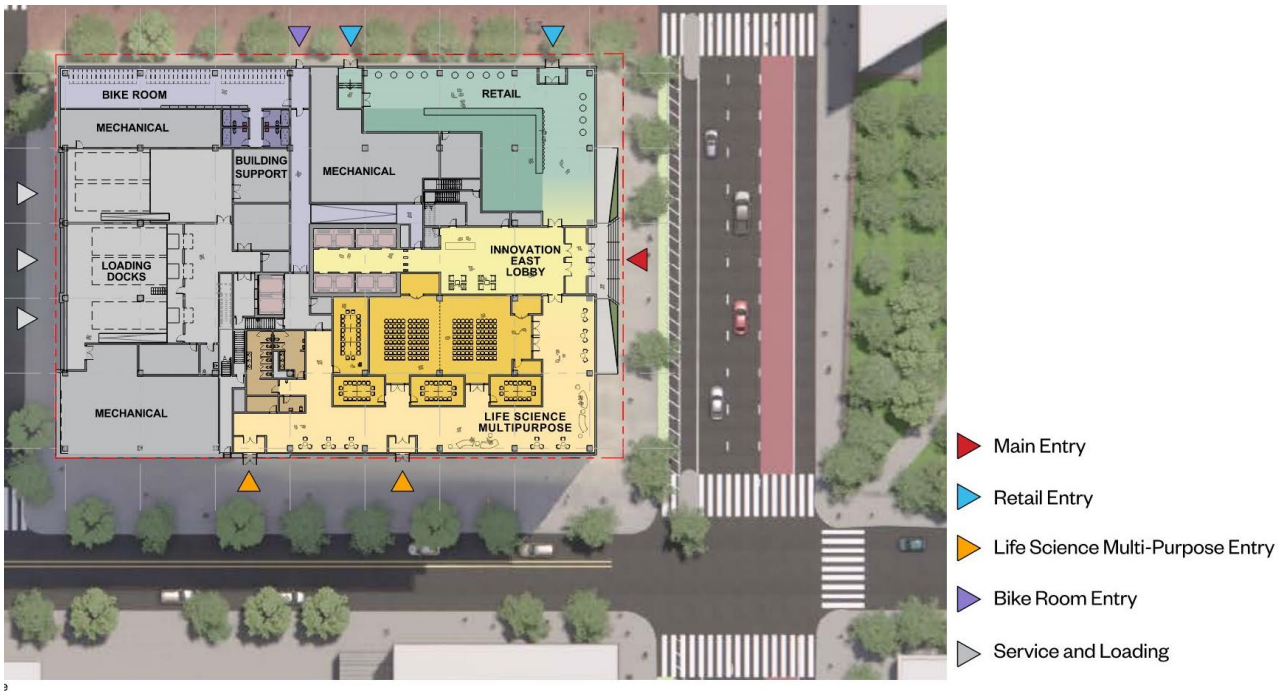


Source: Ennead Architects LLP

As shown in **Figure I-4**, the building's entrance would be located on First Avenue; the Proposed Project's ground floor uses (i.e., the Life Sciences Multi-Purpose Programming Space and local retail space) would be accessed from the lobby. A secondary entrance to the retail space would be provided from the East 27th Street pedestrian way, and a secondary entrance to the Life Science Multi-Purpose Space would be provided from East 26th Street.

The Proposed Project would include a bike room for building tenants, which would be accessed from East 27th Street. The Proposed Project also contemplates the relocation of an existing Citibike dock from its current location on East 27th Street. Loading would occur from Mount Carmel Place.

Figure I-4 Proposed Ground Floor Plan



Source: Ennead Architects LLP

Project Purpose and Need

The Proposed Project is a key component in advancing the City's LifeSci NYC initiative by providing a state-of-the-art facility for the creation and delivery of new medical cures and treatments, new jobs, and a healthier and fairer city. The Proposed Project is specifically designed to accommodate life science businesses at all stages of growth, including space appropriate for businesses in the start-up, graduation, and established stages. The Proposed Project would occupy a key site within the First Avenue Health & Sciences Corridor, significantly contributing to the benefits of clustering life science, academic, and medical uses in a targeted geography. It would further the City's prominence in the health and life sciences industry nationwide.

Analysis Framework and Reasonable Worst-Case Development Scenario

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

Future No-Action Condition

Absent the Proposed Actions, it is assumed that the existing 359,000-gsf building on the Development Site would be re-tenanted with a mix of office and laboratory space for continued use by City agencies. No changes would occur to the building bulk or height.

It is estimated that in the No-Action Condition, there would be approximately 956 workers at the Development Site.[6]

Future With-Action Condition

In the future With-Action condition, the Applicants would redevelop Manhattan Block 932, Lot 17 with an approximately 13-story, 270-foot-tall, 609,988 gross square foot (gsf) life sciences building. The Proposed Project would contain approximately 521,988 gsf of life sciences space, 5,000 gsf of retail space, and 83,000 gsf of mechanical space; it is anticipated to introduce approximately 1,114 workers at the Development Site, approximately 158 more employees than in the No-Action condition.[7]

Increment for Analysis

The With-Action condition would result in an incremental increase of up to approximately 356,988 gsf of life science space and 5,000 gsf of retail space over the No-Action condition and a reduction in office space of 152,296 gsf as compared to the No-Action condition (see **Table I-1**). The events in the Life Science Multi-Purpose Programming Space are expected to vary in terms of number of attendees, time of day, and frequency over the course of the year; the space is considered as life science space for purposes of environmental review.

[6] Based on an assumed multiplier of 1 worker per 475 gsf of life science space and 1 worker per 250 gsf of office space.

[7] The total number of employees is estimated based on the assumed multipliers of 1 worker per 475 gsf of life science space and 1 worker per 333.3 gsf of retail space.

Table I-1 Future No-Action and With-Action Comparison (GSF)

Use	Existing Conditions[1]	No-Action Condition	With-Action Condition	Increment for Analysis
Life Sciences	317,296	165,000	521,988	+356,988
Office	0	152,296	0	(152,296)
Retail	0	0	5,000	+5,000
Mechanical[2]	41,704	41,704	83,000	+41,296
Total	**359,000**	**359,000**	**609,988**	**+250,988**

Notes:

1. The existing building is primarily occupied by the City's Public Health Laboratory (PHL). The building also contains other City uses and some leased spaces.
2. This space specifically consists of mechanical space, including large equipment areas only. This does not include space on individual floors.

Analysis (Build) Year

As noted above, the City's Public Health Laboratory will relocate to a new purpose-built facility at a site adjacent to Harlem Hospital. That facility is currently under construction with completion expected in late 2025. It is expected that the Public Health Laboratory will vacate the Development Site in early 2026. Based on the anticipated duration for demolition of the laboratory building (approximately 11 months) and construction of the Proposed Project (anticipated 31 months), the Proposed Project would be complete and in operation in 2030.

Public Review Process

The Proposed Project described above is subject to public review under the Uniform Land Use Review Procedure (ULURP), Section 200 of the City Charter, as well as City Environmental Quality Review (CEQR) procedures.

The New York City Charter (the Charter) requires certain actions that are reviewed by the City Planning Commission (CPC) to undergo a ULURP review. ULURP is a standardized procedure for public review of applications affecting the land use of the city. The Charter establishes set time frames for review of the application by the local community board, the Manhattan Borough President, the City Council, and the Mayor.

Part II: Supplemental Analyses

Additional Technical Information for EAS Full Form

An analysis framework has been established to assess the potential for the Proposed Actions to result in significant adverse environmental impacts.

The EAS examines the potential for significant adverse impacts to result from the Proposed Actions. As detailed in **Part I: Project Description**, the Proposed Actions would facilitate the construction of a 609,988 gross square feet (gsf) life-sciences building (which would include Life Science Multi-Purpose Programming Space provided at the building's ground-floor), on Manhattan Block 932, Lot 17 in the Kips Bay neighborhood of Manhattan (the Development Site). In comparison to the No-Action condition, the With-Action condition would result in a reduction of 165,000 gsf of City laboratory space and 152,296 gsf of office space for use by City agencies and an increase of approximately 521,988 gsf of life sciences space and up to approximately 5,000 gsf of retail space (a total program increment of 209,692 gsf of space). The mechanical support space increment would be 41,296 gsf, for a total increment of 250,988 gsf, including mechanical space, over the No-Action condition.[1]

Provided below are preliminary screening analyses, conducted based on guidelines presented in the *2021 CEQR Technical Manual* to determine whether further analysis of a given technical area is necessary to evaluate the potential for significant adverse impacts to the environment in that area.

Land Use, Zoning, and Public Policy

According to the *CEQR Technical Manual,* a land use analysis is warranted for projects that would affect land use or change zoning on a site. Because the Proposed Actions would rezone the Development Site, an analysis of land use, zoning, and public policy is warranted. See **Section 2, Land Use, Zoning, and Public Policy**.

Socioeconomic Conditions

The socioeconomic character of an area includes its population, housing, and economic activity. Socioeconomic changes may occur when a project directly or indirectly changes any of these elements. Although socioeconomic changes may not result in impacts under CEQR, they are disclosed if they would affect land use patterns, low-income populations, the availability of goods and services, or economic investment in a way that changes the socioeconomic character of the area.

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

[1] The total net increase in life science space between the No-Action Condition and the With-Action Condition would be approximately +356,988 gsf.

screening assessment considers threshold circumstances identified in the *CEQR Technical Manual* and enumerated below that can lead to socioeconomic changes warranting further assessment.

The manual identifies the following thresholds for an analysis of socioeconomic conditions:

- Whether a project would:
  - Directly displace more than 500 residents or 100 employees;
  - Introduce more than 200 residential units or more than 200,000 square feet of commercial space; or
  - Affect a specific industry.

Based on the screening assessment presented below, the Proposed Actions do not warrant additional analysis of socioeconomic conditions.

Direct and Indirect Residential Displacement

The Development Site does not contain any residential uses or population and the Proposed Project would not include residential units. Therefore, analysis of direct or indirect residential displacement is not warranted.

Direct Business Displacement

The Development Site contains the City's Public Health Laboratory, which is planned to relocate to a new purpose-built facility at a site adjacent to Harlem Hospital. The continued operation of the Public Health Lab is not dependent on its location and is not specific to the Development Site. Thus, an assessment of direct business displacement is not warranted.

Indirect Business Displacement due to Increased Rents

The Proposed Project would result in a reduction of 165,000 gsf of City laboratory space and 152,296 gsf of office space for use by City agencies and an increase of 521,988 gsf of life sciences space and up to approximately 5,000 gsf of retail space (a total program increment of 209,692 gsf of space not including mechanical space or an increment of 250,988 gsf including mechanical space). The total increment is marginally higher than the 200,000 sf threshold for preliminary analysis per the *CEQR Technical Manual*. Although the Proposed Project would result in more than 200,000 sf in commercial uses, the proposed uses on the site would be substantially similar to the current City laboratory and other uses on the site. The current City Public Health Lab and City agency office space would be replaced by life science uses in a neighborhood that currently contains a significant amount of health and life sciences uses. The Proposed Project would not result in new development that is markedly different from the existing uses, development, and activities within the neighborhood and is not expected to adversely affect socioeconomic conditions in the future With-Action condition. Therefore, no analysis of indirect business displacement is warranted.

Additionally, the Proposed Project would be part of the First Avenue life sciences corridor associated with the City's plan to build a hub for LifeSci NYC, a $1 billion investment in life sciences research and development (R&D) and related innovation, in this area of Kips Bay. LifeSci NYC is projected to create nearly 40,000 new jobs by 2030—many accessible to New Yorkers without advanced degrees. The LifeSci program is geared towards the following goals:

- Connecting existing researchers and institutions to the resources needed to advance programs to commercialization;
- Unlocking space for life sciences companies to grow within the city; and
- Building a pipeline for the talent and workforce needed to support these companies across the five boroughs.

The Proposed Project is a key component in advancing the City's LifeSci NYC initiative by providing a state-of-the-art facility for the creation and delivery of new cures and treatments, new jobs, and a healthier and fairer city. The Proposed Project would occupy a key site within the First Avenue life sciences corridor, significantly contributing to the benefits of clustering life science, academic, and medical uses in a targeted geography.

Indirect Business Displacement due to Retail Market Saturation

The Proposed Project would include a small amount of retail space (approximately 5,000 gsf) that would serve building tenants and the adjacent neighborhood. Therefore, an assessment of potential indirect business displacement due to retail market saturation is not warranted.

Adverse Effects on a Specific Industry

As stated previously, the Proposed Project would be part of the First Avenue life sciences corridor and serve as an integral component in furthering the City's LifeSci NYC initiative. Therefore, the Proposed Project is not expected to adversely affect conditions within a specific industry, affect a substantial number of workers or residents who depend on the goods or services provided by affected businesses, or result in the loss or substantial diminishment of a particularly important product or service within the City; an assessment of adverse impacts on specific industries is not warranted.

Community Facilities and Services

The *CEQR Technical Manual* states that a community facilities assessment is appropriate if a project would have a direct effect on a community facility (e.g., schools, childcare facilities, libraries, health care facilities, police and fire protection services) or if it would have an indirect effect by introducing new populations that would overburden existing facilities. The manual further states that for public schools, libraries, and childcare centers, potential impacts depend on the size, income characteristics, and age distribution of the new population.

The Proposed Project would not result in the physical alteration or displacement of any community facility, nor would it result in a new residential population that would create new demands for community facilities. Therefore, the Proposed Project does not have the potential to result in significant adverse impacts to community facilities and no further analysis is warranted.

Open Space

The *CEQR Technical Manual* recommends performing an open space assessment if a project would result in either a direct or indirect effect on open space.

A proposed project would have a direct effect on an open space if it causes the physical loss of public open space because of encroachment onto the space or displacement of the space; changes the use of an open space so that it no longer serves the same user population; limits public access to an open space; or results in increased noise or air pollutant emissions, odor, or shadows that would affect the usefulness of a public open space, whether on a permanent or temporary basis.

Indirect effects may occur when the population generated by the proposed project overtaxes the capacity of existing open spaces so that their service to the future population of the affected area would be substantially or noticeably diminished. The *CEQR Technical Manual* threshold for an analysis of potential indirect effects is whether the project would introduce more than 200 residents or 500 employees.

Direct Effects

The Proposed Project would not cause the physical loss of public open space; change the use of an open space so that it no longer serves the same user population; or limit public access to an open space.

The Proposed Project would not result in direct effects on open spaces from noise, air pollutant emissions, or odors. The potential for direct effects from the Proposed Project on area open spaces because of shadows is assessed in **Section 3, Shadows**.

Indirect Effects

The Proposed Project is expected to generate 157 employees over the No Action condition, which falls below the 500-worker threshold. Therefore, an assessment of indirect effects on open space is not warranted, and the Proposed Project would not result in significant adverse impacts.

Shadows

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

The Proposed Project would be greater than 50 feet in height on a site located near sunlight-sensitive sources (i.e., Bellevue South Park, Vincent F. Albano Jr Playground, Alexandria Center Open Space, and 240 East 27 Street Plaza,). Therefore, a shadows assessment is warranted. See **Section 3, Shadows**.

Historic and Cultural Resources

According to the *CEQR Technical Manual,* a historic and cultural resources assessment is warranted if there is the potential to affect either archaeological or architectural resources; the manual further recommends that a historic resources assessment be prepared if a proposed action would result in any of the following actions: in-ground disturbance; new construction, demolition, or significant physical alteration of any building, structure, or object; the change in scale, visual prominence, or

visual context of any building, structure, or object or landscape feature; or the screening or elimination of publicly accessible views, even if no known historic resources are located nearby.

Archaeological resources are physical remains, usually subsurface, of the prehistoric, Native American, and historic periods—such as burials, foundations, artifacts, wells, and privies. Archaeological resources are considered only in those areas where new in-ground disturbance is likely to occur. As new in-ground disturbance may be needed, the New York City Landmarks Preservation (LPC) was contacted to confirm whether the Development Site may contain archaeological resources. In correspondence dated October 13, 2023, LPC confirmed that there were no archaeological resources of significance (see **Appendix A**). Therefore, further assessment of archaeological resources is not warranted.

Architectural resources generally include historically important buildings, structures, objects, sites, and districts. Historic and cultural resources include designated New York City Landmarks (NYCLs) and Historic Districts; properties calendared for consideration as NYCLs by the New York City Landmarks Preservation Commission (LPC) or determined eligible for NYCL designation (NYCL-eligible); properties listed on the State and National Register of Historic Places (S/NR) or formally determined eligible for S/NR listing (S/NR-eligible), or properties contained within a S/NR listed or eligible district; properties recommended by the New York State Board for listing on the S/NR; National Historic Landmarks (NHLs); and potential historic resources (i.e., properties not identified by one of the programs listed above, but that appear to meet their eligibility requirements). In correspondence dated October 13, 2023, LPC confirmed that there were no architectural resources of significance on the Development Site (see **Appendix A**).

Within 400 feet of the Development Site, there are S/NR listed or eligible architectural resources (see **Table II-1**): Bellevue Hospital is located to the east of the Development Site across First Avenue and contains three buildings that are S/NR eligible or listed (see **Figure II-1**). Within Bellevue Hospital, the C & D Building (USN: 06101.012063) and the Administration Building (USN: 06101.012064) are S/NR eligible, while the R & S Building (USN: 06101.001661) to the north is a listed S/NR resource. Bellevue Hospital, and the three buildings associated with it, are recognized by the State and National Register due to their architectural significance as examples of urban institutional architecture and master planning efforts of the nationally prominent architectural firm of McKim, Mead & White as well as their cultural and historic significance as the oldest municipal hospital in North America.

The historic resources associated with Bellevue Hospital are further than 90 feet away from the Development Site, across First Avenue. Therefore, no impacts from construction of the Proposed Project are expected.

In terms of the potential for contextual impacts to Bellevue Hospital, the Proposed Project includes a 13-story building up to 270 feet in height (inclusive of rooftop bulkheads, mechanical equipment, and associated equipment screens) of 609,988 gsf, which would replace the existing building, which is 171 feet in height. Building heights within the study area range from 150 feet to 260 feet in the study area. Additionally, there are a mix of building types constructed in different decades spanning from the early- to mid-1900s to more modern buildings constructed in the 2000s. Given the mix of heights and building types found within the study area, contextual impacts from the Proposed Project on existing historic resources are not anticipated. Therefore, the Proposed Project would not result in significant adverse impacts on historic resources, and further assessment of architectural resources is not warranted.

Table II-1 Known Historic Resources within 400-foot Radius

Map No.	Block, Lot	Resource Name	S/NR-Listed	S/NR-Eligible
H1	962, 100	Bellevue Hospital R & S Building	X	
H2	962, 100	Bellevue Hospital Administration Building		X
H3	962, 100	Bellevue Hospital C & D Building		X

Source: MapPLUTO21v3, NYS Cultural Resources Information System (CRIS)

Figure II-1 Historic Resources



Source: DCP PLUTO, Cultural Resource Information System

Urban Design and Visual Resources

According to the *CEQR Technical Manual,* if a project requires actions that would result in physical changes to a project site beyond those allowable by existing zoning and which could be observed by a pedestrian from street level, a preliminary assessment of urban design and visual resources should be prepared. The Proposed Actions would result in a change in zoning. Therefore, an analysis of urban design is warranted. See **Section 4, Urban Design and Visual Resources**.

Natural Resources

As stated in the *CEQR Technical Manual,* a natural resource is defined as a plant or animal species and any area capable of providing habitat for plant and animal species or capable of functioning to support environmental systems and maintain the City's environmental balance (e.g., surface and groundwater, wetlands, landscaped areas, gardens, and built structures used by wildlife). An assessment of natural resources is appropriate if a natural resource exists on or near the Development Site, or if there is a potential for impacts related to stormwater and shadows. The Proposed Project would be constructed in a highly developed and dense urban area. The Proposed Project would not affect plant or animal species, nor would it affect habitat for plant and animal species. Therefore, no further analysis is warranted.

Hazardous Materials

According to the *CEQR Technical Manual,* a hazardous materials assessment is conducted when elevated levels of hazardous materials exist on a site, when an action has the potential to increase pathways to their exposure, either human or environmental, or when an action would introduce new activities or processes using hazardous materials, thereby increasing the risk of human or environmental exposure. Because the Proposed Project may result in new in-ground disturbance, an assessment of hazardous materials is warranted. See **Section 5, Hazardous Materials**.

Water and Sewer Infrastructure

According to the *CEQR Technical Manual,* a water and sewer infrastructure assessment analyzes whether a proposed action may adversely affect New York City's water distribution or sewer system and, if so, assesses the effects of the action to determine whether the impact is significant.

Water Supply

According to the *CEQR Technical Manual*, a preliminary water supply infrastructure analysis is warranted if the project would result in an exceptionally large demand for water (i.e., over 1 million gallons per day [gpd]) or is located in an area that experiences low water pressure (i.e., areas at the end of the water supply distribution system such as the Rockaway Peninsula and Coney Island).

In comparison to the No Action condition and as shown in **Table II-2**, the Proposed Project would result in a water supply demand for 57,317 gpd, which is less than 1 million gpd. The Development Site is not within an area that experiences low water pressure. Therefore, no significant adverse impacts on water supply would result, and further analysis is not warranted.

Table II-2 Water Supply Demand and Sewage Generation

Use	CEQR Rate* (gpd/sf)		No Action		With Action		Increment	
			SF	Consumption (gpd)	SF	Consumption (gpd)	SF	Consumption (gpd)
Retail	Domestic	0.24	-	-	5,000	1,200	+5,000	+1,200
	Air Conditioning	0.17	-	-	-	850	-	+850
Commercial /Office	Domestic	0.1	317,296	31,730	521,988	52,199	+204,692	+20,469
	Air Conditioning	0.17	-	53,940	-	88,738	-	+34,798
Total Water Supply Demand			**-**	**85,670**	**-**	**142,987**	**-**	**57,317**
Total Sewage Generation			**-**	**31,730**	**-**	**53,399**	**-**	**21,669**

Note: For purposes of analysis, it is assumed that the City laboratory space and proposed Life Sciences space would generate water demand and sanitary sewage at the rates of commercial/office space.

Wastewater and Stormwater

With regard to wastewater and stormwater conveyance, the *CEQR Technical Manual* states that a preliminary infrastructure analysis would be needed if a project that is located in a combined sewer area within Manhattan would result in incremental development over the No-Action scenario of more than 1,000 residential units or 250,000 sf of commercial, public facility, and institution and/or community facility space. Compared to the No Action condition, the Proposed Project would result in a reduction of 165,000 gsf of City laboratory space and 152,296 gsf of office space for use by City agencies and an increase of 521,988 gsf of life sciences space and up to approximately 5,000 gsf of retail space. The total program increment would be 209,692 gsf of space, which is below the 250,000 gsf threshold, and the estimated incremental sewage generation is 21,669 gpd. The Development Site is currently developed with buildings, pavement, and concrete, and stormwater flows into the existing combined sewer system. The Proposed Project would not introduce new impervious surfaces.

Therefore, the Proposed Project would not result in significant adverse impacts to wastewater and stormwater, and no further analysis is warranted.

Solid Waste and Sanitation Services

The *CEQR Technical Manual* states that an assessment of solid waste and sanitation services is warranted if an action would have the potential to result in a substantial increase in solid waste production that could overburden available waste management capacity or otherwise be inconsistent with the City's Solid Waste Management Plan (SWMP) or with state policy related to the City's integrated solid waste management system. According to the *CEQR Technical Manual*, actions resulting in substantial waste generation, defined as 50 tons (100,000 pounds) per week or more, warrant additional analysis for effects on solid waste and sanitation services. As compared to the No-Action condition, the Proposed Project would result in an increment of 1.52 tons per week, which is

below the 50-ton threshold (see **Table II-3**). Therefore, further analysis of solid waste and sanitation services is not warranted.

Table II-3 Solid Waste Generation

Use	CEQR Rate* (Lbs. per employee)		No Action		With Action		Increment	
			Employee	Pounds/ Week	Employee	Pounds/ Week	Employee	Pounds/ Week
Commercial	Office Building	13	957	12,441	1,099	14,287	+142	+1,846
	General Retail	79	-	-	15	1,185	+15	+1,185
Total			**957**	**12,441**	**1,114**	**15,472**	**+157**	**+3,031**
Total (tons/week)			**-**	**6.22**	**-**	**7.74**	**-**	**1.52**

Note: For purposes of analysis, it is assumed that the proposed Life Sciences building would generate solid waste at the rate of commercial office space.

Energy

According to the *CEQR Technical Manual,* a detailed assessment of energy impacts is only required for projects that would significantly affect the transmission or generation of energy or that would result in substantial consumption of energy. The Proposed Project would not affect the transmission or generation of energy. Based on factors provided in Table 15-1 of the *CEQR Technical Manual,* the No-Action annual energy use on the Development Site would be 77,651,700 MBtu. The Proposed Project is expected to have an energy consumption of 131,940,404 MBtu. This would result in an incremental increase of up to 54,288,704 MBtu of energy consumption. Because the Proposed Project would not affect the transmission or generation of energy, no further analysis is warranted.

Transportation

According to the *CEQR Technical Manual,* detailed transportation analyses may be warranted if a proposed project results in 50 or more vehicle trips, 50 or more City Wide Ferry Service ferry trips, and/or 200 or more bus/subway/rail/pedestrian trips during a given peak hour. A screening analysis determined that the volume of peak hour vehicles, ferry, transit trips (bus, subway, and rail), and pedestrian trips would not exceed the Level 1 screening threshold in any peak hour. Therefore, further detailed analysis is not warranted for any mode of travel. See **Section 6, Transportation** for the Level 1 screening assessment.

Air Quality

Ambient air quality, or the quality of the surrounding air, may be affected by air pollutants produced by motor vehicles, referred to as "mobile sources"; by fixed facilities, usually referenced as "stationary sources"; or by a combination of both. Under CEQR, an air quality assessment determines both a proposed project's effects on ambient air quality as well as the effects of ambient air quality on the project. As discussed in the *CEQR Technical Manual*, a proposed project may potentially result in the following types of air quality impacts:

- Potential impacts from mobile sources introduced by a project
- Emissions from a project's enclosed parking garages
- Emissions from a project's heating, ventilation, and air conditioning (HVAC) system
- Emissions from a project's medical or chemical laboratory vents
- Potential impacts on the Proposed Project from either manufacturing/processing facilities or large/major sources that are located near the Development Site

The Proposed Project would not have a parking garage, and it would use electrical HVAC and hot water systems. As such, analyses of these sources are not warranted.

The Proposed Project may contain medical laboratories (consistent with both the existing and No Action conditions), and there are two large/major sources located within 1,000 feet of the Development Site: NYC HH Bellevue Hospital and the New York Harbor Healthcare System. Therefore, an analysis of air quality, focusing on the potential for mobile sources from the Proposed Project to affect air quality and for the two large/major sources to affect the Proposed Project is provided in **Section 7, Air Quality**. That section also contains a qualitative discussion of the potential effects from a chemical spill.

Greenhouse Gas Emissions and Climate Change

According to the *CEQR Technical Manual,* GHG assessments are appropriate for projects in New York City requiring an EIS that would result in the development of 350,000 square feet (sf) or greater or for projects that propose power generation or regulations or other actions that may fundamentally change the City's solid waste management system. The Proposed Project would not result in an increment of more than 350,000 sf of development over the No Action condition, and an EIS is not being prepared, nor would the project include power generation or change the City's solid waste management system. As such, it would not exceed this threshold.

Depending on the sensitivity, location, and useful life of development resulting from a proposed action, it may be appropriate to include discussion of the potential effects of climate change in environmental review. Rising sea levels and increases in storm surge and coastal flooding are the most immediate threats in New York City for which site-specific conditions can be assessed, and an analysis of climate change may be deemed warranted for sites located within the current 100- or 500-year flood zone, as delineated in the FEMA PFIRMs, or within future 100-year flood zones as projected by the New York City Panel on Climate Change, as appropriate.

While the Development Site is located outside the New York City coastal zone and is outside of the currently identified 100-year and 500-year flood zones, the Applicants have elected to consider the future impact of sea level rise when assessing flood risk due to the anticipated build year (2030), the useful life (70+ years) of the Proposed Project, and the sensitivity to research continuity. The Applicants intend to incorporate measures into the design of the Proposed Project to account for projected sea level rise, including establishing a design flood elevation (DFE) above the nearest established base flood elevation, dry flood proofing building elements below the DFE, and locating critical mechanical equipment above the DFE. As a result, the building will have a larger mechanical footprint above grade for flood resiliency and continuity planning, and no further assessment of climate change is warranted.

Noise

As discussed in the *2021 CEQR Technical Manual*, a noise analysis is appropriate if an action would generate mobile or stationary sources of noise or would introduce noise-sensitive receptors in an area with high ambient noise levels. Mobile sources include vehicular traffic; stationary sources include rooftop equipment such as emergency generators, cooling towers, and other mechanical equipment. The noise analysis in **Section 8, Noise**, provides an assessment of the Proposed Project's potential to result in impacts related to mobile sources as well as an assessment of noise conditions at the Development Site. Because it is assumed that any stationary sources introduced by the Proposed Project would be compliant with the New York City Building Code and Mechanical Code, the Proposed Project would not result in significant adverse noise impacts related to stationary sources, and no further analysis is warranted.

Public Health

According to the guidelines of the *CEQR Technical Manual*, a public health assessment may be warranted if an unmitigated significant adverse impact is identified in other CEQR analysis areas, such as air quality, water quality, hazardous materials, or noise. The Proposed Project does not have the potential to result in adverse effects on water quality, nor would it result in significant adverse impacts in the areas of air quality, hazardous materials, or noise. Therefore, no further analysis is warranted.

Neighborhood Character

As discussed in the *CEQR Technical Manual*, an analysis of neighborhood character is warranted when a project has the potential to result in significant adverse impacts in any of the following technical areas: land use, zoning, and public policy; socioeconomic conditions; open space; historic and cultural resources; urban design and visual resources; shadows; transportation; or noise. In addition, an assessment may be warranted when there is a combination of moderate effects in these technical areas that, when considered together, may affect the defining elements of neighborhood character. Because assessments of land use, zoning, and public policy; urban design and visual resources, shadows, transportation, and noise were undertaken, a neighborhood assessment is provided in **Section 9, Neighborhood Character**.

Construction

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

As shown in the **Table II-4** below, construction of the Proposed Project is anticipated to consist of a demolition stage of approximately 11 months followed by construction of the new building, anticipated to occur over an approximately 31-month period. The demolition phase would

commence after the Public Health Laboratory vacates the Development Site (expected early 2026) to move to its new purpose-built facility at a site adjacent to Harlem Hospital.

Table II-4 Anticipated Construction Schedule

Year	2026												2027											
Calendar Quarter	Q1			Q2			Q3			Q4			Q1			Q2			Q3			Q4		
Calendar Month	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Duration (by Month)	-	-	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Construction Activity																								
Demolition																								
Foundations Installation																								
Super Structure and Exterior Cladding																								
MEP																								
Interior Finishes																								

Year	2028												2029											
Calendar Quarter	Q1			Q2			Q3			Q4			Q1			Q2			Q3			Q4		
Calendar Month	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Duration (by Month)	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
Construction Activity																								
Demolition																								
Foundations Installation																								
Super Structure and Exterior Cladding																								
MEP																								
Interior Finishes																								

Source: VHB

The following sections discuss construction regulations that will apply to the Proposed Project and measures that the Proposed Project will take during construction to reduce air and noise emissions. Additional information on government oversight and regulations around construction, including construction hours, are provided in the assessment of the potential for construction-period transportation impacts in **Section 10, Construction**.

Construction Hours

New York City regulates the hours of construction work through the New York City Noise Control Code, as amended in December 2005 and effective July 1, 2007. Construction is limited to weekdays between the hours of 7:00 AM and 6:00 PM, and noise limits are set for certain specific pieces of construction equipment. The City may permit work outside of these hours to accommodate: (1) emergency conditions; (2) public safety; (3) construction projects by or on behalf of City agencies; (4) construction activities with minimal noise impacts; and (5) undue hardship resulting from unique site characteristics, unforeseen conditions, scheduling conflicts, and/or financial considerations. The DOB issues these work permits, and in some instances, approval of a noise mitigation plan from the DEP under the City's Noise Code is also required.

In New York City, construction work typically occurs on weekdays and begins at 7:00 AM, with most workers arriving between 6:00 AM and 7:00 AM. Work typically ends at 3:00 PM or 3:30 PM, with some exceptions when certain critical tasks (e.g., finishing a concrete pour for a floor deck, completing the drilling of piles, or completing the bolting of a steel frame erected that day) require that the workday be extended beyond normal work hours. Any extended workdays generally last until approximately 5:30 PM or 6:00 PM and do not include all construction workers on-site, but only those involved in the specific task requiring additional work time. For work outside of normal construction hours, work permits are obtained from DOB prior to such work commencing. The numbers of workers and pieces of equipment in operation for work outside normal hours is generally limited to those needed to complete the particular authorized task. Overall, the level of activity for any work outside of normal construction hours is less than a normal workday.

Construction Air Quality

Governmental oversight of construction in New York City is extensive and involves a number of City, State, and Federal agencies, each with specific areas of responsibility. In terms of air quality, the New York City Air Pollution Control Code sets forth requirements with the purpose of preserving, protecting and improving the air quality of the city.

Per the *CEQR Technical Manual,* an assessment of air quality 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 due to staged project completion, there is a potential for on-site receptors occupying buildings completed before the final build-out.

The *CEQR Technical Manual* states that if a project meets one or more of the criteria above or if one of the above criteria is unknown at the time of review, a preliminary air quality assessment is not automatically required. Instead, various factors should be considered, such as the types of construction equipment (e.g., gas, diesel, electric), the nature and extent of any commitment to use

the Best Available Technology (BAT) for construction equipment, the physical relationship of the project site to nearby sensitive receptors, the type of construction activity, and the duration of any heavy construction activity.

While construction of the Proposed Project would extend beyond two years and is located in an area with residential and open space uses, it would entail construction of a single building with a limited excavation and foundation phase (5 months). During construction, the laws, regulations, and building codes that focus on reducing air pollutant emissions associated with construction would be followed, and the Proposed Project is committed to using certain best available technologies and ultra-low sulfur diesel (ULSD) and to following the requirements of the Air Pollution Control Code:

- Clean Fuel. Ultra-low sulfur diesel (ULSD) is required in New York City for diesel engines used on construction sites.
- Dust Control. The New York City Air Pollution Control Code regulates construction-related dust emissions and requires that fugitive dust control plans are developed and implemented as part of contract specifications. Fugitive dust control plans include requirements to:
  - Establish stabilized truck exit areas for washing off the wheels of all trucks that exit a construction site and have the contractor clean streets adjacent to the construction site as frequently as needed;
  - Water truck routes within a site as needed to avoid the re-suspension of dust;
  - Equip all trucks hauling loose material with tight fitting tailgates and to securely cover their loads prior to leaving a site.
  - Use water sprays for transfer of spoils to ensure that materials are dampened as necessary to avoid the suspension of dust into the air.
- Restrictions on Vehicle Idling. Vehicles are not allowed to idle more than three minutes in accordance with New York City Administrative Code §24-163. On-site vehicle idle time is restricted to three minutes for all equipment and vehicles that are not using their engines to operate a loading, unloading, or processing device (e.g., concrete mixing trucks) or otherwise required for the proper operation of the engine.
- Source Location and Shielding. To reduce concentration increments at sensitive receptors, large emissions sources and activities such as concrete trucks, generators, and large compressors can be located away from the sensitive receptors to the extent practical.
- Diesel Equipment Reduction. The Proposed Project is committed to reducing emissions from diesel equipment.

  Given the construction timeframe for the Proposed Project (2026-2029), equipment meeting Tier 4 standards for diesel engines (model years 2011/12 and beyond) is expected to be in wide use and comprise the majority of contractors' fleets. If contractors choose to use older diesel equipment, they would be required to use diesel particulate filters (DPF) in Tier 3 emission standard for diesel engines (model years 2008-2011 for engine sizes between 50 hp and 600 hp). Tier 3 with DPF achieves the same emission reductions as a newer Tier 4 emission standard for diesel engines. The combination of Tier 4 and Tier 3 engines with DPF achieves diesel particulate matter reductions of approximately 90 percent when compared to older uncontrolled engines. The Proposed Project would commit to requiring contractors to use certain best available control technology, which would result in the use of Tier 4 equipment, and Tier 3 equipment (model years 2008-2011 for engine sizes between 50 and 600 hp) with DPFs.

- In addition to stricter standards for diesel equipment, the electrification of certain equipment is a common practice that has been achieving wider use as technology improves. The use of electric engines that operate on grid power instead of diesel power is most commonly in use for hoists and small equipment, such as lifts, compressors, welders, and pumps. The Proposed Project would commit to using electric power for such small equipment to the extent feasible and practicable.

Projects of larger size (1,000,000+ gsf)[2] than the Proposed Project (609,988 gsf) for which quantitative construction analyses were conducted using the above-mentioned reduction measures demonstrated that those projects would not result in significant air quality impacts from construction. The requirements set forth above relating to Tier 4 equipment and DPFs, and electrification of certain equipment, will be established through the ground lease or other binding agreement. Considering this, and that the Proposed Project consists of a single building that is committed to the use of certain best available technologies and the strict standards that regulate air emissions at construction sites in New York City, it is expected that construction of the Proposed Project would not result in significant adverse construction air quality impacts. Therefore, no further assessment will be undertaken.

Construction Noise

Governmental oversight of construction in New York City is extensive and involves a number of City, State, and Federal agencies, each with specific areas of responsibility. In terms of noise, the New York City Department of Environmental Protection (DEP) enforces the New York City Noise Code,

Per the *CEQR Technical Manual,* an assessment of 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 due to staged project completion, there is a potential for on-site receptors occupying buildings completed before the final build-out.

The manual states that if a project meets one or more of the criteria above or if one of the above criteria is unknown at the time of review, a preliminary noise assessment is not automatically required. Instead, various factors should be considered, such as the types of construction equipment (e.g., gas, diesel, electric), the nature and extent of any commitment to use the Best Available Technology (BAT) for construction equipment, the physical relationship of the project site to nearby sensitive receptors, the type of construction activity, and the duration of any heavy construction activity.

To illustrate the above, construction noise, generated by pile driving, truck traffic, blasting, demolition, etc., is generally analyzed only when it affects a sensitive receptor over a long period of time. Based upon experience, unless ambient noise levels are very low and/or construction source levels are very high, and there are no structures that provide shielding, it is unusual for construction sources to have significant impacts at distances beyond 1,500 feet in New York City. Therefore, further analysis may be performed if the proposed project would cause construction equipment to

[2] Greater East Midtown Rezoning (CEQR # 17DCP001M) and 175 Park Avenue (CEQR # 21DCP057M)

be operating within 1,500 feet of a receptor for a period of time exceeding two years. In some circumstances, however, even a construction phase shorter than two years may affect highly sensitive locations (schools, hospitals, etc.), warranting further quantitative analysis.

The Development Site is located along the west side of First Avenue. The nearest sensitive receptors include a residential building directly across the East 27th Street pedestrian way (the microunit building at Carmel Place) and the NYU Rory Meyers College of Nursing across East 26th Street at 433 First Avenue. Both buildings are newly constructed (2015). Other receptors are located at greater distances from the Development Site.

The overall construction period for the project would be approximately 42 months. Within this period, construction of the Proposed Project would not involve loud activities, such as blasting, and excavation activities would be limited given the existing building's cellar, with an expected duration of five months. Demolition would occur over a period of 11 months. A substantial portion of the construction period would consist of quieter phases of construction, such as interior finishes (10 months).

Construction of the Proposed Project would be undertaken consistent with the New York City Noise Code, which includes requirements to implement certain controls to reduce construction-period noise at the source:

- Equipment must meet the sound level standards specified in Subchapter 5 of the New York City Noise Control Code.
- Construction equipment is required to be equipped with necessary noise reduction equipment, including mufflers. All equipment with internal combustion engines is required to be operated with the doors closed, including noise-insulating materials and at the lowest engine speed allowable.
- Replacing back-up alarms with strobes, as allowed within OSHA regulations, to eliminate annoying impulsive sound.
- Vehicles are not allowed to idle more than three minutes in accordance with New York City Administrative Code §24-163.
- Contractors must implement training programs to inform workers on methods that can minimize construction noise.

The New York City Noise Code also includes noise pathway control requirements:

- When the DOB regulations require a perimeter barrier or "construction fence" and the site is within 200 feet of a receptor, the barrier shall be constructed in a specific manner (as described in the New York City Noise Code) to provide sufficient sound attenuation. Section 3307.7 of the New York City Building Code requires a solid 8-foot wall made out of wood or other suitable material be constructed where a new building is being constructed or a building is being demolished to grade.
- Building portable noise walls around construction areas to reduce noise, if needed.
- Locating noisy equipment as far from sensitive receptors as possible.

As noted above, the Proposed Project is committed to implementing measures to reduce construction noise emissions consistent with the New York City Noise Code, including preparation of a Construction Noise Mitigation Plan. Given that the loudest period of construction—excavation and foundation—is limited for the Proposed Project to 5 months and given that the nearest sensitive

receptors are newly constructed buildings (2015), no significant adverse impacts are expected, and no further assessment will be undertaken.

As discussed above, the SPARC Kips Bay project is expected to be under construction while construction is ongoing for the 455 First Avenue project. SPARC Kips Bay is located on the east side of First Avenue, south of the former East 26th Street and therefore, would have limited potential to affect the same receptors as the 455 First Avenue project. However, there are two locations—the NYU Rory Meyers College of Nursing located at 433 First Avenue and outdoor space associated with Bellevue Hospital (the Bellevue Hospital Center Plaza)—that may experience elevated noise levels from construction of both projects. Construction of 455 First Avenue could result in elevated noise levels at the 433 First Avenue building's northern façade (across East 26th Street), and the SPARC project could result in elevated noise levels on the 433 First Avenue building's east facade. Because of the location of the respective construction activities (one project to the north of 433 First Avenue, one to the east), the expected temporary overlap of the construction activities, and the expected attenuation of the 433 First Avenue building, no significant adverse impacts at this location would occur.

At the outdoor space associated with Bellevue Hospital, construction at SPARC would occur to the south across the former East 26th Street. Construction at 455 First Avenue would occur west of the space across First Avenue. While there may be elevated noise levels from construction, this location is not open to the public. If noise reaches levels such that users of the space are not comfortable, it is expected that they will visit alternate locations on a temporary basis while construction is most disruptive.

1

Introduction

As discussed in **Part II: Supplemental Analyses** of this Environmental Assessment Statement (EAS), several technical areas were identified for further analysis and are provided in the following sections:

- Land Use, Zoning, and Public Policy
- Shadows
- Urban Design and Visual Resources
- Hazardous Materials
- Transportation
- Air Quality
- Noise
- Neighborhood Character
- Construction Transportation

Analysis of these areas follow in **Section 2** through **Section 10**.

2

Land Use, Zoning, and Public Policy

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

Introduction

As described in **Part I: Project Description**, the Applicants are proposing to redevelop Manhattan Block 932, Lot 17 (the Development Site) located in the Kips Bay neighborhood of Manhattan Community District 6 with an approximately 13-story, 270-foot-tall, 609,988 gross square foot (gsf) life sciences building (the Proposed Project).

This analysis of land use, zoning and public policy follows the guidelines set forth in the *2021 CEQR Technical Manual*. It characterizes the existing conditions in the area surrounding the Development Site and addresses potential impacts to land use, zoning, and public policy that would be associated with the Proposed Project.

Methodology

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

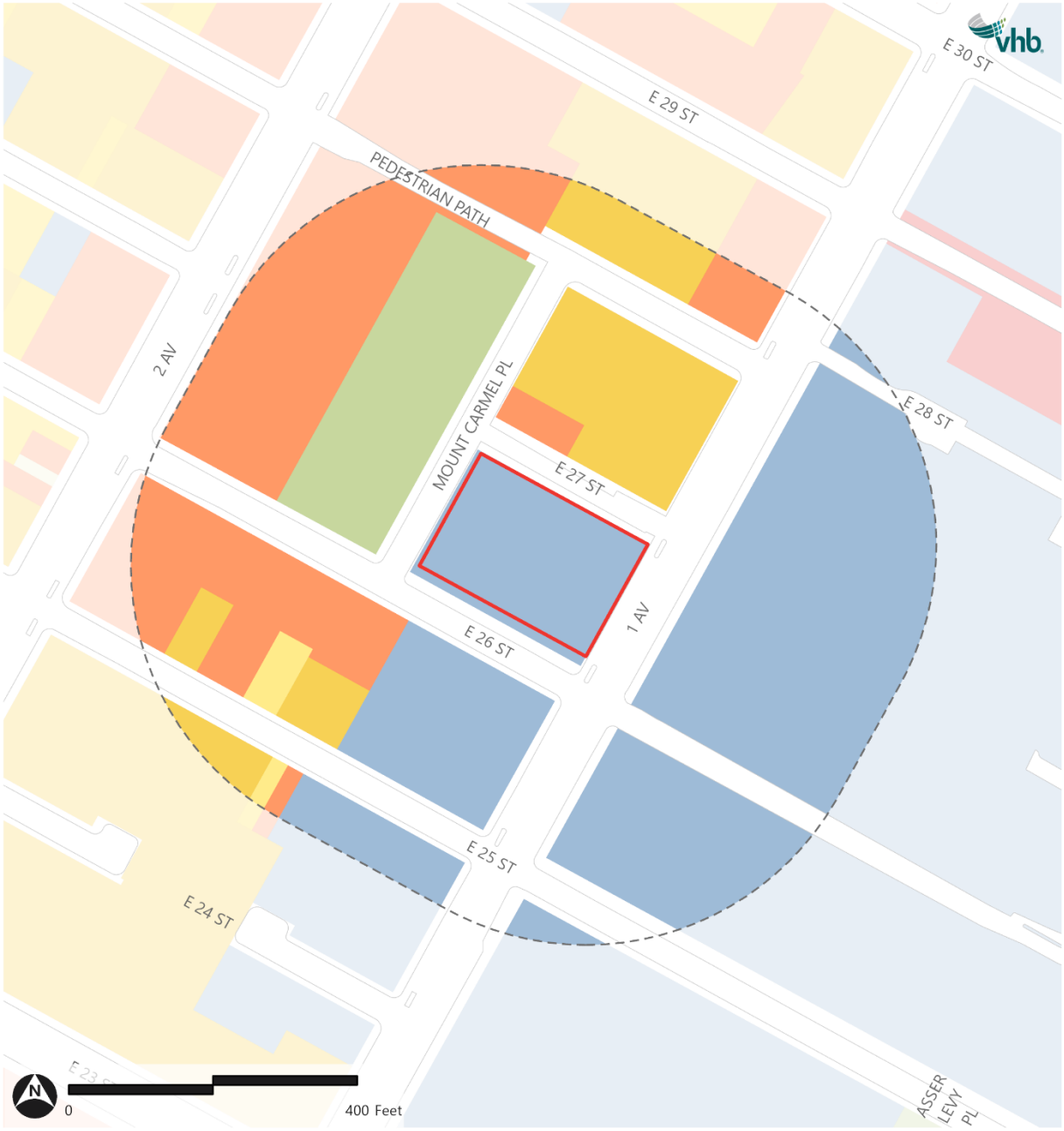
- Describes existing and future land uses and zoning information, and describes any changes in zoning that could cause changes in land use;
- Characterizes the land use development trends in the area surrounding the project site that might be affected by the proposed action; and
- Determines whether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

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

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

The study area for this analysis is the area within 400-feet of the Development Site, which, for the Proposed Project, is generally bounded by First Avenue to the east, Second Avenue to the west, East 25th Street to the south and East 28th Street to the north (see **Figure 2-1**). This is the area in which the Proposed Project would be most likely to have effects in terms of land use, zoning, and public policy.

Figure 2-1 Land Use Map



Source: DCP PLUTO

Assessment

Existing Conditions

Land Use

Development Site

The Development Site is located at 455 First Avenue (Manhattan Block 932, Lot 17) in the Kips Bay neighborhood of Manhattan, in Community District 3 (see **Figure 2-1**). It is bounded by First Avenue to the east, East 26th Street to the south, Mt. Carmel Place to the west, and the pedestrianized East 27th Street to the north. The Development Site is occupied by a 14-story, approximately 191-foot-tall, 359,000 gsf building, which is primarily occupied by the City's Public Health Laboratory (PHL). The building also contains other City uses and some leased spaces.

Study Area

As shown in **Table 2-1,** within the study area, institutional uses comprise approximately 72 percent of the total lot area, mixed-use commercial and residential uses comprise approximately 14 percent of the total lot area, open space uses comprise approximately four percent of the total lot area, while residential uses comprise approximately 10 percent of the total lot area, with 0.42 percent comprised of multifamily walkup buildings and 9.5 percent comprised of multifamily elevator buildings.

Table 2-1 Study Area Generalized Land Uses

Land Use	Number of Tax Lots[2]	Percentage of Total Lots (%)	Lot Area (sf)	Percentage of Total Lot Area (%)
Multifamily Walkup Residential	2	8.70%	6,842	0.42%
Multifamily Elevator Residential	6	26.09%	155,067	9.50%
Mixed Commercial/Residential	5	21.74%	233,550	14.30%
Public Facilities and Institutions	9	39.13%	1,167,828	71.53%
Open Space	1	4.35%	69,398	4.25%
Total	**23**	**100%[1]**	**1,632,685**	**100%[1]**

Source: MapPLUTO 21v3

[1] Numbers may not add up to 100% due to rounding.

[2] All Lots intersecting the 400-foot radius study area were included in analysis.

The Development Site is located along the First Avenue Health & Life Sciences Corridor, one of the fastest-growing clusters of life science activity in the City. This area contains a mix of health and academic institutions and commercial life science uses, including various spaces occupied by NYU Langone Health throughout the corridor and the NYU College of Nursing, Dentistry & Engineering, located across East 26th Street from the Development Site. To the east of the Development Site

across First Avenue is Bellevue Hospital and the Hirsch Center for Forensic Sciences. South of these facilities is the City University of New York (CUNY) Hunter College's Brookdale Campus, which is the site of the future Science Park and Research Center (SPARC) life sciences project (discussed below).

There are additional academic and medical campuses beyond the study area such as the Tisch Hospital, which is part of NYU Langone Health located to the north, additional NYU Langone Health buildings two blocks northwest of the Development Site (i.e., Medical Center Radiology, School of Medicine, and Pulmonary + Critical Care Associates), the Shiel Medical Laboratory, and the Alexandria Launch Labs located to the northeast of the Development Site along East 29th Street. To the southwest of the Development Site is the CUNY Baruch College. Given the extensive presence of these academic and medical institutions, the First Avenue Health & Life Sciences Corridor has been identified as an opportune location to fulfill the goals of the City's Life Sci NYC initiative, a $1 billion investment in life sciences research and development (R&D) and related innovation (see "Public Policy," below).

In addition to the life science, health, and academic uses, the study area contains mixed-use, residential, and open space uses. To the north of the Development Site across the East 27th Street pedestrian way are a New York City Housing Authority (NYCHA) development at 344 East 28th Street and a building containing microunits at 335 East 27th Street. Additional residential buildings are located north of these uses across East 28th Street. The western portion of the study area is occupied by five of the eight buildings that make up the approximately 900-unit Kips Bay Court housing complex; this complex includes ground-floor retail uses and private open space amenities. The southwestern portion of the study area also includes residential uses in a mix of multifamily walkup and elevator buildings.

Directly to the west of the Development Site is Bellevue South Park, a 1.59-acre park that reopened in summer 2023 after being renovated.

Zoning

Development Site

As shown in **Figure 2-2**, the Development Site is mapped within an R8 zoning district with a C2-5 commercial overlay on the portion of the site fronting First Avenue.

R8 zoning districts are non-contextual districts that are mapped in higher-density areas of the city. R8 districts permit both residential and community facility uses.

Apartment buildings in R8 districts can range from mid-rise, eight- to ten-story buildings to much taller buildings set back from the street on large zoning lots. New buildings in R8 districts may be developed under either height factor regulations or the optional Quality Housing regulations. The floor area ratio (FAR) for height factor development in R8 districts ranges from 0.94 to 6.02; the open space ratio (OSR) ranges from 5.9 to 11.9.

R8 districts permit a wide range of Community Facility uses. New community facility buildings in R8 districts may be developed under basic height and setback sky-exposure plane bulk regulations or can elect to follow optional Quality Housing bulk regulations. The floor area ratio (FAR) for community facility developments in R8 districts is 6.5, except that certain uses (including non-profit institutions with sleeping accommodations and long-term care facilities) are limited to the maximum residential FAR of 6.02.

C2 districts permit a range of retail uses and service shops that serve the immediate needs of surrounding residential communities. C2 districts are also mapped as overlays, usually within low- and medium-density residential neighborhoods. In these districts, residential bulk is governed by the residence district within which the overlay is mapped. A commercial FAR of 2.0 is permitted in C2-5 districts that are overlaid in R6 to R10 districts. The depth of overlay is 100 feet from First Avenue.

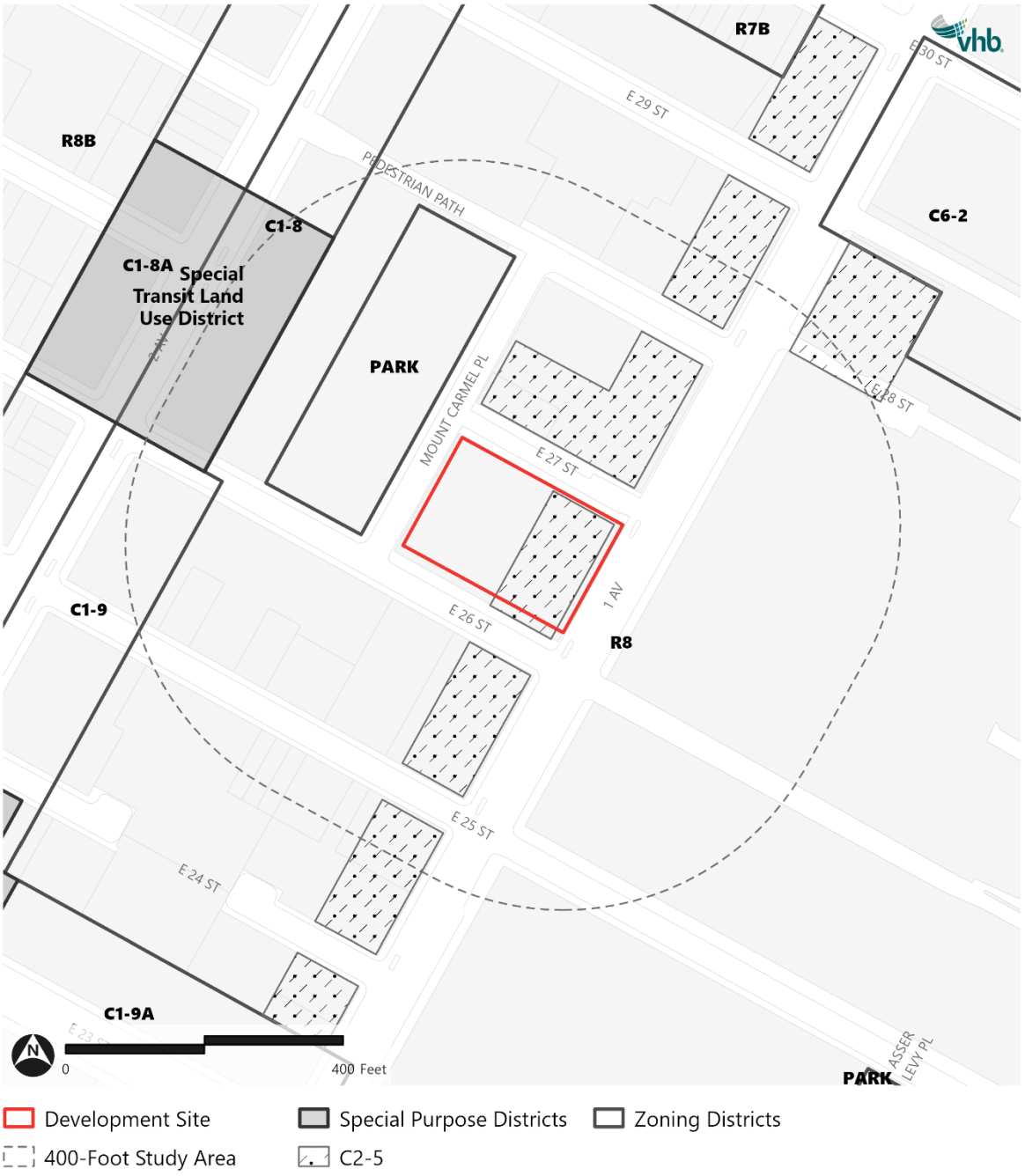
The plans for the existing building pre-date the zoning; the existing building is non-conforming and overbuilt.

Study Area

As shown in **Figure 2-2**, the study area contains mostly R8 zoning with C2-5 commercial overlays along the western side of First Avenue. To the west of the Development Site along Second Avenue are C1-9 and C1-8 commercial districts. Both C1-9 and C1-8 commercial districts are mapped along major thoroughfares in medium- and higher-density areas of the city. For mixed buildings within these districts, commercial uses are limited to one or two floors and must always be located below the residential use. Both have a maximum commercial FAR of 2.0. However, in C1-9 districts residential uses are governed by the residential district equivalent R10, which permits up to 12 FAR, while in C1-8 districts uses are governed by the residential district equivalent R9, which permits up to 8 FAR. There are no accessory parking requirements for both C1-9 and C1-8 commercial districts and signage cannot exceed three times the street frontage (150 square feet).

To the west of the Development Site on Second Avenue is a Special Transit Land Use District. The Special Transit Land Use District is intended to facilitate planning for a future Second Avenue subway extension. It has provisions requiring developments within these districts to provide access to transit and other subway amenities to reduce congestion and minimize conflicts between pedestrian movement at public sidewalks.

Figure 2-2 Zoning Map



Source: DCP PLUTO

Public Policy

LifeSci NYC Initiative

LifeSci NYC was established in 2016 by NYCEDC with the goal to establish New York City as a global leader in life sciences. In June 2021, then Mayor de Blasio announced a plan to double the original $500 million LifeSci NYC investment to further the LifeSci NYC goals. Given the presence of the academic and medical institutions in the Kips Bay area, NYCEDC identified the First Avenue Health & Sciences Corridor as an opportune location to fulfill the goals of the City's Life Sci NYC initiative, a $1 billion investment in life sciences R&D and related innovation.

LifeSci NYC is expected to create nearly 40,000 new jobs by 2026—many accessible to New Yorkers without advanced degrees—and establish NYC as a global leader in life sciences. The LifeSci program is geared towards the following goals:

- Connecting existing researchers and institutions to the resources needed to advance programs to commercialization;
- Unlocking space for life sciences companies to grow within the city; and
- Building a pipeline for the talent and workforce needed to support these companies across the five boroughs.

As part of the LifeSci initiative, NYCEDC issued an RFEI to experienced life science developers to transform select properties into a life sciences hub, including the 455 First Avenue Development Site. Another component of Life Sci initiative is the Science Park and Research Campus (SPARC) Kips Bay project, which was announced in October 2022 by Governor Hochul and Mayor Adams (see "No-Action Condition," below).

PlaNYC: Getting Sustainability Done

In April 2023, *PlaNYC: Getting Sustainability Done* was published as part of the fifth in a series of climate action plans released by the City. It is centered around delivering a cleaner, greener, and more just city for all. PlaNYC builds on the equity focus of the last sustainability plan developed for the City, known as *OneNYC 2050: NYC Green New Deal*. Like OneNYC, growth, sustainability, and resiliency are at the core of PlaNYC, but environmental justice, equity, and improving public health are guiding principles throughout the plan. PlaNYC consists of three objectives, which include:

- Protection from climate threats: this objective sets goals to mitigate extreme heat, adaptation to flooding, perform building decarbonization upgrades, and incorporate clean and reliable energy in the public and private infrastructure.
- Improving quality of life: this objective aims to create safe access to quality green spaces, restore forested areas through planting drives, improve health and ecological function of waterways, cut down transportation emissions, ensure streets provide a safe, clean and livable environment, and reduce emissions from food systems through commercial cooking retrofits and sustainable farming practices.
- Building the green economic engine: this objective aims to accelerate an equitable green economy transition by advancing climate education, creating green jobs opportunities, encouraging entrepreneurship and industry innovation, and creating a circular economy especially for recyclables and reusable assets.

Rebuild, Renew, Reinvent: A Blueprint for New York City's Economic Recovery

Rebuild, Renew, Reinvent: A Blueprint for New York City's Economic Recovery is an economic development plan issued by the Adam's Administration in March 2022 in response to the COVID-19 Pandemic and its impact on New York City's economy. The Plan has the following goals:

1. Restart our city's economic engines and reactivate the public realm.
2. Support small businesses, entrepreneurship, and a more equitable economy.
3. Drive inclusive sector growth and build a future-focused economy.
4. Connect New Yorkers to quality jobs and in-demand skills.
5. Plan and build for inclusive growth now and in the future.

City of Yes: Zoning for Economic Opportunity

On June 6, 2024, the City Council adopted a citywide zoning text amendment—the City of Yes Zoning for Economic Opportunity (COYEO) text amendment—with the overall goal of supporting economic recovery and resiliency in New York City. To achieve this overall goal, the text amendment seeks to address four goals:

- Allow more businesses to locate near their customers by expanding where businesses can locate.
- Support business and industry growth by removing specific impediments for businesses to thrive.
- Foster vibrant neighborhoods by activating commercial streets and increasing access to local businesses and services.
- Give businesses more certainty and predictability by clarifying and modernizing rules.

As part of the goal to support growing industries, the COYEO includes provisions aimed to "give life science companies more certainty to grow." The text amendment includes measures to modernize zoning regulations for laboratories so that the life sciences industry can flourish in offices and near universities and hospitals. Specifically, the text amendment:

- Clarified the definition of a laboratory to allow any life science business to occupy office space if it can meet environmental standards that protect neighbors.
- Expanded applicability for an existing special permit that allows commercial life science facilities so that life science uses can locate on campuses, such as hospitals and universities.

New New York Panel

The "New" New York Panel was launched by Governor Kathy Hochul and Mayor Eric Adams in 2022 to examine the future of New York City and the region's economy. A direct result of the panel's work, the *Making New York Work for Everyone Action Plan* lays out a set of 40 proposals—and a shared City-State agenda—focused on the future of jobs centers, neighborhoods, the way people work, key industries, infrastructure, talent development and more.

Created to develop actionable strategies for the recovery and resilience of the city's commercial districts, the work of the "New" New York Panel informed New York City's path to equitable economic recovery and resurgence—reimagining how and where people work, optimizing the mix and use of space in key employment centers to minimize vacancy, catalyze vibrancy, bolster the tax base, and create new opportunities for New Yorkers to thrive in family-sustaining jobs.

The panel went on to address a wide range of challenges affecting all New Yorkers, from transportation to housing and from public space to childcare. The action plan reflects this broad purview by proposing three overarching goals:

- Reimagine New York's Commercial Districts as Vibrant 24/7 Destinations
- Make It Easier for New Yorkers to Get to Work
- Generate Inclusive, Future-Focused Growth

Manhattan Community Board 6 197-a Plan

The Manhattan CB 6 197-a Plan's[1] primary goals for the eastern portion of Manhattan CB 6 are: (i) increase the amount of useful open space, (ii) improve access to the waterfront and complete the East River Esplanade, (iii) enhance and reclaim the street network to restore the street grid and improve transportation systems and access to the waterfront, (iv) implement land use policies consistent with historical trends in the area, and (v) preserve significant residential developments and individual buildings. In terms of Land Use and Zoning, the plan recommended encouraging institutional development and community uses that are compatible with the existing scientific, hospital and hospital related uses in the area bounded by 23rd Street, First Avenue, 34th Street and the FDR Drive.

No-Action Condition

Land Use

Development Site

Absent the Proposed Actions, it is assumed that the existing 359,000-gsf building on the Development Site would be re-tenanted with a mix of office and laboratory space for continued use by City agencies. No changes would occur to the building bulk or height. The PHL will be relocated uptown to a new, purpose-built facility at a site adjacent to Harlem Hospital.

Study Area

In the No-Action condition, two new developments will be completed within the 400-foot study area by the 2030 analysis year (see **Table 2-2**). These include the Science Park and Research Center (SPARC) and the Alexandria Center.

- **Science Park and Research Campus (SPARC).** This project, which is proposed for CUNY Hunter College's Brookdale Campus at East 25th Street and First Avenue, would replace an entire city block with approximately 2.19 million sf of space consisting of academic, public health, health care, and life sciences space. This space would include new educational facilities for the Hunter College School of Nursing and School of Health Professions, the CUNY Graduate School of Public Health and Health Policy, and the Borough of Manhattan Community College's multiple healthcare programs as well as a new Forensic Pathology Center for the City's Office of the Chief Medical Examiner, a training center for Health and Hospitals, and a new high school. This project has been projected to be completed by the end of 2031.

[1] The plan was modified and approved by the City Planning Commission and further modified by the City Council on March 26, 2008.

- **Alexandria Center (Phase II – North Tower).** This project, which is located at 29th Street and First Avenue between Bellevue Hospital and NYU Langone Health, will replace the existing surface parking lot with approximately 330,000 sf of office and laboratory space. This project is expected to be complete in 2029.

There are three new developments outside of the 400-foot study area but in proximity to the Proposed Project that will be completed by the 2030 analysis year. These include 429 Second Avenue, 202 East 23rd Street, and Stuyvesant Cove Park – Solar 2.

- **429 Second Avenue.** This project will consist of 59,708 sf of residential space, projected to contain 59 units. This project will be complete in 2023.
- **202 East 23rd Street.** This project will consist of 91,454 sf of residential space, projected to total 108 units. This project will be complete in 2023.
- **Stuyvesant Cove Park – Solar 2.** This project will be located on the northern end of Stuyvesant Cove Park and will include the replacement of the existing Solar One structure with a new two-story, 6,409 sf learning center to allow for the teaching and demonstration of urban environmental stewardship. This project will be complete in 2024.

Zoning and Public Policy

In the future No-Action condition, it is anticipated that there will be zoning changes associated with the SPARC project, and the development of that project would advance the City's LifeSci initiative. Other than this change, it is expected that the Development Site and study area would continue to be governed by the various zoning regulations in the area, as described in the existing conditions section as well as the public policies described above.

With-Action Condition

The Proposed Actions would facilitate the development of a 609,988 gsf building, of which approximately 521,988 gsf would be life sciences space, up to approximately 5,000 gsf would be retail space, and 83,000 gsf would be mechanical space.

The life sciences space would consist of space for start-ups, graduation space for life science businesses, space for established R&D firms, and anchor space for NYU Grossman School of Medicine, and a Life Sciences Programmatic space. The Life Science Multi-Purpose Programming space would primarily be used to host programs and events for the life science community.

The mechanical space would consist of space for equipment and infrastructure required to support the life-science program, including appropriate resiliency and redundancy measures. The retail space would serve the Proposed Project's tenants and others in the neighborhood. No parking would be provided.

Land Use

The Proposed Project would increase the size of the life science space at the Development Site. It would also introduce a neighborhood retail component as compared to the future No-Action condition.

The Proposed Project would be consistent with uses in the study area. As discussed above, the study area is characterized predominately by institutional uses affiliated with academic and medical

buildings, mixed-use residential and commercial uses and residential uses, with open space uses directly west of the Development Site. As a life sciences space, the Proposed Project would be consistent with the surrounding academic and medical institutions. The Proposed Project would be part of the First Avenue Health & Life Sciences Corridor, one of the fastest-growing clusters of life science activity in the City. This area contains a mix of health and academic institutions, and commercial life science uses. The neighborhood retail component would offer a useful retail option to the workers and residents in the area and provide street-level activation at First Avenue. As such, the Proposed Project would be consistent with the life-sciences character of the Study Area and its immediate surroundings and would not have a significant adverse impact on land use.

Zoning

As detailed in **Part I: Project Description**, the Proposed Actions would include several zoning changes. The Proposed Actions include a zoning map amendment to rezone the Development Site from a R8 district (with a C2-5 commercial overlay over a portion of the Development Site) to a C6-4 district, a zoning text amendment to map a Mandatory Inclusionary Housing area on the Development Site, and a special permit pursuant to the New York City Zoning Resolution (ZR) Section 74-901 to modify bulk regulations applicable to the Development Site. Upon approval, these actions would change the underlying zoning of the Development Site.

The existing R8 zoning has been in effect since December 15, 1961 and, although life science uses predominate in the area and in the existing building on the site, current zoning does not permit commercial life sciences uses. The proposed zoning changes, including the rezoning to a C6-4 district, would allow for development that is consistent with the existing uses in the study area and the two future developments in the study area, SPARC and Alexandria Center (Phase II – North Tower). The proposed C6-4 district, a contextual commercial district, is appropriate for the location within the First Avenue Health & Life Sciences Corridor, one of the fastest-growing clusters of life science activity in the City. Therefore, the Proposed Actions would not have a significant adverse impact on zoning.

Public Policy

LifeSci NYC Initiative

The Proposed Project would provide a state-of-the-art life-sciences facility for the creation and delivery of new cures and treatments, new jobs, and a healthier and fairer city. As mentioned previously, NYCEDC selected the Development Site to develop this key site within the First Avenue Health & Life Sciences Corridor. The Proposed Project is designed to provide much-needed lab space for life science businesses, including space appropriate for companies in the startup, graduation, and established stages, as well as space for NYU Grossman School of Medicine. It would provide this much-needed commercial lab space in an emerging life sciences cluster. Consistent with the goals of LifeSci NYC initiative, the Proposed Project would create jobs, job training and internship opportunities for New Yorkers in the fast-growing and dynamic life sciences sector. Therefore, the Proposed Project would advance the City's LifeSci NYC initiative by delivering innovation and opportunity for New Yorkers.

PlaNYC: Getting Sustainability Done

The Proposed Project would be consistent with several "Buildings" initiatives outlined in PlaNYC that focus on reducing fossil fuel consumption, reducing localized air pollution in NYC, and supporting building owners in complying with Local Law 97 emissions reduction goals. The Proposed Project plans to use HVAC systems that permit the electrification of heating and air conditioning for the building by implementing Air Source Heat Pumps and using electric equipment for the chiller plant and to heat domestic hot water. The Proposed Project would be consistent with other PlaNYC goals of reducing flood risk by incorporating measures into the design of the project to account for projected sea level rise, including establishing a design flood elevation (DFE) above the nearest established base flood elevation, dry flood proofing building elements below the DFE, and locating critical mechanical equipment above the DFE.

Rebuild, Renew, Reinvent: A Blueprint for New York City's Economic Recovery

The Proposed Project meets the goals of *Rebuild, Renew, Reinvent: A Blueprint for New York City's Economic Recovery* by investing in New York City's Life Sciences economy with the development of approximately 609,988 gsf of life-sciences space that is expected to create approximately 1,114 new permanent jobs.

City of Yes: Zoning for Economic Opportunity

The Proposed Project would align with the objectives of COYEO to promote the life sciences industry within New York City. The Proposed Project would provide approximately 609,988 gsf of life-sciences space and would create approximately 1,114 new permanent jobs. As such, the Proposed Project would support this policy initiative.

New New York Panel

The Proposed Project aligns with the goals of the New New York Panel, specifically, "Making New York Work for Everyone" by creating a life sciences space consisting of space for start-ups, graduation space for life science businesses, space for established R&D firms, and anchor space for NYU Grossman School of Medicine. As part of the Proposed Project, a small portion of the life sciences space, known as Life Sciences Multi-Purpose Programming Space, would be for use by building tenants for internal meetings and events. This space would also be used for life-science-related events (e.g., lectures or symposia) where the public may participate. This space would be used for programs to help fulfill the project's commitment to Life Science Community Programming and Workforce Development. Workforce Development events and programs aim to recruit, train, and attract a commercial life sciences workforce, in partnership with local not-for-profit organizations and academic institutions, such as local public high schools and colleges.

Manhattan Community Board 6 197-a Plan

The Proposed Project meets the goals of the Manhattan Community Board 6 197-a Plan as the design of the proposed building aims to enhance sidewalk access and the pedestrian experience. As illustrated in **Chapter 4, Urban Design and Visual Resources**, the ground floor is designed to activate the streetscape along First Avenue, East 27th Street, and East 26th Street by providing multiple entrances to the life science space, the Life Sciences Multi-Purpose Programming Space, and the retail space. The transparent façade design of the ground floor would create an inviting and visually engaging environment for pedestrians and would improve the streetwall conditions

compared to existing conditions. Importantly, the Proposed Project would remove the portion of the existing building built in the East 26th Street right of way and restore that street to its mapped width. The pedestrian experience on East 26th Street would be further improved given that the proposed building would not include any vehicular access points on East 26th Street, as does the existing building. The proposed façade design would also enhance the overall public space experience at the East 27th Street Pedestrian Way, which serves as a pedestrian connection between Bellevue South Park and points east, including the health and science uses on First Avenue and the East River waterfront.

In addition, the Proposed Project would be consistent with the plan's land use and zoning recommendations as it would consist of the development of life science space on the site of the City's Public Health Laboratory, which is being relocated uptown to a new, purpose-built facility.

Conclusion

As described above, the Proposed Actions would result in the development of a new life-sciences building on the Development Site. As part of the First Avenue Health & Life Science Corridor, the resulting development would be consistent with land use and zoning in the existing study area and would advance the goals of the City's LifeSci NYC initiative. Additionally, by increasing life-sciences space, incorporating design measures that account for projected sea level rise, and electrifying HVAC and hot water systems, the Proposed Project would be consistent with City of Yes: Zoning for Economic Opportunity and PlaNYC policy initiatives. Based on the foregoing, the Proposed Project would not result in any significant adverse impacts to land use, zoning, or public policy.

3

Shadows

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

Introduction

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

The Proposed Actions would facilitate the construction of a building that would exceed 50 feet in height on a site adjacent to a publicly accessible open space (Bellevue South Park). Therefore, further assessment of the potential shadows from the Proposed Project is warranted.

Methodology

According to the *CEQR Technical Manual*, the longest shadow a structure will cast in New York City, except for periods close to dawn or dusk, is 4.3 times its height. In accordance with the *CEQR Technical Manual*, a preliminary screening assessment is conducted to ascertain whether shadows resulting from a project could reach any sunlight-sensitive resource at any time of year; if the preliminary assessment indicates that, in the absence of intervening buildings, shadows from a project could reach sunlight-sensitive resources on any of the representative analysis days, further analysis is typically warranted.

Sunlight-Sensitive Resources

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

- Public open space (e.g., parks, beaches, playgrounds, plazas, schoolyards, greenways, and landscaped medians with seating). Planted areas within unused portions of roadbeds that are part of the Greenstreets program are also considered sunlight-sensitive resources. The uses and vegetation in an open space establish its sensitivity to shadows. This sensitivity is assessed for both (1) warm-weather-dependent features like wading pools and sand boxes, or vegetation that could be affected by loss of sunlight during the growing season (i.e., March through October); and (2) features, such as benches, that could be affected by a loss of winter sunlight. Uses that rely on sunlight include passive uses, such as sitting or sunning; active uses, such as playfields or paved courts; and such activities as gardening, or children's wading pools and sprinklers. Where lawns are actively used, the turf requires extensive sunlight. Vegetation requiring direct sunlight includes the tree canopy, flowering plants, and plots in community gardens. Generally, four to six hours a day of sunlight, particularly in the growing season, is a minimum requirement for most vegetation.
- Features of historic architectural resources that depend on sunlight for their enjoyment by the public. Only the sunlight-sensitive features are considered, as opposed to the entire architectural resource. Sunlight-sensitive features include the following: design elements that are part of a recognized architectural style that depends on the contrast between light and dark (e.g., deep recesses or voids such as open galleries, arcades, recessed balconies, deep window reveals, and prominent rustication); elaborate, highly carved ornamentation; stained-glass windows; exterior building materials and color that depend on direct sunlight for visual character (e.g., the polychromy (multicolored) features found on Victorian Gothic Revival or Art Deco façades); historic landscapes, such as scenic landmarks including vegetation recognized as an historic feature of the landscape; and structural features for which the effect of direct sunlight is described as playing a significant role in the structure's importance as an historic landmark.
- Natural resources where the introduction of shadows could alter the resource's condition or microclimate. Such resources could include surface water bodies, wetlands, or designated resources such as coastal fish and wildlife habitats.

According to the *CEQR Technical Manual*, City streets, sidewalks, and private open spaces (such as private residential front and back yards, stoops, and vacant lots) are not considered to be sunlight-sensitive resources.

Preliminary Assessment

The preliminary screening assessment consists of three tiers of analysis:

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

Detailed Assessment

If the Tier 3 screening indicates that, in the absence of intervening buildings, shadows from the Proposed Project could reach a sunlight sensitive resource on any of the representative analysis days, a detailed shadow analysis may be warranted to account for shadows cast by existing buildings or buildings that may be constructed in an area in the No-Action condition. The detailed shadow analysis models a baseline condition (future No-Action) that is compared to the future condition with the Proposed Project (future With-Action) to distinguish the additional (incremental) shadow cast by the project.

Determination of Significance

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

- Vegetation: a substantial reduction in sunlight available to a sunlight-sensitive feature of the resource to less than the minimum time necessary for its survival (when there was sufficient sunlight in the future without the project), or a reduction in direct sunlight exposure where the sensitive feature of the resource is already subject to substandard sunlight (i.e., less than the minimum time necessary for its survival).

- Historic and cultural resources: a substantial reduction in sunlight available for the enjoyment or appreciation of the sunlight-sensitive features of an historic or cultural resource.
- Open space utilization: a substantial reduction in the usability of open space as a result of increased shadow, with consideration given to anticipated new users and the open space's utilization rates throughout the affected time periods as well as to the inventory of available open space resources in the study area.
- For any sunlight-sensitive feature of a resource: complete elimination of all direct sunlight on the sunlight-sensitive feature of the resource, when the complete elimination results in substantial effects on the survival, enjoyment, or, in the case of open space or natural resources, the use of the resource.

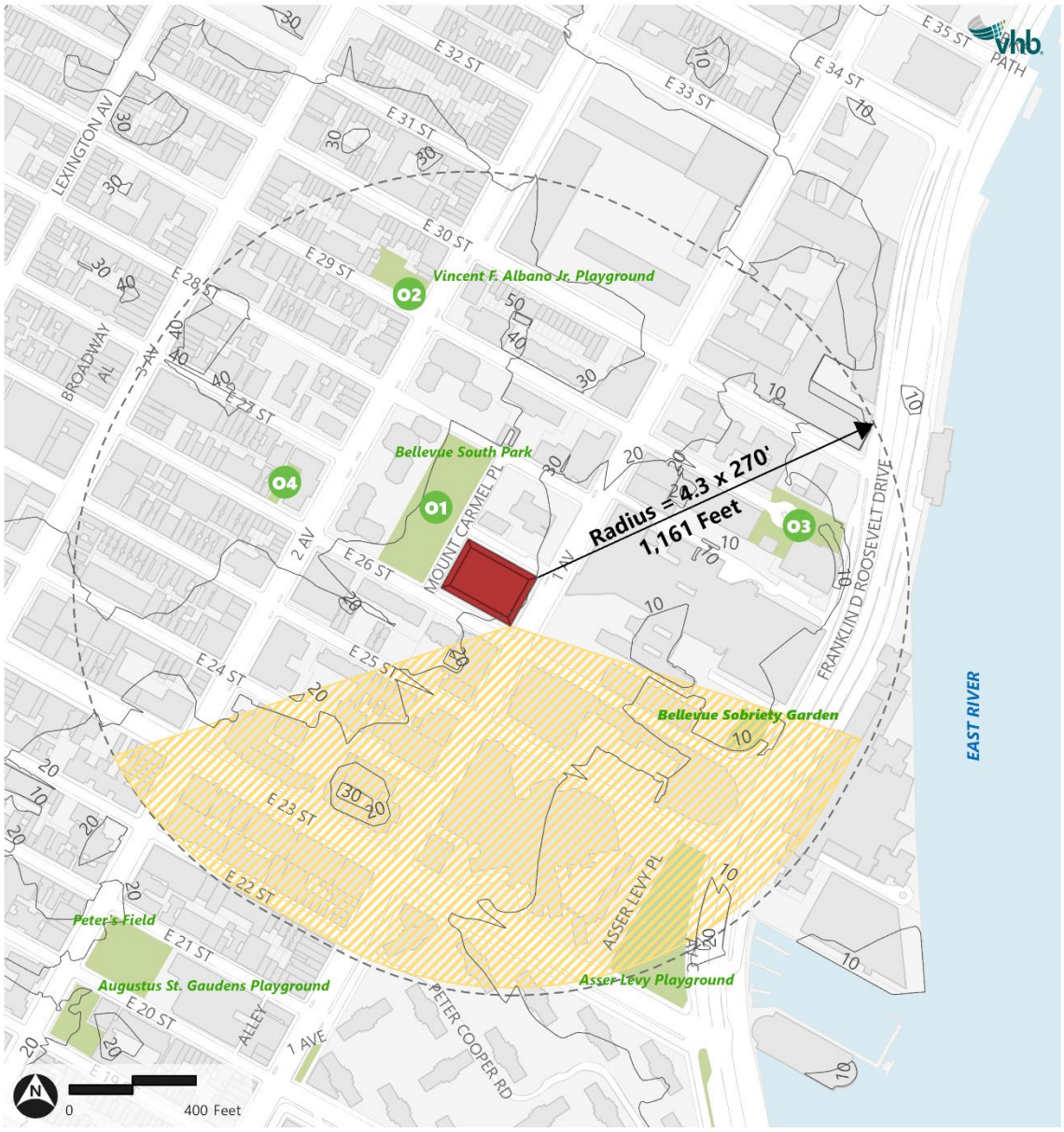
In general, a significant adverse shadow impact occurs when the incremental shadow added by a project falls on a sunlight-sensitive resource and substantially reduces or completely eliminates direct sunlight exposure, thereby significantly altering the public's use of the resource or threatening the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

Preliminary Assessment

Tier 1 and 2 Screening

The Proposed Project would rise to a height up to 255 feet and would have additional height of up to 15 feet for mechanical and elevator bulkheads and associated screens, for a total building height of approximately 270 feet; therefore, a height of 270 feet is considered in the shadows analysis. The Development Site is oriented roughly northeast to southwest along the Kips Bay street grid. The maximum screening radius from the proposed 270-foot-tall building would be an approximately 1,161-foot radius from the Development Site (Tier 1). The area that cannot be shaded by the Proposed Project was drawn from the southernmost point of the Development Site (Tier 2). **Figure 3-1** shows the current topographic elevation of the Development Site and surrounding area, which ranges from approximately 10 feet to 50 feet.

Figure 3-1 Tier 1 and Tier 2 Screening



As shown in **Table 3-1**, four sunlight-sensitive resources—all of which are open space resources—are wholly or partially located within the area that can be shadowed by the Proposed Project and were therefore advanced to the Tier 3 analysis. The Bellevue Hospital Center's historic buildings (identified in the Historic Resources section of **Part II: Supplemental Analyses**) are not included in this analysis as they do not contain sunlight-sensitive elements. Consistent with *CEQR Technical Manual* methodology, private open spaces that are not open to the public on a regular basis are excluded from analysis; these spaces include the Bellevue Hospital Center Plaza, a fenced space that contains trees, landscaping, a fountain, and walkways, and the open space associated with the 344 East 28th Street housing complex. Another private open space, the Bellevue Sobriety Garden is controlled by Bellevue and open to Bellevue patients, staff, and visitors, and was considered in the shadows assessment, however as this site is located in the area that cannot be shaded by the Proposed Project, further assessment is not warranted. Additionally, the Asser Levy Playground, a public open space, is not considered further as it is in the area that cannot be shaded by the Proposed Project.

Table 3-1 Tier 3 Sunlight Sensitive Resources in the Area of Potential Shadow

Map ID	Resource Name	Resource Summary	Sunlight-Sensitive Elements
Open Space Resources			
O1	**Bellevue South Park**	Recently renovated neighborhood park featuring a dog run, spray showers, game tables, play equipment, a basketball court, seating, and the Skagerrak sculpture	Active and passive recreation and vegetation
O2	**Vincent F. Albano Jr. Playground**	Playground featuring play equipment and handball courts	Active recreation and vegetation
O3	**Alexandria Center Public Plaza and Urban Garden**	Privately owned urban farm created with support from GrowNYC featuring a plaza along the East River	Vegetation
O4	**240 East 27 Street Plaza (Parc East Tower Apartments)**	Plaza with seating, tables, and trees	Vegetation

Tier 3 Screening Assessment

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

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

In accordance with the *CEQR Technical Manual*, a model of the building in the With-Action condition was developed in a three-dimensional computer program (Rhinoceros 3D). The model was geolocated, and the surrounding terrain was imported into the model to account for differences in topography. As noted above, the Tier 3 shadow screening shows the shadows that could be cast as a

result of the Proposed Project but does not account for existing buildings which may already cast shadows on the identified resources. See **Figure 3-2** through **Figure 3-5** below.

The Tier 3 screening indicates that in the absence of intervening structures, the Proposed Project could cast shadows on the Bellevue South Park (O1), Alexandria Center Public Plaza and Urban Garden (O3), and 240 East 27 Street Plaza (Parc East Tower Apartments) (O4).

Vincent F. Albano Jr. Playground (O2) would not receive any shadow from the Proposed Project during any of the analysis days. Therefore, further analysis of this resource is not warranted. See **Table 3-2** for a summary of the Tier 1 to Tier 3 screening results.

Table 3-2 Tier 1 through Tier 3 Shadows Screening Results

Map ID	Resource Name	Tier 1-3 Screening Results
Open Space		
O1	Bellevue South Park	Detailed analysis warranted
O2	Vincent F. Albano Jr. Playground	Screened at Tier 3
O3	Alexandria Center Public Plaza and Urban Garden	Detailed analysis warranted
O4	240 East 27 Street Plaza (Parc East Tower Apartments)	Detailed analysis warranted

Figure 3-2 Tier 3 Screening December 21 Analysis Day

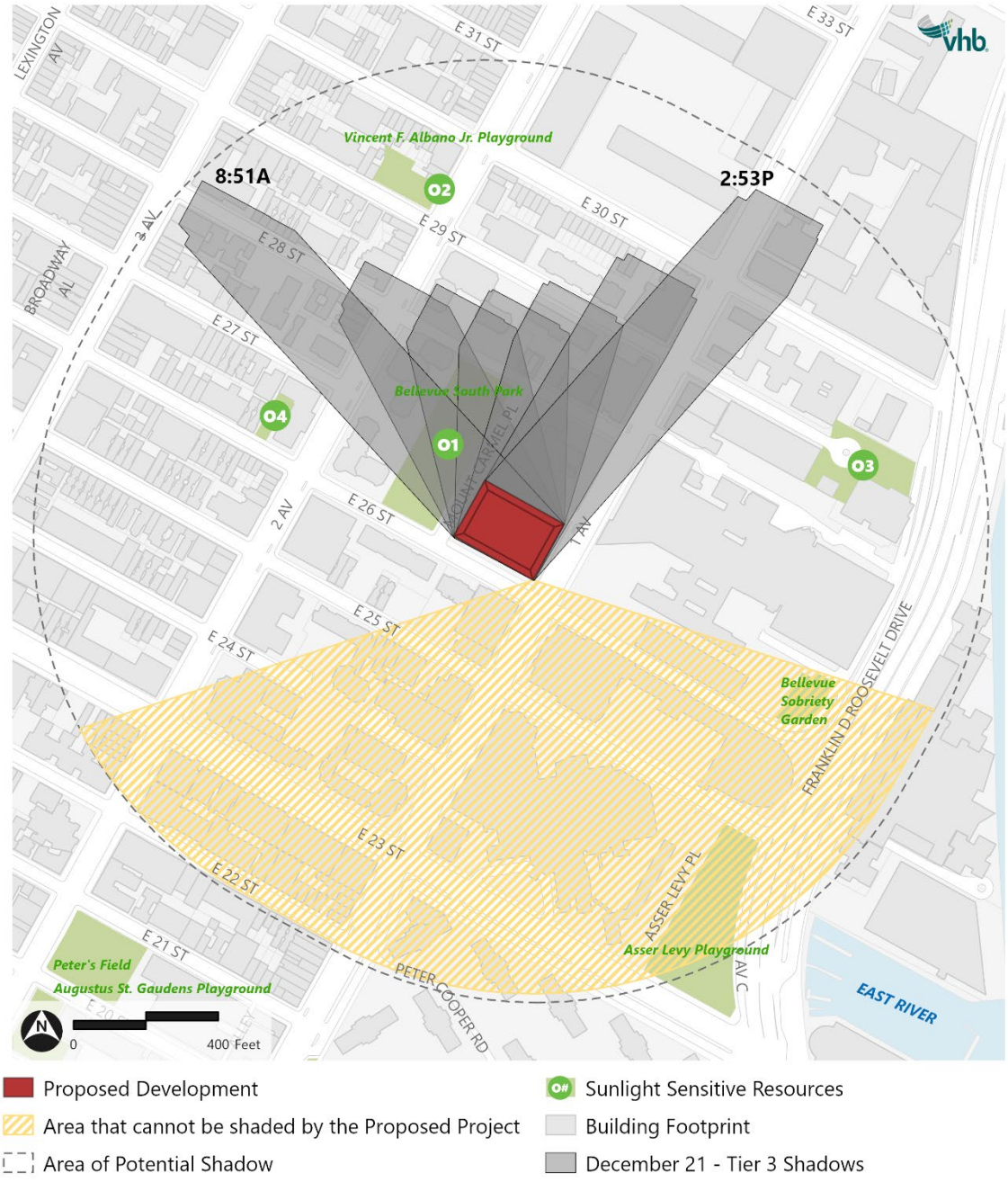


Figure 3-3 Tier 3 Screening March 21 / September 21 Analysis Day

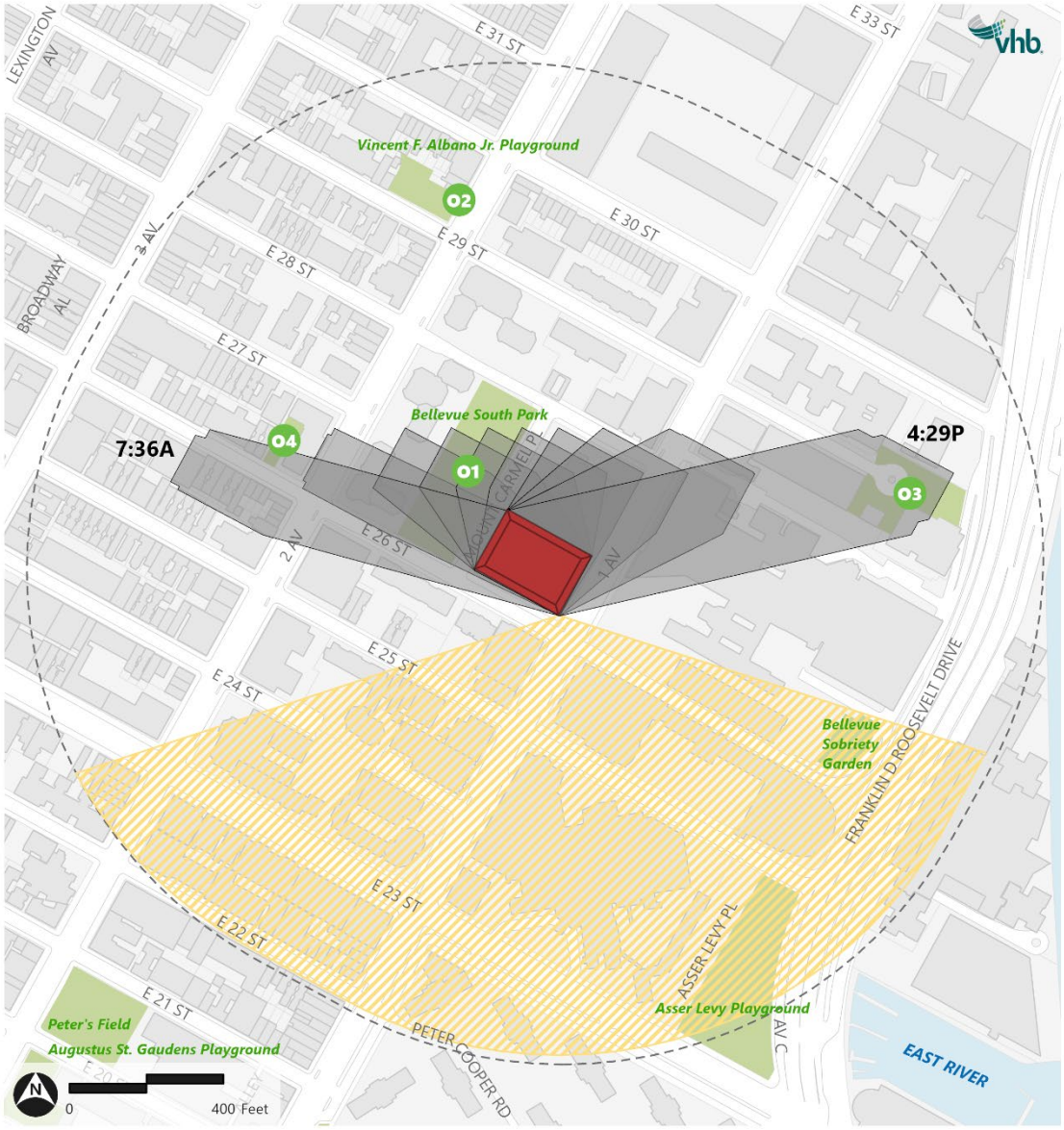


Figure 3-4 Tier 3 Screening May 6 / August 6 Analysis Day

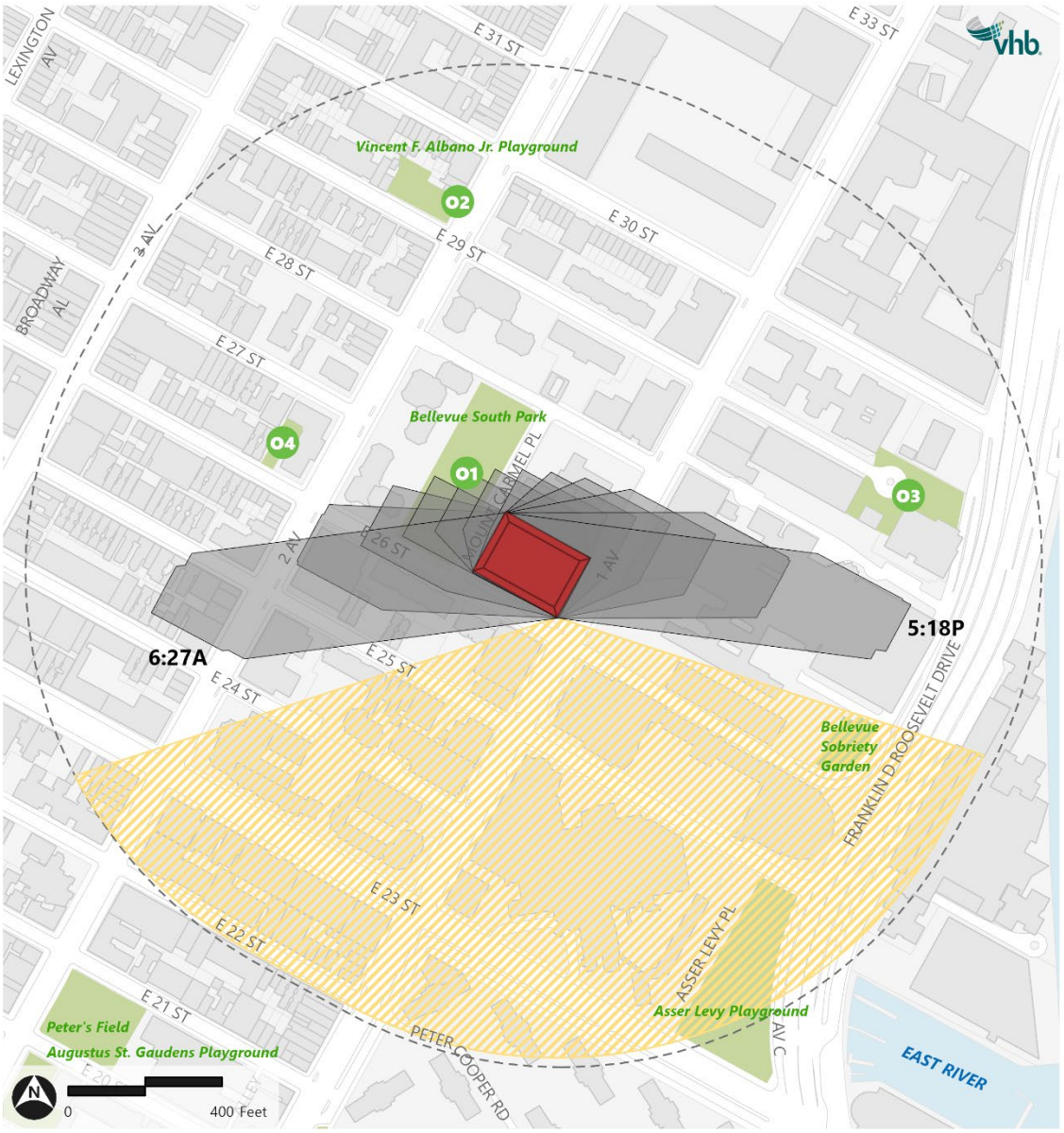
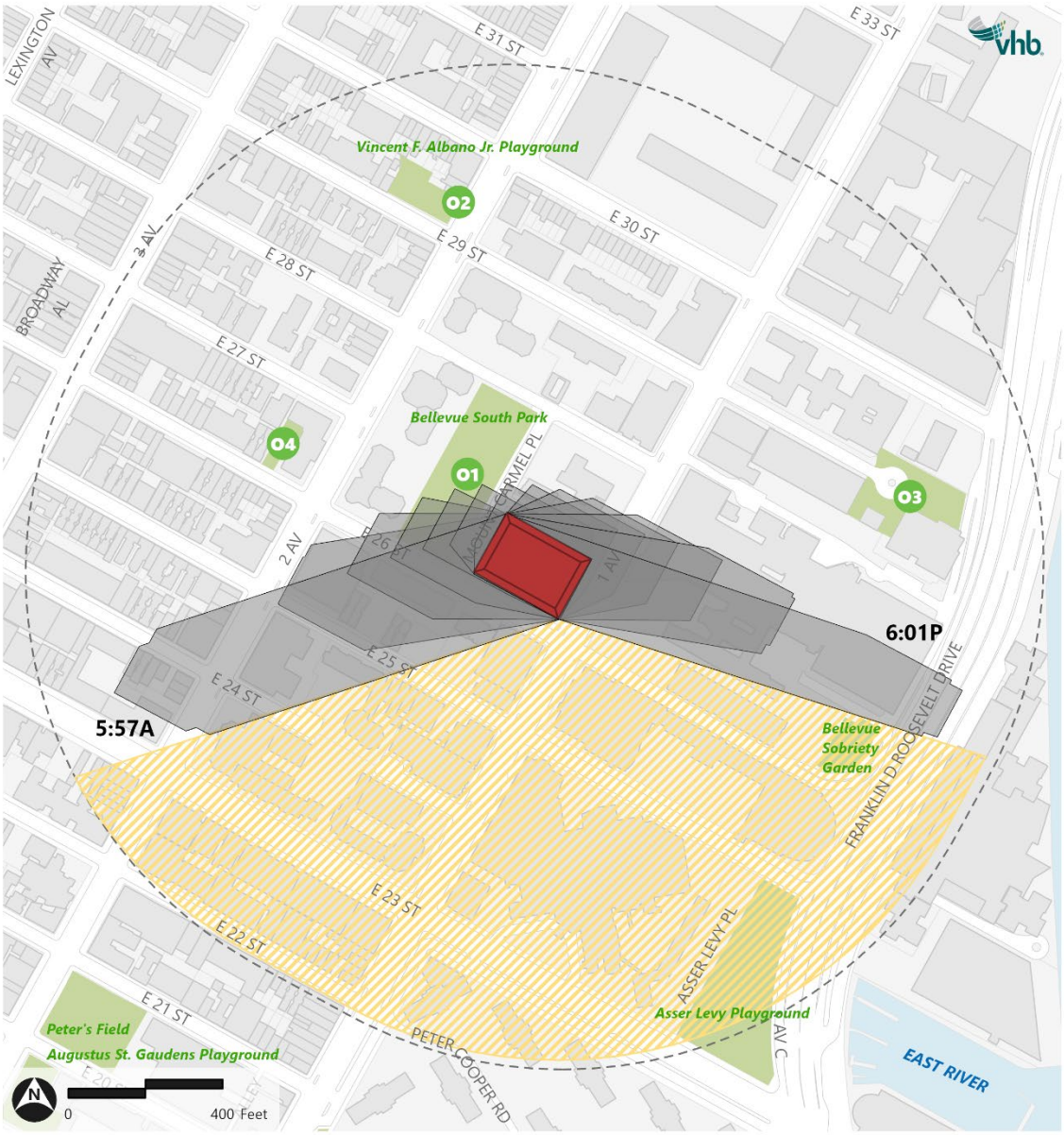


Figure 3-5 Tier 3 Screening June 21 Analysis Day



Detailed Assessment

As discussed above, a detailed shadow analysis accounts for incremental shadows cast by existing buildings or buildings that may be constructed in an area in the No-Action condition. The detailed shadow analysis models a baseline condition (future No-Action condition) that is compared to the future condition with the Proposed Project (future With-Action condition) to distinguish the additional (incremental) shadow cast by the Proposed Project.

No-Action Condition

In the future No-Action condition, it is assumed that the existing 359,000-gsf building on the Development Site would be re-tenanted with a mix of office and laboratory space for continued use by City agencies. No changes would occur to the building bulk or height.

As discussed in **Section 2, Land Use, Zoning, and Public Policy**, there are several planned projects in the vicinity of the Development Site located within the Area of Potential Shadow, which include:

- **Science Park and Research Campus (SPARC)**. This project, which is proposed for CUNY Hunter College's Brookdale Campus at East 25th Street and First Avenue, would replace an entire city block with approximately 2.19 million sf of space consisting of academic, public health, health care, and commercial life sciences space. This project is expected to be complete in 2031, after completion of the Proposed Project.
- **Alexandria Center (Phase II – North Tower)**. This project, which is located at 29th Street and First Avenue between Bellevue Hospital and NYU Langone Health, will replace the existing surface parking lot with approximately 330,000 sf of office and laboratory space. This project is expected to be complete in 2029.
- **429 Second Avenue**. This project will consist of 59,708 sf of residential space, projected to contain 59 units in a 150-foot-tall building. This project will be complete in 2023.

Since the Alexandria Center project is still in the planning phases, detailed information about its proposed massing and building height was unavailable at the time of this EAS. Therefore, this project, as well as the SPARC project, which would be completed after the Proposed Project, was excluded from the detailed shadows analysis, which results in a more conservative assessment. The 150-foot-tall building at 429 Second Avenue, which is located to the southwest of the Development Site, is included in the detailed assessment.

With-Action Condition

In the With-Action condition, the Proposed Project would result in an approximately 270-foot-tall building (with bulkhead) to the Development Site in the place of the existing building on the site. The detailed shadow analysis builds on the three-dimensional modeling used in the Tier 3 analysis to identify whether the building proposed under the With-Action condition could cast shadows on the identified resources of concern. Any new shadows projected to be cast onto the identified resources from the Proposed Project are considered "incremental shadows."

Table 3-3 provides the modeled incremental shadow entry/exit times for the sunlight sensitive resources. Bellevue South Park (O1) would receive incremental shadow on all of the four analysis days; therefore, this resource is discussed further below.

For the Alexandria Center Public Plaza and Urban Garden (O3), the detailed shadows modeling showed that this resource would not receive incremental shading from the Proposed Project; therefore, further analysis of this resource is not warranted. For 240 East 27 Street Plaza (Parc East Tower Apartments) (O4), the detailed analysis showed that incremental shadow would reach a very small portion of paved area in the plaza for a total of four minutes; therefore, further analysis of this resource is not warranted.

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

	Analysis Day			
Resource	**December 21**	**March 21/September 21**	**May 6/August 6**	**June 21**
Analysis Timeframe	**8:51 AM-02:53 PM**	**7:36 AM-4:29 PM**	**6:27 AM-5:18 PM**	**5:57 AM-6:01 PM**
Open Space Resources				
O1 – Bellevue South Park	8:51 AM to 1:19 PM (4 hours and 28 minutes)	7:36 AM to 12:38 PM (5 hours and 2 minutes)	6:27 AM to 11:49 AM (5 hours and 22 minutes)	6:04 AM to 11:37 AM (5 hours and 33 minutes)
O3 – Alexandria Center Public Plaza and Urban Garden	No incremental shading	No incremental shading	No incremental shading	No incremental shading
O4 – 240 East 27 Street Plaza (Parc East Tower Apartments)	No incremental shading	8:01 AM to 8:05 AM (4 minutes)[1]	No incremental shading	No incremental shading

Notes:
Per the *2021 CEQR Technical Manual*, the selected time zone for the analysis is Eastern Standard Time and Daylight Savings Time was not used.
[1] The *CEQR Technical Manual* does not require a detailed analysis for sunlight-sensitive resources that receive less than 10 minutes of incremental shading.

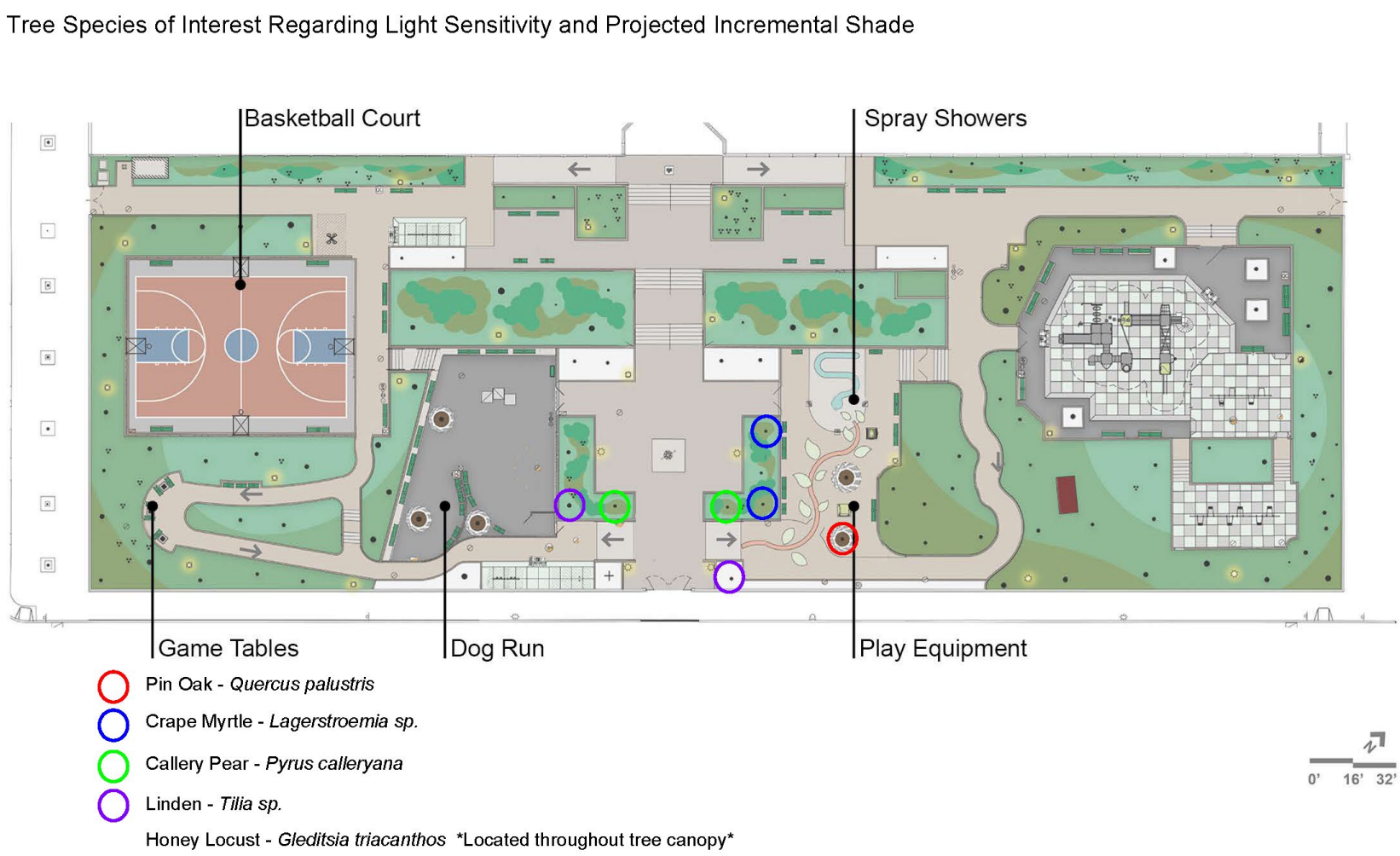
Open Space Resource – O1 Bellevue South Park

Bellevue South Park is located directly west of the Development Site and is a newly renovated open space that features a basketball court, game tables, a dog run, play equipment, spray showers, and the Skagerrak sculpture (see **Figure 3-6**). There are also a number of benches throughout the park. The center of the park serves as an east-west pedestrian way connecting to the pedestrianized East 27th Street adjacent to the Development Site. This detailed shadows analysis assessed all of the listed features as sunlight sensitive except for the sculpture consistent with the *CEQR Technical Manual* guidance discussed above. To provide additional context and for illustrative purposes, a site plan of the Bellevue South Park reconstruction was overlaid on the detailed analysis figures to identify potential project-related shadows impacts on specific features of this resource (see **Figure 3-7** to **Figure 3-49**).

The detailed shadows analysis also considers the potential for the Proposed Project to affect the park in terms of its vegetation during the growing season and its utilization, informed by a field survey of the park on September 7, 2023 (see **Appendix B**). In terms of vegetation, the park contains a substantial number of trees that together provide an extensive tree canopy on either side of the pedestrian way. In addition to the trees, vegetation within the park consists of shrubs and groundcover species. Overall, the majority of the vegetation was observed to be consistent with the species one would find in a full shade-tolerant environment. The full assessment of potential effects on the park's vegetation is provided in **Appendix B**. In terms of utilization, during the field survey, it

was observed that the majority of park users utilized full shade areas, consistent with the park's major program areas. Several users utilized the park to travel east-west through the neighborhood. The type of users that were observed included mothers/care takers and children (limited), the elderly/retired (notably many wheelchair or disabled individuals), workers from the adjacent construction sites and others eating their lunch or reading, and people utilizing the basketball court.

Figure 3-6 Bellevue South Park Schematic and Tree Species of Interest



Source: Ennead, based on as-built condition

December 21st Analysis Day

Existing/No Action Condition

In the existing condition during the December 21st analysis day, because shadows are long at this time of year, Bellevue South Park experiences shadows from surrounding buildings over a majority of the park space. In the early morning hours, most of the park is cast in shadow with a few pockets of sunlight over the playground and basketball court. As the sun moves further west, more of the park is cast in shadow eliminating sunlight in the playground and basketball court and introducing small sections of sunlight on the western and northern portions of the park which mostly contains landscaping. After approximately 12:21 PM, the northern half of the park receives sunlight with minor shading along the eastern boundary and southern portions of the park. During this time, the play equipment receive uninterrupted sunlight. However, starting from approximately 2:30 PM, the southern half of the park begins to experience shading which extends further north until most of the park is cast in shadow again by the end of the analysis day.

With Action Condition

With the Proposed Project, incremental shadows would be cast on portions of the park on the December 21st analysis day from 8:51 AM to 1:19 PM for a total duration of approximately 4 hours and 28 minutes (see **Figure 3-7** to **Figure 3-15**). The shadow would enter from the southwestern portion of the park, then move to the northwest, and finally exit to the northeast. Throughout this period, shadows introduced by the Proposed Project would travel north covering portions of landscaped areas, the basketball court, the dog run, and the play equipment. At its greatest extent, the shadow could eliminate sunlight from the park for a period of less than 20 minutes beginning at 10:51 AM (see **Figure 3-11**). Incremental shading during this 20-minute duration would occur mostly on the pathways and the landscaped areas in the northern portion of the park. Beginning again at 11:11 AM, portions of the park would receive sunlight; the areas of the park in sunlight would increase through the end of the analysis period.

Overall, on the December analysis day, incremental shadows would be cast on the park during the early morning hours of the winter season, when park utilization would typically be at its lowest, and most of the park would already be in shadow. Given that the extent of incremental shadow on this analysis day would be relatively small and consistent with the character of shadows on the park in the existing condition, it would not affect the public's enjoyment of this resource.

March 21st/September 21st Analysis Day

Existing/No Action Condition

Similar to the December 21st analysis day, in existing conditions, the park receives shading in the early morning hours of the March 21st/September 21st analysis day with a few areas of sunlight on the play equipment and dog run. As the sun travels west, more areas of the park receive sunlight with the greatest extent of sunlight occurring at approximately 12:38 PM. During this time, only some of the landscaping along the southern boundary of the park receives shadow while the rest of park would receive sunlight. However, starting at approximately 2:38 PM, shadows cast from the surrounding buildings cover additional areas of the park such that by the end of the analysis day, only small portions of the play equipment and dog run receive sunlight.

With Action Condition

With the Proposed Project, incremental shadows would be cast on the March 21st/September 21st analysis day from 7:36 AM to 12:38 PM for a total duration of approximately 5 hours and 2 minutes (see **Figure 3-16** to **Figure 3-26**). The shadow would move from the southwest to the northeast in the middle portion of the park. This area of the park that would be shaded contains portions of landscaped areas, the basketball court, the dog run, walkways, and the play equipment. Even at its greatest extent, incremental shadow would never eliminate sunlight entirely from the park and the park would be increasingly in sun until 12:38 PM when project shadows would no longer reach the park. At this point, the park would receive uninterrupted sunlight for approximately two hours, between approximately 12:38 PM and 2:38 PM, before buildings adjacent to the park on the southwest and west would begin to cast shadow.

During the period of incremental shadow, areas within the park that would receive sunlight include portions of the playground, the basketball court, the dog run, the spray showers, and the middle of the park. At any time during the period of incremental shadows, park visitors would be able to find seating or enjoy active recreation that would receive sunlight. Given that substantial portions of the park would remain in sun during the period when the project would cast shadow, particularly after 10:00 AM, it is not expected that the public's enjoyment of this resource would be adversely affected by the Proposed Project.

In terms of the potential effect on vegetation, as discussed in more detail in **Appendix B**, the majority of the vegetation was observed to be consistent with the species one would find in a full shade-tolerant environment. For those species that would experience a change in sun/shade condition—Honey Locust, Crape Myrtle, Linden, and Callery Pears—it is expected that the specimen would adapt to the change, and the incremental shadow would not adversely impact these species. For the single Pin Oak that was found to be in decline, it is expected that it will continue to decline with or without the Proposed Project. Therefore, it is not anticipated that incremental shading on the vegetation would have adverse effects.

May 6th/August 6th Analysis Day

Existing/No Action Condition

Under existing conditions, the park is mostly in shadow at the beginning of the May 6th/August 6th analysis day at 6:27 AM. Over the course of approximately three hours, shadows recede from the park with the greatest extent of sunlight occurring at approximately 11:29 AM in which the entire park receives sunlight. The entire park receives uninterrupted sunlight for a duration of approximately two hours after which large portions of the park receive shadow that covers portions of the play equipment, basketball court, landscaping, and trees. By the end of the analysis day, most of the park is in shadow.

With Action Condition

With the Proposed Project, incremental shadows would be cast on the May 6th/August 6th analysis day from 6:27 AM to 11:49 AM for a total duration of approximately 5 hours and 22 minutes (see **Figure 3-27** to **Figure 3-37**). The shadow would move from the southwest to the northeast in the southern half of the park. The area of the park that would be shaded contains portions of landscaped areas, game tables, the basketball court, the dog run, walkways, and the play equipment. Even at its

greatest extent, incremental shadow would never eliminate sunlight entirely from the park. As mentioned previously, the park would still remain in partial sunlight during this time and the entire park would receive uninterrupted sunlight for approximately two hours, between approximately 11:49 AM and 1:49 PM, before buildings adjacent to the park on the south and southwest would begin to cast shadow.

During the period of incremental shadow, areas within the park that would receive sunlight include portions of the playground, the basketball court, and the dog run found along the middle of the park. At any time during the period of incremental shadows, park visitors could find seating or enjoy active recreation in areas that would receive sunlight. Furthermore, the period of incremental shadow would occur during the morning hours of the day when peak utilization is typically the lowest. Given that substantial portions of the park would remain in sunlight during the period when the project would cast shadow, particularly after 8:27 AM, with the northern half of the park fully in sunlight beginning around 9:57 AM, it is not expected that the public's enjoyment of this resource would be adversely affected.

In terms of the potential effect on vegetation, as discussed in more detail in **Appendix B**, the majority of the vegetation was observed to be consistent with the species one would find in a full shade-tolerant environment. For those species that would experience a change in sun/shade condition—Honey Locust, Crape Myrtle, Linden, and Callery Pears—it is expected that the specimen would adapt to the change, and the incremental shadow would not adversely impact these species. For the single Pin Oak that was found to be in decline, it is expected that it will continue to decline with or without the Proposed Project. Therefore, it is not anticipated that incremental shading on the vegetation would have adverse effects.

June 21st Analysis Day

Existing/No Action Conditions

Similar to the other analysis days, under existing conditions, the park receives shading in the early morning hours of the June 21st analysis day with a few areas of sunlight on the play equipment, dog run, and the basketball court. As the sun travels west, shadow is limited to the middle portion and southern half of the park until the shadow completely recedes starting at 11:37 AM when the entirety of the park is sunlit. After 11:37 AM, portions of the park start to be cast in shadow again, specifically the play equipment to the north, and some landscaped areas. The extent of shadow continues to expand over more areas of the park until most of the park is cast in shadow by the end of the analysis day.

With Action Condition

With the Proposed Project, incremental shadows would be cast on the June 21st analysis day from 6:04 AM to 11:37 AM for a total duration of approximately 5 hours and 33 minutes (see **Figure 3-38** to **Figure 3-49**). The shadow would move from the southwest to the northeast in the middle portion of the park. This area of the park that would be shaded contains portions of landscaped areas, game tables, the dog run, the basketball court, and walkways. Even at its greatest extent, the shadow would never eliminate sunlight entirely from the park. Portions of the park would remain in sunlight during this time and would receive uninterrupted sunlight for approximately three hours, between approximately 11:37 AM and 2:37 PM, before shadows from the adjacent buildings to the south and southwest of the park would begin to cast shadow on portions of the park.

During the period of incremental shadow, areas within the park that would remain in sunlight include the entire northern portion of the park which contains play equipment, landscaping, walkways, and trees. At any time during the period of incremental shadows, park visitors could find seating or enjoy active recreation that would receive sunlight. Furthermore, the period of incremental shadow would occur during the early morning hours when peak utilization is typically the lowest. Given that substantial portions of the park would remain in sunlight during the period when the project would cast shadow, particularly after 10:27 AM, with the northern half of the park fully in sun beginning around 9:27 AM, it is not expected that the public's enjoyment of this resource would be adversely affected.

In terms of the potential effect on vegetation, as discussed in more detail in **Appendix B**, the majority of the vegetation was observed to be consistent with the species one would find in a full shade-tolerant environment. For those species that would experience a change in sun/shade condition—Honey Locust, Crape Myrtle, Linden, and Callery Pears—it is expected that the specimen would adapt to the change, and the incremental shadow would not adversely impact these species. For the single Pin Oak that was found to be in decline, it is expected that it will continue to decline with or without the Proposed Project. Therefore, it is not anticipated that incremental shading on the vegetation would have adverse effects.

Conclusion

Overall, the Proposed Project would cast incremental shadows on Bellevue South Park during each of the analysis days. However, the modelling results showed that incremental shading would be limited to the morning hours of each analysis day when utilization is typically low, and the park would continue to receive periods of uninterrupted sunlight later in the day when utilization is higher. With the exception of the December analysis day (when park usage is at its lowest), substantial portions of the park would remain in sunlight during the periods when the project would cast shadow and at times during the period of incremental shadows, park visitors could find seating or other areas of the park that would receive sunlight. Given this, it is not expected that the public's enjoyment of Bellevue South Park would be adversely affected.

In terms of vegetation, as discussed in detail in **Appendix B**, the large majority of trees within the park would not experience a change in sun/shade conditions. For those species that would experience a change in sun/shade condition—Honey Locust, Crape Myrtle, Linden, and Callery Pears—it is expected that the specimen would adapt to the change, and the incremental shadow would not adversely impact these species. For the single Pin Oak that was found to be in decline, it is expected that it will continue to decline with or without the Proposed Project. Therefore, shadows from the Proposed Project would not result in a significant adverse impact on the tree specimens within Bellevue South Park. The identified shrub and groundcover vegetation is located in areas of full shade in the existing condition and would continue to experience full shade conditions in the future with the Proposed Project. The species identified within the park are all species that are hardy and resilient in full shade conditions; therefore, the Proposed Project would not adversely impact shrubs or groundcover vegetation in the park.

Overall, the Proposed Project would not result in a significant adverse impact on the park's vegetation—its trees, shrubs, and groundcover. Therefore, the Proposed Project would not result in a significant adverse shadows impact on Bellevue South Park—its utilization or its vegetation—or any of the identified sunlight-sensitive resources.

O1 – Bellevue South Park

Figure 3-7 December 21 - 8:51 AM



Figure 3-8 December 21 - 9:21 AM



Figure 3-9 December 21 - 9:51 AM

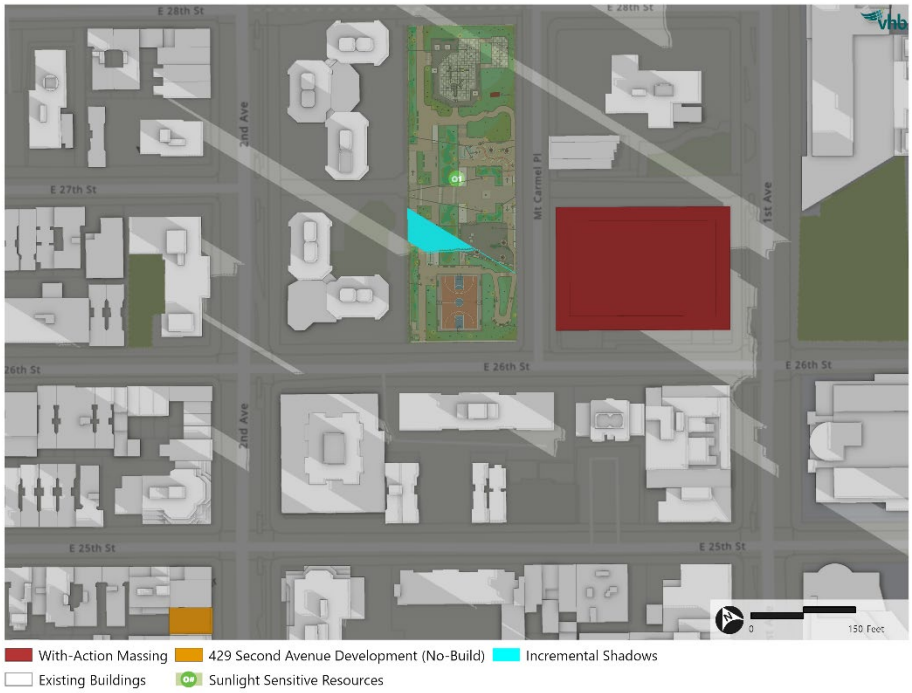


Figure 3-10 December 21 - 10:21 AM

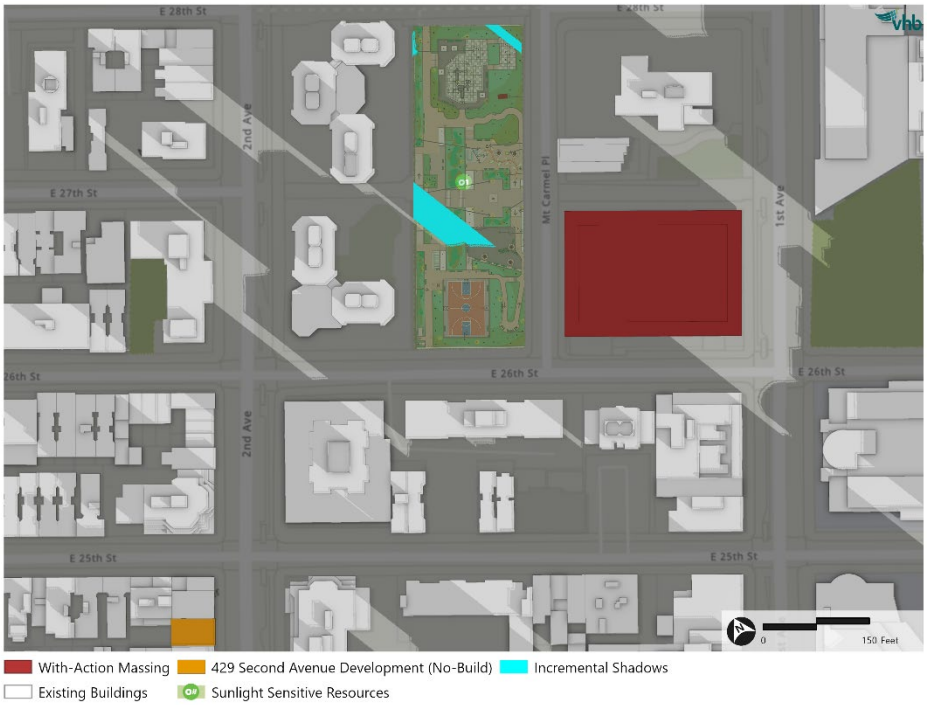


Figure 3-11 December 21 - 10:51 AM

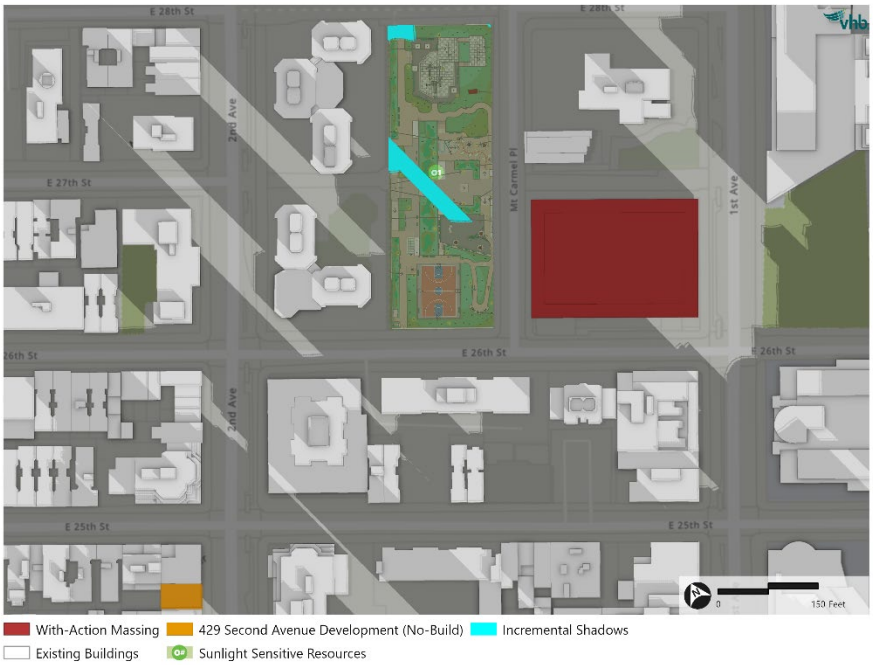


Figure 3-12 December 21 - 11:21 AM

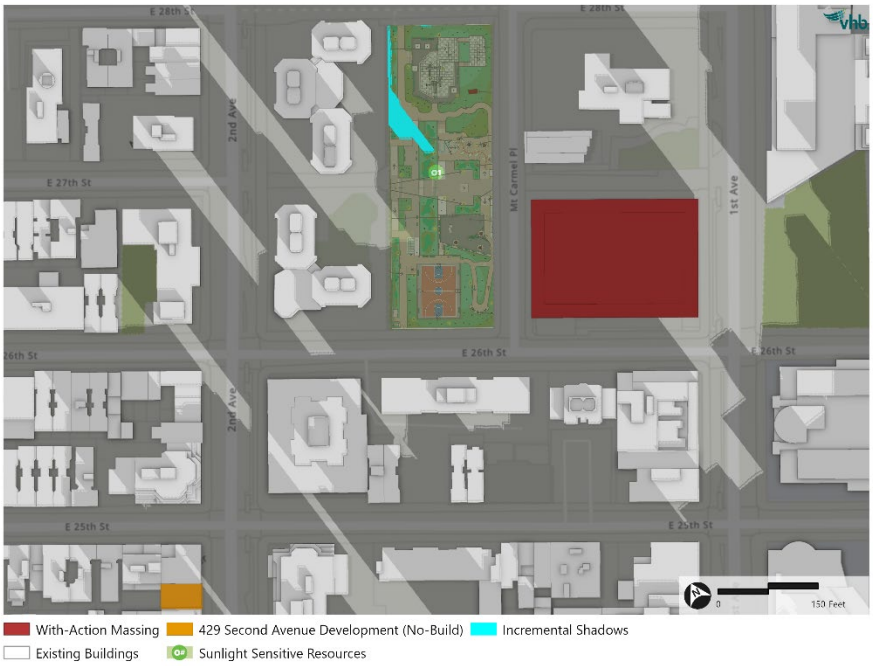


Figure 3-13 December 21 - 11:51 AM

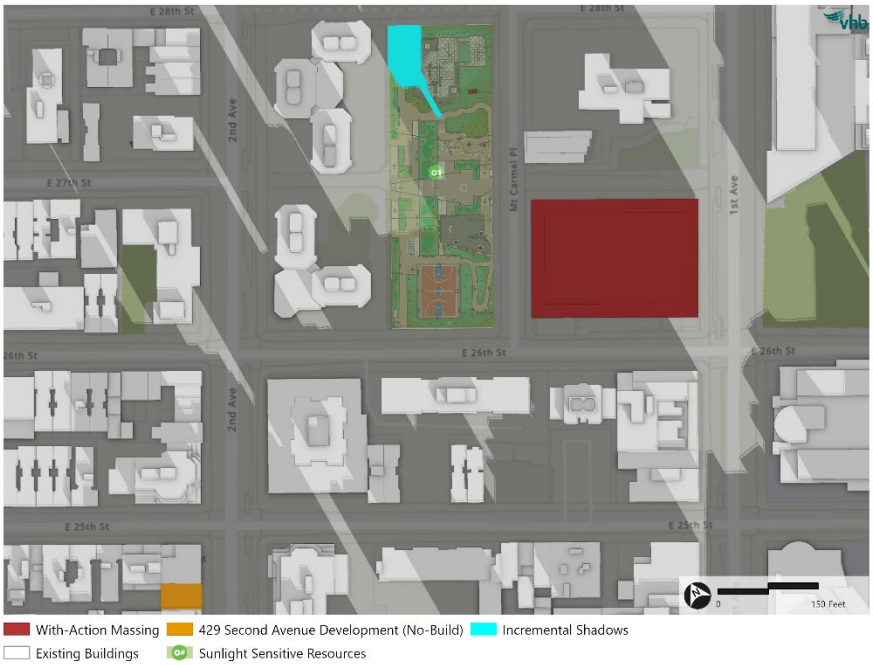


Figure 3-14 December 21 - 12:21 PM

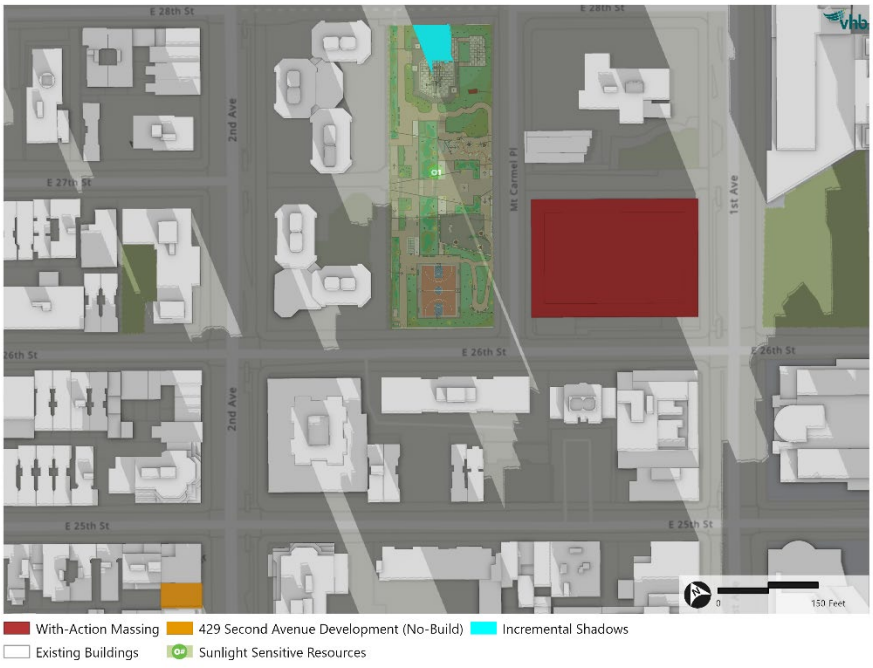


Figure 3-15 December 21 - 12:51 PM



Figure 3-16 March 21/September 21 - 7:36 AM



Figure 3-17 March 21/September 21 - 8:06 AM



Figure 3-18 March 21/September 21 - 8:36 AM



Figure 3-19 March 21/September 21 - 9:06 AM

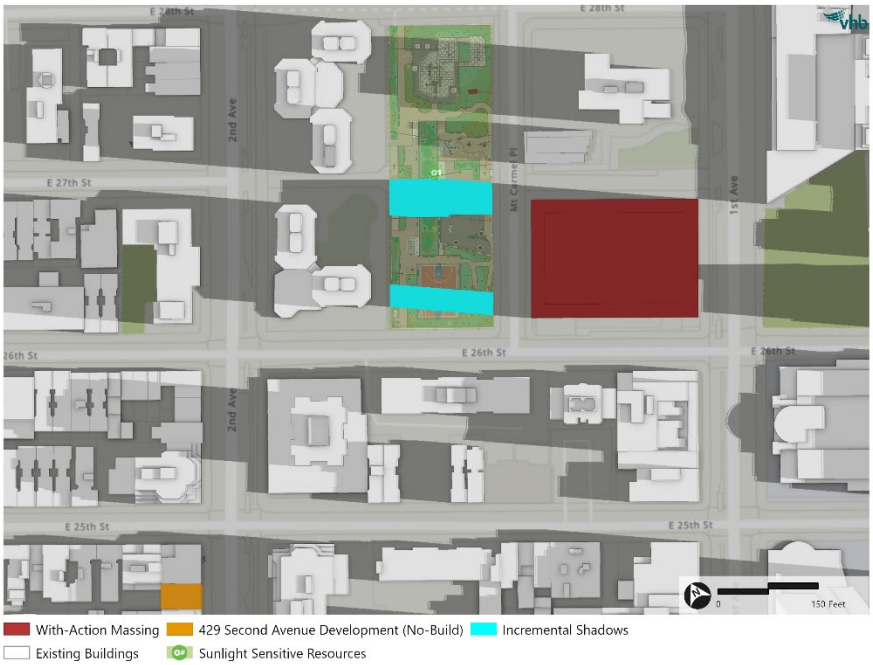


Figure 3-20 March 21/September 21 - 9:36 AM

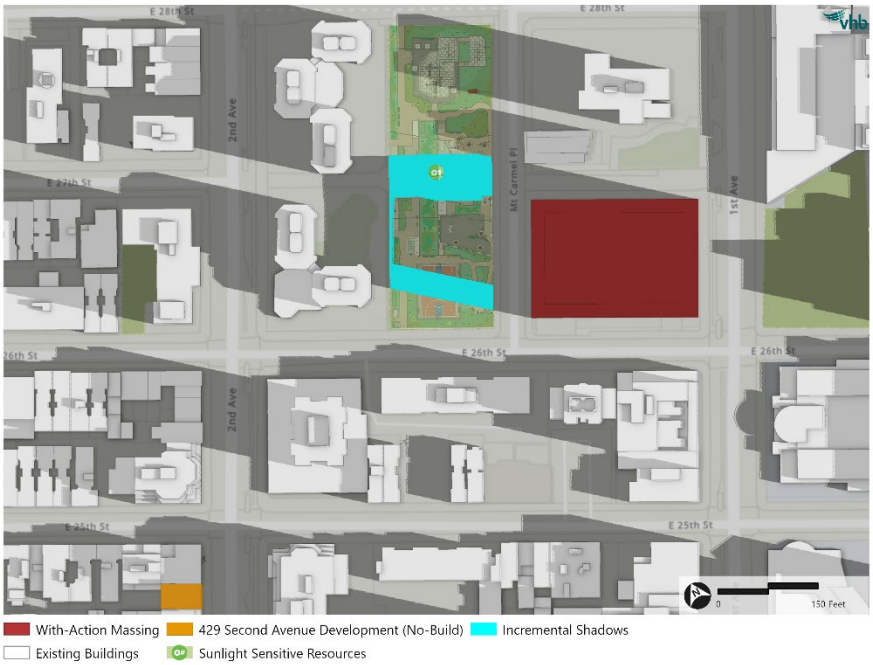
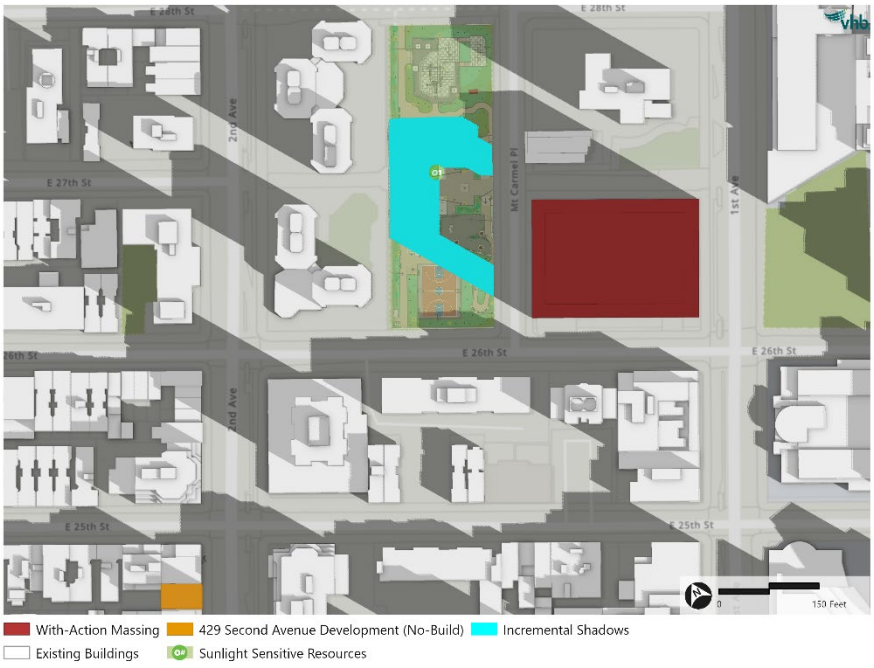


Figure 3-21 March 21/September 21 - 10:06 AM



Figure 3-22 March 21/September 21 - 10:36 AM



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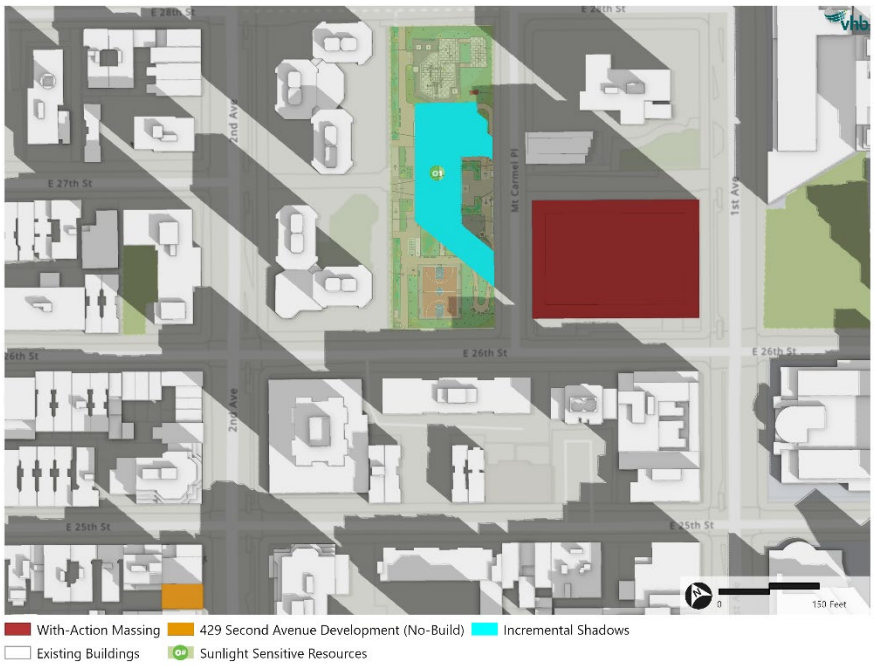
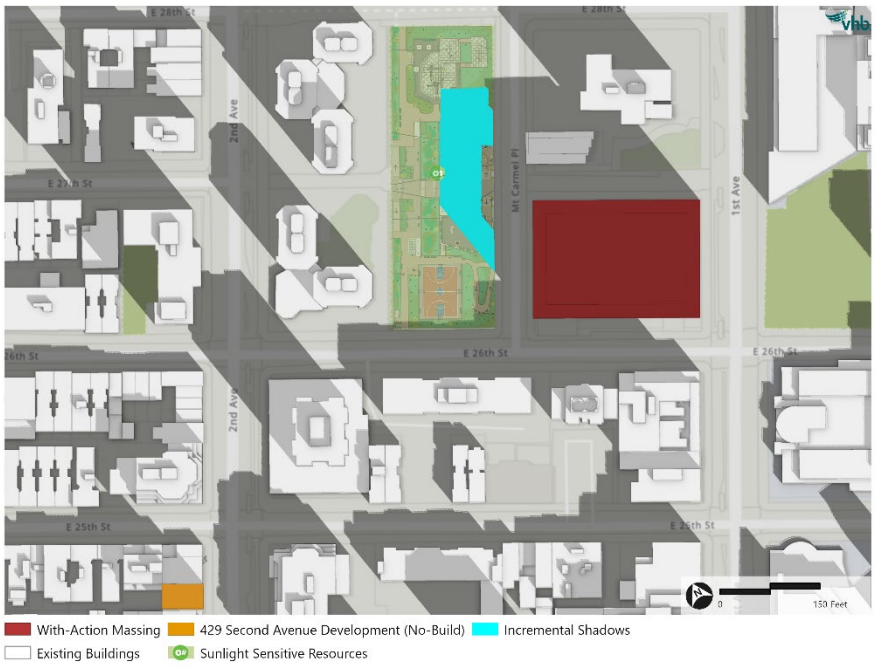


Figure 3-24 March 21/September 21 - 11:36 AM



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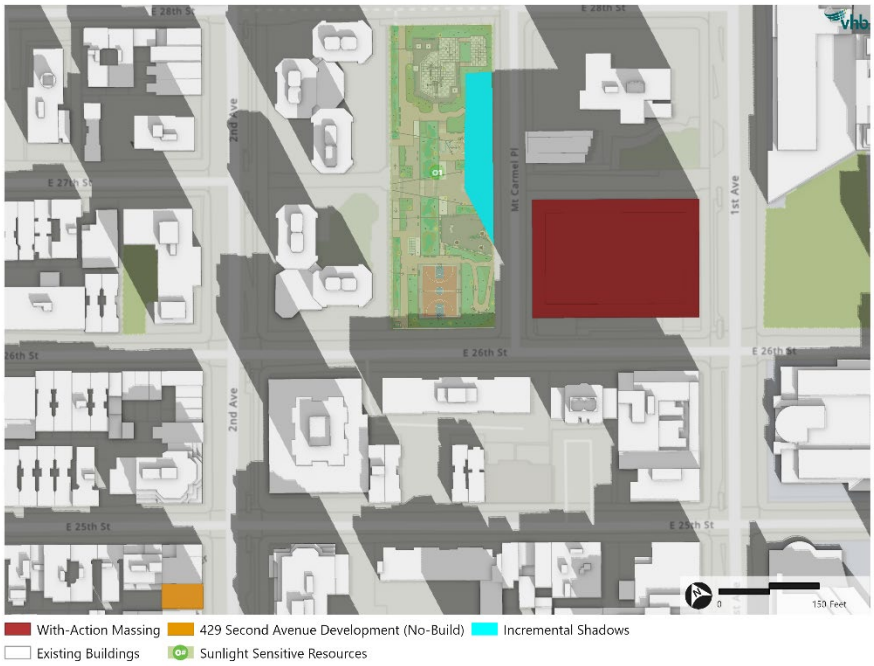


Figure 3-26 March 21/September 21 - 12:36 PM

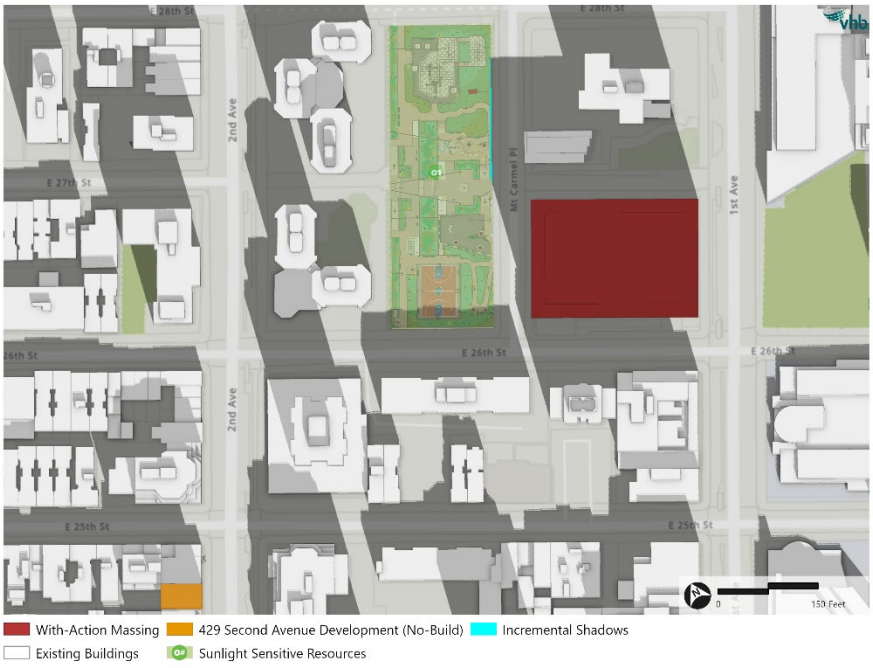


Figure 3-27 May 6/August 6 - 6:27 AM



Figure 3-28 May 6/August 6 - 6:57 AM



Figure 3-29 May 6/August 6 - 7:27 AM

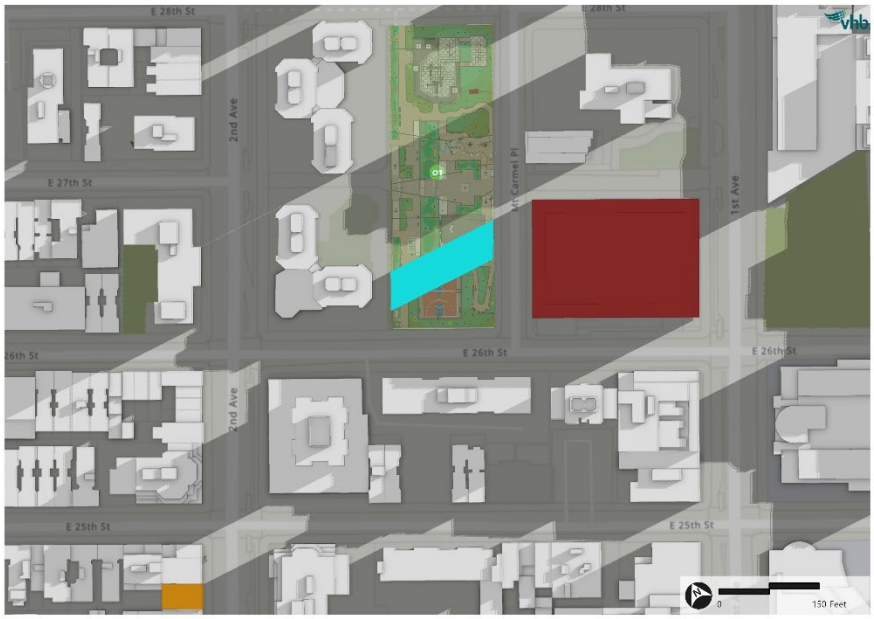


Figure 3-30 May 6/August 6 - 7:57 AM

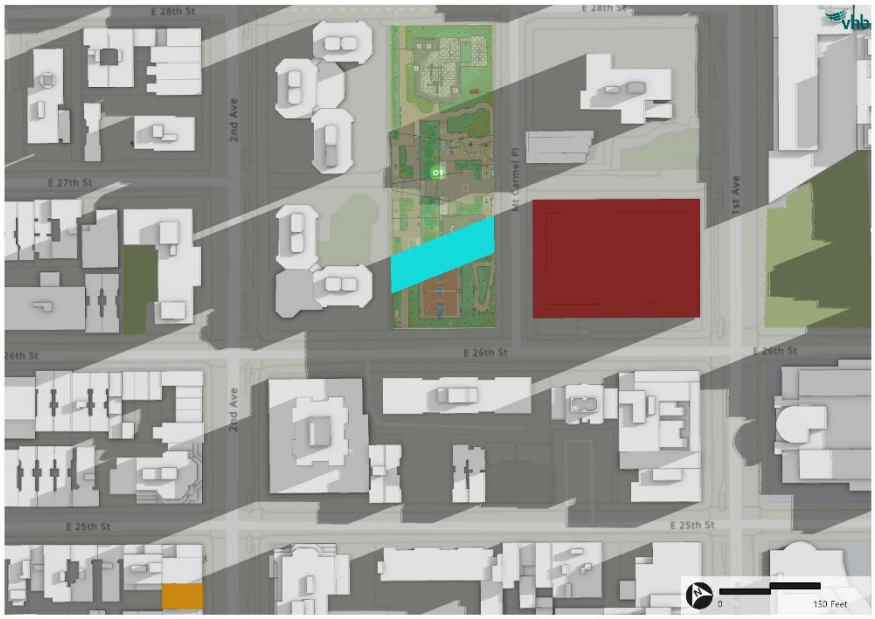


Figure 3-31 May 6/August 6 - 8:27 AM

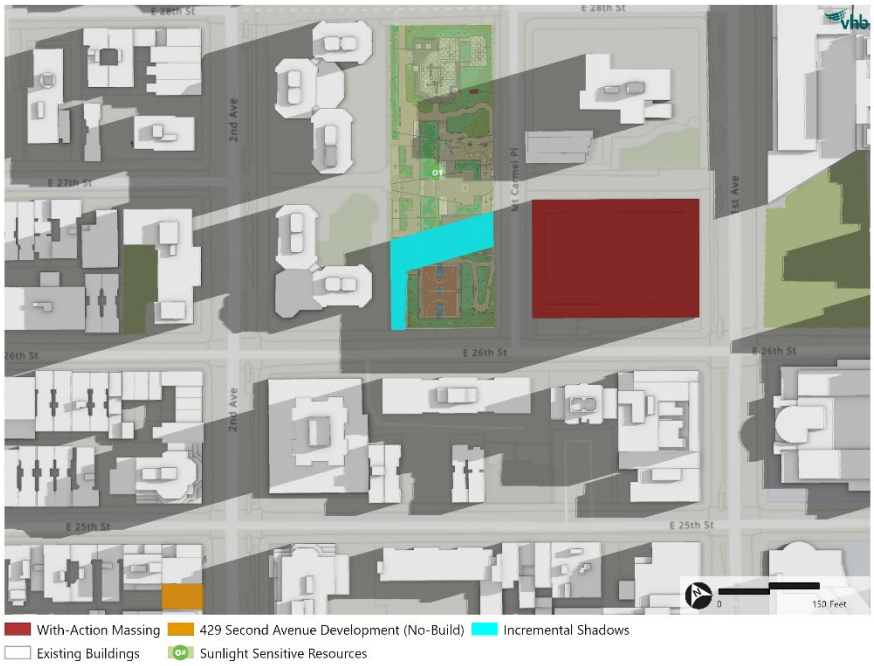


Figure 3-32 May 6/August 6 - 8:57 AM

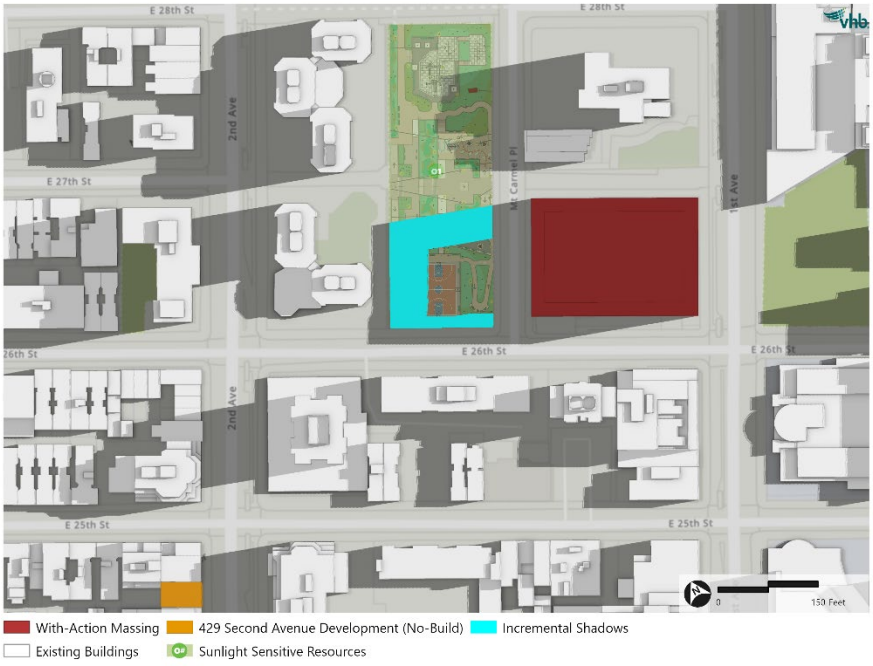


Figure 3-33 May 6/August 6 - 9:27 AM

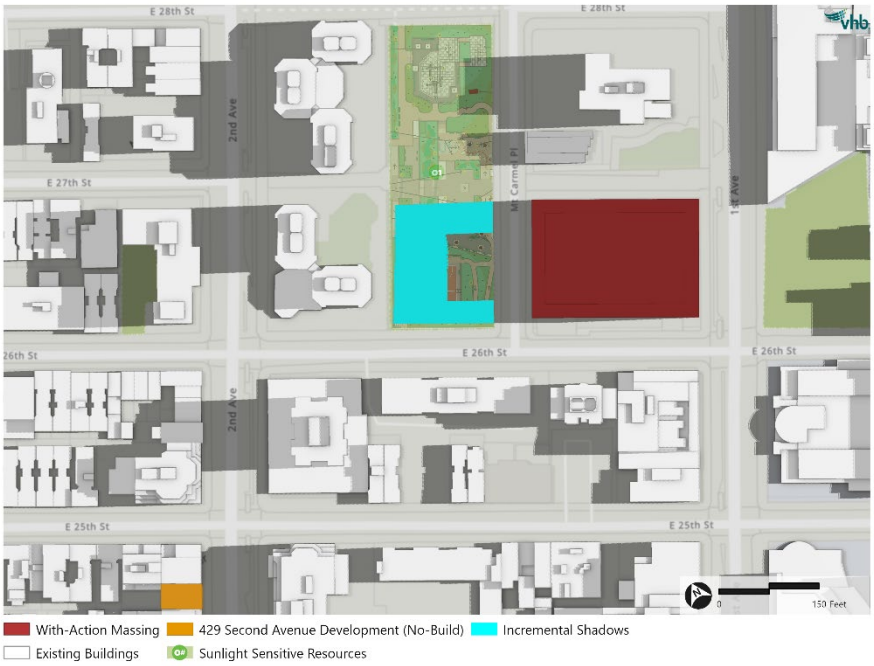
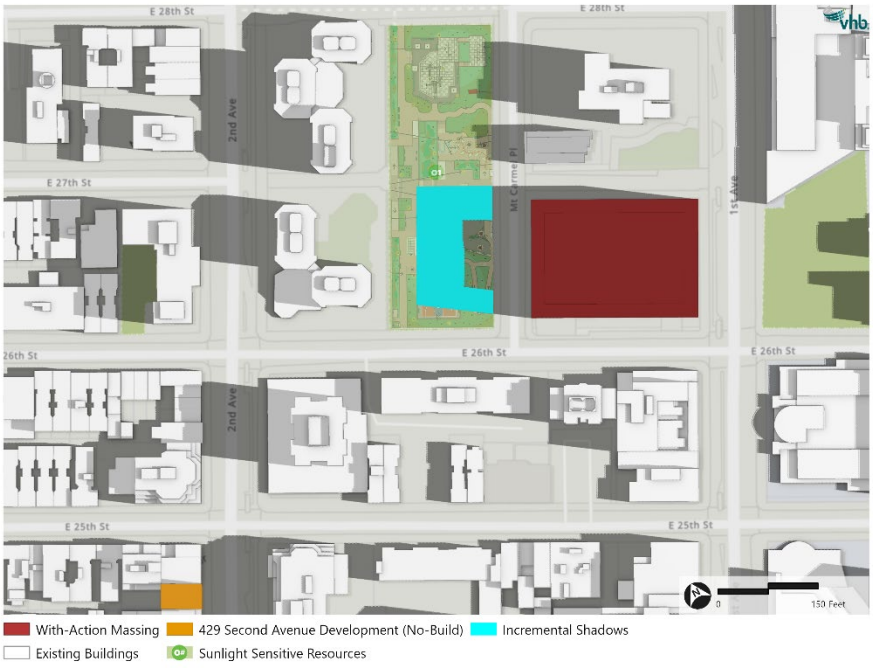


Figure 3-34 May 6/August 6 - 9:57 AM



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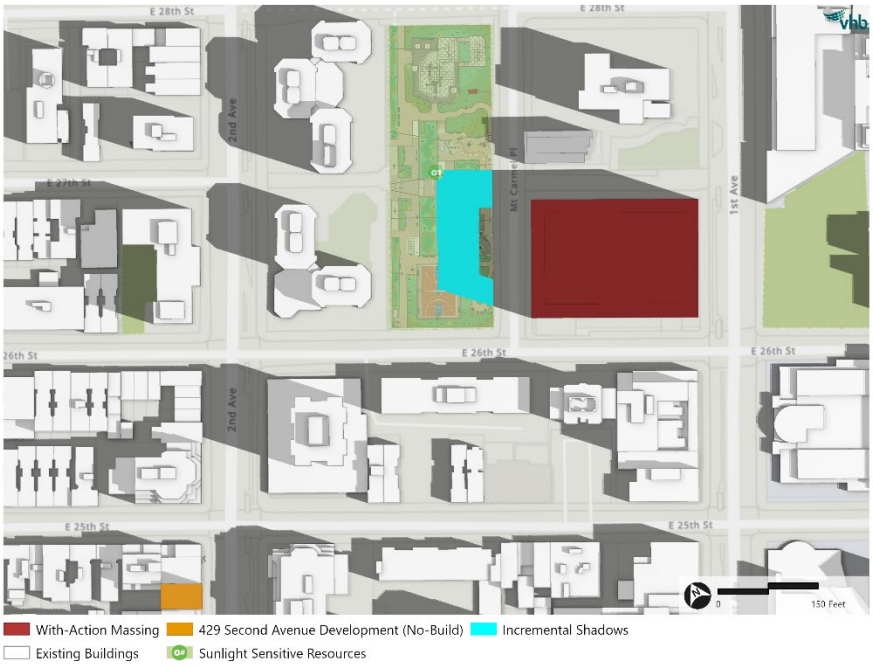

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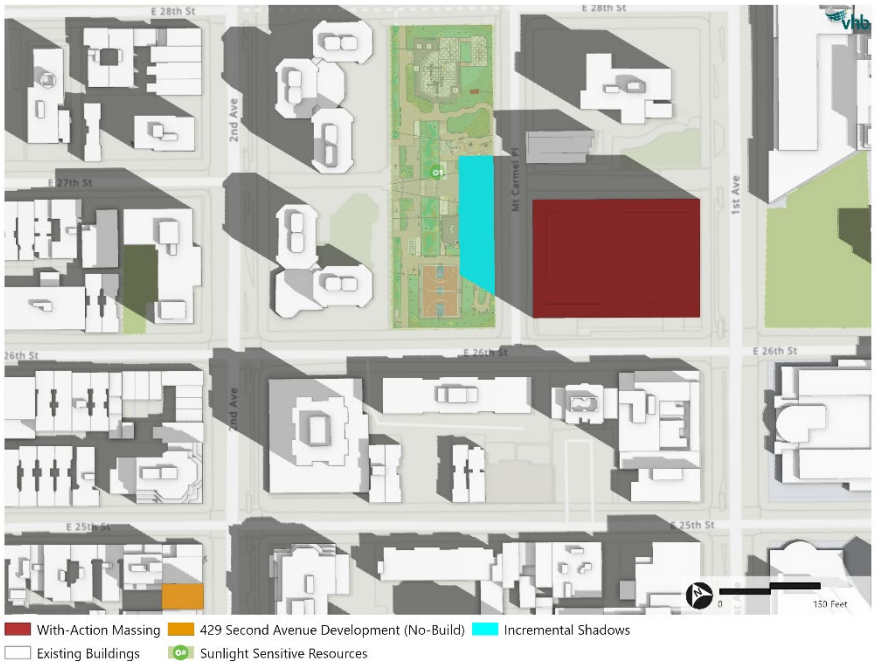


Figure 3-37 May 6/August 6 - 11:27 AM

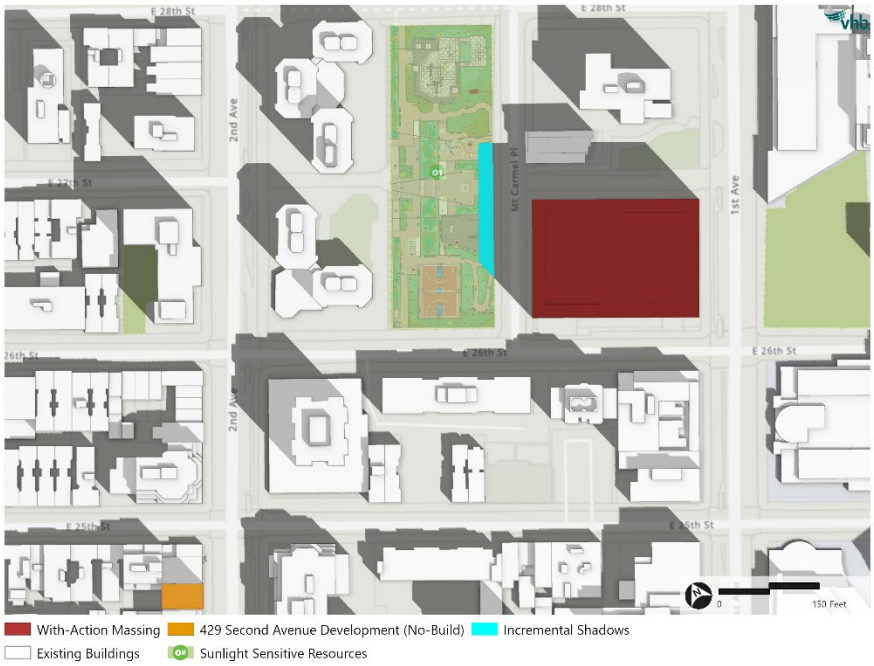


Figure 3-38 June 21 - 5:57 AM

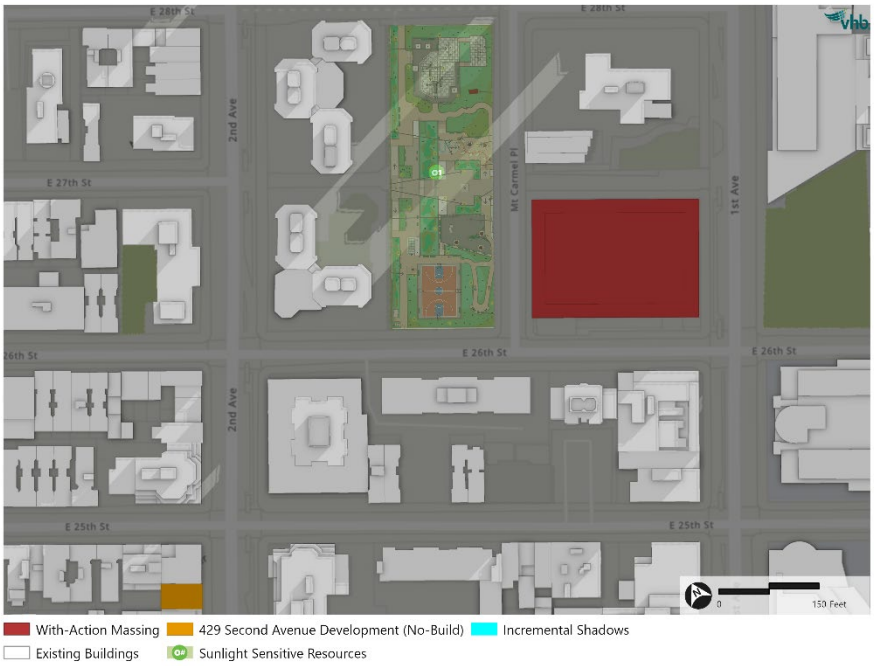


Figure 3-39 June 21 - 6:27 AM

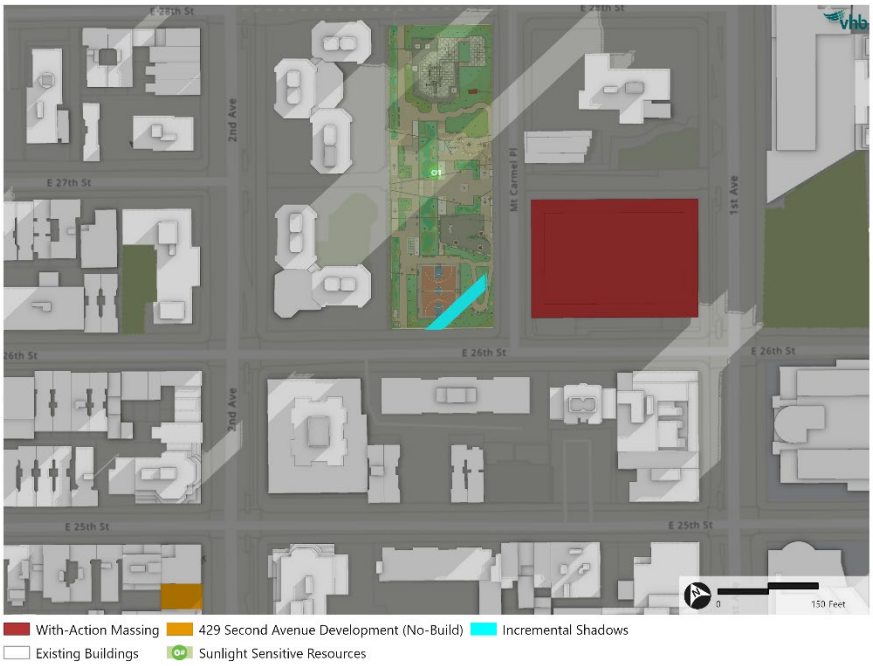


Figure 3-40 June 21 - 6:57 AM

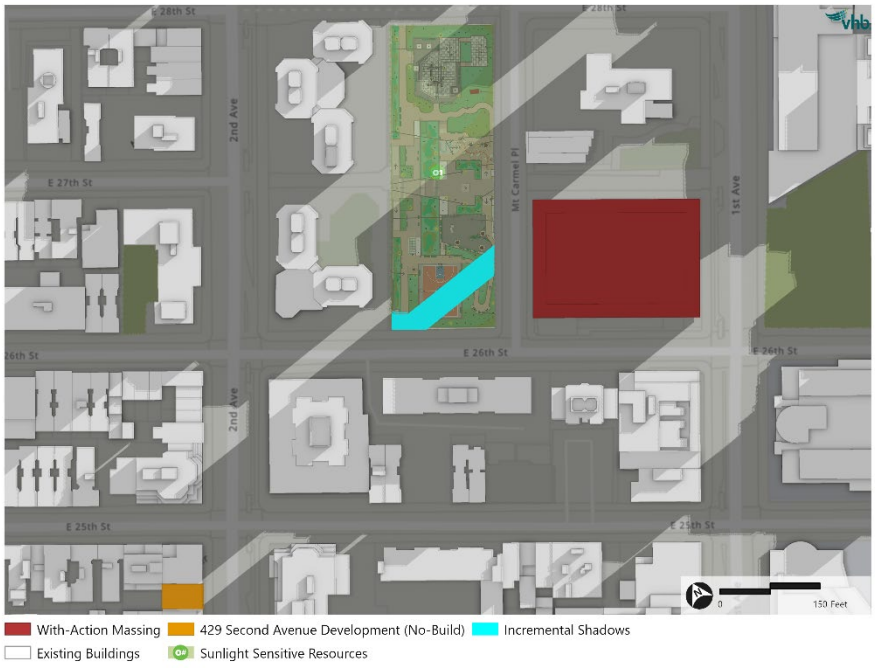
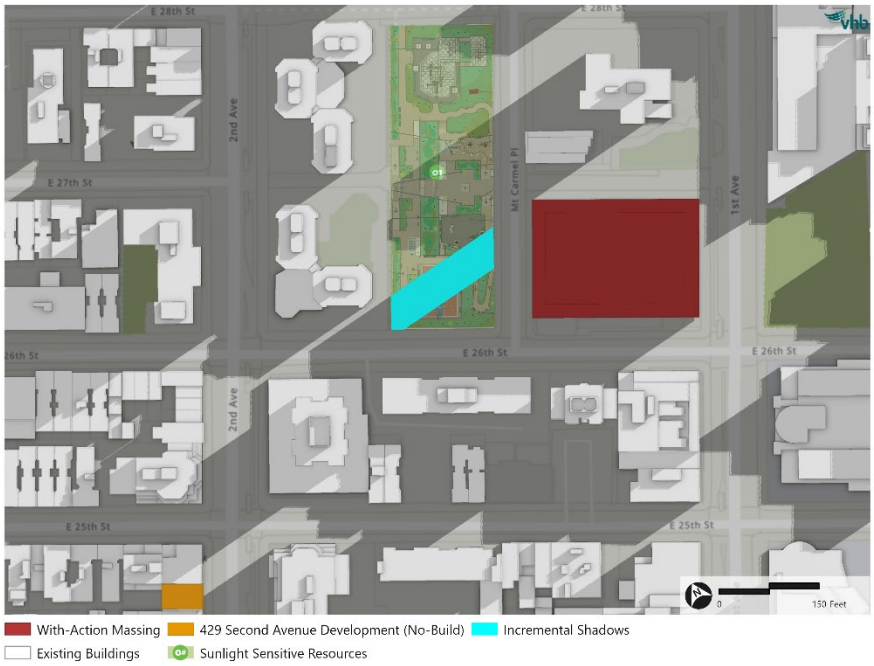


Figure 3-41 June 21 - 7:27 AM



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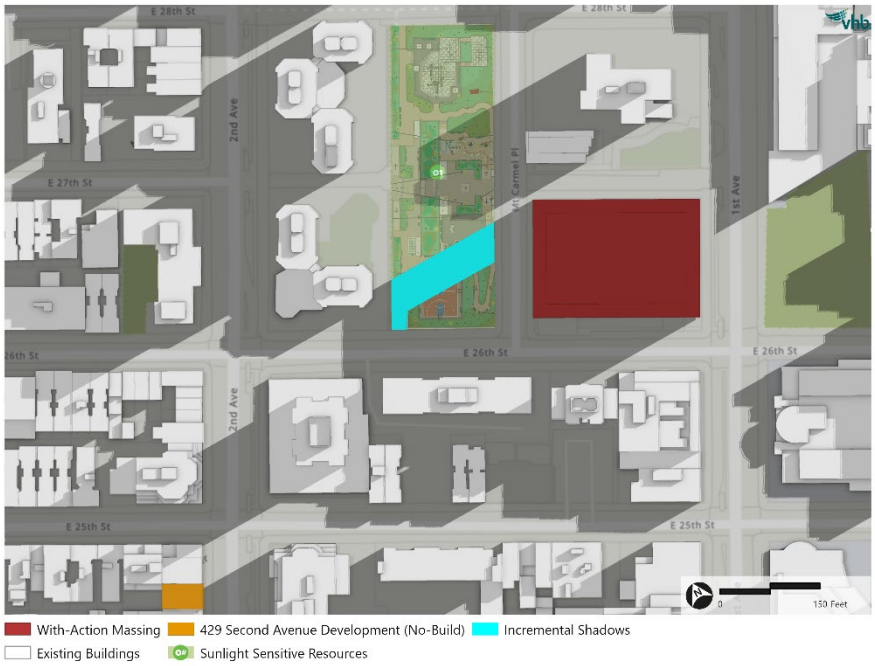

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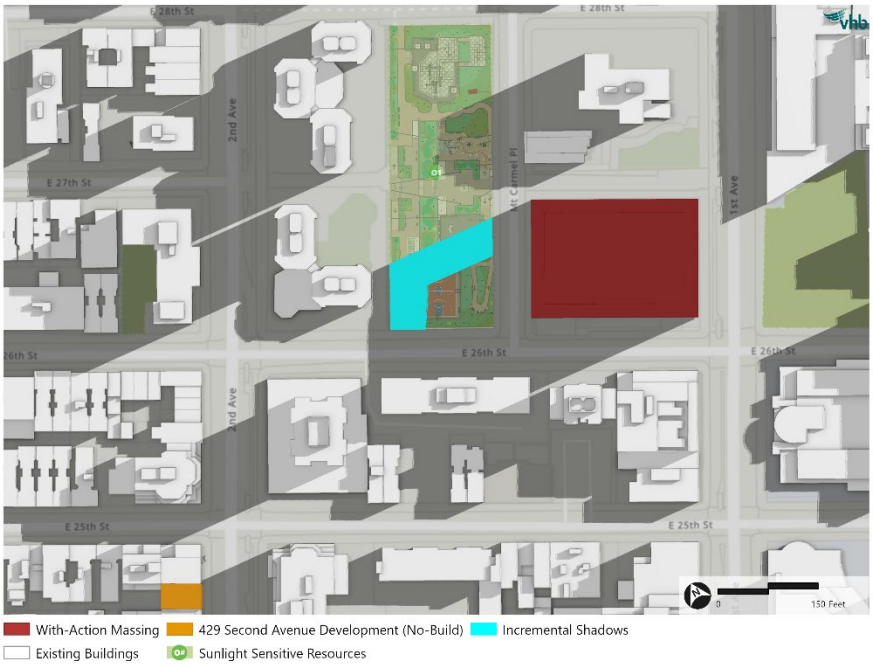


Figure 3-44 June 21 - 8:57 AM

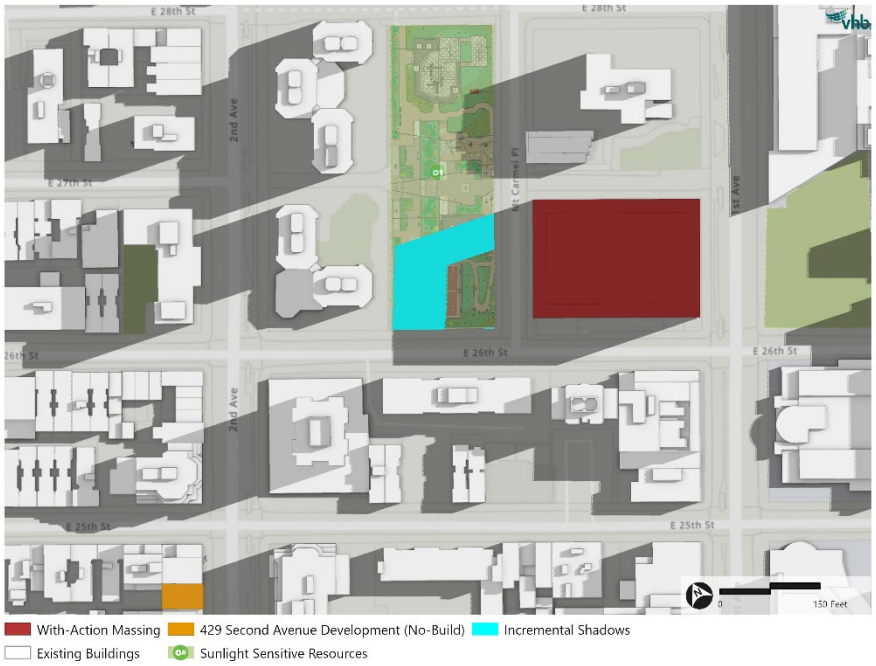


Figure 3-45 June 21 - 9:27 AM

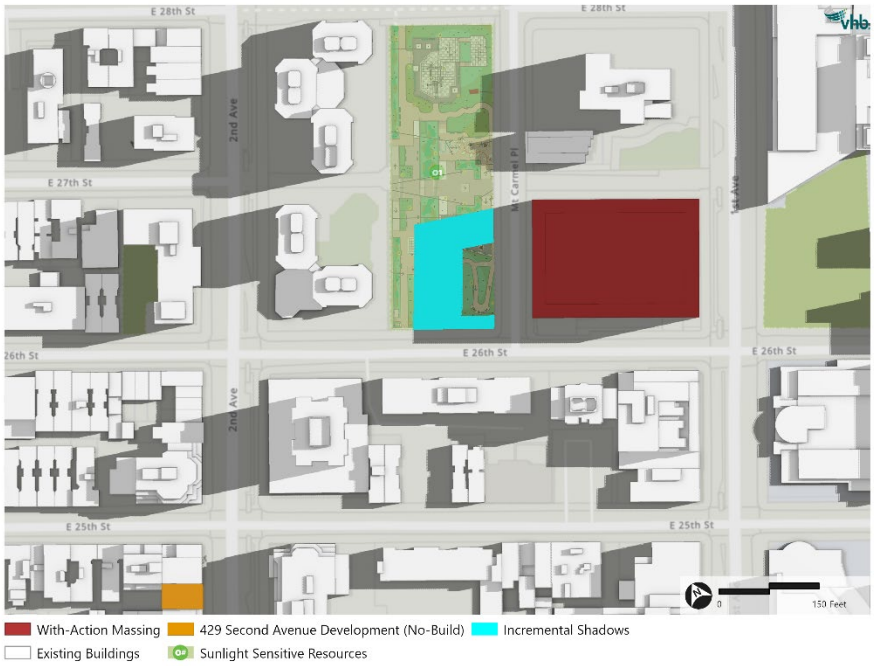


Figure 3-46 June 21 - 9:57 AM

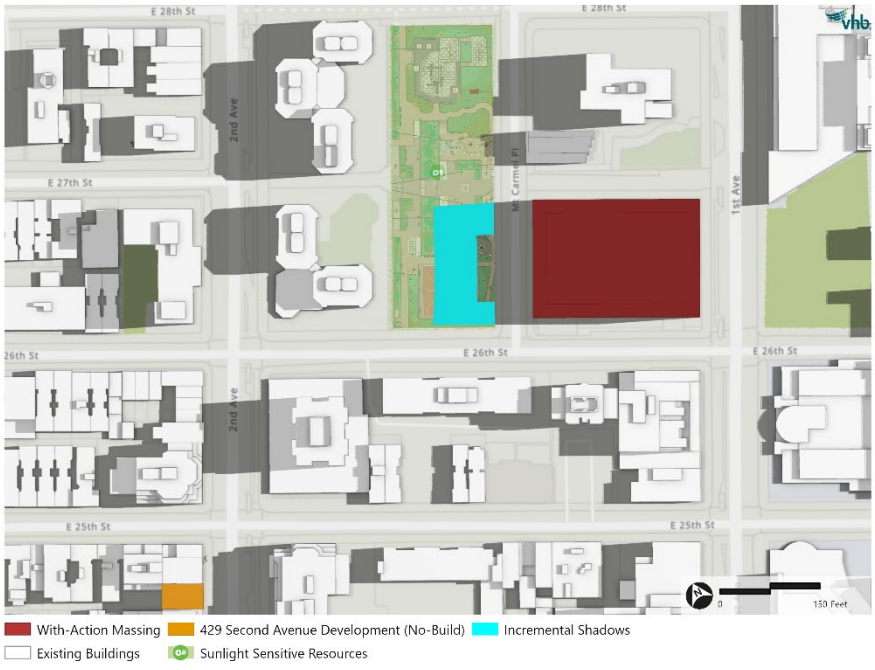
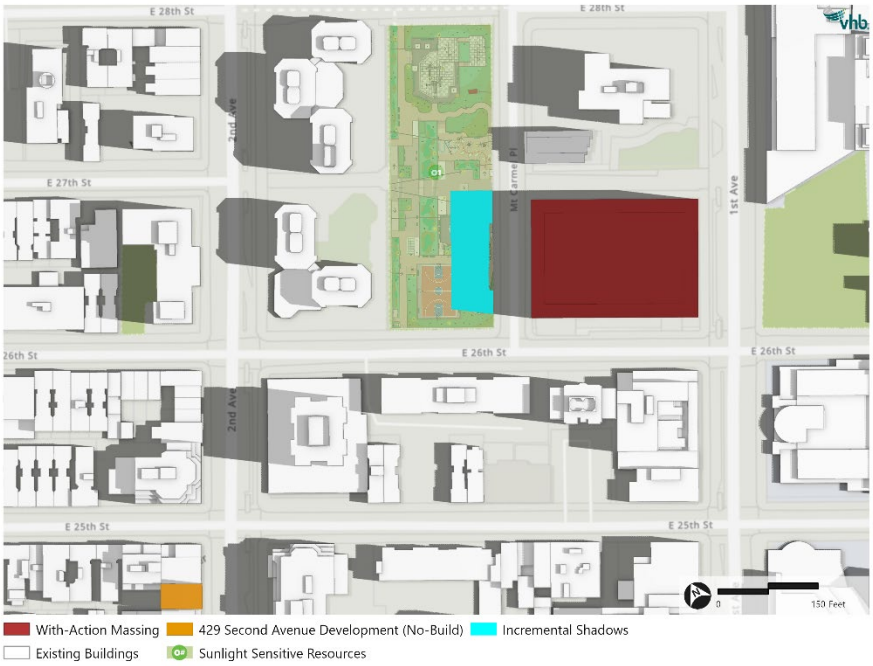


Figure 3-47 June 21 - 10:27 AM



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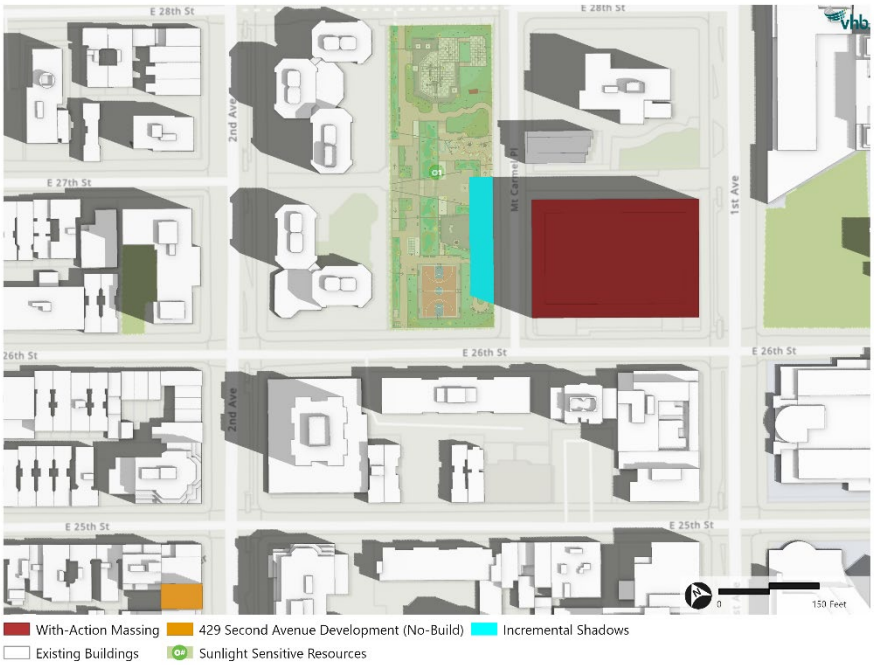

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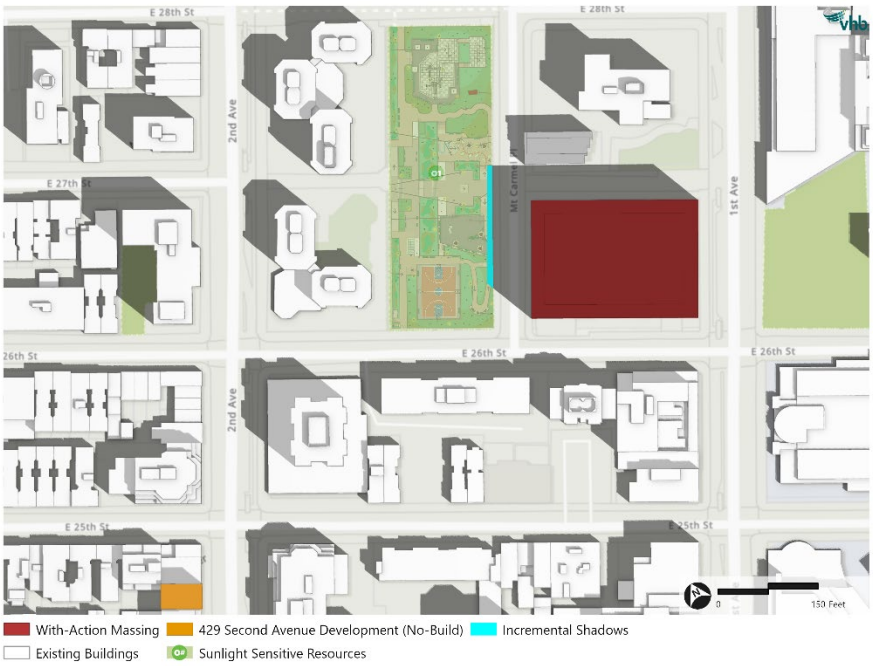


4

Urban Design and Visual Resources

An urban design assessment under CEQR considers whether and how a project may change the experience of a pedestrian in the study area. The assessment focuses on the components of a proposed project that may have the potential to alter the arrangement, appearance, and functionality of the built environment.

Introduction

According to the 2021 *CEQR Technical Manual,* urban design is defined as the totality of components—streets, buildings, open spaces, wind, natural resources, and visual resources—that may affect a pedestrian's experience of public space. A visual resource is the connection from the public realm to significant natural or built features, including views of the waterfront, public parks, landmark structures or districts, otherwise distinct buildings or groups of buildings, or natural resources. Based on the *CEQR Technical Manual* guidance, a preliminary assessment of urban design and visual resources is appropriate when there is the potential for a pedestrian to observe, from the street level, a physical alteration beyond that allowed by existing zoning regulations.

As described in **Part I: Project Description**, the Applicants are proposing to redevelop the Development Site located in the Kips Bay neighborhood of Manhattan Community District 6 with a 13-story, approximately 270-foot-tall, 609,988 gross square foot (gsf) life sciences building (the Proposed Project). The Applicants are seeking a rezoning to a C6-4 zoning district, and a special permit pursuant to ZR Section 74-901 to modify bulk regulations applicable to the Development Site. Since the Proposed Project would introduce slightly different height and form regulations than those permitted in the existing zoning district, an urban design and visual resources analysis is warranted.

Methodology

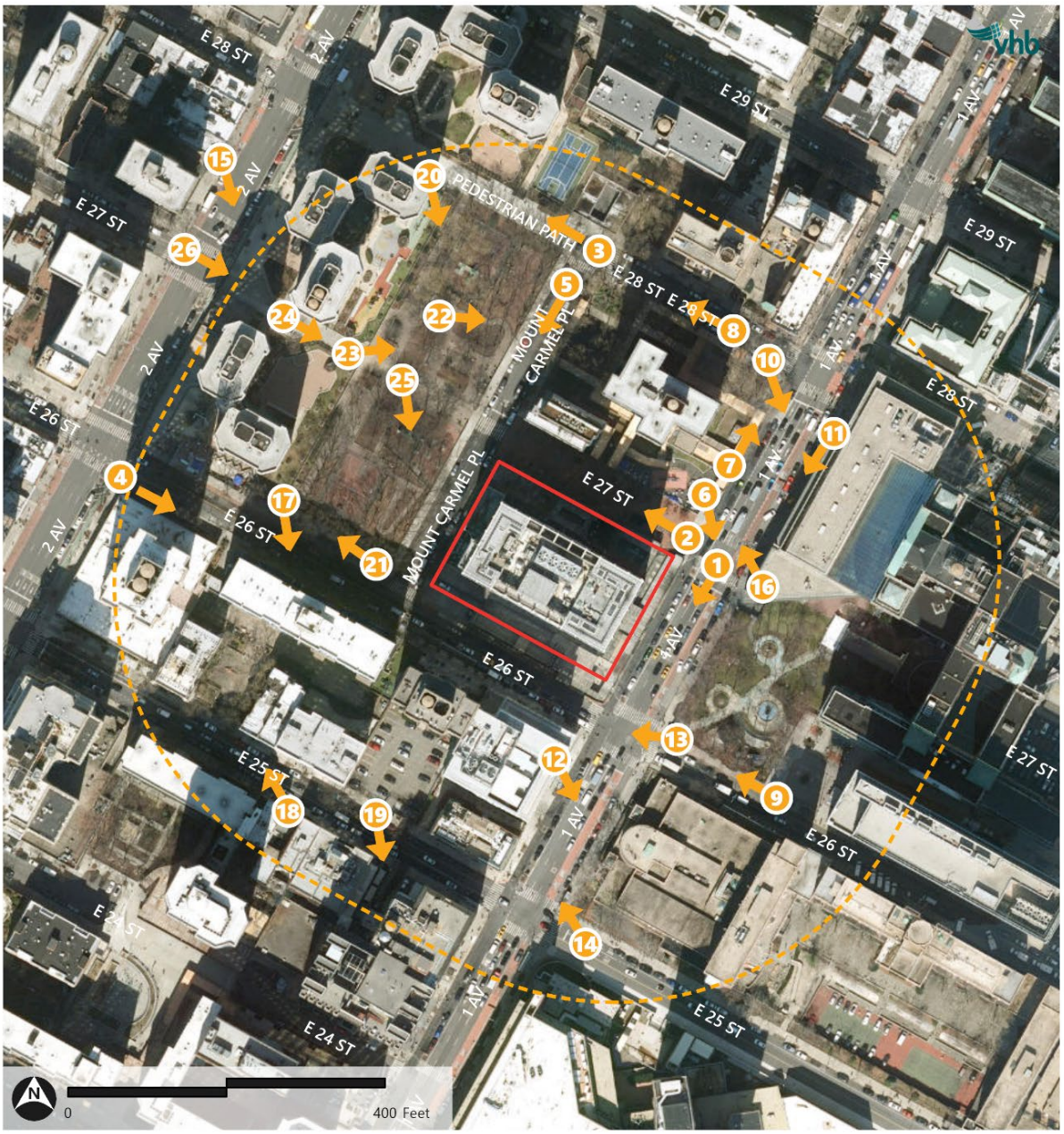
In accordance with the *CEQR Technical Manual* guidelines, the following preliminary urban design and visual resources assessment considers a 400-foot radius study area where the Proposed Actions would be most likely to influence the built environment. As stipulated in the *CEQR Technical Manual*, because the purpose of the preliminary assessment is to determine whether any physical changes facilitated by the Proposed Actions would significantly impact elements of urban design and visual resources, the following information, if known, is included in a preliminary assessment:

- A concise narrative of the existing study area, and conditions under the future No-Action and With-Action conditions;
- An aerial photograph of the study area and ground-level photographs of the Development Site with immediate context;
- Zoning and floor area calculations of the existing and future No-Action and With-Action conditions;
- Building massing and building heights; and
- A three-dimensional representation of the future With-Action and No-Action condition streetscape.

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

The following preliminary urban design and visual resources assessment follows these guidelines and provides a characterization of existing conditions, a description of urban design and visual resources under the future No-Action and With-Action conditions, and an analysis determining the extent to which physical changes resulting from the Proposed Actions would alter the pedestrian experience. The study area for the analysis is typically defined as the area within 400 feet of the Development Site which, for this project, is generally bounded by First Avenue to the east, Second Avenue to the west, East 25th Street to the south, and East 28th Street to the north. A field survey was conducted on August 9, 2023, to document existing conditions in the study area, and representative photographs of the study area are included in the discussion below (see **Figure 4-1**).

Figure 4-1 Study Area Photograph Location Map



Preliminary Assessment

Existing Conditions

Development Site

The Development Site is located at 455 First Avenue in the Kips Bay neighborhood of Manhattan. The Development Site, which is bounded by First Avenue to the east, East 26th Street to the south, Mount Carmel Place to the west, and the East 27th Street Pedestrian Way to the north, is currently occupied by a 14-story, approximately 191-foot-tall, 359,000 gsf building that is primarily occupied by the City's Public Health Laboratory.

Scaffolding associated with the existing building extends into the sidewalk surrounding the Development Site on First Avenue, East 26th Street, and Mount Carmel Place (see **Photo 4-1**). The scaffolding also extends into the East 27th Street Pedestrian Way.

The boundary condition of the existing building along East 27th Street is a combination of blank vertical brick wall and a metal fence (see **Photo 4-2**). On First Avenue, currently obscured by scaffolding, the building's design includes a raised platform along the sidewalk accessible only from First Avenue through steps (see **Figure 4-5**). This edge condition creates a separation between the sidewalk and the building, resulting in an unappealing and constrained visual experience for pedestrians. On East 26th Street, the existing building is built approximately 20 feet into the mapped street.

The existing building includes multiple vehicular access points on Mount Carmel Place, while the main entrance to the building occurs along First Avenue.

Study Area

Urban Design

The Study Area is dominated by health and academic institutions interspersed with residential use and a publicly accessible open space arranged along a typical grid street pattern. Portions of the study area were part of an urban renewal area, which consolidated certain blocks and included the conversion of portions of East 27th and East 28th Streets to pedestrian ways and the creation of Mount Carmel Place.

Streets

First Avenue, a 100-foot-wide one-way, south to north thoroughfare is predominated by superblocks and health and institutional life science uses, interspersed with residential use on the west side of the avenue. Just outside the study area to the west is Second Avenue, a 100-foot-wide one-way, north to south thoroughfare. The street section of the avenues typically consists of designated bus and bike lanes with on-street parking between driveways and the bike lane (see **Photo 4-1**). The M15 bus route travels along the avenues.

East 25th Street, East 26th Street, East 27th Street and East 28th Street are 60 to 80-feet-wide one-way, west to east thoroughfares that divide the study area into regular sized blocks. The portion of East 27th Street between First Avenue and Mount Carmel Place as well as the portion of East 28th

Street between Bellevue South Park and the residential development, Kips Bay Court, are brick-paved streets. The East 27th Street Pedestrian Way, located between First Avenue and Mount Carmel Place, features a pedestrian right of way containing a Citibike installation, a gated fence at the mid-block, street trees, trash receptacles, and no public seating (see **Photo 4-2**). Frequently, vehicles utilize the 27th Street Pedestrian Way between First Avenue and Mount Carmel Place for illegal parking. As the pedestrian way continues west through Bellevue South Park, it has seating on both sides shaded by trees. The pedestrianized portion of East 28th Street is covered with protective scaffolding associated with work being undertaken at Kips Bay Court (see **Photo 4-3**).

East 27th Street is intercepted by Mount Carmel Place, a 60-foot-wide one-way, north-south thoroughfare between First and Second Avenues. The east side of Mount Carmel Place features a residential building containing micro-units and a ground-floor retail café between East 27th and East 28th Streets. Bellevue South Park, a public park, is located on the west side of Mount Carmel Place. Street trees within the study area are well-maintained (see **Photo 4-4**); streets tend to feature mature and large trees, except the avenues feature medium-sized street trees sparsely spaced on sideways and planted within medians along crosswalks (see **Photo 4-5** and **Photo 4-6**). There are crosswalks throughout the study area with garbage receptacles on each side (see **Photo 4-7**). As on-street parking is typically permitted throughout the study area, parked cars typically line both sides of the roadway with an exception on East 26th Street where parking is permitted only on one side of the street (see **Photo 4-8**). Along First Avenue at the corner of East 25th and 28th Streets, there are food trucks and fruit vendors on the sidewalk which serve as popular food options in the absence of food retail spaces.

Buildings

As mentioned above, clusters of commercial health and life science activity uses dominate First Avenue generally along both sides. A portion of the study area, west of First Avenue, is also interspersed with a combination of medium to high density multi-family residential buildings. Overall, buildings in the study area vary in terms of height, bulk, and design.

Typically, buildings in the study area are set back from the lot line. Across First Avenue to the east, the superblock (Block 962, Lot 100) features Bellevue Hospital and the City University of New York (CUNY) Hunter College's Brookdale Campus, with the private, demapped 42-foot-wide East 26th Street located between them. The portion of Bellevue Hospital that falls within the study area features a six-story building clad with dark toned bricks and glass. Bellevue Hospital also contains a private open space that is fenced with vertical metal barriers (see **Photo 4-9**). The hospital building can be accessed from First Avenue (see **Photo 4-10**), and the public sidewalk curves inwards along the building to allow for an ambulance bay but is wide enough to streamline access for patients and passersby (see **Photo 4-11**). A portion of CUNY Hunter College's Brookdale Campus (and site of the future SPARC development) is in the study area; it features a warm-tone brick-clad semi-circular section that is symmetrically aligned into the regular building massing (see **Photo 4-12**). The campus also contains a private space, which is comprised of a court and is separated from the street with metal fencing; this space is used for parking. South of the Development Site across East 26th Street are buildings associated with NYU and NYU Langone. The NYU Rory Meyers College of Nursing is finished with an ornamental terracotta and glass façade accessed from First Avenue. The building is 11 stories tall and features a dynamic arrangement of large glass apertures and recessed floors (see **Photo 4-13**). The NYU Langone Health and Environmental Medicine Building is six stories tall and is

finished with white bands at the ground level and bricks on the upper level of the building façade (see **Photo 4-14**).

The residential uses in the study area have a mix of different building forms with campus-type development predominating north of East 26th Street. Kips Bay Court, a large privately managed mixed-commercial residential development on Second Avenue bordering the western side of the study area, consists of eight towers ranging from 12 to 27 stories with private open space for residents at the ground level. The buildings are finished with light-toned bricks featuring angular balconies (see **Photo 4-15**). Similarly, the NYCHA public housing on First Avenue, which consists of a single 26-story tower that is finished with dark-toned bricks featuring dark glass windows (see **Photo 4-16**), is set back from the lot line, with fencing and landscaped areas demarcating the lot line.

The mix of commercial and residential buildings continues to the southwest portion of the study area along East 26th Street. The buildings to the south of East 26th Street are 28 to 32 stories tall and consist of both office and retail on the ground floor. The buildings are clad in dark and light-toned bricks and are fenced off from the street by raised planter beds or metal fences (see **Photo 4-17**). The study area also contains multi-family elevator buildings and walkup buildings along East 25th Street. Buildings on East 25th Street do not feature a uniform architectural character and finishes vary from different tones of bricks to dark-tones and greys (see **Photo 4-18** and **Photo 4-19**).

Open Space

Within the study area, there is one publicly accessible open space—Bellevue South Park—a 1.59-acre public open space owned and managed by New York City Parks and Recreation (NYC Parks) located directly west of the Development Site along Mount Carmel Place. The park, which is bounded by Mount Carmel Place to the east, the Kips Bay residential development to the west, the pedestrianized East 28th Street to the north and East 26th Street to the south, was mapped in 1966 as a welcome green space for the enjoyment of area residents, healthcare workers and visitors to Bellevue Hospital. The park was initially owned and maintained by local community organizations before NYC Parks assumed jurisdiction in 1986. The park was recently renovated and contains amenities like playgrounds, a basketball court, a spray shower area, and a dog run (see **Photo 4-20**). The park edge is lined with trees and planter beds planted with shrubs and groundcovers (see **Photo 4-21**). In 2001, Antoni Milkowski's abstract sculpture entitled Skaggerak was relocated from Madison Square Park to Bellevue South Park's northern landscape (see **Photo 4-22**). The park's mature tree canopy covers seating space, creating a serene environment shaded by foliage of well-established trees (see **Photo 4-23**).

In addition to this space, the study area includes a number of private open spaces, including several small spaces associated with residential buildings west of First Avenue, two private spaces east of First Avenue associated with Bellevue Hospital (an area at First Avenue that contains mature trees, landscaping, a fountain, and walkways and is fenced with a vertical metal barrier and a second area, the Bellevue Sobriety Garden), and space associated with the CUNY Hunter College Brookdale campus that is currently used as parking.

Visual Resources

For purposes of this analysis, Bellevue South Park is considered a visual resource, although views to this resource are limited to the areas immediately adjacent to the park. The park can be accessed from First and Second Avenue through the East 27th Street Pedestrian Way, although it is not directly visible to pedestrians walking along these avenues (see **Photo 4-2**, **Photo 4-24**, and **Photo 4-26**).

From within Bellevue South Park, views are dominated by the park's mature tree canopy, particularly in the growing seasons, during which much of the park is in shade from the tree canopy itself (see **Photo 4-25**).

Photo 4-1 View of First Avenue looking from south to north with Development Site to the east



Photo captured 08/09/23

Photo 4-2 View from First Avenue towards the East 27th Street Pedestrian Way



Photo captured 08/18/23

Photo 4-3 View of Pedestrian Way through the Kips Bay Court to the north of Bellevue South Park

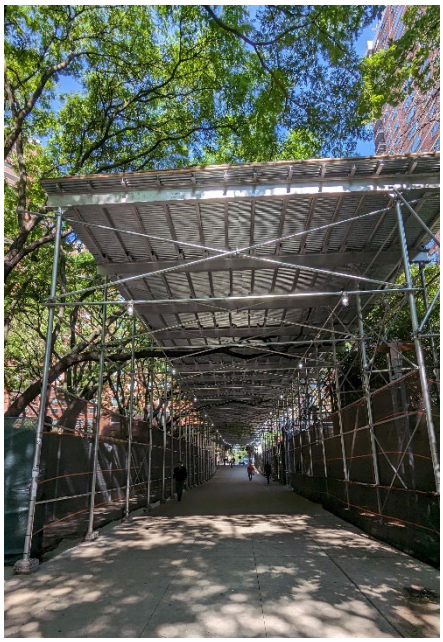


Photo captured 08/09/23

Photo 4-4 Well-maintained tree pits with mature trees along streets

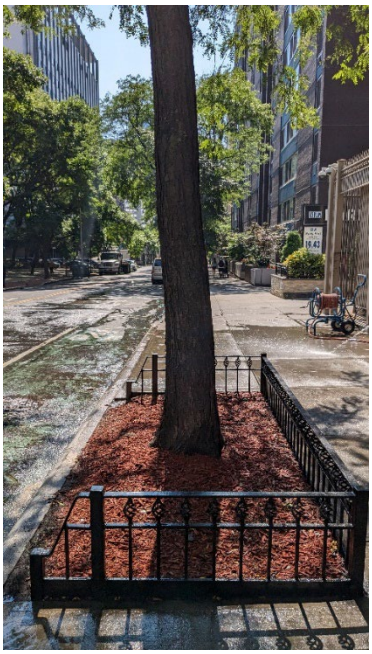


Photo captured 08/09/23

Photo 4-5 View of Mount Carmel Place from East 28th Street facing south



Photo captured 08/09/23

Photo 4-6 View showing crossings and tree pits with medium sized trees along First Avenue

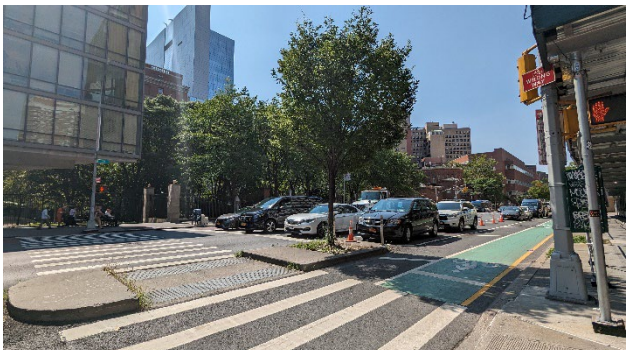


Photo captured 08/09/23

Photo 4-7 Well-maintained sidewalk condition with garbage receptables



Photo captured 08/09/23

Photo 4-8 View of East 28th Street showing on street parking only on one side



Photo captured 08/09/23

Photo 4-9 View showing vertical metal barrier along private open space from East 26th Street facing east

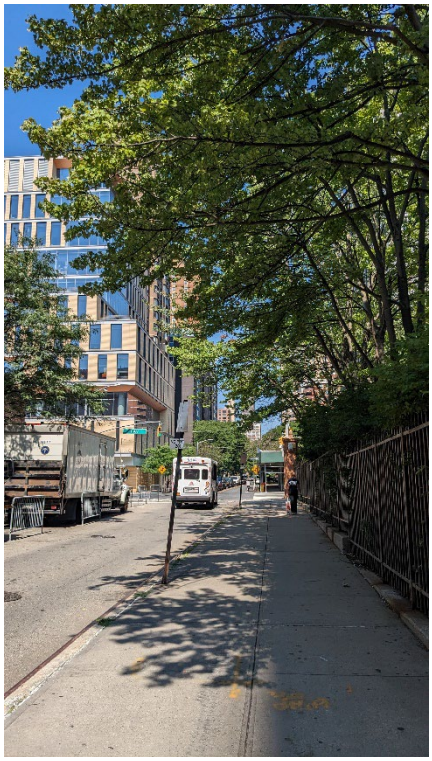


Photo captured 08/09/23

Photo 4-10 View of Bellevue Hospital from First Avenue facing south



Photo captured 08/09/23

Photo 4-11 View of sidewalk along Bellevue Hospital facing south

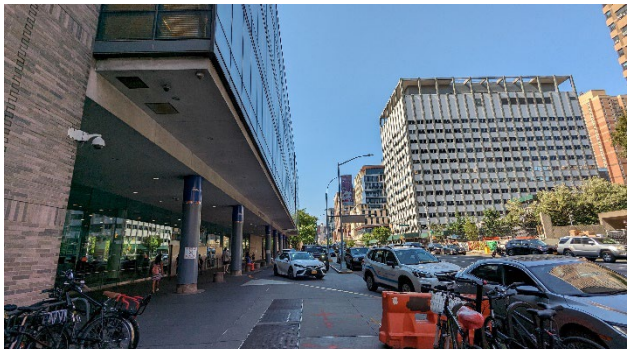


Photo captured 08/09/23

Photo 4-12 View of CUNY Hunter College's Brookdale Campus from First Avenue facing east



Photo captured 08/09/23

Photo 4-13 View of NYU Rory Meyers College of Nursing from East 26th Street facing north

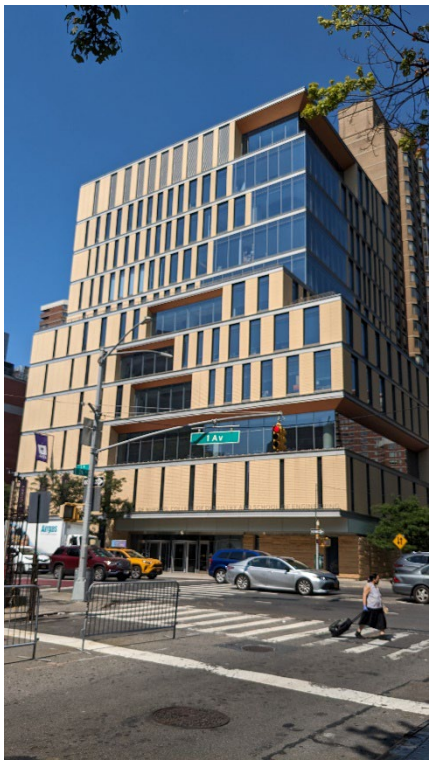


Photo captured 08/09/23

Photo 4-14 View of the NYU Langone building from East 25th Street facing east



Photo captured 08/09/23

Photo 4-15 View of Kips Bay Court from Second Avenue facing east



Photo captured 08/09/23

Photo 4-16 View of NYCHA building from First Avenue facing north



Photo captured 08/09/23

Photo 4-17 View of residential development along East 26th Street facing south



Photo captured 08/09/23.

Photo 4-18 View of the high-rise residential development along East 25th Street facing north



Photo captured 08/09/23

Photo 4-19 View of the low-rise residential development along East 25th Street facing south



Photo captured 08/09/23

Photo 4-20 View of Bellevue South Park from Pedestrian Path facing south



Photo captured 08/09/23

Photo 4-21 View of Bellevue South Park edge lined with mature trees and landscape



Photo captured 08/09/23

Photo 4-22 View of sculpture in Bellevue South Park's northern landscape visible



Photo captured 08/09/23

Photo 4-23 Bellevue South Park with mature tree canopies creating shade for seating spaces



Photo captured 08/09/23

Photo 4-24 View looking east from Second Avenue towards Bellevue South Park

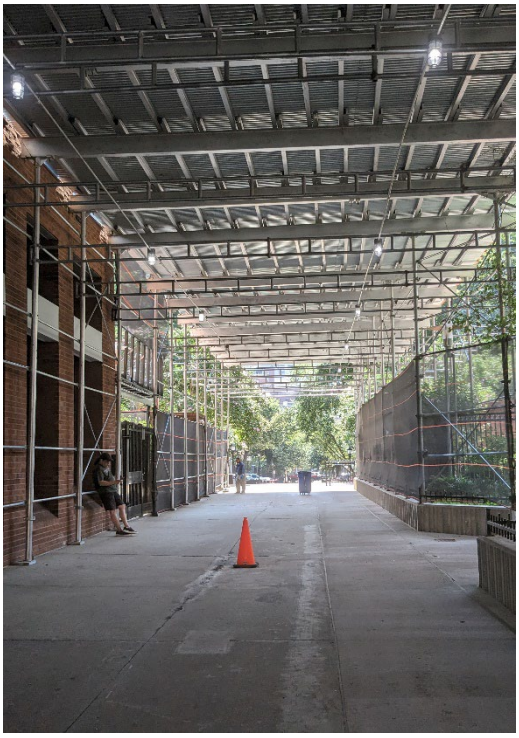


Photo captured 08/09/23

Photo 4-25 View looking south from Bellevue South Park towards East 27th Street and Development Site



Photo captured 08/09/23

Photo 4-26 View from Second Avenue looking south towards pedestrian right of way along Bellevue South Park



Photo captured 08/09/23

No-Action Condition

In the No-Action condition, the existing building on the Development Site would be re-tenanted with a mix of office and laboratory space for continued use by City agencies. No changes would occur to the building bulk or height.

Within the study area, two new developments are proposed—the Science Park and Research Campus (SPARC) Kips Bay and Alexandria Center Phase II – North Tower—both east of First Avenue. The SPARC project, which is expected to be complete in 2031, will redevelop CUNY Hunter College's Brookdale Campus with approximately 2.19 million sf of space. Early concept designs for the SPARC Kips Bay project indicate that the project will transform the Brookdale Campus with a series of new, modern structures of varying heights and materials. The Alexandria Center project will replace an existing surface parking lot between Bellevue Hospital and NYU Langone Health with approximately 330,000 sf of office and laboratory space.

With-Action Condition

Proposed Project

In the With-Action Condition, the Applicants propose to redevelop the Development Site with a 13-story, approximately 270-foot-tall approximately 609,988 gsf building, of which approximately 521,988 gsf would be life sciences space, up to approximately 5,000 gsf would be retail space, and 83,000 gsf would be mechanical space. The proposed building would rise to a height of

approximately 255 feet at the building face and to approximately 270 feet at set-back mechanical bulkheads.

Primary access to the building lobby is proposed along First Avenue and the loading would occur from Mount Carmel Place, in the same location as the loading docks for the existing building. The ground floor retail space would include direct access to and from the East 27th Street Pedestrian Way. The ground floor would also contain Life Science Multi-Purpose space, which would be accessed from East 26th Street, and the building bike room, which would be accessed from East 27th Street. The proposed building is anticipated to feature a highly transparent ground floor and an overall façade design that balances opaque areas with glazing to improve energy performance and respond to community context. The building is purpose-designed for modern laboratories featuring large floor plates which provide efficiency and flexibility, allowing for versatile utilization for either single-tenant or multi-tenant floors and enhanced infrastructure to support the laboratory environment.

The design of the proposed building would require a zoning map amendment to a commercial zoning district and relief from zoning regulations regarding bulk. As detailed in the analysis below the Proposed Actions would help to facilitate the design of a building that is appropriate for its context and consistent with the surrounding area.

Figure 4-2 provides an elevation of the Proposed Project along First Avenue in context of its surrounding buildings. **Figure 4-3** and **Figure 4-4** provide illustrative renderings of the proposed transparent design of the building's ground floor viewed from First Avenue.

Study Area

Urban Design

The existing buildings in the vicinity of the Development Site exhibit diverse massing and heights, creating a dynamic built environment. The institutional buildings along First Avenue are characterized by larger floor plates and are generally larger than the residential buildings to the west. The proposed building is consistent in its massing and articulation with the institutional buildings along First Avenue, including the contemporary design of NYU Rory Meyers College of Nursing located south of the Development Site. The proposed building would provide visual continuity in terms of height and bulk in this section of First Avenue. Thus, the height and bulk of the proposed building would be consistent with the context of its immediate surroundings (see **Figure 4-2**). In addition, the proposed building's façade design would maintain a cohesive architectural language with the neighborhood's aesthetics, which contains a mix of masonry residential construction and more modern glass and metal facades, further reinforcing its consistency within the area context.

The design of the proposed building aims to enhance sidewalk access and the pedestrian experience. The ground floor is designed to activate the streetscape along First Avenue, East 27th Street, and East 26th Street by providing multiple entrances to the life science space, the Life Sciences Multi-Purpose Programming Space, and the retail space. The transparent façade design of the ground floor would create an inviting and visually engaging environment for pedestrians and would improve the streetwall conditions compared to existing conditions (see **Figure 4-3**). Importantly, the Proposed Project would remove the portion of the existing building built in the East 26th Street right of way and restore that street to its mapped width. The pedestrian experience on East 26th Street would be further improved given that the proposed building would not include any vehicular access points on

East 26th Street, as does the existing building. The proposed façade design would also enhance the overall public space experience at the East 27th Street Pedestrian Way, which serves as a pedestrian connection between Bellevue South Park and points east, including the health and science uses on First Avenue and the East River waterfront. As such, the With-Action condition would not result in significant adverse impact to urban design.

Visual Resources

There is one visual resource in the study area: Bellevue South Park. The Proposed Project's potential to result in indirect, or contextual impacts to this visual resource within the study area was evaluated. Indirect impacts are defined as those impacts that could result from blocking significant public views of a resource; isolating a resource from its setting or relationship to the streetscape; altering the setting of a resource; introducing incompatible visual elements to a resource's setting; or introducing shadows over a historic landscape or an architectural resource with sun-sensitive features that contribute to that resource's significance, such as a church with notable stained-glass windows.

Even though the proposed building form on the Development Site would change between No Action and With Action conditions, the experience of the park users would not be affected. The views to Bellevue South Park would remain limited to the areas in its immediate vicinity. Consistent with existing conditions, the park would not be visible to pedestrians along First and Second Avenue. Additionally, the predominant views from within the park would remain the same; the views are largely of tree canopy. The Proposed Project also aims at eliminating vehicles from the East 27th Street Pedestrian Way and improving the experience for users. Thus, the With-Action condition would not result in significant adverse impacts to Bellevue South Park.

Figure 4-2 Building Massings: View North Along First Avenue

No-Action



With-Action (Illustrative Rendering)



Figure 4-3 Building Massings: View west along First Avenue

No-Action

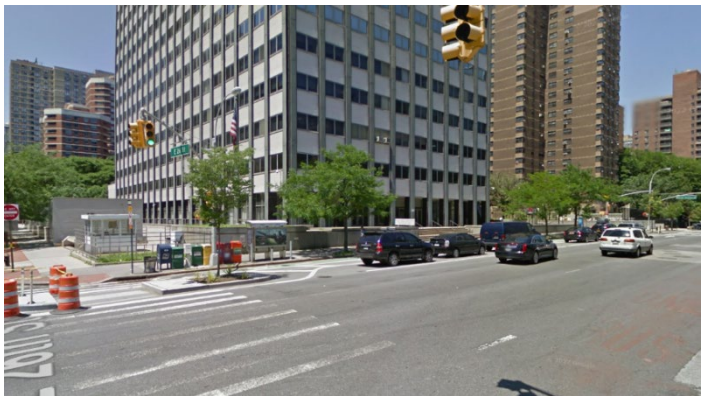


With-Action (Illustrative Rendering)



Figure 4-4 Building Massings: Existing edge condition of building along East 27th Street and First Avenue as photographed in 2013 before installation of scaffolding

No-Action



With-Action (Illustrative Rendering)



Conclusion

Overall, the Proposed Project would be compatible with the urban design character and building conditions of the study area and would enhance sidewalk access and the pedestrian experience. The proposed building form and design components introduced by the Proposed Project would be consistent with the existing buildings along First Avenue and would provide visual continuity in terms of height and bulk. The Proposed Project would strengthen the First Avenue Health & Life Sciences Corridor by filling the need for commercial lab space in an emerging life sciences cluster. Additionally, the proposed ground floor is designed to activate the streetscape along First Avenue, East 27th Street, and East 26th Street. In addition, the proposed building would restore the East 26th Street right of way to its mapped width. Finally, the proposed building would respect and complement the existing architectural character of the neighborhood and would not obstruct views to the visual resource within the study area. Therefore, the Proposed Actions would not result in a significant adverse impact on urban design and visual resources, and no further analysis is warranted.

5

Hazardous Materials

This section assesses whether the Proposed Project may increase the exposure of people or the environment to hazardous materials, and, if so, whether this increased exposure would result in potential significant public health or environmental impacts.

Introduction

A hazardous material is any substance that poses a threat to human health or the environment. Substances that can be of concern include, but are not limited to, heavy metals, volatile and semi-volatile organic compounds, methane, polychlorinated biphenyls (PCBs), and hazardous wastes (defined as substances that are chemically reactive, ignitable, corrosive or toxic).

According to the *2021 CEQR Technical Manual*, the potential for significant impacts from hazardous materials can occur when:

- Elevated levels of hazardous materials exist on a site and the project would increase pathways to their exposure; or
- A project would introduce new activities or processes using hazardous materials and would increase the risk of human or environmental exposure.

This section presents the findings of the hazardous materials assessment and identifies potential issues of concern with respect to workers, the community, and/or the environment during construction and after implementation of the Proposed Project.

Methodology

The potential for hazardous materials was evaluated based on the following documents:

- Phase I Environmental Site Assessment (ESA), dated September 19, 2023, prepared by VHB Engineering, Surveying, Landscape Architecture and Geology, P.C. (VHB).
- Phase II Site Investigation Work Plan (Phase II Work Plan), dated January 22, 2024, prepared by VHB.

A Phase I ESA was prepared on September 19, 2023, in accordance with ASTM Practice E1527-21, inclusive of the "All Appropriate Inquiry" requirement amended in the Federal Register on December 30, 2013. The United States Environmental Protection Agency (EPA) "All Appropriate Inquiry" requirement establishes specific regulatory requirements for conducting appropriate inquiries into the previous ownership, uses, and environmental conditions of a property for the purposes of qualifying for certain landowner liability protections under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

As indicated in **Part I: Project Description**, the Proposed Actions would result in the development of an approximately 13-story, 270-foot-tall, 609,988 gross square foot (gsf) life sciences building containing approximately 521,988 gsf of life sciences space, 5,000 gsf of retail space, and 83,000 gsf of mechanical space.

Preliminary Assessment

Existing Conditions

The Development Site is comprised of Manhattan Block 932, Lot 17. The Development Site is currently occupied by a 14-story, approximately 191-foot-tall, 359,000 gsf building, which is primarily occupied by the City's Public Health Laboratory (PHL). The building also contains other City uses and some leased spaces.

Phase I Environmental Site Assessment

The Phase I ESA, dated September 19, 2023, was completed for the Development Site and included analyses as specified in the ASTM Method E1527-21. The goal of the Phase I ESA process is to identify Recognized Environmental Conditions (RECs), which means the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property.

Per the current ASTM Standard, the Phase I ESA reviewed a variety of information sources, including current and historic Sanborn Fire Insurance Maps and aerial photographs; state and federal environmental regulatory databases identifying listed sites; and local environmental records. The Phase I ESA also included reconnaissance of the Development Site and its immediate surroundings.

Based on a review of historical records dating back to 1890, the Site appears to have been used for commercial, manufacturing, residential, and garage purposes before becoming a laboratory. Products formerly manufactured on site include soda water/soda fountains, electrical supplies, picture frames, furniture, and baked goods. Former garages on site also appear to have been used as auto repair facilities. These former site operators likely used various chemical and petroleum products in their operations. Improper handling and disposal of such products or other byproducts

of manufacturing cannot be ruled out based on available records. The current site use, a public health laboratory, appears to have begun around 1964, when the existing building was constructed. It is possible that historical fill is present at this Site based on the history of development and redevelopment.

During the Phase I ESA, VHB identified two RECs in connection with the Site or in the vicinity of the Site:

- Professional Dry Cleaners, also known as Cherry Blossom Cleaners between 1991 and 2005, is located upgradient from the Site with respect to presumed groundwater flow. The business address at 486 Second Avenue, was listed in EDR's historic and current drycleaning databases as well as RCRA generator and manifest databases. It appears that a dry cleaner operated at this location between 1985 and 2007 and generated hazardous spent halogenated solvent waste as a small and large quantity generator between that time. There is a possibility that solvents have impacted the subsurface at this nearby, upgradient address and migrated on Site. Thus, it is the Environmental Professional's Opinion that the nearby historical drycleaner at 486 Second Avenue represents a REC.
- Based on a review of historical records dating back to 1890, the Site appears to have been used for commercial, manufacturing, residential, and garage purposes before becoming a laboratory. Products formerly manufactured on site include soda water/soda fountains, electrical supplies, picture frames, furniture, and baked goods. Former automotive garages on site also appear to have been used as auto repair facilities. These former site operators likely used various chemical and petroleum products in their operations. Improper handling and disposal of such products or other byproducts of manufacturing cannot be ruled out based on available records. There is a possibility that chemicals of concern or petroleum products have impacted the subsurface on Site. Thus, it is the Environmental Professional's Opinion that the on-site historical uses represent a REC.

Phase II Work Plan

In order to investigate the RECs identified in the Phase I ESA, VHB prepared a Phase II Site Investigation Work Plan and Site-Specific Health and Safety Plan (HASP) in January 2024. The Phase II Work Plan includes the installation of six soil borings, four temporary groundwater monitoring wells, and nine soil vapor probes at the Development Site. According to a letter issued by the New York City Department of Environmental Protection (DEP) on April 9, 2024, the work plan and HASP has been deemed acceptable. Upon completion of the investigation activities, a detailed Phase II report will be submitted for DEP review and approval.

Future No-Action Condition

In the No-Action condition, it is assumed that the existing building on the Development Site would be re-tenanted with a mix of office and laboratory space for continued use by City agencies. With respect to hazardous materials, the No-Action scenario would result in the potential for subsurface contamination at the Development Site to go uninvestigated and therefore un-remediated.

Future With-Action Condition

In the future With-Action condition, the Applicants would redevelop the Development Site with the Proposed Project.

Consistent with the DEP-approved Phase II Site Investigation Work Plan, an investigation will be completed to identify the potential for subsurface contamination in areas of proposed soil disturbance and, if warranted, a Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP) would be prepared and submitted to DEP for review and approval.[1] Any necessary remedial measures would be incorporated into the development plans. In accordance with construction best practices, a vapor barrier would be incorporated into the new development's foundation. In addition to the above, regulatory requirements relating to asbestos-containing material (ACM), lead-based paint (LBP), and PCB-containing building materials would be followed as part of standard demolition and site redevelopment practices.

NYCEDC would require, through terms incorporated into the Pre-Development Agreement (PDA) between NYCEDC and 455 First Avenue Associates LLC, or other legally binding document such as a side letter, that 455 First Avenue Associates LLC complete the site investigation consistent with the DEP-approved Phase II Site Investigation Work Plan. The results of the site investigation will be submitted to DEP for review and if DEP determines that remediation is warranted, 455 First Avenue Associates LLC will prepare a RAP and CHASP for DEP review and approval.

Task 1: Sampling Protocol

A Phase II Site Investigation Work Plan, including a description of methods and a site map with all sampling locations represented, was submitted to and approved by DEP. The number and location of sample sites has been selected to adequately characterize the site, the specific source of suspected contamination (i.e., petroleum-based contamination and non-petroleum-based contamination), and the remainder of the site's condition.

Task 2: Remediation Determination and Protocol

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

If remediation is indicated from the test results, a proposed RAP and CHASP will be submitted to DEP for review and approval. 455 First Avenue Associates LLC will complete such remediation as determined necessary by DEP in accordance with the approved RAP. Based on the RECs that have been identified, it is anticipated that remedial measures may include proper soil handling, transportation and disposal in the limited excavation areas and soil vapor intrusion mitigation (e.g., vapor barrier and/or sub-slab depressurization system).

If remediation is required by DEP, the CHASP will be implemented during excavation and construction and activities to protect workers and the community from potentially significant adverse impacts associated with contaminated soil and/or groundwater. This plan will be submitted to DEP for review and approval as part of the RAP.

Following implementation of the remedial action, 455 First Avenue Associates LLC will provide a Remedial Closure Report (RCR) to document that remedial action has been satisfactorily completed.

[1] Given the presence of the existing building, accessibility constraints of the existing basement areas, limited basement horizontal and vertical clearance, the presence of known utilities and the uncertainty associated with locating utilities within or beneath very thick building slab, and the building's ongoing sensitive operations, it is not practical to perform the subsurface investigation at this time.

In addition to the above, regulatory requirements relating to ACM, LBP and PCB-containing building materials will be followed as part of standard demolition and site redevelopment practices.

Conclusion

A DEP-approved Phase II Investigation Work Plan will be implemented to evaluate the soil, groundwater, and soil vapor conditions present at the Development Site. If a determination is made by DEP that remediation is necessary following sample analysis, a RAP and CHASP will be prepared for the Development Site to assess the potential for exposure to hazardous materials during construction. The above-referenced measures will be implemented to ensure no significant adverse impacts would occur with respect to hazardous materials.

6

Transportation

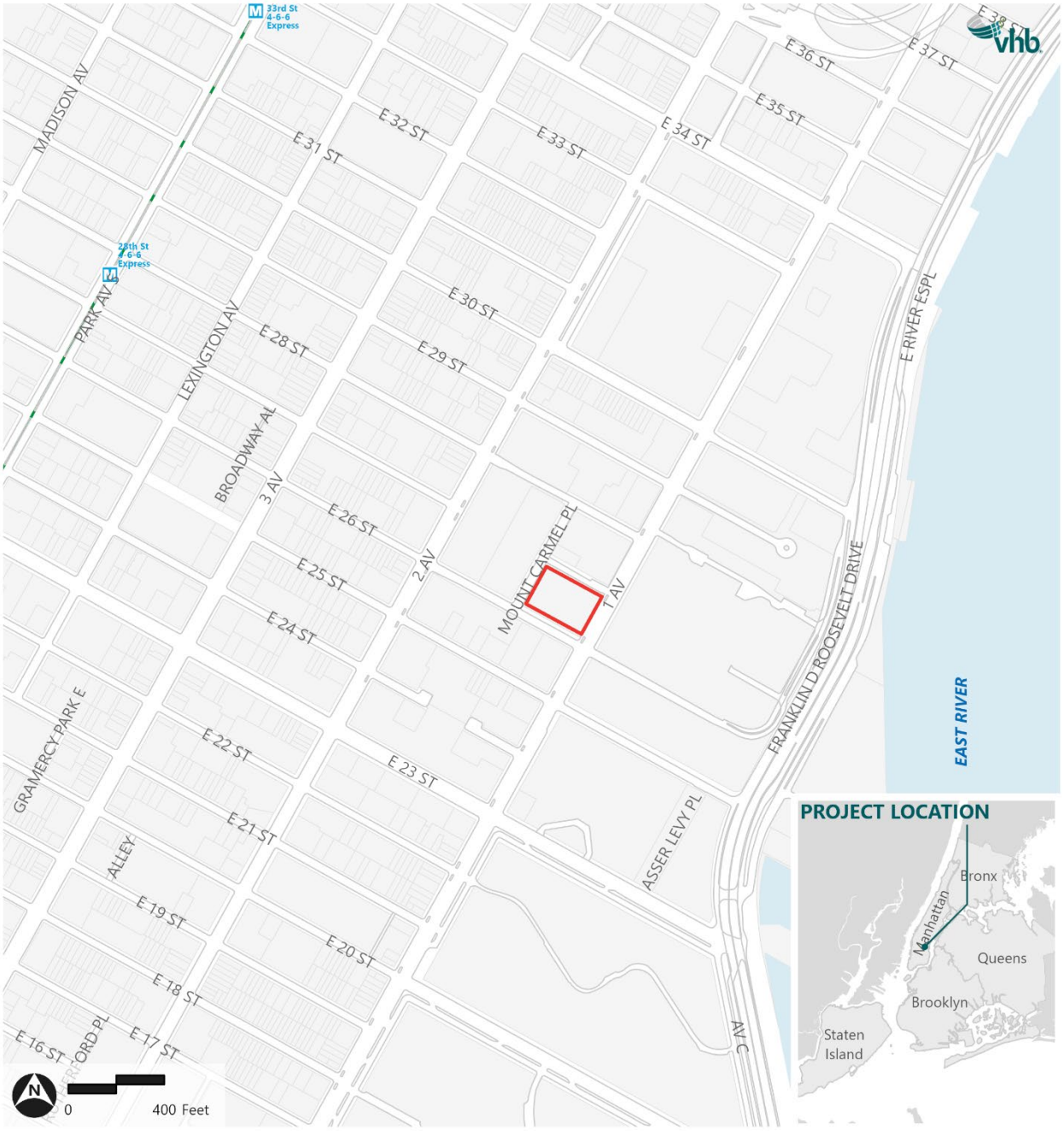
The objective of the transportation analyses is to determine whether a proposed project may have a potential significant impact on traffic operations and mobility, public transportation facilities and services, pedestrian elements and flow, safety of all roadway users (pedestrians, cyclists, and motorists),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

Introduction

The Development Site is located at 455 First Avenue in the Kips Bay section of Manhattan and is bounded by East 27th Street to the north, First Avenue to the east, East 26th Street to the south, and Mt. Carmel Place to the west (see **Figure 6-1**). As detailed in **Part I: Project Description**, the Proposed Project would consist of the redevelopment of the site with a new state-of-the-art life sciences building with ground floor local retail.

Overall, the Proposed Project would include approximately 604,988 gross square feet (gsf) of commercial science laboratory space (referred to as "life sciences", this includes approximately 83,000 gsf of mechanical space associated with the use), and an additional 5,000 gsf of ground floor local retail space for a total development of 609,988 gsf. In the future without the Proposed Project (the No-Action condition), the existing building on the Development Site is expected to be re-tenanted with a mix of office and laboratory space for continued use by City agencies, of which 185,851 gsf is assumed to be for life sciences (this includes approximately 20,851 gsf of mechanical space associated with this use) and 152,296 gsf for office use. As shown in **Table 6-1**, the increment for analysis is 419,137 gsf increase in life sciences space and 5,000 gsf increase in retail space, and a reduction of 152,296 gsf of office space.

Figure 6-1 Site Location



Source: DCP PLUTO

Table 6-1 Development Increment for Analysis[1]

Use	No-Action	Proposed Project	With-Action Increment
Life Sciences	185,851 gsf (includes 20,851 gsf of associated mechanical space)	604,988 gsf[1] (includes 83,000 gsf of associated mechanical space)	+ 419,137 gsf (includes 62,149 gsf of associated mechanical space)
Office	152,296 gsf	0 gsf	- 152,296 gsf
Retail	0 gsf	5,000 gsf	+ 5,000 gsf

Note: The gross square footages for the life sciences uses include estimated associated mechanical space.

[1] The life sciences space would consist of space for start-ups, graduation space for life science businesses, space for established Research and Development firms, anchor space for NYU Grossman School of Medicine, and a Life Science Multi-Purpose Programming space. The Life Science Multi-Purpose Programming space would primarily be used to host programs and events for life science tenants. This space would also host life science community program and events, which are expected to vary in terms of number of attendees, time of day, and frequency over the course of the year.

Methodology

According to the *2021 CEQR Technical Manual* procedures for transportation analysis, a two-tiered screening process is undertaken to determine whether a quantified analysis is necessary. The first step, the Level 1 (Trip Generation) screening, determines whether the volume of peak hour person and vehicle trips generated by the Proposed Project would remain below the minimum thresholds for further study.

These thresholds are:

- 50 peak hour vehicle trip ends;
- 200 peak hour subway/rail or bus transit riders;
- 200 peak hour pedestrian trips; and
- 50 City Wide Ferry Service (CWFS) ferry riders.

If the Proposed Project results in increments that would exceed any of these thresholds, a Level 2 (Trip Assignment) screening assessment is usually performed. Under this assessment, project-generated trips that exceed Level 1 thresholds are assigned to and from the project site through their respective networks (streets, bus and subway lines, sidewalks, etc.) based on expected origin-destination patterns and travel routes.

Level 1 (Trip Generation) Screening Assessment

The travel demand factors used to calculate the projected number of trips were obtained primarily from the *CEQR Technical Manual*, the 2016 *New York City Department of Sanitation Proposed Manhattan Districts 6/6A/8 Transportation Demand Factors & Screening Assessment Memorandum,* 2012-2016 American Association of State Highway and Transportation Officials (AASHTO) Census Transportation Planning Program (CTPP) reverse-journey-to-work (RTJW) data, and information provided by the New York City Department of Transportation (NYC DOT). **Table 6-2** presents the travel demand assumptions used for the weekday AM, midday, PM and Saturday peak hour trip projections.

Table 6-2 Travel Demand Characteristics

Rates	Life Sciences	Local Retail	Office
Person Trip Generation Rate (Weekday/Saturday)	6.98/0.43[1] *per 1,000 SF*	329/358[2] *per 1,000 SF*	18/3.9[2] *per 1,000 SF*
Temporal Distribution			
Weekday AM Peak	13%[1]	4.8%[2]	12.4%[2]
Weekday Midday Peak	10%[1]	8%[2]	11%[2]
Weekday PM Peak	10%[1]	10.9%[2]	10.5%[2]
Saturday Peak	11%	11.7%[2]	14.1%[2]
Modal Split	**Weekday/Saturday**	**All peak hours**	**All peak hours**
Auto	24%/24%[1]	4%[3]	16.2%[5]
Taxi	7%/8%[1]	1%[3]	0.7%[5]
Bus	11%/19%[1]	1%[3]	14.5%[5]
Subway	32%/30%[1]	1%[3]	56.7%[5]
Ferry	2%/1%[1]	0%[3]	0.6%[5]
Bike	2%/2%[1]	1%[3]	1.8%[5]
Walk/Other	22%/16%[1]	92%[3]	9.5%[5]
Vehicle Occupancy	**Weekday/Saturday**	**All peak hours**	**All peak hours**
Auto/Taxi	1.23/1.40 | 1.20/1.40[1]	1.65/1.40[4]	1.13/1.40[5, 4]
Directional Split (In/Out)			
Weekday AM Peak	89%/11%[1]	52%/48%[3]	86%/14%[3]
Weekday Midday Peak	49%/51%[1]	50%/50%[3]	52%/48%[3]
Weekday PM Peak	23%/77%[1]	50%/50%[3]	16%/84%[3]
Saturday Peak	75%/25%[1]	50%/50%[3]	48%/52%[3]
Delivery Trip Gen (Weekday/Saturday)	0.32/0.01[1] *per 1,000 SF*	0.35/0.04[2] *per 1,000 SF*	0.32/0.01[2] *per 1,000 SF*
Delivery Temporal Distribution			
Weekday AM Peak	10%[1]	8%[2]	10%[2]
Weekday Midday Peak	11%[1]	11%[2]	11%[2]
Weekday PM Peak	2%[1]	2%[2]	2%[2]
Saturday Peak	11%[1]	11%[2]	11%[2]
Delivery Trip Directional Split (In/out) - 50%/ 50%[1]			

Source:
[1] 2016 *New York City Department of Sanitation Proposed Manhattan Districts 6/6A/8 Transportation Demand Factors & Screening Assessment Memorandum*
[2] 2021 *City Environment Quality Review Technical Manual*; 25 percent linked trip credit assumed for the local retail use for the weekday peak hours, and a 10 percent linked trip credit was assumed for the Saturday peak hour.
[3] NYCDOT survey data
[4] 2021 *Starrett-Lehigh and Terminal Warehouse FEIS*
[5] 2012-2016 Five-year AASHTO CTPP RJTW Census data for Manhattan Tracts 62, 64, 66, and 70

Life Sciences

For the life sciences use, trip generation rates of 6.98 daily person trips per 1,000 square feet for weekdays and 0.43 daily person trips per 1,000 square feet for Saturday, temporal distributions (13 percent, 10 percent, 10 percent and 11 percent for weekday AM, midday, PM, and Saturday peak hours, respectively), modal splits, vehicle occupancy rates and directional distributions were based on the scientific research laboratory use from the *2016 New York City Department of Sanitation Proposed Manhattan Districts 6/6A/8 Transportation Demand Factors & Screening Assessment Memorandum*. The travel demand assumptions developed for this use were based on surveys of the Alexandria Center for Life Science located a few blocks from the Development Site. The modal splits of 24 percent by auto, 7 percent by taxi, 11 percent by bus, 32 percent by subway, 2 percent by ferry, 2 percent by bike, and 22 percent by walking and other modes, and a vehicle occupancy rate of 1.23 persons per auto and 1.40 persons per taxi were assumed for the weekday. The modal splits of 24 percent by auto, 8 percent by taxi, 19 percent by bus, 30 percent by subway, 1 percent by ferry, 2 percent by bike, and 16 percent by walking and other modes, and a vehicle occupancy rate of 1.20 persons per auto and 1.40 persons per taxi were assumed for the weekday. Directional distributions of 89 percent "in" for weekday AM peak hour, 49 percent "in" for weekday midday peak hour, 23 percent "in" for weekday PM peak hour, and 75 percent "in" for the Saturday peak hours were assumed.

For life sciences' delivery trips, trip generation rates of 0.32 daily delivery trips per 1,000 square feet for weekdays and 0.01 daily delivery trips per 1,000 square feet for Saturday, and temporal distributions of 10 percent, 11 percent, 2 percent, and 11 percent for the weekday AM, midday, PM, and Saturday peak hours, respectively, were obtained from the *2016 New York City Department of Sanitation Proposed Manhattan Districts 6/6A/8 Transportation Demand Factors & Screening Assessment Memorandum*.

Local Retail

For the local retail use, trip generation rates of 329 daily person trips per 1,000 square feet for weekdays and 358 daily person trips per 1,000 square feet for Saturdays, and temporal distributions (4.8 percent, 8 percent, 10.9 percent, and 11.7 percent for weekday AM, midday, PM, and Saturday peak hours, respectively) were based on the *CEQR Technical Manual*. A linked trip credit of 25 percent was assumed during the weekday peak hours to account for internal trips and local pass-by trips; a linked trip credit of 10 percent was assumed for the Saturday peak hour due to the lower level of activity of the life science and offices uses on weekends compared to a weekday. The modal splits of 4 percent by auto, 1 percent by taxi, 1 percent by bus, 1 percent by subway, 1 percent by bike and 92 percent by walking and other modes were obtained from NYCDOT survey data and assumed for all peak hours. The vehicle occupancy rate of 1.65 persons per auto and a taxi occupancy rate of 1.40 persons per taxi were obtained from the 2021 *Starrett-Lehigh and Terminal Warehouse FEIS*. Directional distributions (52 percent "in" for the weekday AM peak hour, 50 percent "in" for the weekday midday, PM and Saturday peak hours) were based on the NYCDOT survey data.

For local retail delivery trips, trip generation rates of 0.35 daily delivery trips per 1,000 square feet for weekdays and 0.04 daily delivery trips per 1,000 square feet for Saturdays, and temporal distributions of 8 percent, 11 percent, 2 percent, and 11 percent for the weekday AM, midday, PM, and Saturday peak hours, respectively, were obtained from the *CEQR Technical Manual*.

Office

For the office use, trip generation rates of 18 daily person trips per 1,000 square feet for weekdays and 3.9 square feet for Saturdays, and temporal distributions (12.4 percent, 11 percent, 10.5 percent, and 14.1 percent for the weekday AM, midday, PM, and Saturday peak hours, respectively) were based on the *CEQR Technical Manual*. The weekday AM, midday, PM, and Saturday peak hour modal splits of 16.2 percent by auto, 0.7 percent by taxi, 14.5 percent by bus, 56.7 percent by subway (includes transfers from commuter rail which would account for 9.3 percent of the trips), 0.6 percent by ferry, 1.8 percent by bike, and 9.5 percent by walking and other modes, and a vehicle occupancy rate of 1.13 per auto were obtained from the AASHTO CTPP RJTW data for Manhattan census tracts 62, 64, 66, 68, 70, and 72. The taxi occupancy rate of 1.40 per auto was obtained from the 2021 *Starrett-Lehigh and Terminal Warehouse FEIS*. Directional distributions (86 percent "in" for the weekday AM peak hour, 52 percent "in" for the weekday midday peak hour, 16 percent "in" for the weekday PM peak hour, and 48 percent "in" for the Saturday peak hour) were also based on NYCDOT survey data.

For office delivery trips, the trip generation rate of 0.32 daily delivery trips per 1,000 square feet for the weekday and 0.01 daily delivery trips per 1,000 square feet for the Saturdays, and temporal distributions of 10 percent, 11 percent, 2 percent, and 11 percent for the weekday AM, midday, PM, and Saturday peak hours, respectively, were obtained from the *CEQR Technical Manual*.

Level 1 Screening Results

Transit and Pedestrians

The total number of person trips expected to be generated by the Proposed Project is provided in **Table 6-3** and detailed by land use in **Table 6-4**. Total pedestrian trips include persons walking to and from transit and ferry stops, walk-only trips, and persons walking to and from automobiles parked in public lots throughout the study area. The number of auto parking, bus, subway, ferry, and walk-only pedestrian trips by peak hour are as follows:

- During the weekday AM peak hour, in comparison to the No-Action condition, the Proposed Project would generate 38 additional auto parking trips, seven fewer bus trips, 72 fewer subway trips, and 104 additional walk-only trips. No incremental ferry trips would be generated during this period.
- During the weekday midday peak hour, in comparison to the No Action condition, the Proposed Project would generate 26 additional auto parking trips, 12 fewer bus trips, 77 fewer subway trips, four additional ferry trips, and 126 additional walk-only trips. No incremental auto parking trips would be generated during this period.
- During the weekday PM peak hour, in comparison to the No Action condition, the Proposed Project would generate 30 additional auto parking trips, eight fewer bus trips, 67 fewer subway trips, five additional ferry trips, and 162 additional walk-only trips.
- During the Saturday peak hour, in comparison to the No Action condition, the Proposed Project would generate one fewer auto parking trip, six fewer bus trips, 41 fewer subway trips, and 169 additional walk-only trips.
- Overall, a net total of 69 additional pedestrian trips would occur in the weekday AM peak hour, a net total of 67 additional pedestrian trips would occur in the weekday midday peak hour, a net

total of 122 additional pedestrian trips would occur in the weekday PM peak hour, and a net total of 121 additional pedestrian trips would occur in the Saturday peak hour.

As shown in **Table 6-3** and summarized above, the number of bus and subway trips generated by the Proposed Project would not exceed the *CEQR* threshold of 200 trips per hour, therefore no further transit analyses are needed. As the project is not expected to generate any increase in peak hour ferry trips, no further analysis is needed for this travel mode. The number of pedestrian trips generated by the Proposed Project would also not exceed the *CEQR* threshold of 200 pedestrian trips per hour peak hour. Therefore, a Level 2 screening assessment is not needed during these peak hours, and a detailed pedestrian analysis is not warranted. Consequently, there is no potential for a significant adverse impact to buses, subway, ferries, or pedestrians.

Table 6-3 Trip Generation Summary – Person Trips

	Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
Mode	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Auto	35	3	38	11	15	26	12	18	30	1	-2	-1
Taxi	22	3	25	9	9	18	6	15	21	2	1	3
Bus	-5	-2	-7	-7	-5	-12	1	-9	-8	-2	-4	-6
Subway	-58	-14	-72	-43	-34	-77	-3	-64	-67	-18	-23	-41
Ferry	5	1	6	2	2	4	1	4	5	0	0	0
Bike	2	0	2	0	0	0	1	2	3	0	0	0
Walk/ Other	74	30	104	62	64	126	73	89	162	85	84	169
Total	**75**	**21**	**96**	**34**	**51**	**85**	**91**	**55**	**146**	**68**	**56**	**124**

Table 6-4 Trip Generation Summary – Person Trips by Land Use

	Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
Mode	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Life Sciences												
Auto	81	10	91	34	36	70	16	54	70	4	1	5
Taxi	24	3	27	10	10	20	5	16	21	1	0	1
Bus	37	5	42	16	16	32	7	25	32	3	1	4
Subway	108	13	121	46	48	94	22	72	94	4	1	5
Ferry	7	1	8	3	3	6	1	5	6	0	0	0
Bike	7	1	8	3	3	6	1	5	6	0	0	0
Walk/Other	74	9	83	32	33	65	15	50	65	2	1	3
Total	**338**	**42**	**380**	**144**	**149**	**293**	**67**	**227**	**294**	**14**	**4**	**18**
Local Retail												
Auto	1	1	2	2	2	4	3	3	6	4	4	8
Taxi	0	0	0	0	0	0	1	1	2	1	1	2
Bus	0	0	0	0	0	0	1	1	2	1	1	2
Subway	0	0	0	0	0	0	1	1	2	1	1	2
Ferry	0	0	0	0	0	0	0	0	0	0	0	0
Bike	0	0	0	0	0	0	1	1	2	1	1	2
Walk/Other	28	26	54	45	45	90	62	62	124	87	87	174
Total	**29**	**27**	**56**	**47**	**47**	**94**	**69**	**69**	**138**	**95**	**95**	**190**
Office												
Auto	-47	-8	-55	-25	-23	-48	-7	-39	-46	-7	-7	-14
Taxi	-2	0	-2	-1	-1	-2	0	-2	-2	0	0	0
Bus	-42	-7	-49	-23	-21	-44	-7	-35	-42	-6	-6	-12
Subway	-166	-27	-193	-89	-82	-171	-26	-137	-163	-23	-25	-48
Ferry	-2	0	-2	-1	-1	-2	0	-1	-1	0	0	0
Bike	-5	-1	-6	-3	-3	-6	-1	-4	-5	-1	-1	-2
Walk/Other	-28	-5	-33	-15	-14	-29	-4	-23	-27	-4	-4	-8
Total	**-292**	**-48**	**-340**	**-157**	**-145**	**-302**	**-45**	**-241**	**-286**	**-41**	**-43**	**-84**

Traffic and Parking

Table 6-5 summarizes the number of new project-generated vehicle trips expected during the peak hours analyzed, which are also detailed by land use in **Table 6-6**. The Proposed Project would result in an increase of 69 vehicle trips during the weekday AM peak hour, 43 vehicle trips during the weekday midday peak hour, 48 vehicle trips during the weekday PM peak hour, and there would be no additional vehicle trips during the Saturday peak hour in comparison to the No Action condition. As the volume of vehicle trips generated by the Proposed Project would exceed the *CEQR* threshold of 50 peak hour vehicle trips during the weekday AM peak hour, a Level 2 trip assignment is needed to determine if further detailed traffic analyses are warranted.

Table 6-5 Trip Generation Summary – Vehicle Trips

	Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
Mode	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Auto	25	2	27	7	10	17	9	11	20	-1	-3	-4
Taxi	16	16	32	9	9	18	13	13	26	2	2	4
Delivery	5	5	10	4	4	8	1	1	2	0	0	0
Total	**46**	**23**	**69**	**20**	**23**	**43**	**23**	**25**	**48**	**1**	**-1**	**0**

Table 6-6 Trip Generation Summary – Vehicle Trips by Land Use

	Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
Mode	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Life Sciences												
Auto	66	8	74	28	29	57	13	44	57	3	1	4
Taxi	17	17	34	10	10	20	13	13	26	1	1	2
Delivery	7	7	14	7	7	14	1	1	2	0	0	0
Total	**90**	**32**	**122**	**45**	**46**	**91**	**27**	**58**	**85**	**4**	**2**	**6**
Local Retail												
Auto	1	1	2	1	1	2	2	2	4	2	2	4
Taxi	0	0	0	0	0	0	1	1	2	1	1	2
Delivery	0	0	0	0	0	0	0	0	0	0	0	0
Total	**1**	**1**	**2**	**1**	**1**	**2**	**3**	**3**	**6**	**3**	**3**	**6**
Office												
Auto	-42	-7	-49	-22	-20	-42	-6	-35	-41	-6	-6	-12
Taxi	-1	-1	-2	-1	-1	-2	-1	-1	-2	0	0	0
Delivery	-2	-2	-4	-3	-3	-6	0	0	0	0	0	0
Total	**-45**	**-10**	**-55**	**-26**	**-24**	**-50**	**-7**	**-36**	**-43**	**-6**	**-6**	**-12**

Level 2 Screening (Trip Assignment) Assessment

As shown above, the number of trips generated by the Proposed Project would exceed the *CEQR Technical Manual* Level 1 screening thresholds for vehicle trips during the weekday AM peak hours Project-generated vehicle trips were assigned through the surrounding street network based on expected routes to and from the Development Site.

Vehicle Trip Assignments

The Development Site would include pedestrian access from First Avenue, East 26th Street and the pedestrian way along East 27th Street. Project-generated vehicle trips were assigned through the surrounding street network based on expected routes to and from the Development Site, the

configuration of the street network, and parking facilities within the Development Site vicinity. As the Proposed Project would not provide on-site parking, auto trips were assigned to park at nearby off-street parking facilities. The loading dock entrance would be located along Mount Carmel Place.

The distribution of auto trips was based upon the AASHTO CTPP RJTW data for Manhattan Census tracts 62, 64, 66, and 70. Within New York City, approximately 9.6 percent of these auto trips were assumed to originate from Manhattan, 22.0 percent from Queens, 13.7 percent from Brooklyn, 6.5 percent from the Bronx, and 3.0 percent from Staten Island. New York counties to the north of New York City (Westchester and Upstate New York) make up approximately 14.0 percent of trips while trips from Long Island are approximately 10.8 percent of trips. Approximately 19.4 percent of office trips are assumed to originate from out of state areas to the west (New Jersey and Pennsylvania) and approximately 1.0 percent from Connecticut.

Most auto trips were assumed to use East River and Hudson River crossings. Approximately 36.2 percent of trips were assigned to the Queens-Midtown Tunnel or the Ed Koch Queensboro Bridge crossing the East River from Queens to access the study area. Approximately 9.8 percent and 6.4 percent of the trips were assigned to the study area using the Lincoln Tunnel and Holland Tunnel, respectively. Trips from the north arriving via the FDR Drive account for approximately 28.1 percent of worker trips (including trips to/from the Ed Koch Queensboro Bridge). FDR Drive worker trips from the south account for approximately 9.4 percent of the trips (including trips arriving from/en route to Brooklyn). The remaining trips would use local north-south streets including First, Second and Third Avenues; and the cross-streets between East 23rd and 34th Streets.

Taxi trips were primarily assigned along the Development Site's East 26th Street and First Avenue frontages. Delivery trips were assigned along New York City Department of Transportation's (NYCDOT) designated delivery routes such as 23rd Street, First Avenue, and Second Avenue. Delivery trips were assigned along delivery routes as long as possible until reaching the Development Site's loading dock, which is accessed from Mount Carmel Place.

The vehicle trip assignment shows that in the weekday AM peak hour, no intersection in the immediate vicinity of the Project Site would receive more than 47 vehicle trips. The vehicle trip increments, as shown in **Figure 6-2**, would not exceed the Level 2 screening threshold of 50 vehicle trips at an intersection. Therefore, further traffic analysis is not warranted and there would not be a potential for significant adverse traffic impacts.

Figure 6-2 Traffic Volume Increment – Weekday AM Peak Hour



Conclusion

The volume of peak hour person and vehicle trips generated by the Proposed Project does not exceed the minimum Level 1 thresholds outlined in the *CEQR Technical Manual* for subway, bus, ferry and pedestrian trips, and does not exceed the minimum Level 2 thresholds for vehicle trips. Therefore, a detailed analysis is not warranted, and the Proposed Project would not have the potential to result in significant adverse impacts on any travel mode: traffic, subway/rail, bus transit, pedestrians, or ferries.

7

Air Quality

Ambient air quality, or the quality of the surrounding air, may be affected by air pollutants produced by motor vehicles, referred to as "mobile sources"; by fixed facilities, referred to as "stationary sources"; or by a combination of both. Under CEQR, an air quality assessment determines both a proposed project's effects on ambient air quality as well as the effects of ambient air quality on the project.

Introduction

The Proposed Actions would facilitate redevelopment of Manhattan Block 932, Lot 17 (the Development Site), located at 455 First Avenue, with an approximately 13-story, up to 270-foot-tall, 609,988 gross square foot (gsf) life sciences building. The building would include life sciences space,[1] retail space, and mechanical space.

Potential air quality impacts of the Proposed Project include potential impacts from the project-generated traffic, from the building's heating, ventilation, and air conditioning (HVAC) systems, and from potential laboratory exhaust. Consistent with the *2021 CEQR Technical Manual*, the air quality analysis also includes potential impacts on the Proposed Project from nearby industrial sources and "large" and "major" sources (i.e., facilities with State and Title V air permits).

Air quality impacts can be either direct or indirect. Direct impacts result from emissions generated by stationary sources at a development site, such as emissions from on-site fuel combustion for heating and hot water systems. Indirect impacts are caused by off-site emissions associated with a project,

[1] The life sciences space would consist of space for start-ups, graduation space for life science businesses, space for established Research and Development firms, anchor space for NYU Grossman School of Medicine, and a Life Science Multi-Purpose Programming space.

such as emissions from nearby existing stationary sources (i.e., impacts on the development site) or by emissions from on-road vehicle trips generated by a proposed project or other changes to future traffic conditions due to a project.

The key issues addressed in these analyses are the potential for:

- Emissions from the project-generated vehicular travel to significantly impact air quality near affected intersections;
- Emissions from the HVAC systems of the Proposed Project to significantly impact existing and proposed land uses;
- Emissions from a potential chemical spill and laboratory fume exhaust;
- Emissions from large/major sources in the surrounding area to impact the Proposed Project;
- Emissions from light industrial and manufacturing facilities in the surrounding area to impact the Proposed Project.

The Proposed Project would not introduce any parking, and therefore, an assessment of emissions from such a facility is not warranted.

Air Quality Standards

Ambient air quality is affected by air pollutants produced by both motor vehicles and stationary sources. Emissions from motor vehicles are referred to as mobile source emissions, while emissions from fixed facilities are referred to as stationary source emissions. Ambient concentrations of CO are predominantly influenced by mobile source emissions. Particulate matter (PM), volatile organic compounds (VOCs), and nitrogen oxides (nitric oxide (NO) and nitrogen dioxide (NO_2), collectively referred to as NO_x) are emitted from both mobile and stationary sources. Fine PM is also formed when emissions of NO_x, sulfur oxides (SO_x), ammonia, organic compounds, and other gases react or condense in the atmosphere. Emissions of sulfur dioxide (SO_2) are associated mainly with coal- or oil-fired stationary sources, and some sources utilizing non-road diesel such as large international marine engines. On-road diesel vehicles currently contribute very little to SO_2 emissions since the sulfur content of on-road diesel fuel, which is federally regulated, is extremely low. Ozone is formed in the atmosphere by complex photochemical processes that include NO_x and VOCs.

In accordance with the requirements of the Clean Air Act (CAA), as amended 1990, the U.S. Environmental Protection Agency (EPA) has promulgated National Ambient Air Quality Standards (NAAQS) (40 CFR part 50) for pollutants considered harmful to public health and the environment. The Clean Air Act established two types of national air quality standards. Primary standards set limits to protect public health, including the health of sensitive populations such as sick, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

The EPA Office of Air Quality Planning and Standards (OAQPS) has set NAAQS for six principal pollutants, which are called "criteria" pollutants. These six pollutants are ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide (SO_2), particulate matter less than 10 microns in aerodynamic diameter (PM_{10}) and less than 2.5 microns in aerodynamic diameter ($PM_{2.5}$), and lead (Pb). These standards are reviewed every five years and may be revised after the applicable review and public comment process.

The NAAQS are presented in **Table 7-1**.

Table 7-1 National Ambient Air Quality Standards

Pollutant	Primary/ Secondary	Averaging Level	Level	Form
Carbon Monoxide (CO)	Primary	8 hours	9 ppm	Not to be exceeded more than once per year
		1 hour	35 ppm	
Lead (Pb)	Primary and secondary	Rolling 3-month average	0.15 µg/m^3 (1)	Not to be exceeded
Nitrogen Dioxide (NO_2)	Primary	1 hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Primary and secondary	1 year	53 ppb (2)	Annual mean
Ozone (O_3)	Primary and secondary	8 hours	0.070 ppm (3)	Annual fourth-highest daily maximum concentration, averaged over 3 years
Particulate Matter ($PM_{2.5}$)	Primary	1 year	9.0 µg/m^3	Annual mean, averaged over 3 years
	Secondary	1 year	15.0 µg/m^3	Annual mean, averaged over 3 years
	Primary and secondary	24 hours	35 µg/m^3	98th percentile, averaged over 3 years
Particulate Matter (PM_{10})	Primary and secondary	24 hours	150 µg/m	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide (SO_2)	Primary	1 hour	75 ppb(4)	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Secondary	3 hours	0.5 ppm	Not to be exceeded more than once per year

Notes:

(1) In areas designated nonattainment for the Pb standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 µg/m^3 as a calendar quarter average) also remain in effect.

(2) The annual NO_2 standard is 0.053 ppm. It is shown here in terms of ppb for the purposes of clearer comparison to the 1-hour standard level.

(3) Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) O_3 standards additionally remain in effect in some areas. Revocation of the previous (2008) O3 standards and transitioning to the current (2015) standards will be addressed in the implementation rule for the current standards.

(4) The previous SO_2 standards (0.14 ppm 24-hour and 0.03 ppm annual) will additionally remain in effect in certain areas: (1) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2)any area for which an implementation plan providing for attainment of the current (2010) standard has not been submitted and approved and which is designated nonattainment under the previous SO_2 standards or is not meeting the requirements of a SIP call under the previous SO_2 standards (40 CFR 50.4(3)). A SIP call is a USEPA action requiring a state to resubmit all or part of its State Implementation Plan to demonstrate attainment of the required NAAQS.

Source: 40 CFR 50, National Primary and Secondary Ambient Air Quality Standards. Nov. 25, 1971 and as updated (Oct. 3, 2016).

In addition to the criteria pollutants, 42 USC 7412 lists toxic air pollutants not included by the EPA in the list of principal pollutants. Toxic air pollutants, sometimes referred to as hazardous air pollutants

(HAP), are emitted by a wide range of man-made and naturally occurring sources and, when emitted from mobile sources, as Mobile Source Air Toxics (MSATs). No federal ambient air quality standards have been promulgated for toxic air pollutants. However, EPA and New York State Department of Environmental Conservation (NYSDEC) have issued guidelines that establish acceptable ambient levels for these pollutants based on human exposure.

Regulatory Context

The 1990 CAA with Amendments resulted in states being divided into attainment and non-attainment areas, with classifications based upon the severity of their air quality problems. Air quality control regions are classified and divided into one of three categories: attainment, unclassified, or non-attainment depending upon air quality data and ambient concentrations of pollutants. Attainment areas are regions where ambient concentrations of a pollutant are below the respective NAAQS; non-attainment areas are those where concentrations exceed the NAAQS. Maintenance areas are former non-attainment that achieved attainment. An unclassified area is a region where data are insufficient to make a determination and is generally considered as an attainment area for administrative purposes. A single area can be in attainment of the standards for some pollutants while being in non-attainment for others. When an area is designated as non-attainment by EPA, the state is required to submit a State Implementation Plan (SIP) which outlines the plan to achieve conformity with the NAAQS and the following plan for maintaining the attainment status.

New York County is designated as a serious non-attainment area for the 2008 8-hour ozone standard and a moderate non-attainment area for the 2015 8-hour ozone standard. Both designations are part of a larger New York-Northern New Jersey-Long Island, NY-NJ-CT non-attainment area. New York County has been a moderate PM_{10} non-attainment area since 1994. The county has been designated as a CO maintenance area as of May 20, 2002 and as a $PM_{2.5}$ maintenance area for the 2006 24-hour $PM_{2.5}$ standard as of April 18, 2014. EPA plans to designate all US areas to the new $PM_{2.5}$ annual standard finalized on February 7, 2024 in two years. Until then, designation for the previous 2012 annual standard remains valid. New York County is in attainment for all other criteria pollutants (Pb, NO_2, and SO_2).

Pollutants of Concern

Air pollution is of concern because of its demonstrated effects on human health. Of special concern are the respiratory effects of the pollutants and their potential toxic effects, as described below.

Carbon monoxide (CO) is a colorless and odorless gas that is a product of incomplete combustion. Carbon monoxide is absorbed by the lungs and reacts with hemoglobin to reduce the oxygen carrying capacity of the blood. At low concentrations, CO has been shown to aggravate the symptoms of cardiovascular disease. It can cause headaches, nausea, and at sustained high concentration levels, can lead to coma and death. The Proposed Project would increase traffic volumes on streets surrounding the Development Site. Therefore, a CEQR mobile source screening analysis was conducted.

Particulate matter is made up of small solid particles and liquid droplets. PM_{10} refers to particulate matter with a nominal aerodynamic diameter of 10 micrometers or less, and $PM_{2.5}$ refers to particulate matter with an aerodynamic diameter of 2.5 micrometers or less. Particulates can enter the body through the respiratory system. Particulates over 10 micrometers in size are generally

captured in the nose and throat and are readily expelled from the body. Particulates smaller than 10 micrometers, and especially particles smaller than 2.5 micrometers, can reach the air ducts (bronchi) and the air sacs (alveoli) in the lungs. Particulates are associated with increased incidence of respiratory diseases, cardiopulmonary disease, and cancer.

All gasoline-powered and diesel-powered mobile source vehicles, especially heavy trucks and buses operating on diesel fuel, emit respirable particulates, most of which is $PM_{2.5}$. Consequently, levels of respirable particulates may be locally elevated near roadways with high volumes of gasoline and diesel-powered vehicles. Vehicular traffic may also contribute to PM emissions through brake and tire wear and by disturbing dust on roadways. The traffic generated by the Proposed Project was assessed as part of a CEQR $PM_{2.5}$ screening analysis.

Impact Criteria

The State Environmental Quality Review Act (SEQRA) regulations and *CEQR Technical Manual* indicate that the significance of a predicted consequence of a project (i.e., whether it is material, substantial, large, or important) should be assessed in connection with its setting (e.g., urban or rural), its probability of occurrence, its duration, its irreversibility, its geographic scope, its magnitude, and the number of people affected.[2] The predicted concentrations of pollutants of concern associated with a proposed project are compared with the NAAQS for criteria air pollutants or ambient guideline concentrations for non-criteria pollutants. Generally, if project-related concentrations are higher than the NAAQS, there is a potential for significant adverse air quality impacts from the project.

New York City uses *de minimis* criteria to determine a project's potential to result in a significant adverse CO and $PM_{2.5}$ impact under CEQR. The *de minimis* criteria are as follows:

- An increase of 0.5 ppm or more in the 8-hour average CO concentration at a location where predicted No Action eight-hour concentration is equal to 8 ppm or between 8 and 9 ppm; or
- An increase of more than half the difference between baseline (i.e., No Action) concentrations and eight-hour standard, when No Action concentration is below 8 ppm.
- Predicted increase of more than half the difference between the $PM_{2.5}$ background concentration and the 24-hour standard;
- Annual average $PM_{2.5}$ concentration increments which are predicted to be greater than 0.1 $\mu g/m^3$ at ground level on a neighborhood scale (i.e., the annual increase in concentration representing the average over an area of approximately 1 square kilometer, centered on the location where the maximum ground-level impact is predicted for stationary sources; or at a distance from a roadway corridor similar to the minimum distance defined for locating neighborhood scale monitoring stations); or
- Annual average $PM_{2.5}$ concentration increments which are predicted to be greater than 0.3 $\mu g/m^3$ at a discrete receptor location (elevated or ground level).

[2] *CEQR Technical Manual*, Chapter 1, section 222, March 2014; and State Environmental Quality Review Regulations, 6 NYCRR §617.7

Background Concentrations

Background concentrations are ambient pollution levels associated with existing stationary, mobile, and other emission sources from the area and not associated with the Proposed Project. The latest full three years of monitoring data (2019 to 2021) from the representative monitoring stations were used to develop background concentrations for all pollutants (see **Table 7-2**).

Table 7-2 Background Concentrations

Pollutant	Averaging Time	Monitoring Location	Background Concentration
Carbon Monoxide	1-Hour	160 Convent Avenue	1.8 ppm
	8-Hour		1.4 ppm
Particulate Matter (PM_{10})	24-Hour	Division St./Queens College	39 µg/m^3
Particulate Matter ($PM_{2.5}$)	24-Hour	Division Street/IS45	19.1 µg/m^3
	Annual		8.4 µg/m^3

Source: VHB, Inc. July 2023

CO and PM background concentrations were obtained from monitoring stations in Manhattan: CO was collected at the City College of New York, 160 Convent Avenue, Manhattan; PM_{10} was collected at the Yung Wing Elementary School, 40 Division Street, Manhattan, until 2020 and at the Queens College Parking Lot #6 in 2021. $PM_{2.5}$ was collected from the station at 40 Division Street until 2020 and at the IS45 school at 2351 First Avenue in 2021, both stations in Manhattan. These concentrations were estimated using the form of the NAAQS (see **Table 7-1**, column Form for information).

The CEQR *de minimis* 24-hour threshold based on the $PM_{2.5}$ observations was estimated to be 7.7 µg/m^3.

Methodology and Analyses

Mobile Sources

A screening analysis of mobile source emissions of CO and PM on ambient pollutant levels in the study area was conducted per *CEQR Technical Manual* guidance. For the project's study area, as described in Chapter 17, Sections 210 and 311 of the *CEQR Technical Manual*, the threshold for conducting an analysis of CO emissions corresponds to 170 project-generated vehicles at a given intersection in the peak hour. The need for conducting an analysis of PM emissions is based on road type and the number of project-generated peak hour heavy-duty diesel vehicles (or its equivalency in vehicular $PM_{2.5}$ emissions) as determined using the worksheet provided on page 17-12 of the *CEQR Technical Manual* (Autos are assumed to be LDGT1 and trucks, such as pick-up trucks or vans, are assumed to be HDGV2B in the worksheet).

The mobile source CEQR screening analysis for the Proposed Project was conducted for the affected intersections within the network considered in the traffic analysis.

The screening indicates that the Proposed Project will generate a maximum of 69 passenger car trips per hour during the highest peak hour. This is below the CEQR threshold of 170 trips per hour for CO in the project area, and thus no further analysis of mobile source CO emissions is needed. Additionally, $PM_{2.5}$ impacts from heavy-duty diesel vehicle emissions, or their equivalents were estimated using the CEQR truck equivalent calculation worksheet from page 17-12 of the *CEQR TM* based on the trip assignments. The intersection of First Avenue and 26th Street had the highest assigned number of trips, consisting of 41 trip by autos, 4 trips by vans, and 2 trips by box trucks. This number of generated trips passes the $PM_{2.5}$ screening for the selected intersection. Therefore, a refined $PM_{2.5}$ analysis is not required for the Proposed Project. Overall, no adverse CO or $PM_{2.5}$ impacts are anticipated from the Proposed Project's mobile sources.

Stationary Sources

HVAC Analysis

The Proposed Project plans to use HVAC systems that permit the electrification of heating and air conditioning for the building by implementing Air Source Heat Pumps and using a chiller plant. Electric heaters will be used for domestic hot water. As there would be no on-site combustion of fossil fuels for HVAC and hot water systems, it can be reasonably concluded that there are no potential air quality impacts on existing and known future development. Therefore, an air quality analysis was not conducted, and no adverse significant air quality impacts are anticipated.

Industrial Source Analysis

As described in Section 220 and Section 321 in Chapter 17 of the *CEQR Technical* Manual, an air quality assessment is required to evaluate potential impacts of air toxics emissions from manufacturing or processing facilities within a 400-foot radius of a project site when a project would result in new sensitive uses (particularly residences, schools, hospitals, or parks).

To assess potential air quality impacts on the Proposed Project from existing industrial sources that emit toxic air contaminants, an investigation of existing land uses within a 400-foot radius of the Development Site was conducted to identify potential sources and determine if there are active permits associated with those sources. Land use maps were reviewed to identify surrounding land uses that could have New York City Department of Environmental Protection (NYCDEP)-issued industrial permits (i.e., sites classified as Industrial/Manufacturing, Transportation/Utility, or Public Facilities/Institutions); these land uses were then compared to NYCDEP's Clean Air Tracking System (NYCDEP CATS) to assess whether the facilities have associated permits. The identified permits are presented in **Table 7-3**.

Table 7-3 Industrial Sources within 400 Feet of the Development Site

Address	Block	Lot	Lot Owner Name[1]	DEP CATS
345 E. 24th Street	930	20	New York University	PA071288
332 E. 29th Street	934	15	Aimco Management Corp.	PB019208
433 First Avenue	931	24	NYU Nursing, Dentistry & Biology	PB051614

[1] Source: NYCDEP's Clean Air Tracking System (NYCDEP CATS). https://a826-web01.nyc.gov/DEP.BoilerInformationExt/

All three permits are for diesel emergency generators. Since emergency generators generally run intermittently and for very short periods, they are not included in a CEQR industrial screening analysis. Thus, it can be concluded that the industrial sources within 400 feet of the Proposed Project will have no adverse effects on the Proposed Project.

Large or Major Source Analysis

As described in Section 220 and Section 321 in Chapter 17 of the *CEQR Technical Manual*, an air quality assessment is required to evaluate the potential impacts of emissions from a "large" or "major" emission source within a 1,000-foot radius of a project site. "Major" sources are identified as sources with Title V/PSD (Prevention of Significant Deterioration) permits. "Large" sources are identified as sources with Air State Facility (ASF) permits. A detailed analysis is usually performed for such sources to determine any potential for significant adverse impact on the proposed development.

Review of available permit information identified two large sources within a 1,000-foot radius of the Development Site: Bellevue Hospital at 462 First Avenue and the Veterans Administration New York Harbor Health Care System at 423 East 23rd Street; both sources have ASF permits.

The Bellevue Hospital ASF permit states that this plant participates in the Coordinated Demand Reduction Program and seven (7) engine generators will be used in demand response mode. According to the permit, there are six (6) Caterpillar C27 engines with an electrical output capacity of 750 kW, and a single (1) 600 kW Rudox/Mitsubishi engine generator. There are also two (2) 1500kW Caterpillar 3512C engine generators onsite to be used for emergency purposes only. The facility also has five (5) 15,000-gallon and three (3) 275-gallon fuel storage tanks.

The 2022 annual monitoring report sent to NYSDEC shows that all nine generators operate for under 65 hours per year (0.7%) with an average monthly usage of less than 6 hours per month. The EPA guidance[3] on treatment of intermittent sources allows for sources with infrequent and unpredictable hours of operation to be excluded from compliance demonstrations. Based on this guidance and the hospital engines' purpose and historical usage, all engines are excluded from a large source analysis.

The New York Harbor Healthcare System ASF permit shows four ethylene oxide sterilizers with two abators located in the main building. The facility also operates three emergency generators.

The annual usage reports submitted to NYSDEC from the hospital show that all sterilizer usage halted in October 2012 due to damage to the system by Hurricane Sandy. Since the annual reports for this facility showed that the sterilizers were not repaired and not returned to use, these sources were not analyzed.

Since both large sources within 1,000 feet of the Proposed Project are intermittent or not used, it is expected that there would be no significant adverse air quality impacts on the Proposed Project from these sources.

Chemical Spill Analysis

As mentioned previously, the Proposed Project would introduce life sciences space that would consist of laboratories. Given the breadth of life sciences as a field of study, such facilities could

[3] U.S. EPA, OAQPS, Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-hour NO_2 NAAQS, March 2011,

range from a focus on data sciences to those that utilize chemicals. For chemical laboratory space, the *CEQR Technical Manual* identifies process emissions as a potential concern and provides guidance on how to conduct analysis of facilities where there is the potential for emissions in the event of an accidental chemical spill or for recirculation from the fume hood into a building's windows or air-intake system. (Fume hoods are enclosures that are kept under negative pressure to release chemicals that are accidentally spilled in a laboratory to exhaust points above the building roof. They prevent potential chemical spills from releasing into the laboratory by providing continuous exhaust from lab rooms.[4]) The manual also notes that the U.S. Occupational Safety and Health Administration (OSHA) and National Institute for Occupational Safety and Health's (NIOSH) Short-Term Exposure Levels (STELs) may be used as a guideline for emissions typically present for short periods of time, such as emissions resulting from chemical spills.

Detailed analyses have been conducted for numerous public school, university, medical, and research institution projects[5] demonstrating that significant impacts from accidental chemical spills are avoided through building design, engineering, and operational controls. Typically, the lab exhaust systems alone dilute the concentrations of chemicals spilled in a laboratory fume hood by a factor of approximately 1,000. For most chemicals, fume hood systems, and building designs, the dilution within the stack is sufficient to preclude the potential for significant adverse impacts from recirculation of the chemical within the building. Depending on the types of laboratories and chemicals being utilized, additional measures may be implemented to ensure that the dispersion of a spilled toxic chemical does not impact nearby buildings.

The Proposed Project would adhere to all applicable agency regulations governing laboratory facilities. This would include regulations of the Fire Department of the City of New York, which oversees lab certification and the Department of Buildings regulations for laboratory facilities. The laboratories in the Proposed Project would be required to incorporate design features to avoid the potential for impact in the event of an accidental chemical spill. Specifically, the central laboratory ventilation and exhaust system would use water to air heat recovery technology to eliminate cross contamination between the combined lab general exhaust and fume hood exhaust system and outside air being provided into the building. High Dilution Cannon Fans that rise above the building roof would be utilized for the discharge of the combined lab general exhaust and fume hood exhaust to the atmosphere.

While specific tenants have not yet been identified and design of the building is ongoing, a chemical spill analysis was conducted for the Proposed Project. Per *CEQR Technical Manual* guidelines, an air quality analysis was performed to assess the potential for the dispersion of hazardous pollutants from these discharge points to impact surrounding existing buildings and the Proposed Project's air intake vents. Maximum predicted concentrations of the chemicals were compared to the short-term exposure levels (STELs) or ceiling levels recommended by the U.S. Occupational Safety and Health Administration (OSHA).

Table 7-4 shows the chemical storage exhaust system design information used for the analysis.

[4] As the fume hoods are regulated, they require continuous testing for compliance.

[5] Such as: MSK/CUNY-Hunter College Mixed-Use Project at 74th Street (August 8, 2013); Rockefeller University New River Building and Fitness Center FEIS (March 21, 2014); ECF East 96th Street FEIS (June 9, 2017); and Public Health Lab EAS (July 6, 2020).

Table 7-4 Chemical Spill Exhaust System Design Parameters

Design Parameter	Analyzed
Number of exhaust stacks[1]	1
Exhaust flow rate	92,600 ft^3/min
Exhaust velocity	5,200 ft/min
Height of exhaust stack above building roof[2]	10 feet

Notes:
[1] One flue was used for conservative analysis purposes.
[2] Assumes conservatively that exhaust stack will rise 10 feet above the building roof.

Chemicals for Analysis

As tenants for the Proposed Project have not been identified, a list of chemicals (i.e., hazardous pollutants) that may be present in the Proposed Project was developed based on information from the Public Health Lab project (19DOH001M). Chemicals were chosen for the analysis based on their toxicity and potential for air quality impacts. Common buffers, salts, enzymes, nucleotides, peptides, and other bio-chemicals were not considered in the analysis because they are not generally categorized as air pollutants. Additionally, nonvolatile chemicals, or chemicals with a vapor pressure of less than 10 mm Hg, were also excluded. **Table 7-5** shows the hazardous chemicals selected for the analysis. One of the critical parameters in determining potential impacts from chemical spills is the vapor pressure of chemicals. Vapor pressure is a measure of a chemical's volatility (i.e., its tendency to evaporate, or to form fumes or vapors). Another parameter used to determine potential impacts is the exposure standards (OSHA permissible exposure limit [PEL], National Institute for Occupational Safety and Health [NIOSH], immediately dangerous to life or health [IDLH], and OSHA and/or NIOSH short-term exposure level [STEL] and ceiling values), which are measures of a chemical's toxicity, where more toxic substances have lower exposure standards.

Table 7-5 Chemicals Analyzed for Worst-Case Spill Analysis

Chemical	Vapor Pressure (mm Hg)	STEL (ppm)	Ceiling (ppm)
Formaldehyde	329	N/A	0.1
Chloroform	160	2	50
Nitric Acid	48	4	N/A
Acetonitrile	73	N/A	N/A
Acetone	180	N/A	N/A
Acetic Acid	11	15	N/A

Notes:
STEL—short-term exposure limit is a 15-minute TWA exposure that should not be exceeded at any time during a workday.
Ceiling—level set by OSHA not to be exceeded in any workplace based on up to 15 minutes exposure. Where a hyphen (-) appears, there is no recommended corresponding guideline value.

Estimates of Worst-Case Emission Rates

The dispersion of chemicals from an accidental spill within the Proposed Project was analyzed to assess the potential for exposure of hazardous fumes on the general public and on people within the building itself. Evaporation rates for the volatile chemicals assumed to be used in the proposed laboratories were estimated using the model developed by the Shell Development Company to assess air quality impacts from chemical spills.[6] The Shell model calculates evaporation rates based on physical properties of the chemical, temperature, and rate of air flow over the spill surface. Room temperature conditions (20° C or ~293° K) and an air-flow rate of 0.5 meters/second were assumed for calculating evaporation rates. Additionally, the analysis assumed that a chemical spill in a fume hood would extend to an area of 12 square feet (approximately 1.11 square meters).[7] The emission rates were determined using the evaporation rates and assuming this maximum spill area. For modeling purposes, the emission rates shown in **Table 7-6** are calculated for a 1-hour period. The vapor from the spill would be drawn into the fume hood exhaust system and released into the atmosphere through the exhaust stacks. The large volume of air drawn through this system provides a high degree of dilution for hazardous fumes before they are released to the atmosphere.

Table 7-6 Estimated Emissions from a Spill in a Fume Hood

Chemical	Evaporation Rate ($g/m^2/s$)	Emission Rate (g/s)
Formaldehyde	10.31	0.040
Chloroform	1.33	1.475
Nitric Acid	0.26	0.291
Acetonitrile	0.25	0.282
Acetone	0.83	0.918
Acetic Acid	0.05	0.058

Recirculation Modeling – Effect within Proposed Building

The potential for recirculation of fume hood emissions or other sources of hazardous pollutants back into the nearest window or fresh air intake vent was assessed using the Wilson method described by D.J. Wilson in *A Design Procedure for Estimating Air Intake Contamination from Nearby Exhaust Vents*.[8] This empirical procedure, which has been verified by both wind tunnel and full-scale testing, is a refinement of the ASHRAE handbook procedure, and takes into account factors such as plume momentum, stack tip downwash, and cavity recirculation effects to determine the worst-case dilution between the exhaust and nearest air intake vent. Three separate effects produce the worst-case dilution:

› Internal system dilution which happens by combining exhaust streams (i.e. mixing in plenum chamber of multiple exhaust streams and fresh air)

[6] Fleischer, M.T. An Evaporation/Air Dispersion Model for Chemical Spills on Land, Shell Development Company, December 1980.

[7] This was conservatively assumed for all chemicals other than formaldehyde. For analysis refinement purposes, the formaldehyde spill area was assumed to be the same as in the Public Health Lab project (0.004 m^2).

[8] D.J. Wilson. *A Design Procedure for Estimating Air Intake Contamination from Nearby Exhaust Vents*, ASHRAE TRAS 89, Part 2A, pp. 136-152, 1983.

› Wind dilution, dependent on the distance from the vent to intake and the exit velocity;

› Dilution from stack that is caused by stack height and plume rise from vertical exhaust velocity.

The critical wind speed of the worst-case dilution is dependent on exit velocity, distance from vent to intake, and the cross-sectional area of the exhaust stack.

Recirculation Modeling Results

The results of the recirculation analysis are presented in **Table 7-7**. The results indicate that an accidental spill for each of the chemicals analyzed in a fume hood described above would produce a maximum concentration at the nearest intake vent location well below the corresponding STELs or ceiling values set by OSHA and/or NIOSH. Thus, it can be concluded that no significant impact would be expected due to recirculation of fume hood exhaust emissions into the proposed building's air intake vents.

Table 7-7 Recirculation Analysis – Maximum Predicted Concentration Results

Chemical	STEL/OSHA Ceiling	Predicted Concentrations (ppm)
Formaldehyde	0.1	0.005
Chloroform	2	0.044
Nitric Acid	4	0.016
Acetonitrile	N/A	0.024
Acetone	N/A	0.056
Acetic Acid	15	0.003

Dispersion Modeling – Effect on Surrounding Sensitive Uses

A detailed air quality analysis was conducted using EPA's AERMOD model (version 23132) to determine the potential for emissions from a chemical spill in the Proposed Project to significantly impact the existing sensitive receptors in the surrounding area. AERMOD is a steady-state plume model that incorporates current concepts about flow and dispersion in complex terrain, including updated treatments of the boundary layer theory, understanding of turbulence and dispersion, and includes handling of terrain interactions. The AERMOD model calculates pollutant concentrations from one or more points (e.g., exhaust stacks) based on hourly meteorological data, and has the capability to calculate pollutant concentrations at locations where the plume from the exhaust stack is affected by the aerodynamic wakes and eddies (downwash) produced by nearby structures. Hourly meteorological data collected at the LaGuardia Airport station from 2017 to 2021 were used in this analysis. The analysis of potential impacts from a chemical spill was performed assuming stack tip downwash, urban dispersion and surface roughness length, and elimination of calms, using AERMOD with and without building downwash options to assess the worse-case impact from these sources.

Sensitive receptor buildings with heights similar or greater than the source were identified. Discrete receptors (i.e., locations at which concentrations are calculated) were placed on each floor of the receptor building along each building façade where operable windows and air intakes could be located.

Dispersion Modeling Results

The results of the detailed AERMOD analysis presented in **Table 7-8** are below the corresponding STELs or ceiling values set by OSHA and/or NIOSH. Thus, it can be concluded that no significant adverse impacts would be expected from the laboratory exhaust onto the surrounding sensitive receptors.

Table 7-8 Dispersion Analysis - Maximum Predicted Concentration Results

Chemical	STEL/OSHA Ceiling	1-hour Average
Formaldehyde	0.1	0.024
Chloroform	2	0.23
Nitric Acid	4	0.08
Acetonitrile	N/A	-
Acetone	N/A	-
Acetic Acid	15	0.02

Overall, laboratories developed as part of the Proposed Project are not expected to have the potential to result in significant adverse impacts on air quality.

Conclusion

The mobile source screening indicates that the Proposed Project would not generate enough passenger car trips or heavy-duty diesel vehicles to exceed the threshold for CO or $PM_{2.5}$ emissions. As there would be no on-site combustion of fossil fuels for HVAC and hot water systems, it can be reasonably concluded that there are no potential air quality impacts on existing and known future development. Industrial sources within 400 feet of the Proposed Project and large sources within 1,000 feet of the Proposed Project would have no adverse effects on the Proposed Project. The Proposed Project would contain laboratories and would be designed to avoid the potential for impact in the event of an accidental chemical spill. Based on the foregoing, the Proposed Project does not have a potential for significant adverse air quality impacts.

8

Noise

The goal of this section is to determine whether the Proposed Project may increase noise exposure at existing sensitive receptors and whether new receptors would be introduced into an acceptable ambient noise environment.

Introduction

455 First Avenue Associates LLC and the New York City Economic Development Corporation (NYCEDC) (the Applicants), in collaboration with New York University (NYU) on behalf of NYU Grossman School of Medicine, as subtenant, are proposing to redevelop Manhattan Block 932, Lot 17 (the Development Site) located at 455 First Avenue with an approximately 13-story, up to 270-foot-tall, 609,988 gross square foot (gsf) life sciences building (the Proposed Project).[1]

Per the *2021 CEQR Technical Manual*, a noise analysis is appropriate if a project would generate mobile or stationary sources of noise or would be located in an area with high ambient noise levels. Mobile sources include vehicular traffic; stationary sources include rooftop equipment such as emergency generators, cooling towers, and other mechanical equipment.

A noise assessment is warranted under CEQR to determine if:

- The Proposed Project would significantly increase sound levels from mobile and stationary sources at existing noise receptors adjacent to the Development Site, including residential, commercial, and institutional land uses; and,
- Noise receptors introduced at the Development Site would be in an acceptable ambient sound level environment.

[1] The life sciences space would consist of space for start-ups, graduation space for life science businesses, space for established Research and Development firms, anchor space for NYU Grossman School of Medicine, and a Life Science Multi-Purpose Programming space.

The noise assessment includes the following:

- Background on metrics used to describe noise;
- The methodology and criteria used to assess potential impacts;
- An assessment of the potential for the Proposed Project to significantly affect existing receptors due to the introduction of new mobile or stationary sources;
- Results from ambient sound level monitoring; and
- An evaluation of the ambient sound levels at new receptor locations.

Noise Background

Noise is defined as unwanted or excessive sound. Sound becomes unwanted when it interferes with normal activities such as sleep, work, or recreation. How people perceive sound depends on several measurable physical characteristics. These factors include:

- Level - Sound level is based on the amplitude of sound pressure fluctuations and is often equated to perceived loudness. Sound levels are most often measured on a logarithmic scale of decibels (dB). The decibel scale compresses the audible acoustic pressure levels which can vary from the threshold of hearing (0 dB) to the threshold of pain (120 dB). Because sound levels are measured in dB, the addition of two sound levels is not linear. Adding two equal sound levels results in a 3 dB increase in the overall level. Research indicates the following general relationships between sound level and human perception:
  - A 3-dB increase is a doubling of acoustic energy and is the threshold of perceptibility to the average person.
  - A 10-dB increase is a tenfold increase in acoustic energy and is perceived as a doubling in loudness to the average person.
- Frequency - Sounds are comprised of acoustic energy distributed over a variety of frequencies. Acoustic frequencies, commonly referred to as tone or pitch, are typically measured in Hertz (Hz). Pure tones have energy concentrated in a narrow frequency range and can be more audible to humans than broadband sounds. Audible sound is comprised of acoustic energy over a range of frequencies typically from 20 to 20,000 Hz. The human ear does not perceive sound levels at each frequency as equally loud. To compensate for this phenomenon in perception, a frequency filter known as A-weighting (dBA) is used to evaluate environmental noise levels.

Table 8-1 presents a list of common outdoor and indoor sound levels.

Table 8-1 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 sound pressure level (SPL). A change in 10 dB(A)Is perceived as a doubling or halving in SPL.
Source: *2021* CEQR Technical Manual

Because sound levels change over time, a variety of sound level metrics can be used to describe environmental noise. The following is a list of sound level descriptors that are used in the noise analysis:

- L_{10} is the sound level which is exceeded for 10 percent of the time during a given time period. Therefore, it represents the higher end of the range of sound levels. The unit is used in the *CEQR Technical Manual* to evaluate acceptable thresholds for noise exposure for new receptors that would be introduced by a proposed development.
- L_{eq} is the continuous equivalent A-weighted sound level. The L_{eq} is a single value that contains the same sound energy as the actual fluctuating sound levels over a given period of time. Therefore, the L_{eq} considers how loud noise events are during the period, how long they last, and how many times they occur. L_{eq} is commonly used to describe environmental noise and relates well to human annoyance. In accordance with the *CEQR Technical Manual*, the L_{eq} sound level is used to assess the potential for significant increases in noise due to a proposed development at existing receptors in the study area.
- L_{dn} is the day-night average A-weighted sound level. Similar to L_{eq}, L_{dn} accounts for how loud noise events are and how long they last. The L_{dn} accounts for how many noise events occur over a 24-hour period and applies a 10-decibel penalty to events occurring from 10:00 PM to 7:00 AM due to the greater sensitivity to noise occurring at night.

Assessment Methodology

As discussed above, the noise assessment considers whether the Proposed Project would significantly increase sound levels from mobile and stationary sources at existing noise receptors

adjacent to the Development Site and whether new noise receptors introduced at the Development Site would be in an acceptable ambient sound level environment.

Noise Assessment for Existing Receptors

Noise impact at existing nearby sensitive receptors is assessed according to the relative increase between No-Action and With-Action sound levels. Noise impact is assessed according to the increase in the L_{eq} sound level in accordance with the *CEQR Technical Manual*. If mobile or stationary sources associated with the Proposed Project would increase L_{eq} sound levels by 3 dB or more and absolute levels would exceed 65 dBA L_{eq}, the Proposed Project would result in a significant adverse impact requiring the exploration of mitigation measures. Additionally, if No-Action condition noise levels are 60 dBA L_{eq} or less, a 5-dB increase would be considered a significant adverse noise impact.

Mobile Sources

According to the guidance established in the *CEQR Technical Manual*, the analysis presented in the Transportation section (see **Section 6, Transportation**) found that the Proposed Project would not generate traffic volumes that require a detailed traffic analysis; therefore, the Proposed Project is not expected to result in a doubling of noise passenger car equivalents (PCEs) and a detailed noise impact analysis is not warranted. Therefore, the Proposed Project would not result in a significant adverse vehicular noise impact.

Stationary Sources

The Proposed Project would not include any substantial stationary source noise generators, such as unenclosed cooling or ventilation equipment, loudspeaker systems, stationary diesel engines, car washes, or other similar types of uses. The Proposed Project's heating, ventilation, and air conditioning (HVAC) equipment would incorporate sufficient noise reduction measures to comply with applicable noise regulations and standards, including the standards contained in the revised New York City Noise Control Code. This would ensure that mechanical equipment does not result in any significant increases in noise levels by itself or cumulatively with other project noise sources.

Noise Assessment for Project Receptors

With-Action noise conditions at receptors that would be introduced by the Proposed Project are evaluated according to absolute exterior sound level. The noise exposure guidelines for acceptable ambient conditions depend on the type of land use; for life science use, which is considered Receptor Type 5, Commercial or Office use (see Table **Table 8-2**), the goal is to maintain interior noise levels of 45 dBA or lower. With-Action exterior sound levels are evaluated to determine if receptors would be in an acceptable ambient sound level environment. Exterior ambient sound levels exceeding 70 dBA (L_{10}) at commercial or office receptors during the daytime (7 AM to 10 PM) are considered to be Marginally Unacceptable. Exterior sound levels exceeding 80 dBA (L_{10}) are considered Clearly Unacceptable. If there would be Marginally Unacceptable or Clearly Unacceptable ambient noise conditions, there would be a need to provide window/wall sound attenuation that is sufficient to reduce interior sound levels to acceptable levels.

Since the Proposed Project would introduce life science and retail space to the Development Site, the highest L_{10} sound level is used to evaluate whether the Proposed Project would be located in an acceptable noise environment.

Noise Exposure Guidelines

The *CEQR Technical Manual* provides noise exposure guidelines for assessing ambient noise conditions at new commercial or office use receptors, as shown in **Table 8-2**.

Existing Sound Levels

Noise monitoring was conducted at four locations, as shown in **Figure 8-1**, on Wednesday, May 24, 2023 in accordance with the *CEQR Technical Manual*. Noise monitors were placed with a minimum of five feet between the microphone and nearby reflecting surfaces. With local roadway activity dominating the overall noise environment, 20-minute noise measurements were conducted during the morning peak period (7:30–9:30 AM), midday period (12-2 PM), and evening peak period (4:30–6:30 PM). Measurements were conducted using Type I sound level meters, which were calibrated by a laboratory following procedures traceable to the National Institute of Standards and Technology, and field-calibrated at the start and end of each measurement. All measurements were conducted at the ground level at the Development Site.

Table 8-3 summarizes the measurement results. The measured L_{eq} levels ranged from 63.7 dBA to 68.6 dBA, and the L_{10} levels ranged between 61.8 and 70.9 dBA.

During the measurements, it was observed that a ventilation system associated with the existing building located on the north side along East 27th Street was operating and having a constant noise emission towards East 27th Street from the Development Site.

Table 8-2 Noise Exposure Guidelines for Use in City Environmental Impact Review

Receptor Type	Time Period	Acceptable General External Exposure	Airport[3] Exposure	Marginally Acceptable General External Exposure	Airport[3] Exposure	Marginally Unacceptable General External Exposure	Airport[3] Exposure	Clearly Unacceptable General External	Airport[3] Exposure
1.Outdoor area requiring serenity and quiet[2]		L10 ≤ 55 dBA							
2. Hospital, Nursing Home		L10 ≤ 55 dBA		55 <L10≤ 65 dBA		65<L10≤80 dBA		L10>80dBA	
3. Residence, residential hotel or motel	7 AM to 10 PM	L10 ≤ 65dBA		65 <L10≤ 70 dBA		70<L10≤80 dBA		L10>80dBA	
	10 PM to 7 AM	L10 ≤ 55dBA		55 <L10≤ 70 dBA		70<L10≤80 dBA		L10>80dBA	
4. School, museum, library, courthouse of worship, transient hotel or motel, public meeting room, auditorium, out- patient public health facility		Same as Residential Day (7 AM-10 PM)	Ldn ≤ 60 dBA	Same as Residential Day (7 AM-10 PM)	60 dBA < Ldn ≤ 65 dBA	Same as Residential Day (7 AM- 10 PM)	65 dBA < Ldn ≤ 75 dBA	Same as Residential Day (7 AM –10 PM)	75 dBA ≤ Ldn
5. Commercial or office		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM –10 PM)		Same as Residential Day (7 AM-10 PM)	
6. Industrial, public areas only[4]	Note 4	Note 4		Note 4		Note 4		Note 4	

Source: Table 19-2, *2021 CEQR Technical Manual*.

(i) In addition, any new activity shall comply with Impact Thresholds detailed in Section 410.

[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 DNL contours supplied by the Port Authority of New York and New Jersey (PANYNJ), or the noise contours may be computed from the federally approved Aviation Environmental Design Tool (AEDT) Computer Model using flight data supplied by the PANYNJ.

[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 listed by octave bands). Sources: New York City Department of Environmental Protection (adopted policy 1983).

Figure 8-1 Noise Monitoring Locations

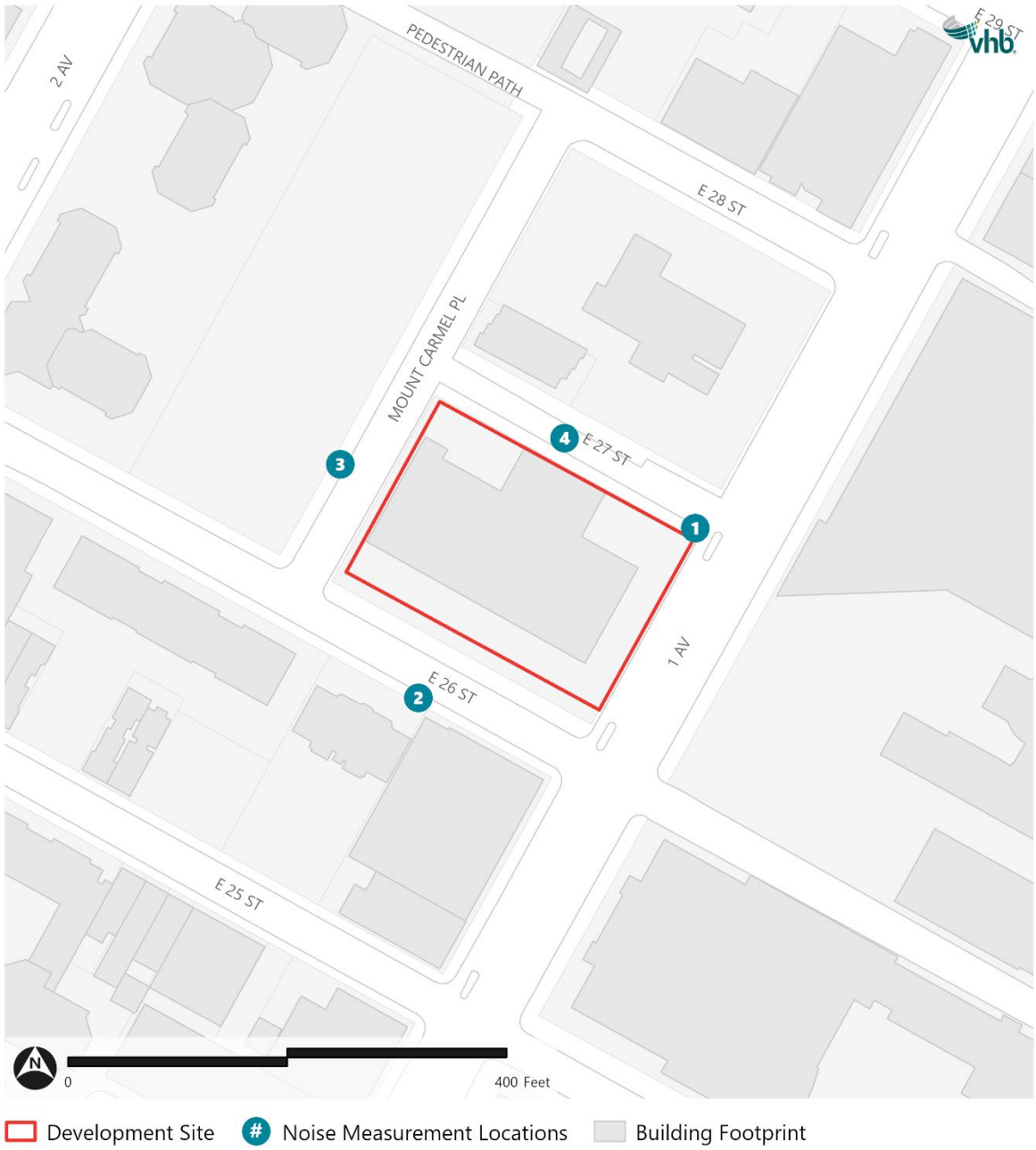


Table 8-3 Ambient Sound Level Measurements

Site	Monitoring Location	Period	Duration	L_{eq}	L_{min}	L_{max}	L_1	L_{10}	L_{50}	L_{90}
1	First Avenue	Morning	20 mins	68.6	57.9	86.5	78.7	70.9	64.4	59.9
		Midday	20 mins	67.0	59.5	85.2	75.8	70.0	63.8	60.7
		Evening	20 mins	66.9	59.0	85.2	78.2	68.6	63.6	60.1
2	E 26th Street	Morning	20 mins	65.9	57.8	82.5	77.9	69.0	61.1	58.9
		Midday	20 mins	63.7	58.5	79.3	72.0	66.0	61.5	59.5
		Evening*	20 mins	65.8	57.8	85.3	77.3	66.0	61.3	59.0
3	Mt Carmel Place	Morning	20 mins	65.0	57.2	80.3	72.6	67.8	63.0	59.3
		Midday	20 mins	65.2	56.6	85.0	75.2	65.1	62.6	58.4
		Evening*	20 mins	63.7	57.4	86.7	72.2	61.8	59.1	58.2
4	E 27th Street	Morning	20 mins	63.8	58.7	73.5	67.8	65.5	63.4	60.6
		Midday	20 mins	68.2	67.0	77.2	71.4	69.0	67.9	67.5
		Evening	20 mins	68.2	66.7	79.3	75.2	68.7	67.4	67.1

Notes: * Field observations conducted during the noise measurements documented that FDNY ambulance activity. Because of the Development Site's proximity to uses with regular ambulance activity given the nearby hospital uses, the siren noise was not excluded from the noise measurement and is considered an ambient condition.
Source: Measurements conducted by VHB on May 24, 2023.

Acceptability Assessment

The *CEQR Technical Manual* provides noise exposure guidelines for assessing ambient sound levels, as shown in **Table 8-4**. Based on these noise exposure guidelines, noise impact has been assessed to determine the level of acceptability for Proposed Project receptors at the Development Site, as shown in **Table 8-5**.

Table 8-4 Required Attenuation Values to Achieve Acceptable Interior Noise Levels

	Marginally Unacceptable				Clearly Unacceptable
Noise Level with Proposed Actions	$70<L_{10}\leq73$	$73<L_{10}\leq76$	$76<L_{10}\leq78$	$78<L_{10}\leq80$	$80<L_{10}$
Attenuation[1]	(I) 28 dBA	(II) 31 dBA	(III) 33 dBA	(IV) 35 dBA	See note[2]

Notes:
[1] 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.
[2] The required attenuation value is the difference between L_{build} and $L_{interior}$, using the appropriate noise descriptor
Where: L_{build} is the projected noise level under the build condition rounded up to the whole number
$L_{interior}$ is the designed interior noise level (45 dB(A) for vehicular noise, 40 dB(A) for aircraft and train noise)
Source: New York City Department of Environmental Protection (*2021 CEQR Technical Manual*, Table 19-3)

Table 8-5 Sound Level Acceptability

Site	Monitoring Location	Period	L_{10}	Required Attenuation
1	First Avenue	Morning	70.9	23[1]
		Midday	70.0	23[1]
		Evening	68.6	N/A
2	East 26th Street	Morning	69.0	N/A
		Midday	66.0	N/A
		Evening	66.0	N/A
3	Mt Carmel Place	Morning	67.8	N/A
		Midday	65.1	N/A
		Evening	61.8	N/A
4	East 27th Street	Morning	65.5	N/A
		Midday	69.0	N/A
		Evening	68.7	N/A

Note:
1 The measured L10 sound level is between 70 and 73 dBA, the minimum composite window/wall attenuation required is 28 dBA. Since the Proposed Project only introduces commercial and office use, 5 dBA less attenuation would be required.
Source: VHB, 2023

According to the noise exposure guidelines in the *CEQR Technical Manual*, the highest existing L_{10} sound levels at all locations is 70.9 dBA, which is considered Marginally Unacceptable.

The composite outdoor-to-indoor transmission classification (OITC) value of the window-wall structure is used to determine the necessary sound attenuation. Sound attenuation measures would be achieved through construction materials and techniques with sufficient OITC-rated windows and walls. Since the measured L_{10} sound level is between 70 and 73 dBA, the minimum composite window/wall attenuation required is 28 dBA for residential buildings. The Proposed Project would consist of commercial and office use, therefore, 5 dBA less attenuation would be required. Typical new building materials (including typical single-glazed windows) provide a minimum of approximately 25 dB(A) of noise attenuation from outdoor to indoor areas. Therefore, acoustically rated windows with higher OITC ratings than typical construction are not required for the Proposed Project.

Conclusion

A noise assessment was conducted to determine whether the Proposed Project would significantly increase sound levels from mobile and stationary sources at existing noise receptors on the Development Site, and if receptors that would be introduced by the Proposed Project would be in an acceptable ambient sound level environment.

The Proposed Project would not generate sufficient vehicular traffic to exceed the threshold for a detailed transportation analysis, according to the *CEQR Technical Manual*, and as such, the Proposed Project would not result in a doubling of noise PCEs, which would be necessary to cause a 3-dBA increase in noise levels. Therefore, the Proposed Project would not cause a significant adverse vehicular noise impact.

The Proposed Project would not include any substantial stationary source noise generators. The design and specifications for the building's mechanical equipment would incorporate sufficient noise reduction devices that would comply with applicable noise regulations and standards, including the standards contained in the revised New York City Noise Control Code.

Noise monitoring was conducted at four locations in accordance with the *CEQR Technical Manual*. Based on the highest measured L_{10} sound levels of 70.9 dBA, no composite outdoor-to-indoor window/wall sound attenuation is required for all facades, since the Proposed Project introduces commercial and office use.

9

Neighborhood Character

This section considers how the Proposed Project would affect neighborhood character, which is defined as the elements of the environment that combine to create the context and feeling of a neighborhood.

Introduction

This analysis of neighborhood character follows the guidelines set forth in the 2021 *CEQR Technical Manual*. As defined within the manual, neighborhood character is an amalgam of various elements that give neighborhoods a distinct "personality," including land use, urban design and visual resources, historic resources, socioeconomic conditions, transportation, and noise. Not all of these elements affect neighborhood character in all cases; a neighborhood usually draws its distinctive character from a few defining elements. According to the *CEQR Technical Manual*, neighborhood character impacts are rare and occur under unusual circumstances.

As described in **Part I: Project Description**, the Proposed Project would result in the redevelopment of the Development Site located at 455 First Avenue in the Kips Bay neighborhood of Manhattan Community District 6 with an approximately 13-story, 270-foot-tall, 609,988 gross square foot (gsf) life sciences building (the Proposed Project). The Development Site is currently occupied by a 14-story, approximately 191-foot-tall, 359,000 gsf building that is primarily occupied by the City's Public Health Laboratory.

This section includes a preliminary assessment of neighborhood character prepared in conformance with the *CEQR Technical Manual* using information from the technical analyses presented in other relevant sections of this EAS.

Methodology

As indicated above, a neighborhood character assessment is generally needed, per the *CEQR Technical Manual*, when a proposed project has the potential to result in significant adverse impacts

in certain technical areas (land use, zoning, and public policy; socioeconomic conditions; community facilities and services; open space; historic and cultural resources; urban design and visual resources; shadows; transportation; or noise) or when the project may have moderate effects on several of the elements that define a neighborhood's character.

As detailed in **Part II: Supplemental Analyses** and in the preceding sections of this EAS, the Proposed Project does not have the potential to result in significant adverse impacts in any of the technical areas listed above. Therefore, the neighborhood character assessment focuses on the potential for a combination of moderate effects to cumulative affect neighborhood character. A "moderate" effect is generally defined as an effect considered reasonably close to the significant adverse impact threshold for a particular technical analysis area.

As part of a neighborhood character analysis, the defining features of the neighborhood are identified and then a determination is made as to whether the project has the potential to adversely affect these defining features, either through the potential for a significant adverse impact or a combination of moderate effects in relevant technical areas. If the assessment concludes that a project has the potential to adversely affect defining features of a neighborhood, a detailed analysis is undertaken to determine whether the project would result in a significant adverse impact on neighborhood character.

The neighborhood character analysis draws from the technical assessments listed above. As recommended in the *CEQR Technical Manual*, the study area for the neighborhood character analysis is consistent with the study areas in the relevant technical areas assessed under CEQR that contribute to the defining elements of the neighborhood. As such, the study area for neighborhood character is consistent with the 400-foot study area used for the analysis of land use, zoning, and public policy; the eastern boundary of this area is east of First Avenue with Second Avenue to the west, East 25th Street to the south, and East 28th Street to the north.

Project Potential to Adversely Affect the Defining Features of the Neighborhood

Identification of the Defining Features of the Neighborhood

Overall, the neighborhood is defined by the following features:

Area Land Uses and Development Trends

As discussed previously in the EAS, the study area contains several distinct areas, distinguishable from each other by key characteristics that include land use, building bulk and density, and open space. These areas include the First Avenue Health & Life Sciences Corridor, which hosts a mix of academic and medical institutions; areas to the south of the Development Site containing institutional, mixed commercial, and residential buildings; residential areas north of the Development Site containing mixed-income and public housing developments; and the predominantly residential blocks west of the Development Site along Second Avenue.

Prominent within the study area is the First Avenue Health & Life Sciences Corridor, one of the fastest-growing clusters of life science activity in the City, which is planned to be expanded with the

introduction of the future SPARC project on the site of the existing City University of New York (CUNY) Hunter College Brookdale Campus.

In general, the area is defined by the convergence of several campus type developments that include the academic and medical institutions east of First Avenue, and the NYCHA and Kips Bay Court residential developments. These developments include buildings that range from 12 to 27 stories. The area has a notable lack of retail amenities with the exception of the Second Avenue corridor.

Open Spaces and Pedestrianized Streets

The study area contains a mix of open space and pedestrianized streets. As discussed elsewhere in the EAS, the primary open space within the study area is Bellevue South Park, a recently renovated 1.59-acre public open space owned and managed by New York City Parks and Recreation (NYC Parks). The park was originally developed as part of a larger urban renewal area that also included the conversion of portions of East 27th and East 28th Streets to pedestrianized streets and the establishment of Mount Carmel Place. The park contains mature trees that provide an established tree canopy, and during the growing season, this tree canopy, along with the mature trees adjacent to the NYCHA development and within the private open space north of East 28th Street create a concentration of greenery and filtered light in this portion of the study area, extending to First Avenue at East 28th Street.

There are two pedestrianized streets—East 27th and East 28th Streets—in the study area. East 27th Street passes through Bellevue South Park and continues as a Pedestrian Way north of the Development Site to First Avenue. The East 27th Street Pedestrian Way is characterized by distinct brick, and there is fencing in portions of the pedestrian path. Additionally, the East 27th Street Pedestrian Way is regularly occupied by parked vehicles in the western portion of the pathway.

The pedestrianized portion of East 28th Street extends east of Second Avenue to the north of the park where it meets Mount Carmel Place.

At the Development Site, the existing building and its scaffolding encroach into the sidewalk on First Avenue, East 26th Street, and Mount Carmel Place.

Assessment

No-Action Condition

In the No-Action condition, the existing 359,000-gsf building on the Development Site would be re-tenanted with a mix of office and laboratory space for continued use by City agencies. No changes would occur to the building bulk or height.

Within the study area, two new life science developments will be completed: SPARC and Alexandria Center Phase II – North Tower, both located east of First Avenue. The SPARC project, part of the City's LifeSci initiative, will redevelop CUNY Hunter College's Brookdale Campus with approximately 2.19 million sf of space for life science, academic and medical uses. Early concept designs for the SPARC project indicate that the project will transform the Brookdale Campus with a series of new, modern structures of varying heights and materials; this project is expected to be complete in 2031. The Alexandria Center project will replace an existing surface parking lot between Bellevue Hospital and NYU Langone Health with approximately 330,000 of office and laboratory space.

With-Action Condition

Overall, the Proposed Project would not adversely affect the defining features of the neighborhood and would in fact, strengthen the existing character of the neighborhood by developing a new commercial life science building along First Avenue, consistent with the character of First Avenue's concentration of life science, academic, and medical institutions in the First Avenue Health & Life Sciences Corridor.

As discussed in **Section 3, Shadows**, the Proposed Project would not result in significant adverse shadows impacts on any of the area's open spaces.

As discussed in **Section 4, Urban Design and Visual Resources**, the Proposed Project would improve pedestrian conditions at the Development Site, particularly along the East 27th Street Pedestrian Way, East 26th Street, and First Avenue. Vehicles would no longer regularly park within the Pedestrian Way, and scaffolding would no longer encroach into the public right-of-way at the Development Site. In addition, the building's transparent façade design planned for the ground floor would create an inviting and visually engaging environment for pedestrians.

At the Proposed Project's First Avenue frontage, the proposed building would improve the pedestrian experience by replacing the existing building's blank vertical wall and metal fence and extensive scaffolding with a new lobby entrance and transparent façade design.

Overall, the Proposed Actions would not result in a significant adverse impact on the defining features of the neighborhood.

Conclusion

The Proposed Project would not result in significant adverse impacts in any of the technical areas that contribute to neighborhood character, nor would it adversely affect the defining features of the neighborhood. The Proposed Project would contribute to the defining features of the neighborhood by developing a new life science building along First Avenue, consistent with the character of First Avenue's concentration of life science, academic, and medical institutions. In addition, it would enhance the overall public space experience at the East 27th Street Pedestrian Way by incorporating transparency and retail at the ground floor and by removing parking. The Proposed Project would also enhance the pedestrian experience along First Avenue by replacing the existing building's blank vertical wall and metal fence (and extensive scaffolding) with a new lobby entrance and transparent façade design. Therefore, the Proposed Project would not result in significant adverse impacts on neighborhood character and no further assessment is warranted.

10

Construction Transportation

Construction activities may affect several elements of the City's transportation system, including traffic, transit, pedestrians, and parking. A transportation analysis of construction activities is predicated upon the duration, intensity, complexity, and/or location of construction activity.

Introduction

Construction of the Proposed Project is anticipated to consist of a demolition stage of approximately 11 months followed by construction of the new building, anticipated to occur over an approximately 31-month period. The demolition phase would commence after the Public Health Laboratory vacates the Development Site (expected early 2026) to move to its new purpose-built facility at a site adjacent to Harlem Hospital.

The following sections discuss the potential for the Proposed Project to result in transportation impacts during construction and the potential for air and noise emissions from mobile sources during construction.

Construction Regulations and General Practices

Construction Oversight

Governmental oversight of construction in New York City is extensive and involves a number of City, State, and Federal agencies, each with specific areas of responsibility, as follows.

› The New York City Department of Buildings (DOB) has primary oversight of construction. DOB oversees compliance with the New York City Building Code to ensure that buildings are structurally, electrically, and mechanically safe. In addition, DOB enforces safety regulations to protect both workers and the general public during construction. Areas of oversight include

installation and operation of equipment such as cranes and lifts, sidewalk sheds, safety netting, and scaffolding.

- The New York City Department of Environmental Protection (DEP) enforces the New York City Noise Code, reviews and approves certain Remedial Action Plans (RAPs) and associated Construction Health and Safety Plans (CHASPs) as well as the removal of fuel tanks and abatement of hazardous materials. DEP also regulates water disposal into the sewer system and reviews and approves any rerouting of wastewater flow. A Community Air Monitoring Program (CMP) may be established in conjunction with other remedial and regulatory programs.
- The New York City Fire Department (FDNY) has primary oversight of compliance with the New York City Fire Code and the installation of tanks containing flammable materials.
- The New York City Department of Transportation Office of Construction Mitigation and Coordination (NYCDOT OCMC) reviews and approves any traffic lane and sidewalk closures.
- The New York City Landmarks Preservation Commission approves studies and testing to prevent loss of archaeological resources and to prevent damage to architectural resources.
- The New York State Department of Environmental Conservation (NYSDEC) regulates disposal of hazardous materials, and construction, operation, and removal of bulk petroleum and chemical storage tanks. NYSDEC also regulates discharge of water into rivers and streams.
- The New York State Department of Labor (DOL) licenses asbestos workers.
- The New York State Department of Transportation (NYSDOT) reviews and approves any traffic lane closures on its roadways, should any be necessary. NYSDOT also reviews any modifications of pedestrian and vehicular crossings over active rail lines.
- The U.S. Environmental Protection Agency (EPA) has wide-ranging authority over environmental matters, including air emissions, noise, hazardous materials, and the use of poisons, however, much of its responsibility is delegated to the state level.
- The Occupational Safety and Health Administration (OSHA) sets standards for work site safety and construction equipment.
- Under the City Charter, the New York City Department of Small Business Services (SBS) have jurisdiction over waterfront properties. For some projects led by private developers, the agency works in conjunction with DOB and New York City Economic Development Corporation (NYCEDC) to oversee activities.

Construction Hours

New York City regulates the hours of construction work through the New York City Noise Control Code, as amended in December 2005 and effective July 1, 2007. Construction is limited to weekdays between the hours of 7:00 AM and 6:00 PM, and noise limits are set for certain specific pieces of construction equipment. The City may permit work outside of these hours to accommodate: (1) emergency conditions; (2) public safety; (3) construction projects by or on behalf of City agencies; (4) construction activities with minimal noise impacts; and (5) undue hardship resulting from unique site characteristics, unforeseen conditions, scheduling conflicts, and/or financial considerations. The DOB issues these work permits, and in some instances, approval of a noise mitigation plan from the DEP under the City's Noise Code is also required.

In New York City, construction work typically occurs on weekdays and begins at 7:00 AM, with most workers arriving between 6:00 AM and 7:00 AM. Work typically ends at 3:00 PM or 3:30 PM, with

some exceptions when certain critical tasks (e.g., finishing a concrete pour for a floor deck, completing the drilling of piles, or completing the bolting of a steel frame erected that day) require that the workday be extended beyond normal work hours. Any extended workdays generally last until approximately 5:30 PM or 6:00 PM and do not include all construction workers on-site, but only those involved in the specific task requiring additional work time. For work outside of normal construction hours, work permits are obtained from DOB prior to such work commencing. The numbers of workers and pieces of equipment in operation for work outside normal hours is generally limited to those needed to complete the particular authorized task. Overall, the level of activity for any work outside of normal construction hours is less than a normal workday.

Construction Practices

Access, Deliveries and Staging Area

Access to construction sites is controlled. Work areas are fenced off, and limited access points for workers and construction-related trucks are provided. Typically, worker vehicles are not allowed into the construction area, and workers or trucks without a need to be on the site are not allowed entry. After work hours, the gates are closed and locked. Security guards may patrol the construction site after work hours and over weekends to prevent unauthorized access.

Material deliveries to the site are controlled and scheduled. To aid in adhering to the delivery schedules, as is normal for building construction in New York City, flaggers are employed at each of the construction site's access points. Flaggers are typically supplied by either the subcontractor on-site at the time or by the construction manager. The flaggers control trucks entering and exiting the project site so that they would not interfere with one another. In addition, they provide an additional traffic aid as trucks enter and exit the on-street traffic streams.

Lane and Walkway Closures

Temporary curb-lane and sidewalk closures are typical for construction projects in New York City. To manage such closures, a Maintenance and Protection of Traffic (MPT) plan is developed consistent with NYCDOT requirements. NYCDOT OCMC reviews and approves MPT plans, and the implementation of the closures is also coordinated with NYCDOT OCMC. In general, construction managers for major projects on adjacent sites also coordinate their activities to avoid delays and inefficiencies.

Public Safety

A variety of measures are employed to ensure public safety during construction at sites within New York City. Examples include the use of sidewalk bridges to provide overhead protection for pedestrians passing by the construction site and the employment of flaggers to control trucks entering and exiting the construction site, to provide guidance to pedestrians, and/or to alert or slow down the traffic. Other safety measures include following DOB requirements during the installation and operation of tower cranes to ensure safe operation of the equipment and the installation of safety nettings on the sides of the project as the superstructure advances upward to prevent debris from falling to the ground. These safety measures are required as part of a Site Safety Plan reviewed and approved by DOB.

Rodent Control

Construction projects in New York City typically include provisions for a rodent (i.e., mouse and rat) control program with provisions for this formalized in construction contracts for the development. Rodent control programs are typically carried out throughout construction, beginning with surveying and baiting appropriate areas prior to construction and providing for proper site sanitation and maintenance during construction. Signage is posted, and coordination is conducted with appropriate public agencies. Only EPA- and NYSDEC-registered rodenticides are permitted, and the contractor is required to implement the rodent control program in a manner that is not hazardous to the general public, domestic animals, and non-target wildlife.

Construction Assessment

The Proposed Project would consist of the development of an approximately 13-story, 270-foot-tall, 609,988 gross square foot (gsf) life sciences building on the Development Site.

Construction at the Development Site would be subject to the government regulations and oversight detailed above in **Construction Regulations and General Practices** and would employ the general construction practices described above, such as the employment of a site safety manager who will oversee safety consistent with a Site Safety Plan that would be submitted to DOB for review and approval at each stage of development.

Schedule and Activities

The anticipated construction schedule is presented in **Table 10-1** and reflects a reasonable assumption for construction activities at the Development Site.

As shown in the schedule, construction of the Proposed Project is anticipated to consist of a demolition stage of approximately 11 months followed by construction of the new building, anticipated to occur over an approximately 31-month period. The demolition phase would commence after the Public Health Laboratory vacates the Development Site (expected early 2026) to move to its new purpose-built facility at a site adjacent to Harlem Hospital.

Table 10-1 Anticipated Construction Schedule

Year	2026												2027										
Calendar Quarter	Q1			Q2			Q3			Q4			Q1			Q2			Q3			Q4	
Calendar Month	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Duration (by Month)	-	-	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Construction Activity																								
Demolition																								
Foundations Installation																								
Super Structure and Exterior Cladding																								
MEP																								
Interior Finishes																								

Year	2028												2029										
Calendar Quarter	Q1			Q2			Q3			Q4			Q1			Q2			Q3			Q4	
Calendar Month	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Duration (by Month)	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
Construction Activity																								
Demolition																								
Foundations Installation																								
Super Structure and Exterior Cladding																								
MEP																								
Interior Finishes																								

Source: VHB

Transportation

Construction activity would extend from 2026 through 2029 and would generate construction worker and truck traffic. Because of the duration of these activities, an evaluation of construction sequencing and worker and truck projections were completed to identify potential construction traffic impacts.

Number of Construction Workers and Material Deliveries

Construction is labor intensive, and the number of workers varies with the general construction task and/or building size. Likewise, material deliveries and removals generate truck trips, and the number also varies depending on the task and/or the building size. **Table 10-2** shows the estimated number of daily workers and trucks to the Development Site per quarter (i.e., three-month period) of each calendar year for the duration of construction activities. These represent the average number of daily workers and trucks within each quarter. During construction, the average number of workers would be approximately 102 workers per day, with a peak of 200 workers per day occurring in the first quarter of 2029. An average of 21 trucks per day is anticipated, with a maximum of 36 trucks per day anticipated during the first three quarters of 2026.

Table 10-2 Average Number of Daily Construction Workers and Trucks by Quarter

Year	2026				2027				2028				2029			
Quarter	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Workers	20	20	20	20	33	40	110	110	127	160	160	187	200	167	150	--
Trucks	36	36	36	29	14	13	13	13	17	17	18	20	19	16	16	--

Construction Worker Modal Splits

The number of projected construction vehicles per day were developed for each quarter of construction based on travel survey information provided by NYCDOT. Based on this information, it is anticipated that 45 percent of construction workers would travel to the construction site by subway, 40 percent by auto (with an average vehicle occupancy of 1.27), 11 percent by bus, three percent by taxi (with an average vehicle occupancy of 1.0), and one percent by walking.

Construction Peak Quarter and Peak Hour of Construction

Based on the above mode share and vehicle occupancy assumptions, the peak quarter for construction activities was identified. As shown in **Table 10-3**, the peak quarter of construction activity would occur during the first quarter of 2029 and construction activities would generate approximately 188 total daily vehicle trips (226 daily PCE trips[1]).

[1] Since larger vehicles such as trucks typically make up a significant portion of construction traffic, a passenger car equivalent factor is applied to these vehicles to account for their size difference. It is assumed that truck trips would be comprised of trucks with three axles which per the *CEQR Technical Manual* is equivalent to two passenger cars.

Table 10-3 Average Number of Daily Number of Construction PCE Trips by Quarter

Year	2026				2027				2028				2029			
Quarter	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Auto Trips	12	12	12	12	20	26	70	70	80	100	100	118	126	106	94	--
Taxi Trips	4	4	4	4	4	4	12	12	16	20	20	24	24	20	20	--
Truck Trips	72	72	72	58	28	26	26	26	34	34	36	40	38	32	32	--
Vehicle Trips	88	88	88	74	52	56	108	108	130	154	156	182	188	158	146	--
PCE Trips	160	160	160	132	80	82	134	134	164	188	192	222	226	190	178	--

Traffic Analysis

Peak Hour Construction Worker Vehicle and Truck Trips

Construction activities would be expected to occur on weekdays beginning at 7 AM and ending at 3:00 PM or 3:30 PM. Auto trips associated with construction workers would typically occur during the hours before and after the daily work shift. Construction truck trips would typically be distributed throughout the day depending upon the specific types of construction activities taking place; most trucks would remain in the area for short durations. Each worker vehicle would arrive in the morning and depart in the evening, and each truck delivery was assumed to result in one "in" trip and one "out" trip during the same hour.

The estimated daily vehicle trips for the peak quarter of construction traffic were distributed throughout the workday based on projected arrival/departure patterns of construction workers, and the projected pattern of truck deliveries based on the types of construction activities that would occur during the peak quarters for the Proposed Project. For construction workers, typical arrival patterns show that most arrivals (approximately 80 percent) occur during the 6 AM to 7 AM hour (the hour before the beginning of a regular day shift) and the same percentage of departure trips occurs during the end of the shift (the 3 PM to 4 PM hour). For trucks, deliveries are usually spread throughout the day, but the peak activity (approximately 25 percent) is anticipated to occur during the 6 AM to 7 AM hour.

The estimated daily average number of construction workers and truck deliveries during the peak construction quarter, which is expected to be the first quarter of 2029, is approximately 200 construction workers and 19 trucks per day. The peak construction hourly trip projections for the peak construction quarter are summarized in **Table 10-4**.

Table 10-4 Proposed Project Construction Vehicle Trips by Hour

Hour Beginning	Auto Trips		Taxi Trips		Truck Trips		Total Vehicle Trips			Total PCE Trips		
	In	Out	In	Out	In	Out	In	Out	Total	In	Out	Total
6 AM	50	0	4	4	4	4	58	8	66	62	12	74
7 AM	13	0	1	1	2	2	16	3	19	18	5	23
8 AM	0	0	0	0	2	2	2	2	4	4	4	8
9 AM	0	0	0	0	2	2	2	2	4	4	4	8
10 AM	0	0	0	0	2	2	2	2	4	4	4	8
11 AM	0	0	0	0	2	2	2	2	4	4	4	8
12 PM	0	0	0	0	2	2	2	2	4	4	4	8
1 PM	0	0	0	0	1	1	1	1	2	2	2	4
2 PM	0	3	0	0	1	1	1	4	5	2	5	7
3 PM	0	50	4	4	1	1	5	55	60	6	56	62
4 PM	0	10	1	1	0	0	1	11	12	1	11	12

The estimated number of vehicle trips generated by construction activities during the peak quarter would be 66 vehicle trips (74 PCEs) during the AM construction peak hour (6 AM to 7 AM) and 60 vehicle trips (62 PCEs) during the PM construction peak hour (3 PM to 4 PM). In comparison, upon completion, the Proposed Project would generate 69 vehicle trips (79 PCEs), 43 vehicle trips (51 PCEs), and 48 vehicle trips (50 PCEs) during the weekday AM, midday, and PM peak hours, respectively, as shown in **Table 10-5**. Construction-related peak vehicle trips for the AM and PM construction peak hours are very close to those projected for the Proposed Project once it is built and in operation.

Table 10-5 Comparison of Vehicle Trips – Construction vs. Operational Conditions

	Construction Peak Hour Trips		Operational Peak Hour Trips		
	AM Peak Hour	PM Peak Hour	AM Peak Hour	Midday Peak Hour	PM Peak Hour
Auto/Taxi Trips	58	58	59	35	46
Truck Trips	8	2	10	8	2
Total Vehicle Trips	66	60	69	43	48
Total PCE Trips	74	62	79	51	50

As discussed in **Section 6, Transportation,** the Proposed Project is not expected to result in significant traffic impacts. A Level 2 screening analysis (trip assignment) was conducted for the Proposed Project's operational AM commuter peak hour and determined that, once assigned, project-generated vehicle trips would not exceed the 50 vehicle trips per intersection thresholds for further analysis and significant traffic impacts would not be expected. For the midday and PM commuter peak hours, project-generated trips would not exceed the Level 1 (trip generation) screening thresholds, requiring no further analysis.

During the AM construction peak hour, construction activities are expected to generate 5 fewer vehicle trips in comparison to the project-generated vehicle trips during the AM commuter peak hour. Since vehicle trips due to construction activities are lower than project-generated trips under the operational condition, and as a Level 2 screening was conducted and determined that traffic

impacts would not be expected for the operational condition, significant traffic impacts are also not expected during the AM construction peak hour.[2]

During the PM construction peak hour, construction activities are expected to generate 12 additional vehicle trips in comparison to the project-generated vehicle trips during the PM commuter peak hour. Therefore, a trip assignment was performed for the PM construction peak hour to determine if additional traffic analyses are warranted. Construction vehicle trips were assigned through the roadway work network based on worker travel trends, similar to the operational analysis. The construction trip assignments determined that construction activities would not be expected to result in an increase of 50 or more vehicle trips at an individual intersection during the PM construction peak hour and therefore would not exceed the *CEQR Technical Manual* thresholds for detailed traffic analysis. Therefore, similar to the PM commuter peak hour, significant adverse construction traffic impacts are also not expected during the PM construction peak hour.

Deliveries

Construction trucks would be required to use NYCDOT-designated truck routes, including First Avenue and 23rd Street, and service the construction site at the designated loading zones anticipated to be along Mt. Camel Place.

Curb Lane Closures and Staging

All travel lanes along the Development Site frontage roadways (First Avenue, East 26th Street, Mt. Carmel Place) would be expected to remain open during construction. It is anticipated that portions of the sidewalk along Mt. Carmel Place would be closed during construction; as a result, a portion of the parking lane would also be closed to accommodate a temporary pedestrian walkway and shed. Portions of other frontage roadway sidewalks may also need to be closed for short durations, but temporary pedestrian walkways and sheds would be maintained. NYCDOT OCMC will consider construction measures at the Development Site within the larger neighborhood context and will coordinate MPT plans across projects within the neighborhood.[3]

Parking

Construction workers would generate an estimated maximum daily parking demand of 63 spaces during the Q1 2029 peak quarter. This parking demand could be accommodated by off-site parking facilities within the surrounding areas. Therefore, construction for the Proposed Project would not result in a parking shortfall.

Transit and Pedestrians

Based on data provided by the NYCDOT, it is anticipated that approximately 56 percent of construction workers would commute to the Development Site by public transportation and one percent would walk to the Development Site. During the first quarter of 2029 when construction worker volumes would be highest, construction would be expected to generate 200 daily construction workers (114 workers would be expected to use public transportation or walk). It is expected the majority of construction

[2] In addition, measured traffic volumes during the AM construction peak hour are approximately 34 percent lower than during the commuter peak hour.

[3] Such as the SPARC Kips Bay project located along First Avenue between East 25th Street and East 26th Street.

workers (80 percent) would arrive during the AM construction peak hour and depart during the PM construction peak hour, and they would generate approximately 91 construction worker trips by public transportation or by walking during the AM and PM construction peak hours. The worker pedestrian trips would be below the threshold provided in the *CEQR Technical Manual* of 200 peak hour pedestrian trips for detailed analysis, therefore construction activities are not expected to result in transit or pedestrian impacts.

Air Quality

An assessment was made using CEQR guidelines of the effects on mobile source air quality from truck and worker trips generated by construction activities. The peak-hour construction trip generation would be 66 vehicles during the AM period in the interior fit-out phase. To evaluate mobile source CO and $PM_{2.5}$ impacts from the intersections near the construction site, the 58 cars and 8 trucks that comprise this total peak were split between different intersections using conservative assumptions:

- A total of 8 truck trips and 8 taxi trips were assumed to be made at the Mount Carmel Place and East 27th Street intersection, which is a combination of local paved roads.
- A total of 50 auto trips were assumed to be made at the First Avenue and East 26th Street intersection. East 26th Street is a collector road west of First Avenue, and First Avenue is an arterial road. The trips would be made west of First Avenue.

The above-mentioned vehicle trips per hour are below the CEQR intersection screening threshold of 170 for CO. Additionally, conservatively assuming that all autos and taxis are vehicle type LDGT1, and that trucks are evenly split between vehicle types HDGV4 and HDDV8B for the interior fit-out phase, the peak condition truck equivalents are below the $PM_{2.5}$ thresholds for the road types listed above. Therefore, a detailed CO or $PM_{2.5}$ assessment of construction-related mobile source air quality is not needed, and no significant adverse mobile source air quality impacts from construction are expected.

Noise

An assessment of mobile sources was made to evaluate their potential to affect noise conditions in the area. Vehicles would be expected to use First Avenue, East 28th Street, and Mount Carmel Place to access the Development Site, then leave the site to Mount Carmel Place onto East 26th Street.

Since East 28th Street and Mount Carmel Place are both one-way roads, the construction mobile source noise assessment evaluated three intersections/sections along First Avenue, Mount Carmel Place and East 26th Street during the 6:00 to 7:00 AM period.

The potential for construction mobile sources to increase ambient sound conditions has been determined based on proportional modeling of noise PCEs. If construction mobile sources would result in a doubling or more of PCEs, it would result in a 3 dBA or greater increase in noise levels. If PCEs would not double during construction, there would not be a significant adverse vehicular noise impact, and no further mobile source noise analysis is warranted. The *2021 CEQR Technical Manual* describes the process to determine PCEs. Vehicle classes are defined to have the following PCEs based on typical vehicles speeds:

- Each automobile or light truck: 1 noise PCE
- Each medium truck: 13 noise PCEs

› Each bus: 18 noise PCEs

› Each heavy truck: 47 noise PCEs

Increases in noise due to construction mobile sources are calculated using the following equation:

*Sound Level Increase (Leq)=10*log (Existing and Construction PCEs)/(Existing PCEs))*

As described above, the peak construction vehicle trips during the peak construction quarter (first quarter of 2029) would include approximately 50 construction workers and eight trucks (four in and four out) per day in the 6:00 to 7:00 AM period. These vehicle trips would be distributed throughout the study area.

As shown in **Table 10-6,** noise from construction mobile sources would increase 0.1 dBA compared to the existing condition along First Avenue, 0.9 dBA along East 26th Street, and 3.5 dBA along Mount Carmel Place. The noise increment along Mount Carmel Place exceeds the general impact threshold of 3 dBA. However, as mentioned in *2021 CEQR Technical Manual*, it is reasonable to consider 65 dB(A) $L_{eq(1\text{-}hr)}$ as an absolute noise level that should not be significantly exceeded. For example, if the No-Action noise level is 60 dB(A) $L_{eq(1\text{-}hr)}$ or less, a 5 dB(A) $L_{eq(1\text{-}hr)}$ or greater increase would be considered significant. If the No-Action noise level is 61 dB(A) $L_{eq(1\text{-}hr)}$, the maximum incremental increase would be 4 dB(A), since an increase higher than this would result in a noise level higher than the 65 dB(A) $L_{eq(1\text{-}hr)}$ threshold and is considered significant. Similarly, if the No-Action noise level is 62 dB(A) $L_{eq(1\text{-}hr)}$ or more, a 3 dB(A) $L_{eq(1\text{-}hr)}$ or greater change is considered significant. A noise measurement was performed during the 6:00 to 7:00 AM period on June 11, 2024; the measured noise is L_{eq} is 60.8 dBA, which included noise from two helicopters flying in the area. Since the existing noise level L_{eq} is less than 61 dBA, the impact threshold of noise increment would be 4 dB(A). Therefore, there would be no significant adverse noise impact from construction mobile sources.

Table 10-6 Construction Mobile Source Screening

Site	Monitoring Location	Period	Existing PCEs	Construction PCEs	Construction/Existing Increment (dBA)
1	First Avenue	Early Morning	3,522	3,642	0.1
2	East 26th Street	Early Morning	391	485	0.9
3	Mount Carmel Place	Early Morning	95	215	3.5

Appendix A: LPC Correspondence

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: LA-CEQR-M (EDC)
Project: 455 FIRST AVENUE
Address: 327 EAST 26 STREET BBL: 1009320017
Date Received: 9/29/2023

[X**] No architectural significance**

[X**] No archaeological significance**

[ ] Designated New York City Landmark or Within Designated Historic District

[ ] Listed on National Register of Historic Places

[ ] Appears to be eligible for National Register Listing and/or New York City Landmark Designation

[ ] May be archaeologically significant; requesting additional materials

Comments:

S/NR LISTED R & S BUILDING AT BELLEVUE HOSPITAL, 492 FIRST AVENUE; S/NR ELIGIBLE BELLEVUE ADMINISTRATION BUILDING (AKA BUILDING E OR MAIN BUILDING), 462 FIRST AVENUE AND C & D BUILDING, 262 FIRST AVENUE WITHIN RADIUS.

Gina Santucci 10/13/2023

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 37170_FSO_DNP_10112023.docx

Appendix B: Shadows Assessment – Vegetation Inventory and Analysis

Appendix B

Vegetation Inventory and Analysis

Introduction

An assessment was undertaken to review vegetation within Bellevue South Park ("the park") to evaluate whether incremental shadows from the proposed 455 First Avenue project (the Proposed Project) would have the potential to threaten the viability of the park's vegetation.

Methodology

For the vegetation shadow inventory and analysis, the following was undertaken:

- A desk-top review of existing vegetation conditions, including reviewing record aerial photography to understand existing shade/sun conditions at the park.
- A site visit to:
  - Observe light conditions in the park.
  - Observe and analyze the existing vegetation types and species at the park and their growing conditions with respect to available light-levels.
  - Compare built conditions of the park in comparison to the park plans provided by NYC Parks Department for Bellevue South Park.
  - Observe park users and their activities within the park.

The site visit was conducted on September 7, 2023, between 11:30 AM and 1:30 PM by a licensed landscape architect registered in New York State under the supervision of a licensed landscape architect registered in NYS; the supervising landscape architect is an International Society of Arboriculture certified arborist approved as a Consulting Arborist by the New York City Department of Parks and Recreation.

Following the desk-top review and field survey, an assessment of the potential effects of the Proposed Project's shadow increment was undertaken based on the vegetation survey in combination with shadow modeling efforts undertaken as part of the Proposed Project's Environmental Assessment Statement (EAS), consistent with the 2021 *CEQR Technical Manual* methodology.

Definitions

For this analysis, the vegetation's shade conditions are characterized as either full sun, part sun, part shade or full shade (Table 1).[1]

Sun/Shade Conditions

Table 1 Types of Sun/Shade Conditions

Type of Condition	# of Hours of Sun
Full Sun	› More than 6 Hours of Direct Sun
Part Sun	› 4-6 Hours of Primarily Afternoon Sun
Part Shade	› 4-6 Hours of Primarily Morning Sun
Full Shade	› Less than 4 Hours of Direct Sun

The 2021 *CEQR Technical Manual* states that the amount of sunlight typically considered to be the minimum that plantings and vegetation would need is six to eight hours of direct sunlight; examples of these types of planting and vegetation include grass lawns, planted annuals, or areas used for a relatively substantial amount of food production (e.g., a garden primarily growing fruit and vegetables). The manual notes that assessment of shadow impacts should consider that some plantings and vegetation can tolerate partial sun, with a reduced minimum requirement of four to six hours of direct sunlight. Examples of areas that can tolerate partial sun, per the manual, are established tree canopies, shrubs, or perennials.

CEQR Impact

To determine the significance of an impact, the manual states that shadows occurring during the cold-weather months generally do not affect the growing season of outdoor vegetation and that therefore, shadow sensitivity is typically assessed for vegetation to evaluate whether the vegetation could be affected by a loss of sunlight during the growing season.

In terms of a shadows impact on vegetation, the 2021 *CEQR Technical Manual* states that a significant adverse shadow impact occurs when there is a substantial reduction in sunlight available to a sunlight-sensitive feature of the resource to less than the minimum time necessary for its survival (when there was sufficient sunlight in the future without the project), or a reduction in direct sunlight exposure where the sensitive feature of the resource is already subject to substandard sunlight (i.e., less than the minimum time necessary for its survival).

Field Observations

As noted above, a field survey was undertaken on September 7, 2023.

Light

During the site visit, it was observed that light conditions in the park varied from full sun in the center of the park (i.e., the pedestrian pathway that extends east-west along East 27th Street where there is no tree canopy) to full shade with filtered light on the north and south sides of

[1] A variety or sources were used to evaluate species' preferred sun/shade condition, including information provided on the Lady Bird Johnson Wildflower and Missouri Botanical Garden websites, as well as information from Kansas State University Research and Extension on defining sun requirements for plants.

park, on either side of the pedestrian pathway. Ambient light was observed to be reflecting off adjacent buildings, providing a minor supplemental light source (**Figure 1**).

Vegetation

During the field survey, the majority of the vegetation identified was observed to be consistent with the species one would find in a full shade-tolerant environment. The primary vegetation type that was observed within the areas of incremental shade from the Proposed Project were large deciduous trees, such as Honey Locusts (*Gleditsia triacanthos var inermis*), Linden (*Tilia sp.*), and a Pin Oak (*Quercus palustris*), and ornamental trees (Crape Myrtle – *Lagerstroemia sp.*). The Honey Locust was the most frequently observed tree species within the incremental shade area. This species prefers Part Shade but is known to be hardy in most environments and is frequently used in park and other settings due to its resiliency. The Pin Oak, which is located within the play area closest to the middle of the park, was observed to show signs of decline, with a lack of leaves (**Figure 2**).

Shrubs and small understory trees were observed to be in full shade because of the park's existing tree canopy (**Figures 3**). There were few groundcovers and perennials observed at the time of visit. The groundcover plantings that were observed were in a full shade condition (**Figures 4** to **10**). There were several planting beds that were bare. **Figures 6** to **15** show the conditions under the park's existing tree canopy. The conditions of the shrubs and groundcovers present were consistent with the specimen's required light conditions. All shrub and groundcover species were found to be shade tolerant, consistent with their existing condition located beneath the park's tree canopy.

Park Plan

During the field survey, the park design, layout and amenities were observed and documented.

Park Activity

During the field survey, there were few users sitting on benches or utilizing the park in part sun or full sun areas. Most park goers utilized full shade areas such as the benches along the west boundary of the park under the tree canopy and the seating to the east of the basketball court. Several users utilized the park as a transition space to travel east-west through the park. The type of users that were observed included mothers/care takers and children (limited), the elderly/retired (notably many wheelchair or disabled individuals), workers from the adjacent construction sites and others eating their lunch or reading, and people utilizing the basketball court (**Figures 16-17**).

Vegetation Assessment

An analysis was conducted to evaluate whether there would be sufficient sunlight during the growing season so that the viability of vegetation would be maintained in the future with the Proposed Project. The 2021 *CEQR Technical Manual* states that for vegetation requiring direct sunlight, generally four to six hours a day of sunlight, particularly in the growing season, is a minimum requirement but that the assessment should also consider the relative shade tolerance of a resource's vegetation.

The results of the analysis are summarized in the table below (**Table 2**). The table provides information on the general location of the observed plant species, their existing shade condition on the day of the field survey, the potential future shade condition in the future with the Proposed Project, and a summary of whether the change in the future shade condition could impact each species. The change in the future shade condition considers the shadow increments for the Proposed Project during the March 21/September 21, May 6/August 6, and June 21 analysis days. The table indicates a Y in the "Further Assessment Warranted" column for any species where there is a potential change in the shade condition in the future with the Proposed Project and where further assessment is warranted; additional details for those species follows the table. Based on the further assessment, the final column in the table summarizes that there is no potential for adverse effects.

Table 2 Vegetation Shade Inventory

Plant Species	Side of Park (N/S/ Both)	Existing Shade Condition	Potential Future Shade Condition	Further Assessment Warranted (Y/N)	Potential Adverse Effect Summary (Y/N)
Trees					
Norway Maple - *Acer platanoides*[2]	› Both	Full Sun	Part Sun	N	N
Maple - *Acer sp*.	› Both	Full Sun	Full Sun	N	N
Honey Locust - *Gleditsia triacanthos var. inermis*	› Both	Full Sun	Part Sun	Y	N
Crape Myrtle - *Lagerstroemia sp.*	› Both	Part Sun	Part Sun	Y	N
Linden - Tilia sp.	› Both	Part Sun	Part Sun	Y	N
Pin Oak - *Quercus palustris*[1]	› North	Full Sun	Part Sun	Y	N
Flowering Dogwood - *Cornus florida*	› North	Full Shade	Full Shade	N	N
Cornelian Cherry Dogwood - *Cornus mas*	› North	Part Sun	Part Sun	N	N
Hawthorn - *Crataegus sp.*	› Both	Full Shade	Full Shade	N	N
Eastern Redbud - *Cercis canadensis*	› Both	Full Shade	Full Shade	N	N
Japanese Pagoda Tree - *Styphnolobium japonicum*	› North	Full Sun	Full Sun	N	N
American Basswood - *Tilia americana*	› North	Full Sun	Full Sun	N	N
Callery Pear - *Pyrus calleryana*[2]	› Both	Full Sun	Part Sun	Y	N
Serviceberry - *Amelanchier sp.*	› North	Full Shade	Full Shade	N	N

Shrubs					
Cherry Laurel - *Prunus laurocerasus*	› Both	Full Shade	Full Shade	N	N
Spotted Laurel - *Acuba japonica*	› South	Full Shade	Full Shade	N	N
Rose - *Rosa sp.*	› Both	Part Shade	Full Shade	N	N
Yew - *Taxus sp.*	› Both	Full Shade	Full Shade	N	N
Prage Viburnum - *Viburnum x pragense*	› North	Full Shade	Full Shade	N	N
Japanese Holly - *Ilex crenanta*	› South	Full Shade	Full Shade	N	N
Groundcovers Sedge - *Carex sp.*	› Both	Full Shade	Full Shade	N	N
Lily turf - *Liriope muscari var.*	› Both	Full Shade	Full Shade	N	N
Pachysandra - *Pachysandra sp.*	› North	Full Shade	Full Shade	N	N
Ivy - *Hedera sp.*	› North	Full Shade	Full Shade	N	N
Viriginia Creeper - *Parthenocissu quinquefolia*	› South	Full Shade	Full Shade	N	N
Siberian Bugloss - *Brunnera macrophylla 'Looking Glass'*	› South	Full Shade	Full Shade	N	N

Notes:
1 Specimen in decline at time of observation
2 Invasive Species

Trees

As noted above, for any species where there is a potential change in the shade condition in the future with the Proposed Project and where the analysis indicated a need for further assessment, additional consideration of those species was undertaken:

Honey Locust

As discussed above, the Honey Locust was the most frequently observed tree species within the area that would experience incremental shade from the Proposed Project. This species prefers Part Shade but has been known to be hardy in most environments and is frequently used in various settings due to its resiliency. While there are some areas of the park containing Honey Locusts that would experience a change in sun condition from Full Sun to Part Sun in the future with the Proposed Project, given this species' adaptability, an adverse effect is not expected.

Crape Myrtle

There is a single Crape Myrtle located in the area of the Proposed Project's shadow increment. Although its sun/shade condition will remain the same (Part Sun), the tree would receive slightly less sun than it does currently. Despite this, it is not anticipated that this reduction in sun will adversely impact the specimen.

Linden

Two Linden trees are located in the area of the Proposed Project's shadow increment. The preferred sun/shade condition of this species is Full Sun. Although their sun/shade condition will remain the same (Part Sun), the trees would receive slightly less sun than they do currently. While this species prefers a Full Sun condition, it is not anticipated that incremental shadow from the Proposed Project would adversely impact the Lindens as Lindens have been known to tolerate a part shade environment.

Pin Oak

A single Pin Oak was identified in the park. The preferred sun/shade condition of this species is Full Sun, but it can tolerate Part Sun. As noted above, the tree was observed to be in severe decline, with a lack of leaves. In the future with the Proposed Project, this single specimen would effectively receive less than 6 hours of direct sun. Given the specimen's current condition, it is expected that it will continue to decline regardless of the Proposed Project.

Callery Pears

The two specimens of Callery pears that fall within the area of incremental shadow currently experience Full Sun, which is this species' preferred sun/shade condition. While Full Sun is the preferred sun/shade condition, Callery Pears have been known to thrive in Part Sun conditions and are well documented as a hardy and invasive species. However, the specimen to the south of the center of the park exhibits form deficiencies in its trunk, which is most likely caused by the existing sun/shade condition under the tree canopy of nearby trees and the tree's attempt to orient itself toward full sun. It will likely continue this behavior in the proposed condition. Currently this species lacks in its ability to contribute to the ecological fabric of the urban forest due to its invasive nature. It is not anticipated that the change in sun/shade conditions in the future with the Proposed Project would adversely affect this species.

Conclusion

Overall, the large majority of trees within the park would not experience a change in sun/shade conditions. For those species that would experience a change in sun/shade condition—Honey Locust, Crape Myrtle, Linden, and Callery Pears—it is expected that the specimens would adapt to the change, and the incremental shadow would not adversely impact these species. For the single Pin Oak that was found to be in decline, it is expected that it will continue its current decline with or without the Proposed Project. Therefore, shadows from the Proposed Project would not result in a significant adverse impact on the tree specimens within Bellevue South Park.

Shrubs

As noted in the table, the identified shrub vegetation is located in areas of full shade in the existing condition and would continue to experience full shade conditions in the future with the Proposed Project. The species identified within the park are all species that are hardy and resilient in full shade conditions; therefore, the Proposed Project would not result in a significant adverse impact on shrubs in the park.

Groundcover

As noted in the table, the identified groundcover vegetation is located in areas of full shade in the existing condition and would continue to experience full shade conditions in the future with the Proposed Project. The species identified within the park are all species that are hardy and resilient in full shade conditions; therefore, the Proposed Project would not result in a significant adverse impact on groundcover in the park.

Figure 1



Image of ambient and filtered light in Bellevue South Park

Figure 2



Pin Oak – *Quercus palustris* in decline

Figure 3



Image depicting shrubs and small understory trees at Bellevue South Park

Figure 4



Image depicting shrubs and small understory trees at Bellevue South Park

Figure 5



Image depicting shrubs and small understory trees at Bellevue South Park

Figure 6



Image depicting groundcovers at Bellevue South Park

Figure 7

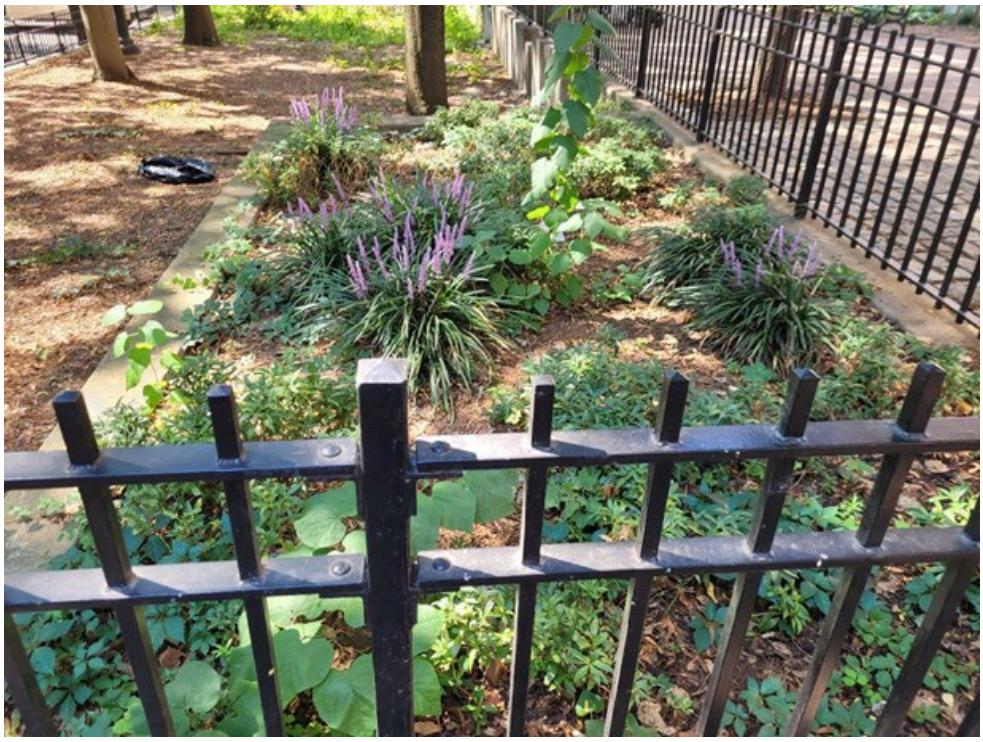


Image depicting groundcovers at Bellevue South Park

Figure 8



Image depicting groundcovers at Bellevue South Park

Figure 9



Image depicting groundcovers at Bellevue South Park

Figure 10



Image depicting groundcovers at Bellevue South Park

Figure 11



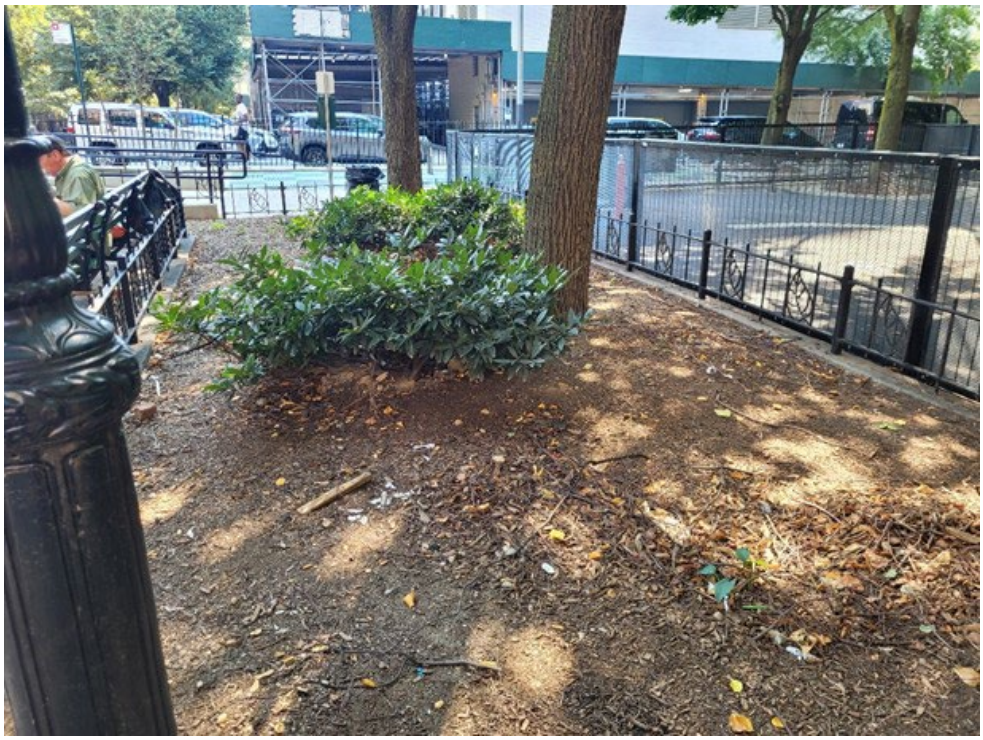
Mulched landscape area

Figure 12



Mulched landscape area

Figure 13



Mulched landscape area

Figure 14



East-west pedestrian path

Figure 15



Image depicting users in Bellevue South Park

Figure 16



Image depicting users in Bellevue South Park

Figure 17



Image depicting users in Bellevue South Park