PROTO PROPERTY SERVICES LLC
2950 WEST 24th STREET REZONING

CITY ENVIRONMENTAL QUALITY REVIEW (CEQR)
ENVIRONMENTAL ASSESSMENT STATEMENT

MATRIXNEWORLD

Engineering Progress

Lead Agency:
New York City Department of City Planning
120 Broadway, 31st Floor
New York, New York 10271

Prepared for:
Proto Property Services LLC
111 North Central Avenue, Suite 425
Hartsdale, New York 10530

Site Location:
2950-60-70 West 24th Street
Brooklyn, New York 11224
Block 7055, Lot 13

CEQR No. 24DCP134K

Prepared by:
Matrix New World Engineering
20 West 37th Street, 12th Floor
New York, New York 10018

May 2024

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 2950 West 24th Street Rezoning

1. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency)	BSA REFERENCE NUMBER (if applicable)
24DCP134K	N/A
ULURP REFERENCE NUMBER (if applicable)	OTHER REFERENCE NUMBER(S) (if applicable) (*e.g.*, legislative intro, CAPA)
TBD	N/A

2a. *Lead Agency Information*			**2b. *Applicant Information***		
NAME OF LEAD AGENCY			NAME OF APPLICANT		
New York City Department of City Planning			Proto Property Services LLC		
NAME OF LEAD AGENCY CONTACT PERSON			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON		
Stephanie Shellooe, AICP, Director, Environmental Assessment and Review Division, New York City Department of City Planning			Olga Abinader, Director of Environmental Review and Land Use, Matrix New World Engineering		
ADDRESS 120 Broadway, 31st Floor			ADDRESS 20 West 37th Street, 12th Floor		
CITY New York	STATE NY	ZIP 10271	CITY New York	STATE NY	ZIP 10018
TELEPHONE (212) 720-3300	EMAIL sshellooe@planning.nyc.gov		TELEPHONE (973) 240-1800	EMAIL oabinader@mnwe.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)(10)

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*

The Applicant, Proto Property Services LLC, is requesting Zoning Map and Text Amendments as well as a Large Scale Development Permit to facilitate the construction of a one- (1-) to 17-story, up to approximately 440,000-GSF (375,532ZSF) mixed-use residential, community facility and commercial building at the Project Site. The Proposed Project includes a total of up to 415 residential dwelling units within up to 415,000 GSF (354,651 ZSF) of residential floor area, all of which would be affordable to a range of income levels under AMI (104 to 125 of which would be made affordable pursuant to either Option 1 or 2 of the MIH program with the other units made affordable pursuant to NYC HPD and HDC financing). The Proposed Project would also include up to 15,000 GSF (12,725ZSF) and up to 10,000 GSF (8,156 ZSF) of groundfloor community facility and commercial retail spaces, respectively; the commercial retail space would be located on the groundfloor at the corner of the proposed building's Surf Avenue and West 25th Street frontages while there would be two separate community facility spaces located along the interior of West 25th Street frontage. A proposed new curb cut along the tax lot's West 25th Street frontage would provide access to the existing parking lot at the Project Site. Under the Proposed Project, the parking lot's capacity would be reduced to 143 spaces (a loss of 20 spaces) due to required landscaping improvements. The Proposed Project also includes an active and passive recreation area, including a multi-purpose field, playground facilities, landscaping, benches, and other amenities, accessible to residents of the Project Site.

Project Location

BOROUGH Brooklyn	COMMUNITY DISTRICT(S) 13	STREET ADDRESS 2950 West 24th Street
TAX BLOCK(S) AND LOT(S) Block 7055, Lot 13		ZIP CODE 11224

DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS The Project Site is generally bounded by West 24th Street to the east, Surf Avenue to the south, West 25th Street to the west, and residential uses fronting along Mermaid Avenue to the north.

EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY	ZONING SECTIONAL MAP NUMBER
R6 w/ C1-2 commercial overlay	28d

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 A Large Scale General Development Special Permit seeking the following:
a. Parking Reduction (ZR § 25-251) - To permit 143 parking spots to serve both existing and proposed buildings (237 would otherwise be required under the R7-3 district)
b. Street Wall/Base Height ZR §§ 123-662, 23-62, 24-51) Flexibility - To allow variable base heights over 85 feet (85 feet is the max. permitted height per the R7-3 district)
c. Window-to-Wall Minimum Distance (ZR § 23-711) Reduction - To permit a 30-foot Window-to-Wall distance (50-foot minimum required under the R7-3 district)
d. Lot coverage (ZR § 23-153) Flexibility - To permit an interior lot coverage of 78.38% (65% permitted under the R7-3 district)

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

Other City Approvals Not Subject to CEQR (check all that apply)
☐ PERMITS FROM DOT'S OFFICE OF CONSTRUCTION MITIGATION AND COORDINATION (OCMC)
☐ LANDMARKS PRESERVATION COMMISSION APPROVAL
☐ OTHER, explain:

***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.): 153,580 SF
Waterbody area (sq. ft.) and type: 0
Roads, buildings, and other paved surfaces (sq. ft.): 87,316 SF
Other, describe (sq. ft.): 66,264 SF (Landscaped Area)

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): 440,000 GSF
NUMBER OF BUILDINGS: 1
GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): 440,000 GSF
HEIGHT OF EACH BUILDING (ft.): 185 FT
NUMBER OF STORIES OF EACH BUILDING: 17

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: 153,580 SF
The total square feet not owned or controlled by the applicant: 0 SF

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: 66,264 SF sq. ft. (width x length) VOLUME OF DISTURBANCE: 92,676 cubic ft. (width x length x depth)

AREA OF PERMANENT DISTURBANCE: 66,264 SF sq. ft. (width x length)

8. *Analysis Year* CEQR Technical Manual Chapter 2

ANTICIPATED BUILD YEAR (date the project would be completed and operational): 2027

ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: 18

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

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE: Assuming receipt of all requisite development approvals by August 2025, incluidng CEQR and ULURP Certification, and an 18-month construction schedule, the Project Analysis Year is anticipated to be 2027.

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

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

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	One (1) Residential Building	Two (2) Residential Buildings	Two (2) Residential Buildings	One (1) new Residential building
No. of dwelling units	360	366 (includes 360 DUs in existing building and 6 DUs in No Action Scenario building)	775 (includes 360 DUs in existing building and 415 DUs in With Action Scenario building)	+409
No. of low- to moderate-income units	360	360	775	+415
Gross floor area (sq. ft.)	380,000	386,390	795,000	+408,610
Commercial	☐ YES ☒ NO	☐ YES ☒ NO	☒ YES ☐ NO	
If "yes," specify the following:				
Describe type (retail, office, other)	N/A	N/A	Local Retail (Supermarket)	Local Retail (Supermarket)
Gross floor area (sq. ft.)	N/A	N/A	10,000 GSF	+10,000 GSF
Manufacturing/Industrial	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
Type of use	N/A	N/A	N/A	N/A
Gross floor area (sq. ft.)	N/A	N/A	N/A	N/A
Open storage area (sq. ft.)	N/A	N/A	N/A	N/A
If any unenclosed activities, specify:	N/A	N/A	N/A	N/A
Community Facility	☐ YES ☒ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify the following:				
Type	N/A	Medical Office	Community Center	New Community Center space, No Medical Office space
Gross floor area (sq. ft.)	N/A	213,616 GSF	15,000 GSF	-198,616
Vacant Land	☒ YES ☐ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," describe:	The portion of the Project Site (Lot 13) intended to be redeveloped by the Applicant is comprised of mostly vacant land, including concrete sidewalks and a steel bridge over a land depression.	N/A	N/A	N/A
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):	N/A	N/A	N/A	N/A
Other Land Uses	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," describe:	N/A	N/A	N/A	N/A
PARKING				
Garages	☐ YES ☒ NO	☒ YES ☐ NO	☐ YES ☒ NO	
If "yes," specify the following:				
No. of public spaces	N/A	0	0	N/A

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
No. of accessory spaces	N/A	65	0	-65 accessory spaces
Operating hours	N/A	24 hours per day	N/A	N/A
Attended or non-attended	N/A	Non-Attended	N/A	N/A
Lots	☒ YES ☐ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify the following:				
No. of public spaces	0	0	0	No Change
No. of accessory spaces	160	160	143	-17 accessory spaces
Operating hours	24 hours per day	24 hours per day	24 hours per day	N/A
Other (includes street parking)	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," describe:				
POPULATION				
Residents	☒ YES ☐ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify number:	868	882	1,868	+986 residents
Briefly explain how the number of residents was calculated:	Based on an average household size of 2.41 persons (based on 2017-21 ACS data for the Coney Island-Seagate NTA) and 360, 366, and 775 dwelling units in existing conditions, Future No-Action Scenaio, and Future With-Action Scenario, respectively.			
Businesses	☐ YES ☒ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify the following:				
No. and type	N/A	Medical Office	Local Retail (Supermarket), Community Center	New Local Retail (Supermarket), Community Center
No. and type of workers by business	N/A	475 employees (i.e., doctors, nurses, other medical support staff, administration, maintenance)	76 employees (i.e., retail managers, floor staff, and cashiers associated with Local Retail (Supermarket); managers and support staff associated with Community Center)	-399 total employeess
No. and type of non-residents who are not workers	N/A	N/A	N/A	N/A
Briefly explain how the number of businesses was calculated:	Based on factors of one (1) employee per 450 GSF of Medical Office; one (1) employee per 333 GSF of Local Retail (Supermarket) one (1) employee per 333 GSF of Community Facility.			
Other (students, visitors, concert-goers, *etc.*)	☐ YES ☒ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If any, specify type and number:	N/A	Patients associated with medical office uses (variable)	Retail patrons, community center users (variable)	No medical office patients; patrons / users of retail and community center users
Briefly explain how the number was calculated:	Highly variable			
ZONING				
Zoning classification	R6, R6 w/ C1-2 R6	R6, R6 w/ C1-2 R6	R6, R7-3, R7-3 w/ C2-4	New R7-3 and R7-3 / C2-4 districts, elimination of C1-2 commercial overlay
Maximum amount of floor area that can be developed	372,718 SF Res; 736,234 SF CF	372,718 SF Res; 736,234 SF CF	740,889 SF Res; 917,479 SF CF; 48,924 SF Com	+368,171 SF Res; +181,245 SF CF; +48,924 SF Com
Predominant land use and zoning classifications within land use study area(s) or a 400 ft. radius of proposed project	R5, R6, R6A, R7-2 zoning districts; Single and multifamily residential, institutional, transportation /	R5, R6, R6A, R7-2 zoning districts; Single and multifamily residential, institutional, transportation /	R5, R6, R6A, R7-2 zoning districts; Single and multifamily residential, institutional, transportation /	No Change

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
	utility, and mixeduse residential and commercial land uses	utility, and mixeduse residential and commercial land uses	utility, and mixeduse residential and commercial land uses	
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. See Attached		
(e) Is the project a large, publicly sponsored project?	☐	☒
○ If "yes," complete a PlaNYC assessment and attach. N/A		
(f) Is any part of the directly affected area within the City's Waterfront Revitalization Program boundaries?	☒	☐
○ If "yes," complete the Consistency Assessment Form. See Attached		
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,	☐	☒

	YES	NO
enhance, or otherwise protect it?		
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		

	YES	NO
6. *HISTORIC AND CULTURAL RESOURCES*: CEQR Technical Manual Chapter 9		
(a) Does the proposed project site or an adjacent site contain any architectural and/or archaeological resource that is eligible for or has been designated (or is calendared for consideration) as a New York City Landmark, Interior Landmark or Scenic Landmark; that is listed or eligible for listing on the New York State or National Register of Historic Places; or that is within a designated or eligible New York City, New York State or National Register Historic District? (See the GIS System for Archaeology and National Register to confirm)	☐	☒
(b) Would the proposed project involve construction resulting in in-ground disturbance to an area not previously excavated?	☒	☐
(c) If "yes" to either of the above, list any identified architectural and/or archaeological resources and attach supporting information on whether the proposed project would potentially affect any architectural or archeological resources. See Attached		
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: See Attached	☐	☐
(j) Based on the Phase I Assessment, is a Phase II Investigation needed? See Attached	☒	☐
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?	☐	☒
(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?	☐	☒

	YES	NO
(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): 19,974 lbs / week (based on 41 lbs / week / household and the proposed 415 residential dwelling unts, 79 lbs / week / retail employee and 31 retail employees, and 13 lbs / week / office employee and 45 employees associated with the community center space)		
○ 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): 58,504,000 MBTUs (based on 415,000 GSF of residential space, 15,000 GSF of community facility space, and 10,000 GSF of commercial retail space).		
(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)	☐	☒
(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.		
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		
(a) Would the proposed project generate or reroute vehicular traffic?	☒	☐

	YES	NO
(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.		
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 Attachment		
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. Construction activities are projected to last 18 months, under the 2 year (24-month) threshold for a construction analysis such that no significant adverse construction impacts associated with transportation, noise, and / or air quality are not anticipated.		

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
Olga Abinader		5/6/2024

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	LEAD AGENCY
NAME	DATE
SIGNATURE	

NEGATIVE DECLARATION (Use of this form is optional)

Statement of No Significant Effect

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

Reasons Supporting this Determination

The above determination is based on information contained in this EAS, which that finds the proposed project:

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

TITLE	LEAD AGENCY
NAME	DATE
SIGNATURE	

TABLE OF CONTENTS

1 PROJECT DESCRIPTION 16
1.1 Introduction 16
1.2 Background and Site History 16
1.3 Description of the Project Site 17
1.4 Description of the Surrounding Area 17
1.5 Description of the Applicant's Proposed Project 17
1.6 Action(s) Necessary to Facilitate the Applicant's Proposed Project 18
1.7 Purpose and Need 18
1.8 Analysis Framework 19
2 LAND USE, ZONING, AND PUBLIC POLICY 24
2.1 Introduction 24
2.2 Methodology 24
2.3 Preliminary Land Use, Zoning, and Public Policy Analysis 24
3 SOCIOECONOMIC CONDITIONS 36
3.1 Introduction 36
3.2 Methodology 36
3.3 Preliminary Socioeconomics Conditions Assessment, Indirect Residential Displacement 37
3.4 Conclusions 43
4 COMMUNITY FACILITIES AND SERVICES 45
4.1 Introduction 45
4.2 Methodology 45
4.3 Primary and Intermediate Public Schools Assessment 46
4.4 Early Childhood Programs Assessment 50
5 OPEN SPACE 54
5.1 Introduction 54
5.2 Methodology 54
5.3 Preliminary Open Space Assessment for Direct Effects 56
5.4 Conclusions 60
6 SHADOWS 62
6.1 Introduction 62
6.2 Methodology 62
6.3 Preliminary Shadows Screening Assessment 63
6.4 Detailed Shadows Analysis 70
6.5 Conclusions 75
7 HISTORIC AND CULTURAL RESOURCES 76
7.1 Introduction 76
7.2 Methodology 76
7.3 Architectural Resources 76
7.4 Archaeological Resources 79
7.5 Conclusions 79

8 URBAN DESIGN AND VISUAL RESOURCES 80
8.1 Introduction 80
8.2 Methodology 80
8.3 Preliminary Urban Design and Visual Resources Assessment 85
9 HAZARDOUS MATERIALS 89
9.1 Introduction 89
9.2 Methodology 89
9.3 Analysis 89
10 WATER AND SEWER INFRASTRUCTURE 92
10.1 Introduction 92
10.2 Methodology 92
10.3 Preliminary Water and Sewer Infrastructure Analysis 92
10.4 Conclusions 100
11 TRANSPORTATION 102
11.1 Introduction 102
11.2 Transportation Analysis Framework 102
11.3 Preliminary Transportation Assessment 102
11.4 Conclusions 107
12 AIR QUALITY 108
12.1 Introduction 108
12.2 Methodology 108
12.3 Preliminary Air Quality Analysis 110
13 NOISE 113
13.1 Introduction 113
13.2 Framework of Noise Analysis 113
13.3 Noise Standards and Guidelines 115
13.4 Initial Impact Screening 117
13.5 Conclusions 123
14 NEIGHBORHOOD CHARACTER 124
14.1 Introduction 124
14.2 Preliminary Neighborhood Character Assessment 124
14.3 Conclusions 128

LIST OF FIGURES

EAS Form Figure 1, Project Site Location Map vi
EAS Form Figure 2, Official Tax Map vii
EAS Form Figure 3, Existing and Proposed Zoning Map viii
EAS Form Figure 4, Existing Land Use Map ix
EAS Form Figure 5, Aerial Photography and Photograph Key x
EAS Form Figure 6, Project Site and Surrounding Area Photographs xi
EAS Form Figure 7, New York City Coastal Zone Boundary Map xv
Figure 1-1, Future No-Action Scenario Massing 22
Figure 1-2, Future With-Action Scenario Massing 23
Figure 3-1, Socioeconomic Conditions Study Area 38
Figure 4-1, Public School Study Area 47
Figure 4-2, Early Childhood Programs Study Area and Locations 51
Figure 5-1, Open Space Study Area Map 57
Figure 5-2, Walk-to-a-Park Service Area Map 61
Figure 6-1, Tier I Shadow Screening Assessment 65
Figure 6-2, Tier III Shadow Screening Assessment, December 21 Analysis Day 66
Figure 6-3, Tier III Shadow Screening Assessment, March 21 / September 21 Analysis Day 67
Figure 6-4, Tier III Shadow Screening Assessment, May 6 / August 6 Analysis Day 68
Figure 6-5, Tier III Shadow Screening Assessment, June 21 Analysis Day 69
Figure 6-6, Surf Playground Schematic Plan 70
Figure 6-7, Surf Playground March 21 / September 21 Detailed Analysis 71
Figure 6-8, Surf Playground May 6 / August 6 Detailed Analysis 72
Figure 6-9, Surf Playground June 21 Detailed Analysis 73
Figure 8-1, Urban Desing Study Area and Photograph Key 81
Figure 8-2, Urban Design Study Area Photographs 82
Figure 8-3, Future No-Action and With-Action Scenario Renderings 87
Figure 10-1, Project Area Sewer Infrastructure 96
Figure 10-2, Project Site Permeability Coverages Map 97
Figure 12-1, Industrial Emissions Screening 112
Figure 13-1, Noise Monitoring Locations Map 119
Figure 13-2, Location 1 – Noise Monitor Location 1 (West 24th Street Frontage) 120
Figure 13-3, Location 2 – Noise Monitor Location 1 (Surf Avenue Frontage) 120
Figure 13-4, Location 3 – Noise Monitor Location 1 (West 25th Street Frontage) 121

LIST OF TABLES

Table 1-1, RWCDS Analysis Framework Table 20
Table 1-2, RWCDS Analysis Increments 21
Table 2-1, Existing Zoning District Regulations 28
Table 2-2, Zoning District Area and Bulk Regulations, Future No-Action and With-Action Scenarios 29

Table 3-1, Existing Conditions Population Estimates 39
Table 3-2, Socioeconomic Conditions Study Area Selected Income Metrics, 2017-2021 ACS 40
Table 3-3, Socioeconomic Conditions Study Area Median Gross Rent, 2006-10 and 2017-2021 ACS 41
Table 3-4, Socioeconomic Conditions Study Area GRAPI, 2006-10 and 2017-2021 ACS 42
Table 3-5, Future With-Action Scenario Dwelling Unit Information 42
Table 3-6, 2023 New York City AMI 43
Table 4-1, Community Facilities Preliminary Assessment Thresholds 45
Table 4-2, Primary and Intermediate School Enrollment and Utilization Data 48
Table 4-3, Future No-Action Scenario Projected Enrollment 49
Table 4-4, Future No-Action Scenario School Utilization Levels 49
Table 4-5, Future With-Action Scenario Projected Enrollment 50
Table 4-6, Early Childhood Program Enrollment and Utilization Data 52
Table 4-7, Future With-Action Scenario Projected Early Childhood Program Enrollment 53
Table 5-1, Defined Open Space Study Area ACS 2017-2021 Population 56
Table 5-2, Defined Open Space Study Area Open Spaces 58
Table 5-3, Existing Conditions Open Space Ratio 58
Table 5-4, Future No-Action Scenario Open Space Ratio 59
Table 5-5, Future With-Action Scenario Open Space Ratio 60
Table 6-1, Tier III Shadow Durations on Sunlight Sensitive Resources 64
Table 6-2, New Incremental Shadow Durations 70
Table 10-1, Existing Conditions, Surface Runoff Calculations[1] 95
Table 10-2, Existing Conditions, Surface Runoff Coefficient Calculations[1] 95
Table 10-3, Future With-Action Scenario, Surface Runoff Calculations[1] 99
Table 10-4, Future With-Action Scenario, Surface Runoff Coefficient Calculations[1] 99
Table 10-5, Projected Stormwater Runoff Increases[1] 100
Table 11-1, Travel Demand Factors 104
Table 11-2, Project Generated Person Trips 105
Table 11-3, Project Generated Vehicle Trips 106
Table 11-4, Summary of Project Generated Trip Ends 107
Table 13-1, Noise Levels of Common Sources 114
Table 13-2, Noise Exposure Guidelines for Use in City Environmental Impact Review 116
Table 13-3, Attenuation Values to Achieve Acceptable Interior Noise Levels 117
Table 13-4, Noise Levels in dBA at Location 1 – January 18, 2024 121
Table 13-5, Noise Levels in dBA at Location 2 – January 18, 2024 122
Table 13-6, Noise Levels in dBA at Location 3 – January 18, 2024 122
Table 13-7, Traffic Volumes and Vehicle Classifications, Noise Location 1– January 18, 2024 122
Table 13-8, Traffic Volumes and Vehicle Classifications, Noise Location 2– January 18, 2024 122
Table 13-9, Traffic Volumes and Vehicle Classifications, Noise Location 3– January 18, 2024 123

APPENDICES

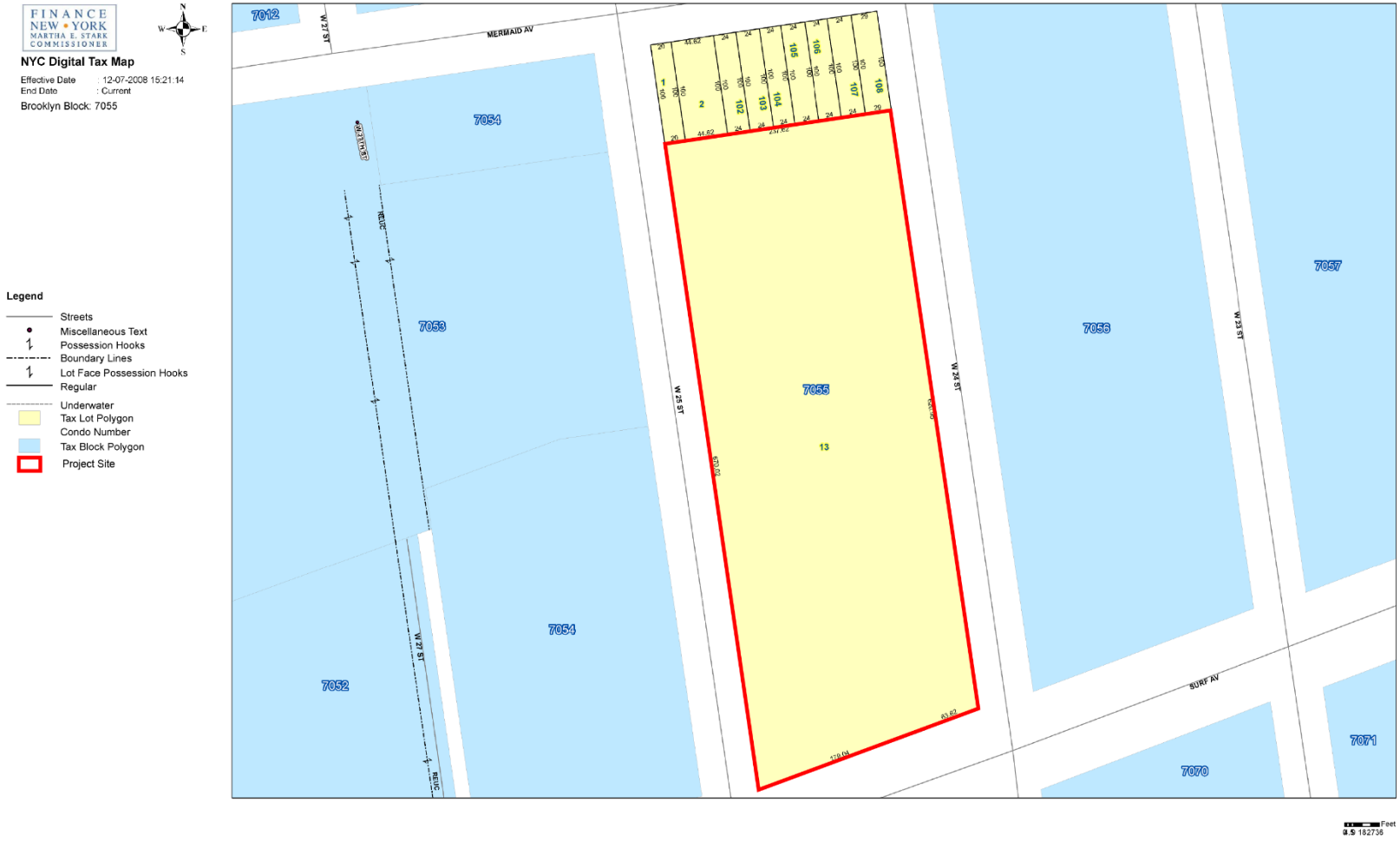
Appendix A – Waterfront Revitalization Policy (WRP) Assessment
Appendix B – Historic and Cultural Resources Appendix
Appendix C – Hazardous Materials Appendix
Appendix D – Water and Sewer Infrastructure Appendix
Appendix E – Transportation Appendix
Appendix F – Noise Appendix

EAS Form Figure 1, Project Site Location Map

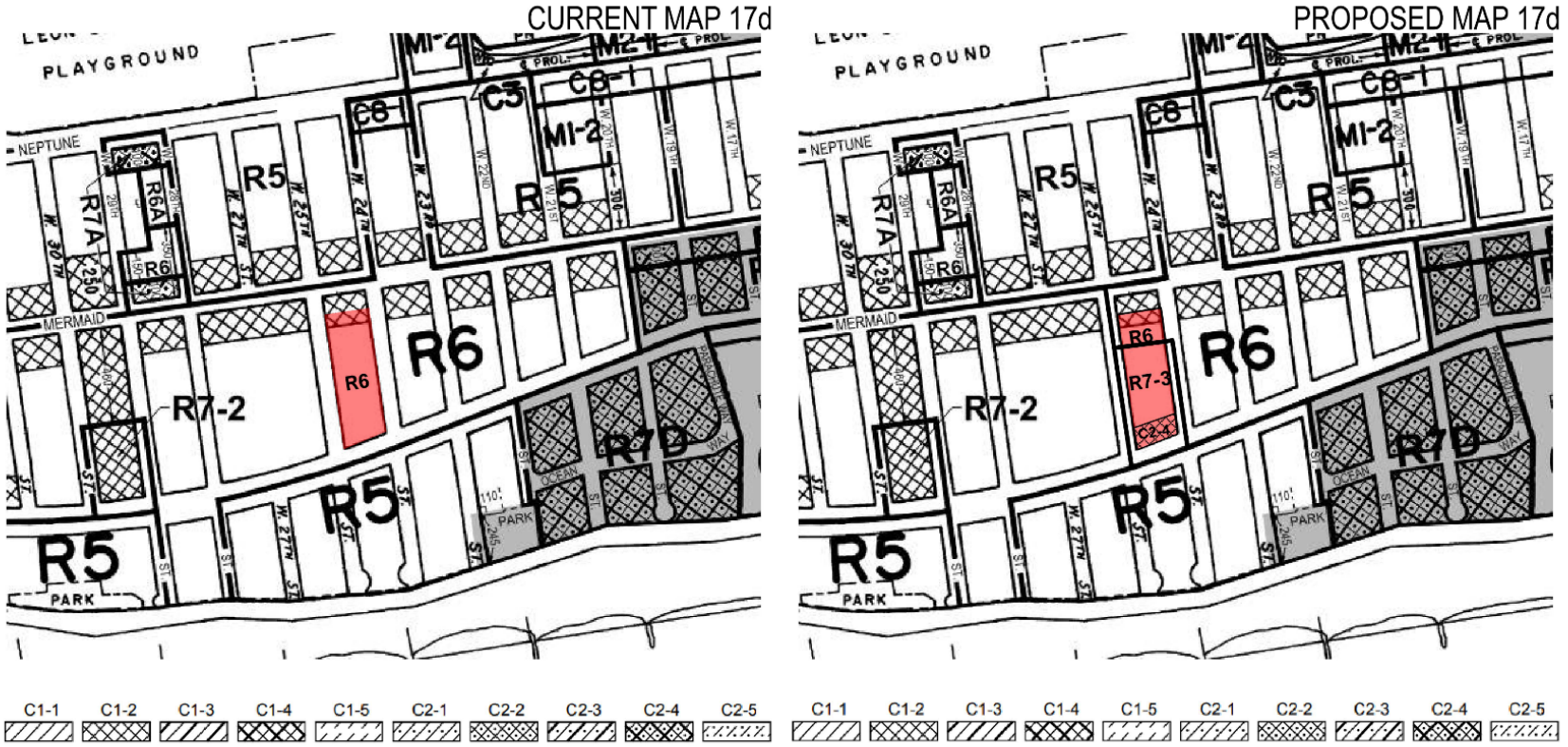


Data Source(s):
(1) New York City Department of City Planning, Information Technology Division: MapPLUTO Data;
(2) NYC Department of Information Technology and Telecommunications: NYC Street Centerlines;
(3) NYC Department of Information Technology and Telecommunications: Pavement Edge;
(4) NYC Department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

EAS Form Figure 2, Official Tax Map

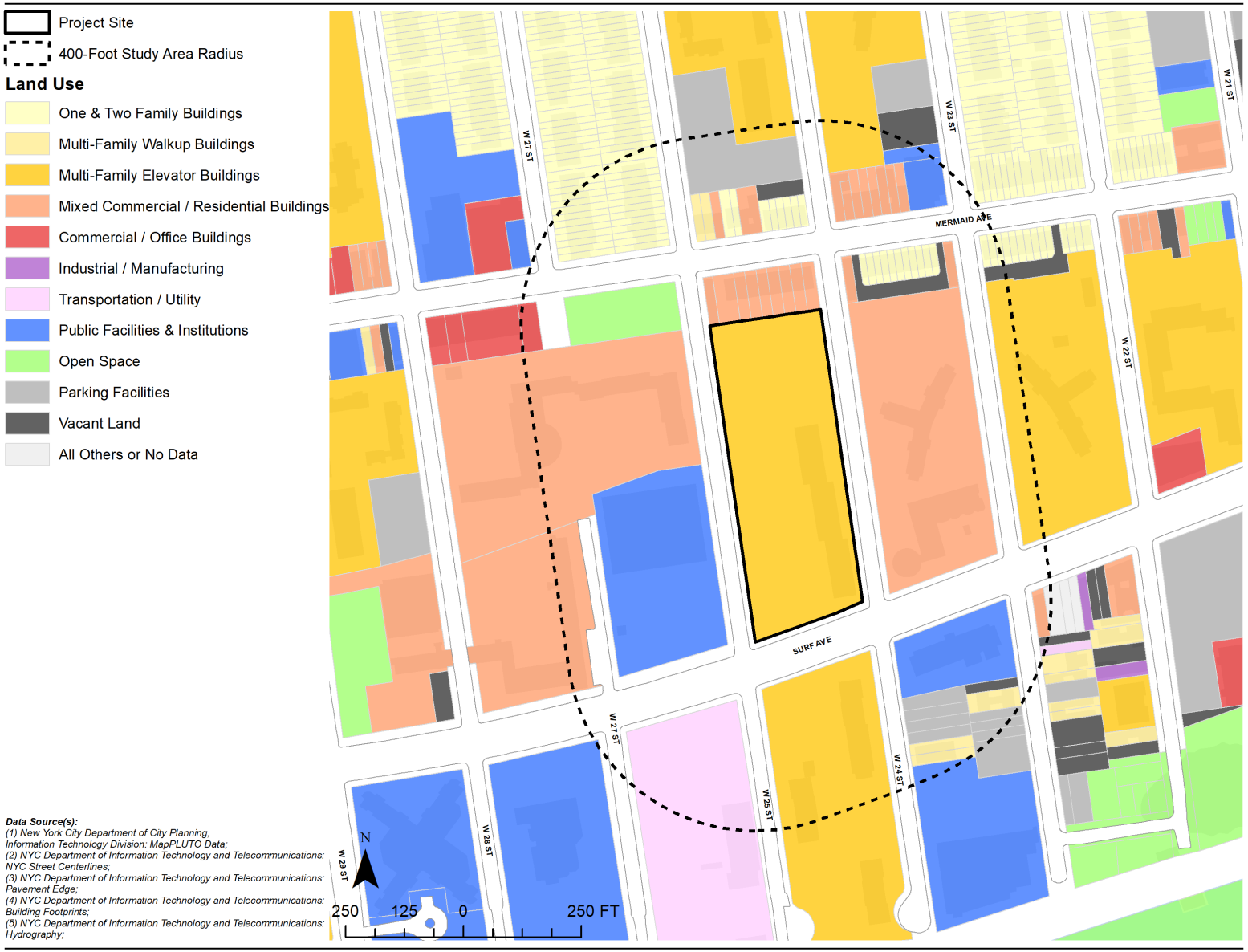


EAS Form Figure 3, Existing and Proposed Zoning Map



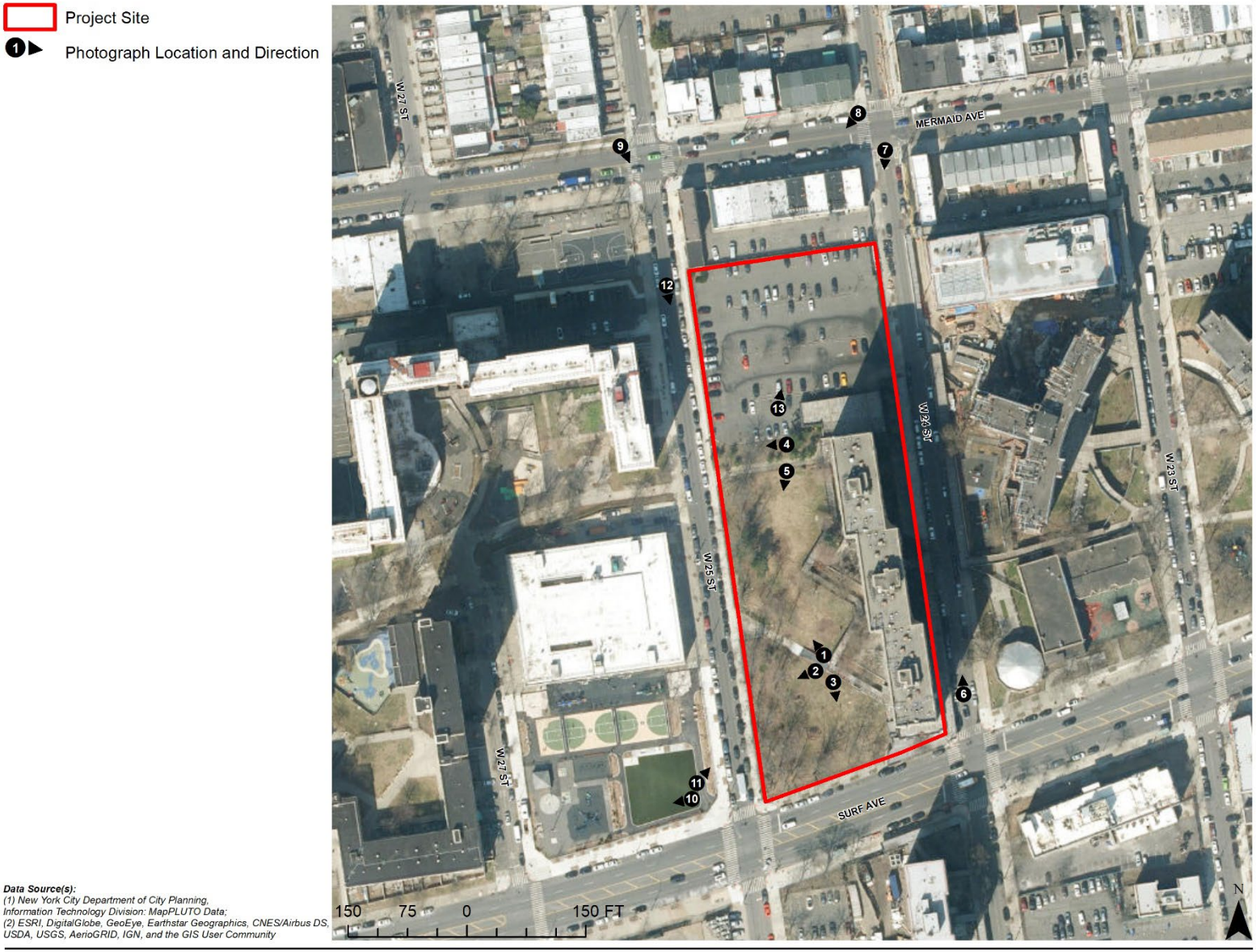
ZONING MAP CHANGE

EAS Form Figure 4, Existing Land Use Map



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

EAS Form Figure 5, Aerial Photography and Photograph Key



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

EAS Form Figure 6, Project Site and Surrounding Area Photographs



Photo No. 1: View of the western portion of the Project Site, facing north from southern interior walkways.



Photo No. 2: View of the western portion of the Project Site, facing west from southern interior walkways.



Photo No. 3: View of the western portion of the Project Site, facing south from southern interior walkways.



Photo No. 4: View of the northern-central portion of the Project Site, facing west from south of the existing parking lot.

All photographs taken January 28, 2022 (Site and immediate surrounding area conditions are unchanged as of February 2024)

EAS Form Figure 6, Project Site and Surrounding Area Photographs (Continued)



Photo No. 5: View of the western portion of the Project Site, facing south from south of the existing parking lot.



Photo No. 6: View along West 24th Street, facing north from Surf Avenue.



Photo No. 7: View of the Project Site, facing south / southwest from the intersection of Mermaid Avenue and West 24th Street.



Photo No. 8: View of mixed-use residential and groundfloor commercial uses adjacent to the Project Site to the north, facing southwest from the intersection of Mermaid Avenue and West 24th Street.

All photographs taken January 28, 2022 (Site conditions are unchanged as of February 2024)

EAS Form Figure 6, Project Site and Surrounding Area Photographs (Continued)

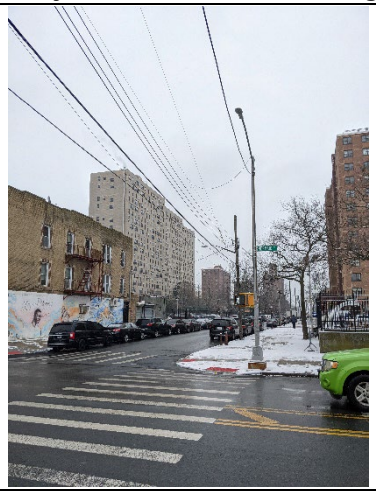


Photo No. 9: View of the Project Site, facing south / southeast from the intersection of Mermaid Avenue and West 25th Street.



Photo No. 10: View of Surf Playground, adjacent to the Project Site to the west, facing west from West 25th Street.



Photo No. 11: View of the Project Site, facing northeast from Surf Playground.



Photo No. 12: View along West 25th Street, facing south from Mermaid Avenue.

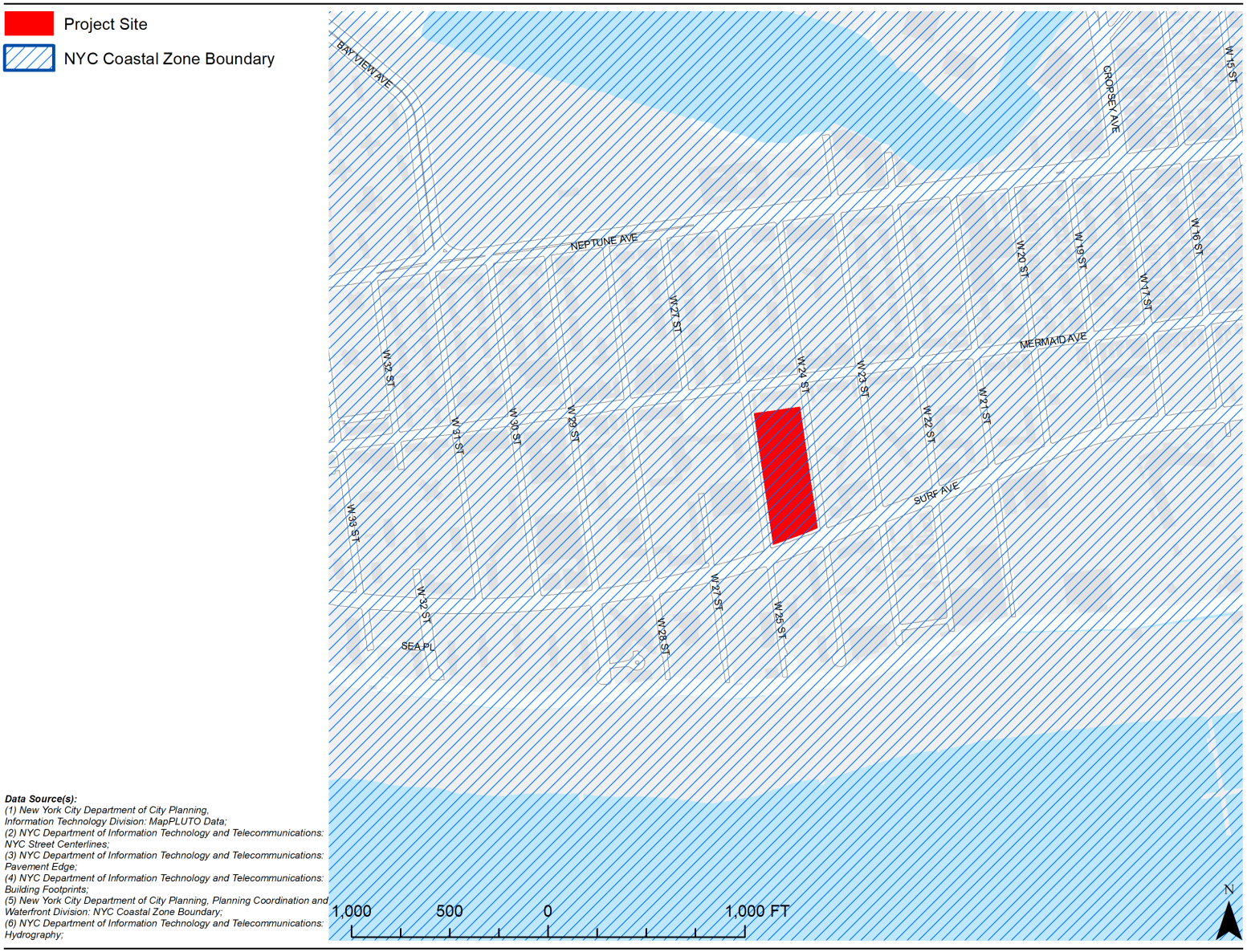
All photographs taken January 28, 2022 (Site conditions are unchanged as of February 2024)

EAS Form Figure 6, Project Site and Surrounding Area Photographs (Continued)

	
Photo No. 13: View of the existing parking lot in the northern portion of the Project Site,	

All photographs taken January 28, 2022 (Site conditions are unchanged as of February 2024)

EAS Form Figure 7, New York City Coastal Zone Boundary Map



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

1 PROJECT DESCRIPTION

1.1 Introduction

The Applicant, Proto Property Services LLC (PPS LLC), seeks a series of New York City (NYC) City Planning Commission (CPC) discretionary approvals, including: (1) Zoning Map Amendments (from R6/C1-2 to R6, from R6 to R7-3, and from R6 to R7-3/C2-4); (2) Zoning Text Amendments (to map a Mandatory Inclusionary Housing area conterminously with the rezoning areas as well as to permit R7-3 districts to be mapped at non-waterfront sites); and (3) a Large Scale Development Special Permit in order to facilitate the construction of a one- (1-) to 17-story, up to approximately 440,000-gross-square-foot (-GSF) mixed-use residential, community facility and commercial building (the "Proposed Project"), at 2950 West 24th Street (Block 7055, Lot 13) in the Coney Island neighborhood of Brooklyn, Community District 13 (the "Project Site"). The Project Site is generally bounded by West 24th Street to the east, Surf Avenue to the south, West 25th Street to the west, and residential uses fronting along Mermaid Avenue to the north.

Within Lot 13, to the east of the Applicant's proposed building, is an existing residential building fronting West 24th Street under the Applicant's control, which would remain unchanged under the Applicant's Proposed Project. Additionally, there is an existing 163-space surface parking lot at the Project Site immediately north of the Applicant's proposed building. Under the Applicant's Proposed Project, the parking lot's capacity would be reduced to 143 spaces (a loss of 20 spaces) due to required landscaping improvements.

The Proposed Project is anticipated to include a total of up to 415 residential dwelling units within up to 415,000 GSF of residential floor area, all of which would be affordable to a range of income levels under Area Median Income (AMI; 104 to 125 of which would be made affordable pursuant to either Option 1 or 2 of the Mandatory Inclusionary Housing (MIH) program with the other units made affordable pursuant to NYC Department of Housing Preservation and Development (HPD) and Housing Development Corporation (HDC) financing). The Proposed Project would also include up to 15,000 GSF and up to 10,000 GSF of groundfloor community facility and commercial retail spaces, respectively; the commercial retail space would be located on the groundfloor at the corner of the proposed building's Surf Avenue and West 25th Street frontages while there would be two separate community facility spaces located along the interior of West 25th Street frontage. A proposed new curb cut along the tax lot's West 25th Street frontage would provide access to the existing parking lot at the Project Site.

The Proposed Project also includes an active and passive recreation area, including a multi-purpose field, playground facilities, landscaping, benches, and other amenities, accessible to residents of the Project Site.

1.2 Background and Site History

A regulatory agreement with the NYC HPD was recorded against the Project Site (CFRN 2015000244942) in 2013 and indicates that the existing building on the site is subject to a 32-year requirement to follow rent stabilization guidelines. Discussions with NYC HPD are ongoing regarding how this regulatory agreement would be amended to allow the construction of a new mixed-use building containing affordable residential, commercial, and community facility uses on the unbuilt portion of the lot, which will be subdivided from the existing tax lot.

The Project Site has not been the subject of any prior rezonings. Two recent rezonings within the last decade were identified within the vicinity of the Development Site, including:

- Seaside Park and Community Arts Center (ULURP No. C 140065zmk / CEQR No. 13DME014K): The Proposed Project included a mix of entertainment and commercial uses, as well as publicly accessible open space along the western portion of the Riegelmann Boardwalk in Coney Island. The Proposed Actions associated with this project did not result in any increases in permissible floor area.
- Sea Park North Rezoning (ULURP No. C 170240zmk / CEQR No. 17DCP098K): This rezoning was undertaken to facilitate the development of an 8-story, 100 percent affordable residential building with 153 dwelling units. The rezoning included remapping an existing R5 district to a combination of R6, R6A, R7A, and R7A / C2-4 zoning districts; R5 districts feature a maximum residential FAR of 1.25 while R6, R6A, and R7A districts feature maximum residential FARs of 2.43, 3.60, and 4.60, respectively.

1.3 Description of the Project Site

The Project Site is located at Brooklyn Block 7055, Lot 13, a 153,580-square-foot (SF) lot developed with a 19-story, 380,000-gross-square-foot (GSF) / 367,163-zoning-square-foot (ZSF), 2.39 floor area ratio (FAR) multi-family residential building featuring 360 affordable dwelling units located in the eastern half of the property. Lot 13 is bounded by mixed-use residential and groundfloor commercial uses fronting along Mermaid Avenue to the north, West 24th Street to the east, Surf Avenue to the south, and West 25th Street to the west. The existing residential building is accessed from multiple points along its West 24th Street frontage to the east. The northern portion of Lot 13 is developed with a 163-space parking lot that provides parking for residents of the existing residential building and is accessed via one curb cut along West 24th Street. The western half of Lot 13 is undeveloped and landscaped; this portion of the tax lot is gated and not accessible. The parking lot portion of the property totals 47,524 SF while the remainder of the property, including developed and undeveloped areas, totals 106,056 SF.

See **EAS Form Figure 1** and **EAS Form Figure 5** for a general visualization of the location of the Project Site and its location within the larger Coney Island neighborhood.

1.4 Description of the Surrounding Area

Areas east and west of the Project Site are developed similarly to the Project Site itself, with large "tower-in-the-park" style developments featuring high-rise buildings on open, landscaped plots of land. Surf Playground and the P.S. 288 The Shirley Tanyhill Middle School are also located directly adjacent to the Project Site to the west. South of the Project Site is a mixture of tower-in-the-park residential development, transportation / utility uses (including a NYC Parks storage facility and administration building), and community facility uses (including adult care, nursing, and rehabilitation centers). Further south is the Coney Island Beach and Boardwalk, with the Atlantic Ocean beyond. Immediately north of the Project Site along the south side of Mermaid Avenue are small-scale mixed-use residential and ground floor commercial development with primarily one- and two-family residential development beyond, interspersed with tower-in-the-park development and parking facilities.

Refer to **EAS Form Figure 4** and **EAS Form Figure 5** for a visualization of land uses in the vicinity of the Project Site.

1.5 Description of the Applicant's Proposed Project

The Applicant, PPS LLC, proposes the construction of a one- (1-) to 17-story, up to approximately 440,000-GSF (375,532ZSF) mixed-use residential, community facility and commercial building at the Project Site. The Proposed Project includes a total of up to 415 residential dwelling units within up to 415,000 GSF (354,651 ZSF) of residential floor area, all of which would be affordable to a range of

income levels under AMI (104 to 125 of which would be made affordable pursuant to either Option 1 or 2 of the MIH program with the other units made affordable pursuant to NYC HPD and HDC financing). The Proposed Project would also include up to 15,000 GSF (12,725ZSF) and up to 10,000 GSF (8,156 ZSF) of groundfloor community facility and commercial retail spaces, respectively; the commercial retail space would be located on the groundfloor at the corner of the proposed building's Surf Avenue and West 25th Street frontages while there would be two separate community facility spaces located along the interior of West 25th Street frontage. A proposed new curb cut along the tax lot's West 25th Street frontage would provide access to the existing parking lot at the Project Site. Under the Proposed Project, the parking lot's capacity would be reduced to 143 spaces (a loss of 20 spaces) due to required landscaping improvements. The Proposed Project also includes an active and passive recreation area, including a multi-purpose field, playground facilities, landscaping, benches, and other amenities, accessible to residents of the Project Site.

1.6 Action(s) Necessary to Facilitate the Applicant's Proposed Project

The Applicant is requesting the following actions (collectively, the Proposed Actions) to facilitate the Proposed Project:

1. Zoning Map Amendments:
    a. From an R6/C1-2 zoning district to an R6 district (reducing the depth of the existing C1-2 overlay from 150' to 100') along the Site's frontage parallel to Mermaid Avenue.
    b. From an R6 zoning district to an R7-3 district (mid-block) and
    c. From an R6 zoning district to an R7-3/C2-4 zoning district along the site's Surf Avenue frontage.
2. Zoning Text Amendments:
    a. Map an MIH Area at the Project Site. This would permit a residential FAR bonus at the Project Site for the development of affordable housing.
3. Large Scale General Development Special Permit seeking the following:
    a. Parking Reduction (ZR § 25-251) - To permit 143 parking spots to serve both existing and proposed buildings (237 would otherwise be required under the R7-3 district)
    b. Street Wall/Base Height ZR §§ 123-662, 23-62, 24-51) Flexibility - To allow variable base heights over 85 feet (85 feet is the max. permitted height per the R7-3 district)
    c. Window-to-Wall Minimum Distance (ZR § 23-711) Reduction - To permit a 30-foot Window-to-Wall distance (50-foot minimum required under the R7-3 district)
    d. Lot coverage (ZR § 23-153) Flexibility - To permit an interior lot coverage of 78.38% (65% permitted under the R7-3 district)

1.7 Purpose and Need

The Applicant's Proposed Project would result in the construction of 415 affordable dwelling units in the Coney Island neighborhood of Brooklyn Community District 13. Pursuant to 2017-21 American Community Survey Data, approximately 27.4 percent of the population within the Coney Island neighborhood live below the poverty line, compared to 18.8 percent in Brooklyn and 17.0 percent in New York City as a whole, pointing to a significant need for affordable housing in the area of the Project Site.

The Applicant will be pursuing Enterprise Green Communities (EGC) 2020 Certification, a building standard that strives to ensure healthy, resilient, energy-efficient, and environmentally responsible homes. It requires designing a building to serve the tenants and consider the community. It also requires using energy modeling to confirm that the building uses significantly less energy than it would if it was designed to only meet the minimum energy code requirements. The Applicant intends to

exceed the EGC baseline criteria through the use of environmentally responsible material selection, designing the building to be all-electric, and installing fixtures that are expected to reduce water consumption by 30 percent in comparison to the Enterprise baseline. The design also includes several resiliency measures in the form of floodproofing by using the 2080s sea-level-rise adjusted Design Flood Elevation, supplementing power using a large photovoltaic array, and ensuring potable water is available for residents during emergencies.

1.8 Analysis Framework

The analysis framework compares the incremental difference between future development under the Proposed Actions (the Future With-Action Scenario) and the development that could occur at the Project Site absent the Proposed Actions (the Future No-Action Scenario). This EAS studies the potential for individual and cumulative environmental impacts related to the Proposed Actions occurring in a study area of approximately 400 feet around the Project Site.

1.8.1 Project Analysis Year

Assuming receipt of all requisite development approvals by August 2025 and an 18-month construction schedule, the Project Analysis Year is anticipated to be 2027.

1.8.2 Future No-Action Scenario

Absent the Proposed Actions (i.e., the Future No-Action Scenario), the Applicant could reasonably develop the Project Site with nine (9) story, 213,616 GSF / 150,508 ZSF medical office facility (0.98 FAR), rising to a maximum height of 95 feet and featuring 65 off-street parking spaces in a parking garage (see **Figure 1-1** for a visual massing of the Future No-Action Scenario). In addition, a 6,390 GSF (0.04 FAR), three (3) story residential building containing six (6) dwelling units could be developed with the remaining available residential density at the Project Site under the existing R6 district.

The Future No-Action Scenario was determined using the remaining available development density at the Project Site under the R6 zoning district for both community facility and residential uses and medical office facilities in the vicinity of the Project Site, including:

- 6010 Bay Parkway (Brooklyn Block 5522, Lot 36): A nine (9) story, 144,764 GSF (7.23 FAR) medical office building constructed in 2012.
- 1664 East 14th Street (Brooklyn Block 6776, Lot 32): A five (5) story, 20,000 GSF (5.00 FAR) medical office building constructed in 1996.
- 1660 East 14th Street (Brooklyn Block 6776, Lot 33): A five (5) story, 20,000 GSF (5.00 FAR) medical office building constructed in 1994.

Refer to **Table 1-1** for a quantitative breakdown of the Future No-Action Scenario, including site details, floor areas, and dwelling unit counts.

1.8.3 Future With-Action Scenario

The Future With-Action Scenario is equivalent to the Applicant's Proposed Project. The proposed 415 dwelling units is the reasonable maximum residential density, based on a factor of one residential unit per 1,000 GSF of space. All other aspects of the Future With-Action Scenario are equivalent to the Applicant's Proposed Project as well, considering the number of waivers and approvals sought by the Applicant "lock in" a specific and unique building envelope.

Based on the foregoing, the Future With-Action Scenario would result in the construction of a one- (1-) to 17-story, up to approximately 440,000-GSF (375,532ZSF) mixed-use residential, community

facility and commercial building at the Project Site (see **Figure 1-2** for visual massing of the Future With-Action Scenario). The Future With-Action Scenario includes a total of up to 415 residential dwelling units within up to 415,000 GSF (354,651 ZSF) of residential floor area, all of which would be affordable to a range of income levels under AMI (104 to 125 of which would be made affordable pursuant to either Option 1 or 2 of the MIH program with the other units made affordable pursuant to NYC HPD and HDC financing). The Future With-Action Scenario would also include up to 15,000 GSF (12,725ZSF) and up to 10,000 GSF (8,156 ZSF) of groundfloor community facility and commercial retail spaces, respectively; the commercial retail space would be located on the groundfloor at the corner of the proposed building's Surf Avenue and West 25th Street frontages while there would be two separate community facility spaces located along the interior of West 25th Street frontage. A proposed new curb cut along the tax lot's West 25th Street frontage would provide access to the existing parking lot at the Project Site. Under the Future With-Action Scenario, the parking lot's capacity would be reduced to 143 spaces (a loss of 20 spaces) due to required landscaping improvements. The Future With-Action Scenario also includes an active and passive recreation area, including a multi-purpose field, playground facilities, landscaping, benches, and other amenities, accessible to residents of the Project Site.

Refer to **Table 1-1** for a quantitative breakdown of the Future With-Action Scenario, including site details, floor areas, and dwelling unit counts.

Table 1-1, RWCDS Analysis Framework Table

Site Info				Existing Conditions							
Site ID	**Block**	**Lot**	**Lot Area (sf)**	**Zoning**	**MF (gsf)**	**Com (gsf)**	**CF (gsf)**	**Res (gsf)**	**Total (gsf)**	**Affordable DUs**	**Total DUs**
Project Site	7055	13	153,580	R6, R6 w/ C1-2	0	0	0	380,000	380,000	360	360
TOTAL:	-	-	**153,580**	-	**0**	**0**	**0**	**380,000**	**380,000**	**360**	**360**
Site Info				**Future No-Action Scenario**							
Site ID	**Block**	**Lot**	**Lot Area (sf)**	**Zoning**	**MF (gsf)**	**Com (gsf)**	**CF (gsf)**	**Res (gsf)**	**Total (gsf)**	**Affordable DUs**	**Total DUs**
Project Site	7055	13	153,580	R6, R6 w/ C1-2	0	0	213,616	386,390	600,006	360	366
TOTAL:	-	-	**153,580**	-	**0**	**0**	**213,616**	**386,390**	**600,006**	**360**	**366**
Site Info				**Future With-Action Scenario**							
Site ID	**Block**	**Lot**	**Lot Area (sf)**	**Zoning**	**MF (gsf)**	**Com (gsf)**	**CF (gsf)**	**Res (gsf)**	**Total (gsf)**	**Affordable DUs**	**Total DUs**
Project Site	7055	13	153,580	R6, R7-3, R7-3 w/ C2-4	0	10,000	15,000	795,000	820,000	775	775
TOTAL:	-	-	**153,580**	-	**0**	**10,000**	**15,000**	**795,000**	**820,000**	**775**	**775**

1.8.4 RWCDS Analysis Increments

As indicated in **Table 1-2** below, there are significant incremental changes in various analysis metrics between the Future No-Action and Future With-Action Scenario. The proposed building height would increase by 90 feet, from a maximum of 95 feet under the Future No-Action Scenario to a maximum of 185 feet under the Future With-Action Scenario. The Future No-Action Scenario would introduce an additional 6,390 GSF of residential floor area in a three- (3-) story building while the Future With-Action Scenario would create up to an additional 415,000 GSF of residential floor area (an incremental increase of up to 408,610 GSF). The total population at the Project Site is projected to increase from 882 persons under the Future No-Action Scenario to 1,868 people under the Future With-Action Scenario (a 986-person increase, which assumes full occupancy of all existing and proposal dwelling

units for the purposes of a conservative analysis and utilizes an average household size of 2.41 persons, based on 2017-2021 American Community Survey (ACS) for the Coney Island – Seagate Neighborhood Tabulation Area (NTA), in which the Project Site is located).

The Future No-Action Scenario would not create or expand any commercial uses at the Project Site, such that the up to 10,000 GSF of commercial space proposed under the Future With-Action Scenario also represents the incremental increase for the purposes of this EAS. However, the Future No-Action Scenario features a large medical office community facility building totaling 213,616 GSF, such that the up to 15,000 GSF of community facility space proposed as part of the Future With-Action Scenario represents an incremental decrease of 198,616 GSF of such space at the Project Site.

The Future No-Action Scenario would have no impact on the existing, 163-space parking lot in the northern portion of the Project Site and would introduce a 65-space parking garage within the medical office building, for a total parking space count of 228 spaces. The Future With-Action Scenario would not result in the creation of any additional parking, and proposed landscaping and circulation improvements would result in a loss of 20 spaces within the existing parking lot, bringing the total available spaces down to 143.

Table 1-2, RWCDS Analysis Increments

	Future No-Action Scenario	Future With-Action Scenario	RWCDS Analysis Increment
Proposed Building Height (FT)	95 FT	185 FT	+90 FT
Residential Uses			
GSF	386,390 GSF	795,000 GSF	+408,610 GSF
Affordable Dwelling Units	360	775	+415
Total Dwelling Units	366	775	+409
Residents	882	1,868	+986
Commercial Uses			
GSF	0 GSF	10,000	+10,000 GSF
Community Facility Uses			
GSF	213,616 GSF	15,000 GSF	-198,616 GSF
Parking Facilities			
Garage Spaces	65	0	-65 Garage Spaces
Accessory Spaces	163	143	-20 Accessory Spaces
Total Parking	228	143	-85 total spaces

Figure 1-1, Future No-Action Scenario Massing

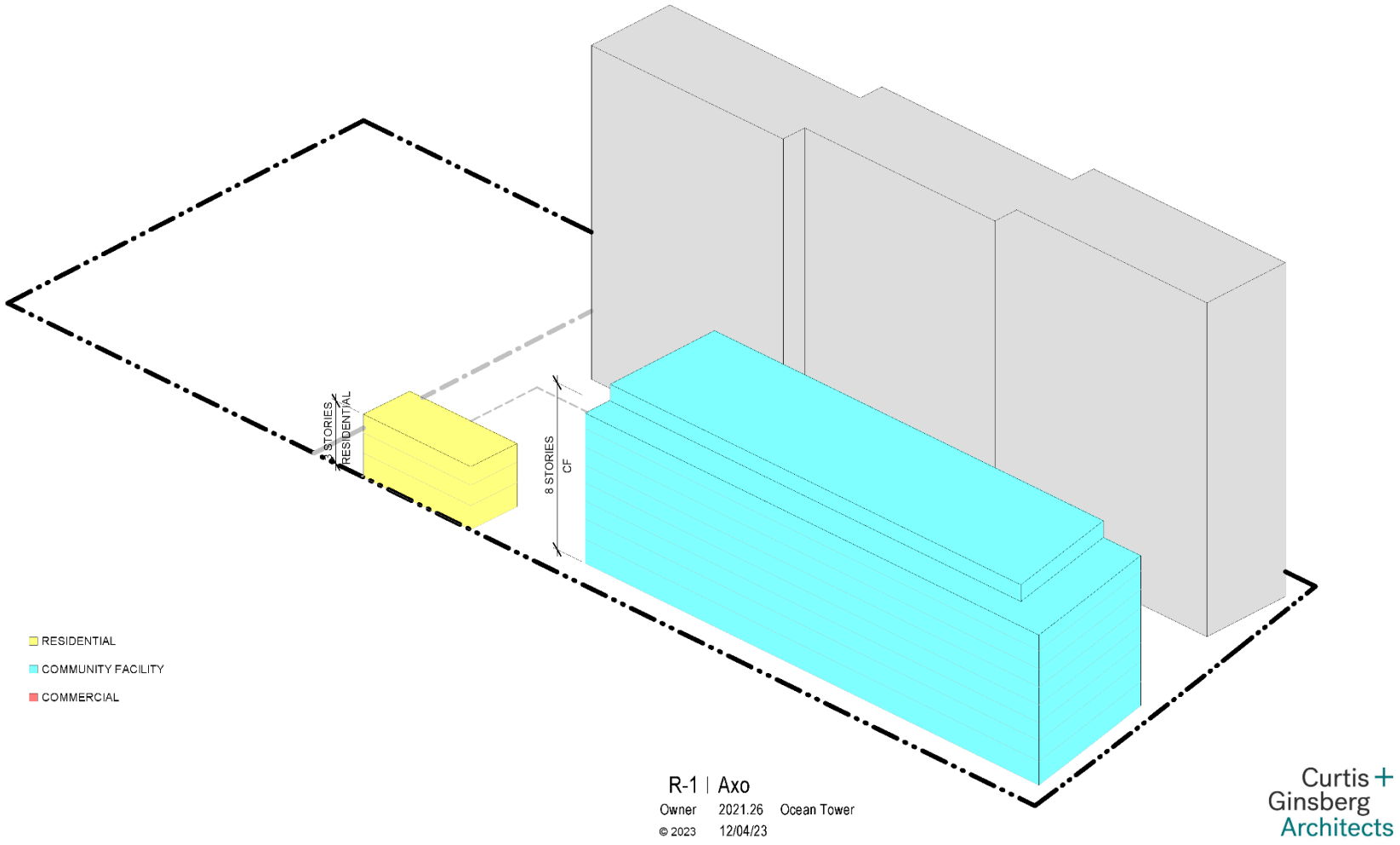
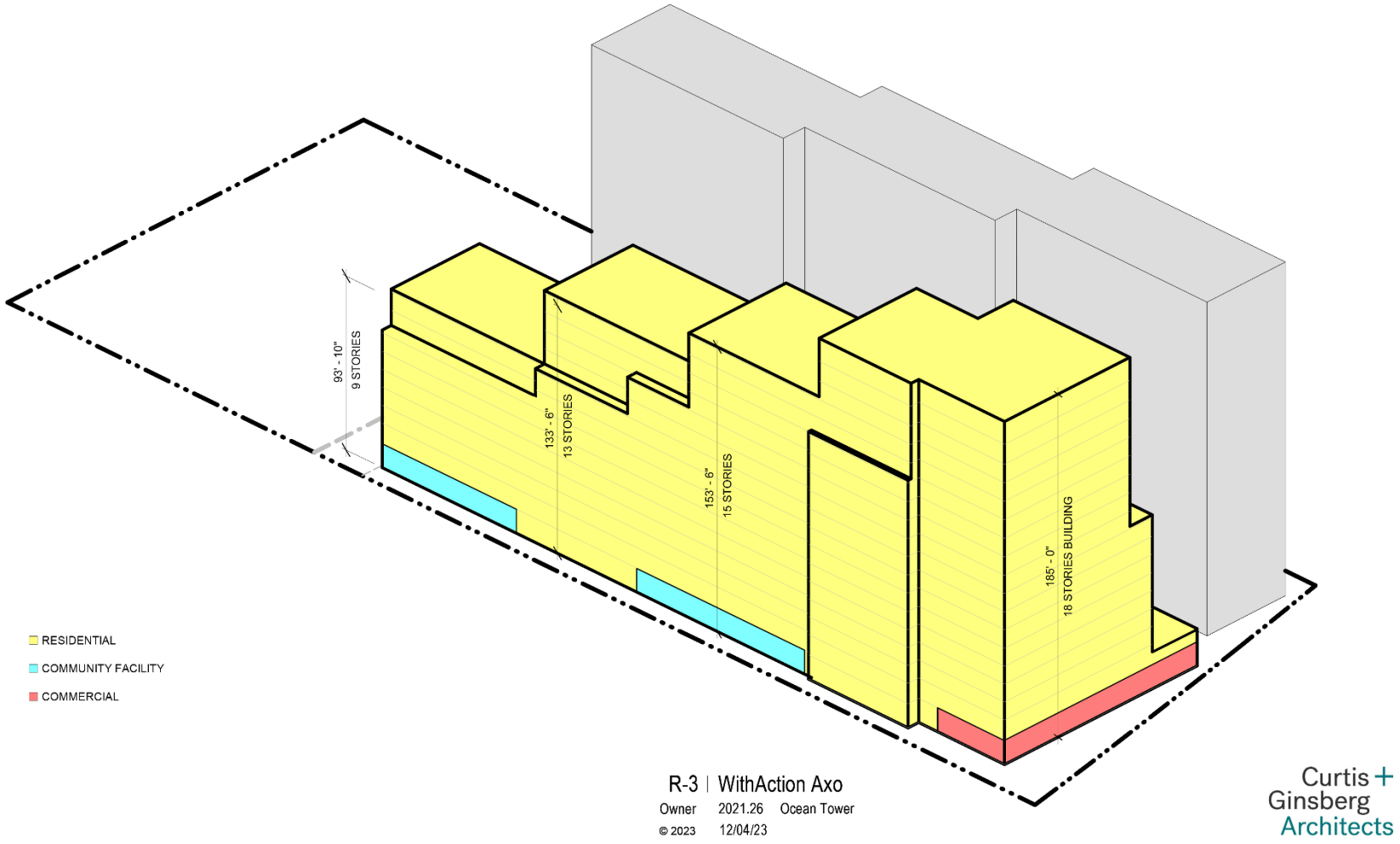


Figure 1-2, Future With-Action Scenario Massing



2 LAND USE, ZONING, AND PUBLIC POLICY

2.1 Introduction

The *2021 CEQR Technical Manual* recommends procedures for the analysis of land use, zoning, and public policy to ascertain the impacts of a project on the Surrounding Area. Land use, zoning, and public policy are described in detail below. This section considers existing conditions, development trends, zoning, and other public policies in relation to the Project Site and its associated Study Area, as well as the larger area in which the Proposed Actions may have an effect. As these Proposed Actions would facilitate the development of a new land use (i.e., senior affordable housing) that differs from the surrounding area, a preliminary assessment of Land Use, Zoning, and Public Policy is required.

2.2 Methodology

This analysis assesses the impact of the Proposed Actions impact on land use, zoning, and public policy at the Project Site and its associated Study Area. The analysis includes a description of the Existing Conditions, Future No-Action Scenario, and Future With-Action Scenario at the Project Site and Study Area geographies; the impact of the Proposed Actions is then assessed through a comparison of the Future No-Action and With-Action Scenarios.

The analysis then focuses on the project's compatibility and consistency with surrounding land uses, zoning, and applicable public policies as they would exist in the future without the project. Finally, the analysis should determine whether the project would have the ability to generate land use change in the study area. This analysis addresses the interplay between the Proposed Project in its particular location and conditions in the surrounding area. Key conditions most often include the size, use, and special characteristics of the development expected with the proposed project; the current and anticipated land use trends; linkages among land uses; presence (or absence) of underutilized properties appropriately zoned for the expected new use; and zoning or other public policies in the area that promote, permit, or prohibit the development of the expected new use.

Existing land uses were determined by reference to the New York City Zoning and Land Use (ZoLa) database and PLUTOTM 23v3 shapefiles in conjunction with an in-person survey of the area. The evaluation of lots within the 400-foot Study Area was performed with reference to New York City Zoning Maps and the Zoning Resolution of the City of New York and served as the basis for the zoning evaluation of the Future No-Action and Future With-Action Conditions. Public Policy research was performed through an evaluation of the NYC Department of City Planning (DCP) and other city agencies' programs and documentation.

2.3 Preliminary Land Use, Zoning, and Public Policy Analysis

2.3.1 Land Use

The *2021 CEQR Technical Manual* indicates that a land use, zoning, and public policy Study Area should generally extend 400 feet from the Project Site ("the Surrounding Area" or "Study Area"). Existing land uses within approximately 400 feet of the Project Site are visualized in **EAS Form Figure 4**.

Existing Conditions

Project Site

The Project Site is comprised of one, 3.53-acre, rectangular tax lot in the Coney Island neighborhood of Brooklyn (Block 7055, Lot 13). The Project Site is generally bounded by West 24th Street to the east, Surf Avenue to the south, West 25th Street to the west, and residential uses fronting along Mermaid Avenue to the north. The Project Site is developed with a 19-story, 380,000-GSF residential building containing 360 residential dwelling units, all of which are affordable, located in the eastern half of the site. This building is accessed from multiple points along its West 24th Street frontage. Additionally, the northern portion of the Project Site is developed with a 163-space, 47,524-square-foot (-sf) surface parking lot, accessed from a curb cut along West 24th Street. The western half of the property south of the parking lot is undeveloped, fenced off, and not accessible to residents or the public. See **EAS Form Figure 1, Project Site Location Map** and **EAS Form Figure 5, Project Site Aerial and Photograph Key** for a general visualization of the location of the Project Site and its location within the larger Coney Island neighborhood.

Study Area

Areas east and west of the Project Site are developed similarly to the Project Site itself, with large "tower-in-the-park" style developments featuring high-rise buildings on open, landscaped plots on land. Surf Playground and the P.S. 288 The Shirley Tanyhill Middle School are also located directly adjacent to the Project Site to the west. South of the Project Site is a mixture of tower-in-the-park residential development, transportation and utility uses (including a NYC Parks storage facility and administration building), and community facility uses (including adult care, nursing, and rehabilitation centers). Further south is the Coney Island Beach and Boardwalk with the Atlantic Ocean beyond. Immediately north of the Project Site along the south side of Mermaid Avenue are small-scale mixed-use residential and ground floor commercial development with primarily one- and two-family residential development beyond, interspersed with tower-in-the-park development and parking facilities.

Future No-Action Scenario

Project Site

Absent the Proposed Actions (i.e., the Future No-Action Scenario), the Applicant would develop the undeveloped portion of the Project Site with a nine (9) story, 213,616 GSF / 150,508 ZSF medical office facility (0.98 FAR), rising to a maximum height of 95 feet and featuring 65 off-street parking spaces in a parking garage. In addition, a 6,390 GSF (0.04 FAR), three (3) story residential building containing six (6) dwelling units could be developed with the remaining available residential density at the Project Site under the existing R6 district.

Study Area

Based on a review of NYC's Active Major Construction[1] (AMC) and Zoning Application Portal[2] (ZAP) databases on January 8, 2024, there is one development within the 400-foot Study Area to be considered under the Future No-Action Scenario. A three-story, 61,100-GSF community center at 2920 West 23rd Street (Block 7056, Lot 14) in the Coney Island neighborhood of Brooklyn is currently under construction, assumed to be completed by the 2027 Project Build Year (NYC Department of Buildings Job No. 321189628).

[1] https://nycdob.github.io/DOB_Dashboards/layouts/two-and-one/Active_ConstructionTM_withGraphs, accessed January 9, 2024.
[2] https://zap.planning.nyc.gov/projects, accessed January 9, 2024.

Future With-Action Scenario

Project Site

The Future With-Action Scenario consists of the construction of a one- (1-) to 17-story, up to approximately 440,000-GSF (375,532ZSF) mixed-use residential, community facility and commercial building at the Project Site. The Future With-Action Scenario includes a total of up to 415 residential dwelling units within up to 415,000 GSF (354,651 ZSF) of residential floor area, all of which would be affordable to a range of income levels under AMI (104 to 125 of which would be made affordable pursuant to either Option 1 or 2 of the MIH program with the other units made affordable pursuant to NYC HPD and HDC financing). The Future With-Action Scenario would also include up to 15,000 GSF (12,725ZSF) and up to 10,000 GSF (8,156 ZSF) of groundfloor community facility and commercial retail spaces, respectively; the commercial retail space would be located on the groundfloor at the corner of the proposed building's Surf Avenue and West 25th Street frontages while there would be two separate community facility spaces located along the interior of West 25th Street frontage. A proposed new curb cut along the tax lot's West 25th Street frontage would provide access to the existing parking lot at the Project Site. Under the Future With-Action Scenario, the parking lot's capacity would be reduced to 143 spaces (a loss of 20 spaces) due to required landscaping improvements. The Future With-Action Scenario also includes an active and passive recreation area, including a multi-purpose field, playground facilities, landscaping, benches, and other amenities, accessible to residents of the Project Site.

Study Area

The Future With-Action Scenario would be limited to the Project Site, such that there would be no changes in land use within the Study Area associated with the Proposed Actions.

Conclusions

The proposed mixed-use multi-family residential, groundfloor retail, and groundfloor community center spaces would be consistent with the existing land use character of the Project Site and associated study area. The Project Site is already developed with a large, multi-family affordable residential building, such that the new multi-family affordable residential building would reinforce the land use character of the Project Site. The proposed groundfloor retail and community facility spaces would also reinforce the land use character of the area, as there are groundfloor retail uses on the northern portion of Brooklyn Tax Block 7055, while community facility spaces currently exist and / or are under construction at Brooklyn Tax Block 7056 immediately east of the Project Site (NYC Department of Buildings Job No. 321189628).

Based on the foregoing, the Future With-Action Scenario would reinforce and complement the land use character of the area such that no significant adverse land use impacts would result, and no further analysis is necessary.

2.3.2 Zoning

Existing Conditions

Project Site

The Project Site is within a mapped R6 zoning district (see **EAS Form Figure 3**). R6 districts are widely mapped in medium-density areas of the city and cover a wide range of building types. In these districts, there are two sets of bulk regulations to choose from: the height factor regulations, original to the 1961 Zoning Resolution, and the Quality Housing regulations that were introduced in 1987. R6 Districts often encompass many blocks and thus have wide and narrow street rules for each set of

regulations. The distribution of R6 Zoning Districts has shrunk over time, as contextual districts have been mapped in their place. The Quality Housing Program, mandatory in contextual R6 through R10 residence districts and optional in non-contextual R6 through R10 districts, encourages development consistent with the character of many established neighborhoods. Its bulk regulations set height limits and allow high lot coverage buildings that are set at or near the street line. The Quality Housing Program also requires amenities relating to interior space, recreation areas, and landscaping.

Pursuant to the Quality Housing regulations, R6 districts permit residential FARs ranging from 2.2 to 3.6, dependent on adjacent street widths and the utilization of inclusionary housing bonuses (with a maximum community facility FAR of 4.8), and a minimum rear yard requirement of 30 feet. Assuming, a wide street, inclusionary housing bonus, and use of a Qualifying Ground Floor, the minimum required base height of a building ranges from 40 to 65 feet with a maximum building height of 115 feet, limited to 11 stories. The district requires parking for 50 percent of market rate dwelling units and 25 percent of income-restricted dwelling units.

Pursuant to height factors regulations, R6 districts permit residential FARs ranging from 0.78 to 2.43 (dependent on utilization of inclusionary housing bonuses) and a maximum community facility FAR of 4.8, with a minimum rear yard requirement of 30 feet. Building height is regulated by a sky exposure plan beginning at 60 feet above ground. Parking requirements vary, generally requiring parking for 70 percent of dwelling units in a group parking facility, with reductions for reduced income and senior development and development on small lots (0 to 15,000 SF).

Study Area

Mapped zoning districts within the Study Area include the R5 and R6 districts, both of which feature C1-2 commercial overlays along their respective Mermaid Avenue frontages (see **EAS Form Figure 3**). Area and bulk regulations of each district within the Study Area are described below (with the exception of the R6 district, described above) as well as detailed in **Table 2-1**.

R5 Zoning District

R5 districts are widely mapped districts intended for neighborhoods with an assortment of housing types at densities higher than those found in R3-2 or R4 Districts and are often transition districts between medium and lower density areas. These districts allow all types of residences in a variety of housing types. R5 districts permit a maximum residential FAR of 1.25 (with a maximum community facility FAR of 2.0), with minimum front, rear, and side yard requirements of 10, 30, and 5 to 8 feet, dependent on housing type, respectively. The maximum permitted building height is 40 feet, with a maximum streetwall height of 30 feet. The district requires parking for 85 percent of market rate dwelling units and 42.5 percent of income-restricted dwelling units.

C1-2 Commercial Overlay Districts

C1-2 commercial overlay districts are commercial overlays mapped within residence districts. Mapped along streets that serve local retail needs, they are found extensively throughout the city's lower- and medium-density areas and occasionally in higher-density districts. Typical retail uses include neighborhood grocery stores, restaurants, and beauty parlors. In mixed buildings, commercial uses are limited to one or two floors and must always be located below the residential use. When commercial overlays are mapped in R1 through R5 districts, the maximum commercial FAR is 1.0; when mapped in R6 through R10 districts, the maximum commercial FAR is 2.0. Commercial buildings are subject to commercial bulk rules.

Table 2-1, Existing Zoning District Regulations

Zoning District	Type and Use Group	Floor Area Ratio (FAR)	Parking
R5	Medium Density Res UGs 1-4	1.25 FAR – Res 2.00 FAR – CF	85% MR 42.5% IRH
R6 *(Quality Housing)*	Medium Density Res UGs 1-4	3.60 FAR – Res 4.80 FAR – CF	50% MR 25% IRH
R6 *(Height Factor)*	Medium Density Res UGs 1-4	2.43 FAR – Res 4.80 FAR – CF	70% MR, 10-25% IRH
C1-2 *Commercial Overlay*	Com - Local Retail UGs 1-9, 14	1.00 FAR - Com (R1-R5B) 2.00 FAR - Com (R5B - R10X)	1 per 300 sf

Res = Residential; Com = Commercial; CF = Community Facility; MR = Market Rate; IRH = Income Reduced Housing

Future No-Action Scenario

Project Site

No changes to zoning at the Project Site would take place absent the Proposed Actions.

Study Area

Based on a review of NYC's ZAP[3] database on November 30, 2024, no changes to zoning are proposed within the 400-foot Study Area that would change existing land uses by the Project Analysis Year of 2027.

Future With-Action Scenario

Project Site

The Proposed Actions are consistent with the following zoning-related discretionary actions at the Project Site and the Future With-Action Scenario:

1. Zoning Map Amendments:
    a. From an R6/C1-2 zoning district to an R6 district (reducing the depth of the existing C1-2 overlay from 150' to 100') along the Site's frontage parallel to Mermaid Avenue.
    b. From an R6 zoning district to an R7-3 district (mid-block) and
    c. From an R6 zoning district to an R7-3/C2-4 zoning district along the site's Surf Avenue frontage.
2. Zoning Text Amendments:
    a. Map an MIH Area at the Project Site. This would permit a residential FAR bonus at the Project Site for the development of affordable housing.
3. Large Scale General Development Special Permit seeking the following:
    a. Parking Reduction (ZR § 25-251) - To permit 143 parking spots to serve both existing and proposed buildings (237 would otherwise be required under the R7-3 district)
    b. Street Wall/Base Height ZR §§ 123-662, 23-62, 24-51) Flexibility - To allow variable base heights over 85 feet (85 feet is the max. permitted height per the R7-3 district)
    c. Window-to-Wall Minimum Distance (ZR § 23-711) Reduction - To permit a 30-foot Window-to-Wall distance (50-foot minimum required under the R7-3 district)

[3] https://zap.planning.nyc.gov/projects, accessed January 9, 2024

d. Lot coverage (ZR § 23-153) Flexibility - To permit an interior lot coverage of 78.38% (65% permitted under the R7-3 district)

Table 2-2 below compares and highlights different zoning district requirements under the Future No-Action and Future With-Action Scenarios. Additionally, **EAS Form Figure 3** visualizes the difference in the zoning maps at the Project Site under the Future No-Action and Future With-Action Scenarios.

Table 2-2, Zoning District Area and Bulk Regulations, Future No-Action and With-Action Scenarios

	Future No-Action Scenario Zoning District	Future With-Action Scenario Zoning Districts		
Area and Bulk Regulations	***R6***	***R6***	***R7-3***	***R7-3 w/ C2-4***
Maximum Permitted FAR	3.60 FAR – Res 4.80 FAR – CF	3.60 FAR – Res 4.80 FAR – CF	6.00 FAR – Res 6.50 FAR – CF	6.00 FAR – Res 2.00 – Com 6.50 FAR – CF
Permitted Use Groups	UGs 1-4	UGs 1-4	UGs 1-4	UGs 1-9
Maximum Stories / Building Height	11 / 115 FT	11 / 115 FT	18 / 185 FT	18 / 185 FT
Required Streetwall / Base Height	65 FT	65 FT	85 FT	85 FT
Required Minimum Rear Yard	30 FT	30 FT	30 FT	30 FT
Required Minimum Lot Coverage	65%	65%	65%	65%

Res = Residential; Com = Commercial; CF = Community Facility; MR = Market Rate; IRH = Income Reduced Housing

Study Area

The Proposed Actions would be limited to the Project Site such that there would be no changes of zoning within the associated 400-foot Study Area.

Conclusions

Block 7055 is characterized by four different land use patterns, residential with ground floor retail or community facilities uses, parking, all-residential, and undeveloped land. Along Mermaid Avenue the block is occupied by three-story attached buildings with retail on the ground floor and residential above with the rear of these lots occupied by a common accessory parking lot. A parking lot accessory to the residential buildings is located along West 24th Street; the parking lot extends approximately 335 feet further south from Mermaid Avenue. Along West 24th Street to the south of the parking lot, there are three, contiguous 19-story residential buildings. Along West 25th Street, to the south of the parking lot, is undeveloped land where the Proposed Project will be constructed. With the approval of the Proposed Action, the Applicant intends to build a 415 dwelling unit, an affordable building of varying heights (from 8 to 17 stories) with the tallest portion along the 120-foot-wide Surf Avenue and stepping down toward the midblock. The immediate area is dominated by high-rise buildings. Within two blocks of the site, there are five (5) existing buildings of 16 stories or more and six (6) buildings of 11-16 stories. The building sections step up.

The proposed R7-3 zoning district would maximize housing opportunities in a configuration that is contextual with the existing building on the zoning lot and with nearby high-rises. The R7-3 zoning district has been previously mapped in Coney Island for the 21-story Ocean Drive development located approximately 2,400 feet east of the Project Site, and therefore approximately 0.5-mile further from the nearest subway station (i.e., the Stillwell Avenue subway station serving the four subway lines the N, D, Q and F). It is noted that there are also several applications before the City and DCP with proposals to establish R7-3 as a new generic zoning district.

The proposed R7-3 district would be mapped south of a line 300 feet from Mermaid Avenue. This would leave a 300-foot deep R6 district measured from Mermaid Avenue that would better reflect the existing development (three-story residential buildings with groundfloor commercial uses and accessory parking in the rear) than the higher residential density permitted by the R7-3 zoning district. Between 1967 and 2018, the City adopted at least three rezonings in the immediate area that drew zoning boundaries through mid-blocks, such that there is local precedent for the Proposed Actions.[4]

As commercial uses along Mermaid Avenue are limited to a depth of 100 feet, it is proposed to reduce the depth of the current C1-2 commercial overlay to a depth of 100 feet as well. A C2-4 commercial overlay is proposed for the Surf Avenue frontage to a depth of 125 feet from Surf Avenue. As Surf Avenue is not at a right angle to West 24th and 25th Streets, the design of the proposed building would angle away from Surf Avenue to allow additional light and air to reach the Surf Playground along Surf Avenue between West 25th and West 26th Streets. The 125-foot depth for the C2-4 district would allow sufficient commercial depth to accommodate the contemplated supermarket. A C2-4 overlay district is also the best choice for a commercial overlay district as C2 districts offer more flexibility for potential commercial tenants. C2-4 districts have been mapped repeatedly by the City in Coney Island in recent years including the 2009 Coney Island Rezoning, on both Mermaid and Neptune Avenues between West 28th and West 29th Street and in conjunction with the mapping of the R7-3 district for the Ocean Drive development at West 35th and West 36th Streets.

Based on the foregoing, it is anticipated that the Zoning Map and Text Amendments and Large-Scale General Development Special Permit would both complement and reinforce existing zoning district and zoning trends in the larger Coney Island neighborhood. As such, no significant adverse zoning impacts associated with the Proposed Actions are anticipated, and no further analysis is warranted.

2.3.3 Public Policy

According to the *2021 CEQR Technical Manual*, a project that would be located within areas governed by public policies controlling land use, or that has the potential to substantially affect land use regulation or policy controlling land use, requires an analysis of public policy. A preliminary assessment of public policy should identify and describe any public policies, including formal plans or published reports, that pertain to the Study Area. If the Proposed Actions could potentially alter or conflict with identified policies, a detailed assessment should be conducted; otherwise, no further analysis of public policy is necessary.

Existing Conditions

The Project Site is located within a NYC Food Retail Expansion to Support Health (FRESH) program zone, the NYC Coastal Zone Boundary (and therefore subject to the NYC Waterfront Revitalization Program (WRP)), and a Federal Emergency Management Agency (FEMA) Special Flood Hazard Area (SFHA). Additionally, due to its waterfront location, the Project Site is also subject to the 2020 NYC Comprehensive Waterfront Plan (CWP). A description of these policies and an assessment of their applicability to the Future With-Action Scenario is provided below. While the Future With-Action Scenario is not a large, publicly sponsored project, an assessment of the applicability to OneNYC 2050 is also provided below. Additionally, the forthcoming City of Yes for Housing Opportunity policy was also included in this assessment.

[4] (1) 1967, CP 19594, M1-2 mapped between West 20th and 21st Streets at a depth of 300 feet from Neptune Avenue; (2) 2009, C090179 ZMK. R7-2 mapped between West 229th and 30th Streets at a depth of 460 feet from Mermaid Avenue; and (3) 2018, C 170240ZMK, R6, and R6A mapped at different depths between west 28th and 29th Streets between Neptune and Mermaid Avenues.

The Project Site is not part of, or subject to, an Urban Renewal Plan (URP), adopted community 197-a Plan, Solid Waste Management Plan, Business Improvement District (BID), Industrial Business Zone (IBZ), or the New York City Landmarks Law.

NYC FRESH Program

Access to affordable, quality food is critical to building strong neighborhoods. The Food Retail Expansion to Support Health (FRESH) program brings healthy and affordable food options to communities by lowering the costs of owning, leasing, developing, and renovating supermarket retail space. The FRESH program provides financial and zoning incentives for supermarket operators and developers seeking to build or renovate new retail space to be owned or leased by a full-line supermarket operator, including:

- *Real Estate Tax Deductions*:
  - Land tax abatement for 25 years equal to $500 multiplied by each full-time employee or part-time equivalent at the time of application (or the full value of the land tax for projects located within Empire and Empowerment Zones).
  - Stabilization of building taxes based on pre-improvement assessed value for 25 years (benefit reduced in years 22 through 25).
- Sales Tax Exemptions:
  - Exemption from the 8.875 percent sales tax on materials to construct, renovate, or equip facilities.
- Mortgage Recording Tax Deferral:
  - Deferral of mortgage recording tax relating to the project's financing, equal to 2.05 percent for mortgages of $500,000 or less, and 2.80 percent for mortgages greater than $500,000.
- Additional Development Rights:
  - One additional square foot of residential floor area in mixed-use buildings for every square foot provided for a grocery store, up to a 20,000 square foot limit.
- Reduction in Required Parking:
  - No parking is required for grocery stores up to 40,000 square feet in commercial districts that permit residential buildings with ground floor retail
  - First 15,000 square feet of grocery retail space exempt from parking in other Commercial and Light Manufacturing districts
- Larger As-of-Right Stores in Light Manufacturing Districts

NYC Coastal Zone Boundary / NYC Waterfront Revitalization Program

The Project Site is located within the NYC Coastal Zone Boundary (see **EAS Form Figure 7**). The Coastal Zone Boundary defines the geographic scope of New York City's WRP. Pursuant to Federal statute, the boundary encompasses all land and water of direct and significant impact on coastal waters. The NYC WRP establishes the City's policies for waterfront planning, preservation, and development projects to ensure consistency over the long term. The goal of the program is to maximize the benefits derived from economic development, environmental conservation, and public use of the waterfront, while minimizing any potential conflicts among these objectives. The WRP is authorized by New York State's Waterfront Revitalization of Coastal Areas and Inland Waterways Act, which was enacted in response to the Federal Coastal Zone Management Act and allows municipalities to

participate in the State's Coastal Management Program by creating their own local Waterfront Revitalization Program.

FEMA Special Flood Hazard Area (SFHA)

FEMA Special Flood Hazard Areas are defined as areas that will be inundated by the flood event having a one-percent chance of being equaled or exceeded in any given year. The one-percent annual chance flood is also referred to as the base flood or 100-year flood. SFHAs are labeled as Zone A, Zone AO, Zone AH, Zones A1-A30, Zone AE, Zone A99, Zone AR, Zone AR/AE, Zone AR/AO, Zone AR/A1-A30, Zone AR/A, Zone V, Zone VE, and Zones V1-V30. Moderate flood hazard areas, labeled Zone B or Zone X (shaded) are the areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood. The areas of minimal flood hazard, which are the areas outside the SFHA and higher than the elevation of the 0.2-percent-annual-chance flood, are labeled Zone C or Zone X (unshaded).

Pursuant to FEMA 2015 Preliminary Flood Insurance Rate Map (FIRM) data, the Project Site is located within an SFHA Zone AE with a Base Flood Elevation of 11 feet. AE flood zones are areas that present a one percent annual chance of flooding and a 26 percent chance over the life of a 30-year mortgage, according to FEMA. Most AE flood zones are located near floodplains, rivers, and lakes, though low-lying regions without large bodies of water may also be classified under this designation. Since these areas are prone to flooding, homeowners with mortgages from federally regulated lenders are required to purchase flood insurance through the National Flood Insurance Program (NFIP). Development in such high-risk zones comes with numerous regulations laid out by the American Society of Civil Engineers (ASCE), including, but not limited to:

- The elevation of the lowest floor in a structure must be at or above the zone's base flood elevation.
- Enclosed areas below the base flood elevation (BFE) or lowest floor cannot be used as living spaces.
- All electrical, plumbing, and HVAC equipment must be elevated to or above the area's BFE.

NYC 2020 Comprehensive Waterfront Plan

The 2020 CWP builds upon the vibrancy of today's waterfront while also putting forth new strategies for an equitable, resilient, and healthy waterfront in the face of climate change. The Plan is organized by six topic areas, each with its own vision for the next 10 years of NYC's waterfront. Each topic area includes a set of goals to advance a vision for a more equitable, more resilient, and healthier waterfront. Each goal is followed by strategies the City has identified that can achieve the specific goals.

OneNYC 2050 (Formerly PlaNYC)

OneNYC 2050 is New York City's long-term strategy and Green New Deal to confront the climate crisis, achieve equity, and strengthen democracy so that people can build a strong and fair city. It covers eight strategies: a vibrant democracy, an inclusive economy, thriving neighborhoods, healthy lives, equity and excellence in education, a livable climate, efficient mobility, and modern infrastructure.

City of Yes for Housing Opportunity

According to the New York City Department of City Planning website, the City of Yes for Housing Opportunity will deliver new affordable housing in high-cost neighborhoods across New York City to

working families.[5] This proposal features several tools to achieve this goal, such as the Universal Affordability Preference (UAP; this would allow developers to add 20 percent more dwelling units so long as the additional units are affordable) and removal of parking mandates (i.e., off-street parking requirements for new housing; the proposal will preserve the option to add parking, but no one will be forced to build unnecessary parking.

The City of Yes for Housing Opportunity will begin the formal public review process in the Spring of 2024.[6] All 59 Community Boards, five-borough boards, and five Borough Presidents will be able to hold public meetings and offer their recommendations on the proposal, after which the NYC CPC will then hold a public hearing and a vote. If passed by the CPC, the proposal will go to the City Council, which can hold hearings, modify the proposal, and vote.

Future No-Action Scenario

No changes to any policies applicable to the Project Site, including the NYC FRESH program, and NYC Coastal Zone Boundary. NYC WRP, One NYC, NYC Waterfront Comprehensive Plan, or the City of Yes for Housing Opportunity are anticipated under the Future No-Action Scenario. It is anticipated that the City of Yes for Housing Opportunity proposal, in either its current form or with modifications, would be passed by the 2027 Project Analysis Year.

Future With-Action Scenario

The analyses below assess the Future With-Action Scenario's consistency with the applicable public policies identified above in the **Existing Conditions** section. Additionally, the Future With-Action Scenario includes a Zoning Text Amendment to establish an MIH area at the Project Site, such that a consistency assessment with NYC's Housing New York public policy is also warranted.

Housing New York

The Proposed Actions include a Zoning Text Amendment to ZR Appendix F: Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing Areas for Community District 2, Brooklyn, to establish the Project Site as an MIH Area under Program Option 1 as well as make all dwelling units constructed under the Future With-Action Scenario affordable. As such, a consistency analysis with the Housing New York policy is warranted.

Carried out by Housing Preservation and Development (HPD), Housing New York is a plan to build or preserve 300,000 affordable homes by 2026. The plan outlines a comprehensive set of policies and programs to address the city's affordable housing crisis and retain the diversity and vitality of its neighborhoods. An analysis was provided for the Proposed Actions regarding how the Housing New York public policy would or would not be promoted in the No-Action and With-Action conditions.

In the future with the Proposed Actions, the Future With-Action Scenario would result in the construction of 415 new dwelling units at the Project Site, all of which would be made affordable to a range of incomes below AMI (104 to 125 of which would be made affordable pursuant to either Option 1 or 2 of the MIH program with the other units made affordable pursuant to NYC HPD and HDC financing). The development would help foster diverse and livable neighborhoods with the mixed-use building consisting of residential, commercial, and community facility uses on an underutilized portion of the Project Site and ensure the housing supply increases in an equitable way, building new affordable housing units for the local community.

[5] https://www.nyc.gov/site/planning/plans/city-of-yes/city-of-yes-housing-opportunity.page, accessed February 13, 2024.
[6] https://storymaps.arcgis.com/stories/f266a53c9cda42d5b7f63b57dc08f849, accessed February 13, 2024.

Based on the foregoing, the Proposed Actions are consistent with the goals of Housing New York and no further analysis is necessary.

City of Yes for Housing Opportunity

Only two features of the City of Yes for Housing Opportunity proposal as currently constructed would potentially be applicable to the projected development under the Future With-Action Scenario, including the Universal Affordability Preference (UAP) and removal of parking mandates. However, as described in the preceding section, the Future With-Action Scenario would utilize residential floor area density bonuses as provided by the Mandatory Inclusionary Housing program, such that there would be no need for similar density bonuses under the UAP. Further, as part of the Large Scale Development Permit, the Applicant would receive a parking waiver such that no additional parking at the Project Site is required despite the new residential, community facility, and commercial retail development.

Based on the foregoing, the City of Yes for Housing Opportunity proposal does not apply to the Future With-Action Scenario and no further analysis is required.

NYC FRESH Program

The Future With-Action Scenario would not utilize any FRESH program incentives such that this public policy is not applicable, and no further analysis is required.

NYC Coastal Zone Boundary / NYC Waterfront Revitalization Program

An analysis of the Future With-Action Scenario's consistency with the applicable regulations of the NYC WRP is included in **Appendix A** of this EAS, including the completed NYC WRP Form, associated supplemental narrative, and flood elevation worksheet. As indicated in that documentation, the Future With-Action Scenario would be consistent with the applicable regulations of the NYC WRP and no further analysis is required.

FEMA Special Flood Hazard Area (SFHA)

The Future With-Action Scenario would comply with all applicable regulations governing development within the FEME SFHA Zone AE. Refer to the NYC WRP assessment in **Appendix A** of this EAS for a detailed discussion of the Future With-Action Scenario's fulfillment of requirements for development within the FEMA SFHA AE Zone.

Based on the foregoing, the Future With-Action Scenario would obey all applicable requirements of development within the FEMA SFHA AE Zone and no further analysis is required.

NYC 2020 Comprehensive Waterfront Plan

One goal associated with the "Climate Resiliency and Adaptation" topic areas of the 2020 CWP are relevant to the Future With-Action Scenario, identified and discussed below.

> *Preserve and create new housing for a mix of incomes in appropriate locations and provide waterfront residents with new resources to manage flood impacts on their homes.*

The Future With-Action Scenario would result in the construction of a new residential development with 415 new dwelling units, all of which would be made affordable to a range of income levels below AMI (104 to 125 of which would be made affordable pursuant to either Option 1 or 2 of the MIH program with the other units made affordable pursuant to NYC HPD and HDC financing). Pursuant to 2017-21 American Community Survey Data, approximately 27.4 percent of the population within the Coney Island neighborhood live below the poverty line, compared to 18.8 percent in Brooklyn and 17.0

percent in New York City as a whole, pointing to a significant need for affordable housing in the area of the Project Site.

The Future With-Action Scenario would comply with the applicable regulations of the NYC WRP, including the placement of dwelling units and critical building systems above the BFE, ensuring that future residents would be protected during potential flood events.

Based on the foregoing, the Future With-Action Scenario would promote this policy of the 2020 CWP.

OneNYC 2050 (Formerly PlaNYC)

The Future With-Action Scenario would support the "Thriving Neighborhoods" goals and initiatives of OneNYC 2050, which includes ensuring all New Yorkers have access to safe, secure, and affordable housing. Development of affordable housing at the Project Site would address the need for such housing, both in the Coney Island neighborhood of Brooklyn and New York City as a whole. Pursuant to 2017-21 American Community Survey Data, approximately 27.4 percent of the population within the Coney Island neighborhood live below the poverty line, compared to 18.8 percent in Brooklyn and 17.0 percent in New York City as a whole, pointing to a significant need for affordable housing in the area of the Project Site.

Conclusions

As discussed in this section, the Future With-Action Scenario would be consistent with and reinforce applicable goals, policies, and objectives of Housing New York, the FRESH Program, the NYC WRP, FEMA SFHAs, the 2020 CWP, and OneNYC 2050. As such, the Proposed Actions are not anticipated to result in any significant adverse public policy impacts and no further analysis is warranted.

3 SOCIOECONOMIC CONDITIONS

3.1 Introduction

According to the *2021 CEQR Technical Manual*, an analysis of socioeconomic conditions is conducted to determine whether a proposed project 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 an area. The *2021 CEQR Technical Manual* considers the socioeconomic character of an area to include its population, housing, and economic activity.

3.2 Methodology

The *2021 CEQR Technical Manual* primarily considers four types of potential impacts relative to socioeconomic conditions: direct residential displacement, direct business displacement, indirect residential displacement, and indirect business displacement. The *2021 CEQR Technical Manual* recommends performing an analysis of socioeconomic conditions if a project would directly displace residents or businesses, or if a project has the potential to indirectly displace them by altering one or more of the underlying forces that shape socioeconomic conditions in an area. If a project is expected to directly displace 500 residents or 100 workers by, for example, requiring the demolition of existing residential or commercial buildings, the *2021 CEQR Technical Manual* considers that this may have a significant impact on the socioeconomic conditions of the study areas. Further, a proposed project may result in significant changes to the socioeconomic conditions of a study area if the project introduces more than 200 dwelling units or 200,000 square feet.

3.2.1 Direct Residential Displacement

The area of the Project Site to be redeveloped under the Future With-Action Scenario is currently undeveloped and landscaped; this area is fenced off and is not accessible to either residents of the existing residential building at the Project Site or otherwise. As such, the Future With-Action Scenario would not result in any direct residential displacement impact, such that no direct residential displacement analysis is required.

3.2.2 Direct Business Displacement

That portion of the Project Site to be redeveloped under the Future With-Action Scenario is currently vacant, inaccessible land, such that its redevelopment under the Future With-Action Scenario would not directly displace any existing businesses and no further analysis is required.

3.2.3 Indirect Residential Displacement

The Future With-Action Scenario would result in an incremental increase of 409 dwelling units at the Project Site, a net increase of more than 200 dwelling units. Therefore, a preliminary assessment of socioeconomic conditions for indirect residential displacement is required and is provided below in **Section 3.3.2**.

3.2.4 Indirect Business Displacement

The *2021 CEQR Technical Manual* states that there may be an indirect business displacement impact when any of the following is true:

- The project would directly displace more than 100 employees;
- A commercial development contains more than 200,000 square feet of space that is “markedly different than existing uses”;

- The project would add to, or create, a retail concentration that may draw a substantial amount of sales from existing businesses within the study area to the extent that certain categories of business close and vacancies in the area increase, thus resulting in a potential for disinvestment on local retail streets (i.e. retail market saturation); and / or
- Certain regulatory changes that could cause adverse impacts to specific industries.

As discussed above, the portion of the Project Site to be redeveloped under the Future With-Action Scenario is currently undeveloped and inaccessible. As such, none of the criteria or thresholds for indirect business displacement would be met, including direct employee displacement, development of 200,000 square feet of commercial development, creation of commercial retail concentrations, or result in industry-related regulatory changes. Based on the foregoing, no further analyses related to indirect business displacement are warranted.

3.2.5 Adverse Effects on Specific Industries

Pursuant to the *2021 CEQR Technical Manual*, the need for a preliminary assessment for adverse effects on specific industries is determined when any of the following are true:

- The Future With-Action Scenario would significantly affect business conditions in any industry or any category of businesses within or outside the study area; and/or
- The Future With-Action Scenario would indirectly substantially reduce employment or impair the economic viability in the industry or category of businesses?

The Future With-Action Scenario would result in the redevelopment of an underutilized portion of the Project Site with a mixed-use residential, commercial, and community facility building featuring 415 residential dwelling units, 10,000 GSF of groundfloor retail space, and 15,000 GSF of community facility floor area separate groundfloor spaces. The modest commercial and community facility spaces are not anticipated to significantly affect business conditions in any industry or any category of businesses or indirectly substantially reduce employment or impair the economic viability in the industry or category of businesses. Based on the foregoing, further study regarding adverse effects on specific industries is not warranted.

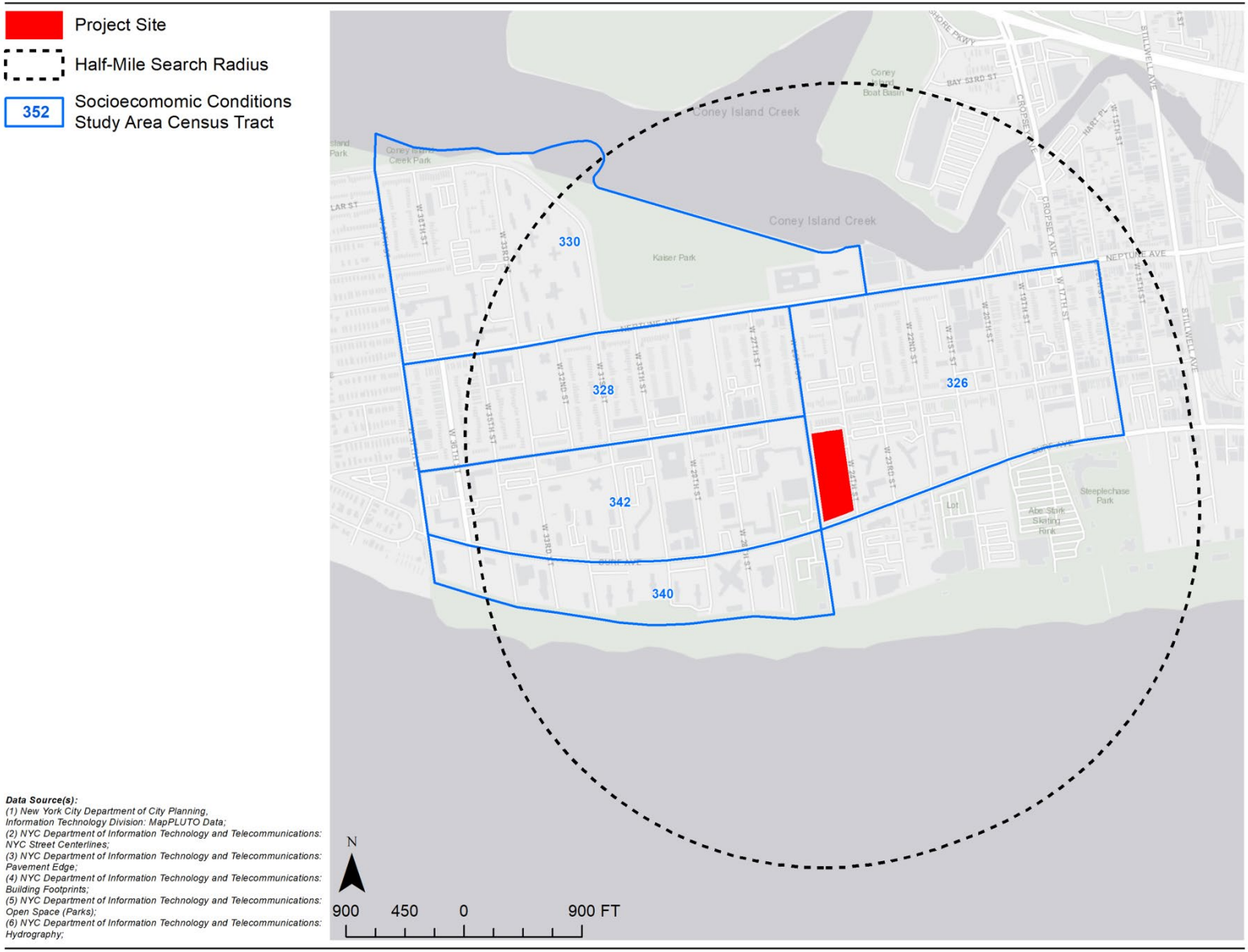
3.3 Preliminary Socioeconomics Conditions Assessment, Indirect Residential Displacement

3.3.1 Socioeconomic Conditions Study Area

Pursuant to the *2021 CEQR Technical Manual*, an Applicant may begin with a 0.25-mile study area radius for the preliminary assessment and if, based on the results of said preliminary analysis, it is determined a broader study area is appropriate, further detailed analyses should utilize a 0.5-mile study area radius; specifically, the *2021 CEQR Technical Manual* suggests that if a project increases the population of the 0.25-mile study area by more than 5 percent, a 0.5-mile radius should be used. As the Future With-Action Scenario is projected to result in an incremental population increase of 986 persons, a 0.5-mile radius was used for a conservative analysis.

As such, those census tracts with 50 percent or more of their area within 0.5-mile of the Project Site were identified for the purposes of this assessment, which included Brooklyn Census Tracts 326, 328, 330, 340, and 342. See **Figure 3-1** for a map of the socioeconomic conditions study area.

Figure 3-1, Socioeconomic Conditions Study Area



3.3.2 Study Area Population Estimates

Existing Conditions

2017-2021 American Community Survey (ACS) and NYC DCP Housing Database Housing Files data were used to determine the existing population count within the study area, the results of which are indicated below in **Table 3-1**.

Table 3-1, Existing Conditions Population Estimates

Census Tract	Average Household Size (Persons)	New Housing Starts Since January 1, 2021	Projected New Population Added Since 2021	2017 – 2021 ACS Population Count (Persons)	Estimated 2024 Population
Brooklyn 326	2.41	469	1,131	7,501	8,632
Brooklyn 328		0	0	2,848	2,848
Brooklyn 330		200	482	5,007	5,489
Brooklyn 340		0	0	1,998	1,998
Brooklyn 342		0	0	6,615	6,615
TOTAL:	**N/A**	**669**	**1,613**	**23,969**	**25,582**

Source(s): 2017-2021 US Census American Community Survey Data, Average Household Size of the Coney Island – Seagate NTA

As indicated in **Table 3-1** above, when considering 2017-21 ACS data and housing starts data within the study area, the estimated year 2024 population is 25,582 persons.

Future No-Action Scenario

Based on a review of the NYC Active Major Construction database,[7] under the 2027 Future No-Action Condition, an additional 400 dwelling units are forecasted to be constructed and occupied over four separate development projects, all of which are located within the socioeconomic conditions study area (including the six (6) dwelling units that would be developed at the Project Site). To present a conservative analysis, it is assumed that all of these dwelling units would be completed and occupied by the 2027 Project Build Year and are thus considered as "no-build projects" included in the "baseline" of this socioeconomic conditions analysis. Using an estimated 2.41 residents per household average, in the Future No-Action Scenario, 964 new residents would occupy the 400 no-build new dwelling units by the 2027 Project Build Year. When added to the existing conditions estimated 2024 population (25,582 persons), the population for the socioeconomic conditions study area is projected to be 26,546 persons in the 2027 Future No-Action Scenario.

Future With-Action Scenario

The Future With-Action Scenario would add 986 new residents within the socioeconomics study area, for a total population of 27,532 persons. This represents an approximate 3.71 percent increase in population over the Future No-Action Scenario. In determining whether a detailed analysis of potential indirect residential displacement is warranted, *2021 CEQR Technical Manual* Chapter 5, Section 322.1, Step 2, states in part, "if the population increase is greater than 5 percent in the study area as a whole or within any identified subareas, move on to Step 3." As the population increase is not greater than 5 percent, the analysis presented below includes Steps 1 and 2; further analysis pursuant to Step 3 of the *2021 CEQR Technical Manual* is not required.

[7] https://www.nyc.gov/assets/buildings/html/active-major-construction.html, accessed December 12, 2023

Indirect Residential Displacement Analysis, Step 1

Study Area Household Income

Household income characteristics within the 0.5-mile study area are represented by the median household income, the mean household income, and the percentage of households living below the poverty level, in accordance with *2021 CEQR Technical Manual* guidance. The median household income divides the household income distribution into two equal parts. Half of household incomes fall below the median, while the other half of households exceed the median. Unlike the median household income, the mean household income is the amount obtained by dividing the total aggregate income of all households by the number of households, which can therefore be skewed by very small or large values; as a result, the mean household income is typically higher than the median household income given that the top earning households sometimes "skew" the result of the median upward. The percentage of households below the poverty level is also important in forming a comprehensive understanding of household income. The poverty level is determined by the U.S. Census Bureau, which identifies an official poverty measure that compares pre-tax cash income against consumer price thresholds and adjusted for family size.

Referencing the NYC Planning Population FactFinder,[8] as shown below in **Table 3-2**, the median household income within the study area decreased between 2006-10 and 2017-21, from $31,814 to $24,150, while mean household income remained stagnant, slightly increasing from $43,844 to $44,950; households below the poverty level increased from 24.7 to 33.4 percent. This contrasted with corresponding metrics for Brooklyn and New York City, with median household income for Brooklyn increasing from $54,646 to $67,753 while New York City increased from $63,072 to $70,663 over that time period. Mean income for those geographies over the same time period includes increases from $78,589 to $103,893 in Brooklyn and from $97,706 to $113,315 in New York City. From 2006-2010 to 2017 to 2021, households below the poverty level decreased in Brooklyn from 18.8 to 14.9 percent as well as in New York City, from 16.2 to 13.6 percent. Overall, the study area features far lower incomes and higher poverty levels compared to Brooklyn and New York City.

Table 3-2, Socioeconomic Conditions Study Area Selected Income Metrics, 2017-2021 ACS

Geography	Median Household Income ($)	Mean Household Income ($)	Households Below Poverty Level (%)
2006-2010 ACS Data			
Study Area Census Tracts	$31,814	$43,844	24.7
Brooklyn	$54,646	$78,589	18.8
New York City	$63,072	$97,706	16.2
2017-2021 ACS Data			
Study Area Census Tracts	$24,150	$44,950	33.4
Brooklyn	$67,753	$103,893	14.9
New York City	$70,663	$113,315	13.6

Source(s): 2006-10 and 2017-2021 US Census American Community Survey Data

Study Area Market Rent

The US Census Bureau provides information on median contract rents, which reflects the range of rents for units of different sizes and ages/states of repair, and occupants of varying residential durations, including those who may have moved into their units recently, and on the other extreme,

[8] https://popfactfinder.planning.nyc.gov/#11.67/40.7198/-73.9515, accessed January 12, 2024

those who have lived in their units for decades. However, these data are of limited use because they fail to distinguish between units subject to market rents and those units subject to rent regulation. To understand the current trends, particularly trends affecting unregulated rental units, the rental data from ACS should be supplemented by information from real estate brokers and an examination of current rental apartment listings. As the Future With-Action Scenario consists entirely of affordable housing subsidized by City and Federal assistance programs, and are therefore not considered "unregulated rental units," an examination of current rental apartment listings and data from real estate brokers was not undertaken.

Though utilizing the median gross rent from the ACS data to determine market rents in a study area is not recommended as ACS rents do not distinguish between market and rent-regulated units, often making the data difficult to parse, the value of ACS rent data lies in its ability to show trends over time as opposed to the actual values. Therefore, the 2010 ACS and 2021 ACS have been adopted to show the trend of rent change in the 0.5-mile study area, Brooklyn, and New York City.

Table 3-3, Socioeconomic Conditions Study Area Median Gross Rent, 2006-10 and 2017-2021 ACS

Geography	2006-10 ACS Median Gross Rent ($)	2017-21 ACS Median Gross Rent ($)	Percent Change (%)
Study Area Census Tracts	$705	$575	-18.4
Brooklyn	$1,281	$1,582	+23.5
New York City	$1,343	$1,579	+17.6

Source(s): 2006-210 and 2017-2021 US Census American Community Survey Data

As shown in **Table 3-3** above, in 2006-10 the median gross rent within the 0.5-mile study area was low ($705) compared to median gross rent in Brooklyn ($1,281) and in New York City ($1,343). In 2021, the median gross rent within the study area decreased by approximately 18.4 percent to $575 while gross median rents in Brooklyn and New York City increased to $1,582 (+23.5 percent) and $1,579 (+17.6 percent), respectively. As described above, though the ACS median gross rent data is considered to be of limited use, it still indicates that the 0.5-mile study area may have experienced a readily observable trend toward decreasing rents over the last decade. Decreasing rents within the study area over this time period may be attributable to income and poverty trends, as indicated **Table 3-2**, including a decreasing median household income (from $31,814 in 2006-2010 to $24,150 in 2017-21) and an increased proportion of households below the poverty level (increasing from 24.7 to 33.4 percent from 2006-10 to 2017-21).

Further investigation was undertaken regarding gross rent as a percentage of household income (GRAPI).[9] As shown in **Table 3-4** below, as of 2010, households that spend 15% to 30% of their household income on gross rent within the 0.5-mile study area constitute 39.3 percent of the total households paying rent, which decreased to 32.3 percent in 2021. Rent-burdened households that spend 30 percent to 50 percent of their total income on gross rent increased within the study area from 2010 to 2021, from 27.2 to 31.2 percent. The proportion of rent-burdened households located within the study area (27.2 percent) was slightly higher than both Brooklyn and New York City in 2010 (24.3 and 23.6 percent, respectively). However, in 2021 those rates for Brooklyn and New York City remained relatively similar (24.2 and 24.3 percent, respectively), while the proportion of those households located within the study area was much greater (31.2 percent). This points to a need for more affordable housing within the study area, given the much greater proportion of rent-burdened households compared to Brooklyn and New York City.

[9] The comparisons between the GRAPI values for the 0.5-mile study area and that of Brooklyn and New York City are statistically valid as the margin of error of the difference is no larger than 1/3 of the difference itself.

Overall, rental markets in Brooklyn and New York City appear to be slightly healthier than those in the study area per the 2021 ACS data. Approximately 47.4 and 47.8 percent of households in Brooklyn and New York City, respectively, spend 30 percent or less of their income on rent. Approximately 43.4 percent of households within the study area spend less than 30 percent of their income on rent, indicating that a larger percentage of households in the study area spent more of their income on rent, compared to Brooklyn and New York City.

The number of very rent-burdened households (those spending 50 percent or more of their income on rent) within the 0.5-mile study area increased from 2010 to 2021, from 19.5 percent to 26.9 percent. At the same time, rates in Brooklyn and New York City either decreased or were relatively stable over that period (from 29.3 to 28.4 percent in Brooklyn and from 27.7 to 27.9 percent in New York City).

Table 3-4, Socioeconomic Conditions Study Area GRAPI, 2006-10 and 2017-2021 ACS

Geography	Less than 15%	15 to 30%	30 to 50%	50% or more
2006 – 2010 ACS Data				
Study Area Census Tracts	14.0%	39.3%	27.2%	19.5%
Brooklyn	12.9%	33.4%	24.3%	29.3%
New York City	14.4%	33.2%	23.6%	27.7%
2017 – 2021 ACS Data				
Study Area Census Tracts	9.6%	32.3%	31.2%	26.9%
Brooklyn	13.6%	33.8%	24.2%	28.4%
New York City	14.7%	33.1%	24.3%	27.9%

Source(s): 2006-210 and 2017-2021 US Census American Community Survey Data

Future With-Action Scenario Projected Rents and Subsidies

Pursuant to information provided by the Applicant, all 415 proposed dwelling units would be made affordable to a range of incomes, from those making 27 to 77 percent of AMI. See **Table 3-5** for a breakdown of unit types, rent per applicable AMI range, and other details, as provided by the Applicant, are provided below in.

Table 3-5, Future With-Action Scenario Dwelling Unit Information

	Studio	One Bedroom	Two Bedroom	Three Bedroom
27 Percent Qualified Income AMI Limit				
Number of Units	4	20	14	4
Monthly Rent	$486	$617	$728	$830
40 Percent Qualified Income AMI Limit (Considered Formerly Homeless)				
Number of Units	4	30	25	4
Monthly Rent	$215	$283	$425	$512
47 Percent Qualified Income AMI Limit				
Number of Units	4	70	30	1
Monthly Rent	$910	$1,146	$1,364	$1,564
57 Percent Qualified Income AMI Limit				
Number of Units	4	50	19	33
Monthly Rent	$1,122	$1,411	$1,682	$1,931
77 Percent Qualified Income AMI Limit				
Number of Units	6	48	39	11
Monthly Rent	$1,546	$1,941	$2,317	$2,665

As indicated in **Table 3-5** above, studio units in the Future With-Action Scenario would feature rents ranging from $215 to $1,516, while one-bedroom units would feature rents ranging from $283 to $1,941. Two- and three-bedroom units would feature rents ranging from $425 to $2,317 and from $512 to $2,665, respectively. As previously discussed, all units would be set aside as affordable to households earning between 27 and 77 percent of AMI. Pursuant to **Table 3-6** below, the Future With-Action Scenario would introduce a new population with overall average incomes ranging from $16,813 (one-person family size at 17 percent AMI) to $143,528 (eight-person family size at 77 percent AMI). As indicated in **Table 3-2** and **Table 3-3**, the median income and median gross rent for this area are $24,150 and $575, respectively. The Future With-Action Scenario would offer eight (8) studio units and 50 one-bedroom units (58 units total, approximately 14 percent of the total amount of dwelling units) to income ranges of 27 to 40 percent of AMI with rents ranging from $215 to $486 for a studio unit and $283 to $617 for a one-bedroom unit. These rents are consistent with the $575 median gross rent for the study area. However, given that there would be offerings for income ranges higher than the $24,150 median household income, this analysis is required to continue to Step 2.

Table 3-6, 2023 New York City AMI[10]

Family Size	27% AMI	40% AMI	47% AMI	57% AMI	77% AMI	100% AMI
1 Person	$26,703	$39,500	$46,483	$56,373	$76,153	$98,900
2 Persons	$30,510	$45,200	$53,110	$64,410	$87,010	$113,000
3 Persons	$34,317	$50,840	$59,737	$72,447	$97,867	$127,100
4 Persons	$38,124	$56,480	$66,364	$80,484	$108,724	$141,200
5 Persons	$41,175	$61,000	$71,675	$86,925	$117,425	$152,500
6 Persons	$44,226	$65,520	$76,986	$93,366	$126,126	$163,800
7 Persons	$47,277	$70,040	$82,297	$99,807	$134,827	$175,100
8 Persons	$50,328	$74,560	$87,608	$106,248	$143,528	$186,400

Indirect Residential Displacement Analysis, Step 2

Step 2 of a socioeconomic conditions analysis requires determining if the Proposed Project would increase the study area's population (relative to the population absent the Proposed Project) in a way that would potentially affect real estate market conditions in the study area significantly. If the population increase is less than five percent within the study area, the *2021 CEQR Technical Manual* indicates that a population increase is not expected to significantly affect real estate market conditions significantly in the study area.

As discussed above in **Section 3.3.2**, the Future With-Action Scenario population would result in a 3.71 percent increase over the Future No-Action Scenario, which would be below the threshold requiring further analysis.

3.4 Conclusions

Development resulting from the Proposed Actions would continue established trends of population growth in the area, as indicated by various active or planned construction projects located within the socioeconomic conditions study area. While household incomes associated with the Proposed Project may, in some cases, be higher than the Area Median Income identified in this study, the Future With-Action Scenario is anticipated to result in a 3.71 percent increase in the socioeconomic conditions study area population, which falls below the CEQR five percent threshold. Therefore, the Proposed

[10] https://www.nyc.gov/site/hpd/services-and-information/area-median-income.page, accessed January 18, 2024

Actions are not expected to result in significant adverse impacts related to socioeconomic conditions, and no further analysis is required.

4 COMMUNITY FACILITIES AND SERVICES

4.1 Introduction

A community facilities assessment may be necessary if an action could potentially affect the provision of services provided by public or publicly funded community facilities such as schools, hospitals, libraries, daycare/Head Start facilities, and fire and police protection. Per the screening levels established in the CEQR Technical Manual, there are direct and indirect effects. An assessment of the project's impacts on community facilities is generally warranted if:

- A project would add new population to an area that would increase the demand for services and cause potential indirect effects on service delivery. Depending on the size, income characteristics, and age distribution of the new population there may be effects on public or publicly funded schools, libraries, health care facilities, or daycare/Head Start facilities.
- A project would physically alter a community facility, whether by displacement of the facility or other physical change. This direct effect triggers the need to assess the service delivery of the facility and the potential effect that the change may have on that service delivery.

4.2 Methodology

Under the Future With-Action Scenario, there would be a net increase of 409 dwelling units, all of which would be permanently affordable. Based on a review of Brooklyn CEQR thresholds for analysis of community facilities and public schools, the Proposed Actions require preliminary CEQR analyses for public schools and publicly funded daycare but does not for libraries, health care facilities, or Police and Fire Protection services. The incremental development scenario results in approximately 79 combined elementary and middle school students and 21 high school students. As shown below in **Table 4-1**, this is above the applicable threshold of 50 combined elementary and middle school students and below the threshold of 150 high school students. Additionally, the threshold for an Early Childhood Programs analysis in Brooklyn is 110 permanently affordable dwelling units; as the Future With-Action Scenario would result in 415 new permanently affordable dwelling units, an Early Childhood Programs analysis is required.

Table 4-1, Community Facilities Preliminary Assessment Thresholds

Community Facility		Threshold		Project Metrics		Exceeds Criteria Threshold?
Public Schools	*Elementary School and Middle School Students*	>50 elementary and middle school children (combined)	Elementary School Student Generation Factor[1]	0.1400 x 409 DUs	58	**Yes (Approximately 79 Elementary and Middle School Children Total)**
			Middle School Student Generation Factor[1]	0.0500 x 409 DUs	21	
	High School Students	>150 high school students	High School Study Generation Factor[1]	0.05 x 409 DUs	21	No
Libraries		>734 DUs in Brooklyn		415 DUs		No
Early Childhood Programs		>110 permanently affordable DUs in Brooklyn		415 Permanently Affordable DUs		**Yes**
Health Care Facilities		Direct Effect		N/A	N/A	No
Fire Protection		Direct Effect		N/A	N/A	No
Police Protection		Direct Effect		N/A	N/A	No

[1] Based on 2023 Project Public School Ration data for Community School District 21, in which the Project Site is located, located online at: https://data.cityofnewyork.us/Education/Projected-Public-School-Ratio/n7ta-pz8k, accessed March 20, 2023.

4.3 Primary and Intermediate Public Schools Assessment

Based on the preliminary analysis, the Proposed Actions are expected to result in a total of 79 additional public school students (58 primary and 21 intermediate school students), which is above the threshold of 50 students.

4.3.1 Study Area

Per the *2021 CEQR Technical Manual*, the Study Area for the analysis of primary and intermediate schools is to be conducted in the school district's sub-district in which the Project Site is located. The Project Site is located entirely within Community School District 21 (CSD 21), Subdistrict 1. CSD 21, Subdistrict 1 features five (5) primary schools, three (3) intermediate schools, and two (2) combination primary and intermediate schools. **Figure 4-1** illustrates the CSD 21, Subdistrict 1 boundary, and the primary and intermediate schools within it.

4.3.2 Existing Conditions

As **Table 4-2** indicates, CSD 21, Subdistrict 1 has a total primary school enrollment of 3,578 students with a maximum capacity of 3,777 students (a utilization rate of 94.7 percent with 199 available seats). Intermediate school enrollment within this Subdistrict is 2,389 students with a maximum capacity of 2,714 students (a utilization rate of 88.1percent with 325 available seats). The data indicates that both school levels are somewhat below full utilization within CSD 21, Subdistrict 1.

Figure 4-1, Public School Study Area

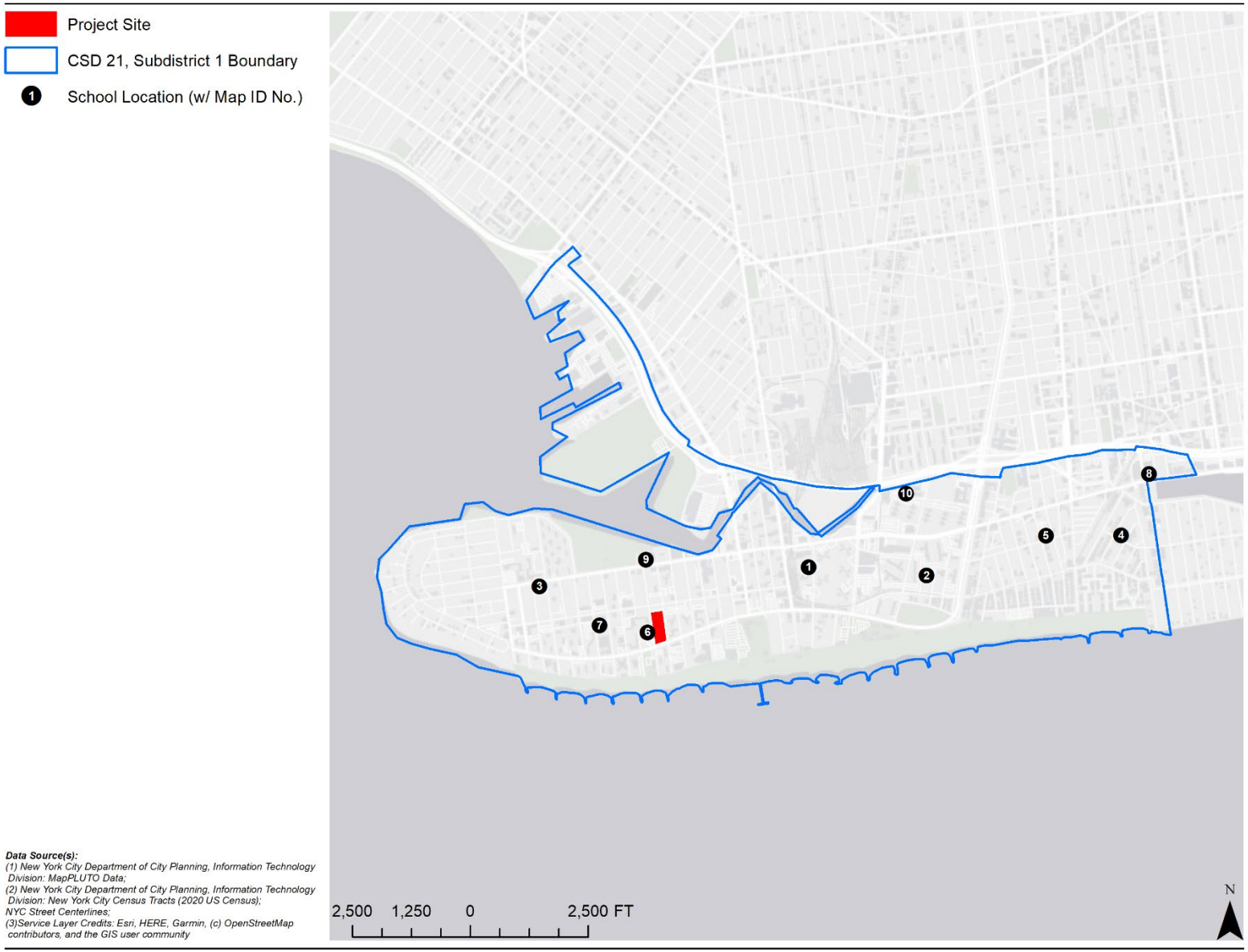


Table 4-2, Primary and Intermediate School Enrollment and Utilization Data

Map ID	Org. ID	Building ID	School Name	Address	Enrollment	Capacity	Available	Utilization (%)
	Primary Schools							
1	K090	K090	P.S. 90 Edna Cohen School	2840 West 12th Street	500	537	37	93.1
2	K100	K100	P.S. 100 The Coney Island School	2951 West 3rd Street	621	610	-11	101.8
3	K188	K188	P.S. 188 Michael E. Berdy	3314 Neptune Avenue	259	573	314	45.2
4[1]	K225	K225	P.S. K225 - The Eileen E. Zaglin	1075 Oceanview Avenue	619	480	-139	129.0
5	K253	K253	P.S. 253	601 Oceanview Avenue	888	590	-298	150.5
6[1]	K288	K288	P.S. 288 The Shirley Tanyhill	2950 West 25th Street	379	435	56	87.1
7	K329	K329	P.S. 329 Surfside	2929 West 30th Street	312	552	240	56.5
				TOTALS:	**3,578**	**3,777**	**199**	**94.7**
	Intermediate Schools							
8	K098	K043	I.S. 98 Bay Academy	1401 Emmons Avenue	1,488	1,475	-13	100.9
4[1]	K225	K225	P.S. K225 - The Eileen E. Zaglin	1075 Oceanview Avenue	363	282	-81	128.7
6[1]	K288	K288	P.S. 288 The Shirley Tanyhill	2950 West 25th Street	147	169	22	87.0
9	K303	K303	I.S. 303 Herbert S. Eisenberg	501 West Avenue	391	788	397	49.6
				TOTALS:	**2,389**	**2,714**	**325**	**88.1**

Source(s): SCA Enrollment, Capacity, and Utilization (Blue Book) [2022-23]

Note(s): [1] Combined Primary and Intermediate School

4.3.3 Future No-Action Scenario

Housing starts data as provided by the NYC School Construction Authority (SCA) were utilized to project primary and intermediate school enrollment under the Future No-Action Scenario. It is further noted that there is one school construction project within CSD 21, Subdistrict 1 that would add additional capacity to the school district by the 2027 Project Analysis Year. An addition to the P.S. 253, scheduled to be complete in January 2024, would add 428 seats of primary school capacity to both the facility itself and the larger CSD 21, Subdistrict 1. Refer to **Table 4-3** for Future No-Action Scenario school enrollment projections.

Table 4-3, Future No-Action Scenario Projected Enrollment

CSD 21, Subdistrict 1	Existing Enrollment	Future No-Action Scenario Projected Housing Units within CSD 21, Subdistrict[1]	Student Generation Factor[2]	Future No-Action Scenario Additional School Children	Future No-Action Scenario Enrollment
Primary Schools	3,578	721	0.14	101	3,679
Intermediate Schools	2,389	695	0.05	25	2,414

Note(s):

[1] NYC SCA Projected New Housing Starts as Used in 2020-2029 Enrollment Projection Data (separate housing start data is given for primary and intermediate schools).

[2] As used in **Table 4-1**

As indicated above in **Table 4-3**, primary and intermediate school enrollment under the Future No-Action Scenario within CSD 21, Subdistrict 1 is projected to be 3,679 and 3,614 students, respectively. Resultant utilization levels based on these enrollment projects are provided below in **Table 4-4**.

Table 4-4, Future No-Action Scenario School Utilization Levels

CSD 21, Subdistrict 1	Future No-Action Scenario Enrollment	CSD 21, Subdistrict 1 Capacity	Available Seats	Utilization Level
Primary Schools	3,679	4,205	526	87.5 %
Intermediate Schools	2,414	2,714	300	88.9 %

As indicated above in **Table 4-4**, under the Future No-Action Scenario primary and intermediate school utilization is projected to be 87.5 and 88.9 percent, respectively. There are projected to be 526 primary school seats available and 300 intermediate school seats available.

4.3.4 Future With-Action Scenario

As previously discussed, the Future With-Action Scenario would result in 58 new primary school students and 21 new intermediate school students within CSD 21, Subdistrict 1. See **Table 4-5** below for enrollment projections under the Future With-Action Scenario; as indicated in that table, primary and intermediate school utilization within CSD 21, Subdistrict 1 would be 88.9% and 89.7%, respectively.

Table 4-5, Future With-Action Scenario Projected Enrollment

CSD 21, Subdistrict 1	Future No-Action Scenario Enrollment	Future With-Action Scenario Student Generation	Future With-Action Scenario Total Enrollment	Projected Capacity	Available Seats	Projected Utilization	Change in Utilization from Future No-Action Scenario
Primary Schools	3,679	58	3,737	4,205	468	88.9%	+2.4%
Intermediate Schools	2,414	21	2,435	2,714	279	89.7%	+0.8%

4.3.5 Conclusions

The Future With-Action Scenario would result in the generation of 58 primary school and 21 intermediate school students within CSD 21, Subdistrict 1. This would increase overall utilization rates at primary and intermediate schools to 88.9 and 89.7 percent, respectively. These utilization rates would be below the respective maximum capacity of each school level, such that no significant adverse public-school impacts would result, and no further analysis is warranted.

4.4 Early Childhood Programs Assessment

Based on the preliminary analysis, the Proposed Actions are expected to result in an incremental increase of 409 permanently affordable dwelling units, exceeding the 110 dwelling unit threshold for Brooklyn (see **Table 4-1**). As such an assessment of indirect impacts to early childhood programs is required.

4.4.1 Study Area

Pursuant to the *2021 CEQR Technical Manual*, the study area for this assessment includes all publicly funded early childhood programs within 1.5 miles of the Project Site. **Figure 4-2** below visualizes the study area for this assessment, and all publicly funded early childhood programs within it.

4.4.2 Existing Conditions

As **Table 4-6** indicates (and as visualized in **Figure 4-2**), there are 28 publicly funded Early Childhood Programs within 1.5 miles of the Project Site. These 28 programs feature a total enrollment of 706 children with 1,177 available seats (a utilization rate of approximately 60 percent, with a 471-seat surplus).

Figure 4-2, Early Childhood Programs Study Area and Locations



Table 4-6, Early Childhood Program Enrollment and Utilization Data

Map ID	Site ID	Program Name	Address	Total Enrollment	Total Seats	Seats Available	Utilization (%)
1	KBQP	Shore Parkway	8885 26 Avenue, Brooklyn	31	50	19	62.0%
2	21K101	P.S. 101 The Verrazano	8696 24 Avenue, Brooklyn	36	60[1]	24	60.0%
3	21K212	P.S. 212 Lady Deborah Moody	87 Bay 49 Street, Brooklyn,	47	78[1]	31	60.0%
4	KCLH	Neshama Preschool	723 Avenue Z, 1a 1c, Brooklyn	5	8[1]	3	60.0%
5	KBQN	Friends Of Crown Heights - 49 Avenue W	49 Avenue W, Brooklyn,	11	34	23	32.4%
6	KCOP	Shostakovich Music, Art And Sport School, Inc.	297 Avenue X, Brooklyn	16	27[1]	11	60.0%
7	KCJM	Dmi Prep	2720 86 Street, Brooklyn	30	33[1]	3	90.9%
8	KCIX	Jlee Montessori	2631 86 Street, Brooklyn	56	16	-40	350.0%
9	Z095	Brooklyn's Daily Discovery Pre-K Center	10 Bouck Court, Brooklyn	48	80[1]	32	60.0%
10	KDYK	Coney Island Ymca	2980 West 29 Street, Brooklyn	0	0	0	0.0%
11	KDVQ	Dvora, Inc. D/B/A Building Blocks Land	2817 West 12 Street, Brooklyn	9	25	16	36.0%
12	KCHX	Dezzenterprise Llc	3524 Neptune Avenue, Brooklyn	12	20[1]	8	60.0%
13	KCPE	Teremok Daycare Llc	448 Neptune Avenue, Brooklyn	12	20[1]	8	60.0%
14	KBWQ	Coney Island West	2960 West 27 Street, Brooklyn	13	42	29	31.0%
15	KCED	Sunshine Center Of Coney Island Llc	2929 West 31 Street, Brooklyn	16	27[1]	11	60.0%
16	KDQQ	Five Stars Child Care Ii, Inc.	3415 Neptune Avenue, Brooklyn	18	30[1]	12	60.0%
17	KBWG	Life-Coney Island	2757 West 33 Street, Brooklyn	19	51	32	37.3%
18	KDYS	Basin Prep Ii	76 West Brighton Avenue, Brooklyn	33	55[1]	22	60.0%
19	21K288	P.S. 288 The Shirley Tanyhill	2950 West 25 Street, Brooklyn	14	23[1]	9	60.0%
20	21K100	P.S. 100 The Coney Island School	2951 West 3 Street, Brooklyn	17	28[1]	11	60.0%
21	21K188	P.S. 188 Michael E. Berdy	3314 Neptune Avenue, Brooklyn	17	28[1]	11	60.0%
22	21K329	P.S. 329 Surfside	2929 West 30 Street, Brooklyn	24	40[1]	16	60.0%
23	21K090	P.S. 90 Edna Cohen School	2840 West 12 Street, Brooklyn	45	75[1]	30	60.0%
24	KCPF	Neshama Preschool	2997 Ocean Parkway, Brooklyn	12	20[1]	8	60.0%
25	KBQE	Buratino International Day Care Inc	2962 Brighton 1 Street, Brooklyn	19	32[1]	13	60.0%
26	KDYM	Steps To Success V	360 Neptune Avenue, Brooklyn	36	60[1]	24	60.0%
27	KCNK	Learn And Explore	330 Neptune Avenue, Brooklyn	48	80[1]	32	60.0%
28	KATZ	Neptune	293 Neptune Avenue, Brooklyn	62	134	72	46.3%
			TOTAL:	**706**	**1,177**	**471**	**60.0%**

Source(s): Early Childhood Programs data provided by NYC DCP on January 26, 2024

Note(s): [1] In instances where the provided data indicated that the facility had no seats (despite an enrollment greater than 0), the average utilization for those locations for which data was available was used to estimate total seats for those locations that did not have total seat data.

4.4.3 Future No-Action Scenario

The aforementioned six (6) dwelling units projected to be constructed under the Future No-Action Scenario would be market-rate housing and as such would not generate any children eligible for Early Childhood Programs. Based on a review of the NYC Active Major Construction database,[11] five (5) ongoing large construction projects within the 1.5-mile study area would yield 873 total affordable dwelling units. Based on the *2021 CEQR Technical Manual* factor of 0.178 children eligible for Early Childhood Programs per affordable dwelling unit in Brooklyn, the 873 identified affordable dwelling units would yield approximately 156 children eligible for early childhood programs by the 2027 Project Build Year. When added to existing conditions, this results in a total enrollment of 862 children with 1,177 available seats (an approximate 73.2 percent utilization rate with a surplus of 315 seats).

4.4.4 Future With-Action Scenario

The Future With-Action Scenario would result in the construction of 415 affordable dwelling units at the Project Site; based on the aforementioned factor of 0.178 children eligible for Early Childhood Programs per affordable dwelling unit in Brooklyn, the Future With-Action Scenario is anticipated to result in approximately 74 children eligible for Early Childhood Programs. When added to the Future No-Action Scenario, this results in a total enrollment of 936 children with 1,177 available seats, representing an approximate 79.5 percent utilization rate (an increase of 6.3 percent over the Future No-Action Scenario) and a surplus of 241 seats. See **Table 4-7** for breakdown of Early Childhood Program enrollment and utilization under the Future With-Action Scenario.

Table 4-7, Future With-Action Scenario Projected Early Childhood Program Enrollment

Future No-Action Scenario ECP Enrollment / Utilization	Future With-Action Scenario Additional ECP Enrollment	Future With-Action Scenario Total ECP Enrollment	Projected Capacity (Seats)	Available Seats	Future With-Action Scenario Projected Utilization	Change in Utilization from Future No-Action Scenario
862 / 73.2%	74	936	1,177	241	79.5%	+6.3%

4.4.5 Conclusions

The Future With-Action Scenario would result in a 6.3 percent increase in the Early Childhood Program utilization rate over the Future No-Action Scenario. Specifically, the 28 Early Childhood Program locations within 1.5 miles of the Project are projected to have an enrollment of 862 children with 1,177 total seats (a 73.2 percent utilization rate). The Future With-Action Scenario is projected to result in the generation of 74 additional income-eligible children in Early Childhood Programs, resulting in a total enrollment of 936 children with 1,177 available seats (a 79.5 percent utilization rate).

As indicated above, the capacity of Early Childhood Programs within the Project Site's 1.5-mile study area is anticipated to be well below 100 percent despite the addition of 74 income-eligible children under the Future With-Action Scenario. Based on the foregoing, the Future With-Action Scenario is not anticipated to result in significant adverse impacts related to Early Childhood Programs, and no further analysis is necessary.

[11] https://www.nyc.gov/assets/buildings/html/active-major-construction.html, accessed January 30, 2024

5 OPEN SPACE

5.1 Introduction

The *2021 CEQR Technical Manual* identifies the need for an open space assessment if the Proposed Action(s) would have a direct or indirect effect on open space resources. Direct effects would occur if the Proposed Action(s) would result in the physical loss of a public open space; change of use of an open space so that it no longer serves the same user population; limit public access to an open space; or cause increased noise or air pollutant emissions, odors, or shadows on public open space that would affect its usefulness, whether temporary or permanent. Indirect effects would occur if the Proposed Action(s) would result in an increase in population sufficiently large enough to noticeably diminish the ability of an area's open space to serve the future population.

Publicly accessible open space is defined as publicly or privately owned land that is accessible to the public and operates, functions, or is available for leisure, play, or sport, or set aside for the protection and/or enhancement of the natural environment.

Pursuant to Chapter 7, Section 100 of the *2021 CEQR Technical Manual*, Open Space Resources are defined as active and/or passive, and may include, but are not limited to, the following:

- NYC Parks operated or managed by the City, State, or Federal governments and include neighborhood and regional parks, beaches, pools, golf courses, boardwalks, playgrounds, ball fields, and recreation centers that are available to the public at no cost or through a nominal fee, as in the case of recreation centers and golf courses;
- Open space designated through regulatory approvals (such as zoning), including large-scale permits that prescribe publicly accessible open space, such as public plazas;
- Outdoor schoolyards if available to the public during non-school hours;
- Publicly-accessible institutional campuses;
- Esplanades;
- Designated greenways, as shown on the City's Bike Map, and defined as multi-use pathways for non-motorized recreation and transportation along natural and manmade linear spaces such as rail and highway rights-of-way, river corridors, and waterfront spaces;
- Landscaped medians with seating;
- Housing complex grounds, if publicly accessible;
- Nature preserves, if publicly accessible;
- Gardens, if publicly accessible on a constant and regular basis;
- Church yards (with seating) or cemeteries, if publicly accessible on a constant and regular basis for passive recreation such as strolling; or
- Waterfront piers used for recreation.

5.2 Methodology

According to the guidelines of the *2021 CEQR Technical Manual* for the analysis of residential development, census tracts with at least half of their geographic area located within a one-half-mile radius of the Project Site comprise the Defined Open Space Study Area. Using current population figures, an open space ratio is calculated for both the Future No-Action and Future With-Action Scenarios, expressed as the amount of open space acreage per 1,000 user population. Typically, a comparison is made to the city's planning goal of 2.50 acres per 1,000 residents. Ideally, this would

comprise 0.50 acres (20 percent) of passive space and 2.0 acres (80 percent) of active open space per 1,000 residents. For nonresidents who tend to use passive open space, for example, workers taking a break in a park, the optimal ratio for nonresidential populations is 0.15 acres of passive open space per 1,000 nonresidents.

An open space analysis that follows the *2021 CEQR Technical Manual* guidance was prepared for the Proposed Project and is shared below. In addition to field surveys, information from the NYC DCP Community District Needs Statements, the NYC Parks Department website, and U.S. Census data were utilized in preparing this open space analysis.

5.2.1 Direct Effects

The Project Site is comprised of one, 3.53-acre, rectangular tax lot in the Coney Island neighborhood of Brooklyn (Block 7055, Lot 13). The Project Site is generally bounded by West 24th Street to the east, Surf Avenue to the south, West 25th Street to the west, and residential uses fronting along Mermaid Avenue to the north. The Project Site is developed with a 19-story, 380,000-GSF residential building containing 360 residential dwelling units, all of which are affordable, located in the eastern half of the site. The western half of the property south of the parking lot is undeveloped, fenced off, and not accessible to residents or the public, which is the area of the development projected under the Future With-Action Scenario. As there are no public open spaces at the Project Site, its redevelopment under the Future With-Action Scenario would not result in direct effects on open space. An assessment of the effects of the Proposed Actions related to shadows on nearby open space resources in the vicinity of the Project Site is provided in **Section 6, Shadows**. As indicated in that section, while the Future With-Action Scenario could result in new incremental shadows on portions of Surf Playground, they are not anticipated to jeopardize the viability of vegetation at, or the usability of, the open space resource, such that no significant adverse impacts would result.

5.2.2 Indirect Effects

The threshold for assessment of the potential for indirect open space impacts is 200 additional residents or 500 additional employees. Based on an incremental increase of 409 dwelling units at the Project Site under the Future With-Action Scenario and assuming an average household size of 2.41 persons based on the 2017-2021 American Community Survey (ACS) data for the Coney Island – Seagate neighborhood tabulation area (NTA), the incremental population introduced as a result of the Proposed Actions would be approximately 986 residents, well beyond the 200-resident threshold for a preliminary residential open space assessment. The Future With-Action Scenario is projected to generate approximately 76 new employees between the proposed retail and community center spaces, well below the 500-employee threshold for an assessment of indirect effects on public space resources associated with employees.

5.2.3 Walk-to-a-Park Service Area

New York City, as part of the OneNYC 2050 Building a Strong and Fair City plan, has put forth a goal for 85 percent of New York City residents living within walking distance of a park by 2030. To help the City reach this goal, NYC DPR developed a “Walk-to-a-Park” initiative that focuses on increasing access to parks and open space in areas of the City where residents live further than walking distance to a park. Areas outside of Walk-to-a-Park Service Areas are considered “walk gaps” – i.e., areas of the City that are not within walking distance of a park.

As part of the preliminary assessment for open space, a project should be reviewed to determine if it is located in an area of the City within a Walk-to-a-Park Service Area. Sites that are located outside of a Walk-to-a-Park Service Area (i.e., located in a known walk gap areas) suggest there is a need for a

detailed analysis to be performed to determine if the project may further exacerbate the condition of residents living in areas of the city with inadequate park access, potentially leading to a significant impact. While the focus of the Walk-to-a-Park initiative is on residents living within walking distance of a park, projects that create a non-residential population (e.g., new workers) should also review if the project is located within a known walk gap and assess if the project would generate a new non-residential population within areas of the City with inadequate access to open space resources.

5.3 Preliminary Open Space Assessment for Direct Effects

5.3.1 Study Area Definition

In accordance with the guidelines established in the City's *2021 CEQR Technical Manual*, the Open Space Study Area is defined to analyze both the nearby publicly accessible open spaces and the population using those open space resources. It is generally defined by a "reasonable walking distance" that users would travel to reach local open spaces and recreational areas. Pursuant to the *2021 CEQR Technical Manual*, the Defined Open Space Study Area includes all U.S. Census Tracts that have 50 percent or more of their area within a half-mile radius of the Project Site for residential users. As shown in **Figure 5-1**, those Census Tracts with 50 percent or more of their area within the half-mile Study Area include Census Tracts 326, 328, 330, 340, and 342 in Kings County, New York City. Additionally, as Census Tract 352 is directly adjacent to the Project Site to the south, it was also included in the Defined Open Space Study Area.

5.3.2 Existing Conditions

Residential Population

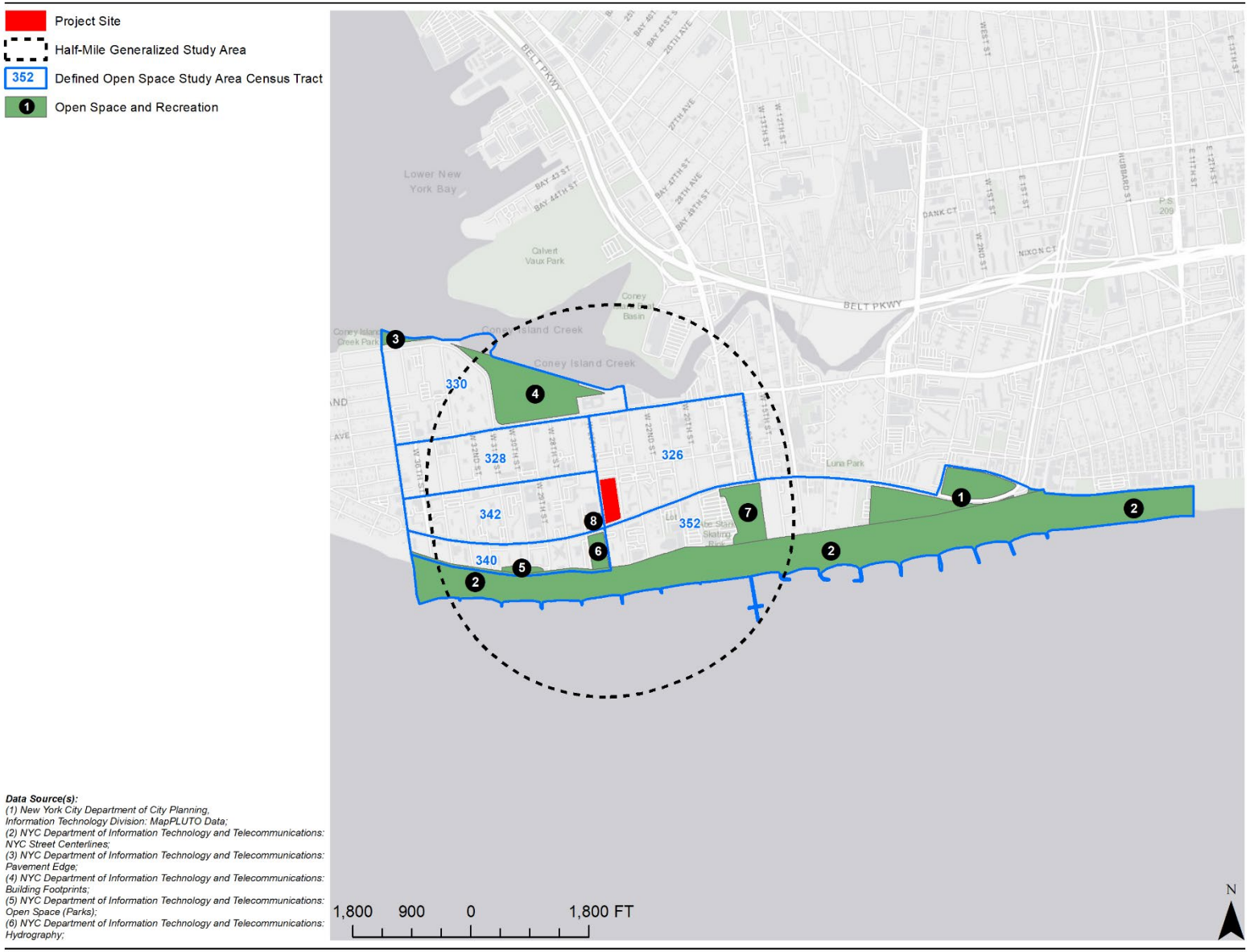
Based on data from the 2017-21 ACS, the Open Space Study Area visualized in **Figure 5-1** had a population of 25,379 residents in 2021, as indicated in below **Table 5-1**.

Table 5-1, Defined Open Space Study Area ACS 2017-2021 Population

Census Tract	2017-21 ACS Population
326	7,510
328	2,848
330	5,007
340	1,998
342	6,615
352	1,401
Total	**25,379**

According to the Project-Level DCP Housing Database, 871 new housing units were constructed in the census tracts comprising the Defined Open Space Study Area since January 1, 2021. Based on the aforementioned average household size of 2.41 persons in Coney Island – Seagate NTA, these new housing units have been projected to add 2,100 persons to the existing population of the Defined Open Space Study Area, resulting in a total population of 27,479 persons in 2024.

Figure 5-1, Open Space Study Area Map



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

Open Space Inventory

Eight (8) open spaces were identified within the Defined Open Space Study Area, described in **Table 5-2** below.

Table 5-2, Defined Open Space Study Area Open Spaces

Map ID No.	Park Name	Owner	Acreage
1	Asser Levy Park	DPR	21.04
2	Coney Island Beach and Boardwalk (p/o)*	DPR	146.99
3	Coney Island Creek Park (p/o)*	DPR	1.55
4	Kaiser Park	DPR	26.26
5	Nautilus Playground	DPR	1.38
6	Poseidon Playground	DPR	2.94
7	Steeplechase Park	DPR	10.01
8	Surf Playground	DPR / DOE	0.93
		TOTAL:	**211.1**

Note(s): *Represents only the portion of that park within the Defined Open Space Study Area.

As indicated in **Table 5-2**, the total open space acreage within the Defined Open Space Study Area is 211.1 acres.

Open Space Ratio

Based on a 2024 existing population of 27,479 persons and an existing open space acreage of 211.1 acres within the Defined Open Space Study Area, the existing open space ratio is 7.68 acres per 1,000 residents. Pursuant to the *2021 CEQR Technical Manual*, this is well above the City's planning goal of 2.5 acres of open space per 1,000 residents. See **Table 5-3** below for a break down of the Existing Conditions open space ratio.

Table 5-3, Existing Conditions Open Space Ratio

2024 Population	Total Study Area Open Space (Acres)	Open Space Ratio (Acres per 1,000 Residents)
27,479	211.1	7.68

5.3.3 Future No-Action Scenario

Residential Population

Based on a review of the NYC Active Major Construction database,[12] under the 2027 Future No-Action Scenario, an additional 400 dwelling units are forecasted to be constructed and occupied over three (4) separate development projects within the Defined Open Space Study Area (including the six (6) new dwelling units constructed at the Project Site). To present a conservative analysis, it is assumed that all of these dwelling units would be completed and occupied by the 2027 Project Build Year and are thus considered as "no-build projects" included in the baseline analysis for this open space analysis. Using the 2.41 residents per household average for the Defined Open Space Study Area, in the Future No-Action Scenario, 964 new residents would occupy the 400 new dwelling units by the 2027 Project Build Year. When added to the existing conditions estimated 2024 population (27,479

[12] https://www.nyc.gov/assets/buildings/html/active-major-construction.html, accessed January 3, 2024

persons), the population for the Defined Open Space Study Area is projected to be 28,443 persons in the 2027 Future No-Action Scenario.

Open Space Inventory

Based on a review of the NYC DPR Capital Projects Tracker,[13] no new public open spaces are planned to be constructed or expanded within the Defined Open Space Study Year by the 2027 Project Build Year. As such, the open space acreage within said study area would remain at 211.1 acres under the Future No-Action Scenario.

Open Space Ratio

Based on an estimated 2027 population of 28,443 persons and an open space acreage of 211.1 acres within the Defined Open Space Study Area, the Future No-Action Scenario open space ratio is projected to be 7.42 acres per 1,000 residents, a decrease of 3.39 percent from existing conditions. Despite this decrease, the Future No-Action Scenario open space ratio would remain well above the City's planning goal of 2.5 acres of open space per 1,000 residents. See **Table 5-4** for a breakdown of the open space ratio under the Future No-Action Scenario.

Table 5-4, Future No-Action Scenario Open Space Ratio

Existing Open Space Ratio (Acres per 1,000 Residents)	Projected 2027 Population	Total Study Area Open Space (Acres)	No-Action Open Space Ratio (Acres per 1,000 Residents)	Open Space Ration Change, Existing Conditions to Future No-Action Scenario
7.68	28,443	211.1	7.42	-3.39 %

5.3.4 Future With-Action Scenario

Residential Population

As previously discussed, the Future With-Action Scenario is projected to generate an incremental increase of 986 new residents, which results in a total population of 29,429 persons within the Defined Open Space Study Area.

Open Space Inventory

The Future With-Action Scenario would not result in the construction or expansion of any publicly accessible open space resources within the Defined Open Space Study Area. As such, the open space acreage within said study area is conservatively assumed to remain at 211.1 acres under the Future With-Action Scenario.

Open Space Ratio

The proposed housing under the Future With-Action Scenario would result in an increase in the Defined Open Space Study Area's population by 986 residents by the 2027 Project Build Year, resulting in a population of 29,429 persons, served by 211.1 acres of open space. With this increase in population, the resultant Future With-Action Scenario open space ratio would be 7.17 acres per 1,000 residents, an approximate 3.37 percent decrease from the Future No-Action Scenario. The overall open space ratio would remain well above the City's planning goal of 2.5 acres per 1,000 residents. See **Table 5-5** for a breakdown of the open space ratio under the Future With-Action Scenario.

[13] https://www.nycgovparks.org/planning-and-building/capital-project-tracker/proposed#type-selection, accessed January 3, 2023

Table 5-5, Future With-Action Scenario Open Space Ratio

Existing Open Space Ratio (Acres per 1,000 Residents)	Projected 2027 Future With-Action Population	Total Study Area Open Space (Acres)	No-Action Open Space Ratio (Acres per 1,000 Residents)	Open Space Ration Change, Existing Conditions to Future No-Action Scenario
7.42	29,429	211.1	7.17	-3.37 %

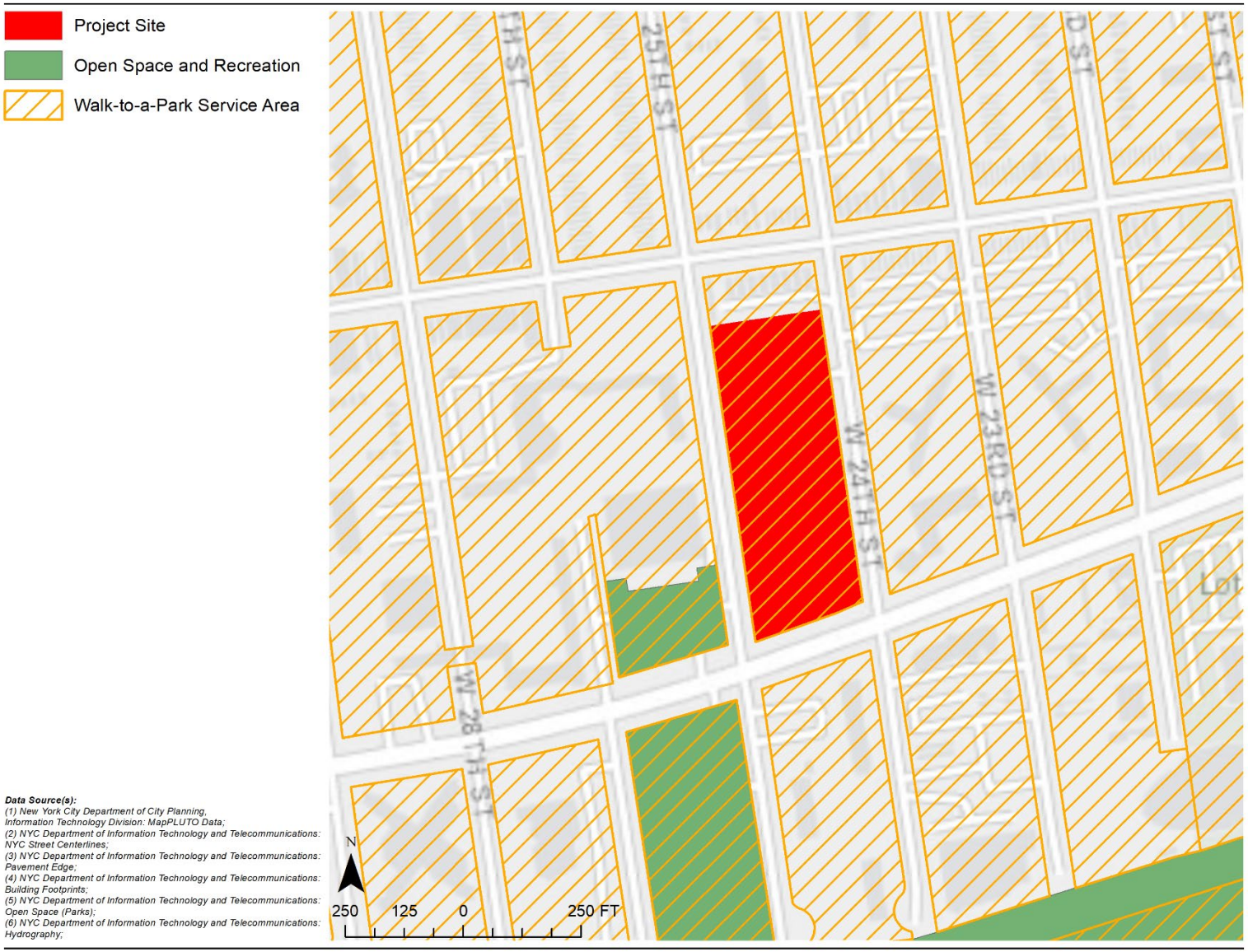
5.3.5 NYC DPR Walk-to-a-Park Initiative

As shown in **Figure 5-2**, the Project Site is within a designated DPR Walk-to-a-Park service area, such that residents of the Future With-Action Scenario would live within a reasonable walking distance of open space resources (notably the Coney Island Beach and Boardwalk). As such, no further analysis is required.

5.4 Conclusions

The Future With-Action Scenario would result in an incremental increase of 409 dwelling units over the Future No-Action Scenario, generating an additional population of 986 persons. This increase in new residents would result in a decrease in the Defined Open Space Study Area's open space ratio from 7.42 acres per 1,000 residents in the Future No-Action Scenario to 7.17 acres per 1,000 residents in the Future With-Action Scenario, a decrease of approximately 3.39 percent. Pursuant to the *2021 CEQR Technical Manual*, open space ratios between 2.01 and 2.50 or greater can tolerate up to a five (5) percent decrease in the open space ratio between the Future No-Action and Future With-Action Scenarios without warranting additional analyses. Further, the Project Site is within a Walk-to-a-Park service area indicating all future projected residents are within a reasonable walking distance to public open spaces. Based on the foregoing, the Future With-Action Scenario is not projected to create significant adverse open space impacts and no further analysis is required.

Figure 5-2, Walk-to-a-Park Service Area Map



6 SHADOWS

6.1 Introduction

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 chapter 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. The duration and dimensions of shadows are determined by the geographic location of the area from which the shadow is cast and the time of day and season. Shadows cast during the morning and evening, when the sun is low in the sky, are longer, while midday shadows are shorter in length. Shadows in winter, when the sun arcs low across the southern sky, are also longer throughout the day than at corresponding times in spring and fall seasons. In summer, the high arc of the sun casts shorter shadows than at any other time of year, and early and late shadows during the summer are cast farther towards the south than shadows cast in early and late winter months.

According to the *2021 CEQR Technical Manual*, a shadows assessment is required for projects 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, 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 eliminates direct sunlight exposure, thereby significantly altering the public's use of the resource or threatening the viability of vegetation or other resources.

The Project Site is located adjacent to Surf Playground, an NYC DPR-owned and operated public playground, which is considered a sunlight-sensitive resource. As such, a preliminary shadows screening assessment is warranted.

6.2 Methodology

In accordance with the *2021 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. This preliminary screening assessment consists of three tiers of analysis:

- *Tier 1 Screening:* The first tier determines a radius around the proposed buildings representing the longest shadow that could be cast. The radius is calculated based on a factor of 4.3 times the proposed maximum building height. 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 2014 CEQR Technical Manual, shadows cannot be cast within New York City outside of 108 degrees from True North;
- *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 maximum building envelope that could be achieved because of a

proposed action is modeled and geo-located within the program. The terrain provided by the modeling software 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 proposed project. The representative days are December 21 (winter solstice), June 21 (summer solstice), March 21 / September 21 (vernal/autumnal equinox), and May 6 / August 6 (halfway between the summer solstice and the equinoxes). The modeling software is also used to approximate times that shadows cast from the proposed project could enter and exit a resource.

If the Tier 3 screening indicates that, in the absence of intervening buildings, shadows from the proposed project would reach a sunlight-sensitive resource on any of the representative analysis days, a detailed shadow analysis could be warranted. Because existing buildings may already cast shadows on a sun-sensitive resource (or a future building could be expected to cast shadows), the proposed project may not result in new incremental shadows upon that resource. The detailed shadow analysis models a baseline condition (the Future No-Action Scenario) that is compared to the future condition resulting from the proposed project (the Future With-Action Scenario) to illustrate the shadows cast by existing or future buildings and distinguish the new incremental shadow cast by the project. Like in the Tier 3 analysis, the detailed analysis considers the maximum building envelope that could be achieved as a result of a proposed project.

6.3 Preliminary Shadows Screening Assessment

6.3.1 Tier I Shadows Screening Assessment

Under the Future With-Action Scenario, undeveloped land at the Project Site would be redeveloped with a new building with a maximum height of 195 feet (including a 185-foot building height with a 10-foot rooftop elevator and/or mechanical bulkheads), resulting in a shadow screening radius of 838.5 feet (4.3 x 195 feet) in length. The first step in a shadow analysis is to determine if there are any sunlight-sensitive resources located within the 838.5-foot radius.

As **Figure 6-1** shows below, there are up to six (6) sunlight-sensitive resources within the maximum shadow screening radius, including five (5) open space resources and one (1) historic resource. The open space resources include Surf Playground (O1), Poseidon Playground (O2), a portion of the Coney Island Beach and Boardwalk (O3), a portion of the Surfside Multi-Cultural Garden (O4), and a portion of Santas White Community Garden (O5) while the one (1) historic resource within the shadow screening radius is a portion of the Coney Island Boardwalk scenic landmark (H1). Accordingly, a Tier II shadows screening assessment is required.

6.3.2 Tier II Shadows Screening Assessment

The *2021 CEQR Technical Manual* states that a Tier 2 shadow screening assessment is required if any portion of a sunlight-sensitive resource lies within the Tier 1 shadow screening radius. Because of the path the sun travels across the sky in the northern hemisphere, no shadow can be cast in a triangular area south of any given project site. In New York City, this area lies between -108 and +108 degrees from true north. For a Tier 2 screening assessment, sunlight-sensitive resources within the triangular area cannot be shaded by the Future With-Action Scenario and are screened out. The complementing portion to the north within the Tier 1 shadow screening radius is the area that can be shaded by the Proposed Project.

As shown in **Figure 6-1**, the Tier 2 screening assessment shows that Surfside Playground (O1), a portion of a portion of Surfside Multi-Cultural Garden (O4), and a portion of Santos White Garden (O5) are within the area between -108 and +108 degrees from true north. Accordingly, a Tier III shadows screening assessment is required.

6.3.3 Tier III Shadows Screening Assessment

The *2021 CEQR Technical Manual* states that if any portion of a sunlight-sensitive resource is within the area that could be shaded by the Future With-Action Scenario, a Tier 3 screening assessment should be performed. Because the sun rises in the east and travels across the southern part of the sky to set in the west, a project's earliest shadows would be cast almost directly westward. Throughout the day, they would shift clockwise (moving northwest, then north, then northeast) until sunset, when they would fall east. Therefore, a project's earliest shadow on a sunlight-sensitive resource would occur in a similar pattern, depending on the location of the resource in relation to the Project Site. For a Tier 3 screening assessment, if the assessment determines that no shadows from the development would reach any of the sunlight-sensitive resources on any of the representative analysis days, then no further assessment for those days is needed. If, however, in the absence of intervening buildings shadows from the proposed building would reach sunlight-sensitive resources on any of the representative analysis days, then a detailed shadow analysis would be warranted for those days.

As shown in **Figure 6-2** through **Figure 6-5** below and indicated in **Table 6-1**, Tier III shadows from the Future With-Action Scenario would reach Surf Playground during all of the identified analysis days, while no Tier III shadows we projected to fall on either the Surfside Multi-Cultural Garden or Santos White Community Garden. Specifically, shadows from the Future With-Action Scenario could fall on Surf Playground from 8:51 AM to 9:23 AM (a 32-minute duration) during the December 21 analysis day, for 2 hours, 47 minutes during the March 21 / September 21 analysis day (from 7:36 AM to 10:23 AM), from 6:27 AM to 10:27 AM (a 4-hour duration) during the May 6 / August 6 analysis day, and for 4 hours, 38 minutes during the June 21 analysis day. Based on the foregoing, a detailed shadow analysis is required as shadows from the Future With-Action Scenario could reach Surf Playground on each analysis day for durations greater than 10 minutes.

Table 6-1, Tier III Shadow Durations on Sunlight Sensitive Resources

Analysis Day	December 21	March 21 / September 21	May 6 / August 6	June 21
Timeframe Window	*8:51 a.m. – 2:53 p.m.*	*7:36 a.m. – 4:29 p.m.*	*6:27 a.m. – 5:18 p.m.*	*5:57 a.m. – 6:01 p.m.*
Surf Playground				
Shadow Entry – Exit Time	8:51 AM – 9:23 AM	7:36 AM – 10:23 AM	6:27 AM – 10:27 AM	5:57 AM – 10:35 AM
Duration	32 minutes	2 hours, 47 minutes	4 hours	4 hours, 38 mins
Surfside Multi-Cultural Garden				
Shadow Entry – Exit Time	No Shadows	No Shadows	No Shadows	No Shadows
Duration	0 mins	0 mins	0 mins	0 mins
Santos White Community Garden				
Shadow Entry – Exit Time	No Shadows	No Shadows	No Shadows	No Shadows
Duration	0 mins	0 mins	0 mins	0 mins

Figure 6-1, Tier I Shadow Screening Assessment

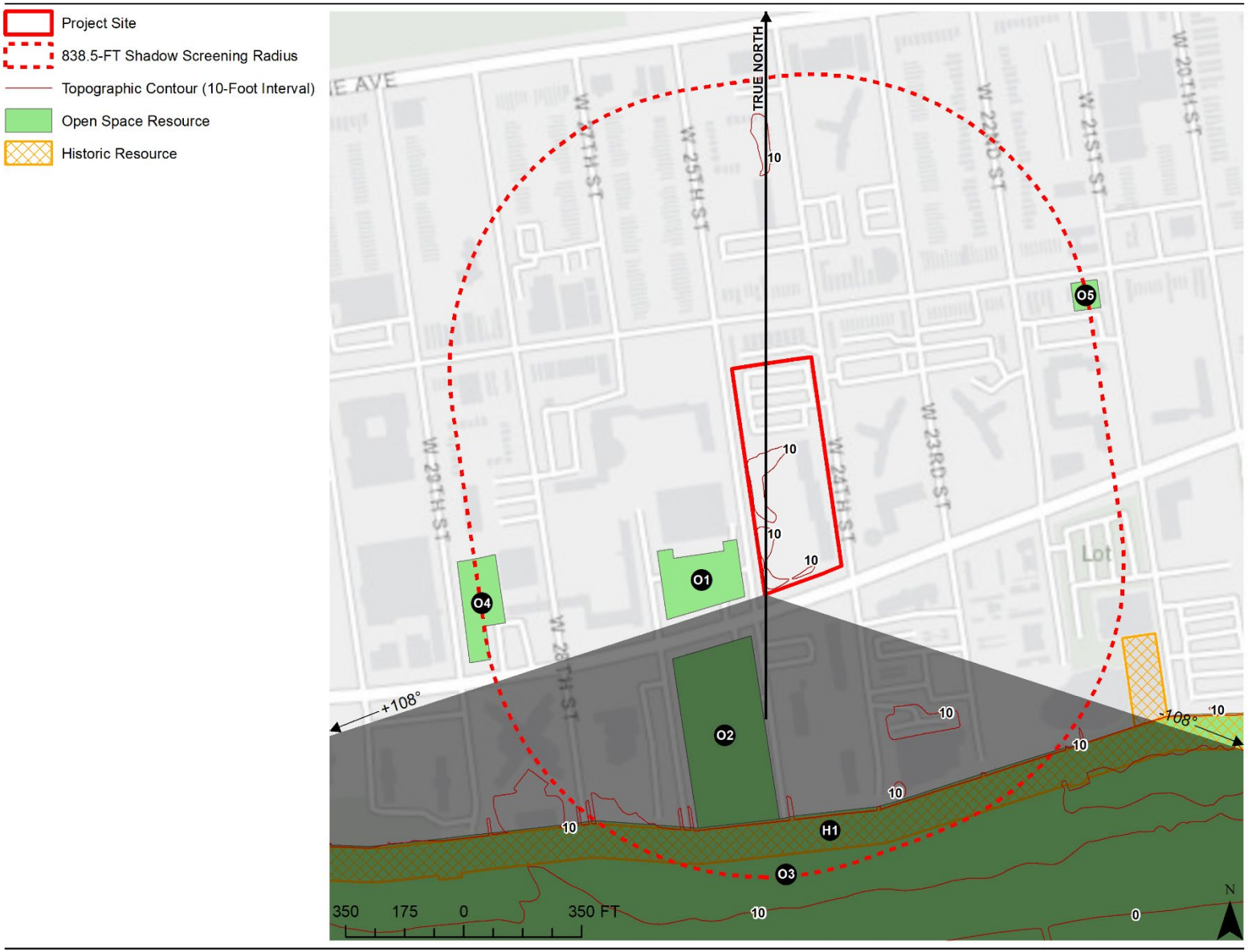
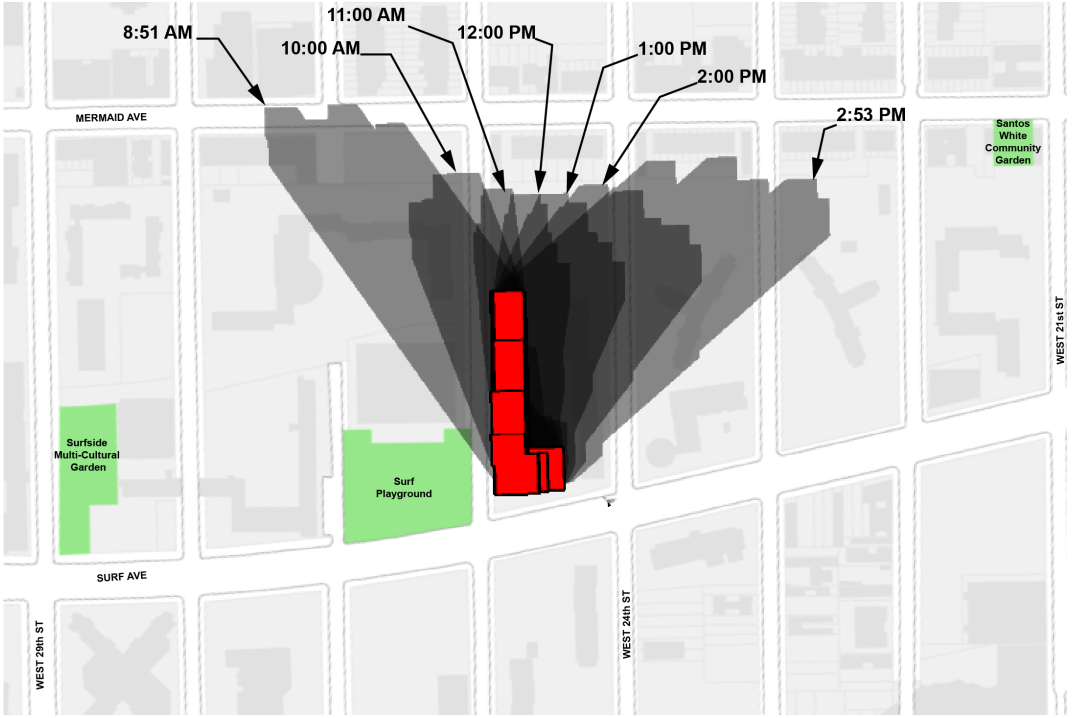


Figure 6-2, Tier III Shadow Screening Assessment, December 21 Analysis Day

Project Building

Sunlight Sensitive Open Space Resource

Tier III Projected Shadow



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

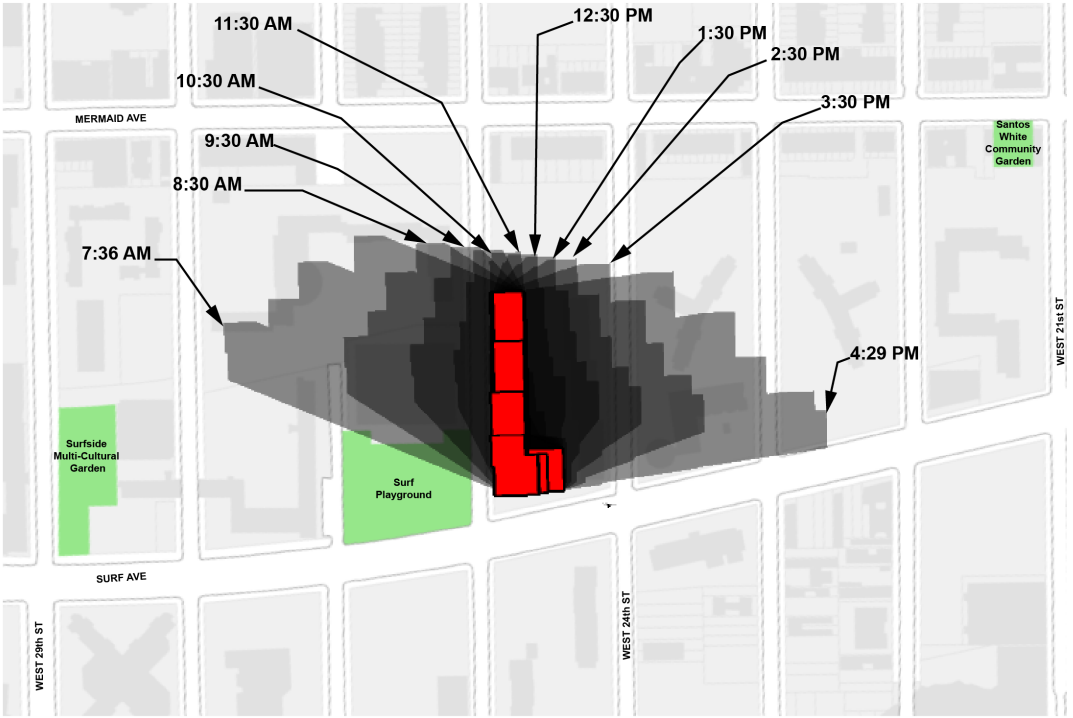
N

Figure 6-3, Tier III Shadow Screening Assessment, March 21 / September 21 Analysis Day

Project Building

Sunlight Sensitive Open Space Resource

Tier III Projected Shadow



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

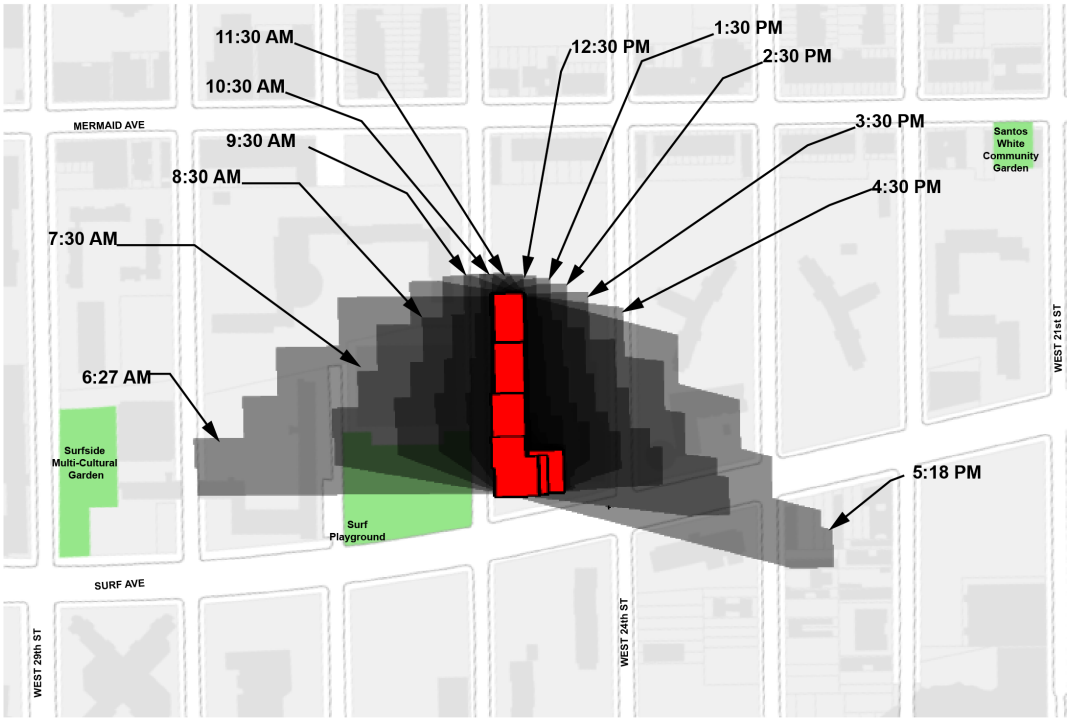
N

Figure 6-4, Tier III Shadow Screening Assessment, May 6 / August 6 Analysis Day

Project Building

Sunlight Sensitive Open Space Resource

Tier III Projected Shadow



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

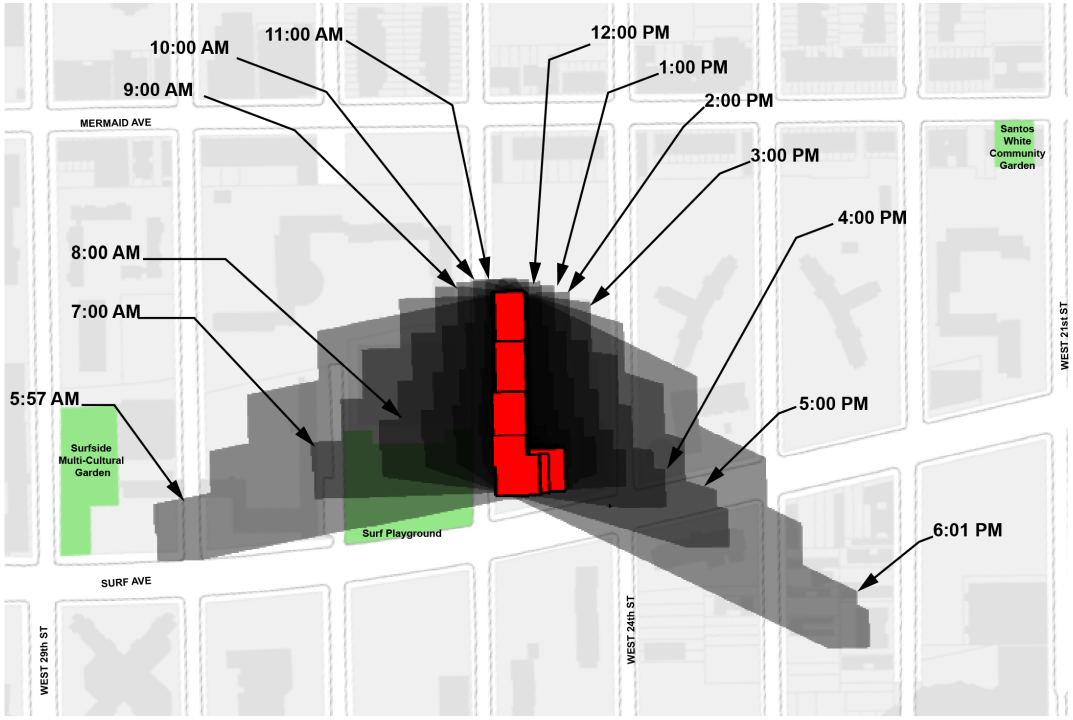
N

Figure 6-5, Tier III Shadow Screening Assessment, June 21 Analysis Day

Project Building

Sunlight Sensitive Open Space Resource

Tier III Projected Shadow



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

N

6.4 Detailed Shadows Analysis

The *2021 CEQR Technical Manual* states that a detailed shadow analysis is warranted when the screening analyses do not rule out the possibility that project-generated shadows would reach any sunlight-sensitive resources. The purpose of the detailed analysis is to determine the extent and duration of new incremental shadows that fall on a sunlight-sensitive resource as a result of development projected under the Future With-Action Scenario. The detailed shadows analysis accounts for the Future No-Action Scenario shadow conditions at identified sunlight-sensitive resources, measuring new shadow coverage beyond what Future No-Action Scenario development at the Project Site and in the surrounding area would cast on an individual resource. The results of the detailed shadow analyses on Surf Playground are summarized in **Table 6-2** (with illustrative figures of new incremental shadows provided in **Figure 6-7 through Figure 6-9**).

Table 6-2, New Incremental Shadow Durations

Analysis Day	December 21	March 21 / September 21	May 6 / August 6	June 21
Timeframe Window	*8:51 a.m. – 2:53 p.m.*	*7:36 a.m. – 4:29 p.m.*	*6:27 a.m. – 5:18 p.m.*	*5:57 a.m. – 6:01 p.m.*
Surf Playground				
Shadow Entry – Exit Time	No Incremental Shadows	(1) 7:36 AM – 7:45 AM (2) 8:03 AM – 10:23 AM	6:27 AM – 10:27 AM	5:57 AM – 10:35 AM
Duration	0 minutes	(1) 9 minutes (2) 2 hours, 20 minutes TOTAL: 2 hours, 29 minutes	4 hours	4 hours, 38 mins

Surf Playground is a 0.93-acre publicly accessible playground and open space owned and operated by NYC DPR and features a variety of recreation amenities, including playground and fitness equipment, athletic courts, and a turf field, as well as benches, seating, and tables (see **Figure 6-6** for a schematic plan of Surf Playground).

Figure 6-6, Surf Playground Schematic Plan



Source(s): NYC DPR

Figure 6-7, Surf Playground March 21 / September 21 Detailed Analysis

Project Building

Sunlight Sensitive Open Space Resource

Projected Future With-Action Shadow Condition

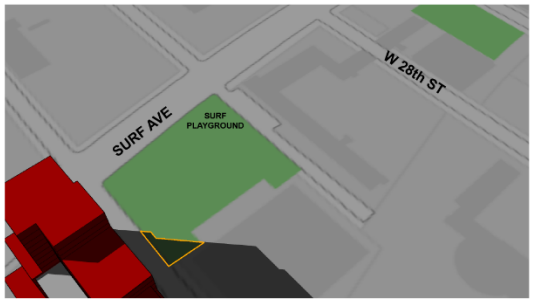
New Incremental Shadow



7:36 AM



8:30 AM



9:30 AM



10:15 AM

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

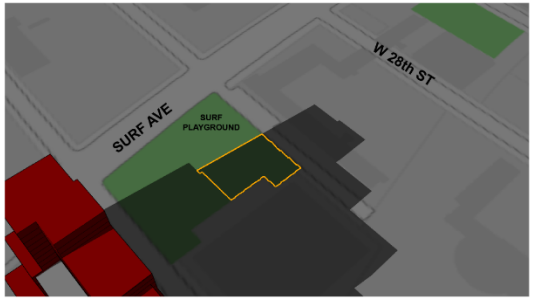
Figure 6-8, Surf Playground May 6 / August 6 Detailed Analysis

Project Building

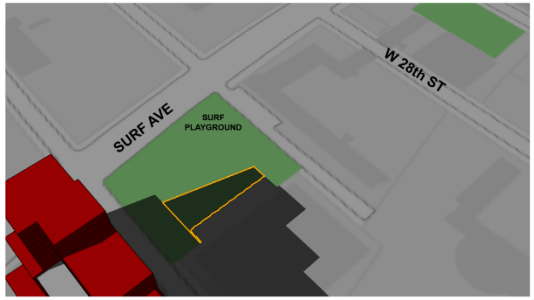
Sunlight Sensitive Open Space Resource

Projected Future With-Action Shadow Condition

New Incremental Shadow



7:00 AM



8:00 AM



9:00 AM



10:00 AM

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

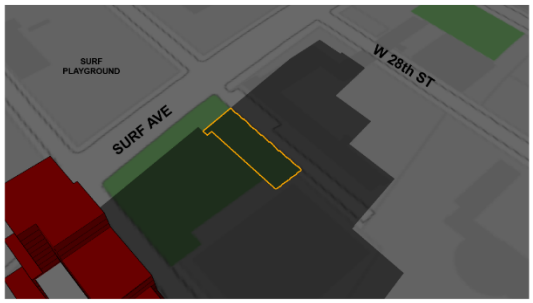
Figure 6-9, Surf Playground June 21 Detailed Analysis

Project Building

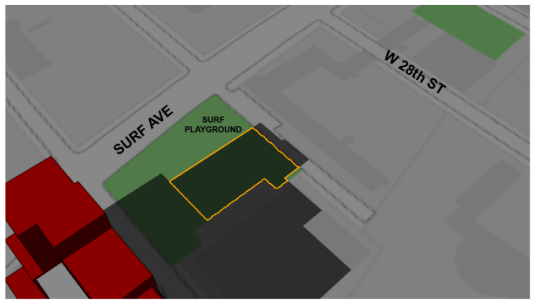
Sunlight Sensitive Open Space Resource

Projected Future With-Action Shadow Condition

New Incremental Shadow



7:00 AM



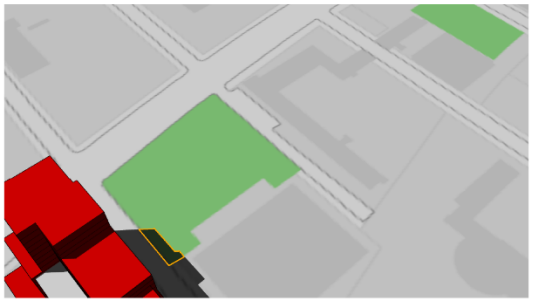
8:00 AM



9:00 AM



10:00 AM



10:15 AM

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

6.4.1 Determination of Shadow Impact Significance

The *2021 CEQR Technical Manual* states that the determination of the significance of shadow on a sunlight-sensitive resource is based on: (1) the information resulting from the detailed shadow analysis describing the extent and duration of incremental shadows; and (2) an analysis of the resource's sensitivity to reduced sunlight. Determining whether this impact is significant or not, under CEQR, depends on the extent and duration of the incremental shadow and the specific context in which the impact occurs.

For open space and natural resources, the uses and features of a resource are an indicator of its sensitivity to shadows. Shadows occurring during the cold-weather months, for example, generally do not affect the growing season of outdoor vegetation. This sensitivity is assessed for warm-weather-dependent features such as vegetation that could be affected by a loss of sunlight during the growing season, and for features (such as benches) that could be affected by a loss of winter sunlight. Generally, four to six hours a day of sunlight, particularly in the growing season, is often a minimum requirement. Where the incremental shadows from the project fall on sunlight-sensitive features or uses, the analysis assesses the loss of sunlight relative to sunlight that would be available without the project.

As stated in the *2021 CEQR Technical Manual*, to determine impact significance, 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 generally occurs 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 sunlight-sensitive feature of the resource is already subject to substandard sunlight (i.e., less than the minimum time necessary for its survival).
- Open Space Utilization – A substantial reduction in the usability of open space as a result of increased shadow.
- 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.

Surf Playground Incremental Shadows Assessment

As indicated in **Table 6-2**, new incremental shadows from the Future With-Action Scenario would fall on Surf Playground during two separate durations, from 7:36 AM to 7:45 PM (9 minutes) and from 8:03 AM to 10:23 AM (2 hours, 20 minutes), for a total time of 2 hours, 29 minutes. These new incremental shadows would be relegated to very small portions of the northern and northeastern areas of Surf Playground (see **Figure 6-7**); as visualized in **Figure 6-6**, these areas of this open space resource are characterized by basketball courts, fitness areas, and game tables, which are mostly paved and feature minimal vegetation. Based on the relatively small area of new incremental shadow coverage and the nature of these areas projected to receive new incremental shadows, the viability of vegetation at and the usability of Surf Playground would not be jeopardized during the March 21 / September 21 analysis day.

During the May 6 / August 6 analysis day, new incremental shadows would fall on Surf Playground for a total duration of 4 hours, from 6:27 AM to 10:27 AM (see **Table 6-2**). These new incremental shadows would cover a small portion of the western area of Surf Playground and would move clockwise progressively covering more area in the central and north portions of the playground throughout the identified duration, finishing with a relatively small coverage on the eastern portion of the playground (see **Figure 6-8**). The areas projected to receive new incremental shadows during these analysis days are characterized by playground and fitness equipment, turf fields, basketball courts, and game tables, with minimal vegetation (see **Figure 6-6**). Based on the nature of these areas projected to receive new incremental shadows, the viability of vegetation at and the usability of Surf Playground would not be jeopardized during the May 6 / August 6 analysis day.

New incremental shadows on Surf Playground during the June 21 analysis day are projected from 5:57 AM to 10:35 AM for a total duration of 4 hours and 38 minutes (see **Table 6-2**). Similar to the May 6 / August 6 analysis day, new incremental shadows would start covering a small portion of the western area of Surf Playground and would move clockwise progressively covering more area in the central and north portions of the playground throughout the identified duration, finishing with a relatively small coverage on the eastern portion of the playground (see **Figure 6-9.**). The areas projected to receive new incremental shadows during these analysis days are characterized by playground and fitness equipment, turf fields, basketball courts, and game tables, with minimal vegetation (see **Figure 6-6**). Based on the nature of these areas projected to receive new incremental shadows, the viability of vegetation at and the usability of Surf Playground would not be jeopardized during the June 21 analysis day.

6.5 Conclusions

Based on the results of detailed shadows analysis, new incremental shadows on Surf Playground are not anticipated to jeopardize the viability of vegetation at, or the usability of, this open space resource. Therefore, no significant shadow impacts are anticipated such that no further analysis is warranted.

7 HISTORIC AND CULTURAL RESOURCES

7.1 Introduction

An assessment of historic and cultural resources is usually necessary for projects that are located near historic or landmark structures or districts, or for projects that require in-ground disturbance, unless such disturbance occurs in an area that has been formerly excavated, according to the *2021 CEQR Technical Manual*.

The term “historic resources” defines districts, buildings, structures, sites, and objects of historical, aesthetic, cultural, architectural, and archaeological importance. In assessing both historic and cultural resources, the findings of the appropriate New York City, New York State, and Federal agencies are consulted. Historic resources include the New York City Landmarks Preservation Commission (LPC) designated landmarks, interior landmarks, scenic landmarks, and historic districts; locations being considered for landmark status by the LPC; properties/districts listed on, or formally determined eligible for, inclusion on the State and/or National Register (S/NR) of Historic Places; locations recommended by the New York State Board for Listings on the State and/or National Register of Historic Places and National Historic Landmarks.

7.2 Methodology

Archaeological and architectural resources usually need to be assessed for projects that would result in any in-ground disturbance. In-ground disturbance is any disturbance to an area not previously excavated, including new excavation that is deeper and/or wider than previous excavation on the same site. For projects that may affect historic or cultural resources, the first step in evaluating a project’s potential effects on historic resources is to consider what area the project might affect and then identify historic resources—whether officially recognized or eligible for such recognition—within that area. The area of subsurface work for a proposed project is considered the impact area for archaeological resources, while the Study Area for architectural resources is the area in which any resources may be affected by the project, which is defined by the radius of 400 feet from the borders of a site for most proposals.

After the study areas have been established, all known archaeological and architectural resources within the study areas are identified, and the potential for unknown resources is investigated, it is recommended that lead agencies and applicants contact LPC for archaeological and architectural resources review. Based on the report from LPC, if any listed historic or cultural resources are located in the study areas, then further analysis of the project’s impact on these resources must be performed. The proposed project's effects on any designated or pote’tial archaeological and architectural resources are then analyzed under existing conditions, F’ture No-Action Scenario, and Future With-Action Scenario. The assessment specifically considers whether the project may result in the disturbance or destruction of those archaeological and architectural resources as a result of the Proposed Actions.

7.3 Architectural Resources

Per *2021 CEQR Technical Manual* guidelines, impacts on historic resources are considered on those sites affected by the Proposed Action(s) and an area extending 400 feet from those sites (i.e., the historic resources Study Area). According to the *2021 CEQR Technical Manual*, significant adverse impacts to historic and cultural resources could potentially result if a proposed action affects those characteristics that make a resource eligible for LPC designation or S/NR listing. This section assesses the potential for the Proposed Actions to result in significant adverse impacts on identified historic and cultural resources. Generally, architectural resources should be surveyed and assessed if the

proposed project would result in any of the following, whether or not any known historic resources are located near the site of the project:

- Construction resulting in ground disturbance, including construction of temporary roads and access facilities, grading, and landscaping.
- Below-ground construction, such as excavation or installation of utilities.
- Physical destruction, demolition, damage, alteration, or neglect of all or part of a historic property.
- Changes to the architectural resource that cause it to become a different visual entity, such as a new location, design, materials, or architectural features.
- Isolation of the property from, or alteration of, its setting or visual relationship with the streetscape. This includes changes to the resource's visual prominence so that it no longer conforms to the streetscape in terms of height, footprint, or setback; is no longer part of an open setting; or can no longer be seen as part of a significant view corridor.
- Introduction of incompatible visual, audible, or atmospheric elements to a resource's setting.
- Replication of aspects of the resource to create a false historical appearance.
- Elimination or screening of publicly accessible views of the resource.
- Construction-related impacts such as falling objects, vibration, dewatering, flooding, subsidence, or collapse.
- Introduction of significant new shadows, or significant lengthening of the duration of existing shadows, over a historic landscape or a historic structure to the extent that the architectural details that distinguish that resource as significant are obscured.

7.3.1 Direct Impacts

Historic resources could be directly affected by physical destruction, demolition, damage, alteration, or neglect of all or part of a historic resource. For example, alterations, such as the addition of a new wing to a historic building could result in significant adverse impacts, depending on the design. Direct impacts also include changes to an architectural resource that cause it to become a different visual entity, such as a new location, design, materials, or architectural features.

NR-listed and eligible resources are given a measure of protection from the effects and impacts of projects sponsored, assisted, or approved by federal agencies under Section 106 of the National Historic Preservation Act. Although preservation is not mandated, federal agencies must attempt to avoid adverse impacts on such resources through a notice, review, and consultation process. S/NR-listed and eligible resources are similarly protected against impacts resulting from projects sponsored, assisted, or approved by State agencies under the State Historic Preservation Act. However, private owners of S/NR-listed and eligible resources using private funds can alter or demolish their properties without such a review process. Privately owned properties that are NYCLs, in LPC-designated historic districts, or pending designation as Landmarks by LPC are protected under the New York City Landmarks Law. The law requires LPC review and approval before any alteration or demolition occurs, regardless of whether the project is publicly or privately funded. Publicly owned resources are also subject to review and advisement by LPC before project implementation.

The LPC was contacted on February 15, 2024, for their initial review of the Proposed Project's potential to impact architectural resources. In a response dated February 26, 2024, LPC indicated that there were no architectural resources of significance at the Project Site (see **Appendix B** for a copy of LPC's findings).

7.3.2 Construction Impacts

The assessment of construction impacts on historic and cultural resources considers the possibility of physical damage to any architectural or archaeological resources identified in the Proposed Project's historic and cultural resources assessment. Pursuant to Chapter 22, Section 300 of the *2021 CEQR Technical Manual*, if a project's construction activities are located within 400 feet of a historic or cultural resource, potential hazards should be assessed, such as whether certain character-defining elements of a structure, including but not limited to rooftops or stained-glass windows, could be impacted by falling objects from an adjacent construction site. The City has two procedures for avoidance of damage to historic structures from adjacent construction.

1. All buildings are provided some protection from accidental damage through New York City Department of Buildings (DOB) controls that govern the protection of any adjacent properties from construction activities, under Building Code Section 27-166 (C26-112.4). For all construction work, Building Code section 27-166 (C26-112.4) serves to protect buildings by requiring that all lots, buildings, and service facilities adjacent to foundation and earthwork areas be protected and supported in accordance with the code requirements.

2. The second protective measure applies only to designated NYCL and S/NR-listed historic buildings that are located within 90 linear feet of a proposed construction site. For these structures, the DOB's Technical Policy and Procedure Notice (TPPN) #10/88 is applicable. The DOB's TPPN 10/88 supplements the standard building protections afforded by the Building Code C26-112.4 by requiring, among other things, a monitoring program to reduce the likelihood of construction damage to adjacent LPC-designated or S/NR-listed resources (within 90 feet), and to detect at an early stage the beginnings of damage so that construction procedures can be changed.

If the project is not located within 90 feet of a historic or cultural resource that is NYC-landmark eligible, eligible for the State and National Register of Historic Places, or within an eligible New York City Historic District, then no special protections apply. Therefore, the potential for physical disturbance and adverse impacts on those historic and cultural resources should be disclosed. Based on a review of the New York State (NYS) Office of Parks, Recreation, and Historic Preservation's (OPRHP's) Cultural Resources Information System (CRIS) there are no local, State, or Federal landmarks of historic districts within 90 feet of the Project Site. Thus, the Future With-Action Scenario would not result in physical disturbance and adverse impacts on such resources, and no further analysis is required.

7.3.3 Indirect Impacts

As per the *2021 CEQR Technical Manual*, visual and contextual impacts on historic resources can include: the isolation of a property from or alteration of its setting or visual relationship with the streetscape; introduction of incompatible visual, audible, or atmospheric elements to a resource's setting; elimination or screening of publicly accessible views of a resource; or introduction of significant new shadows, over a historic landscape or on a historic structure (if the features that make the resource significant depend on sunlight) to the extent that the architectural details that distinguish that resource as significant are obscured.

Architectural Resources within the Study Area

To determine whether the Proposed Actions have the potential to affect nearby off-site historic or architectural resources, the Study Area was screened for historic and architectural resources. Based on a review of the aforementioned CRIS, there are no local, State, or Federal landmarks of historic

districts within 400 feet of the Project Site. Thus, the Future With-Action Scenario would not result in physical disturbance and adverse impacts on such resources, and no further analysis is required. As such, the Future With-Action Scenario could not result in adverse visual or contextual impacts on existing architectural resources, nor would it eliminate or screen publicly accessible views of these resources, introduce an incompatible visual, audible, or atmospheric element to these resources' setting, or introduce significant new shadows on sunlight sensitive features of these resources.

Based on the foregoing, the Future With-Action Scenario would not result in significant adverse impacts on historic architectural resources, and no further analysis is warranted.

7.4 Archaeological Resources

Unlike the architectural evaluation of a Study Area that extends beyond the footprint of a project's block and lot lines, the analysis of potential and/or projected impacts on archaeological resources is controlled by the actual footprint of the limits of soil disturbance. Archeological resources are physical remains, usually subsurface, of the prehistoric and historic periods such as burials, foundations, artifacts, wells, and privies. The *2021 CEQR Technical Manual* requires a detailed evaluation of a project's potential effect on the archeological resources if it would potentially result in an in-ground disturbance to an area not previously excavated.

The LPC was contacted on February 15, 2024, for their initial review of the Proposed Project's potential to impact archaeological resources. In a response dated February 26, 2024, LPC indicated that there were no archaeological resources of significance at the Project Site (see **Appendix B** for a copy of LPC's findings).

7.5 Conclusions

As there are no known historic and architectural resources at or within the vicinity of the Project Site, no direct, indirect, or construction impacts would result under the Future With-Action Scenario. Further, LPC indicated that there are no resources of architectural or archaeological concern at the Project Site. Based on the foregoing, the Future With-Action Scenario would not result in significant adverse impacts on historic and cultural resources, and no further analysis is warranted.

8 URBAN DESIGN AND VISUAL RESOURCES

8.1 Introduction

An urban design assessment pursuant to the *2021 CEQR Technical Manual* 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.

An urban design assessment pursuant to the *2021 CEQR Technical Manual* considers whether and how a project may change the experience of a pedestrian in the area of a proposed project. 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 and natural environment in the context of the project. The analysis of urban design relies on observations, drawings, maps, renderings, and most importantly, photographs and photographic montages taken from a pedestrian's eye level. These representations allow the public to see what a project would look like in the future.

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

- Projects that permit the modification of yard, height, and setback requirements; and
- Projects that result in an increase in built floor area beyond what would be allowed 'as-of-right' or in the future without the Proposed Action.

As the Proposed Actions consist of zoning-related discretionary actions that would result in an increase in built floor area beyond what would be allowed 'as-of-right' pursuant to existing mapped zoning an urban design and visual resources analysis is therefore warranted.

8.2 Methodology

Pursuant to the *2021 CEQR Technical Manual* guidelines, the preliminary urban design and visual resources assessment analyzes a 400-foot radius study area where a proposed action would be most likely to influence the built environment. The following preliminary urban design and visual resources assessment follows these guidelines and provides a characterization of existing conditions, a description of urban design under the Future No-Action and With-Action Scenarios, and an analysis determining the extent to which physical changes resulting from the Future With-Action Scenario would alter the pedestrian experience and visual resources.

Pursuant to the *2021 CEQR Technical Manual*, the appropriate study area for an urban design and visual resources analysis is within a 400-foot radius of the Project Site (the Study Area), as visualized in **Figure 8-1** below.

Figure 8-1, Urban Desing Study Area and Photograph Key

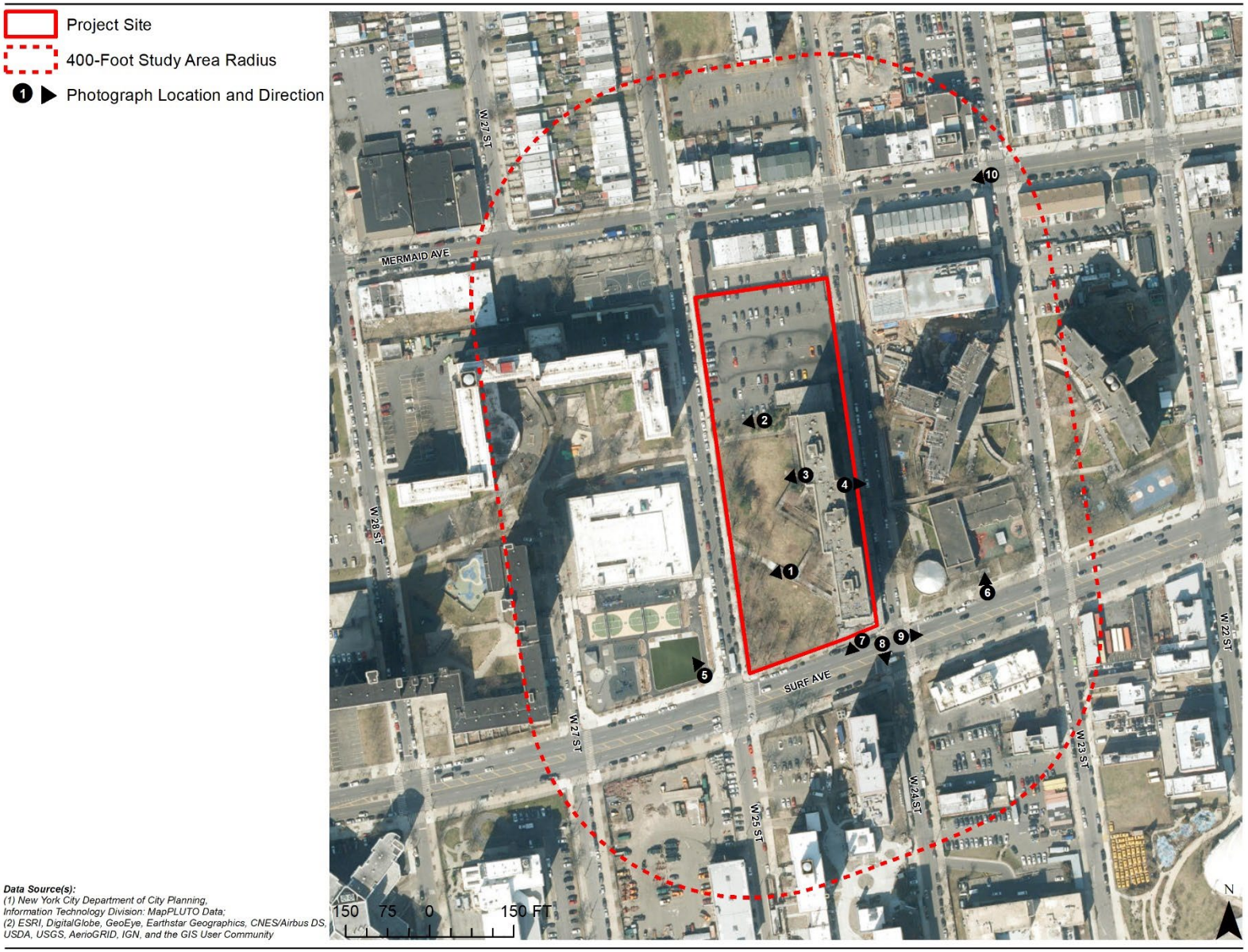


Figure 8-2, Urban Design Study Area Photographs



Photo No. 1: View of development west of the Project Site.



Photo No. 2: View of development west of the Project Site.



Photo No. 3: View of development west of the Project Site from the roof of the existing building.



Photo No. 4: View of development east of the Project Site from the roof of the existing building.

All photographs taken January 28, 2022 (Site and immediate surrounding area conditions are unchanged as of February 2024)

Figure 8-2, Urban Design Study Area Photographs (Continued)



Photo No. 5: View of Surf Playground with the P.S. 288 adjacent to the north, facing northwest.



Photo No. 6: View of the NYCHA community facility building east of the Project Site, facing north from Surf Avenue.



Photo No. 7: View of development along Surf Avenue, facing west from the intersection of West 24th Street and Surf Avenue.



Photo No. 8: View of development along Surf Avenue, facing south from the intersection of West 24th Street and Surf Avenue.

All photographs taken January 28, 2022 (Site and immediate surrounding area conditions are unchanged as of February 2024)

Figure 8-2, Urban Design Study Area Photographs (Continued)

	
Photo No. 9: View of development along Surf Avenue, facing east from the intersection of West 24th Street and Surf Avenue.	**Photo No. 10:** View of development along Mermaid Avenue north of the Project Site, facing west from the intersection of West 23rd Street and Mermaid Avenue.

All photographs taken January 28, 2022 (Site and immediate surrounding area conditions are unchanged as of February 2024)

8.3 Preliminary Urban Design and Visual Resources Assessment

8.3.1 Existing Conditions

Project Site

The Project Site is located within Brooklyn Block 7055, Lot 13, a 153,580-SF lot developed with a 19-story, 380,000-GSF / 367,163-ZSF, 2.39 FAR multi-family residential building featuring 360 affordable dwelling units located in the eastern half of the property. Lot 13 is bounded by mixed-use residential and groundfloor commercial uses fronting along Mermaid Avenue to the north, West 24th Street to the east, Surf Avenue to the south, and West 25th Street to the west. The existing residential building is accessed from multiple points along its West 24th Street frontage to the east. The northern portion of Lot 13 is developed with a 163-space parking lot that provides parking for residents of the existing residential building and is accessed via one curb cut along West 24th Street. The western half of Lot 13 is undeveloped and landscaped; this portion of the tax lot is gated and not accessible. The parking lot portion of the property totals 47,524 SF while the remainder of the property, including developed and undeveloped areas, totals 106,056 SF.

The Project Site is developed in a “towers in the park” style, characterized by high-rise apartment buildings surrounded by landscaping, popularized in the 1960s and 1970s (the existing building at the Project Site was constructed in 1972; see **EAS Form Figure 6, Photograph Nos. 1 through 13** for photographs of the existing building and associated landscaped area).

Study Area

The existing built form within the 400-foot Study Area is generally similar to that of the Project Site, except for development along and north of Mermaid Avenue. Tower in the park-style development is located east and west of the Project Site, including several high-rise residential structures with associated landscaping, with built FARs and heights ranging from 1.78 to 4.76 and from 17 to 24 stories, respectively (see **Figure 8-2, Photograph Nos. 1 through 4** for representative photographs of these buildings). A three (3) story public intermediate school building is also located west of the Project Site (0.70 built FAR), as well as Surf Playground, a NYC DPR-owned and operated playground facility, approximately 0.93-acre in size, that fronts along Surf Avenue and West 25th Street (see **Figure 8-2, Photograph No. 5**). To the east of the Project Site is a two (2) story NYCHA community facility building at the same property as the aforementioned high rise residential structure to the east (see **Figure 8-2, Photograph No. 6**).

South of Surf Avenue is another tower in the park-style development (14 stories, 2.15 built FAR) with a NYC DPR administrative building/storage yard property to the west (three (3) stories, 0.26 built FAR). The southeastern study area is developed with a four (4) story adult care facility (1.28 built FAR) with lots developed with surface parking facilities beyond. Refer to **Figure 8-2, Photograph Nos. 7 through 9** for representative photographs of development along the south side of Surf Avenue.

The northern Study Area consists of smaller-scale development fronting along the north and south sides of Mermaid Avenue between West 26th and West 27th Street. These lots are developed with a mixture of two (2) to three (3) story one- and two-family residential and mixed-use residential with groundfloor commercial buildings with lot sizes generally ranging from 1,000 to 3,000 sf (0.80 to 2.40 built FAR). See **Figure 8-2, Photograph No. 10** for a representative photograph of development along Mermaid Avenue north of the Project Site.

Streets within the Study Area follow the New York City grid layout. Mermaid and Surf Avenues are major east-west thoroughfares in the western half of the Coney Island peninsula, with the former providing one lane of traffic in each direction with curbside parking while the latter provides two lanes

of traffic in each direction with curbside parking. West 23rd and 25th Streets are one-way local southbound streets while West 24th Street is a one-way northbound local street, all of which feature curbside parking.

8.3.2 Future No-Action Scenario

Project Site

Absent the Proposed Actions (i.e., the Future No-Action Scenario), the Applicant could reasonably develop the Project Site with nine (9) story, 213,616 GSF medical office facility (0.98 FAR), rising to a maximum height of 95 feet and featuring 65 off-street parking spaces in a parking garage. In addition, a 6,390 GSF (0.04 FAR), three (3) story residential building containing six (6) affordable dwelling units could be developed with the remaining available residential density at the Project Site under the existing R6 district.

The Future No-Action Scenario was determined using the remaining available development density at the Project Site under the R6 zoning district for both community facility and residential uses and medical office facilities in the vicinity of the Project Site, including:

- 6010 Bay Parkway (Brooklyn Block 5522, Lot 36): A nine (9) story, 144,764 GSF (7.23 FAR) medical office building constructed in 2012.
- 1664 East 14th Street (Brooklyn Block 6776, Lot 32): A five (5) story, 20,000 GSF (5.00 FAR) medical office building constructed in 1996.
- 1660 East 14th Street (Brooklyn Block 6776, Lot 33): A five (5) story, 20,000 GSF (5.00 FAR) medical office building constructed in 1994.

Renderings depicting street-level pedestrian views of the Future No-Action Scenario development condition at the Project Site are presented in **Figure 8-3**.

Figure 8-3, Future No-Action and With-Action Scenario Renderings



Future No-Action Scenario, View 1 (view from West 24th Street near Mermaid Avenue



Future With-Action Scenario, View 1 (view from Surf Avenue west of the Project Site)



Future No-Action Scenario, View 2 (view from West 24th Street near Mermaid Avenue



Future With-Action Scenario, View 2 (view from Surf Avenue west of the Project Site)

8.3.3 Future With-Action Scenario

Under the Future With-Action Scenario, the undeveloped portion of the Project Site would be redeveloped with a one- (1-) to 17-story, up to approximately 440,000-GSF (375,532ZSF) mixed-use residential, community facility and commercial building at the Project Site. The Future With-Action Scenario includes a total of up to 415 residential dwelling units within up to 415,000 GSF (354,651 ZSF) of residential floor area, all of which would be affordable to a range of income levels under AMI (104 to 125 of which would be made affordable pursuant to either Option 1 or 2 of the MIH program with the other units made affordable pursuant to NYC HPD and HDC financing). The Future With-Action Scenario would also include up to 15,000 GSF (12,725ZSF) and up to 10,000 GSF (8,156 ZSF) of groundfloor community facility and commercial retail spaces, respectively; the commercial retail space would be located on the groundfloor at the corner of the proposed building's Surf Avenue and West 25th Street frontages while there would be two separate community facility spaces located along the interior of West 25th Street frontage. A proposed new curb cut along the tax lot's West 25th Street frontage would provide access to the existing parking lot at the Project Site. Under the Future With-Action Scenario, the parking lot's capacity would be reduced to 143 spaces (a loss of 20 spaces) due to required landscaping improvements. The Future With-Action Scenario also includes an active and passive recreation area, including a multi-purpose field, playground facilities, landscaping, benches, and other amenities, accessible to residents of the Project Site. Representative views of the Project Site under the Future With-Action Scenario development conditions are provided in **Figure 8-3**.

While the Proposed Actions would permit development at the Project Site beyond what is currently permitted by the existing mapped R6 zoning district, the resultant development would be consistent and complementary to existing development in the area. The proposed building's height (185 feet) and overall gross square footage (up to 440,000 GSF) are comparable to that of the existing building at the Project Site (178 feet and 380,000 GSF, respectively). This development typology would be consistent with the above-described existing development on tax blocks located between Mermaid and Surf Avenues, defined by residential tower-style development (ranging from 17 to 24 stories near the Project Site) with landscaped open space at their base. The proposed groundfloor community center and retail uses would activate the streetscape with pedestrians, improving the walkability and visual character of the area. Additionally, the redevelopment of the interior lot with active and passive recreation use would also activate currently underutilized land.

8.3.4 Conclusions

The development facilitated by the Proposed Actions would not adversely impact any of the constituent urban design elements or impact the overall character of the neighborhood. It would not significantly change the pedestrian experience, nor would it disturb the vitality, walkability, or visual character of the area. While the Proposed Actions would permit new development larger in scale and height than could be developed under existing zoning, the proposed development is consistent with tower-style residential development on tax blocks between Mermaid and Surf avenues in terms of scale, density, and height. Additionally, the development with a ground floor community center and retail uses, as well the private recreational courtyard, would improve walkability and the visual character of the area, and would also provide locally serving retail uses. Therefore, the Proposed Actions would not result in any significant adverse impact on the constituent elements of urban design, and a detailed analysis is not warranted.

9 HAZARDOUS MATERIALS

9.1 Introduction

According to the *2021 CEQR Technical Manual*, the potential for significant impacts from hazardous materials can occur when: (a) hazardous material exists on a site, and (b) an action would increase pathways to their exposure, or (c) an action would introduce new activities or processes using hazardous materials.

9.2 Methodology

The hazardous materials assessment begins with a Phase I Environmental Site Assessment (ESA), which is a qualitative evaluation of the environmental conditions present at a site, based on a review of available information, site observations, and interviews. Pursuant to the *2021 CEQR Technical Manual*, the Phase I ESA is conducted in accordance with the standards established by the current ASTM Phase I ESA Standard and includes research and field observations to determine whether the site may contain contamination from either past or present activities on the site or as a result of activities on adjacent or nearby properties. If potential Recognized Environmental Conditions (RECs) are identified during this assessment, then any subsurface investigations are usually conducted as part of a Phase II ESA to confirm the presence and extent of the contamination.

9.3 Analysis

As discussed in **Section 1, Project Description**, the Proposed Actions would result in the redevelopment of a vacant portion of the Project Site with a mixed-use multi-family residential, commercial, and community facility building. Accordingly, a Phase I ESA was conducted at the Project Site by EFI Global, Inc. (EFI) in March 2023. The following subsections summarize the findings of that and subsequent hazardous materials studies.

9.3.1 EFI Phase I ESA, March 2023

The purpose of the Phase I ESA was to determine whether any type of environmental hazard exists within or adjacent to the Applicant's Development Site. Environmental hazards may include, but are not limited to, hazardous/toxic wastes or raw chemicals stored, dumped, or spilled on the site, underground and above ground storage of petroleum or hazardous materials; asbestos within the building materials/structures; and identification of potential off-site sources of hazardous waste contamination, such as industrial facilities adjacent to the development site.

Recognized Environmental Conditions (RECs) are defined as the presence or likely presence of any hazardous substances or petroleum products under conditions that indicate an existing release, past release, or a material threat of a release into structures on the property or into the ground, groundwater or surface waters of the property. De minimis RECs are those that do not present a threat to health or the environment and would not be the subject of an enforcement action by a government agency. All RECs, excluding de minimis RECs, were considered in the Phase I ESA.

EFI performed a Phase I ESA in March 2023 in conformance with the scope and limitations of ASTM Practice E 1527-13 and E1527-21. It is noted that this Phase I ESA only considered a 1.49-acre southwest portion of the overall 3.53-acre Project Site. The portion of the Project Site to be redeveloped is comprised of mostly vacant land with a few improvements, including concrete sidewalks and a steel bridge over a land depression.

The Phase I ESA identified the following RECs:

- REC No. 1: The historical use of the dry-cleaning facilities adjacent to the east of the Project Site at 2970 West 24th Street in 1934 and at 2944 West 24th Street, adjacent to the northeast of the Project Site in 1966 until sometime between 1968 and 1977, present vapor encroachment conditions.

The Phase I ESA did not identify any Historical RECs or Controlled RECs. The Phase I ESA identified the following Business Environmental Risks (BERs):

- BER No. 1: Historic fill was not identified at the Project Site through a review of published sources. However, given the elevation differences noted across different portions of the Project Site, the observed presence of construction debris (brick wall remnants) at the surface in the vicinity of the former buildings, and information provided by the Site Manager of the east-adjoining apartments indicating that the mounds on the western portion of the Property consist of debris from the prior structures as well as soil excavated during construction of the east-adjoining apartments, EFI cannot discount the possibility that historic fill may be present at the Subject Property.

Phase I ESA Recommendations

Given the proposed rezoning and development plans for the Project Site, soil disturbance, and removal factors must be considered. A limited Phase II subsurface investigation consisting of soil, soil-gas, and groundwater sampling was recommended at the northeast, east, and southwest portions of the Project Site to determine if residual contamination is present in soil and groundwater and if a potential vapor encroachment condition exists for the future building. The findings of the investigation will assist in determining if a Soil Management Plan, sub-slab vapor barrier, and/or vapor mitigation system will be needed to be designed and implemented as part of planned construction activities.

A copy of the Phase I ESA is provided in **Appendix C** of this EAS.

9.3.2 Phase II Limited Subsurface Investigation, May 2023

A Phase II Limited Subsurface Investigation (LSI) was performed on May 18th and 19th of 2023, which included six (6) soil borings that were advanced to a maximum depth of 20 feet bgs. The locations of the soil borings were biased to the previously referenced RECs and potential vapor encroachment conditions identified in the Phase I ESA. One (1) soil sample was collected from each soil boring for a total of six (6) soil samples submitted for analysis. Three (3) soil borings had a temporary monitoring well installed and three (3) groundwater samples were collected and submitted for analysis. The soil and groundwater samples were analyzed for Volatile Organic Compounds (VOCs) by EPA Method 8260 and Semi-Volatile Organic Compounds (SVOCs) by EPA Method 8270. See Figure 5 for the previously sampled locations.

All six (6) soil samples submitted for analysis had concentrations below New York State (NYS) unrestricted use soil cleanup objectives. Groundwater samples SB-1 and SB-3 exceeded NYS Groundwater Quality Standards (GWQS) for chloroform. Groundwater sample SB-5 exceeded NYS GWQS for chrysene, benzo(a)pyrene, and indeno(1,2,3-cd)pyrene.

A full copy of the Phase II LSI report is included in **Appendix C** of this EAS.

9.3.3 Phase II Investigation Workplan, April 2024

Based on the results of the Phase II LSI, EFI prepared a Phase II investigation Workplan in February 2024, which was subsequently reviewed by DEP and revised in April 2024 pursuant to feedback provided by the agency. The Phase II Investigation Workplan will include:

- Geophysical Survey
- Soil, Groundwater, and Soil Vapor Summary
- Soil Sampling
- Groundwater Sampling
- Soil Vapor Sampling
- Sample Analysis
- Quality Assurance / Quality Control Procedures
- Investigation Derived Waste
- Report
- Investigation Health and Safety Plan (HASP)

Copies of the Phase II Investigation Workplan and HASP are provided in **Appendix C** of this EAS.

10 WATER AND SEWER INFRASTRUCTURE

10.1 Introduction

As defined in the *2021 CEQR Technical Manual*, infrastructure comprises the physical systems that support populations and includes structures such as water mains and sewers, bridges and tunnels, roadways, and electrical substations. These structures are static and thus have defined capabilities that may be affected by growth in a particular area. This chapter assesses the potential effects of the Proposed Actions on the City's water supply, sanitary sewage, and stormwater management infrastructure in accordance with the *2021 CEQR Technical Manual*. The purpose of the Water and Sewer Infrastructure analysis is to determine whether the Proposed Actions may adversely affect the City's water distribution or sewer systems.

10.2 Methodology

This analysis of water and sewer infrastructure follows the guidelines outlined in the *2021 CEQR Technical Manual* for a preliminary assessment (Chapter 13, Section 320). According to the *2021 CEQR Technical Manual*, a preliminary analysis of water and sewer infrastructure is generally only necessary for projects that increase density or change drainage conditions. In addition to water supply, conveyance, and wastewater resource recovery facility (WRRF) assessments, stormwater management is an integral component of an infrastructure analysis due to potential environmental impacts related to how much the built sewer and conveyance system can handle, and related effects such as street flooding, surcharging sewers downstream, sewer back-ups (SBUs), increases in combined sewer overflows (CSOs), and pollutant loadings contained in CSOs or direct stormwater discharges to the City's surrounding waterbodies.

The *2021 CEQR Technical Manual* establishes several thresholds to determine if a proposed action requires an analysis of water and sewer infrastructure. As indicated in the accompanying EAS Form, the Project Site is located in a separately sewered area and the Future With-Action Scenario would result in the development of more than 100 dwelling units, such that a preliminary analysis of water and sewer infrastructure is required.

10.3 Preliminary Water and Sewer Infrastructure Analysis

10.3.1 Water Supply

Pursuant to the *2021 CEQR Technical Manual*, a preliminary water supply infrastructure analysis is needed if the Future With-Action Scenario meets any of the following criteria:

- Would result in an exceptionally large demand for water (e.g., those that are projected to use more than one million gallons per day such as power plants, very large cooling systems, or large developments); or
- Is located in an area that experiences low water pressure (e.g., areas at the end of the water supply distribution system such as the Rockaway Peninsula and Coney Island).

The Project Site is located in Coney Island (an area identified as potentially experiencing low water pressure) such that a preliminary water supply analysis is required.

Water Demand

Existing Conditions

The Project Site is developed with a multi-family residential building containing 360 dwelling units, with an estimated population of 868 persons, using an average household size of 2.41 persons (based on 2017-21 ACS data for the Coney Island-Seagate NTA). Pursuant to *Table 13-2* of the *2021 CEQR*

Technical Manual, water use in residential uses is 100 gallons be day (gpd) per person; based on that rate, water demand at the existing building is projected to be 86,800 gallons per day gpd.

Future No-Action Scenario

Absent the Proposed Actions, undeveloped portions of the Project Site would be developed with the following development program (including associated water demand calculations:

- A six (6) unit residential building

  Based on the same 2.41-person average household size, this building is anticipated to result in 14 new residents at the Project Site with a 1,400 gpd water demand (using the aforementioned 100 gpd per person factor).
- A 213,616 GSF medical office facility

  Based on the *2021 CEQR Technical Manual* specified factor of 0.27 gpd / square foot (SF)[14] for office uses, the 213,616 GSF medical office facility is projected to result in a water demand of 57,677 gpd.

In total, new development associated with the Future No-Action Scenario is projected to have a total water demand of 59,077 gpd; in combination with existing water demand at the Project Site (86,800 gpd), the overall water demand under the Future No-Action Scenario is projected to be 145,877 gpd.

Future With-Action Scenario

The Future With-Action Scenario would result in the redevelopment of the undeveloped portions of the Project Site with a one- (1-) to 17-story, 440,000-GSF mixed-use multi-family residential building with 415 dwelling units and 15,000 GSF of ground floor community facility space and 10,000 GSF of groundfloor retail spaces. Based on a 2.41-person per household average, the Future With-Action Scenario would generate approximately 1,000 persons (a 986-person increase over the Future No-Action Scenario). The projected water demand associated with each of these proposed uses is provided below.

- 415 Residential Dwelling Units

  As previously discussed, the proposed 415 dwelling units are projected to generate 1,000 persons. Using a water demand factor of 100 gpd per person pursuant to the *2021 CEQR Technical Manual*, the residential component of the Future With-Action Scenario has a projected pater demand of 100,000 gpd.
- 15,000 GSF Community Center Spaces

  Based on the *2021 CEQR Technical Manual* specified factor of 0.27 gpd / SF for office uses, the 15,000 GSF community center is projected to result in a water demand of 4,050 gpd.
- 10,000 GSF Retail Space

  Based on the *2021 CEQR Technical Manual* specified factor of 0.41 gpd / square foot (SF)[15] for retail stores, the 10,000 GSF retail space is projected to result in a water demand of 4,700 gpd.

In total, new development associated with the Future With-Action Scenario is projected to have a total water demand of 108,750 gpd; in combination with existing water demand at the Project Site (86,800 gpd), the overall water demand under the Future With-Action Scenario is projected to be 195,550 gpd.

[14] This factor includes 0.10 gpd / SF for domestic use and 0.17 gpd / SF for air conditioning for commercial office spaces.
[15] This factor includes 0.24 gpd / SF for domestic use and 0.17 gpd / SF for air conditioning for retail stores.

Pursuant to the *2021 CEQR Technical Manual*, a water demand of 195,550 gpd is not considered a significantly large water demand (i.e., greater than one million gpd).

Water Pressure

Based on a review of the West 22nd – West 23rd Street Coney Island Rezoning EAS ("West 22nd Street EAS"; CEQR No. 18DCP064K, approved in August 2018), the Project Site is not located within an area of low water pressure despite being located within the Coney Island neighborhood. The West 22nd Street EAS analyzed a rezoning of a large portion of Brooklyn Block 7071 (located approximately 355 feet southeast of the Project Site - see **EAS Figure 2**), including an incremental water demand increase of approximately 40,000 gpd. The NYC Department of Environmental Protection (DEP) reviewed the West 22nd Street EAS, and in a memorandum dated January 5, 2018, stated that "existing water mains around the subject property are being upgraded and should be able to handle the estimated increase in water demand." A copy of the water and sewer infrastructure analysis and DEP's determination regarding water supply infrastructure for the West 22nd Street EAS is included in **Appendix D** of this EAS.

Based on the Project Site's proximity to the rezoning area considered in the West 22nd Street EAS, ongoing and future water supply infrastructure improvements in the Coney Island neighborhood cited by DEP are projected to accommodate water demand generated by the Future With-Action Scenario.

Water Supply Conclusions

Based on the foregoing, the Future With-Action Scenario would not generate a significant water demand (i.e., greater than 1,000,000 gpd) nor would it be located in an area of low water pressure or insufficient water distribution infrastructure, such that further water supply analysis is not required.

10.3.2 Wastewater and Stormwater Conveyance and Treatment

The Future With-Action Scenario would result in the redevelopment of the Project Site, which is within a mapped R6 district and a NYC municipal separate storm sewer (MS4) area, with 415 new dwelling units, pursuant to Table 13-1 of the *2021 CEQR Technical Manual*, requires a preliminary analysis of wastewater and stormwater conveyance and treatment.

Existing Conditions

Stormwater Conveyance

The Project Site is located within a NYC MS4 district of the Coney Island Sewershed (see **Figure 10-1**). MS4s are a publicly-owned conveyance or system of conveyances (including but not limited to streets, ditches, catch basins, curbs, gutters, and storm drains) that are designed or used for collecting or conveying stormwater and discharge to surface waters of New York State. Separate storm sewers carry stormwater runoff directly to local waterbodies and serve approximately 30 to 40 percent of New York City.

The Project Site is characterized by a mix of developed and undeveloped areas; developed areas of the Project Site include the existing building in the eastern half of the property and the parking lot in the northern portion of the Project Site while the western half of the property is characterized by undeveloped softscape areas (see **Figure 10-2**). Stormwater runoff generated at developed portions of the Project Site is directed to both the undeveloped portions of the Project Site where it can naturally infiltrate as well as catch basins along the adjoining street network, including Surf Avenue and West 24th and West 25th Streets. As previously mentioned, the Project Site is located within an MS4 district and situated within three separate drainage areas, including CI-663 (encompassing the southern two-thirds of the Project Site), CI-665 (encompassing a small northeast portion of the Project Site), and

CI-601 (encompassing a small northwest portion of the Project Site). The CI-663 drainage area discharges stormwater directly to the Lower New York Bay / Gravesend Bay via the CI-663 outfall located near the southern terminus of West 23rd Street near the Coney Island Beach and Boardwalk while the Ci-601 and CI-665 drainage areas discharge to Coney Island Creek via to separate outfalls; the CI-601 outfall is located along Kaiser Park's shoreline and the Ci-665 outfall is located at the northern terminus of West 21st Street. Refer to **Figure 10-1** for a visualization of the Project Site's location within the three separate drainage areas as well as the location of the outfalls associated with those drainage areas.

Based on DEP's Volume Calculation Matrix (see **Appendix D**), existing drainage conditions at the Project Site are projected to generate up to 0.14 million gallons (MG) of stormwater runoff during a 2.5-inch rain event, directly discharged to the Lower New York Bay / Gravesend Bay via the CI-663 outfall and Coney Island Creek via the CI-603 and CI-665 outfalls. Stormwater runoff coefficient and volume calculations, as summarized from DEP's Volume Calculation Matrix (see **Appendix D**) are provided below in **Table 10-1** and **Table 10-2**.

Table 10-1, Existing Conditions, Surface Runoff Calculations[1]

Surface Type	Roof	Pavement and Walks	Other	Soft Scape	*TOTAL*
Area (%)	13%	44%	0%	43%	***100%***
Surface Area (SF)	19,878 SF	67,438 SF	0 SF	66,264 SF	***153,580 SF***
Runoff Coefficient	1.00	0.85	0.85	0.20	***0.59***

Note(s):
[1] Calculations and other details provided in DEP's Volume Calculation Matrix (see **Appendix D**)

Table 10-2, Existing Conditions, Surface Runoff Coefficient Calculations[1]

Rainfall (inches)	Duration (hours)	Total Area (Acres)	Weighted Runoff Coefficient[2]	Stormwater Runoff (MG)
0.00	3.80	3.53	0.59	0.00
0.40	3.80	3.53	0.59	0.02
1.20	11.30	3.53	0.59	0.07
2.50	19.50	3.53	0.59	0.14

Note(s):
[1] Calculations and other details provided in DEP's Volume Calculation Matrix (see **Appendix D**)
[2] As calculated in Table 10-1 above.

Sanitary Wastewater Conveyance

Pursuant to the *2021 CEQR Technical Manual*, the factors used to calculate water demand for residential uses are equivalent to those used for sanitary wastewater generation. Therefore, under existing conditions, the Project Site is estimated to generate approximately 86,800 gpd of sanitary wastewater. This sanitary wastewater would be discharged to the local sewer system and treated by the Coney Island Wastewater Resource Recovery Facility (WRRF).

Figure 10-1, Project Area Sewer Infrastructure

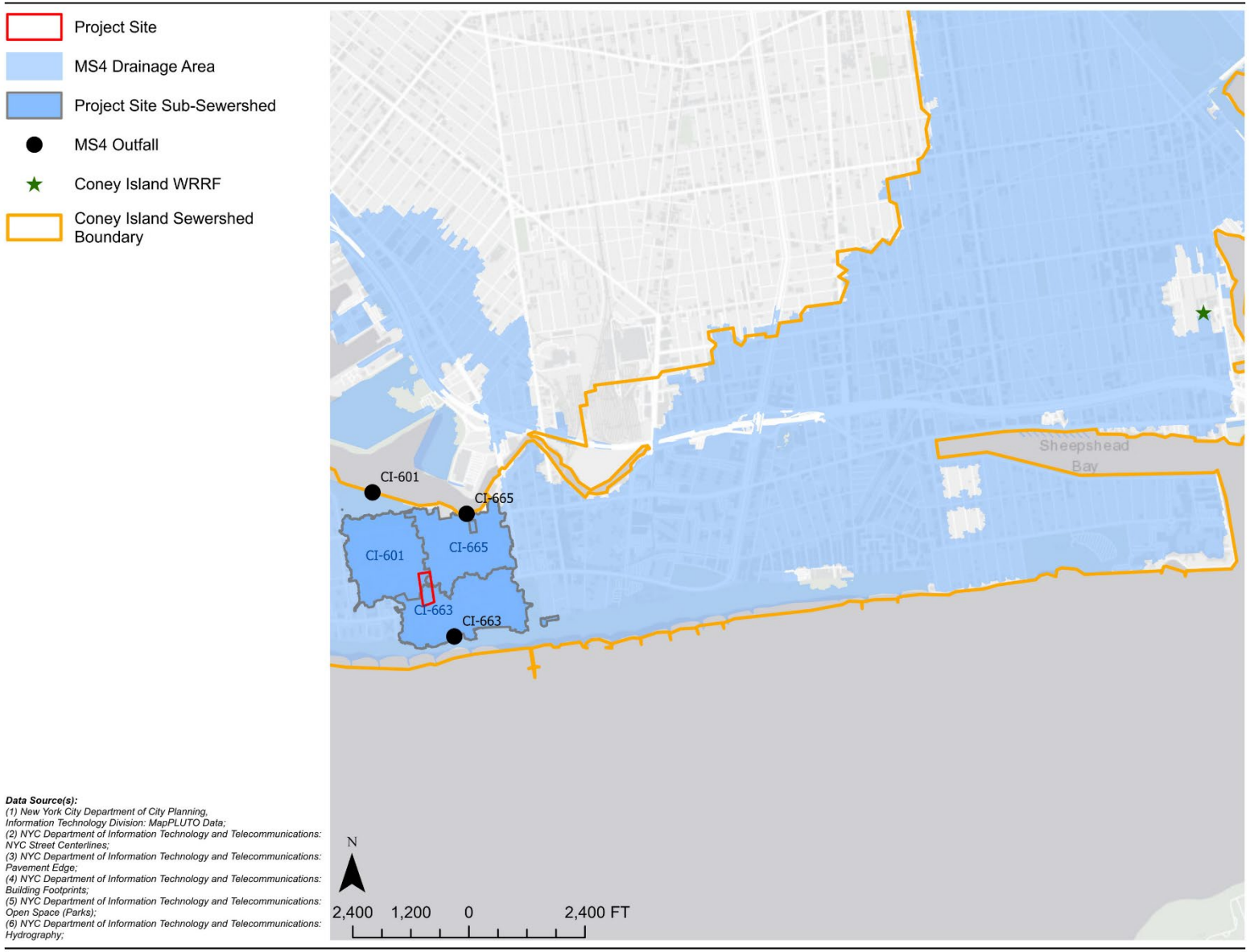
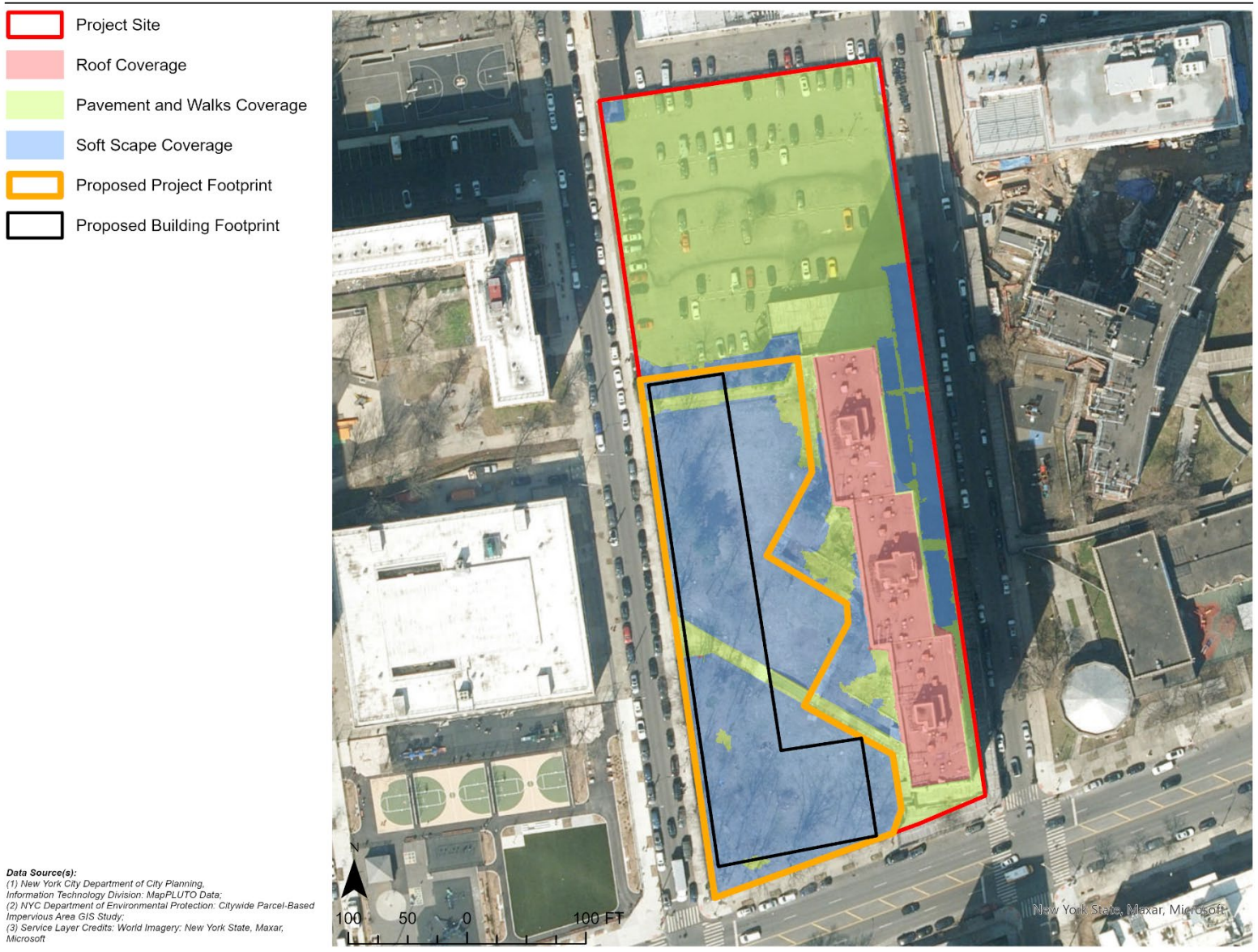


Figure 10-2, Project Site Permeability Coverages Map



Data Source(s):
(1) New York City Department of City Planning, Information Technology Division: MapPLUTO Data;
(2) NYC Department of Environmental Protection: Citywide Parcel-Based Impervious Area GIS Study;
(3) Service Layer Credits: World Imagery: New York State, Maxar, Microsoft

It is noted that the Coney Island Wastewater Resource Recovery Facility (WRRF), which receives and treats sanitary wastewater generated in the Coney Island Sewershed, is currently undergoing a $110 million upgrade, which began in early 2021. The upgrade project will replace the Main Sewage Pumps (MSP) system, which was built in the 1980s and has operated continuously for more than 30 years. The system and its associated motors, suction and discharge piping, valves, motor starters, and associated electrical equipment and controls are due for replacement. Upgrades at the facility will include the facility's six main sewage pumps, discharge piping, force main, and valves in the existing dry well. New motors, controllers, and associated electrical equipment will also be provided for the pump system. It is anticipated that the work will be completed in 2025.[16]

Pursuant to information provided by the DEP,[17] the Coney Island WRRF has been in operation since 1935 and serves 596,326 persons located in southern and central Brooklyn. The Coney Island WRRF has a design capacity of 110 million gallons per day (MGD) and discharges treated wastewater to Jamaica Bay.

Future No-Action Scenario

Stormwater Conveyance

Absent the Proposed Actions, undeveloped western portions of the Project Site would be redeveloped with a three (3) story, six (6) dwelling unit residential building and a 213,616 GSF, nine (9) story medical office facility. These two buildings would add approximately 26,808 SF of roof area, in locations that are generally considered pervious, to the Project Site, such that additional stormwater is anticipated to be generated at the Project Site under the Future No-Action Condition. Pursuant to the *2021 CEQR Technical Manual*, for the purposes of the stormwater conveyance analysis, the combined effect of changes in permeability at a site in the Future No-Action and Future With-Action Scenarios is considered, such that these additional roof areas will be considered in the Future With-Action Scenario analysis in the subsequent section.

Sanitary Wastewater Conveyance

Pursuant to the *2021 CEQR Technical Manual*, the factors used to calculate water demand for residential and commercial office uses (exclusive of air conditioning water demand) are equivalent to those used for sanitary waste generation. Therefore, under the Future No-Action Scenario, the Project Site is estimated to generate approximately 109,030 gpd of sanitary wastewater, including 86,800 gpd from existing residential uses (868 residents at 100 gpd), 1,400 gpd from the proposed residential uses (14 residents at 100 gpd), and 21,362 gpd from the proposed medical office use (0.10 gpd / SF and 213,616 SF of medical office space). This sanitary wastewater would be discharged to the local sewer system and treated by the Coney Island Wastewater Resource Recovery Facility (WRRF).

As noted above, the upgrade project at the Coney Island WRRF will be completed by the 2027 Project Build Year.

Future With-Action Scenario

Stormwater Conveyance

Under the Future With-Action Scenario, the western undeveloped portion of the Project Site would be redeveloped with a one- (1-) to 17-story, up to 440,000-GSF mixed-use multi-family residential building with 415 dwelling units and up to 15,000 GSF of ground floor community facility space and up to 10,000 GSF of groundfloor retail spaces. Additionally, the central courtyard area created by the

[16] https://www.nyc.gov/site/dep/news/21-020/-110-million-upgrade-coney-island-wastewater-resource-recovery-facility-will-ensure-continued#/0, accessed December 20, 2023
[17] https://www.nyc.gov/site/dep/water/wastewater-treatment-plants.page, accessed December 21, 2023

existing and proposed residential buildings would be redeveloped with a private recreation area. In total, the Future With-Action Scenario is projected to add approximately 31,263 SF of roof area associated with the proposed building and 20,000 SF of a recreational area characterized by pavement and walks (including plaza and sidewalk areas along the proposed building's southern and western frontages), with a corresponding decrease in existing soft scape areas at the Project Site (for the purposes of a conservative analysis, it is assumed the entirety of the area to be redeveloped with the Proposed Project is defined as "soft-scape" concerning its permeability characteristics). See **Figure 10-2** for a visual representation of the Future With-Action Scenario's footprint in relation to existing permeability conditions at the Project Site. Further, development associated with the Future No-Action Scenario would be located entirely within the footprint of the Future With-Action Scenario, such that permeability characteristics associated with the latter take priority when assessing surface runoff flows.

Based on DEP's Volume Calculation Matrix (see **Appendix D**), under the Future With-Action Scenario, the Project Site is projected to generate up to 0.20 million gallons (MG) of stormwater runoff during a 2.5-inch rain event, directly discharged to the Lower New York Bay / Gravesend Bay and Coney Island Creek via the CI-601, CI-663, and CI-665 outfalls. Stormwater runoff coefficient and volume calculations, as summarized from DEP's Volume Calculation Matrix (see **Appendix D**) are provided below in **Table 10-3** and **Table 10-4**.

Table 10-3, Future With-Action Scenario, Surface Runoff Calculations[1]

Surface Type	Roof	Pavement and Walks	Other	Soft Scape	*TOTAL*
Area (%)	33%	57%	0%	10%	***100%***
Surface Area (SF)	51,141 SF	87,438 SF	0 SF	15,001 SF	***153,580 SF***
Runoff Coefficient	1.00	0.85	0.85	0.20	***0.84***

Note(s):
[1] Calculations and other details provided in DEP's Volume Calculation Matrix (see **Appendix D**)

Table 10-4, Future With-Action Scenario, Surface Runoff Coefficient Calculations[1]

Rainfall (inches)	Duration (hours)	Total Area (Acres)	Weighted Runoff Coefficient[2]	Stormwater Runoff (MG)
0.00	3.80	3.53	0.84	0.00
0.40	3.80	3.53	0.84	0.03
1.20	11.30	3.53	0.84	0.10
2.50	19.50	3.53	0.84	0.20

Note(s):
[1] Calculations and other details provided in DEP's Volume Calculation Matrix (see **Appendix D**)

Pursuant to the *2021 CEQR Technical Manual*, increases of two (2) percent or more in stormwater flow from a Project Site in certain drainage areas (such as the Coney Island Creek drainage area, in which the Project Site is partially located) necessitate further review of the completed Volume Calculation Matrix by DEP. Projected increases in stormwater runoff at the Project Site are quantified below in **Table 10-5**.

Table 10-5, Projected Stormwater Runoff Increases[1]

Rainfall (inches)	Duration (hours)	Existing Conditions Stormwater Runoff (MG)	Future With-Action Scenario Stormwater Runoff (MG)	Projected Stormwater Runoff Increase (Number / %)
0.00	3.80	0.00	0.00	0.00 / 0 %
0.40	3.80	0.02	0.03	0.01 / 50 %
1.20	11.30	0.07	0.10	0.10 / 43 %
2.50	19.50	0.14	0.20	0.20 / 43%

Note(s):
[1] Calculations and other details provided in DEP's Volume Calculation Matrix (see **Appendix D**)

The Future With-Action Scenario would result in increases in stormwater runoff, ranging from 43 to 50 percent, compared to existing conditions. This can be attributed to the loss of large, undeveloped portions of the Project Site, which serve as areas of natural infiltration during precipitation events. Based on these increases, the Proposed Project and its associated stormwater runoff calculations warrant further review by DEP.

It is noted that the Proposed Project would incorporate stormwater detention tanks at the Project Site to capture and retain stormwater runoff generated on-site during precipitation events and delay its release into the local MS4 infrastructure. Further, all new stormwater management practices and storm sewer infrastructure will be designed in accordance with the NYC DEP Unified Stormwater Rule and will be reviewed by NYC DEP through the project Stormwater Pollution Prevention Plan (SWPPP).

Sanitary Wastewater Conveyance

Pursuant to the *2021 CEQR Technical Manual*, the factors used to calculate water demand for residential office, and retail uses (exclusive of air conditioning water demand) are equivalent to those used for sanitary waste generation. Therefore, under the Future With-Action Scenario, the Project Site is estimated to generate approximately 190,700 gpd of sanitary wastewater, including 86,800 gpd from existing residential uses (868 residents at 100 gpd), 100,000 gpd from proposed residential uses (1,000 residents at 100 gpd), 2,400 gpd from proposed retail uses (based on a rate of 0.24 gpd / SF and 10,000 GSF of retail uses), and 1,500 gpd from the proposed community center uses (based on a rate of 0.10 gpd / SF and 15,000 GSF of community center space). This Future With-Action Scenario projected sanitary wastewater flow represents an approximate 74.9 percent increase over existing the Future No-Action Scenario, respectively.

Sanitary sewage flows generated by the Future With-Action Scenario would be directed to the local sanitary sewer system (separate from the MS4 system), which would convey sanitary wastewater generated at the Project Site to the Coney Island WRRF, which has a capacity of 110 MGD. Sanitary wastewater flows generated by the Future With-Action Scenario would be greater than existing and Future No-Action Scenario wastewater flows. NYC DEP, in their review of the EAS, will determine whether the projected increased flows would be considered significant.

10.4 Conclusions

The Future With-Action Scenario would not result in significant impacts on water supply since the projected development would not generate an exceptionally large water demand nor is it located in an area that experiences low water pressure or inadequate water supply infrastructure. As such, no significant adverse impacts to the water supply infrastructure would be anticipated.

The Future With-Action Scenario would result in increases in stormwater runoff generation at the Project Site and, in combination with the implementation of stormwater detention tanks as part of the

Proposed Project, the Future With-Action Scenario could improve stormwater management and conveyance conditions at the Project Site and the local infrastructure network.

The Future With-Action Scenario is projected to generate a 74.9 percent increase in sanitary wastewater over the Future No-Action Scenario.

Given these measures, it is not anticipated that the increase in stormwater and/or sanitary wastewater flows generated by the Proposed Actions would result in significant adverse impacts. It is not anticipated that the increases in sanitary sewage flows generated by the project would exceed the capacity of existing sewer lines servicing the Project Site or the design capacity of the Coney Island WRRF.

Based on the foregoing, no significant adverse impacts to the water and sewer infrastructure are therefore anticipated and no further analysis is warranted.

11 TRANSPORTATION

11.1 Introduction

Pursuant to the *2021 CEQR Technical Manual* methodology, a transportation assessment may be necessary when a proposed action would alter the transportation network by closing, opening, or realigning an element of the transportation system such as a roadway, pedestrian way, or transit route, or if it would generate new trips on the transportation network. The objective of the transportation analyses is to determine whether a proposed project may have a potentially significant impact on traffic operations and mobility, public transportation facilities and services, pedestrian elements and flow, safety of all roadway users (pedestrians, bicyclists, and vehicles), on- and off-street parking, or goods movement.

This chapter assesses the potential for project-generated vehicle, transit, and pedestrian trips to affect the local transportation network.

11.2 Transportation Analysis Framework

11.2.1 Existing Conditions

The Project Site is currently developed with a 19-story, 380,000-gross-square-foot (gsf), 2.39 FAR multi-family residential building featuring 360 affordable dwelling units located in the eastern half of the property. The western half of Lot 13 is undeveloped and landscaped.

11.2.2 Future No-Action Scenario

Absent the Proposed Actions, the Applicant could reasonably develop the undeveloped western portion of the Project Site with a nine-story, 213,616-GSF medical office facility (0.98 FAR). In addition, a 6,390-GSF (0.04 FAR), three-story residential building containing six (6) affordable dwelling units could be developed with the remaining available residential density at the Project Site. Combined with the existing 19-story, 360-unit residential building that would remain on the eastern half of the property, there would be a total of 366 residential units under the Future No-Action Scenario.

11.2.3 Future With-Action Scenario

As a result of the Proposed Actions, the western half of the property would be developed with a one- to 17-story, up to 440,000-GSF mixed-use multi-family residential building with ground floor community facility and commercial spaces. There would be a total of up to 415,000 GSF of residential floor area throughout the building containing 415 residential dwelling units. Additionally, there would be up to 15,000 GSF and up to 10,000 GSF ground floor community facilities and commercial retail spaces, respectively.

11.3 Preliminary Transportation Assessment

The Project Site is within Traffic Zone 4. According to Table 16-1 of the *2021 CEQR Technical Manual,* in this zone, the development of fewer than 200 residential units, 75,000 square feet of commercial office, 10,000 square feet of local retail, 15,000 square feet of community facility space, or a weighted average below 1.00, typically does not warrant further assessment of the potential for adverse effects on transportation. While the Proposed Actions would result in a decrease in community facility space, as discussed above, the 415 new dwelling units and 10,000 new square feet of local retail space exceed their thresholds and Level 1 Trip Generation screening is therefore provided below.

11.3.1 Level 1 Trip Generation Assessment

The *2021 CEQR Technical Manual* states that a preliminary Level 1 Trip Generation Screening Assessment should be prepared to determine whether a quantified analysis of any technical areas of the transportation system is necessary. Except in unusual circumstances, a further quantified analysis would typically not be needed for a technical area if the Proposed Project would result in fewer than the following increments:

- 50 peak-hour vehicle trips;
- 200 peak-hour subway/rail or bus transit riders (or 50 bus trips in a single direction on a single route during a peak hour);
- 50 CWFS Ferry Trips; or
- 200 peak hour pedestrian trips.

The *2021 CEQR Technical Manual* also states that if the threshold for traffic is surpassed, a parking assessment may also be warranted.

Transportation Planning Assumptions

As described below in more detail for individual land uses, the CEQR TM; East New York Rezoning FEIS; and American Community Survey (ACS) 2018-2022 5-year journey-to-work census data for Brooklyn tracts 326, 328, 330, 340, 342, 348, and 352 were used to develop the Travel Demand Factors as shown in **Table 11-1** below. **Table 11-2** and **Table 11-3** below shows the person trips, transit and pedestrian trips, and vehicular trips generated based on the travel demand factors presented in **Table 11-1**.

Residential

The daily person trip generation rates, temporal and directional distributions, and truck trip generation rates are based on the *2021 CEQR Technical Manual*. The modal splits and auto vehicle occupancy rate are based on 2018-2022 American Community Survey (ACS) journey-to-work data for census tracts 326, 328, 330, 340, 342, 348, and 352, while the taxi vehicle occupancy rate is based on the 2016 East New York Rezoning FEIS.

Local Retail

The daily person trip generation rates, temporal and directional distributions, modal splits, and truck trip generation rates are based on the *2021 CEQR Technical Manual.* The vehicle occupancy rates are based on the 2016 East New York Rezoning FEIS. A linked-trip credit of 50 percent was applied per *2021 CEQR Technical Manual* guidelines. This linked-trip credit reflects the assumption that half of the local retail trips would be uniquely generated, while the other half are expected to be trips that are already generated by the adjacent residential component that includes an additional “link” to the local retail component.

Community Facility (Medical Office)

The daily person trip generation rates, temporal and directional distributions, modal splits, and truck trip generation rates are based on the *2021 CEQR Technical Manual*. The vehicle occupancy rates are based on the 2016 East New York Rezoning FEIS.

Table 11-1, Travel Demand Factors

	Residential		Local Retail		Community Facility	
Trip Generation	(1)		(1)		(1)	
Weekday	8.18		329		66.626x + 141.77	
Saturday	9.08		358		37	
	per dwelling unit		per 1,000 sf		per 1,000 sf	
Linked-trip Credit			50%			
Temporal Distribution	(1)		(1)		(1)	
AM	9.30%		4.80%		11.00%	
MD	5.60%		8.00%		12.60%	
PM	8.50%		10.90%		8.50%	
Sat MD	8.40%		11.70%		16.60%	
Modal Splits	(2)		(1)		(1)	
Auto	20.5%		11%		53.0%	
Taxi	2.5%		0.0%		14.0%	
Bus	7.7%		2%		7.0%	
Subway	58.5%		3%		6.0%	
Walk/Other	10.7%		84%		20.0%	
In/Out Splits	In (1)	Out (1)	In (1)	Out (1)	In (1)	Out (1)
AM	22%	78%	53%	47%	62%	38%
MD	50%	50%	50%	50%	53%	47%
PM	62%	38%	50%	50%	39%	61%
Sat MD	55%	45%	50%	50%	54%	46%
Vehicle Occupancy	(2) (3)		(3)		(3)	
Auto	1.07		2.00		1.50	
Taxi	1.30		2.00		1.50	
Truck Trip Generation	(1)		(1)		(1)	
Weekday	0.06		0.35		0.32	
Saturday	0.02		0.04		0.01	
Temporal Distribution	(1)		(1)		(1)	
AM	12.00%		8.00%		10.00%	
MD	9.00%		11.00%		11.00%	
PM	2.00%		2.00%		2.00%	
Saturday	9.00%		11.00%		11.00%	
In/Out Splits	In (1)	Out (1)	In (1)	Out (1)	In (1)	Out (1)
AM/MD/PM/Sat	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%

Notes:
(1) – 2021 CEQR Technical Manual
(2) – JTW ACS 2018-2022 Brooklyn Census Tracts 326, 328, 330, 340, 342, 348, 352
(3) – East New York Rezoning FEIS

Table 11-2, Project Generated Person Trips

	Residential		Local Retail		Community Facility		Total		
Size (gsf)	409 du		10,000 gsf		-198,616 gsf				
Peak Hour Trips									
AM	311		79		-1440		-1050		
MD	187		132		-1649		-1331		
PM	284		179		-1113		-649		
Sat MD	312		209		-1220		-699		
Person Trips									
AM	In	Out	In	Out	In	Out	In	Out	In/Out Total
Auto	14	50	5	4	-473	-290	-455	-236	-691
Taxi	2	6	0	0	-125	-77	-123	-70	-194
Bus	5	19	1	1	-62	-38	-56	-19	-75
Subway	40	142	1	1	-54	-33	-12	110	98
Walk/Other	7	26	35	31	-179	-109	-136	-52	-188
Total	68	243	42	37	-893	-547	-783	-267	-1050
MD	In	Out	In	Out	In	Out	In	Out	In/Out Total
Auto	19	19	7	7	-463	-411	-437	-384	-821
Taxi	2	2	0	0	-122	-109	-120	-106	-226
Bus	7	7	1	1	-61	-54	-53	-46	-98
Subway	55	55	2	2	-52	-47	4	10	15
Walk/Other	10	10	55	55	-175	-155	-110	-90	-199
Total	94	94	66	66	-874	-775	-715	-616	-1331
PM	In	Out	In	Out	In	Out	In	Out	In/Out Total
Auto	36	22	10	10	-230	-360	-184	-328	-512
Taxi	4	3	0	0	-61	-95	-56	-92	-149
Bus	14	8	2	2	-30	-48	-15	-37	-52
Subway	103	63	3	3	-26	-41	80	25	105
Walk/Other	19	12	75	75	-87	-136	7	-49	-41
Total	176	108	90	90	-434	-679	-168	-481	-649
Saturday	In	Out	In	Out	In	Out	In	Out	In/Out Total
Auto	35	29	12	12	-349	-297	-302	-257	-560
Taxi	4	4	0	0	-92	-79	-88	-75	-163
Bus	13	11	2	2	-46	-39	-31	-26	-57
Subway	100	82	3	3	-40	-34	64	52	116
Walk/Other	18	15	88	88	-132	-112	-25	-9	-35
Total	172	140	105	105	-659	-561	-382	-316	-699

Table 11-3, Project Generated Vehicle Trips

	Residential		Local Retail		Community Facility		Total		
Vehicle Trips									
AM	In	Out	In	Out	In	Out	In	Out	In/Out Total
Auto	13	47	2	2	-315	-193	-300	-144	-444
Taxi	1	5	0	0	-83	-51	-82	-46	-128
Taxi Balanced	6	6	0	0	-134	-134	-128	-128	-256
Truck	1	1	0	0	-3	-3	-2	-2	-4
Total	20	54	2	2	-452	-330	-430	-274	-704
MD	In	Out	In	Out	In	Out	In	Out	In/Out Total
Auto	18	18	4	4	-309	-274	-287	-252	-539
Taxi	2	2	0	0	-82	-72	-80	-70	-150
Taxi Balanced	4	4	0	0	-154	-154	-150	-150	-300
Truck	1	1	0	0	-3	-3	-2	-2	-4
Total	23	23	4	4	-466	-431	-439	-404	-843
PM	In	Out	In	Out	In	Out	In	Out	In/Out Total
Auto	34	21	5	5	-153	-240	-114	-214	-328
Taxi	3	2	0	0	-41	-63	-38	-61	-99
Taxi Balanced	5	5	0	0	-104	-104	-99	-99	-198
Truck	0	0	0	0	-1	-1	-1	-1	-2
Total	39	26	5	5	-258	-345	-214	-314	-528
Saturday	In	Out	In	Out	In	Out	In	Out	In/Out Total
Auto	33	27	6	6	-233	-198	-194	-165	-359
Taxi	3	3	0	0	-61	-52	-58	-49	-107
Taxi Balanced	6	6	0	0	-113	-113	-107	-107	-214
Truck	0	0	0	0	0	0	0	0	0
Total	39	33	6	6	-346	-311	-301	-272	-573

Trip Generation Summary

The *2021 CEQR Technical Manual* provides a methodology for evaluating the potential impacts of a Proposed Project on the transportation system. In accordance with the *2021 CEQR Technical Manual*, a Level 1 Screening Assessment includes a trip generation analysis to determine whether the project would result in more than 50 vehicle trip-ends, 200 subway/rail or bus transit riders, 50 CWFS ferry trips, or 200 pedestrian trip-ends in a peak hour.

The incremental project-generated trip ends determined based on the Level 1 Trip Generation Screening are summarized below in **Table 11-4**.

Table 11-4, Summary of Project Generated Trip Ends

Peak Hour	AM Peak Hours	Midday Peak Hour	PM Peak Hour	Saturday Peak Hour
Total Subway Trip-Ends	98	15	105	116
Total MTA Bus Trip-Ends	-75	-98	-52	-57
Total Walk-Only Trip-Ends	-188	-199	-41	-35
Total Pedestrian Trip-Ends	-165	-283	11	24
Total Vehicular Trip-Ends	-704	-843	-528	-573

11.4 Conclusions

As indicated in **Table 11-4**, during all identified peak hours, the Proposed Project would result in a decrease in vehicular trips, would generate fewer than 200 subway trips, would result in a decrease in MTA bus trips, and generate fewer than 200 combined pedestrian trips compared to the Future No-Action Scenario, such that no thresholds for additional transportation analyses would be exceeded and, thus, no significant adverse transportation impacts would result and no further analysis is required.

12 AIR QUALITY

12.1 Introduction

When assessing the potential for significant impacts on air quality, the *2021 CEQR Technical Manual* seeks to determine a Proposed Action's effect on ambient air quality or the quality of the surrounding air. Ambient air can be affected by motor vehicles, referred to as "mobile sources," or by fixed facilities, referred to as "stationary sources". This can occur during the operation and/or construction of a project being proposed. The pollutants of most concern are carbon monoxide, lead, nitrogen dioxide, ozone, relatively coarse inhalable particulates (PM_{10}), fine particulate matter ($PM_{2.5}$), and sulfur dioxide. The *2021 CEQR Technical Manual* generally recommends an assessment of the potential impact of mobile sources on air quality when an action increases traffic or causes a redistribution of traffic flows, creates any other mobile sources of pollutants (such as diesel train usage), or adds new uses near mobile sources (e.g., roadways, parking lots, garages). The *2021 CEQR Technical Manual* generally recommends assessments when new stationary sources of pollutants are created, when a new use might be affected by existing stationary sources, or when stationary sources are added near existing sources and the combined dispersion of emissions would impact surrounding areas.

Ambient air quality describes pollutant levels in the surrounding environment to which the public has access. To assess potential health hazards due to ambient air quality, the impact of air pollutants emitted by motor vehicles (mobile source) and by fixed facilities (stationary source) are analyzed, where the effects of both the proposed project on ambient air quality and the ambient air quality effect on the proposed project are considered. The analysis framework, as mandated by the State Environmental Review Act, follows the *2021 CEQR Technical Manual*.

12.2 Methodology

12.2.1 Mobile Sources

According to the *2021 CEQR Technical Manual*, projects, whether site-specific or generic, may result in significant mobile source air quality impacts when they increase or cause a redistribution of traffic; create any other mobile sources of pollutants (such as diesel trains, helicopters, etc.); or add new uses near mobile sources (roadways, garages, parking lots, etc.). Projects requiring further assessment include:

- Projects that would result in the placement of operable windows, balconies, air intakes, or intake vents generally within 200 feet of an atypical source of vehicular pollutants.
- Projects that would result in the creation of a fully or partially covered roadway, would exacerbate traffic conditions on such a roadway or would add new uses near such a roadway.
- Projects that would generate peak hour auto traffic or divert existing peak hour traffic of 170 or more auto trips in this area of the City.
- Projects that would generate peak hour heavy-duty diesel vehicle traffic or its equivalent in vehicular emissions resulting from 12 or more heavy-duty diesel vehicles (HDDVs) for paved roads with average daily traffic of fewer than 5,000 vehicles, 19 or more HDDVs for collector roads, 23 or more HDDVs for principal and minor arterials, or 23 or more HDDVs for expressways and limited-access roads.
- Projects that would result in new sensitive uses (e.g., schools or hospitals) adjacent to large existing parking facilities or parking garage exhaust vents.

- Projects that would result in parking facilities or applications requesting the grant of a special permit or authorization for parking facilities; or projects that would result in a sizable number of other mobile sources of pollution (e.g., a heliport or a new railroad terminal).
- Projects that would substantially increase the vehicle miles traveled in a large area.

The Proposed Actions would not result in operable windows or air intakes within 200 feet of an atypical roadway. It would not result in the creation of a covered roadway or affect any covered roadway. Peak hour trip generation is far below the 170-car threshold, as per the transportation section, as potentially warranting further assessment (see EAS Short Form screen). The project would not generate HDDV equivalent traffic volume of more than 12 – 23 per hour depending on the road types. The project would not create a new sensitive receptor adjacent to large parking facilities. A new curb cut along the site's West 25th Street frontage would provide access to the existing parking lot, for which landscaping improvements are proposed, and would reduce its parking capacity from 163 spaces to 143 spaces. The project would not result in any other mobile sources of pollution and would not significantly increase vehicle miles traveled in a large area. Therefore, no further assessment of the potential for mobile source air quality impacts is warranted.

12.2.2 Stationary Sources

According to the *2021 CEQR Technical Manual*, projects may result in stationary source air quality impacts when one or more of the following occurs:

- New stationary sources of pollutants are created (e.g., emission stacks for industrial plants, hospitals, and other large institutional uses).
- Certain new uses near existing (or planned future) emissions stacks are introduced that may affect the use.
- Structures near such stacks are introduced so that the structures may change the dispersion of emissions from the stacks so that surrounding uses are affected.
- Fossil fuels (fuel oil or natural gas) for heating/hot water, ventilation, and air conditioning systems are used.
- Large emission sources are created (e.g., solid waste or medical-waste incinerators, cogeneration facilities, asphalt/concrete plants, or power-generating plants, etc.).
- New sensitive uses are located near a large emission source.
- Medical, chemical, or research labs are created or result in new uses being located near them.
- Operation of manufacturing or processing facilities is created.
- New sensitive uses created within 400 feet of manufacturing or processing facilities.
- New uses created within 400 feet of a stack associated with commercial, institutional, or residential developments (and the height of the new structures would be similar to or greater than the height of the emission stack).
- Potentially significant odors are created.
- New uses near an odor-producing facility are created.
- "Non-point" sources that could result in fugitive dust are created.
- New uses near nonpoint sources are created.
- A generic or programmatic action is introduced that would change or create a stationary source or that would expose new populations to such a station.

12.3 Preliminary Air Quality Analysis

12.3.1 Analysis Framework

The stationary source analysis will study the potential impacts of the Projected Development on nearby receptors. The Reasonable Worst Case Development Scenario for the Proposed Actions is described below. The Project Site consists of Block 7055, Lot 13 in Brooklyn Community District 13.

The Proposed Actions would result in the development of a one- (1-) to 17-story, up to approximately 440,000-GSF (375,532ZSF) mixed-use residential, community facility and commercial building at the Project Site (see **Figure 1-2** for visual massing of the Future With-Action Scenario). The Future With-Action Scenario includes a total of up to 415 residential dwelling units within up to 415,000 GSF (354,651 ZSF) of residential floor area, all of which would be affordable to a range of income levels under AMI (104 to 125 of which would be made affordable pursuant to either Option 1 or 2 of the MIH program with the other units made affordable pursuant to NYC HPD and HDC financing). The Future With-Action Scenario would also include up to 15,000 GSF (12,725ZSF) and up to 10,000 GSF (8,156 ZSF) of groundfloor community facility and commercial retail spaces, respectively; the commercial retail space would be located on the groundfloor at the corner of the proposed building's Surf Avenue and West 25th Street frontages while there would be two separate community facility spaces located along the interior of West 25th Street frontage. A proposed new curb cut along the tax lot's West 25th Street frontage would provide access to the existing parking lot at the Project Site. Under the Future With-Action Scenario, the parking lot's capacity would be reduced to 143 spaces (a loss of 20 spaces) due to required landscaping improvements. The Future With-Action Scenario also includes an active and passive recreation area, including a multi-purpose field, playground facilities, landscaping, benches, and other amenities, accessible to residents of the Project Site.

12.3.2 Heating and Hot Water Systems

Per the *2021 CEQR Technical Manual*, the HVAC analysis considers the potential for emissions from the HVAC system of the proposed project to significantly impact existing land uses (project-on-existing). Based on CEQR guidelines, a preliminary screening analysis is to be conducted as a first step to predict whether the potential impacts of the heat and hot water system(s) boiler emissions can be significant. The screening analysis determines the threshold of development size below which the action would not have a significant impact. This CEQR screening procedure applies to buildings that are not less than 30 feet from the nearest building of similar or greater height. Otherwise, a detailed dispersion analysis is required.

Screening Assessment

The potential for the heat and hot water system(s) to have a significant adverse impact on nearby receptors depends on the type of fuel that would be used by the HVAC system, the height of the stack venting the emissions, the distance to the nearest building of similar or greater height, the building's use which affects the emissions, and the square footage of the development that would be served by the system. The *2021 CEQR Technical Manual* screening analysis is based on these factors. A detailed analysis is required if the screening analysis fails.

The RWCDS would facilitate the construction of an approximately 185-foot-tall building on the Project Site.

Project-on-Existing

The impact of the Proposed Development on existing land uses is represented by a hypothetical HVAC system serving an approximately 440,000-GSF mixed-use multi-family residential building with ground

floor community facility and commercial uses. In 2021, the New York City Council passed legislation to phase fossil fuels out of new construction starting in 2024. Local Law 154 of 2021 prohibits the onsite combustion of fuels that emit more than 25kg CO_2/MMBTU. The law phases out the usage of fossil fuels in new buildings for heating and service hot water. This also impacts appliances such as domestic cooking ranges and clothes dryers. This law means new buildings, with few exceptions, will be all-electric. Therefore, the Proposed Development will utilize an electrical system as opposed to fossil fuels for the proposed HVAC system. As such, no significant adverse impacts from emissions are anticipated.

12.3.3 Industrial Emissions

The Proposed Actions would introduce a sensitive land use into the area. Accordingly, a preliminary screening was conducted to determine if there were any potential sources of industrial process emissions that could affect project occupants. Industrial sources were identified through a site visit within a 400-foot study area and the New York City Department of Environmental Protection Clean Air Tracking System (DEP CATS) search.

400-Foot Study Area

The Project Site is located within an R6/C1-2 zoning district, and the surrounding area is a mixture of commercial and residential properties. The 400-foot radius was screened for potential sources of industrial emissions and is shown below in **Figure 12-1**. Based on field observations and reviews of DCP land use maps, there are no sites that were identified as potentially containing industrial/manufacturing land uses. Therefore, further analysis of industrial emissions is not warranted.

1,000-Foot Study Area

As outlined in the *2021 CEQR Technical Manual*, projects that would introduce new uses near major sources, large sources, and odor-producing facilities may result in potentially significant adverse air quality impacts. The study area considers major sources, large sources, and odor-producing facilities within 1,000 feet of the Project Site. Major emission sources are identified as those sources located at Title V facilities that require Prevention of Significant Deterioration permits; large emission sources are identified as sources located at facilities that require a State facility permit. Solid waste or medical waste incinerators, asphalt and concrete plants, power generating plants, large boilers of large public facilities, and large industrial facilities are typical types of sources requiring these permits. Odor-producing facilities are operations that have the potential to cause discomfort, such as: solid waste management facilities, water pollution control plants (i.e., sewage treatment plants), and incinerators.

A search using the EPA's Envirofacts database was conducted for large or major source emissions. No existing large or major combustion sources, such as power plants, cogeneration facilities, etc. located within 1,000 feet of the Project Site were identified. As such, an analysis of major emission sources is not warranted.

Conclusions

As indicated above, there are no active industrial uses within the 400-foot study area. In addition, no large or major industrial emission sources were identified within the 1,000-foot study area. Additionally, there is no evidence present to conclude that there are illegal unpermitted air emissions present in the study area. Therefore, a detailed industrial emission analysis is not warranted.

Figure 12-1, Industrial Emissions Screening



13 NOISE

13.1 Introduction

This noise analysis was conducted to assess the potential for adverse noise impacts related to the proposal for rezoning that would result in a new affordable housing development at the Project Site. The Project Site is currently zoned R6/C1-2 and the Applicant is requesting the following Zoning Map Amendments:

- From an R6/C1-2 zoning district to an R6 district (reducing the depth of the existing C1-2 overlay from 150' to 100') along the Site's frontage parallel to Mermaid Avenue.
- From an R6 zoning district to a R7-3 district (mid-block) and
- From an R6 zoning district to an R7-3/C2-4 zoning district along the site's Surf Avenue frontage.

This noise analysis is limited to an assessment of ambient noise that could adversely affect building occupants of the proposed development.

13.2 Framework of Noise Analysis

As defined in the *2021 CEQR Technical Manual* Chapter 19, noise is defined as any unwanted sound, and sound is defined as any pressure variation that the human ear can detect. Humans can detect a large range of sound pressures, from 20 to 20 million micropascals, but only those air pressure variations occurring within a particular set of frequencies are experienced as sound. Air pressure changes that occur between 20 and 20,000 times a second, stated as units of Hertz (Hz), are registered as sound.

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

Sound is often measured and described in terms of its overall energy, taking all frequencies into account. However, the human hearing process is not the same at all frequencies. Humans are less sensitive to low frequencies (less than 250 Hz) than mid-frequencies (500 Hz to 1,000 Hz) and are most sensitive to frequencies in the 1,000- to 5,000-Hz range. Therefore, noise measurements are often adjusted, or weighted, as a function of frequency to account for human perception and sensitivities. The most common frequency weightings used are the A- and C-weightings. These weight scales were developed to allow sound level meters, which use filter networks to approximate the characteristics of the human hearing mechanism, to simulate the frequency sensitivity of human hearing. The A-weighting is the most commonly used for environmental measurements, and sound levels measured using this weighting are denoted as dBA. The letter "A" indicates that the sound has been filtered to reduce the strength of very low and very high-frequency sounds, much as the human ear does. C-weighting gives nearly equal emphasis to sounds of most frequencies. Mid-range frequencies approximate the actual (unweighted) sound level, while the very low and very high-frequency bands are significantly affected by C-weighting. **Table 10-1** notes the decibel levels of common noise sources.

Table 13-1, 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

Note(s): A change in 3dB(A) is a just noticeable change in SPL. A change in 10 dB(A)Is perceived as a doubling or halving in SPL.

The following are typical human perceptions of dB(A) relative to changes in noise level:

- 3 dB(A) change is the threshold of change detectable by the human ear;
- 5 dB(A) change is readily noticeable; and
- 10 dB(A) increase is perceived as a doubling of the noise level.

As stated on Page 19-3 of the *2021 CEQR Technical Manual*, in a large open area with no obstructive or reflective surfaces, it is a general rule that at distances greater than 50 feet, the SPL from a point source of noise drops off at a rate of 6 dB with each doubling of distance away from the source. For "line" sources, such as vehicles on a street, the SPL drops off at a rate of 3 dBA with each doubling of the distance from the source. Sound energy is absorbed in the air as a function of temperature, humidity, and the frequency of the sound. This attenuation can be up to 2 dBA over 1,000 feet. The drop-off rate also will vary with both terrain conditions and the presence of obstructions in the sound propagation path.

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

- L_{eq} is the continuous equivalent sound level. The sound energy from the fluctuating SPLs is averaged over time to create a single number to describe the mean energy, or intensity level. High noise levels during a measurement period will have a greater effect on the L_{eq} than low noise levels. L_{eq} has an advantage over other descriptors because L_{eq} values from various noise sources can be added and subtracted to determine cumulative noise levels.
- $L_{eq(24)}$ is the continuous equivalent sound level over a 24-hour time period.
- Lmax is the highest SPL measured during a given period of time. It is useful in evaluating Leqs for time periods that have an especially wide range of noise levels.
- L_{dn} is the day-night equivalent sound level, defined as a 24-hour continuous Leq with a 10 dB adjustment added to all hourly noise levels recorded between the hours of 10 PM and 7 AM. This 10 dB addition accounts for the extra sensitivity people have to noise during typical sleeping hours.
- DNL is the annual average day-night average sound level. Aircraft noise around airports is usually mapped out in terms of DNL, which are normally depicted as noise contours on a map.

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

13.3 Noise Standards and Guidelines

In 1983, the New York City Department of Environmental Protection (NYC DEP) adopted the CEQR noise exposure guidelines for exterior noise levels. As shown in **Table 10-2** below, noise standards classify noise exposure into four categories based on noise level limits and land use, for vehicular traffic, rail, and aircraft noise sources: Acceptable, Marginally Acceptable, Marginally Unacceptable, and Clearly Unacceptable, Table 19-3 of the *2021 CEQR Technical Manual* defines attenuation requirements for buildings based on exterior noise exposure levels. Recommended noise attenuation values for buildings are designed to maintain interior L_{10} noise levels of 45 dB(A) or below or interior L_{dn} noise levels of 40 dB(A) or below depending on the noise source, as shown below in **Table 10-2**.

Table 13-2, Noise Exposure Guidelines for Use in City Environmental Impact Review

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

Notes:

(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 as 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).

Table 13-3, Attenuation Values to Achieve Acceptable Interior Noise Levels

	Marginally Unacceptable				Clearly Unacceptable
Vehicular Traffic	70 < L_{10} ≤ 73	73 < L_{10} ≤ 76	76 < L_{10} ≤ 78	78 < L_{10} ≤ 80	80 < L_{10}
Aircraft [a]	65 < DNL ≤ 68	68 < DNL ≤ 71	71 < DNL ≤ 73	73 < DNL ≤ 75	75 < DNL
Train	65 < L_{dn} ≤ 68	68 < L_{dn} ≤ 71	71 < L_{dn} ≤ 73	73 < L_{dn} ≤ 75	75 < L_{dn}
Attenuation [b]	(i) 28 dB(A)	(ii) 31 dB(A)	(iii) 33 dB(A)	(iv) 35 dB(A)	See Note c

Note(s):

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

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

c. The required attenuation value is the difference between Lbuild and Linterior, using the appropriate noise descriptor where: (1) Lbuild is the projected noise level under the build condition rounded up to the whole number and/or (2) Linterior is the designed interior noise level (45 dB(A) for vehicular noise, 40 dB(A) for aircraft and train noise)

13.4 Initial Impact Screening

13.4.1 Future No-Action Scenario

Absent the Proposed Actions, the Applicant could reasonably develop the Project Site with a nine-story, 213,616 GSF / 150,508 ZSF medical office facility (0.98 FAR), rising to a maximum height of 95 feet and featuring 65 off-street parking spaces in a parking garage. In addition, a 6,390 GSF (0.04 FAR), three-story residential building containing six (6) affordable dwelling units could be developed with the remaining available residential density at the Project Site under the existing R6 district.

13.4.2 Future With-Action Scenario

The Future With-Action Scenario is a one- (1-) to 17-story, up to approximately 440,000-GSF (375,532ZSF) mixed-use residential, community facility and commercial building at the Project Site. The Future With-Action Scenario includes a total of up to 415 residential dwelling units within up to 415,000 GSF (354,651 ZSF) of residential floor area, all of which would be affordable to a range of income levels under AMI (104 to 125 of which would be made affordable pursuant to either Option 1 or 2 of the MIH program with the other units made affordable pursuant to NYC HPD and HDC financing). The Future With-Action Scenario would also include up to 15,000 GSF (12,725ZSF) and up to 10,000 GSF (8,156 ZSF) of groundfloor community facility and commercial retail spaces, respectively; the commercial retail space would be located on the groundfloor at the corner of the proposed building's Surf Avenue and West 25th Street frontages while there would be two separate community facility spaces located along the interior of West 25th Street frontage. A proposed new curb cut along the tax lot's West 25th Street frontage would provide access to the existing parking lot at the Project Site. Under the Future With-Action Scenario, the parking lot’s capacity would be reduced to 143 spaces (a loss of 20 spaces) due to required landscaping improvements. The Future With-Action Scenario also includes an active and passive recreation area, including a multi-purpose field, playground facilities, landscaping, benches, and other amenities, accessible to residents of the Project Site.

Stationary Sources

The *2021 CEQR Technical Manual* states that based upon previous studies, unless existing ambient noise levels are very low and/or stationary source levels are very high (and there are no structures that provide shielding), it is unusual for stationary sources to have significant impacts at distances beyond 1,500 feet. A detailed analysis may be appropriate if the Proposed Project would: cause a

substantial stationary source (i.e., unenclosed mechanical equipment for manufacturing or building ventilation purposes, playground, etc.) to be operating within 1,500 feet of a receptor, with a direct line of sight to that receptor; or introduce a receptor in an area with high ambient noise levels resulting from stationary sources, such as unenclosed manufacturing activities or other loud uses. Machinery, mechanical equipment, heating, ventilating and air-conditioning units, loudspeakers, new loading docks, and other noise associated with building structures may also be considered in a stationary source noise analysis. Impacts may occur when a stationary noise source is near a sensitive receptor and is unenclosed.

No unenclosed stationary noise sources of concern were observed during field inspections. As the Project Site is not subject to high ambient noise levels from any nearby stationary source, no stationary source noise impacts from surrounding uses are anticipated. Additionally, it is assumed that the building mechanical systems (i.e., HVAC systems) would be designed to meet all applicable noise regulations (i.e., Subchapter 5, §24-227 of the New York City Noise Control Code, the New York City Department of Buildings Code) and to avoid producing levels that would result in any significant increase in ambient noise levels. Therefore, the Proposed Actions would not result in any significant adverse noise impacts related to building mechanical equipment.

Mobile Sources

Pursuant to Section 111 of the *2021 CEQR Technical Manual*, mobile sources are those noise sources that move in relation to a noise-sensitive receptor—principally automobiles, buses, trucks, aircraft, and trains. Each has its own distinctive noise character, and, consequently, an associated set of noise assessment descriptors. For mobile sources, an initial noise assessment may be appropriate if a proposed action would generate additional project-generated vehicular traffic in an area where roadways currently carry no or very low traffic volumes, or where a nearby receptor would potentially be impacted by high ambient noise levels.

Vehicular traffic is the predominant source of noise in the area. Therefore, the noise analysis presented in this chapter focuses on the operational noise effects of the Proposed Actions to determine the level of building attenuation necessary to ensure that interior noise levels satisfy CEQR requirements. The Proposed Actions are not expected to increase existing noise passenger car equivalents (PCEs) by greater than 100 percent and would therefore not result in significant adverse noise impacts associated with project-generated vehicles.

13.4.3 Noise Monitoring Results

Measurement Location and Equipment

Because the predominant noise sources in the area of the Proposed Project consist of vehicular traffic, noise monitoring was conducted during peak weekday vehicular travel periods (AM, Midday, PM) on a typical midweek day for 20-minute periods. Noise Monitoring Location One (1) was located at the street level along West 24th Street, the eastern frontage of the Project Site. Noise Monitoring Location Two (2) was located at the street level along Surf Avenue, the southern frontage of the Project Site. Noise Monitoring Location Three (3) was located at the street level along West 25th Street, the western frontage of the Projected Development Site. The noise monitoring locations are shown in **Figure 13-1** to **Figure 13-4** below.

Figure 13-1, Noise Monitoring Locations Map

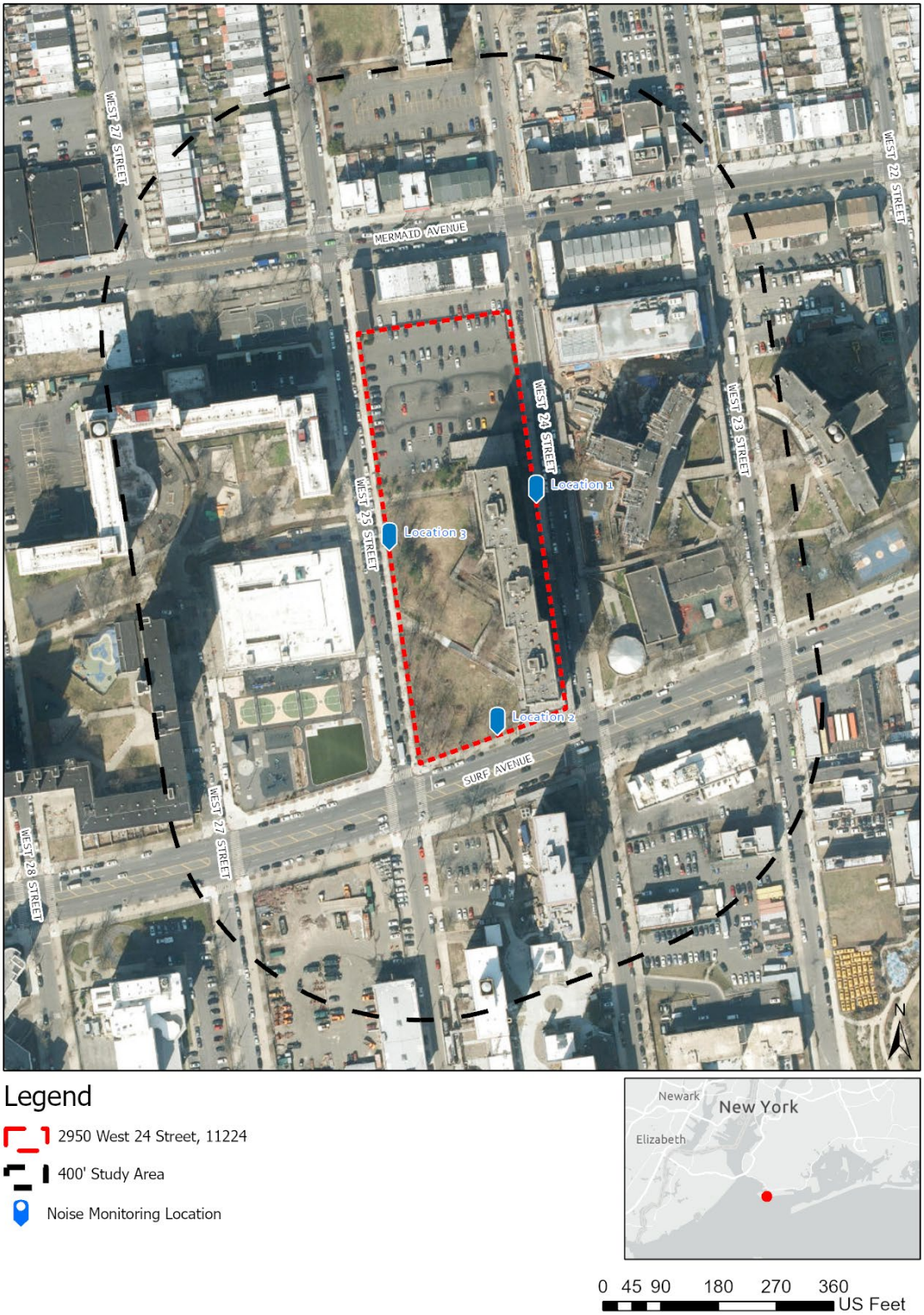


Figure 13-2, Location 1 – Noise Monitor Location 1 (West 24th Street Frontage)



Figure 13-3, Location 2 – Noise Monitor Location 1 (Surf Avenue Frontage)



Figure 13-4, Location 3 – Noise Monitor Location 1 (West 25th Street Frontage)



Noise monitoring was conducted using Type 1 Casella CEL-633 sound level meters with windscreens. The monitors were placed on tripods at a height of approximately four feet above the ground, away from any other noise-reflective surfaces. The monitors were calibrated prior to and following each monitoring session. Periods of peak vehicular around the Project Site constitute a worst-case condition for noise. Noise meter calibration certification and backup data are provided in **Appendix F**.

Existing Conditions

Monitoring was conducted during typical midweek conditions, on Thursday, January 18, 2024. The weather was dry and wind speeds were moderate during all monitoring periods. **Table 13-4** through **Table 13-6** below contains the results for the measurements taken at Location 1, Location 2, and Location 3, respectively.

Table 13-4, Noise Levels in dBA at Location 1 – January 18, 2024

Time	7:55 AM – 8:15 AM	12:00 PM – 12:20 PM	4:30 PM – 4:50 PM
L_{max}	89.4	79.6	87.8
L_{10}	64.0	60.0	65.5
L_{eq}	63.7	57.0	63.7
L_{50}	61.5	54.0	57.0
L_{90}	58.5	51.5	54.0
L_{min}	53.2	48.3	50.4
L_{max}	89.4	79.6	87.8

Table 13-5, Noise Levels in dBA at Location 2 – January 18, 2024

Time	7:55 AM – 8:15 AM	12:00 PM – 12:20 PM	4:30 PM – 4:50 PM
L_{max}	86.2	100.1	91.6
L_{10}	69.5	66.5	66.0
L_{eq}	66.0	70.6	65.5
L_{50}	62.5	59.0	59.5
L_{90}	53.0	51.0	51.5
L_{min}	47.3	46.7	47.8
L_{max}	86.2	100.1	91.6

Table 13-6, Noise Levels in dBA at Location 3 – January 18, 2024

Time	7:55 AM – 8:15 AM	12:00 PM – 12:20 PM	4:30 PM – 4:50 PM
L_{max}	108.1	71.8	106.3
L_{10}	62.0	54.5	60.0
L_{eq}	75.8	53.5	73.9
L_{50}	53.0	51.0	53.5
L_{90}	49.0	49.0	51.0
L_{min}	45.5	46.2	49.1
L_{max}	108.1	71.8	106.3

The traffic volumes (vehicle counts) and vehicle classifications collected during peak vehicular travel periods (morning, midday, and evening) concurrent with noise monitoring at Location 1, Location 2, and Location 3 are shown below in **TABLE** through **TABLE**, respectively.

Table 13-7, Traffic Volumes and Vehicle Classifications, Noise Location 1– January 18, 2024

Vehicle Type	7:55 AM – 8:15 AM	12:00 PM – 12:20 PM	4:30 PM – 4:50 PM
Car / Truck	1	7	7
Van / Light Truck / SUV	16	9	17
Medium Truck	0	0	1
Heavy Truck	1	0	1
Bus	1	1	1

Table 13-8, Traffic Volumes and Vehicle Classifications, Noise Location 2– January 18, 2024

Vehicle Type	8:19 am – 8:39 am	12:22 pm – 12:42 pm	4:52 pm – 5:12 pm
Car / Truck	62	40	42
Van / Light Truck / SUV	72	48	58
Medium Truck	5	2	3
Heavy Truck	0	0	1
Bus	6	6	7

Table 13-9, Traffic Volumes and Vehicle Classifications, Noise Location 3– January 18, 2024

Vehicle Type	8:42 am – 9:02 am	12:44 pm – 1:04 pm	5:14 pm – 5:34 pm
Car / Truck	5	3	5
Van / Light Truck / SUV	10	4	11
Medium Truck	0	1	2
Heavy Truck	1	0	0
Bus	3	0	0

13.5 Conclusions

The *2021 CEQR Technical Manual* sets external noise exposure standards, which are classified into four categories: acceptable, marginally acceptable, marginally unacceptable, and clearly unacceptable. Table 19-3 of the *2021 CEQR Technical Manual* defines attenuation requirements for buildings based on exterior noise exposure levels. Recommended noise attenuation values for buildings are designed to maintain interior noise levels of 45 dB(A) or lower where vehicular traffic is the noise source. For mixed community facility, commercial, and residential use such as what would occur under the Future With-Action Scenario, an L_{10} of between 65 and 70 dB(A) is identified as marginally acceptable general external exposure. An L_{10} of between 70 and 80 dB(A) is identified as marginally unacceptable general external exposure.

The highest recorded L_{10} at Location 1 was 65.5 dB(A) during the evening period. The highest recorded L_{eq} at Location 2 was 70.6 during the midday period. Field notes during the midday period at Location 2 note that an ambulance with sirens passed the monitoring location at 12:27, attributing to the elevated Leq during that time period. Therefore, the highest L_{10} at Location 2 of 69.5 dB(A) during the morning period will be used as representative of typical noise levels at this location. The highest recorded L_{eq} at Location 3 was 75.8 during the morning period. Field notes during the morning period at Location 3 note that an ambulance with sirens passed the monitoring location at 8:57, attributing to the elevated L_{eq} during that time period. The second-highest recorded L_{eq} at Location 3 was 73.9 during the evening period. Field notes during the evening period at Location 3 note that a fire truck with sirens passed the monitoring location at 5:25, attributing to the elevated L_{eq}. Therefore, the highest L_{10} at Location 3 of 62.0 dB(A) during the morning period will be used as representative of typical noise levels at this location.

No attenuation is required to ensure that no significant adverse impacts related to noise occur as a result of the Proposed Actions.

14 NEIGHBORHOOD CHARACTER

14.1 Introduction

According to the *2021 CEQR Technical Manual*, a neighborhood character assessment considers how elements of the environment combine to create the context and feeling of a neighborhood and how a project may affect that context and feeling. Thus, to determine a project's effects on the neighborhood character, the elements that contribute to a neighborhood's context and feeling are considered together. These elements may include land use, zoning, and public policy, socioeconomic conditions, community facilities, open space, historic and cultural resources, urban design and visual resources, shadows, transportation, and noise. The study area for a preliminary analysis of neighborhood character is typically consistent with the study areas of the relevant technical areas under CEQR that contribute to the defining elements of the neighborhood. The study area should generally extend to a 400-foot radius from the Project Site.

14.2 Preliminary Neighborhood Character Assessment

14.2.1 Existing Conditions

Project Site

The Project Site is located within Brooklyn Block 7055, Lot 13, a 153,580-SF lot developed with a 19-story, 380,000-GSF / 367,163-ZSF, 2.39 FAR multi-family residential building featuring 360 affordable dwelling units located in the eastern half of the property. Lot 13 is bounded by mixed-use residential and groundfloor commercial uses fronting along Mermaid Avenue to the north, West 24th Street to the east, Surf Avenue to the south, and West 25th Street to the west. The existing residential building is accessed from multiple points along its West 24th Street frontage to the east. The northern portion of Lot 13 is developed with a 163-space parking lot that provides parking for residents of the existing residential building and is accessed via one curb cut along West 24th Street. The western half of Lot 13 is undeveloped and landscaped; this portion of the tax lot is gated and not accessible. The parking lot portion of the property totals 47,524 sf while the remainder of the property, including developed and undeveloped areas, totals 106,056 sf.

See **EAS Form Figure 1** and **EAS Form Figure 5** for a general visualization of the location of the Project Site and its location within the larger Coney Island neighborhood.

Neighborhood Character Study Area

Areas east and west of the Project Site are developed similarly to the Project Site itself, with large "tower-in-the-park" style development featuring high-rise buildings on open, landscaped plots on land. Surf Playground and the P.S. 288 The Shirley Tanyhill Middle School are also located directly adjacent to the Project Site to the west. South of the Project Site is a mixture of tower-in-the-park residential development, transportation/utility uses (including a NYC Parks storage facility and administration building), and community facility uses (including adult care, nursing, and rehabilitation centers). Further south is the Coney Island Beach and Boardwalk with the Atlantic Ocean beyond. Immediately north of the Project Site along the south side of Mermaid Avenue are small-scale mixed-use residential and ground floor commercial development with primarily one- and two-family residential development beyond, interspersed with tower-in-the-park development and parking facilities.

Refer to **EAS Form Figure 4** for a visualization of land uses in the Project Site's surrounding area.

14.2.2 Future No-Action Scenario

Absent the Proposed Actions (i.e., the Future No-Action Scenario), the Applicant could reasonably develop the Project Site with nine (9) story, 213,616 GSF / 150,508 ZSF medical office facility (0.98 FAR), rising to a maximum height of 95 feet and featuring 65 off-street parking spaces in a parking garage. In addition, a 6,390 GSF (0.04 FAR), three (3) story residential building containing six (6) affordable dwelling units could be developed with the remaining available residential density at the Project Site under the existing R6 district.

The Future No-Action Scenario was determined using the remaining available development density at the Project Site under the R6 zoning district for both community facility and residential uses and medical office facilities in the vicinity of the Project Site, including:

- 6010 Bay Parkway (Brooklyn Block 5522, Lot 36): A nine (9) story, 144,764 GSF (7.23 FAR) medical office building constructed in 2012.
- 1664 East 14th Street (Brooklyn Block 6776, Lot 32): A five (5) story, 20,000 GSF (5.00 FAR) medical office building constructed in 1996.
- 1660 East 14th Street (Brooklyn Block 6776, Lot 33): A five (5) story, 20,000 GSF (5.00 FAR) medical office building constructed in 1994.

14.2.3 Future With-Action Scenario

Based on the foregoing, the Future With-Action Scenario is a one- (1-) to 17-story, up to approximately 440,000-GSF (375,532ZSF) mixed-use residential, community facility and commercial building at the Project Site. The Future With-Action Scenario includes a total of up to 415 residential dwelling units within up to 415,000 GSF (354,651 ZSF) of residential floor area, all of which would be affordable to a range of income levels under AMI (104 to 125 of which would be made affordable pursuant to either Option 1 or 2 of the MIH program with the other units made affordable pursuant to NYC HPD and HDC financing). The Future With-Action Scenario would also include up to 15,000 GSF (12,725ZSF) and up to 10,000 GSF (8,156 ZSF) of groundfloor community facility and commercial retail spaces, respectively; the commercial retail space would be located on the groundfloor at the corner of the proposed building's Surf Avenue and West 25th Street frontages while there would be two separate community facility spaces located along the interior of West 25th Street frontage. A proposed new curb cut along the tax lot's West 25th Street frontage would provide access to the existing parking lot at the Project Site. Under the Future With-Action Scenario, the parking lot’s capacity would be reduced to 143 spaces (a loss of 20 spaces) due to required landscaping improvements. The Future With-Action Scenario also includes an active and passive recreation area, including a multi-purpose field, playground facilities, landscaping, benches, and other amenities, accessible to residents of the Project Site.

Impact Analysis

In order to determine the potential effects of the Future With-Action Scenario on neighborhood character, the elements that contribute to a neighborhood’s context and feeling are considered both separately and cumulatively. The examination focuses on whether a defining feature of the neighborhood's character may be significantly affected, as further described below. It is noted that this neighborhood character analysis did not consider socioeconomic conditions, community facilities, or noise impacts, as the Future With-Action Scenario did not meet thresholds for analysis of those resource impact categories.

- **Land Use, Zoning, and Public Policy**: The proposed mixed-use multi-family residential, groundfloor retail, and groundfloor community center spaces would be consistent with the existing land use character of the Project Site and associated study area. The Project Site is already developed with a large, multi-family affordable residential building, such that the new multi-family affordable residential building would reinforce the land use character of the Project Site. The proposed groundfloor retail and community facility spaces would also reinforce the land use character of the area, as they are groundfloor retail on the northern portion of Brooklyn Tax Block 7055, while community facility spaces currently exist and/or are under construction at Brooklyn Tax Block 7057 immediately east of the Project Site.

  Additionally, it is anticipated that the Zoning Map and Text Amendments and Large-Scale General Development Special Permit would both complement and reinforce existing zoning district and zoning trends in the larger Coney Island neighborhood. As such, no significant adverse zoning impacts associated with the Proposed Actions are anticipated, and no further analysis is warranted.

  Further, the Future With-Action Scenario would be consistent with and reinforce applicable goals, policies, and objectives of Housing New York, the FRESH Program, the NYC WRP, FEMA SFHAs, the 2020 CWP, and OneNYC 2050. As such, the Proposed Actions are not anticipated to result in any significant adverse public policy impacts and no further analysis is warranted.
- **Socioeconomic Conditions**: Development resulting from the Proposed Actions would continue established trends of population growth in the area, as indicated by various active or planned construction projects located within the socioeconomic conditions study area. While household incomes associated with the Proposed Project may, in some cases, be higher than the Area Median Income identified in this study, the Future With-Action Scenario is anticipated to result in a 3.71 percent increase in the socioeconomic conditions study area population, which falls below the CEQR five percent threshold. Therefore, the Proposed Actions are not expected to result in significant adverse impacts related to socioeconomic conditions, and no further analysis is required.
- **Community Facilities**: The Future With-Action Scenario would result in the generation of 58 primary school and 21 intermediate school students within CSD 21, Subdistrict 1. This would increase overall utilization rates at primary and intermediate schools to 88.9 and 88.5 percent, respectively. These utilization rates would be well below the respective maximum capacity of each school level, such that no significant adverse public-school impacts would result and no further analysis is warranted.

  The Future With-Action Scenario would result in a 6.3 percent increase in the Early Childhood Program utilization rate over the Future No-Action Scenario. Specifically, the 28 Early Childhood Program locations within 1.5 miles of the Project are projected to have an enrollment of 862 children with 1,177 total seats (a 73.2 percent utilization rate). The Future With-Action Scenario is projected to result in the generation of 74 additional income-eligible children in Early Childhood Programs, resulting in a total enrollment of 936 children with 1,177 available seats (a 79.5 percent utilization rate). As such, the capacity of Early Childhood Programs within the Project Site's 1.5-mile study area is anticipated to be well below 100 percent despite the addition of 74 income-eligible children under the Future With-Action Scenario. Based on the foregoing, the Future With-Action Scenario is not anticipated to result in significant adverse impacts related to Early Childhood Programs, and no further analysis is necessary.

Open Space: The Future With-Action Scenario would result in an incremental increase of 409 dwelling units over the Future No-Action Scenario, generating an additional population of 986 persons. This increase in new residents would result in a decrease in the Defined Open Space Study Area's open space ratio from 7.42 acres per 1,000 residents in the Future No-Action Scenario to 7.17 acres per 1,000 residents in the Future With-Action Scenario, a decrease of approximately 3.39 percent. Pursuant to the 2021 CEQR Technical Manual, open space ratios between 2.01 and 2.50 or greater can tolerate up to a five (5) percent decrease in the open space ratio between the Future No-Action and Future With-Action Scenarios without warranting additional analyses. Further, the Project Site is within a Walk-to-a-Park service area indicating all future projected residents are within a reasonable walking distance to public open spaces. Based on the foregoing, the Future With-Action Scenario is not projected to create significant adverse open space impacts and no further analysis is required.

- **Historic and Cultural Resources**: As there are no known historic and architectural resources at or within the vicinity of the Project Site, no direct, indirect, or construction impacts would result under the Future With-Action Scenario. The LPC was contacted on February 15, 2024, for their initial review of the Proposed Project's potential to impact archaeological resources. LPC's response is still pending; the Applicant will adhere to all of LPC's findings and recommendations regarding impacts to archaeological resources, as applicable and practical, such that no significant adverse impacts are anticipated, and no further analysis is required.

  Based on the foregoing, the Future With-Action Scenario would not result in significant adverse impacts on historic and cultural resources, and no further analysis is warranted.
- **Shadows**: Based on the results of the shadows analysis, the only sunlight-sensitive resource that would receive new incremental shadows under the Future With-Action Scenario is Surf Playground. However, the areas projected to receive new incremental shadows during these analysis days are characterized by playground and fitness equipment, turf fields, basketball courts, and game tables, with minimal vegetation. Based on the nature of these areas projected to receive new incremental shadows, the viability of vegetation at and the usability of Surf Playground are not anticipated to be jeopardized. Therefore, no significant shadow impacts are anticipated such that no further analysis is warranted.
- **Transportation:** During all identified peak hours, the Proposed Project would result in a decrease in vehicular trips, would generate fewer than 200 subway trips, would result in a decrease in MTA bus trips, and generate fewer than 200 combined pedestrian trips compared to the Future No-Action Scenario, such that no thresholds for additional transportation analyses would be exceeded and, thus, no significant adverse transportation impacts would result and no further analysis is required.
- **Noise**: The highest recorded L10 at Location 1 was 65.5 dB(A) during the evening period. The highest recorded Leq at Location 2 was 70.6 during the midday period. Field notes during the midday period at Location 2 note that an ambulance with sirens passed the monitoring location at 12:27, attributing to the elevated Leq during that time period. Therefore, the highest L10 at Location 2 of 69.5 dB(A) during the morning period will be used as representative of typical noise levels at this location. The highest recorded Leq at Location 3 was 75.8 during the morning period. Field notes during the morning period at Location 3 note that an ambulance with sirens passed the monitoring location at 8:57, attributing to the elevated Leq during that time period. The second-highest recorded Leq at Location 3 was 73.9 during the evening period. Field notes during the evening period at Location 3 note that a fire truck with sirens passed the monitoring location at 5:25, attributing to the elevated Leq. Therefore, the highest

L10 at Location 3 of 62.0 dB(A) during the morning period will be used as representative of typical noise levels at this location.

No attenuation is required to ensure that no significant adverse impacts related to noise occur as a result of the Proposed Actions.

Combination of Moderate Effects

Based on the above findings, the effects of the Proposed Project would not reach a level of significant adverse impacts, and there would be no combination of moderate effects resulting from the Proposed Project that cumulatively may affect the character of the neighborhood.

14.3 Conclusions

As discussed above, the Future With-Action Scenario would not in whole or from a specific technical study standpoint result in a significant impact on the neighborhood character, nor would have cumulative effects of two or more of the above technical areas have any significant impacts on the 400-foot study area. As such, no further analysis is required.

APPENDIX A
NYC WATERFRONT REVITALIZATION PROGRAM
ASSESSMENT DOCUMENTATION

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

NEW YORK CITY WATERFRONT REVITALIZATION PROGRAM
Consistency Assessment Form

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

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

A. APPLICANT INFORMATION

Name of Applicant: Proto Property Services LLC

Name of Applicant Representative: Olga Abinader, Director of Land Use and Planning

Address: Matrix New World Engineering, 20 West 37tth Street, 12th Floor

Telephone: 973.240.1800 Email: oabinder@mnwe,com

Project site owner (if different than above): _____

B. PROPOSED ACTIVITY

If more space is needed, include as an attachment.

1. Brief description of activity

The Applicant is proposing a one- (1-) to 17-story, approximately 440,000-gsf mixed-use multi-family residential building with ground floor community facility and commercial spaces, reaching a maximum overall height of 185 feet and fronting on both Surf Avenue and West 25th Street. There would be a total of 415,000 gsf of residential floor area throughout the building, which would contain 409 residential dwelling units, all of which would be affordable to a range of incomes below Area Median Income (AMI) Additionally, there would be 15,000 gsf and 10,000 gsf groundfloor community facility and commercial retail spaces, respectively; the commercial retail space would be located on the groundfloor at the corner of the building's Surf Avenue and West 25th Street frontages while there would be two separate community facility spaces located along the interior West 25th Street frontage. A new curb cut along the tax lot's West 25th Street frontage would provide access to the existing parking lot at the site, for which landscaping improvements are proposed and would reduce its parking capacity from 160 spaces to 143 spaces. Additionally, the area located between the Applicant's Proposed Project and the existing building at Lot 13 would be redeveloped with active and passive recreation areas, including a multi-purpose field, playground facilities, landscaping, benches, and other amenities, which would only be accessible to existing and future residents of the Project Site.

2. Purpose of activity

The Applicant's Proposed Project would result in the construction of 415 affordable dwelling units in Coney Island neighborhood of Brooklyn Community District 13. Pursuant to 2017-21 American Community Survey Data, approximately 27.4 percent of the population within the Coney Island neighborhood live below the poverty line, compared to 18.8 percent in Brooklyn and 17.0 percent in New York City as a whole, pointing to a significant need for affordable housing in the area of the Project Site.

C. PROJECT LOCATION

Borough: Brooklyn Tax Block/Lot(s): Block 7055, Lot 13

Street Address: 2950-60-70 West 24th Street Brooklyn, New York 11224

Name of water body (if located on the waterfront): Coney Island Creek, Atlantic Ocean

D. REQUIRED ACTIONS OR APPROVALS

Check all that apply.

City Actions/Approvals/Funding

City Planning Commission ☑ Yes ☐ No

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

Board of Standards and Appeals ☐ Yes ☑ No

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

Other City Approvals

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

State Actions/Approvals/Funding

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

Federal Actions/Approvals/Funding

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

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

E. LOCATION QUESTIONS

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

   ☐ Significant Maritime and Industrial Area (SMIA) (*2.1*)
   ☐ Special Natural Waterfront Area (SNWA) (*4.1*)
   ☐ Priority Maritime Activity Zone (PMAZ) (*3.5*)
   ☐ Recognized Ecological Complex (REC) (*4.4*)
   ☐ West Shore Ecologically Sensitive Maritime and Industrial Area (ESMIA) (*2.2, 4.2*)

F. WRP POLICY ASSESSMENT

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

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

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

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

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

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

G. CERTIFICATION

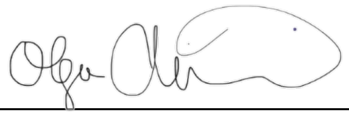
The applicant or agent must certify that the proposed activity is consistent with New York City's approved Local Waterfront Revitalization Program, pursuant to New York State's Coastal Management Program. If this certification cannot be made, the proposed activity shall not be undertaken. If this certification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

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

Applicant/Agent's Name: Olga Abinader

Address: 20 West 37th Street, 12th Floor, New York, NY 10018

Telephone: (973) 240-1800 Email: OAbinader@mnwe.com

Applicant/Agent's Signature: 

Date: 5/6/24

Submission Requirements

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

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

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

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

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

New York City Department of City Planning
Waterfront and Open Space Division
120 Broadway, 31st Floor
New York, New York 10271
212-720-3696
wrp@planning.nyc.gov
www.nyc.gov/wrp

New York State Department of State
Office of Planning and Development
Suite 1010
One Commerce Place, 99 Washington Avenue
Albany, New York 12231-0001
518-474-6000
www.dos.ny.gov/opd/programs/consistency

Applicant Checklist

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

2950 WEST 24th STREET REZONING
WRP SUPPLEMENTAL CONSISTENCY ANALYSIS

The WRP Consistency Assessment Form was completed to determine the consistency of the Proposed Actions with the Waterfront Revitalization Program's (WRP's) ten policies. Based on the information provided in the CAF, a detailed methodology and policy response is provided below, which incorporates the findings of the consistency of the Proposed Actions with the applicable WRP Policies (policies 1, 6, 7, 9, and 10) and Sub-policies (1.1, 1.3, 1.5, 6.1, 6.2, 7.1, 7.2, 7.3, 9.1, 10.1, and 10.2).

Policy 1: Support and Facilitate Commercial and Residential Development in Areas Well-Suited to Such Development

Sub-Policy 1.1, Encourage commercial and residential development in appropriate coastal zone areas.

The proposed residential, retail, and community center uses at the Project Site would be consistent with the existing land use character of both the Project Site and surrounding area. The Project Site is developed with a 19-story, 360-affordable-dwelling-unit residential building, with similar development adjacent to the east and west. The Project Site is bounded by Mermaid Avenue to the north and Surf Avenue to the south, both major east-west automobile and pedestrian thoroughfares in the Coney Island neighborhood, which would provide adequate access to and from the Proposed Project; multiple bus lines run along each of these avenues, including the B74 lines along Mermaid Avenue and the B36, X28, and X36 lines along Surf Avenue, all of which have stops in close proximity to the Project Site. Further, the proposed ground floor commercial space would be situated along the Project Site's Surf Avenue frontage, a corridor with high pedestrian and automobile traffic, making it an ideal location for such for such a use.

The Applicant's Proposed Project would result in the construction of 415 affordable dwelling units in Coney Island neighborhood of Brooklyn Community District 13. Pursuant to 2017-21 American Community Survey Data, approximately 27.4 percent of the population within the Coney Island neighborhood live below the poverty line, compared to 18.8 percent in Brooklyn and 17.0 percent in New York City as a whole, pointing to a significant need for affordable housing in the area of the Project Site.

Based on the foregoing, the location of the Proposed Project would promote Sub-Policy 1.1 of the NYC WRP.

Sub-Policy 1.3, Encourage redevelopment in the Coastal Zone where public facilities and infrastructure are adequate or will be developed.

As previously discussed, the Project Site is bounded by Mermaid Avenue to the north and Surf Avenue to the south, both major east-west automobile and pedestrian thoroughfares in the Coney Island neighborhood, which would provide adequate access to and from the Proposed Project; multiple bus lines run along each of these avenues, including the B74 lines along Mermaid Avenue and the B36, X28, and X36 lines along Surf Avenue, all of which have stops in close proximity to the Project Site.

Several public-school facilities are located in close proximity to the Project Site, including the P.S. 288 The Shirley Tanyhill Middle School immediately adjacent to the west, the P.S. 329 The Surfside School Elementary School approximately 0.5-mile to the west, and the Mark Twain IS 239 for the Gifted and Talented Middle School approximately 0.4-mile to the north.

Access to the Coney Island Beach and Boardwalk public park is located approximately 0.5-mile south of the Project Site, providing over three (3) miles of oceanfront beach along the Atlantic Ocean and a

plethora of recreational opportunities including fitness, equipment, beach volleyball, handball, and basketball courts, as well as playgrounds, athletic fields, and amusement rides.

Based on the foregoing, the location of the Proposed Project would promote Sub-Policy 1.3 of the NYC WRP.

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

Residential, commercial, and other non-industrial projects that comply with Article 6 Chapter 2 of the New York City Zoning Resolution satisfy the consistency requirements for Policy 1.5.

The Proposed Actions are consistent with this policy; as portions of the Applicant's Proposed Project are located within the FEMA-designated Zone AE, a 100-year floodplain, development would appropriately incorporate building features from the New York City Building Code Appendix G Flood Resistant Construction Standards for flood protection. Refer to the Sub-Policy 6.1 and 6.2 assessments below for more details regarding flood protection measures.

Policy 5: Protect and improve water quality in the New York City coastal area.

Sub-Policy 5.2, Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.

During construction of the Proposed Project, best management practices (BMPs), such as implementation of pollution prevention measures, will be utilized throughout the course of the construction phase to manage activities that could generate non-point sources of pollution. Additional precautions such as minimizing the sources of pollution and preventing stormwater runoff from paved surfaces will also be implemented. All stormwater conveyance systems implemented as part of the Proposed Project would be in compliance with all Federal, State, and / or local regulations and permit conditions, as applicable.

The Proposed Project would result in increases in stormwater runoff generation at the Project Site and, in combination with the implementation of stormwater detention tanks as part of the Proposed Project, it is anticipated that stormwater management and conveyance conditions at the Project Site and the local infrastructure network would improve.

Thus, the Proposed Project promotes and is consistent with this policy.

Policy 6: Minimize Loss of Life, Structures, Infrastructure, and Natural Resources Caused by Flooding and Erosion, And Increase Resilience to Future Conditions Created by Climate Change.

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

As indicated in **Figure A-1** below, the Project Site is located within the FEMA SFHA AE Zone, a 1.0 percent annual chance floodplain (i.e., 100-year flood zone) with a BFE of 11 feet (NAVD88 Datum). As shows in **Figure A-2** through **Figure A-5**, the Project Site is projected to remain in a 100-year flood zone through the 2100s. Under Policy 6, the primary goal for projects within flood hazard areas is to reduce the risks posed by current and future flood events, mainly major storms that are likely to increase due to climate change and sea level rise.

The Proposed Project is therefore subject to compliance with NYC Building Code Appendix G, which requires owners of severely damaged or destroyed buildings and new buildings in the 1.0 percent

annual chance floodplain to comply with the flood resistant construction standards of the Building Code when they rebuild or construct. As discussed under Policy 6.2 below, based on the future flood projections, the design of the Proposed Project would take the future climate change into consideration, including:

- The Design Flood Elevation (DFE) for the Proposed Project is calculated at 13 feet. The ground floor and main entrances of the building are raised to 13.2 feet, which is approximately 6 feet above street level. The resulting crawl space above grade and below the ground floor will be wet floodproofed with flood vents along the façade.
- The only occupiable space below the DFE is a partial basement level below the proposed commercial retail space. This space will be dry floodproofed with cast-in-place concrete walls. A permanent side-hinged flood gate will provide egress from the basement directly to outside.
- The residential elevator pits would be dry floodproofed, with access into the pits from above the DFE, except for the Fire Service Access Elevator (FSAE). The FSAE pit would need to be accessed from the dry floodproofed commercial retail basement space, and as such would be below DFE.
- Utility POE connections will be located primarily at the Ground floor, above DFE. All utility components that must be routed below DFE will have enclosures and fittings to prevent water from entering during a flood.

Based on the foregoing, the Proposed Project would meet the requirements of building-scale resiliency measures to reduce the risks of damage from current and future coastal hazards and would be consistent with Policy 6.1.

Sub-Policy 6.2, Integrate consideration of the latest New York City projections of climate change and sea level rise (as published in New York City Panel on Climate Change 2015 Report, Chapter 2: Sea Level Rise and Coastal Storms) into the planning and design of projects in the city's Coastal Zone.

The following assessment was prepared in accordance with The New York City Waterfront Revitalization Program: Climate Change Adaptation Guidance Document for Policy 6.2. The three basic steps to assessing an action's consistency with Policy 6.2 of the Waterfront Revitalization Program include identifying vulnerabilities and consequences, identifying adaptive strategies, and assessing policy consistency.

Sub-Policy 6.2 Detailed Methodology

1. Identify Vulnerabilities and Consequences
    a. *Assess the Project Site's exposure to current and future flood risk*

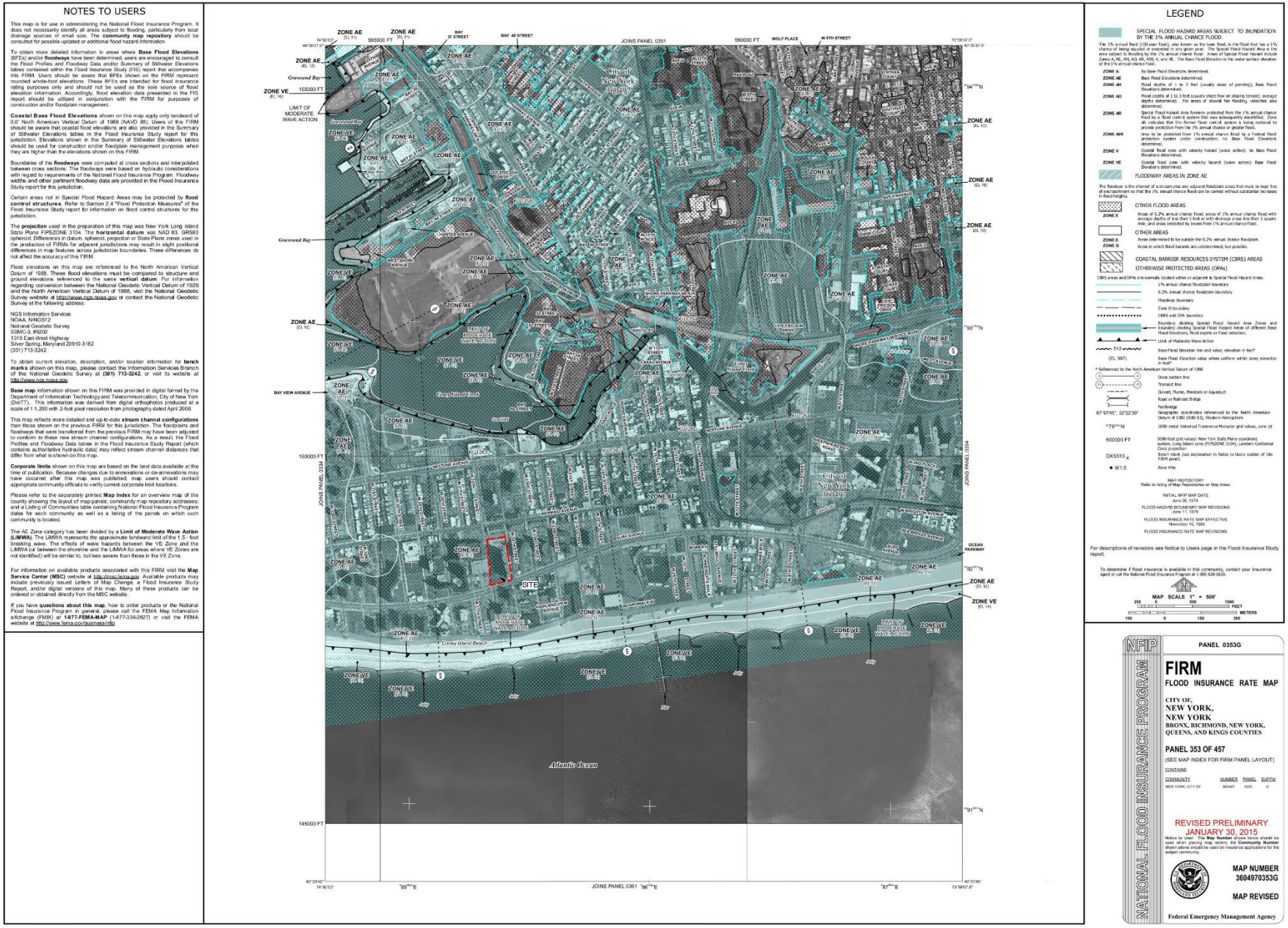
        As previously discussed, the Project Site is located in the 1.0 percent annual chance floodplain. The information in the following subsections is based on the results of the completed flood evaluation worksheet, which is provided in **Attachment A**, and the flood hazard projections shown above in **Figure A-2** through **Figure A-5**, as well as the New York City Panel on Climate Change (NPCC) future floodplain projections through the 2100s.

        The Project Site's base plane is located approximately at 7.40 feet in elevation (NAVD88 Datum). The proposed building's vulnerable or critical features, which are most likely to be impacted by future flood events, are located within the first floor, which has an elevation of approximately 13.2 feet (NAVD88 Datum).

Regulatory floodplains are defined by the elevation of the base flood (BFE) in relation to the elevation of the ground. According to datum (NAVD88 Datum) obtained from the National Oceanic and Atmospheric Administration (NOAA) website for the nearest NOAA station – Kingsborough Station (Station ID 8517756) - the mean of the higher high-water height (MHHW) is 2.46 feet. Based on the 2015 FEMA floodplain mapping, the 1.0 percent flood height for the nearest AE zone is 11 feet.

Based on the results of the calculations completed in the flood evaluation worksheet using site-specific data, **Figure A-6** shows the results of the MHHW and Sea Level Rise (SLR) projections and **Figure A-7** shows the results of the 1.0 percent Flood Elevation and SLR projections.

Figure A-1: 2015 PFIRM



NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was New York Long Island State Plane FIPSZONE 3104. The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the **National Geodetic Survey** website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, NNGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3182
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was provided in digital format by the Department of Information Technology and Telecommunication, City of New York (DoITT). This information was derived from digital orthophotos produced at a scale of 1:1,200 with 2-foot pixel resolution from photography dated April 2008.

This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

The AE Zone category has been divided by a **Limit of Moderate Wave Action (LiMWA)**. The LiMWA represents the approximate landward limit of the 1.5 - foot breaking wave. The effects of wave hazards between the VE Zone and the LiMWA (or between the shoreline and the LiMWA for areas where VE Zones are not identified) will be similar to, but less severe than those in the VE Zone.

For information on available products associated with this FIRM visit the **Map Service Center (MSC)** website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have **questions about this map**, how to order products or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange (FMIX) at **1-877-FEMA-MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip.

LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- ZONE A — No Base Flood Elevations determined.
- ZONE AE — Base Flood Elevations determined.
- ZONE AH — Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR — Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99 — Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V — Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE — Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

- ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

- ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.
- ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Limit of Moderate Wave Action
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

- Cross section line
- Transect line
- Culvert, Flume, Penstock or Aqueduct
- Road or Railroad Bridge
- 87°07'45", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 97°78'00"N — 1000-meter Universal Transverse Mercator grid values, zone 18
- 600000 FT — 5000-foot grid values: New York State Plane coordinate system, Long Island zone (FIPSZONE 3104), Lambert Conformal Conic projection
- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

INITIAL NFIP MAP DATE
June 28, 1974
FLOOD HAZARD BOUNDARY MAP REVISIONS
June 11, 1976
FLOOD INSURANCE RATE MAP EFFECTIVE
November 16, 1983
FLOOD INSURANCE RATE MAP REVISIONS

For descriptions of revisions see Notice to Users page in the Flood Insurance Study report.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'
250 0 500 1000 FEET
150 0 150 300 METERS

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0353G

FIRM
FLOOD INSURANCE RATE MAP

CITY OF,
NEW YORK,
NEW YORK
BRONX, RICHMOND, NEW YORK,
QUEENS, AND KINGS COUNTIES

PANEL 353 OF 457
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
NEW YORK, CITY OF	360497	0353	G

REVISED PRELIMINARY
JANUARY 30, 2015

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
3604970353G

MAP REVISED

Federal Emergency Management Agency

Figure A-2: 2020s High Tide and 1.0 Percent Flood Projections

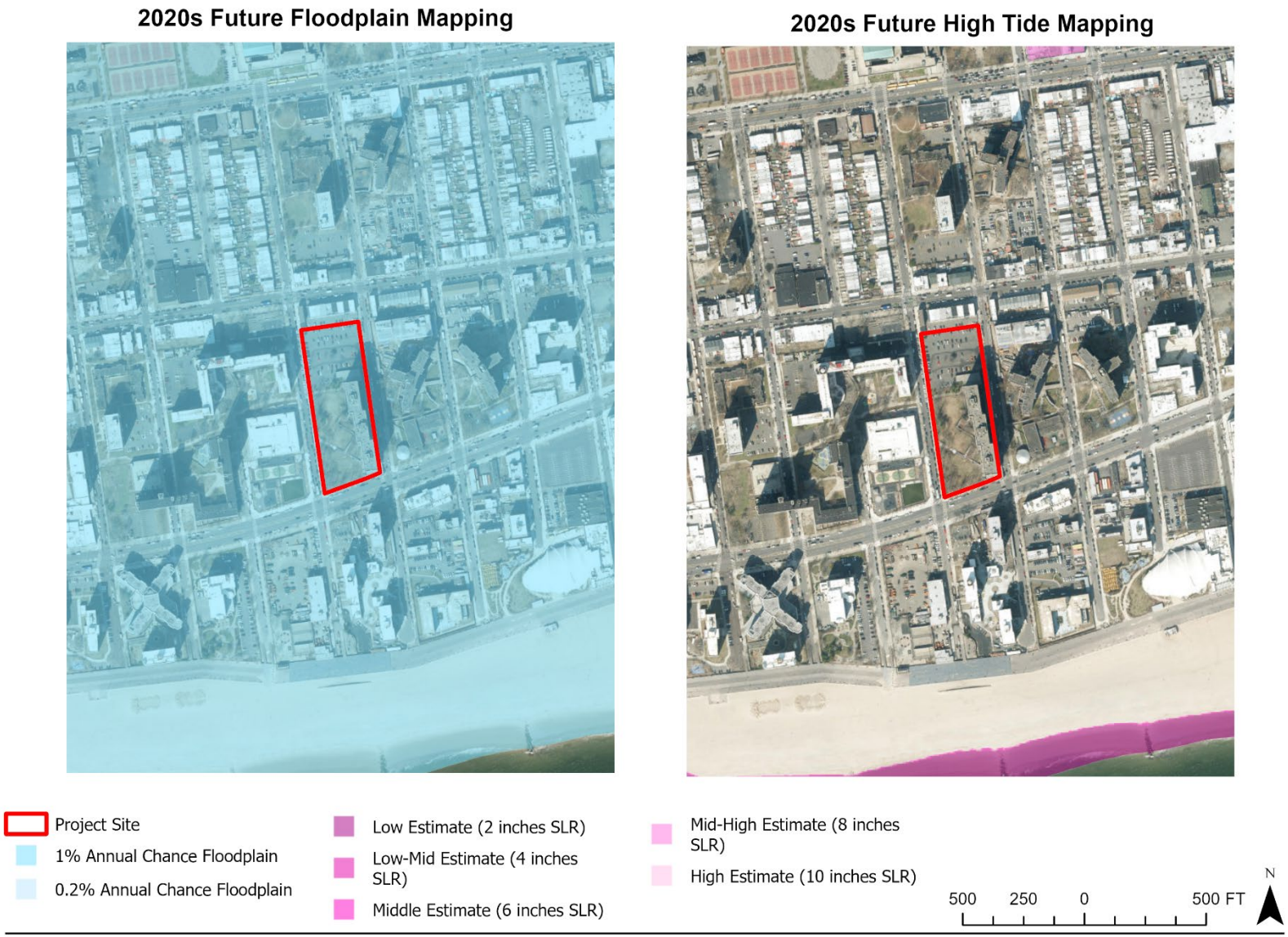


Figure A-3: 2050s High Tide and 1.0 Percent Flood Projections

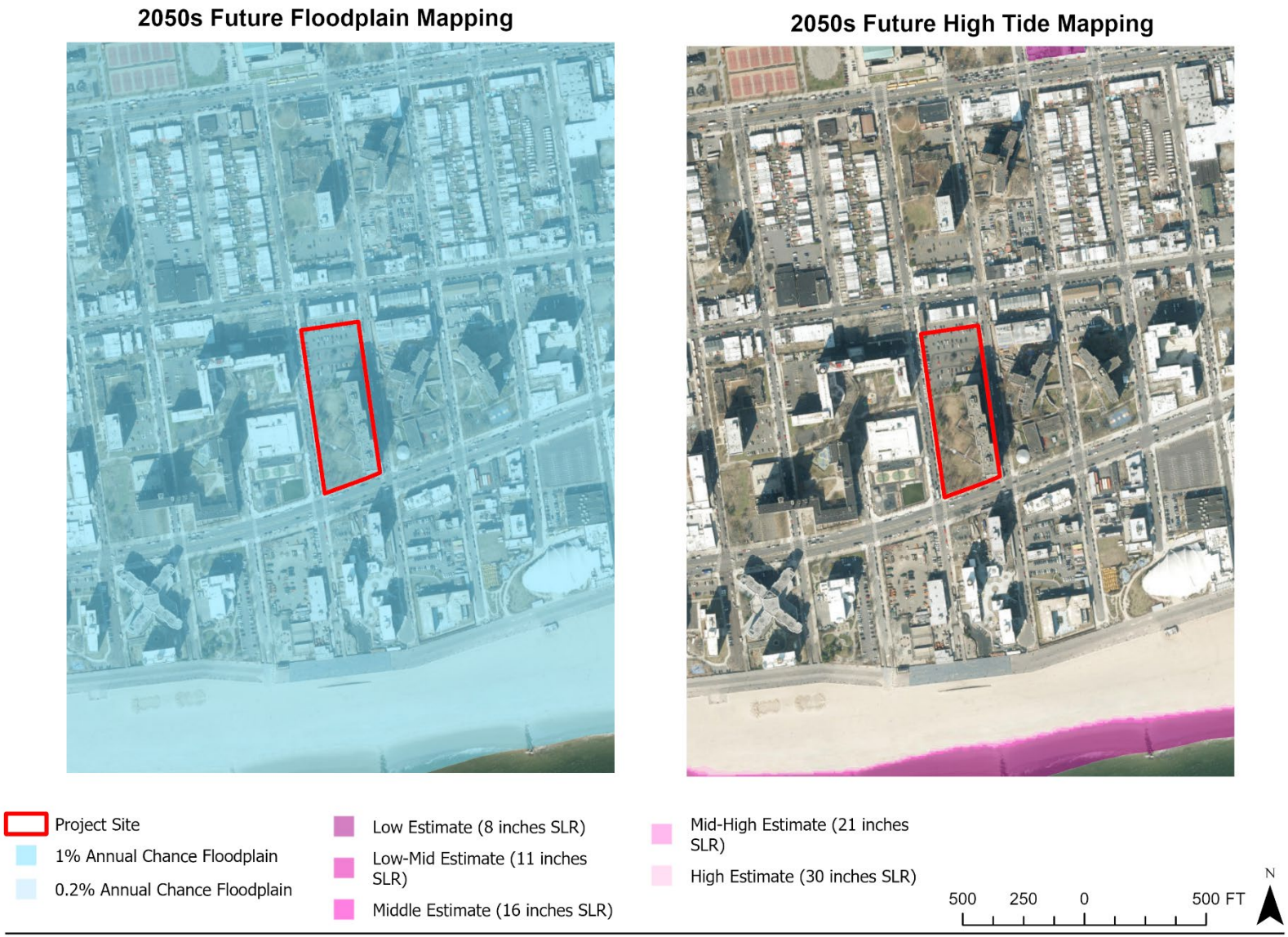


Figure A-4: 2080s High Tide and 1.0 Percent Flood Projections

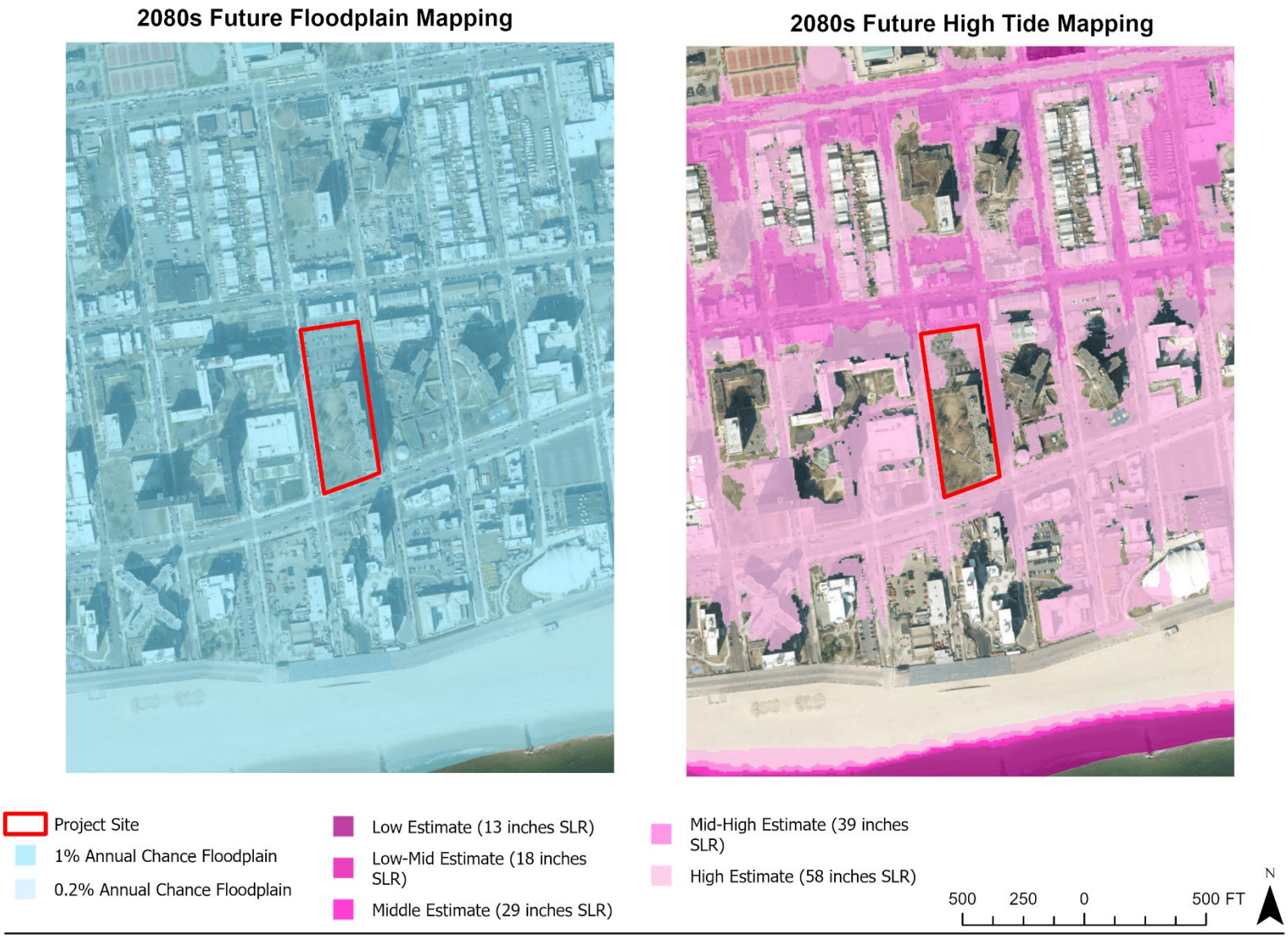


Figure A-5: 2100s High Tide and 1.0 Percent Flood Projections

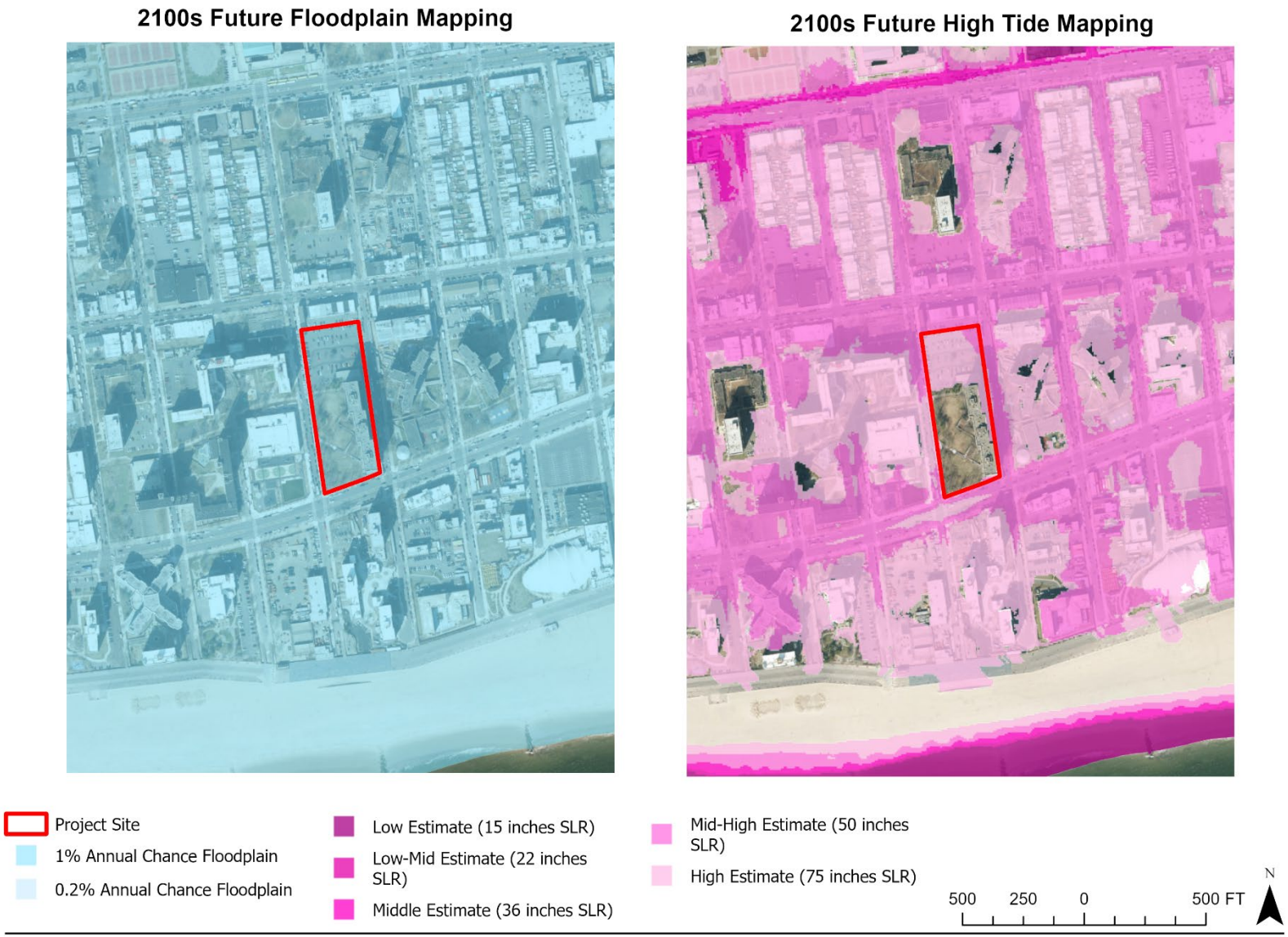


Figure A-6: Mean Higher High Water + SLR Projections

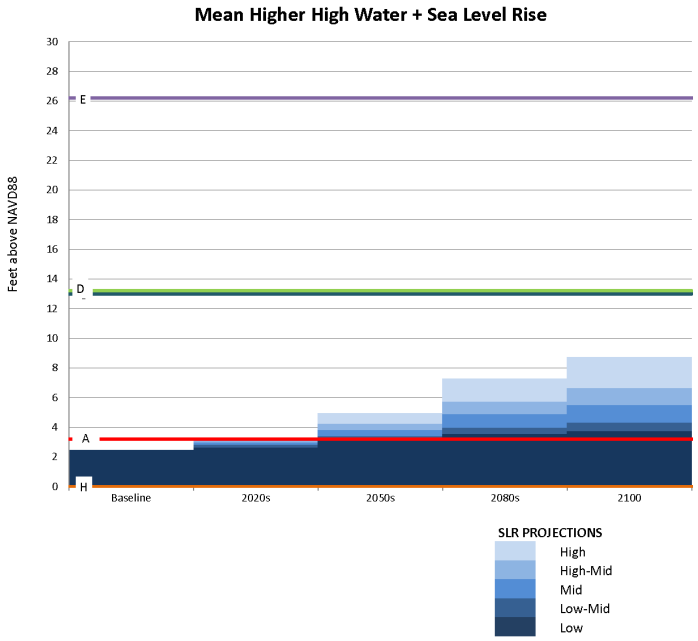
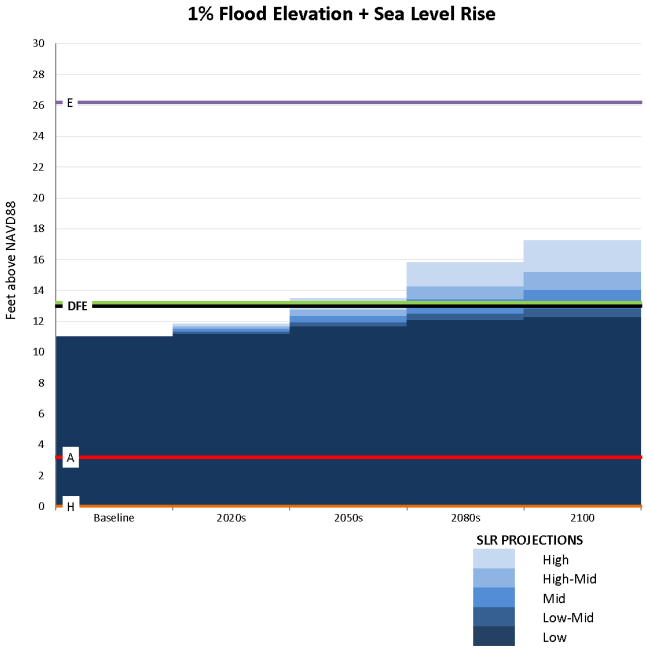


Figure A-7: 1.0 Percent Flood Elevation + SLR Projections



b. *Identify any Project Features that may be located below the elevation of the 1% floodplain over the lifespan of the project under any SLR scenario:*

Figure A-7 shows that the basement associated with the proposed commercial space is significantly below the floodplain elevation under existing conditions and would continue to be through the lifespan of the Proposed Project. As previously discussed in the response to Subsection 6.1, this basement space would be dry floodproofed with cast-in-place concrete walls; further, a permanent side-hinged flood gate would provide egress from the basement directly to outside.

As indicated in **Figure A-7** above, the Proposed Project's ground-floor level has the potential to be impacted by the 1.0 percent annual floodplain under high SLR projections by the 2050s, under mid SLR projections by the 2080s (the latter condition continuing into the 2100s).

The first floor is proposed to contain entrance and lobby areas, the proposed retail and community center spaces, as well as management and administrative offices and mechanical / utility rooms. Residential dwelling units would be situated on the second through 17th floors.

c. *Identify any vulnerable, critical, or potentially hazardous features that may be located below the elevation of Mean Higher High Water over the lifespan of the project under any sea level rise scenario.*

As indicated in **Figure A-6**, the Proposed Project would not be impacted by the MHHW under any SLR projections, with the exception of the basement area associated with the retail space, which is considered a vulnerable feature pursuant to WRP guidance.

d. *Describe how any additional coastal hazards are likely to affect the project, both currently and in the future, such as waves, high winds, or debris.*

Vulnerable Features, if damaged, have the potential to incur significant damage if flooded. These include any form of enclosed space within a building, including residential, commercial, industrial, or community facility land uses; enclosed parking structures; storage areas; enclosed recreational facilities; and bulkheads, revetments, piers, platforms, and other in-water infrastructure elements.

Critical Features, if damaged, would have severe impacts on the project and its ability to function. The project features that if damaged would have severe impacts on the project and its ability to function as designed. Examples include electrical utilities, building heating and cooling systems, telephone and data connection and distribution rooms, and other supporting and related building technology and utility spaces.

Potentially Hazardous Features, if damaged or made insecure by flooding, could potentially adversely affect the health and safety of the public and the environment. Examples include hazardous materials, including highly volatile, flammable, explosive, toxic, or water-reactive materials; and materials that have the potential to become waterborne in the event of a flood and would be dangerous to the health and safety of the public and the environment, such as the storage of construction materials, demolition debris, and aggregate materials.

As discussed above, the groundfloor level would fall within the 1.0 percent annual floodplain under high SLR projections by the 2050s and mid SLR projections by the 2080s through the 2100s, while the proposed basement area associated with the retail space falls within the existing and all future floodplain with SLR projections.

The enclosed basement area associated with the retail space and the majority of the groundfloor spaces themselves, including the entrance and lobby areas, community center spaces, retail space, and administrative / management offices, would all be considered vulnerable features pursuant to the WRP guidance. The ground floor would also contain utility rooms (e.g., gas, electrical, water, telecommunications, etc.), considered critical features pursuant to the WRP guidance, which if damaged, would have severe impact on the Proposed Project and its ability to function as designed.

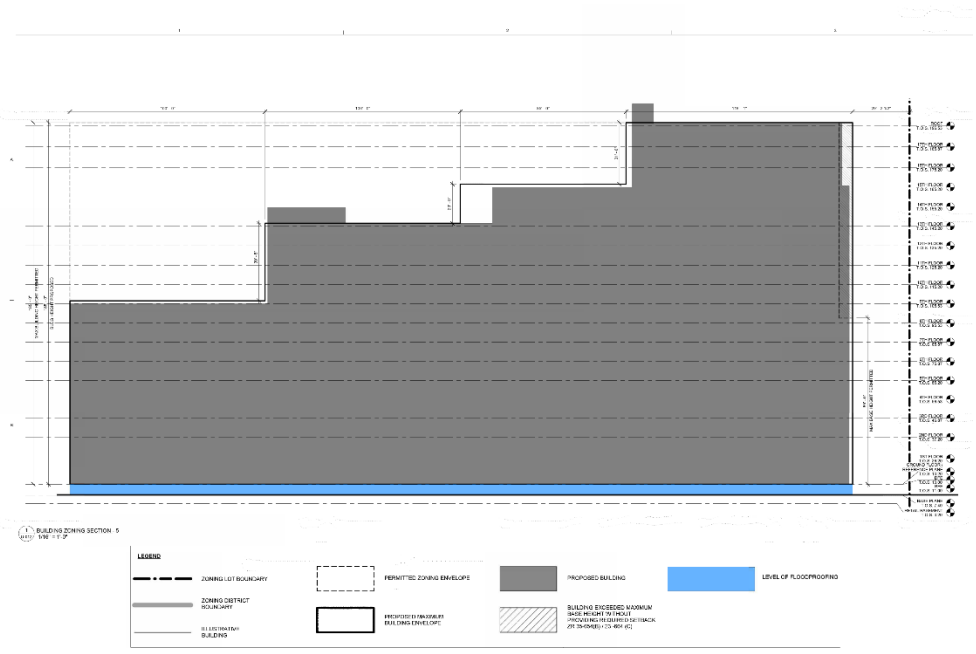
The groundfloor level would not introduce any hazardous features, materials, or substances that if made insecure, would result in a threat to public health or the environment.

The first floor through 17th floors would feature residential dwelling units. Vulnerable building features within these floors include walls, floors, and enclosed dwelling unit spaces. These floors would not introduce any critical or hazardous features, materials, or substances that if made insecure, would result in failure of the Proposed Project to function or that would result in a threat to public health or the environment.

It is noted that the second floor and above within the proposed building, with an elevation of 26.2 feet (NAVD88 Datum), is well above the highest projected elevations for the 1.0 percent flood elevation combined with SLR (which is approximately 17.5 feet (NAVD99 Datum) under the year 2100 High SLR projection). As such, these portions of the Proposed Project are not anticipated to be damaged by potential future flood events.

See **Figure A-8** for illustrative site plans of the Proposed Project in relation to the BFE and DFE.

Figure A-8: Proposed Illustrative Building Elevation



2. <u>Identify Adaptive Strategies</u>

The goal of Step 2 under WRP Policy 6.2 is to assess how the vulnerabilities and consequences identified in Step 1 are addressed through the project's design and planning. Assess how applicable codes and regulations, planned flood damage reduction elements and adaptive measures, or likely future infrastructure investments (beyond the scope of the Proposed Project), would or would not reduce potential flood damage for any proposed vulnerable, critical, or potentially hazardous features.

The Project Site is located within the 1.0 percent annual chance floodplain and is therefore required to comply with Appendix G of the NYC Building Code for Flood Resistant Construction. Pursuant to Policy 6.2: Climate Change Adaptation Guidance, consideration of climate change projections for coastal flooding and sea level rise should be incorporated into

the design and planning of projects. The Proposed Project should identify potential vulnerabilities to and consequences of sea level rise and coastal flooding over its lifespan and identify and incorporate design techniques to address these risks.

Recommendations

As indicated above in Policy 6.0, and under Policy 6.2, Step 1(d), based on the flood projections above, measures should be considered to increase groundfloor building-scale resilience to future flood conditions. The Proposed Project should floodproof any rooms that contain critical building features within the groundfloor level, or where possible elevate these critical features to upper levels to protect the normal operation within the building in the event of future flooding events.

The mitigation and resiliency strategy for the Proposed Project principally relies on raised entrances to the DFE. The DFE establishes a height of protection that equals the FEMA established floodplain elevation plus additional "freeboard." The freeboard for this project is 2.00 feet, establishing the DFE at 13.00 feet (NAVD88 Datum). The aforementioned groundfloor uses would be designed to be located at 13.2 feet (NAVD88 Datum), above anticipated flood water levels, and to preserve emergency egress from the building during a flood event. The groundfloor will be wet floodproofed with flood vents along the façade. Additionally, utility POE connections will be located primarily at the ground floor, above DFE. All utility components that must be routed below DFE will have enclosures and fittings to prevent water from entering during a flood.

The only occupiable space below the DFE is a partial basement level below the proposed commercial retail space. This space will be dry floodproofed with cast-in-place concrete walls. A permanent side-hinged flood gate will provide egress from the basement directly to outside. Further, the residential elevator pits would be dry floodproofed, with access into the pits from above the DFE, except for the FSAE. The FSAE pit would need to be accessed from the dry floodproofed commercial retail basement space, and as such would be below DFE.

Construction will be steel reinforced cast-in-place concrete floors and columns with prefabricated panelized precast with detailing. There will be aluminum framed and insulated glass storefronts with high performance aluminum or UPVC casement inswing windows. The soil conditions at the Project Site will require extensive structural piles to support the foundation. The Proposed Project has been designed to withstand major storms and flooding. The first floor of the building will be raised out of the floodplain and a number of schematic flood mitigation measures are incorporated into the design of the building.

3. <u>Assess Policy Consistency</u>

Pursuant to Policy 6.2 Guidance, a project or action would advance the policy when:

- No new vulnerable, critical, or potentially hazardous features would be located within area flooded by current or future high tide, or current or future 0.2% annual chance flood, over the project's lifespan, or
- All new vulnerable, critical, or potentially hazardous features would be protected through flood damage reduction elements or future adaptive measures within the timeframe that they would be needed.
- A project or action would hinder the policy when:

- Vulnerable, critical, or potentially hazardous features would be introduced in areas that will be flooded by high tide during the project's lifespan and adaptive measures are not feasible.
- Industrial development would not be protected from 2050s high tides or the current 0.2% annual chance flood.
- Critical infrastructure would not be protected to the elevation of the 0.2% annual chance storm over its lifespan.
- Shoreline structures would not function as intended with increases in sea levels projected over their lifespan.

As discussed above, based on the future flood projections related to the 1.0 percent annual chance flood elevation, the Proposed Project would incorporate design and mitigation measures to protect the groundfloor building features from future flood events. These building-scale resiliency measures and adaptive strategies would minimize the potential damage to site-specific vulnerable or critical features. In addition, construction and remediation would be performed pursuant to applicable Local, State, Federal regulations and laws. Therefore, the Proposed Actions are consistent with Policy 6.2 of the Waterfront Revitalization Program and would not jeopardize the intent of the WRP.

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

Sub-Policy 7.1, Manage solid waste material, hazardous wastes, toxic pollutants, substances hazardous to the environment, and the unenclosed storage of industrial materials to protect public health, control pollution and prevent degradation of coastal ecosystems.

All hazardous material would be handled and disposed in accordance with all City, State, and Federal regulations. Sediment characterization will be performed on excavated soils to determine the appropriate means and site of disposal. Excavated soils containing greater than 50 ppm of PCB must be disposed of in accordance with the disposal and reporting requirements of the Toxic Substance Control Act disposal and reporting regulations. All other excavated soils will be handled and disposed of in accordance with 6 NYCRR Part 375 Environmental Remediation Programs. The Proposed Project will ensure that potentially hazardous or toxic materials are appropriately contained onsite until the time of transport. Additionally, potential impacts during site preparation and proposed construction activities will be avoided by implementing a Construction Health and Safety Plan. All contractors and subcontractors are required to develop their own health and safety related procedures and programs required for work activities, which will ensure that the construction workers, the surrounding community, and the environment are not adversely affected by environmental conditions encountered during the construction activities. With these proposed measures in place, the health and safety of construction workers and the visiting public can be protected from adverse hazardous materials identified with the Project area. Thus, the Proposed Project will be consistent with this policy.

Sub-Policy 7.2, Prevent and remediate discharge of petroleum products.

A Phase I ESA for that portion of the Project Site to be redeveloped with the Proposed Project was performed in March 2023 by EFI Global. The Phase I ESA found that:

- Given the elevation differences noted across different portions of the Project Site, the observed presence of construction debris (brick wall and glass remnants) at the surface in the vicinity of the former buildings, and information provided by the Site Manager of the

east-adjoining apartments indicating that the mounds on the western portion of the Project Site consist of debris from the prior structures as well as soil excavated during construction of the east-adjoining apartments, the possibility that historic fill may be present at the Project Site cannot be discounted.

- The historical use of the southern portion of the Project Site by a printing company from at least 1950 until at least 1968 presents a vapor encroachment condition.
- The historical use of the dry-cleaning facilities adjacent to the east of the Project Site at 2970 West 24th Street in 1934 and at 2944 West 24th Street, adjacent to the northeast of the Project Site in 1966 until sometime between 1968 and 1977, presents a vapor encroachment condition.

Based on the findings of the Phase I ESA, EFI Global recommended the performance of a limited Phase II Subsurface Investigation be performed to determine the potential for vapor encroachment conditions at that portion of the Project Site to be redeveloped with the Proposed Project. A Phase II Subsurface Investigation was conducted by EFI on May 18 and 19, 2023. EFI conducted six borings to a maximum depth of 20 feet bgs. The locations of the borings were chosen to investigate the RECs identified in the Phase I ESA. Two borings were conducted with two soil and one groundwater sample being collected in the area of each REC. A total of six soil and three groundwater samples were collected and analyzed for Volatile Organic Compounds (VOCs) by EPA Method 8260 and Semi-Volatile Organic Compounds (SVOCs) by EPA Method 8270. VOCs and SVOCs were detected below New York State (NYS) unrestricted use soil cleanup objectives in all soil samples. Groundwater from Sample SB-1 and SB-3 were analyzed for an exceedance of NYS Groundwater Quality Standards (GWQS) for Chloroform, a VOC. Groundwater from sample SB-5 was analyzed for an exceedance of the NYS GWQS for chrysene, benzo(a)pyrene, and indeno(1,2,3-cd)pyrene, all SVOCs.

Based on the results of that investigation EFI Global formulated a Phase II Workplan, consisting of a geophysical survey, soil, groundwater, and soil vapor summary, soil, groundwater, and soil vapor sampling, and sampling analysis. The Applicant submitted the Phase II Workplan to the NYC Department of Environmental Protection (DEP) in December 2023; approval is pending completed review. The Applicant will adhere to all recommendations and requirements resulting from the approved Phase II Workplan, subsequent Phase II Environmental Site Investigation (ESI), and any other required or requested hazardous materials studies, as practical.

Based on the foregoing, the Proposed Project is consistent with this policy.

Sub-Policy 7.3, Transport solid waste and hazardous materials and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.

All spoils and associated liquids (such as contaminated groundwater) within the Project Site will be excavated, collected, stored, and transported in accordance with applicable Local, State, and Federal laws. Additionally, all contaminated soil and liquid waste generated by the proposed activities will be disposed of in appropriate facilities off-site. Thus, the Proposed Project will be consistent with this policy.

Policy 9: Protect scenic resources that contribute to the visual quality of the New York City coastal area.

Sub-Policy 9.1, Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.

The Future With-Action Scenario would be constructed on underutilized land (i.e., landscaped areas that are no accessible) at the Project Site pursuant the proposed R7-3 and R7-3 / C2-4 zoning districts

to be mapped at the Project Site as part of the Proposed Actions. The development facilitated by the Proposed Actions would not adversely impact any of the constituent visual elements or impact the overall visual character of the neighborhood. It would not significantly change the pedestrian experience, nor would it disturb the vitality, walkability, or the visual character of the area. While the Proposed Actions would permit new development larger in scale and height than could be developed under existing zoning, the proposed development is consistent with tower-style residential development on tax blocks between Mermaid and Surf avenues in terms of scale, density, and height. Additionally, the development with ground floor community center and retail uses, as well the private recreational courtyard, would improve walkability and the visual character of the area, and would also provide locally serving retail uses.

Based on the foregoing, the Proposed Project would improve the visual quality of the Project Site as well as complement and reinforce the envisioned urban context for this area, such that it is consistent with this policy.

Policy 10: Protect, preserve, and enhance resources significant to the historical, archaeological, architectural, and cultural legacy of the New York City coastal area.

Sub-Policy 10.1, Retain and preserve historic resources, and enhance resources significant to the coastal culture of New York City.

The Future With-Action Scenario would not have adverse visual or contextual impacts on existing architectural resources in the vicinity of the Project Site, the closest of which is the NYC LPC-designated Coney Island Beach and Boardwalk scenic resource approximately 670 feet to the south. The Proposed Project would not eliminate or screen publicly accessible views of a resource, introduce an incompatible visual, audible, or atmospheric element to a resource's setting, or introduce significant new shadows on a historic structure with sun-sensitive features. As there are no historic resources are not within 90 feet of the Project Site, the requirements of TPPN #10/88, which requires a monitoring program to reduce the likelihood of construction damage to adjacent New York City Landmarks and National Register-listed resources, is not required.

In a letter dated February 26, 2024, NYC LPC determined that the Project Site did not contain any resources of architectural significance.

Based on the foregoing, the Proposed Project is consistent with this policy.

Sub-Policy 10.2, Protect and preserve archaeological resources and artifacts.

In a letter dated February 26, 2024, NYC LPC determined that the Project Site did not contain any resources of archaeological significance.

Based on the foregoing, the Proposed Project is consistent with this policy.

NYC Waterfront Revitalization Program - Policy 6.2 Flood Elevation Workhsheet

COMPLETE INSTRUCTIONS ON HOW TO USE THIS WORKSHEET ARE PROVIDED IN THE "CLIMATE CHANGE ADAPTATION GUIDANCE" DOCUMENT AVAILABLE AT www.nyc.gov/wrp

Enter information about the project and site in highlighted cells in Tabs 1-3. Tab 4, "Summary Charts" contains primary results. Tab 5, "0.2%+SLR" produces charts to be used for critical infrastructure or facilities. Tab 6, "Calculations" contains background computations. Appendix A contains tide elevations for station across the city to be used for the elevation of MHHW if a site survey is not available. Non-highlighted cells have been locked.

Background Information	
Project Name	2950 West 24th Street Rezoning
Location	2950 West 24th Street, Brooklyn, New York 11224 (Block 7055, Lot 13)
Type(s)	☑ Residential, Commercial, Community Facility ☐ Parkland, Open Space, and Natural Areas ☐ Tidal Wetland Restoration ☐ Critical Infrastructure or Facility ☐ Industrial Uses ☐ Over-water Structures ☐ Shoreline Structures ☐ Transportation ☐ Wastewater Treatment/Drainage ☐ Coastal Protection
Description	The Project Site is located within Brooklyn Block 7055, Lot 13, a 153,580-square-foot (-sf) lot developed with a 19-story, 380,000-gross-square-foot (-gsf) / 367,163-zoning-square-foot (-zsf), 2.39 floor area ratio (FAR) multi-family residential building featuring 360 affordable dwelling units located in the eastern half of the property. Lot 13 is bounded by mixed-use residential and groundfloor commercial uses fronting along Mermaid Avenue to the north, West 24th Street to the east, Surf Avenue to the south, and West 25th Street to the west. The existing residential building is accessed from multiple points along its West 24th Street frontage to the east. The northern portion of Lot 13 is developed with a 160-space parking lot that provides parking for residents
Planned Completion Date	2027
Expected Project Lifespan	100 Years

The New York City Waterfront Revitalization Program Climate Change Adaptation Guidance document was developed by the NYC Department of City Planning. It is a guidance document only and is not intended to serve as a substitute for actual regulations. The City disclaims any liability for errors that may be contained herein and shall not be responsible for any damages, consequential or actual, arising out of or in connection with the use of this information. The City reserves the right to update or correct information in this guidance document at any time and without notice.

For technical assistance on using this worksheet, email wrp@planning.nyc.gov, using the message subject "Policy 6.2 Worksheet."

Last update: Sept. 7, 2018

Establish current tidal and flood heights.

	FT (NAVD88)	Feet	Datum	Source
MHHW	2.46	**2.46**	**NAVD88**	*Worksheet Appendix A - Kingsborough Station*
1% flood height	11.00	**11.00**	**NAVD88**	*NYC Flood Hazard Mapper*
Design flood elevation	13.00	**13.00**	**NAVD88**	*Project Plans*
As relevant:				
0.2% flood height	-->			

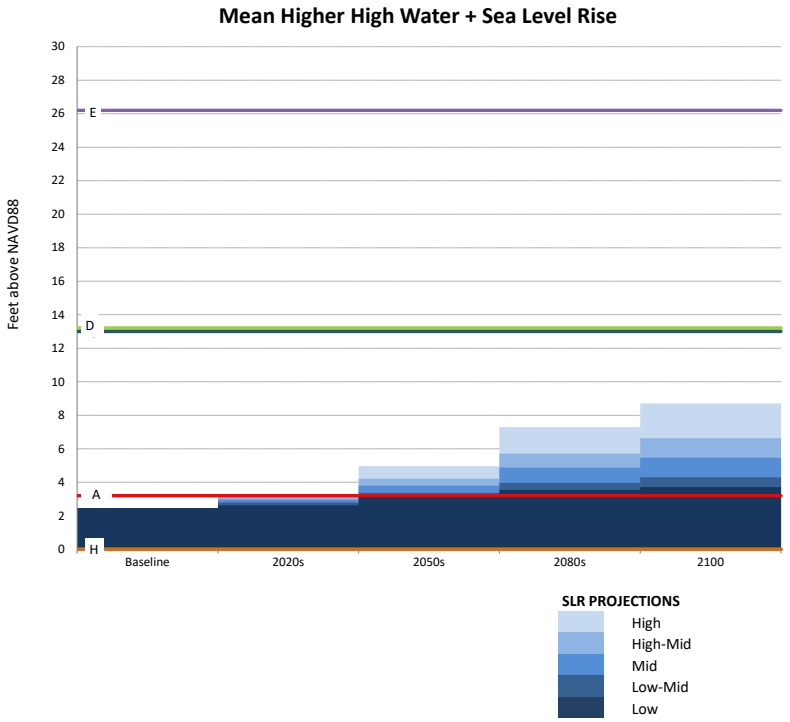
Data will be converted based on the following datums:

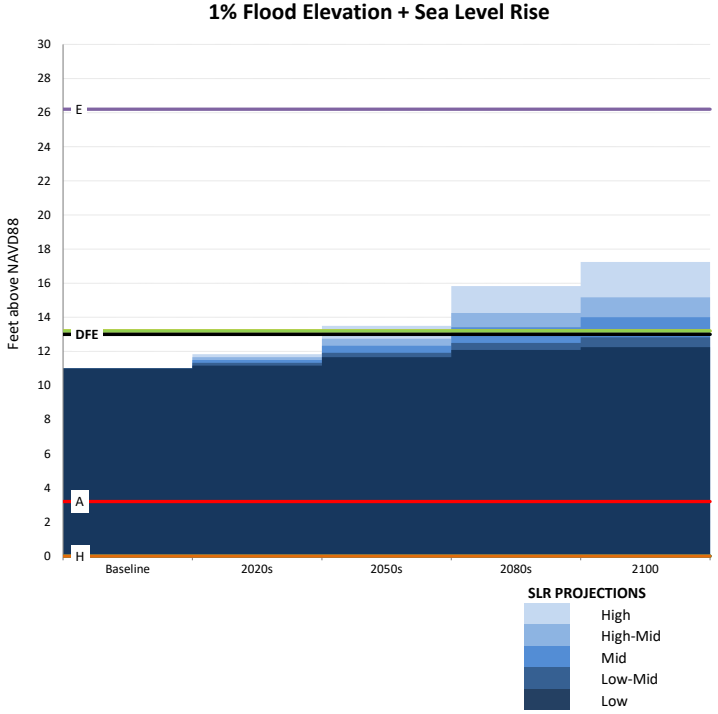
Datum	FT (NAVD88)
NAVD88	*0.00*
NGVD29	*-1.10*
Manhattan Datum	*1.65*
Bronx Datum	*1.51*
Brooklyn Datum (Sewer)	*0.61*
Brooklyn Datum (Highway)	*1.45*
Queens Datum	*1.63*
Richmond Datum	*2.09*

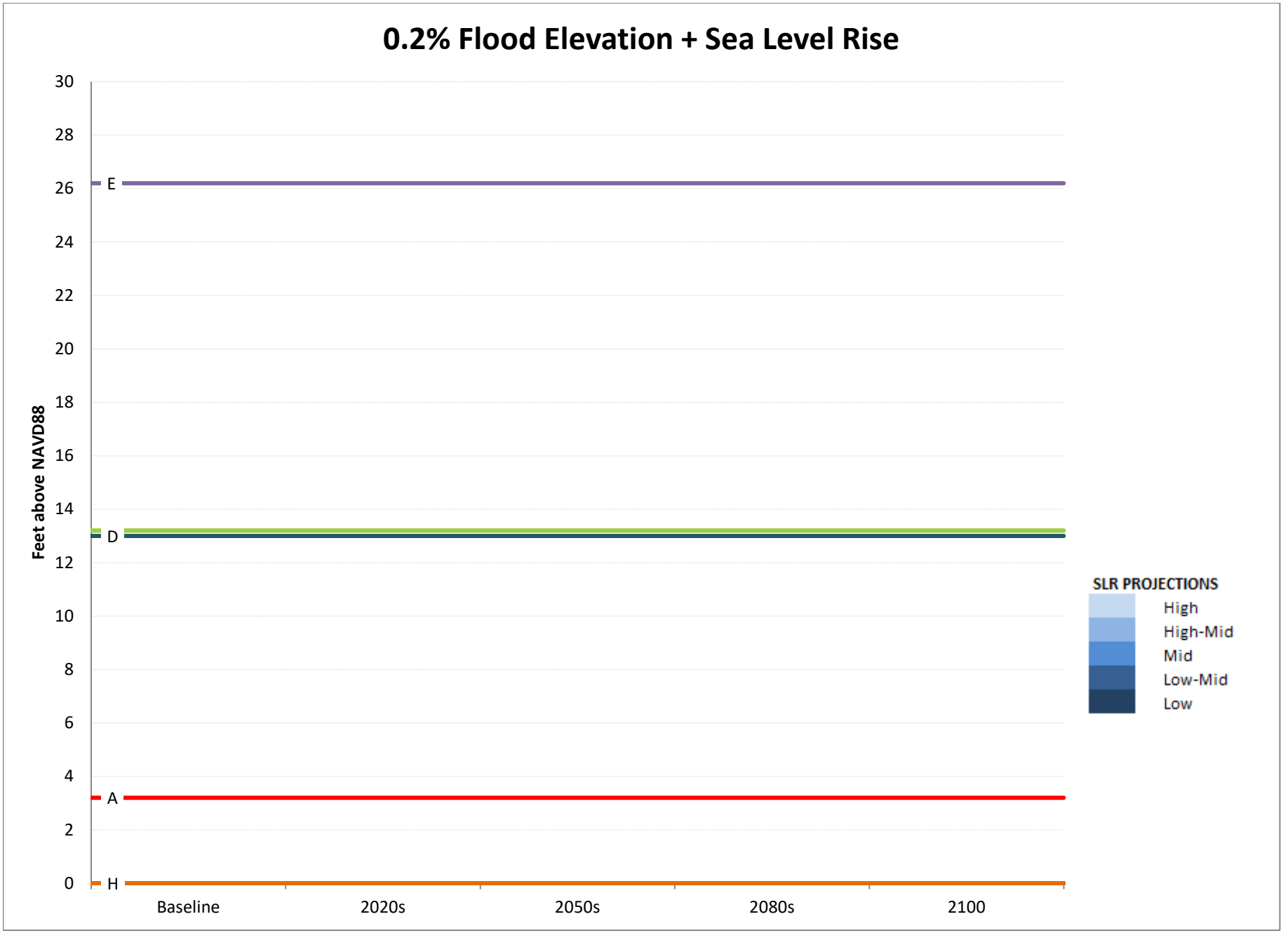
Describe key physical features of the project.

Feature *(enter name)*	Feature Category	Lifespan	Elevation	Units	Datum	Ft	Ft Above NAVD88	Ft Above MHHW	Ft Above 0.2% flood height
A	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	100	3.2	Feet	NAVD88	*3.2*	*3.2*	*0.7*	*#VALUE!*
Commercial Basement Space (Employee Locker Space)									
B	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	100	13.2	Feet	NAVD88	*13.2*	*13.2*	*10.7*	*#VALUE!*
First floor of building, including residential lobby, management offices, commercial retail, and community center uses.									
C	☐ Vulnerable ☑ Critical ☐ Potentially Hazardous ☑ Other	100	13.2	Feet	NAVD88	*13.2*	*13.2*	*10.7*	*#VALUE!*
First floor building utility systems (electric, etc.)									
D	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☑ Other	100	13.0	Feet	NAVD88	*13.0*	*13.0*	*10.5*	*#VALUE!*
Private Outdoor Recreational Space									
E	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	100	26.2	Feet	NAVD88	*26.2*	*26.2*	*23.7*	*#VALUE!*
Second Floor Dwelling Units									
F	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other			Feet	NAVD88				
Description of Planned Uses and Materials									
G	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other			Feet	NAVD88				
Description of Planned Uses and Materials									
H	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other			Feet	NAVD88				
Description of Planned Uses and Materials									

Assess project vulnerability over a range of sea level rise projections.






0.2% Flood Elevation + Sea Level Rise
Feet above NAVD88
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
E
D
A
H
Baseline
2020s
2050s
2080s
2100
SLR PROJECTIONS
High
High-Mid
Mid
Low-Mid
Low

SLR (ft)

	Low	Low-Mid	Mid	High-Mid	High
Baseline	0.00	0.00	0.00	0.00	0.00
2020s	0.17	0.33	0.50	0.67	0.83
2050s	0.67	0.92	1.33	1.75	2.50
2080s	1.08	1.50	2.42	3.25	4.83
2100	1.25	1.83	3.00	4.17	6.25

SLR (in)

	Low	Low-Mid	Mid	High-Mid	High
2014	0	0	0	0	0
2020s	2	4	6	8	10
2050s	8	11	16	21	30
2080s	13	18	29	39	58
2100	15	22	36	50	75

MHHW+SLR (ft above NAVD88)

	Low	Low-Mid	Mid	High-Mid	High
Baseline	2.46	2.46	2.46	2.46	2.46
2020s	2.63	2.79	2.96	3.13	3.29
2050s	3.13	3.38	3.79	4.21	4.96
2080s	3.54	3.96	4.88	5.71	7.29
2100	3.71	4.29	5.46	6.63	8.71

1%+SLR (ft above NAVD88)

	Low	Low-Mid	Mid	High-Mid	High
Baseline	11.00	11.00	11.00	11.00	11.00
2020s	11.17	11.33	11.50	11.67	11.83
2050s	11.67	11.92	12.33	12.75	13.50
2080s	12.08	12.50	13.42	14.25	15.83
2100	12.25	12.83	14.00	15.17	17.25

0.2%+SLR (ft above NAVD88)

	Low	Low-Mid	Mid	High-Mid	High
Baseline	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2020s	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2050s	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2080s	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2100	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!

	0	1
A	3	3.2
B	13	13.2
C	13.2	13.2
D	13	13
E	26.2	26.2
F	0	0
G	0	0
H	0	0
DFE	13.00	13.00

NOAA Tide Station Data

(to be used only when a site survey is unavailable)

Station ID	*Station Name*	*Source MHHW (Feet, NAVD88)**	*Adjusted MHHW (Feet, NAVD88)**	*Source*
8518687	Queensboro Bridge	2.27	2.60	NOAA Tides and Currents
8530095	Alpine	2.11	2.44	NOAA Tides and Currents
8516614	Glen Cove	3.72	4.05	NOAA Tides and Currents
8516990	Willets Point	3.72	4.05	NOAA Tides and Currents
8518639	Port Morris	3.33	3.66	NOAA Tides and Currents
8518699	Williamsburg Bridge	2.14	2.47	NOAA Tides and Currents
8518750	The Battery	2.28	2.61	NOAA Tides and Currents
8531680	Sandy Hook	2.41	2.74	NOAA Tides and Currents
8518490	New Rochelle	3.71	4.04	NOAA Tides and Currents
8531545	Keyport	2.66	2.99	NOAA Tides and Currents
8516891	Norton Point	2.08	2.41	NOAA VDATUM
8517201	North Channel	2.72	3.05	NOAA Tides and Currents
8517137	Beach Channel	2.10	2.43	NOAA VDATUM
8517756	Kingsborough	2.13	2.46	NOAA VDATUM
8519436	Great Kills	2.22	2.55	NOAA VDATUM
8531142	Port Reading	2.82	3.15	NOAA VDATUM
8519483	Bergen Point	2.56	2.89	NOAA VDATUM
8519050	USCG	2.28	2.61	NOAA Tides and Currents
8518902	Dyckman St	2.01	2.34	NOAA Tides and Currents
8517251	Worlds Fair Marina	3.59	3.92	NOAA VDATUM
8518668	Horns Hook	2.54	2.87	NOAA VDATUM
8518643	Randalls Island	2.60	2.93	NOAA VDATUM
8518526	Throggs Neck	3.68	4.01	NOAA Tides and Currents

* MHHW values include an addition 0.33 feet to account for changes in sea level since the 1983-2001 tidal epoch.



APPENDIX B
LPC COORDINATION

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-K (DEPARTMENT OF CITY PLANNING)
Project: 2950 WEST 24 STREET REZONING
Address: 2950 WEST 24 STREET BBL: 3070550013
Date Received: 2/20/2024

[X**] No architectural significance**

[X**] No archaeological significance**

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

[ ] Listed on National Register of Historic Places

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

[ ] May be archaeologically significant; requesting additional materials

Gina Santucci

2/26/2024

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 37248_FSO_DNP_02262024.docx

APPENDIX C
HAZARDOUS MATERIALS DOCUMENTATION

11 Commerce Way, Suite A
Totowa, New Jersey 07512

Phase I Environmental Site Assessment Report

EFI Project No.: 011.09640

Parcel A

West 25th Street and Surf Avenue (2950, 2960, and 2970 West 24th Street)
Brooklyn, New York 11224

Date of Issuance: March 20, 2023

Prepared For:

Ocean Towers Partners L.L.C. c/o Proto Property Services L.L.C.

3441 Kingsbridge Avenue, 2nd Floor
Bronx, New York 10463

Project No. 011.09640
March 20, 2023

Ocean Towers Partners L.L.C. c/o Proto Property Services L.L.C.
Attn: Demetrios Moragianis
3441 Kingsbridge Avenue, 2nd Floor
Bronx, New York 10463

RE: Phase I Environmental Site Assessment
Parcel A
West 25th Street and Surf Avenue (2950, 2960, and 2970 West 24th Street)
Brooklyn, New York 11224

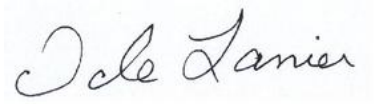
Dear Mr. Moragianis:

EFI Global, Inc. (EFI) is pleased to provide the results of our Phase I Environmental Site Assessment (ESA) of the referenced property. This assessment was authorized on February 28, 2023, and was performed in general accordance with the scope of services outlined in the Professional Services Agreement, dated February 27, 2023.

This assessment was performed in conformance with ASTM E1527-13 and E1527-21, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process and included a site reconnaissance, as well as research and interviews with private individuals, knowledgeable parties, and regulatory agency officials. An assessment was made, conclusions stated, and recommendations outlined.

We appreciate the opportunity to serve Ocean Towers Partners L.L.C. c/o Proto Property Services L.L.C. on this project. If you have any questions concerning this report, or if we can assist you in any other matter, please contact Mandeep S. Sandhu at (732) 629-7930 or Mandeep.Sandhu@efiglobal.com.
Sincerely,

EFI Global, Inc.


Christine Beaver	Dale Lanier	Mandeep Sandhu
Field Professional	Senior Environmental Advisor	Vice President, Environmental Service Line

TABLE OF CONTENTS

EXECUTIVE SUMMARY **1**

Conclusions 3

Recommendations 4

1.0 INTRODUCTION **5**

1.1 Purpose 5

1.2 Scope of Work 6

1.3 Significant Assumptions 7

1.4 Limitations and Exceptions 7

1.5 Deviations 8

1.6 Special Terms and Conditions 8

1.7 User Reliance 9

2.0 SITE AND VICINITY DESCRIPTION **10**

2.1 Current Subject Property Use and Improvements 10

2.2 Subject Property Location, Legal Description, and Zoning 10

2.3 Current Use of the Adjoining Properties 11

3.0 USER-PROVIDED INFORMATION **12**

3.1 Title Records 12

3.2 Activity and Use Limitations Applicable to the Subject Property 12

3.3 Specialized Knowledge or Experience of the User 12

3.4 Commonly Known or Reasonably Ascertainable Information 12

3.5 Relationship of the Purchase Price to Fair Market Value 12

3.6 Reason For Performing Phase I 12

4.0 PHYSICAL SETTING SOURCES **14**

4.1 Topography 14

4.2 Soils/Geology 14

4.3 Hydrology 14

4.4 Wetlands 14

4.5 Flood Zone Information 14

4.6 Oil and Gas Exploration 14

4.7 Mining Activities 15

4.8 Historic Fill 15

5.0 STANDARD ENVIRONMENTAL RECORD SOURCES **16**

5.1 Subject Property Listings 17
5.2 Adjoining Property Listings 17
5.3 Other Relevant Vicinity Listings 18
5.4 Orphan (Unmappable Sites) 18
5.5 Super Lien Statute 18
6.0 HISTORICAL USE INFORMATION 19
6.1 Historical Summary 19
6.2 City Directories 19
6.3 Aerial Photographs 20
6.4 Sanborn Fire Insurance Maps 20
6.5 Topographic Maps 21
6.6 Title Records 21
6.7 Prior Environmental Reports 21
6.8 State and Local Agency Records 24
6.9 Historical Data Source Failure 24
7.0 SITE RECONNAISSANCE 26
7.1 Methodology and Limiting Conditions 26
7.2 Site Reconnaissance Observation Summary 26
7.3 Discussion of Site Reconnaissance Observations 26
8.0 INTERVIEWS 28
8.1 Interview with Owner 28
8.2 Interview with Site Manager 28
8.3 Interviews with Site Occupants 28
8.4 Interviews with Local Government Officials 28
8.5 Interviews with Others 28
9.0 OTHER NON-SCOPE CONSIDERATIONS 29
9.1 Asbestos-Containing Material 29
9.2 Lead-Based Paint 29
9.3 Radon 29
9.4 Water Intrusion/Mold 30
9.5 Lead in Drinking Water 30
10.0 EVALUATION OF FINDINGS 31
10.1 Data Gaps 31
10.2 Findings and Opinions 31

10.2.1 Recognized Environmental Conditions 31
10.2.2 Controlled Recognized Environmental Conditions 31
10.2.3 Historical Recognized Environmental Conditions 32
10.2.4 De Minimis Environmental Conditions 32
10.2.5 Vapor Encroachment Conditions 32
10.2.6 Non-Scope Considerations 32
10.2.7 Additional Findings of Note 32
10.2.8 Business Environmental Risks 32
11.0 CONCLUSIONS AND RECOMMENDATIONS 33
11.1 Conclusions 33
11.2 Recommendations 33
12.0 REFERENCES 34
13.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS 35
14.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS 36
14.1 Definition of an Environmental Professional 36
14.2 Relevant Experience 36

TABLE OF APPENDICES

Figures

Appendix A: Site Photographs

Appendix B: Historical Research Documentation

Appendix C: Regulatory Database Report

Appendix D: Interview Records

Appendix E: Client-Provided Documentation

Appendix F: Other Supporting Documentation

Appendix G: Qualifications of Environmental Professionals

EXECUTIVE SUMMARY

EFI Global, Inc. (EFI) has performed a Phase I Environmental Site Assessment (ESA) of Parcel A located at West 25th Street and Surf Avenue (2950, 2960, and 2970 West 24th Street), Brooklyn, New York (the "Property" or "Subject Property") in conformance with ASTM E1527-13 and E1527-21, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. This ESA was authorized by Ocean Towers Partners L.L.C. c/o Proto Property Services L.L.C. on February 27, 2023.

Subject Property Description

The Subject Property is 1.4902 acres in size and consists of the southwest portion of Tax Block 7055, Lot 13, which is approximately 3.5 acres in size. The Subject Property is mostly vacant land with a few improvements. The improvements include concrete sidewalks and a steel bridge over a land depression. Pedestrian access to the Subject Property is provided via two gated entrances along West 25th Street to the west and a gated entrance from an asphalt-paved parking lot to the north as well as through the adjoining building at 2950, 2960, and 2970 West 24th Street.

Location and Vicinity Description

The Subject Property is located on the east side of West 25th Street and the north side of Surf Avenue in an area that consists of multi-family residential properties and commercial businesses. The Subject Property is bordered to the north by an asphalt-paved parking lot on the same parcel; to the east by Ocean Towers Apartments at 2950, 2960, and 2970 West 24th Street on the same parcel; to the south by Surf Avenue followed by a portion of New York City Housing Authority Haber Houses; to the southwest by the intersection of West 25th Street and Surf Avenue followed by a New York City Parks and Recreation storage lot and an unoccupied building; and to the west by West 25th Street followed by Surf Playground, The Shirley Tanyhill School (also known as Public School 288), and by a portion of New York City Housing Authority Coney Island Houses Sites 4 and 5.

Historical Review Summary

According to the historical information, the Subject Property consisted of mostly vacant land with a railroad right of way along the northern boundary, residential dwellings and storage buildings from at least 1895 to 1906, was improved with Railroad Avenue, residential dwellings and flats and Brooklyn Trust Co. Sea Gate Branch in 1930. The Sanborn map from 1950 indicates the Brooklyn Trust Co. building was occupied by a printing company, which was present until at least 1968. The former structures were demolished circa 1972 and the Subject Property has been vacant land since that time.

Adjoining properties consisted of residential dwellings and flats and stores and were redeveloped with multi-family residential buildings, a school, and a playground.

According to a prior Phase I ESA report prepared by Matrix, one Recognized Environmental Condition (REC), a former printing company, was identified on Parcel A. Additionally, three RECs were identified adjacent to Parcel A, as follows: historic railroad tracks from at least 1895 until sometime between 1906 and 1930; a woodworking facility was located at 2411 Surf Avenue from 1966 until sometime between 1968 and 1977; and dry cleaning facilities were located at 2970 West 24th Street in 1934 and at 2944 West 24th Street in 1966 until sometime between 1968 and 1977.

Historic fill was not identified at the Subject Property through a review of published sources. However, given the elevation differences noted across different portions of the Subject Property, the observed presence of construction debris (brick wall remnants) at the surface in the vicinity of the former buildings, and information provided by the Site Manager of the east-adjoining apartments indicating that the mounds on the western portion of the Property consist of debris from the prior structures as well as soil excavated during construction of the east-adjoining apartments, EFI cannot discount the possibility that historic fill may be present at the Subject Property.

The historical use of the Subject Property by a printing company and the historical use of adjacent sites by dry cleaning facilities are considered to be RECs to the Subject Property. Additionally, the possible presence of soil generated during the construction of the adjacent building is considered to be a Business Environmental Risk. The former railroad tracks are not an environmental concern as the shallow soil beneath the tracks was likely removed during the construction of Railroad Avenue. Also, the location of the former wood working facility is cross gradient to the Subject Property, and therefore is not a REC.

Regulatory Review Summary

EFI reviewed regulatory databases and files from federal, state and local environmental regulatory agencies to identify use, generation, storage, treatment or disposal of hazardous materials or release incidents of such materials that may impact the Subject Property. The records reviewed included,, but were not limited to, the following: Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS); National Priorities List (NPL); Resource Conservation Recovery Information System (RCRIS); Treatment, Storage and Disposal Facilities (TSD); Resource Conservation and Recovery Act (RCRA) Large and Small Quantity Generators; Emergency Response Incidence Logs; State-registered underground storage tanks (UST); State leaking underground storage tank (LUST) incident reports; State solid waste facilities/landfill sites (SWF/LS); State hazardous waste sites (SHWS); and other local records.

The Property does not appear on the researched databases and no recognized environmental conditions (RECs) were noted. Adjoining properties were identified on the Spill and tank databases, as follows:

- New York City School Construction Authority, Sandy Follow Up, New York City Department of Education and P.S. 288 at 2950 West 25th Street is located on an adjoining site to the west and is inferred to be cross gradient to the Subject Property. This facility appears on the RCRA NonGen, RCRA SQG, NY Manifest, PA Manifest, AST and NY Spills databases. According to the regulatory database report, two 7,000-gallon fuel oil ASTs were closed at this site in 2015 and one 7,000-gallon fuel oil AST was closed in 2017. A fuel oil spill associated with Super Storm Sandy was identified on October 28, 2012. The spill impacted the basement of the building. Remediation was conducted and the incident was closed. Based on regulatory status and gradient, this incident is not an environmental concern. Additionally, no spills or releases are associated with the RCRA and Manifest listings.

- Surf Playground and NYC Parks at 2501 Surf Avenue is located on an adjoining site to the west and is inferred to be cross gradient to the Subject Property. This facility appears on the UST and NY Spills databases. According to the regulatory database report, a 1,000-gallon UST was closed at this site in August 2021. A spill (no. 2102270) was issued when contaminated

soil was detected during the tank closure. The soil was excavated, and the incident was closed in September 2021. Based on regulatory status and gradient, this incident is not an environmental concern.

Additional listings were identified in the vicinity of the Subject Property, however these sites do not pose a threat to the Subject Property as there are no indications releases at these sites, release have occurred, but groundwater has not been impacted, release have occurred, but the cases are closed, or the sites are located cross or down gradient of the Subject Property and in excess of 1/10 mile from the Subject Property.

Based on a review of the Property's historical uses, EFI concludes that a vapor encroachment condition (VEC) exists at the Subject Property.

Environmental Report Findings Summary

	Report Section	No Further Action	REC	CREC	HREC	Issue/Further Investigation
2.0	Current Use of Subject Property and Adjoining Properties	✔				
3.0	User Responsibilities	✔				
4.0	Physical Setting Sources	✔				
5.0	Standard Environmental Record Sources	✔				
6.0	Historical Use Information		✔			✔
7.0	Site Reconnaissance	✔				
8.0	Interviews	✔				
9.0	Non-Scope Conditions	✔				

Conclusions

EFI has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practices E1527-13 and E1527-21 of West 25th Street and Surf Avenue (2950, 2960, and 2970 West 24th Street), Brooklyn, New York. Any exceptions to or deletions from this practice are described in Section 1.4 of this report. This assessment has revealed no evidence of Recognized Environmental Conditions (RECs) or Controlled Recognized Environmental Conditions (CRECs) in connection with the Subject Property, except the following:

- The historical use of the southern portion of the Subject Property by a printing company from at least 1950 until at least 1968 presents a vapor encroachment condition.

- The historical use of the dry cleaning facilities adjacent to the east of the Subject Property at 2970 West 24th Street in 1934 and at 2944 West 24th Street, adjacent to the northeast of the Subject Property in 1966 until sometime between 1968 and 1977, presents a vapor encroachment condition.

Additionally, the following Business Environmental Risk (BER) was identified at the Subject Property:

Historic fill was not identified at the Subject Property through a review of published sources. However, given the elevation differences noted across different portions of the Subject Property, the observed presence of construction debris (brick wall remnants) at the surface in the vicinity of the former buildings, and information provided by the Site Manager of the east-adjoining apartments indicating that the mounds on the western portion of the Property consist of debris from the prior structures as well as soil excavated during construction of the east-adjoining apartments, EFI cannot discount the possibility that historic fill may be present at the Subject Property.

Proposed plans for the Subject Property include rezoning and development of a new multi-story residential building. It should be noted that additional actions and review maybe required by regulatory agencies in connection with rezoning and development purposes.

EFI's assessment also included additional non-scope considerations to evaluate asbestos-containing material (ACM), lead-based paint (LBP), radon, lead in drinking water, wetlands and mold. This assessment has revealed no evidence of related conditions of concern.

Recommendations

The recommendation is as follows:

- Given the proposed rezoning and development plans for the Subject Property, soil disturbance and removal factors must be considered. A limited Phase II subsurface investigation consisting of soil, soil-gas, and groundwater sampling should be conducted at the northeast, east, and southwest portions of the Subject Property to determine if residual contamination is present in soil and groundwater and if a potential vapor encroachment condition exists for the future building. The findings of the investigation will assist in determining if a Soil Management Plan, sub-slab vapor barrier, and/or vapor mitigation system will be need to be designed and implemented as part of planned construction activities.

Report Section and Concern	Recommendation	Cost
6.1 - Historical Summary	A Limited Phase II investigation should be conducted at the Subject Property (northeast, east, and southwest).	$10,000-12,000

1.0 INTRODUCTION

EFI Global, Inc. (EFI) was retained by Ocean Towers Partners L.L.C. c/o Proto Property Services L.L.C. to perform a Phase I Environmental Site Assessment (ESA) of Parcel A located at West 25th Street and Surf Avenue (2950, 2960, and 2970 West 24th Street) in Brooklyn, New York (the "Property" or "Subject Property"). This ESA was performed in accordance with the Professional Services Agreement between EFI and Ocean Towers Partners L.L.C. c/o Proto Property Services L.L.C., authorized on February 27, 2023.

1.1 Purpose

The purpose of the ESA is to conduct all appropriate inquiry (AAI) into the previous ownership and uses of the Subject Property consistent with good commercial and customary standards and practices as defined at 42 U.S.C. Section 9601(35)(B). As such, this assessment is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) liability.

The goal of this process is to identify any (1) recognized environmental conditions (RECs), (2) historical recognized environmental conditions (HRECs), (3) controlled recognized environmental conditions (CRECs), and/or (4) *de minimis* conditions associated with the subject property.

- A **recognized environmental condition** is defined as "...(1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment" (ASTM, 2013 & 2021).

- A **historical recognized environmental condition** is defined as "a previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the subject property to any controls (for example, activity and use limitations or other property use limitations). A historical recognized environmental condition is not a recognized environmental condition" (ASTM, 2013 & 2021). The HREC designation requires the comparison of residual contamination concentrations, if any, to current regulatory standards.

- A **controlled recognized environmental condition** is defined as a "recognized environmental condition affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls (for example, activity and use limitations or other property use limitations)" (ASTM, 2013 & 2021).

- A ***de minimis condition*** is defined as "a condition related to a release that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental

agencies. A condition determined to be a de minimis condition is not a recognized environmental condition nor a controlled recognized environmental condition" (ASTM, 2013 & 2021).

A further goal of this process is to identify other business environmental risks (BERs) associated with the Subject Property, that exist beyond CERCLA liability, but that can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of the Subject Property. This investigation is not an environmental compliance audit and is not designed to determine if the operations of an existing facility are in compliance with applicable environmental laws and regulations.

1.2 Scope of Work

In order to evaluate environmental conditions at the Subject Property, the scope of work for this project included the following: 1) conducting a site reconnaissance of the Subject Property and viewing readily-observable conditions at adjoining properties; 2) reviewing relevant regulatory agency database records associated with the Subject Property, adjoining properties, and immediately surrounding sites; 3) contacting local officials and other knowledgeable persons associated with the Subject Property; and, 4) reviewing pertinent historical documents with regard to past land use, regional setting information, and ownership records. Each task is conducted with the intent to identify recognized environmental conditions as defined by ASTM Standard E1527-13. This ASTM standard exceeds the requirements set forth in 40 CFR Part 312, Standards and Practices for All Appropriate Inquiries.

In addition, the following non-scope considerations that are outside the standard practices required by ASTM E1527-13 and E1527-21, were included as a part of our scope of services:

- EFI conducted a limited visual evaluation of accessible areas of the Subject Property to determine the potential for asbestos-containing material to be present at the Property. As a part of this evaluation, the condition and location of suspect or presumed asbestos-containing material was reported. See Section 9.1 for additional details regarding this scope of work.

- A limited lead-based paint evaluation was performed in accessible areas of the Subject Property during the site reconnaissance. The potential for lead-based paint was based on the date of construction and the condition and location of painted surfaces where noted. See Section 9.2 for additional details regarding this scope of work.

- An evaluation of radon potential was provided utilizing average radon concentration zones available from the US Environmental Protection Agency (USEPA). See Section 9.3 for additional details regarding this scope of work.

- A limited visual assessment of accessible areas of the Subject Property were evaluated for the presence of mold growth. The location and quantity of mold growth observed, if any, was documented. See Section 9.4 for additional details regarding this scope of work.

- A limited visual assessment for wetlands vegetation was performed as part of the completion of the site reconnaissance. In addition, EFI reviewed readily ascertainable jurisdictional data or maps to confirm if jurisdictional wetlands are located on the Property. See Section 4.4 for additional details.

- An evaluation for lead in drinking water was provided utilizing annual drinking water quality reports or interviews with municipal or utility officials. See Section 9.5 for additional details regarding this scope of work.

It should be noted that non-scope considerations provided as part of this ESA are not intended to satisfy a regulatory requirement but are intended to give a lender or user of this report an indication of significant environmentally-related conditions which may exist at the Subject Property. These items may be considered significant due to the quantity of, accessibility to, and/or condition of the non-scope issue identified. Further investigation may be appropriate to satisfy regulatory requirements, or in the event of future renovation, demolition, or maintenance work that may impact suspect or affected materials.

1.3 Significant Assumptions

In conducting this Phase I ESA, EFI relied on federal and state regulatory agency database information, published historical and physical setting sources, and interviews with knowledgeable parties, regulatory officials, and other private individuals. EFI has assumed where reasonable to do so that the information provided is true and accurate. If information to the contrary is discovered, our conclusions and recommendations may not be valid.

EFI obtained environmental agency database information from Environmental Data Resources, Inc. (EDR). The databases usually present the location of the entities by their street address. In many cases this is the only reasonable means by which we may locate a database entry. The actual location of an entry may not be accurately indicated by the street address given.

Certain environmental hazards are impossible to visually identify; their presence can be verified only by testing and analysis. EFI can make no direct inferences as to the subsurface conditions at the Property based on the Phase I scope of work, which does not include a physical investigation of the subsurface. No detailed wetlands assessments, endangered species, or fault investigations were performed during this site assessment.

Conditions other than those observed may exist in inaccessible or unobserved areas of the Property. During the site visit, materials identified on the Property were not disturbed and underlying conditions were not observed. Should there be a substantial change in the functional utilization of the Property, or if additional improvements are planned, the conclusions presented here may not be valid. If there are changes in the use of the Property or changes in the adjacent property activities or conditions, EFI should be notified so that we may observe these conditions.

Our conclusions and recommendations relate only to the areas we observed during the site reconnaissance and the findings of the research noted in this report. The scope of this report is limited to matters expressly covered.

1.4 Limitations and Exceptions

Along with all of the limitations set forth in various sections of the ASTM E1527-13 and E1527-21, the accuracy and completeness of this report may be limited by the following:

Outstanding Information Requests - As of the issue date of this report, EFI has not received a response to our request for information from the New York City Fire Department and the New York City Department of Health and Mental Hygiene-Bureau of Environmental Health Services.

Historical Data Source Failure - EFI was not able to document the historical use back to the Property's first developed use. This data failure is not considered significant and does not alter the conclusions of this report, as the 1895 Sanborn Fire Insurance map indicates the Subject Property was mostly vacant land with a railroad right of way, a storage building and a residential dwelling. Additionally, gaps of greater than five-year intervals in the historical record were noted by EFI. However, because the Property consisted of vacant land or the occupant/use of the Subject Property was generally consistent during these intervals, this data failure is not a significant concern.

It should be noted that this assessment did not include a review or audit of operational environmental compliance issues, or of any environmental management systems (EMS) that may exist on the property. Where required, the documents provided in the appendices were used as reference material for the completion of the Phase I ESA. Some of the information presented in this report was provided through existing documents and interviews. Although attempts were made, whenever possible, to obtain a minimum of two confirmatory sources of information, EFI in certain instances has been required to assume that the information provided is accurate.

The information and conclusions contained in this report are based upon work undertaken by trained professional and technical staff in accordance with generally accepted engineering and scientific practices current at the time the work was performed. The conclusions and recommendations presented represent the best judgment of EFI based on the data obtained from the work. Due to the nature of investigation and the limited data available, EFI cannot warrant against undiscovered environmental liabilities. Conclusions and recommendations presented in this report should not be construed as legal advice.

Should additional information become available which differs significantly from our understanding of conditions presented in this report, we request that this information be brought to our attention so that we may reassess the conclusions provided herein.

The User informed EFI of the proposed plans for the Subject Property include rezoning and development of a new multi-story residential building. It should be noted that additional actions and review maybe required by regulatory agencies in connection with rezoning and development purposes.

1.5 Deviations

No deviations from the recommended scope of ASTM Standards E1527-13 and E1527-21 were performed as part of this Phase I ESA with the exception of any additional services noted in Section 1.2 Scope of Work.

1.6 Special Terms and Conditions

No special terms and/or conditions are associated with this project.

Instructions as to the location of the Subject Property , access, and an explanation of the Property and facilities to be assessed were provided by Mr. Demetrios Moragianis, Managing Member, with Ocean Towers Partners LLC.

1.7 User Reliance

All reports, both verbal and written, are for the benefit of Ocean Towers Partners L.L.C. c/o Proto Property Services L.L.C.. This report has no other purpose and may not be relied upon by any other person or entity without the written consent of EFI. Either verbally or in writing, third parties may come into possession of this report or all or part of the information generated as a result of this work. In the absence of a written agreement with EFI granting such rights, no third parties shall have rights of recourse or recovery whatsoever under any course of action against EFI, its officers, employees, vendors, successors or assigns. Reliance is provided in accordance with EFI's Proposal and General Conditions executed by Ocean Towers Partners L.L.C. c/o Proto Property Services L.L.C. on February 27, 2023.

2.0 SITE AND VICINITY DESCRIPTION

2.1 Current Subject Property Use and Improvements

The Subject Property is approximately 1.4902 acres in size and consists of the southwest portion of Tax Block 7055, Lot 13, which is approximately 3.5 acres in size. The Subject Property is mostly vacant land. Limited improvements to the Subject Property include concrete sidewalks and a steel bridge over a land depression. Pedestrian access to the Subject Property is provided via two gated entrances along West 25th Street to the west and a gated entrance from an asphalt-paved parking lot to the north as well as through the adjoining building at 2950, 2960, and 2970 West 24th Street.

A summary of Subject Property and building features, including utilities, is provided in the tables below.

Subject Property Summary	
Size of Subject Property (approximate):	1.4902 acres
General Topography of Subject Property:	General slope to the south
Adjoining and/or Access/Egress:	Access via paved entrances from West 25th Street to the west and an asphalt parking lot to the north and Ocean Towers apartment building at 2950, 2960, and 2970 West 24th Street to the east. Additionally, Surf Avenue adjoins the Property to the south.
Paved or Concrete Areas (including parking):	Concrete sidewalks
Unimproved Areas:	Covered with grass and trees
Landscaped Areas:	None
Surface Water:	None
Potable Water Source:	New York City Department of Environmental Protection
Sanitary Sewer Utility:	New York City Department of Environmental Protection
Storm Sewer Utility:	New York City Department of Environmental Protection
Electrical Utility:	Con Edison
Natural Gas Utility:	National Grid

2.2 Subject Property Location, Legal Description, and Zoning

The Subject Property is located on the east side of West 25th Street and the north side of Surf Avenue in an area that consists of multi-family residential properties and commercial businesses.

Information obtained from the New York City Department of Finance (DOF)) indicates that the tax assessment parcel number for the Subject Property is Part of Block 7055, Lot 13.

The legal description for the Property was provided by the Property owner and is located in Appendix F.

The Subject Property is zoned R6 for residential use. The area surrounding the Property is primarily zoned for residential use and commercial use.

2.3 Current Use of the Adjoining Properties

An area reconnaissance was conducted to assist in evaluating if adjacent land uses have or could have impacted the Subject Property. The area reconnaissance was conducted within a quarter of a mile of the Subject Property by touring the area by automobile and/or walking, by viewing particular businesses from public rights-of-way, and by physical observations at selected businesses or properties. The following summary describes land use on the adjoining properties, based on our observations.

Direction From Site	Occupant	Use	Comments
North	Parking lot on the same parcel (2950, 2960, 2970 West 24th Street)	Residential	No environmental concerns were observed
South	New York City Housing Authority Haber Houses (3018 West 24th Street)	Residential	No environmental concerns were observed
East	Ocean Towers Apartments (2950, 2960, 2970 West 24th Street)	Residential	No environmental concerns were observed; however 2950 W. 24th Street appears on the NY Lead database. See Section 5.2
West	Surf Playground (2501 Surf Avenue); The Shirley Tanyhill School (also known as Public School 288) (2950 W. 25th Street); and New York City Housing Authority Coney Island Houses Sites 4&5 (2926 W. 25th Street)	Residential and Institutional	No environmental concerns were observed; however 2950 W. 25th Street appears on the RCRA NonGen, RCRA SQG, NY Manifest, PA Manifest, AST and NY Spills databases; 2501 Surf Avenue appears on the UST and NY Spills databases and 2926 West 25th Street appears on the RCRA NonGen, FINDS and ECHO databases. See Section 5.2
Southwest	New York City Parks and Recreation (3001 W. 27th Street)	Storage	No environmental concerns were observed

Our observations of the adjoining and adjacent properties did not reveal evidence of potential environmental concerns such as suspect storage facilities, visible fueling facilities, or significantly stained surfaces.

3.0 USER-PROVIDED INFORMATION

ASTM E1527-13 and E1527-21 require that the Environmental Professional request from the user of the Phase I ESA, the Client, certain information discussed below concerning the Subject Property or request from the user the names of other individuals who can provide this information.

ASTM E1527-13 and E1527-21 assign to the Client or its representative, the responsibility to check or engage a title company or title professional to check reasonably-ascertainable recorded land title records for environmental liens, judicial records, or activity and use limitations currently recorded against the Subject Property and provide that information for inclusion in this report.

If this Client or its representative is aware of specialized knowledge or experience that is material to the identification of recognized environmental conditions, or if they have actual knowledge that the purchase price of the Subject Property is significantly less than the purchase price of comparable properties, ASTM E1527-13 and E1527-21 assign to the Client the obligation to communicate that information for inclusion in this report.

The User Questionnaire was completed by Mr. Demetrios Moragianis, Managing Member with Ocean Towers Partners LLC. Information provided by the Client is included below. A copy of the completed questionnaire is provided in Appendix E.

3.1 Title Records

Information provided by the Client indicated that no title records, judicial records, or environmental cleanup liens are known for the Property.

3.2 Activity and Use Limitations Applicable to the Subject Property

Information provided by the Client indicates that no environmental activity and use limitations (AULs) or governmental notification relating to past or recurrent violations of environmental laws are known for the Property.

3.3 Specialized Knowledge or Experience of the User

According to the Client, there was no specialized knowledge of the Property. Property management and tenants as well as all individuals who were interviewed as part of this investigation, have not reported any specialized knowledge of the Property outside of what is contained in this report.

3.4 Commonly Known or Reasonably Ascertainable Information

The User indicated having no knowledge of environmentally-relevant, commonly-known or reasonably-ascertainable information pertaining to the Property.

3.5 Relationship of the Purchase Price to Fair Market Value

No information indicating that the purchase price of the Property is significantly less than the purchase price of comparable properties was reported to EFI by the Client or their representative.

3.6 Reason For Performing Phase I

We understand that the purpose of this assessment is to complete an evaluation that will help to provide the factual support of the innocent landowner defense to CERCLA liability and to understand potential environmental conditions that could materially impact the operation of the business associated with the Subject Property (business environmental risk).

Additionally, the Client indicated that the purpose of this assessment is a requirement of a ULURP application to rezone to build 411 residential units on the Subject Property.

4.0 PHYSICAL SETTING SOURCES

4.1 Topography

The elevation of the Subject Property is approximately two feet above mean sea level, as depicted on the U.S.G.S. 7.5 Minute Series Topographic Map of the Coney Island, NY Quadrangle. The terrain in the vicinity of the Subject Property is generally flat and generally slopes to the south. Storm water flow is routed to storm drains in the adjoining right-of-ways. The Subject Property does not appear to receive significant surface water runoff from adjoining properties.

4.2 Soils/Geology

Based on information obtained from the United States Department of Agriculture (USDA), National Resources Conservation Service (NRCS), Soil Survey Geographic Database (SSURGO), the Subject Property is mapped as Urban land which consists of soils where more than 85 percent of the original soils have been disturbed or covered by paved surfaces, buildings, or other structures.

The Subject Property is underlain by a stratified sequence of Cenozoic, Quaternary, Pleistocene age. The estimated depth to bedrock is more than 500 feet below land surface.

4.3 Hydrology

Shallow groundwater flow generally follows the local topography but may be affected by localized conditions. Based on the local topography of the area, shallow groundwater in the vicinity of the Subject Property is expected to flow to the south toward Coney Island Channel located approximately 1,000 feet to the south of the Subject Property. The depth to groundwater at the Subject Property is estimated to be less than 10 feet below land surface.

4.4 Wetlands

According to the US Fish and Wildlife Service Geospatial Wetlands Information online map, there are no mapped wetlands on the Subject Property. Additionally, no evidence of wetlands was observed at the Subject Property during this investigation.

4.5 Flood Zone Information

A review of the Flood Insurance Rate Maps, published by the Federal Emergency Management Agency, was performed. According to Panel Number 3604970353F, dated September 5, 2007, the Subject Property is located in the following Flood Zones:

- X (shaded): A moderate risk area between the limits of the 100-year and 500-year floods, areas protected by levees from 100-year flood, or shallow flooding areas with average depths of less than one foot or drainage areas of less than 1 square mile. No base flood depths are shown within this zone. This is considered to be a 500-year floodplain.

- AE: Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. In most instances, base flood elevations derived from detailed analyses are shown at selected intervals within these zones. A base flood elevation of approximately 10 feet is depicted in this area of the Subject Property. This is considered to be a 100-year floodplain.

4.6 Oil and Gas Exploration

No oil or gas wells were identified at the Subject Property.

4.7 Mining Activities

No indication of mining activities was identified during completion of this assessment.

4.8 Historic Fill

Historic fill was not identified at the Subject Property through a review of published sources. However, given the elevation differences noted across different portions of the Subject Property, the observed presence of construction debris (brick wall remnants) at the surface in the vicinity of the former buildings, and Information provided by the Site Manager of the east-adjoining apartments indicating that the mounds on the western portion of the Property consist of debris from the prior structures as well as soil excavated during construction of the east-adjoining apartments, EFI cannot discount the possibility that historic fill may be present at the Subject Property.

5.0 STANDARD ENVIRONMENTAL RECORD SOURCES

EFI contracted EDR to conduct a search of Federal and State regulatory agency databases containing known and suspected sites of environmental contamination. The databases searched and the number of listed sites identified within the approximate minimum search distance from the Federal and State environmental records database listings specified in ASTM Standards E1527-13 and E1527-21 are summarized in the following table. A copy of the regulatory database report containing the EDR research data and descriptions of the reviewed databases is included in Appendix C of this report.

ASTM-REQUIRED STANDARD ENVIRONMENTAL RECORD SOURCES				
DATABASE	**SEARCH RADIUS**	**SUBJECT PROPERTY LISTINGS**	**ADJOINING LISTINGS**	**TOTAL LISTINGS**
Federal National Priorities List (NPL)	1 mile	0	0	0
Federal Delisted NPL Sites	1/2 mile	0	0	0
Federal Superfund Enterprise Management System (SEMS) List	1/2 mile	0	0	0
Federal SEMS-ARCHIVE List	1/2 mile	0	0	0
Federal Corrective Action Sites (CORRACTS) Sites	1 mile	0	0	0
Federal RCRA Non-CORRACTS Treatment/ Storage/Disposal (TSD) Facilities	1/2 mile	0	0	0
Federal RCRA Generators List	On-site and adjoining	0	1	14
Federal Institutional Control/Engineering Control Registries	On-site	0	0	0
Federal ERNS List	On-site	0	0	0
State and Tribal Hazardous Waste Sites (SHWS)	1 mile	0	0	3
State and Tribal Landfill and/or Solid Waste Disposal Sites (SWLF)	1/2 mile	0	0	0
State and Tribal Registered Underground Storage Tank (UST) Sites	On-site and adjoining	0	1	12
State and Tribal Leaking Storage Tank (LTANKS) Sites	1/2 mile	0	0	23
State and Tribal Institutional Control/ Engineering Control Registries	On-site	0	0	2
State and Tribal Voluntary Cleanup Program (VCP) Sites	1/2 mile	0	0	1
State and Tribal Brownfield Sites	1/2 mile	0	0	3

OTHER DATABASES WITH PERTINENT LISTINGS AT THE SUBJECT PROPERTY AND THE ADJOINING SITES			
DATABASE	**SEARCH RADIUS**	**SUBJECT PROPERTY LISTINGS**	**ADJOINING LISTINGS**
NY Lead	On-site	0	0
State and Tribal Registered Aboveground Storage Tank (AST) Sites	On-site and adjoining	0	1
State Spills (SPILLS)	1/8 mile	0	2
Manifest	1/4 mile	0	2
RCRA Non Generator	1/4 mile	0	2

5.1 Subject Property Listings

The Subject Property is not listed within the researched databases.

5.2 Adjoining Property Listings

Adjoining properties are listed within the regulatory database report as follows:

- 2950 West 24th Street is located on an adjoining site to the east and is inferred to be cross-gradient relative to the Subject Property. This facility appears on the NY Lead database. It refers to lead based paint violations within the building and is not an environmental concern to the Subject Property.

- New York City School Construction Authority, Sandy Follow Up, New York City Department of Education and P.S. 288 at 2950 West 25th Street is located on an adjoining site to the west and is inferred to be cross gradient to the Subject Property. This facility appears on the RCRA NonGen, RCRA SQG, NY Manifest, PA Manifest, AST and NY Spills databases. According to the regulatory database report, two 7,000-gallon fuel oil ASTs were closed at this site in 2015 and one 7,000-gallon fuel oil AST was closed in 2017. A fuel oil spill associated with Super Storm Sandy was identified on October 28, 2012. The spill impacted the basement of the building. Remediation was conducted and the incident was closed. Based on regulatory status and gradient, this incident is not an environmental concern. Additionally, no spills or releases are associated with the RCRA and Manifest listings.

- Surf Playground and NYC Parks at 2501 Surf Avenue is located on an adjoining site to the west and is inferred to be cross gradient to the Subject Property. This facility appears on the UST and NY Spills databases. According to the regulatory database report, a 1,000-gallon UST was closed at this site in August 2021. A spill (no. 2102270) was issued when contaminated soil was detected during the tank closure. The soil was excavated and the incident was closed in September 2021. Based on regulatory status and gradient, this incident is not an environmental concern.

- NYCHA Surfside Gardens Houses at 2926 West 25th Street is located on an adjoining site to the west and is inferred to be cross gradient to the Subject Property. This facility appears on the RCRA NonGen, FINDS and ECHO databases. No spills or releases are associated with these listings.

5.3 Other Relevant Vicinity Listings

Additional listings were identified in the vicinity of the Subject Property, however these sites do not pose a threat to the Subject Property as there are no indications releases at these sites, release has occurred but groundwater has not been impacted, release has occurred but the cases are closed, or the sites are located cross or down gradient of the Subject Property and in excess of 1/10 mile from the Subject Property.

5.4 Orphan (Unmappable Sites)

Seven Orphan sites were identified, however these sites are not the Subject Property or adjoining properties.

5.5 Super Lien Statute

New York has a first priority Super Lien Statute for clean up of hazardous waste.

6.0 HISTORICAL USE INFORMATION

6.1 Historical Summary

Historical information identifying the past uses of the Subject Property and adjoining properties was obtained from city directories, aerial photographs, Sanborn Fire Insurance maps, topographic maps, municipal records, and prior ESA reports.

According to the historical information, the Subject Property consisted of mostly vacant land with a railroad right of way along the northern boundary, residential dwellings and storage buildings from at least 1895 to 1906, was improved with Railroad Avenue, residential dwellings and flats and Brooklyn Trust Co. Sea Gate Branch in 1930. The Sanborn map from 1950 indicates the Brooklyn Trust Co. building was occupied by a printing company, which was present until at least 1968. The former structures were demolished circa 1972 and the Subject Property has been vacant land since that time.

Adjoining properties consisted of residential dwellings and flats and stores and were redeveloped with multi-family residential buildings, a school, and a playground.

According to a prior Phase I ESA report, one REC, a former printing company, was identified on Parcel A. Additionally, three RECs were identified adjacent to Parcel A, as follows: historic railroad tracks from at least 1895 until sometime between 1906 and 1930; a woodworking facility was located at 2411 Surf Avenue from 1966 until sometime between 1968 and 1977; and dry cleaning facilities were located at 2970 West 24th Street in 1934 and at 2944 West 24th Street in 1966 until sometime between 1968 and 1977.

Historic fill was not identified at the Subject Property through a review of published sources. However, given the elevation differences noted across different portions of the Subject Property, the observed presence of construction debris (brick wall remnants) at the surface in the vicinity of the former buildings, and Information provided by the Site Manager of the east-adjoining apartments indicating that the mounds on the western portion of the Property consist of debris from the prior structures as well as soil excavated during construction of the east-adjoining apartments, EFI cannot discount the possibility that historic fill may be present at the Subject Property.

The historical use of the Subject Property by a printing company and the historical use of an adjacent site by a dry cleaning facility are considered to be RECs to the Subject Property. Additionally, the possible presence of soil generated during the construction of the adjacent building is considered to be a Business Environmental Risk. The former railroad tracks are not an environmental concern as the shallow soil beneath the tracks was likely removed during the construction of Railroad Avenue. Also, the location of the former wood working facility is cross gradient to the Subject Property, and therefore is not a REC.

The historical Subject Property and adjoining site operations are discussed in the following sections.

6.2 City Directories

City Directories for the Subject Property and select adjoining property addresses that covered the years 1928 through 2020 were reviewed for this assessment.

No historical tenants of environmental concern were identified in association with the Subject Property. No historical tenants of environmental concern were identified at the adjoining or nearby properties as most of these listings were residential.

A copy of the city directories is provided in Appendix B.

6.3 Aerial Photographs

Based on the dense, urbanized nature of the surrounding area, historical aerial photographs for the Subject Property and surrounding area were not reviewed for this assessment.

6.4 Sanborn Fire Insurance Maps

Historical Sanborn Fire Insurance maps for the Subject Property dated between 1895 and 2007 were reviewed for this assessment. Copies of the Sanborn maps are included in Appendix B of this report. A summary of the Sanborn maps is provided below.

Sanborn Fire Insurance Map Summary

Date	Site Comments	Adjoining Property Comments
1895	Mostly vacant land with a railroad right of way, a storage building and a residential dwelling.	Adjoining north is vacant land. Adjoining east is vacant land. Adjoining west is West 25th Street followed by vacant land, a residential dwelling and a store. Adjoining south is Surf Avenue followed by vacant land.
1906	Some vacant land with a railroad right of way now identified as New York & Coney Island R.R., storage buildings, and a residential dwelling, and a structure identified as The Kurland House.	Adjoining north is vacant land, a storage shed and residential dwelling. Adjoining east is vacant land, a storage shed and residential dwelling. Adjoining west is West 25th Street followed by vacant land and a few a residential dwellings. Adjoining south is Surf Avenue followed by vacant land. Adjoining southwest is the intersection of West 25th Street and Surf Avenue followed by a hotel.
1930	Almost completely developed with Railroad Avenue, residential dwellings and flats, and Brooklyn Trust Co. Sea Gate Branch.	Adjoining north is completely developed with residential flats. Adjoining east is completely developed with stores residential flats, dwellings, a dead end street. Adjoining west is West 25th Street followed by stores residential flats and dwellings. Adjoining south is Surf Avenue followed by stores and Moving Pictures. Adjoining southwest is the intersection of West 25th Street and Surf Avenue followed by a store and a hotel.
1950	Printing has replaced the former Brooklyn Trust Co. Sea Gate Branch. No other significant changes.	No significant changes to adjoining north, east, west or southwest. Adjoining south is Surf Avenue followed by stores and "to be clothing manufacturing".

Date	Site Comments	Adjoining Property Comments
1966, 1968	No significant changes.	No significant changes to adjoining north. Adjoining east continues to be completely developed with stores residential flats, dwellings, a dead end street. Drycleaning is noted in one of the stores. Adjoining west is West 25th Street followed by residential dwellings and flats, Public School No. 288 and a playground.Adjoining south is Surf Avenue followed by several multi-family residential buildings and a community center that are identified as New York City Housing Authority Bernard Haber Houses Apartments. Adjoining southwest is the intersection of West 25th Street and Surf Avenue followed by vacant land and a maintenance building that is part of New York City Parks Department.
1977, 1979, 1980, 1981, 1982, 1983, 1986, 1987, 1989, 1991, 1992, 1993, 1995, 1996, 2001, 2002, 2003, 2004, 2005, 2006, and 2007	Vacant land that is on the parcel identified as Coney Island Houses Site No. 17. All prior structures and the prior right of way traversing the Property are no longer depicted.	Adjoining north is also vacant land that is on the parcel identified as Coney Island Houses Site No. 17, with no separation/boundary depicted. Adjoining east is also on the parcel identified as Coney Island Houses Site No. 17 and is newly developed with three attached 20-story buildings containing 360 residential units, constructed in 1972. Adjoining west is West 25th Street followed by a newly developed multi-family residential building, Public School No. 288 and a playground. Adjoining south and southwest are unchanged from 1968.

6.5 Topographic Maps

Historical topographic maps were not reviewed as part of this assessment. Historical use of the Subject Property was researched using other standard historical sources.

6.6 Title Records

Review of a 50-year chain of title was not included in the scope of the assessment. A title report was requested from the Client but was not received prior to issuance of this report. As a result, the information required for review of recorded land title records is considered not to be readily ascertainable.

6.7 Prior Environmental Reports

The following prior assessment was provided to EFI for review:

Phase I Environmental Site Assessment, Ocean Tower Coney Island, 2950, 2960, & 2970 West 24th Street, Block 7055, Lot 13, Brooklyn, Kings County, New York, prepared by Matrix New World Engineering, Land Surveying and Landscape Architecture, P.C., dated February 15, 2023.

- This report was done on a larger site (3.5 acres) that included the current Property (Parcel A) and the building at 2950, 2960, and 2970 West 24th Street. The report was completed in accordance with ASTM E-1527-21. The assessment identified four RECs at the larger parcel. These included historic railroad tracks along the northern side of the site from at least 1895

until sometime between 1906 and 1930; a printing facility was located at 2427 and 2429 Surf Avenue at the southwestern side of the site from 1950 to 1968; a woodworking facility was located at 2411 Surf Avenue from 1966 until sometime between 1968 and 1977; and dry cleaning facilities were located at 2970 West 24th Street in 1934 and at 2944 West 24th Street in 1966 until sometime between 1968 and 1977. The only REC identified at Parcel A was the former printing company. Additionally, a small portion of the historic railroad tracks would have been present along the northern side of Parcel A. Matrix provided no recommendations.

Phase I Environmental Site Assessment, Ocean Towers, 2950, 2960, & 2970 West 24th Street, Brooklyn, Kings County, New York, prepared by AEI Consultants, dated March 19, 2020.

- This report was done on a larger site (3.5 acres) that included the current Property (Parcel A), as well as the building at 2950, 2060, and 2970 West 24th Street and asphalt parking area. The report was performed in accordance with ASTM E1527-13 and the Freddie Mac scope of work. No RECs were identified at the Subject Property, however several Business Environmental Risks were identified as follows:
    - A former dry cleaning business (labeled "DRY CLEAN'G") was depicted in a relatively small building in the 1966 and 1968 Sanborn maps, addressed at 2944 West 24th Street. This business was not identified in the regulatory database and is not depicted in an earlier Sanborn map, dated 1950. Based on review of city directories, this property was utilized for residential purposes in 1960, as well as in 1965 and 1970, and the dry cleaning business is not listed. The site was redeveloped and constructed with the current site configuration in 1972. Therefore, any potential release to the subsurface would likely have been removed during development of the current subject property buildings. Furthermore, based on the short duration of time (3 years) this cleaning business potentially occupied the site, time elapsed since (over 50 years), lack of a reported database listing indicating hazardous waste generation or release, and no ground-floor residential occupancy at the property, AEI indicated that this was not a significant environmental concern.

    - Due to the age of the subject property building, there is a potential that LBP is present. The observed painted surfaces were in good condition and are not expected to pose a health and safety concern to the occupants of the subject property at this time. However, based on the potential presence of LBP and in accordance with the Freddie Mac Multi-Family Seller/ Servicer Guide-Environmental Reporting Requirements, AEI recommended the property owner implement an O&M Plan which stipulates that the assessment, repair and maintenance of damaged painted surfaces be performed to protect the health and safety of the building occupants. Local regulations may apply to LBP in association with building demolition/ renovations and worker/occupant protection. Actual material samples would need to be collected or an XRF survey performed in order to determine if LBP is present. It should be noted that construction activities that disturb materials or paints containing any amount of lead may be subject to certain requirements of the OSHA lead standard contained in 29 CFR 1910.1025 and 1926.62.

- AEI observed interior areas of the subject property building in order to identify the presence of mold. During the on-site reconnaissance, obvious visible signs of mold growth/water intrusion or conditions conducive for suspect mold growth were observed in sheet rock and ceiling tiles. The mold growth appeared limited to the shower area in Apt 12A and appeared to be a result of poor housekeeping. Based upon AEI's observations, including the localized nature of the suspect mold, AEI recommended cleaning the affected materials. Improved housekeeping would also be prudent. AEI also recommended replacing the water stained ceiling tile observed in the laundry room and ensure the source of water intrusion has been addressed. In addition, per Freddie Mac Guidelines, AEI recommended the property owner implement a Mold/Moisture Plan (MMP) in order to assist on-site staff with proper methods of mold growth evaluation and remediation, as well as proper training for on-site maintenance personnel.

- Due to the COVID-19 outbreak, AEI proposed collecting samples of suspect friable materials once restrictions have been lifted and can access the the residential units and common areas. AEI indicated that suspect ACMs were observed in good condition and are not expected to pose a health and safety concern to the occupants of the subject property at this time. In the event that building renovation or demolition activities are planned, an asbestos survey adhering to AHERA sampling protocol should be performed prior to demolition or renovation activities that may disturb suspect ACMs. In addition, in accordance with Freddie Mac requirements, based on the presence of friable suspect ACMs, AEI recommended the property owner implement an O&M Plan which stipulates that the assessment, repair and maintenance of damaged materials be performed to protect the health and safety of the building occupants.

Phase I Environmental Site Assessment Report, Ocean Towers Apartments, 2950, 2960 and 2970 West 24th Street, Brooklyn, New York, prepared by LandAmerica Assessment Corporation (LAC), dated December 21, 2006.

- This report was done on a larger site (3.5 acres) that included the current Property (Parcel A) as well as the building at 2950, 2960, and 2970 West 24th Street and asphalt parking area. The report was performed in accordance with ASTM E 1527-00, which was subsequently updated. LAC concluded "This assessment has revealed no evidence of recognized environmental conditions in connection with the Property, however, the following warrants mention: Suspect asbestos ceiling texture, wallboard assemblies, resilient floor finishes and roofing components were identified at the Property. These materials were observed to be in good condition with low potential for fiber release." LAC recommended "An Operations and Maintenance (O&M) program should be developed to manage the asbestos-containing materials in place found at the facility. The intent of the O&M program is to minimize the potential exposure of building occupants to airborne asbestos fibers. In addition, prior to any demolition or renovation activities a comprehensive asbestos survey is recommended." The conclusions and recommendations appear to be pertain to the larger site rather that the current Property. Section 3.0 of this report pertaining to Historical Use Information states "All the previous structures on the Property were razed prior to 1972 and excavated in preparation for construction of the current 20-story building. The subject property has been utilized exclusively for multi-family residential purposes since initial development. The current Property building has not been utilized for environmentally sensitive purposes,

such as photo developing or dry cleaning; rather, the tenants currently present at the Property have occupied them. Impact to the Property is considered unlikely because of the subsequent development of the subject site area since these historic operations ceased activities. Standard construction methodologies would have excavated impacted soils (if present) from these previous activities. Standard construction methodologies for the subject site buildings would have excavated to at least 15 feet below surface grade to prepare the area for the foundations required for the building currently present. Impact to the subject site from this historical activity is considered unlikely."

Copies of the reports are included in Appendix E.

6.8 State and Local Agency Records

New York City Building Department (DOB)-
EFI obtained online records from the New York City DOB website to assist in determining the developmental history of the Subject Property. Note that it was not possible to separate the records for Parcel A from the remainder of the larger parcel. A copy of the records are included in Appendix F.

New York City Fire Department (FDNY)-
EFI submitted a Fuel Tank Special Report Request Form for the Property to the FDNY for evidence indicating the presence of fuel oil tanks. A response has not been received from the FDNY as of the release date of this report. Please see Appendix F for a copy of the Tank Request Form.

New York City Department of Finance (DOF)-
EFI reviewed assessment records on the New York City DOF website. Note that it was not possible to separate the records for Parcel A from the remainder of the larger parcel. The Property owner is listed as Ocean Towers Partners LLP. No additional information of interest was listed.

New York City Department of Health-
A review of pertinent information was conducted at the New York City Environmental Health Department's website. Note that it was not possible to separate the records for Parcel A from the remainder of the larger parcel. In addition, EFI submitted a Freedom of Information Letter (FOIL) for the Property to the New York City Department of Health and Mental Hygiene-Bureau of Environmental Health Services for information pertaining to hazardous substances, USTs, releases, inspection records, asbestos, mold and LBP violations, etc. A response has not been received from this agency as of the release date of this report. Please see Appendix F for a copy of the FOIL request.

New York City Department of Housing Preservation & Development (NYCHPD)-
EFI reviewed the NYCHPD online database for current outstanding violations issued to the Property. Note that it was not possible to separate the records for Parcel A from the remainder of the larger parcel. Please see Appendix F for a copy of the HPD summary report.

6.9 Historical Data Source Failure

Based on the definition presented in ASTM E1527-13 and E1527-21, data failure occurs when all of the standard historical sources that are reasonably-ascertainable and likely to be useful have been reviewed and the historical use of the Property has not been documented back to the Property's first developed use, or 1940 whichever is earlier, or when intervals of greater than approximately five years were encountered during review of standard historical sources. When data failure occurs,

ASTM E1527-13 and E1527-21 require the Environmental Professional to document the data failure and assess the potential impact on the ability of the Environmental Professional to identify recognized environmental conditions.

The following data failures have been identified:

- EFI was not able to document the historical use back to the Property's first developed use. This data failure is not considered significant and does not alter the conclusions of this report, as the 1895 Sanborn Fire Insurance map indicates the Subject Property was mostly vacant land with a railroad right of way, a storage building and a residential dwelling.

- Gaps of greater than five-year intervals in the historical record were noted by EFI. However, because the Property consisted of vacant land or the occupant/use of the Subject Property was generally consistent during these intervals, this data failure is not a significant concern.

7.0 SITE RECONNAISSANCE

7.1 Methodology and Limiting Conditions

The site reconnaissance was conducted on March 2, 2023, by Christine Beaver, Field Professional with EFI, accompanied by Jimmy Guzman, Senior Property Manager with Ocean Towers Apartments. The weather was cloudy with an approximate temperature of 44 degrees Fahrenheit.

The visual reconnaissance consisted of observing the boundaries of the Subject Property and systematically traversing the Subject Property to provide an overlapping field of view, wherever possible.

Photographs of pertinent site features identified during the site reconnaissance are included in Appendix A.

7.2 Site Reconnaissance Observation Summary

A general discussion of Subject Property improvements and features was previously provided in Section 2. The following table summarizes other observations made during our Site Reconnaissance.

Yes	No	Observed Feature(s)
	✔	Hazardous Substance and Petroleum Product Containers (USTs, ASTs, Drums, Totes, Intermediate Bulk Containers, Retail-Size, or Other Containers)
	✔	Containers with Non-Hazardous Substances/Non-Petroleum Products (USTs, ASTs, Drums, Totes, Intermediate Bulk Containers, Retail-Size, or Other Containers)
	✔	Unidentified Substance Containers
	✔	Stained or Corroded Surfaces, Stained Soil, or Stressed Vegetation
	✔	Strong, Pungent, or Noxious Odors
	✔	Pits, Ponds, Lagoons, or Pools of Liquid (Associated with hazardous substance/petroleum product use, storage, disposal, or treatment)
	✔	Discharge Features (Not including stormwater management to municipal systems) (Floor Drains, Catch Basins, Sumps, Septic Systems, Cesspools, Clarifiers/ Grease Traps, Oil/Water Separators, Wastewater discharge other than sanitary waste)
	✔	Polychlorinated Biphenyl Compounds (PCBs)
	✔	Wells (Dry, Irrigation, Injection, Monitoring, Soil Vapor, Abandoned, etc.)
✔		Evidence of On-Site Improper Solid Waste Disposal/Dumping or Fill Areas
	✔	Evidence of Borings
	✔	Additional Hazardous Observations Observed or Reported by those Interviewed During the Site Reconnaissance

7.3 Discussion of Site Reconnaissance Observations

Evidence of On-Site Improper Solid Waste Disposal/Dumping or Fill Areas

- EFI observed evidence of fill materials with mounds up to 8 feet high primarily along the west and south borders of the Property that are not characteristic of the surrounding flat topography. Given the elevation differences noted across different portions of the Subject Property, as well as, the observed presence of construction debris (brick wall remnants) at the surface in the vicinity of the former buildings, EFI cannot discount the possibility that historic fill may be present at the Subject Property.

- EFI observed evidence of household debris and construction debris including PVC piping, concrete, and brick remnants in the northwest portion. EFI found no evidence of hazardous substances or petroleum products. However, three empty drums were observed on site consisting of one 30-gallon steel drum in poor condition in the northwest portion and two 55-gallon plastic drums in good condition in the southwest portion. Based upon our observations, these materials are not an environmental concern.

8.0 INTERVIEWS

8.1 Interview with Owner

EFI provided an environmental property questionnaire to property ownership requesting information about the Property, past and current operations, historical uses and any known environmental concerns including asbestos-containing material, lead-based paint, underground storage tanks, aboveground storage tanks, poly-chlorinated biphenyls, and spills or releases of hazardous materials. The questionnaire was completed by Mr. Demetrios Moragianis, Managing Member of Ocean Towers Partners LLC. A copy of the completed questionnaire is included in Appendix F.

8.2 Interview with Site Manager

According to Mr. Jim Guzman, Senior Property Manager of Ocean Towers Apartments, who has been familiar with the Property for approximately 10 years, the Property has historically been vacant land. A small steel bridge that traverses the Property was constructed in 2021 as a replacement for a collapsing wood bridge in the same location. Mr. Guzman was also questioned about the mounds and markouts/flagging stakes observed on the Property. He stated that he received prior site history from a woman at the neighboring school. Reportedly, the mounds consist of debris from prior residential structures that existed on the Property and soil that was excavated during construction of the Ocean Towers Apartments buildings at 2950, 2960, and 2970 West 24th Street. Reportedly, a shortcut street also previously existed. ACS Underground Solutions performed a geophysical survey in February 2023. Mr. Guzman is unaware of any environmental concerns associated with the Property. Additional information provided by Mr. Guzman is provided within appropriate sections of this report.

8.3 Interviews with Site Occupants

There was not a site occupant available to interview.

8.4 Interviews with Local Government Officials

Please see Section 6.8 for information obtained from interviews with local government officials/ agencies.

8.5 Interviews with Others

No additional individuals, agencies, and/or sources were interviewed during the course of this assessment.

9.0 OTHER NON-SCOPE CONSIDERATIONS

9.1 Asbestos-Containing Material

Asbestos is the name for a group of naturally occurring silicate minerals that can be separated into fibers. The fibers are strong, durable, and resistant to heat and fire. They are also long, thin and flexible, so they can even be woven into cloth. Because of these qualities, asbestos has been used in thousands of consumer, industrial, maritime, automotive, scientific, and building products. During the 20th century, some 30 million tons of asbestos have been used in industrial sites, homes, schools, shipyards, and commercial buildings in the United States. Common ACMs include pipe-covering, insulating cement, insulating block, refactory and boiler insulation materials, transite board, fireproofing spray, joint compound, vinyl floor tile, ceiling tile, mastics, roofing products, and duct insulation for HVAC applications. Inhalation of asbestos fibers can result in deleterious health effects.

The potential for ACM was evaluated based on the USEPA Guidance Document: Managing Asbestos in Place - A Building Owner's Guide on Operations and Maintenance Programs for Asbestos-Containing Material (the Green Book). The Green Book was used as a guide in identifying suspect material while the definition of presumed ACM is taken from 29 CFR Parts 1910, et al. Occupational Exposure to Asbestos; Final Rule. Friable surfacing material and thermal system insulation installed prior to 1981 are presumed to be asbestos-containing until tested by laboratory analysis to prove otherwise.

The Subject Property is currently vacant land and lacks structures. Consequently, EFI did not observe building components likely to contain asbestos-containing material during the site inspection.

9.2 Lead-Based Paint

The Subject Property is currently vacant land and lacks structures. Consequently, EFI did not observe building components likely to contain lead-based paint (LBP) during the site inspection.

9.3 Radon

Radon gas is a product of the decay series that begins with uranium. Radon is produced directly from radium, which can be commonly found in bedrock that contains black shale and/or granite. Radon gas can migrate through the ground and enter buildings through porous concrete or fractures. Radon tends to accumulate in poorly ventilated basements. Long-term exposure to radon has been associated with lung cancer.

To satisfy the requirements of the Client, an evaluation of radon potential was performed utilizing the research results available from the USEPA. The USEPA has designated three zones depending on radon potential. Zone 1 is an area with the average predicted indoor radon concentration in residential dwellings exceeding the EPA action limit of 4.0 picoCuries per Liter (pCi/L). Zone 2 are areas with average predicted indoor radon concentration of 2.0 - 4.0 pCi/L and Zone 3 are those areas with an average predicted indoor radon concentration in residential dwellings below 2.0 pCi/L.

It is important to note that the EPA has found homes with elevated levels of radon in all three zones, and the EPA recommends site-specific testing in order to determine radon levels at a specific location.

Review of the USEPA Map of Radon Zones places the Property in Zone 3. Based on the zone classification of the Property, radon is not considered to be a concern.

9.4 Water Intrusion/Mold

In accordance with the scope of work, the site reconnaissance is to include a visual inspection for indications of water intrusion or the presence of active mold growth on readily accessible interior and exterior surfaces. Confirmation sampling was not included in the scope of work for the ESA. Readily accessible areas of the building were observed for visual or olfactory indications of mold and for areas of water damage.

The Subject Property is currently vacant land and lacks structures. Consequently, no evidence of mold growth or suspect moisture intrusion was identified.

9.5 Lead in Drinking Water

The Subject Property receives its drinking water from New York City Department of Environmental Protection. According to the 2021 Annual Water Quality Report, the water supplied to the Subject Property meets federal and state drinking water standards, including those for lead and copper.

10.0 EVALUATION OF FINDINGS

10.1 Data Gaps

As required by the ASTM Standards E1527-13 and E1527-21, the ESA shall identify and comment on significant data gaps that affect the ability of the Environmental Professional to identify recognized environmental concerns.

No significant data gaps were encountered as a result of this assessment.

10.2 Findings and Opinions

As set forth in ASTM E1527-13 and E1527-21 Standard Practice for Environmental Site Assessments, the Phase I ESA report shall include a findings section, which identifies known or suspect RECs, CRECs, HRECs, and de minimis conditions, and opinions providing the logic and reasoning used by the Environmental Professional in evaluating information collected during the course of the investigation related to such conditions. Section 12.6 of ASTM E1527-13 and E1527--21 further state that findings initially suspected to be a recognized environmental condition are, upon further evaluation, frequently determined to not be considered a REC and that the opinions provided shall specifically include the Environmental Professional's rationale for concluding that a condition is or is not currently a REC.

EFI identified the following findings during the course of this assessment:

10.2.1 Recognized Environmental Conditions

Recognized Environmental Conditions are associated with the presence or likely presence of any hazardous substances or petroleum products in, on, or at a Property due to any release to the environment, under conditions indicative of a release to the environment, or under conditions that pose a material threat of a future release to the environment.

The following Recognized Environmental Conditions were identified during the course of this assessment:

- The historical use of the southwestern portion of the Subject Property by a printing company from at least 1950 until at least 1968 presents a vapor encroachment condition.

- The historical use of the dry cleaning facilities adjacent to the east of the Subject Property at 2970 West 24th Street in 1934 and at 2944 West 24th Street, adjacent to the northeast of the subject property in 1966 until sometime between 1968 and 1977 presents a vapor encroachment condition.

10.2.2 Controlled Recognized Environmental Conditions

Controlled Recognized Environmental Conditions (CRECs) are past releases of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (such as property use restrictions, activity and use limitations, institutional controls, or engineering controls).

No Controlled Recognized Environmental Conditions were identified on the Subject Property or on adjacent properties.

10.2.3 Historical Recognized Environmental Conditions

Historical Recognized Environmental Conditions are a past release of any hazardous substances or petroleum products that has occurred in connection with the Property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted residential use criteria established by a regulatory authority, without subjecting the property to any required controls.

No Historical Recognized Environmental Conditions were identified during the course of this assessment.

10.2.4 De Minimis Environmental Conditions

De minimis conditions are those that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis are not recognized environmental conditions or controlled recognized environmental conditions.

No de minimis environmental conditions were identified in connection with the Subject Property during completion of this assessment.

10.2.5 Vapor Encroachment Conditions

Based on a review of the Property's historical uses, EFI concludes that a vapor encroachment condition (VEC) exists at the Property.

10.2.6 Non-Scope Considerations

This assessment also included other environmental considerations. No related issues of significant concern were identified.

10.2.7 Additional Findings of Note

The Subject Property is located in a flood zone.

10.2.8 Business Environmental Risks

Historic fill was not identified at the Subject Property through a review of published sources. However, given the elevation differences noted across different portions of the Subject Property, the observed presence of construction debris (brick wall remnants) at the surface in the vicinity of the former buildings, and Information provided by the Site Manager of the east-adjoining apartments indicating that the mounds on the western portion of the Property consist of debris from the prior structures as well as soil excavated during construction of the east-adjoining apartments, EFI cannot discount the possibility that historic fill may be present at the Subject Property.

11.0 CONCLUSIONS AND RECOMMENDATIONS

11.1 Conclusions

EFI has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practices E1527-13 and E1527-21 of West 25th Street and Surf Avenue (2950, 2960, and 2970 West 24th Street), Brooklyn, New York. This assessment has revealed no evidence of RECs or CRECs in connection with the Subject Property, except the following historic uses of the property:

- The historical use of the southwestern portion of the Subject Property by a printing company from at least 1950 until at least 1968 presents a vapor encroachment condition.

- The historical use of the dry cleaning facilities adjacent to the east of the Subject Property at 2970 West 24th Street in 1934 and at 2944 West 24th Street, adjacent to the northeast of the subject property in 1966 until sometime between 1968 and 1977 presents a vapor encroachment condition.

Additionally, the following Business Environmental Risk (BER) was identified at the Subject Property:

Historic fill was not identified at the Subject Property through a review of published sources. However, given the elevation differences noted across different portions of the Subject Property, the observed presence of construction debris (brick wall remnants) at the surface in the vicinity of the former buildings, and information provided by the Site Manager of the east-adjoining apartments indicating that the mounds on the western portion of the Property consist of debris from the prior structures as well as soil excavated during construction of the east-adjoining apartments, EFI cannot discount the possibility that historic fill may be present at the Subject Property.

Proposed plans for the Subject Property include rezoning and development of a new multi-story residential building. It should be noted that additional actions and review maybe required by regulatory agencies in connection with rezoning and development purposes.

EFI's assessment also included additional non-scope considerations to evaluate asbestos-containing material (ACM), lead-based paint (LBP), radon, lead in drinking water, wetlands and mold. This assessment has revealed no evidence of related conditions of concern.

11.2 Recommendations

The recommendation is as follows:

- Given the proposed rezoning and development plans for the Subject Property, soil disturbance and removal factors must be considered. A limited Phase II subsurface investigation consisting of soil, soil-gas, and groundwater sampling should be conducted at the northeast, east, and southwest portions of the Subject Property to determine if residual contamination is present in soil and groundwater and if a potential vapor encroachment condition exists for the future building. The findings of the investigation will assist in determining if a Soil Management Plan, sub-slab vapor barrier, and/or vapor mitigation system will be need to be designed and implemented as part of planned construction activities.

12.0 REFERENCES

Interviews:

Site Contact - Jim Guzman - (718)266-0075

Agencies Contacted:

New York City Department of Buildings (www.nyc.gov).
New York City Environmental Control Board (www.nyc.gov).
New York City Fire Department (Tank Special Report Request Form via mail).
New York City Department of City Planning (www.nyc.gov).
New York City Department of Finance (www.nyc.gov).
New York City Department of Health and Mental Hygiene-Bureau of Environmental Health Services (FOIA Letter via mail).
New York City Department of Environmental Protection (www.nyc.gov).
New York City Department of Housing Preservation & Development (NYCHPD) (www.nyc.gov).

Research:

ASTM, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process," ASTM Designations E1527-13 and E1527-21.

Environmental Data Resources, Inc. (EDR) Radius Map with GeoCheck Report, 2950 W. 24th Street, Brooklyn, NY, Inquiry Number: 7267603.2s, dated March 2, 2023.

EDR Sanborn Map Report, maps dated 1895 through 2007, dated March 2, 2023.

EDR City Directory Report, directories dated 1928 through 2020.

7.5-Minutes Series Topographic Map, Coney Island, NY Quadrangle, U.S. Department of the Interior Geological Survey, provided by EDR, dated 2013.

Federal Emergency Management Agency (FEMA) Flood Map Service Center - https://msc.fema.gov/portal/home.

United States Environmental Protection Agency, EPA Map of Radon Zones - https://www.epa.gov/radon/find-information-about-local-radon-zones-and-state-contact-information.

United States Fish & Wildlife Service, National Wetlands Inventory, Wetlands Mapper - https://www.fws.gov/wetlands/data/mapper.html.

United States Department of Agriculture, Natural Resources Conservation Service, Web Soil Survey - https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm.

Phase I Environmental Site Assessment, Ocean Tower Coney Island, 2950, 2960, & 2970 West 24th Street, Block 7055, Lot 13, Brooklyn, Kings County, New York, prepared by Matrix New World Engineering, Land Surveying and Landscape Architecture, P.C., dated February 15, 2023.

Phase I Environmental Site Assessment, Ocean Towers, 2950, 2960, & 2970 West 24th Street, Brooklyn, Kings County, New York, prepared by AEI Consultants, dated March 19, 2020.

Phase I Environmental Site Assessment Report, Ocean Towers Apartments, 2950, 2960 and 2970 West 24th Street, Brooklyn, New York 11224, prepared by LandAmerica Assessment Corporation, dated December 21, 2006.

13.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

As required by 40 CFR 312.21(d), the report shall include the following statements of the environmental professional(s) responsible for conducting the Phase I Environmental Site Assessment and preparation of the report.

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in 312.10 of 40 CFR 312; and, we have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the Property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.



Christine Beaver
Field Professional



Dale Lanier
Senior Environmental Advisor



Mandeep Sandhu
Vice President, Environmental Service Line

14.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

14.1 Definition of an Environmental Professional

An *Environmental Professional* means: (1) a person who possesses sufficient specific education, training, and experience necessary to exercise professional judgment to develop opinions and conclusions regarding conditions indicative of releases or threatened releases (see §312.1(c)) on, at, in, or to a property, sufficient to meet the objectives and performance factors in §312.20(e) and (f). (2) Such a person must: (i) hold a current Professional Engineer's or Professional Geologist's license or registration from a state, tribe, or U.S. territory (or the Commonwealth of Puerto Rico) and have the equivalent of three (3) years of full-time relevant experience; or (ii) be licensed or certified by the federal government, a state, tribe, or U.S. territory (or the Commonwealth of Puerto Rico) to perform environmental inquiries as defined in §312.21 and have the equivalent of three (3) years of full-time relevant experience; or (iii) have a Baccalaureate or higher degree from an accredited institution of higher education in a discipline of engineering or science and the equivalent of five (5) years of full-time relevant experience; or (iv) have the equivalent of ten (10) years of full-time relevant experience. (3) An environmental professional should remain current in his or her field through Participation in continuing education or other activities. (4) The definition of environmental professional provided above does not preempt state professional licensing or registration requirements such as those for a professional geologist, engineer, or site remediation professional. Before commencing work, a person should determine the applicability of state professional licensing or registration laws to the activities to be undertaken as Part of the inquiry identified in §312.21(b). (5) A person who does not qualify as an environmental professional under the foregoing definition may assist in the conduct of all appropriate inquiries in accordance with this Part if such person is under the supervision or responsible charge of a person meeting the definition of an environmental professional provided above when conducting such activities.

14.2 Relevant Experience

Relevant experience, as used in the definition of environmental professional in this Section, means: Participation in the performance of all appropriate inquiries investigations, environmental site assessments, or other site investigations that may include environmental analyses, investigations, and remediation which involve the understanding of surface and subsurface environmental conditions and the processes used to evaluate these conditions and for which professional judgment was used to develop opinions regarding conditions indicative of releases or threatened releases (see §312.1(c)) to the Property.

Resumes for the Environmental Professionals involved in this project are included in Appendix G.

Phase II Work Plan
(Short Form)

For

Parcel A Redevelopment

2950-2970 West 24th Street, Brooklyn, New York 11224

Block 7055, Lot 13

Prepared for:

Ocean Tower Partners LLC
C/O Proto Property Services LLC
Attn: Demetrios Moragianis
3441 Kingsbridge Avenue, 2nd Floor
Bronx, New York 10463

Prepared by:

EFI Global
11 Commerce Way, Suite A, Totowa, New Jersey
alexander.dewhirst@efiglobal.com
401.871.8496

Introduction

EFI has developed this Phase II Investigation Work Plan in accordance with New York City Office of Environmental Coordination and City Environmental Quality Review (CEQR) Chapter 12 standards for property at 2950-2970 West 24th Street in Brooklyn, New York (Site). The Site is located within Coney Island, Queens. The following work scope has been developed in response to the Phase I ESA findings associated with the proposed redevelopment project at the Site. See **Figure 1** and **Figure 2** for the Site Plan and Site Drawing, respectively.

Site Location, Current Use, and Proposed Development Plan

The Site is located within Coney Island, Queens, New York and is identified as Parcel A, Block 7055, and Lot 13. The Site is mostly vacant land with a few improvements. The improvements include concrete sidewalks and a steel bridge over a land depression.

The proposed redevelopment project consists of a new multi-family residential high-rise building. The ground floor will consist of a community facility, a commercial retail space with a basement, and the lobby of a high-rise building. The remaining 16 floors will be entirely residential. The footprint of the building will be approximately 32,000 square feet (sf). The proposed basement for the commercial retail space will be approximately 9,000 sf and excavated to 9 feet below surface grade (bgs).

A new outdoor recreation area is located east of the proposed high-rise building. The recreational area will extend to the existing walkways and green spaces with the elevated surfaces. The design will have the recreational areas adjoin existing features such as concrete walkways. A below surface grade stormwater infiltration and detention system is incorporated into the design in the new recreational area. The new reactional area is estimated to encompass 20,000 sf with an elevation of 10 feet above the existing surface grade. See **Figure 3** for the limits of the new outdoor recreation area.

Montrose Survey Company completed a Site Survey on February 23, 2023. These findings were used to calculate conservative soil disposal quantities at the Site. The current ground surface in this area is approximately 6- to 10 feet. The calculated soil disposal quantity associated with the building footprint that includes the basement is approximately 2,474 cubic yards (cy^3) or approximately 66,791 cubic feet (ft^3) and the soil disposal quantity associated with the building footprint without a basement is approximately 267 cy^3 or approximately 7,198 ft^3. The soil disposal quantity associated with the exterior spaces outside the building footprint is approximately 692 cy^3 or approximately 18,687 ft^3. The calculated soil disposal quantity for the exterior spaces is a worst-case scenario in which the below grade infiltration system will not be installed as per designed. In this scenario, EFI estimated a maximum total soil disposal quantity of 3,433 cy^3 or 92,676 ft^3. See **Figure 4,** which shows the topography of the Site (dated 2-23-2023).

Phase I ESA Summary

A Phase I ESA conducted by EFI Global (EFI) in February 2023 identified the following recognized environmental concerns (RECs) and potential vapor encroachment conditions (pVECs):

- Given the elevation differences noted across different portions of the Site, the observed presence of construction debris (brick wall remnants) at the surface in the vicinity of the former buildings, and information provided by the Site Manager of the east-adjoining apartments indicating that the mounds on the western portion of the Property consist of debris from the prior structures as well as soil excavated during construction of the east-adjoining apartments, EFI cannot discount the possibility that historic fill may be present at the Site.

- The historical use of the southern portion of the Site by a printing company from at least 1950 until at least 1968 presents a pVEC.

- The historical use of the dry-cleaning facilities adjacent to the east of the Site at 2970 West 24th Street in 1934 and at 2944 West 24th Street, adjacent to the northeast of the Site in 1966 until sometime between 1968 and 1977, presents a pVEC.

The reference Phase I ESA Report is included as **Appendix A**.

Limited Phase II Investigation Report Summary

EFI performed a limited Phase II Site Investigation on May 18th, and 19th, 2023. Six (6) soil borings were advanced to a maximum depth of 20 feet bgs. The locations of the soil borings were biased to the previously referenced RECs and pVECs. One (1) soil sample was collected from each soil boring for a total of six (6) soil samples submitted for analysis. Three (3) soil borings had a temporary monitoring well installed and three (3) groundwater samples were collected and submitted for analysis. The soil and groundwater samples were analyzed for Volatile Organic Compounds (VOCs) by EPA Method 8260 and Semi-Volatile Organic Compounds (SVOCs) by EPA Method 8270. See **Figure 5** for the previously sampled locations.

All six (6) soil samples submitted for analysis had concentrations below New York State (NYS) unrestricted use soil cleanup objectives. Groundwater samples SB-1 and SB-3 exceeded NYS Groundwater Quality Standards (GWQS) for chloroform. Groundwater sample SB-5 exceeded NYS GWQS for chrysene, benzo(a)pyrene, and indeno(1,2,3-cd)pyrene.

The referenced limited Phase II Report is included as **Appendix B**.

Phase II Investigation Work Scope

Geophysical Survey

Prior to Phase II work commencing, preconstruction activities such as removing trees and re-grading the Site must be performed. Due to uneven topography and trees, EFI was unable to access the western portion of the Site with a drill rig during the limited Phase II Investigation. Once Site clearing and re-grading has occurred, a geophysical survey will be performed to clear the boring locations to investigate for the presence of potential underground abnormalities.

Soil, Groundwater, and Soil Vapor Summary

An investigation of the subsurface conditions will be performed to characterize the Site for potential environmental impacts from historical operations at the Site and adjacent properties. The proposed sampling will address the identified RECs and pVECs, as well as to provide horizontal and vertical characterization across the Site for soil disposal purposes. The sampling procedures of this investigation will be performed in accordance with the NYSDEC Technical Guidance for Site Investigation and Remediation DER-10 as well as NYSDEC Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS), October 2020.

EFI is proposing to advance twelve (12) soil borings at the Site to groundwater. At a minimum, twenty-four (24) discrete (grab) soil samples will be collected from the twelve (12) soil borings. Once the soil borings are terminated in groundwater, EFI will collect one (1) grab groundwater sample per location for a total of twelve (12) groundwater samples submitted for analysis. The anticipated depth of groundwater at the Site is approximately 5- to 10 feet bgs, and the shallow groundwater flow direction is expected to flow to the south. Approximately 5 feet away from each soil boring, EFI will collect one (1) soil vapor sample at an approximate depth of 5 feet bgs. A total of twelve (12) soil vapor samples will be submitted for analysis. Each soil boring and sample location will be measured by a GPS that has an accuracy of +/- 1 foot. See **Figure 5** for the proposed soil boring, groundwater sample, and soil vapor sample locations.

Soil Sampling

A Geoprobe® 7782 Direct Push drill rig will be used to complete the subsurface investigation at the Site. A qualified environmental professional (QEP) will screen the soil samples during borehole advancement for volatile organic vapors using a photo-ionization detector (PID) and evaluate for visual and olfactory impacts prior to collecting soil samples (gross contamination). A soil boring log will be completed for each bore hole location.

At a minimum, two (2) soil samples will be collected from each test boring for a total of twenty-four (24) discrete soil samples for laboratory analysis. In each boring, a discrete soil sample will be collected from 0- to 2 feet bgs, and 2 feet below final excavation depth interval or above groundwater (whichever is encountered first). Where screening indicates contamination at an intermediate interval(s) in a soil boring, i.e., 2 feet bgs and the maximum excavation depth, and additional soil samples will be for analysis. If groundwater is encountered in a soil boring within 5-feet of surface grade, only one (1) sample per boring may be warranted as long as adequate upgradient and downgradient groundwater samples are collected.

Groundwater Sampling

EFI will advance twelve (12) soil borings into groundwater, then install one (1) temporary groundwater monitoring well per boring location. Temporary monitoring wells will be constructed of a 1-inch diameter PVC, 0.01-inch slotted screen and 10/20 silica sand placed around it. Representative groundwater samples will be collected from each temporary monitoring well with a peristaltic pump and single use tubing utilizing low-flow sampling techniques. Groundwater sampling will be conducted in accordance with NYSDEC Draft DER-10 Technical Guidance for Site Investigation and Remediation, dated May 2010, and Sampling Guidelines and Protocols, dated March 1991. The temporary monitoring wells will be gauged with a water level meter to record a depth to groundwater reading (1/100 foot), and if necessary, an interface meter to determine the thickness of LNAPL or DNAPL.

Soil Vapor Sampling

One (1) soil vapor probe will be installed approximately 5 feet away from each of the twelve (12) soil borings at a depth corresponding to the proposed development excavation depth or at least 1- to 2 feet above the groundwater interface, whichever is encountered first. At each of these locations, one (1) soil vapor sample will be collected by applying a vacuum to the probe and drawing soil gas into a 6-liter Summa® canister configured with a 2-hour flow controller. The flow controller will not exceed a flow rate of 0.2 liters per minute. Soil vapor samples will be submitted for laboratory analysis.

Sample Analysis

Soil samples will be submitted to a NYS Environmental Laboratory Accreditation Program (ELAP)-certified laboratory for Full analysis:

- VOCs by EPA Method 8260
- SVOCs by EPA Method 8270
- Target Analyte Metals by EPA Method 6010
- Pesticides by EPA Method 8081
- Herbicides by EPA Method 8151
- Toxicity Characteristics Leaching Procedure (TCLP) Leaching by EPA Method 1311
- Polychlorinated Bi-phenyls (PCBs) by EPA Method 8082

- RCRA Characteristics including reactivity, ignitability, and corrosivity
- PFOA and PFOA by EPA Method 1633

Groundwater samples will be submitted to a NYS Environmental Laboratory Accreditation Program (ELAP)-certified laboratory for:

- VOCs by EPA Method 8260
- SVOCs by EPA Method 8270
- Polychlorinated Bi-phenyls (PCBs) by EPA Method 8082
- Pesticides by EPA Method 8081
- Target Analyte Metals by EPA Method 6020**; both dissolved and total**
- PFOA and PFOA by EPA Method 1633

Soil Vapor samples will be submitted to a NYS Environmental Laboratory Accreditation Program (ELAP)-certified laboratory for:

- VOCs by EPA Method TO-15 with Selective Ion Monitoring (SIM)

Quality Assurance/Quality Control Procedures

QA/QC procedures will be used to provide performance information with regard to accuracy, precision, sensitivity, representation, completeness, and comparability associated with the sampling and analysis for this investigation. Field QA/QC procedures will be used one (1) to document that samples are representative of actual conditions at the Site, and two (2) identify possible cross-contamination from field activities or sample transit. Laboratory QA/QC procedures and analyses will be used to demonstrate whether analytical results have been biased either by interfering compounds in the sample matrix, or by laboratory techniques that may have introduced systematic or random errors to the analytical process. QA/QC samples (field and trip blanks, duplicates, etc.) will be collected and analyzed at an ELAP-certified laboratory.

Investigation Derived Waste

Cuttings may potentially be disposed at the Site within the borehole they originated from and placed within 24-inches of the existing surface grade unless:

- Free product or grossly contaminated soil are present in the cuttings.
- The borehole has penetrated an aquitard, aquiclude or other confining layer; or extends significantly into bedrock.
- Backfilling the borehole with cuttings will create a significant path for vertical movement of contaminants. Soil additives (bentonite) may be added to the cuttings to reduce permeability.
- The soil cannot fit into the borehole.

Soil cuttings needing to be managed on-site will be containerized in properly labeled DOT approved 55-gallon drums for future off-site disposal at a permitted facility. Boreholes which require drill cuttings to be disposed of off-site would ultimately be filled with bentonite chips, hydrated, and then topped with an asphalt or concrete cap. Disposable sampling equipment including, but not limited to, acetate liners, hand augers, nitrile gloves, plastic bags, paper towels, and tubing that encountered environmental media will be double bagged and disposed in a facility trash dumpster as non-hazardous waste.

Reporting

A Phase II Investigation Report will be prepared following completion of the field activities and receipt of the laboratory data. The report will provide detailed summaries of the investigative findings. Soil analytical results will be compared to the NYSDEC Part 375-6.8(a) Unrestricted Used Soil Cleanup Objectives, appropriate Part 375-6.8(b) Restricted Soil Cleanup Objectives and supplemental cleanup objectives in NYSDEC CP-51 Soil Cleanup Guidance. Groundwater analytical results will be compared to NYSDEC Part 703 Groundwater Quality Standards (GQS) (class GA) or Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards (AWQS). Soil vapor analytical results will be compared to NYSDOH October 2006 Final Guidance for Evaluating Soil Vapor Intrusion Matrices, updated May 2017.

The report will include an updated sampling plan, spider diagrams, analytical data tables for all reported constituent compounds (including non-detectable concentrations) and remedial recommendations, as warranted. Site grade varies as much as 15 feet across the site. In the Phase II Investigation Report, all applicable documentation (site map, conceptual building plans, soil boring and groundwater monitoring well construction logs, and sampling intervals) will be prepared from a single grade reference point as well as in terms of elevation.

The report will also include all soil boring logs, sampling observations, and photos taken during the investigation.

Investigation HASP

An OSHA compliant Health and Safety Plan (HASP) that meets all OSHA Hazardous Waste Operations and Emergency Response (HAZWOPER) requirements will be implemented during the Site work to protect worker safety. The Site Safety Coordinator will ensure full compliance of the HASP in accordance with applicable health and safety laws and regulations. All field personnel involved in investigation activities will participate in training required under OSHA HAZWOPER 29 CFR 1910.120, including 40-hour hazardous waste operator training and annual 8-hour refresher training. Emergency telephone numbers will be posted at the site location before any work begins. A safety meeting will be conducted before each shift begins. Topics to be discussed include task hazards and protective measures (physical, chemical, environmental); emergency procedures; PPE levels and other relevant safety topics including a highlighted route map to the nearest hospital/emergency room. Meetings will be documented in a logbook or specific form. Potential on-site chemicals of concern include VOCs, SVOCs, Pesticides/PCBs, and Metals (specifically arsenic, lead, and mercury at a minimum). Information fact sheets and/or summary tables for each contaminant group are included in the HASP. A copy of this HASP will be on-site during each sampling event.

APPENDIX D
WATER AND SEWER INFRASTRUCTURE
DOCUMENTATION

NYC DEP Volume Calculation Matrix

These instructions are to assist in the completion of the DEP Volume Calculation Matrix. Following this tab, there are two worksheets (WS1 and WS2) and a Summary Table. The worksheets must be completed first in order to provide the information necessary to complete the Summary Table. With-Action Scenario information entered in each worksheet and the Summary Table should include the project and No-Action Scenario for that site. Additional instructions for each tab in this spreadsheet are listed below.

SUMMARY TABLE: Comparison of Existing and With-Action Volume

Using the information from worksheets (WS1 and WS2), enter the information below in the summary table as follows:

Step 1: Enter in the CSO subcatchment area info for the proposed project above the table. If the proposed project crosses over several different CSO sub-catchment areas, a summary table should be completed for each CSO sub-catchment area.

Step 2: In the **Existing** table, enter in the area of the proposed project in square feet and in acres (1 acre = 43,560 sq. ft.).

Step 3: Enter the area of the proposed project at the top of the With-Action table in square feet and in acres and complete in the same way as the **Existing** table.

Step 4: The information for columns in this table should be taken from the completed Surfaces Calculations and Volume Calculations Worksheets.

Step 5: The **Existing** and **With-Action** summary tables should be directly inserted into CEQR Infrastructure chapters.

Note: The applicant should only input information in the fields highlighted in yellow.

WORKSHEET 1 (WS1): Surfaces Calculations

WS1 calculates the weighted runoff coefficients to be used in WS2 based on the types of surfaces associated with the existing site and those that will be associated with the proposed site. If the existing and/or planned site is comprised of two discrete or phased sites, use the additional cells provided (labeled Site B) in WS1. In addition, if there are more than two sites, copy and paste the cells to provide for the entire proposed project.

Step 1: In the **Existing** table, enter the total areas for each surface type in the corresponding column (i.e., roof, pavement & walks, other, and grass/softscape). The total surface area and percentages of the total site those areas represent should auto-caculate. If they do not automatically calculate, click on the cell and press the F9 key. This should activate the calculation. Runoff coefficients for each surface area are provided in the worksheet and the total or weighted runoff coefficient will be auto-calculated (or press the F9 key).

Step 2: Repeat for **With-Action** table using information for the entire area for the With-Action scenario (project + No-Action scenario).

Step 3: The "TOTAL" columns have the formulas in place to calculate total percent, surface area, and weighted runoff coefficient. If they do not automatically compute, click on the cell and ensure the correct cells are highlighted, then press enter. This should activate the computation.

Step 4: Use the Runoff Coefficient in "TOTAL" column (or the Weighted Runoff Coefficient) for the Rational Method calculations in WS2, Volume Calculations, tables.

Step 5: The **Existing** and **With-Action** surfaces calculations tables should be directly inserted into CEQR Infrastructure chapters.

Note: The applicant should only input information in the fields highlighted in yellow.

WORKSHEET 2 (WS2): Volume Calculations

Worksheet 2 calculates the discharge volume (in millions of gallons - MG) from the existing and proposed site to the CSS as well as stormwater volumes to separate storm sewers or direct discharges to surface waterbodies. Identify the CSO subcatchment area or recieving water body, and

Step 1: Enter the CSO subcatchment area for the site at the top of the **Existing** table.

Step 2: In **Existing** table, reference WS1 and enter the total area of the site's runoff being directed to combined or separate storm sewers or direct discharge. Square feet will need to be converted to acres for this worksheet (1 Acre = 43,560 sq. ft.). WS1 will provide the areas for each discharge type. The area entered will be the same for each row of storm volume and duration.

Step 3: Enter the Weighted Runoff Coefficient for that area in the corresponding column. Use the weighted runoff coefficients for entire proposed project from WS1.

Step 4: in column H, enter the total sanitary flow (*i.e.* , sewage generation) calculated for the existing site per the guidance in the CEQR Technical Manual. The worksheet will calculate the volume associated with sanitary flows during specific storm events using the durations provided in the table (in column I).

Step 5: If necessary, repeat tables for areas of the site that discharge to separate storm sewers or direct discharge/overland flow. Also, repeat all tables if proposed project crosses over several different CSO subcatchment areas or if proposed project includes a phased implementation plan or discrete sites.

Step 6: Repeat for the **With-Action** tables using information from the proposed project's site plan. See instructions above referring to completion of a separate table for each discharge point, catchment area or phase associated with the proposed project.

Step 7: The formulas are in place for summing the **"TOTAL"** tables on the right side of the worksheet. Use these totals in the Summary Table. Note: any direct discharge volumes to adjacent waterbodies will be needed for the Summary Table for the "RUNOFF TO RIVER" column.

Note: The applicant should only input information in the fields highlighted in yellow.

Reference:

MG	millions of gallons
GPD	gallons per day
in	inches
hr	hour
A	area
SF	square feet
I	intensity
C	runoff coefficient
CSS	combined sewer system
CSO	combined sewer overflow
CEQR	City Environmental Quality Review

COMPARISON OF EXISTING AND WITH-ACTION VOLUME

CSO SUBCATCHMENT AREA:[1]

EXISTING

		Area = 153,580 SF (3.53 ACRES)				Area = XX,XXX SF (XX.XX ACRES)				
		SITE A				SITE B[2]				SITE A & B
RAINFALL VOLUME (in)	RAINFALL DURATION (hr)[3]	RUNOFF VOLUME DIRECT DRAINAGE (MG)[4]	RUNOFF VOLUME TO CSS (MG)	SANITARY VOLUME TO CSS (MG)	TOTAL VOLUME TO CSS (MG)	RUNOFF VOLUME TO RIVER (MG)	RUNOFF VOLUME TO CSS (MG)	SANITARY VOLUME TO CSS (MG)	TOTAL VOLUME TO CSS (MG)	TOTAL VOLUME TO CSS (MG)
0.00	3.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.40	3.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.20	11.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.50	19.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

With-Action

		Area = XX,XXX SF (XX.XX ACRES)				Area = XX,XXX SF (XX.XX ACRES)				
		SITE A				SITE B[2]				SITE A & B
RAINFALL VOLUME (in)	RAINFALL DURATION (hr)[3]	RUNOFF VOLUME DIRECT DRAINAGE (MG)[4]	RUNOFF VOLUME TO CSS (MG)	SANITARY VOLUME TO CSS (MG)	TOTAL VOLUME TO CSS (MG)	RUNOFF VOLUME TO RIVER (MG)	RUNOFF VOLUME TO CSS (MG)	SANITARY VOLUME TO CSS (MG)	TOTAL VOLUME TO CSS (MG)	TOTAL VOLUME TO CSS (MG)
0.00	3.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.40	3.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.20	11.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.50	19.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[1] If the proposed project crosses over several different CSO subcatchment areas, the above summary table should be completed for each CSO sub-catchment area.

[2] If proposed project includes a phased implementation plan or discrete sites, assess volumes using additional cells above (e.g., Site B).

[3] Based on ***Intensity/duration/Frequency Rainfall Analysis, New York City and the Catskill Mountain Water Supply Reservoirs,*** Vieux & Associates, Inc., April 4, 2006. The 24-hour rainfall volume is based on average rainfall intensity over 24-hours (inch/per) times 24 hrs. (Duration information provided by T. Newman & P. Jadhav, HydroQual).

[4] The volume (calculated in WS2) of stormwater runoff from any portion of the proposed project site draining to a separate storm sewer or as overland flow directly to a waterbody should be entered here.

SURFACE CALCULATIONS

CSO SUBCATHMENT OR RECEIVING WATERBODY FOR STORM SEWER OR DIRECT DISCHARGE:

	EXISTING					
	WEIGHTED RUNOFF COEFFICIENT, C					
	SURFACE TYPE[1]	ROOF[2]	PAVT & WALKS	OTHER[3]	GRASS & SOFT SCAPE	TOTAL
SITE A	AREA, %	13%	44%	0%	43%	100%
	SURFACE AREA, SF	19878	67438	0	66264	153580
	RUNOFF COEFFICIENT	1.00	0.85	0.85	0.20	**0.59**
SITE B	AREA, %	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
	SURFACE AREA, SF	XX,XXX	XX,XXX	XX,XXX	XX,XXX	0
	RUNOFF COEFFICIENT	1.00	0.85	0.85	0.20	**#VALUE!**

NOTES:

1 Runoff coefficients for each surface type are as per DEP.
2 Total roof areas onsite.
3 Identify any other surfaces onsite and obtain runoff coefficients from DEP.

CSO SUBCATHMENT OR RECEIVING WATERBODY FOR STORM SEWER OR DIRECT DISCHARGE:

	WITH-ACTION SCENARIO (PROJECT + NO-ACTION SCENARIO)					
	WEIGHTED RUNOFF COEFFICIENT, C					
	SURFACE TYPE[1]	ROOF[2]	PAVT & WALKS	OTHER[3]	GRASS & SOFT SCAPE	TOTAL
SITE A	AREA, %	33%	57%	0%	10%	100%
	SURFACE AREA, SF	51141	87438	0	15001	153580
	RUNOFF COEFFICIENT	1.00	0.85	0.85	0.20	**0.84**
SITE B	AREA, %	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
	SURFACE AREA, SF	XX,XXX	XX,XXX	XX,XXX	XX,XXX	0
	RUNOFF COEFFICIENT	1.00	0.85	0.85	0.20	**#VALUE!**

NOTES:

1 Runoff coefficients for each surface type are as per NYCDEP.
2 Total roof areas onsite.
3 Identify any other surfaces onsite and obtain runoff coefficients from NYCDEP.

EXISTING:

CSO SUBCATCHMENT AREA:

Rainfall, in	Duration, hr	Total Area (A), acre	Weighted Runoff Coefficient (C)	Stormwater to CSS, MG	Daily Sanitary Sewage Generation per CEQR TM, MGD	Sanitary to CSS , MG
0.00	3.80	3.53	0.59	0.00	0.00	0.000
0.40	3.80	3.53	0.59	0.02	0.00	0.000
1.20	11.30	3.53	0.59	0.07	0.00	0.000
2.50	19.50	3.53	0.59	0.14	0.00	0.000

RECEIVING WATERBODY FOR STORM SEWER OR DIRECT DISCHARGE:

Rainfall, in	Duration, hr	Total Area (A), acre	Weighted Runoff Coefficient (C)	Stormwater Runoff, MG	Daily Sanitary Sewage Generation per CEQR TM, MGD	Sanitary to CSS, MG	TOTAL Sanitary to CSS, MG	TOTAL TO CSS, MG
0.00	3.80	3.53	0.59	0.00	0.09	0.014	0.014	0.01
0.40	3.80	3.53	0.59	0.02	0.09	0.014	0.014	0.04
1.20	11.30	3.53	0.59	0.07	0.09	0.042	0.042	0.11
2.50	19.50	3.53	0.59	0.14	0.09	0.073	0.073	0.21

WITH-ACTION SCENARIO (PROPOSED PROJECT + WITHOUT ACTION SCENARIO):

CSO SUBCATCHMENT AREA:

Rainfall (I), in	Duration, hr	Total Area (A), acre	Weighted Runoff Coefficient (C)	Stormwater to CSS, MG	Daily Sanitary Sewage Generation per CEQR TM, MGD	Sanitary to CSS , MG
0.00	3.80	3.53	0.84	0.00	0.00	0.000
0.40	3.80	3.53	0.84	0.03	0.00	0.000
1.20	11.30	3.53	0.84	0.10	0.00	0.000
2.50	19.50	3.53	0.84	0.20	0.00	0.000

RECEIVING WATERBODY FOR STORM SEWER OR DIRECT DISCHARGE:

Rainfall (I), in	Duration, hr	Total Area (A), acre	Weighted Runoff Coefficient (C)	Stormwater Runoff, MG	Daily Sanitary Sewage Generation per CEQR TM, MGD	Sanitary to CSS, MG	TOTAL Sanitary to CSS , MG	TOTAL TO CSS, MG
0.00	3.80	XX	0.XX	#VALUE!	0.XX	#VALUE!	#VALUE!	#VALUE!
0.40	3.80	XX	0.XX	#VALUE!	0.XX	#VALUE!	#VALUE!	#VALUE!
1.20	11.30	XX	0.XX	#VALUE!	0.XX	#VALUE!	#VALUE!	#VALUE!
2.50	19.50	XX	0.XX	#VALUE!	0.XX	#VALUE!	#VALUE!	#VALUE!

NOTES:

1 RUNOFF VOLUMES for EXISTING and WITH-ACTION condition have been calculated as follows:

Q_{VOL} = [R_{VOL} x A x RC x 7.48GAL/1,000,000 MGD per GAL] - S_{VOL} ; where

Q_{VOL} = Total Volume of Rainfall for 24-hour storm event discharged offsite (either to River or into CSS), in MG

R_{VOL} = RAINFALL VOLUME, in Inches, for the corresponding RAINFALL RETURN PERIOD listed in WS2 in the EXISTING and PLAN Tables.

A = SITE AREA, in SQ. FT., as indicated in WS1 EXISTING and WITH-ACTION Tables for the various site areas.

RC = RAINFALL RUNOFF COEFFICIENT for each of the applicable Site Areas as per EXISTING and WITH-ACTION tables (refer to WS1).

2 RAINFALL RUNOFF COEFFICIENTS used are composite rates as shown in WS1 in the EXISTING and WITH-ACTION tables (Refer to RUNOFF COEFFICIENTS WORKSHEET).

13. WATER AND SEWER INFRASTRUCTURE

Introduction

A waste water and storm water infrastructure analysis is required for the proposed project because the Project Area is located in a separately sewered area and would exceed the *CEQR Technical Manual* threshold of an incremental increase of 50 residential units in an existing R5 zone. The Proposed Actions would result in the development of a net increase of approximately 172 dwelling units and 46,249 gsf of additional commercial space on the 8 Projected Development Sites within the Project Area.

Infrastructure Analysis

Water Supply

The proposed project does not require an analysis of impacts to water supply as it would not result in an exceptionally large demand for water (i.e., more than one million gallons per day) and the Project Area is not located in an area that experiences low water pressure (such as areas at the end of the water supply distribution system). Nevertheless, a water usage analysis is presented below.

The existing development on the 8 Projected Development Sites consists of 34 dwelling units and 4,730 gsf of commercial space. Based on the water usage rate factors shown in Table 13-2 of the Water and Sewer Infrastructure chapter of the *CEQR Technical Manual,* the existing development on the 8 Projected Development Sites would utilize 9,577 gallons per day (gpd) of water as shown in Table 13-4 below.

Table 13-4

Existing Water Usage

Use	Rate Factor	Water Usage Amount
Residential	100 gpd/person x 83 persons*	8,300 gpd
Commercial (office)		
- domestic	0.10 gpd/sf (4,730 sf)	473 gpd
- air conditioning	0.17 gpd/sf (4,730 sf)	804 gpd

TOTAL		**9,577 gpd**

* Based on average household size of 2.45 persons

The No-Action development on the 8 Projected Development Sites would consist of 81 dwelling units and 4,730 gsf of commercial space. Based on the water usage rate factors shown in Table 13-2 of the Water and Sewer Infrastructure chapter of the *CEQR Technical Manual,* the No-Action development on the 8 Projected Development Sites would utilize 21,077 gallons per day (gpd) of water as shown in Table 13-5 below.

Table 13-5

No-Action Water Usage

Use	Rate Factor	Water Usage Amount
Residential	100 gpd/person x 198 persons*	19,800 gpd
Commercial (office)		
- domestic	0.10 gpd/sf (4,730 sf)	473 gpd
- air conditioning	0.17 gpd/sf (4,730 sf)	804 gpd
TOTAL		**21,077 gpd**

* Based on average household size of 2.45 persons

The proposed project would result in the development in the Project Area of a net increase of 172 dwelling units and 46,249 gsf of new local retail space. Based on the water usage rate factors shown in Table 13-6 of the Water and Sewer Infrastructure chapter of the *CEQR Technical Manual,* the project would utilize 61,062 gallons per day (gpd) of water as shown in the table below.

Table 13-6

With-Action Water Usage

Use	Rate Factor	Water Usage Amount
Residential	100 gpd/person x 421 persons*	42,100 gpd
Retail Stores		

- domestic	0.24 gpd/sf (46,249 sf)	11,100 gpd
- air conditioning	0.17 gpd/sf (46,249 sf)	7,862 gpd
TOTAL		**61,062 gpd**

* Based on average household size of 2.45 persons

The NYC Department of Environmental Protection (DEP) has reviewed the EAS for the Proposed Actions, and in a memorandum dated January 5, 2018 states the following regarding the water system (see Infrastructure Appendix):

> The existing water mains around the above subject Project are being upgraded and should be able to handle the estimated increase in water demand.

Sanitary Sewage

The existing development on the 8 Projected Development Sites consists of 34 dwelling units and 4,730 gsf of commercial space. Based on the sewage generation rate factors shown in Table 13-2 of the Water and Sewer Infrastructure chapter of the *CEQR Technical Manual,* the existing development on the 8 Projected Development Sites would generate 8,773 gallons per day (gpd) of sanitary sewage as shown in Table 13-4 below.

Table 13-4

Existing Sanitary Sewage Generation

Use	Rate Factor	Sewage Generation Amount
Residential	100 gpd/person x 83 persons*	8,300 gpd
Commercial (office)	0.10 gpd/sf (4,730 sf)	473 gpd
TOTAL		**8,773 gpd**

* Based on average household size of 2.45 persons

The No-Action development on the 8 Projected Development Sites would consist of 81 dwelling units and 4,730 gsf of commercial space. Based on the sewage generation rate factors shown in Table 13-2 of the Water and Sewer Infrastructure chapter of the *CEQR Technical Manual,* the No-Action development on the 8 Projected Development Sites

would generate 20,273 gallons per day (gpd) of sanitary sewage as shown in Table 13-5 below.

Table 13-5

No-Action Sanitary Sewage Generation

Use	Rate Factor	Sewage Generation Amount
Residential	100 gpd/person x 198 persons*	19,800 gpd
Commercial (office)	0.10 gpd/sf (4,730 sf)	473 gpd
TOTAL		**20,273 gpd**

* Based on average household size of 2.45 persons

The proposed project would result in the development in the Project Area of a net increase of 172 dwelling units and 46,249 gsf of new local retail space. Based on the sewage generation rate factors shown in Table 13-6 of the Water and Sewer Infrastructure chapter of the *CEQR Technical Manual,* the project would generate 53,200 gallons per day (gpd) of sanitary sewage as shown in the table below.

Table 13-6

With-Action Sanitary Sewage Generation

Use	Rate Factor	Sewage Generation Amount
Residential	100 gpd/person x 421 persons*	42,100 gpd
Retail Stores	0.24 gpd/sf (46,249 sf)	11,100 gpd
TOTAL		**53,200 gpd**

* Based on average household size of 2.45 persons

Storm Water

Table 13-7 below presents the existing surface area conditions on the 8 Projected Development Sites.

Table 13-7

Existing Surface Area Conditions

Projected Development Site	Lot Area (SF)	Roof Area	Pavement & Walkways	Grass & Softscape
1	17,467	7,838	3,629	6,000
2	7,658	0	7,658	0
3	4,048	0	0	4,048
4	3,308	2,530	778	0
5	3,261	0	3,261	0
6	13,200	0	0	13,200
7	4,400	0	0	4,400
8	4,400	2,200	2,200	0
TOTAL	**57,742**	**12,568**	**17,526**	**27,648**

Table 13-8 below presents the No-Action surface area conditions on the 8 Projected Development Sites.

Table 13-8

No-Action Surface Area Conditions

Projected Development Site	Lot Area (SF)	Roof Area	Pavement & Walkways	Grass & Softscape
1	17,467	7,838	3,629	6,000
2	7,658	3,190	1,000	3,468
3	4,048	1,686	750	1,612
4	3,308	2,530	778	0
5	3,261	1,358	600	1,303
6	13,200	5,500	1,750	5,950
7	4,400	1,833	800	1,767
8	4,400	2,200	2,200	0

TOTAL	**57,742**	**26,135**	**11,507**	**20,100**

Table 13-9 below presents the proposed surface area conditions on the 8 Projected Development Sites.

Table 13-9

With-Action Surface Area Conditions

Projected Development Site	Lot Area (SF)	Roof Area	Pavement & Walkways	Grass & Softscape
1	17,467	17,467	0	0
2	7,658	7,658	0	0
3	4,048	4,048	0	0
4	3,308	3,308	0	0
5	3,261	3,261	0	0
6	13,200	13,200	0	0
7	4,400	4,400	0	0
8	4,400	4,400	0	0
TOTAL	**57,742**	**57,742**	**0**	**0**

Sewer Services

The Project Area is located in a separately sewered area. The attached matrix table presents the sanitary and stormwater drainage generation characteristics of the existing, No-Action, and With-Action developments on the combined 8 Projected Development Sites.

Sanitary sewage and storm water flows generated by the proposed building on the Applicant's Projected Development Site 1 would be directed to an existing 42" storm sewer and an 8" sanitary sewer located in the bed of West 23rd Street adjacent to the property. In addition to these sewer lines, other sewer lines in the streets adjoining the Project Area include an 8" sanitary sewer line and a 24" storm sewer in the bed of Surf Avenue which would be likely to service Projected Development Sites 2 and 3. It is

likely that the existing sanitary and storm sewer lines located in the bed of West 23rd Street would service Projected Development Sites 4 through 8. See the Site Plan included in Infrastructure Appendix which illustrates the sewer lines in the vicinity of the Project Area. The combined sanitary and storm sewer flows would flow to the Coney Island Wastewater Treatment Plant (WWTP) which has a capacity of 110 million gallons per day.

Storm water flows generated by the proposed project would be greater than existing and future No-Action flows as additional impervious surfaces for buildings, pavement, etc. would be constructed on the 8 Projected Development Sites. The NYC Department of Environmental Protection (DEP) will determine whether the projected increased flows would be considered significant.

DEP has reviewed the EAS for the Proposed Actions, and in a memorandum dated January 5, 2018 states the following regarding the sewer system (see Infrastructure Appendix):

1. The proposed rezoning results in an increase of 347% for the sanitary flow in the adjacent sewers based on a DU size of 2.45 people per unit. A hydraulic analysis of the existing sewer system may be needed at the time of submittal of the site connection proposal application to determine whether the existing sewer system is capable of supporting higher density development and related increase in wastewater flow, or whether there will be a need to upgrade the existing sewer system. In addition, there might be a need to amend the existing drainage plan based on the hydraulic analysis calculations.

2. During the submittal of the site connection proposal applications of these sites, please restrict the storm flow per the following:

a. As per the new stormwater requirements, the Stormwater Release Rate must be no more than the greater of 0.25 cfs or 10% of the Allowable Flow or, if the Allowable Flow is less than 0.25 cfs, no more than the Allowable Flow. Allowable Flow is defined as the stormwater flow from a development that can be released into an existing storm or combined sewer based on existing sewer design criteria.

b. Specify a method of retaining or detaining the site generated storm flow that adheres to the Stormwater Release Rate requirements stated above.

Conclusion

The proposed actions would not result in significant impacts on water supply since the projected developments would not generate an exceptionally large demand in water. Additionally, the Project Area is not within an area that experiences low water pressure. However, based on the water usage factors provided in the *CEQR Technical Manual*, future development in the Project Area could result in 61,062 gpd of water usage compared to the existing water usage rate of 9,577 gpd and the projected No-Action water usage rate of 21,077 gpd. No significant adverse impacts to the water supply infrastructure would be anticipated.

Based on the sewage generation factors provided in the *CEQR Technical Manual*, future development in the Project Area could result in 53,200 gpd of sanitary sewage compared to the existing sanitary sewage generation of 8,773 gpd and the projected No-Action sanitary sewage flow of 20,273 gpd. While the Proposed Actions would result in an increase in sanitary flow in adjacent sewers, further measures are enforced by the DEP during the Sewer Certification application process to evaluate the adequacy of the existing abutting sewer to receive site storm and sanitary discharge from new development. If determined that there is potential for a significant increase in sanitary flow, DEP may request a hydraulics analysis, prior to issuing a Site Connection Permit, to further assess whether the existing sewer system is capable of supporting potential increase in wastewater flow from any new development (with or without the Proposed Actions). Due to change in zoning, an amendment to the existing City Drainage Plan is required to ensure that the capacity of the sewer system is capable of supporting higher density development and related increase in wastewater flow. Given these measures, it is not anticipated that the increase in sanitary sewage flows generated by the Proposed Actions would result in significant adverse impacts. It is not anticipated that the relatively modest increase in sanitary sewage flows generated by the project would exceed the capacity of existing sewer lines servicing the Project Area or the design capacity of the Coney Island WWTP. No significant adverse impacts to the water and sewer infrastructure are therefore anticipated.

No significant adverse impacts to the water and sewer infrastructure would be anticipated as a result of the Proposed Actions.

COMPARISON OF EXISTING AND WITH-ACTION VOLUME

CSO SUBCATCHMENT AREA:[1]

EXISTING

		Area = 57,742 SF (1.33 ACRES)				Area = XX,XXX SF (XX.XX ACRES)				
		SITE A				SITE B[2]				SITE A & B
RAINFALL VOLUME (in)	RAINFALL DURATION (hr)[3]	RUNOFF VOLUME DIRECT DRAINAGE (MG)[4]	RUNOFF VOLUME TO CSS (MG)	SANITARY VOLUME TO CSS (MG)	TOTAL VOLUME TO CSS (MG)	RUNOFF VOLUME TO RIVER (MG)	RUNOFF VOLUME TO CSS (MG)	SANITARY VOLUME TO CSS (MG)	TOTAL VOLUME TO CSS (MG)	TOTAL VOLUME TO CSS (MG)
0.00	3.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.40	3.80	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.01
1.20	11.30	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.02
2.50	19.50	0.00	0.05	0.01	0.06	0.00	0.00	0.00	0.00	0.06

With-Action

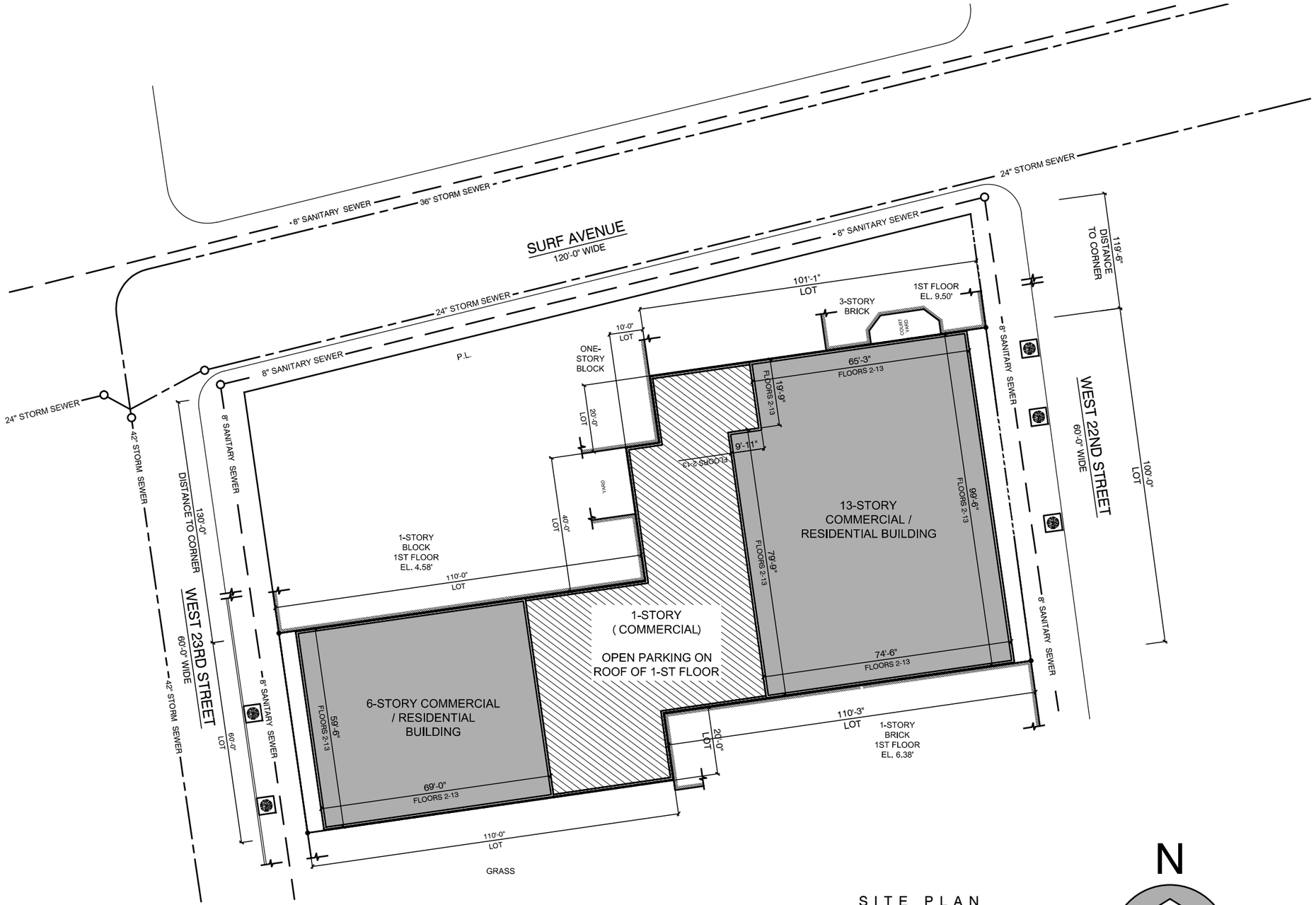
		Area = 57,742 SF (1.33 ACRES)				Area = XX,XXX SF (XX.XX ACRES)				
		SITE A				SITE B[2]				SITE A & B
RAINFALL VOLUME (in)	RAINFALL DURATION (hr)[3]	RUNOFF VOLUME DIRECT DRAINAGE (MG)[4]	RUNOFF VOLUME TO CSS (MG)	SANITARY VOLUME TO CSS (MG)	TOTAL VOLUME TO CSS (MG)	RUNOFF VOLUME TO RIVER (MG)	RUNOFF VOLUME TO CSS (MG)	SANITARY VOLUME TO CSS (MG)	TOTAL VOLUME TO CSS (MG)	TOTAL VOLUME TO CSS (MG)
0.00	3.80	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.01
0.40	3.80	0.00	0.01	0.01	0.02	0.00	0.00	0.00	0.00	0.02
1.20	11.30	0.00	0.04	0.02	0.06	0.00	0.00	0.00	0.00	0.06
2.50	19.50	0.00	0.09	0.04	0.13	0.00	0.00	0.00	0.00	0.13

[1] If the proposed project crosses over several different CSO subcatchment areas, the above summary table should be completed for each CSO sub-catchment area.

[2] If proposed project includes a phased implementation plan or discrete sites, assess volumes using additional cells above (e.g., Site B).

[3] Based on ***Intensity/duration/Frequency Rainfall Analysis, New York City and the Catskill Mountain Water Supply Reservoirs,*** Vieux & Associates, Inc., April 4, 2006. The 24-hour rainfall volume is based on average rainfall intensity over 24-hours (inch/per) times 24 hrs. (Duration information provided by T. Newman & P. Jadhav, HydroQual).

[4] The volume (calculated in WS2) of stormwater runoff from any portion of the proposed project site draining to a separate storm sewer or as overland flow directly to a waterbody should be entered here.



LEGEND:

- PROPOSED RESIDENTIAL / COMMERCIAL
- PROPOSED PARKING (NOT INCLUDING PARKING AREA UNDER PROPOSED COMMERCIAL / RESIDENTIAL BUILDING)

SITE PLAN

0 2' 4' 8' 16' 32'

N

P1-B

2 OF 3

BRICOLAGE
ARCHITECTURE
& DESIGN, PLLC
6321 New Utrecht Avenue
Brooklyn, N.Y. 11219
Tel. 718.259.1100
Fax. 718.259.0111

BLOCK: 7071
LOT: 16, 114, 13, 93, 94
ZONING: R7D

SCALE: N.T.S.

DATE: 3/2/16

JOB NO 16-124

3021 WEST 23RD STREET / 3022 WEST 22ND STREET
Brooklyn, New York 11224

R7D BUILD OUT SCENARIO

Environmental Protection

Vincent Sapienza, P.E.
Commissioner

Angela Licata
Deputy Commissioner of Sustainability

59-17 Junction Boulevard
Flushing, NY 11373

T: (718) 595-4398
F: (718) 595-4479
alicata@dep.nyc.gov

MEMORANDUM

To: Kevin Corte
Project Manager
DCP EARD

From: Mitchell Wimbish
Project Manager
DEP BEPA

Subject: CEQR # 18DCP064K

Date: January 5, 2018

New York City Department of Environmental Protection has reviewed the Environmental Assessment Statement for the above project and has the following comments:

Sewer System

1. The proposed rezoning results in an increase of 347% for the sanitary flow in the adjacent sewers based on a DU size of 2.45 people per unit. A hydraulic analysis of the existing sewer system may be needed at the time of submittal of the site connection proposal application to determine whether the existing sewer system is capable of supporting higher density development and related increase in wastewater flow, or whether there will be a need to upgrade the existing sewer system. In addition, there might be a need to amend the existing drainage plan based on the hydraulic analysis calculations.

2. During the submittal of the site connection proposal applications of these sites, please restrict the storm flow per the following:

    a. As per the new stormwater requirements, the Stormwater Release Rate must be no more than the greater of 0.25 cfs or 10% of the Allowable Flow or, if the Allowable Flow is less than 0.25 cfs, no more than the Allowable Flow. Allowable Flow is defined as the stormwater flow from a development that can be released into an existing storm or combined sewer based on existing sewer design criteria.

    b. Specify a method of retaining or detaining the site generated storm flow that adheres to the Stormwater Release Rate requirements stated above.

Water System

The existing water mains around the above subject Project are being upgraded and should be able to handle the estimated increase in water demand.

C: Bhaskar Nookala, BWSO
Lillian Cheng, BWSO
Bushra Asfare, BWSO
Terrell Estesen, BEPA

APPENDIX E
TRANSPORTATION APPENDIX

	Existing	No-Action	With-Action	Increment
Residential	360	366	775	409
Community Facilty	-	213,616	15000	-198616
Local Retail	-	-	10000	10000

	Census Tract 326; Kings County; New York	Census Tract 328; Kings County; New York	Census Tract 330; Kings County; New York	Census Tract 340; Kings County; New York	Census Tract 342; Kings County; New York	Census Tract 348; Kings County; New York	Census Tract 352; Kings County; New York	Census Tract 347, Kings County, New York					
Label	**Estimate**	**Estimate**	**Estimate**	**Estimate**	**Estimate**	**Estimate**	**Estimate**	**Estimate**	**Total**		**Modal Split**	**Trips**	**%**
Total:	2,554	975	1,050	313	1,270	942	174	1,664	8,942		Auto	1,596	20.5%
Car, truck, or van:	531	380	132	84	180	186	54	49	1,596		Taxi	198	2.5%
Drove alone	346	264	114	79	137	179	39	49	1,207		Bus	599	7.7%
Carpooled:	185	116	18	5	43	7	15	0	389		Subway	4,558	58.5%
In 2-person carpool	120	95	18	5	30	7	15	0	290		Walk/Other	837	10.7%
In 3-person carpool	0	0	0	0	0	0	0	0	0		Total	7,788	
In 4-or-more-person	65	21	0	0	13	0	0	0	99				
Public transportation (excluding taxicab):	1,178	419	624	100	832	461	120	1,423	5,157		**Riders**	**Person Trips**	**Vehicle Trips**
Bus	67	24	147	5	80	20	9	247	599		1	1,207	1207
Subway or elevated rail	1,061	395	477	95	752	441	111	1,176	4,508		2	290	145
Long-distance train or commuter rail	50	0	0	0	0	0	0	0	50		3	0	0
Light rail, streetcar or trolley (carro público in Puerto Rico)	0	0	0	0	0	0	0	0	0		4	99	24.75
Ferryboat	0	0	0	0	0	0	0	0	0		Total	1,596	1376.75
Bicycle	0	0	0	11	0	0	0	0	11		**Occupancy Rate**	**1.159251861**	
Walked	88	135	174	72	72	172	0	124	837				
Taxicab, motorcycle, or other means	32	13	2	0	78	35	0	38	198				
Worked from home	725	28	118	46	108	88	0	30	1,143				

	Residential		Local Retail		Community Facility	
Trip Generation	(1)		(1)		(1)	
Weekday	8.18		329		66.626x + 141.77	
Saturday	9.08		358		37	
	per dwelling unit		per 1,000 sf		per 1,000 sf	
Linked-trip Credit			50%			
Temporal Distribution	(1)		(1)		(1)	
AM	9.30%		4.80%		11.00%	
MD	5.60%		8.00%		12.60%	
PM	8.50%		10.90%		8.50%	
Sat MD	8.40%		11.70%		16.60%	
Modal Splits	(2)		(1)		(1)	
Auto	20.5%		11%		53.0%	
Taxi	2.5%		0.0%		14.0%	
Bus	7.7%		2%		7.0%	
Subway	58.5%		3%		6.0%	
Walk/Other	10.7%		84%		20.0%	
In/Out Splits	In (1)	Out (1)	In (1)	Out (1)	In (1)	Out (1)
AM	22%	78%	53%	47%	62%	38%
MD	50%	50%	50%	50%	53%	47%
PM	62%	38%	50%	50%	39%	61%
Sat MD	55%	45%	50%	50%	54%	46%
Vehicle Occupancy	(2) (3)		(3)		(3)	
Auto	1.07		2.00		1.50	
Taxi	1.30		2.00		1.50	
Truck Trip Generation	(1)		(1)		(1)	
Weekday	0.06		0.35		0.32	
Saturday	0.02		0.04		0.01	
Temporal Distribution	(1)		(1)		(1)	
AM	12.00%		8.00%		10.00%	
MD	9.00%		11.00%		11.00%	
PM	2.00%		2.00%		2.00%	
Saturday	9.00%		11.00%		11.00%	
In/Out Splits	In (1)	Out (1)	In (1)	Out (1)	In (1)	Out (1)
AM/MD/PM/Sat	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%

1 = 2021 CEQR Technical Manual

2 = ITW ACS 2018-2022 Brooklyn Census Tracts 326, 328, 330, 340, 342, 348, 352

3 = East New York Rezoning FEIS

	Residential		Local Retail		Community Facility		Total			
Size (gsf)	409 du		10,000 gsf		-198,616 gsf					
Peak Hour Trips										
AM	311		79		-1440		-1050			
MD	187		132		-1649		-1331			
PM	284		179		-1113		-649			
Sat MD	312		209		-1220		-699			
Person Trips										
AM	In	Out	In	Out	In	Out	In	Out	In/Out Total	AM
Auto	14	50	5	4	-473	-290	-455	-236	-691	
Taxi	2	6	0	0	-125	-77	-123	-70	-194	
Bus	5	19	1	1	-62	-38	-56	-19	-75	14
Subway	40	142	1	1	-54	-33	-12	110	98	15
Walk/Other	7	26	35	31	-179	-109	-136	-52	-188	16
Total	68	243	42	37	-893	-547	-783	-267	-1050	
MD	In	Out	In	Out	In	Out	In	Out	In/Out Total	MD
Auto	19	19	7	7	-663	-411	-637	-384	-821	
Taxi	2	2	0	0	-122	-109	-120	-106	-226	
Bus	7	7	1	1	-61	-54	-53	-46	-98	21
Subway	55	55	2	2	-52	-47	4	10	15	22
Walk/Other	10	10	55	55	-175	-155	-110	-90	-199	23
Total	94	94	66	66	-874	-775	-715	-616	-1331	
PM	In	Out	In	Out	In	Out	In	Out	In/Out Total	PM
Auto	36	22	10	10	-230	-360	-184	-328	-512	
Taxi	4	3	0	0	-61	-95	-56	-92	-149	
Bus	14	8	2	2	-30	-48	-15	-37	-52	28
Subway	103	63	3	3	-26	-41	80	25	105	29
Walk/Other	19	12	75	75	-87	-136	7	-49	-41	30
Total	176	108	90	90	-434	-679	-168	-481	-649	
Saturday	In	Out	In	Out	In	Out	In	Out	In/Out Total	SAT
Auto	35	29	12	12	-349	-297	-302	-257	-560	
Taxi	4	4	0	0	-92	-79	-88	-75	-163	
Bus	13	11	2	2	-46	-39	-31	-26	-57	35
Subway	100	82	3	3	-40	-34	64	52	116	36
Walk/Other	18	15	88	88	-132	-112	-25	-9	-35	37
Total	172	140	105	105	-659	-561	-382	-316	-699	
Taxi Overlap Rate										
Vehicle Trips										
AM	In	Out	In	Out	In	Out	In	Out	In/Out Total	AM
Auto	13	47	2	2	-315	-193	-300	-144	-444	42
Taxi	1	5	0	0	-83	-51	-82	-46	-128	
Taxi Balanced	6	6	0	0	-134	-134	-128	-128	-256	44
Truck	1	1	0	0	-3	-3	-2	-2	-4	45
Total	20	54	2	2	-452	-330	-410	-274	-704	
MD	In	Out	In	Out	In	Out	In	Out	In/Out Total	MD
Auto	18	18	4	4	-309	-274	-287	-252	-539	48
Taxi	2	2	0	0	-82	-72	-80	-70	-150	
Taxi Balanced	4	4	0	0	-154	-154	-150	-150	-300	50
Truck	1	1	0	0	-3	-3	-2	-2	-4	51
Total	23	23	4	4	-466	-431	-439	-404	-843	
PM	In	Out	In	Out	In	Out	In	Out	In/Out Total	PM
Auto	34	21	5	5	-153	-240	-114	-214	-328	54
Taxi	3	2	0	0	-41	-63	-38	-61	-99	
Taxi Balanced	5	5	0	0	-104	-104	-99	-99	-198	56
Truck	0	0	0	0	-1	-1	-1	-1	-2	57
Total	39	26	5	5	-258	-345	-214	-314	-528	
Saturday	In	Out	In	Out	In	Out	In	Out	In/Out Total	SAT
Auto	33	27	6	6	-233	-198	-194	-165	-359	60
Taxi	3	3	0	0	-61	-52	-58	-49	-107	
Taxi Balanced	6	6	0	0	-113	-113	-107	-107	-214	62
Truck	0	0	0	0	0	0	0	0	0	63
Total	39	33	6	6	-346	-311	-301	-272	-573	

0% taxi overlap rate

Peak Hour	AM Peak Hour	Midday Peak Hour	PM Peak Hour	Saturday Peak Hour
Total Walk Only Trip-Ends	-188	-199	-41	-35
Walk Only Threshold	200	200	200	200
Total Subway Trip-Ends	98	15	105	116
Subway Threshold	200	200	200	200
Total MTA Bus Trip-Ends	-75	-98	-52	-67
MTA Bus Threshold	200	200	200	200
Total Pedestrian Trip-Ends	-165	-283	11	24
Pedestrian Threshold	200	200	200	200
Total Vehicular Trip-Ends	-704	-843	-528	-573
Vehicular Threshold	50	50	50	50

Highlighted cells denote trips in exceedance of 200 pedestrians or 50 vehicles per peak hour

	Residential		Local Retail		Community Facility	
Trip Generation	(1)		(1)		(1)	
Weekday	8.18		329		66.626x + 141.77	
Saturday	9.08		358		37	
	per dwelling unit		per 1,000 sf		per 1,000 sf	
Linked-trip			0%			
Temporal Distribution	(1)		(1)		(1)	
AM	9.30%		4.80%		11.00%	
MD	5.60%		8.00%		12.60%	
PM	8.50%		10.90%		8.50%	
Sat MD	8.40%		11.70%		16.60%	
Modal Splits	(2)		(1)		(3)	
Auto	20.5%		11%		53.0%	
Taxi	2.5%		0.0%		14.0%	
Bus	7.7%		2%		7.0%	
Subway	58.5%		3%		6.0%	
Walk/Other	10.7%		84%		20.0%	
In/Out Splits	In (1)	Out (1)	In (1)	Out (1)	In (1)	Out (1)
AM	22%	78%	53%	47%	62%	38%
MD	50%	50%	50%	50%	53%	47%
PM	62%	38%	50%	50%	39%	61%
Sat MD	55%	45%	50%	50%	54%	46%
Vehicle Occupancy	(2) (4)		(4)		(3) (4)	
Auto	1.07		2.00		1.50	
Taxi	1.30		2.00		1.50	
Truck Trip Generation	(1)		(1)		(1)	
Weekday	0.06		0.35		0.32	
Saturday	0.02		0.04		0.01	
Temporal Distribution	(1)		(1)		(1)	
AM	12.00%		8.00%		10.00%	
MD	9.00%		11.00%		11.00%	
PM	2.00%		2.00%		2.00%	
Saturday	9.00%		11.00%		11.00%	
In/Out Splits	In (1)	Out (1)	In (1)	Out (1)	In (1)	Out (1)
AM/MD/PM/Sat	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%

1 = 2021 CEQR Technical Manual

2 = ITW ACS 2018-2022 Brooklyn Census Tracts 326, 328,330,340,342,348,352

3 = RITW CTPP 2012-2016 Brooklyn Census Tracts 326, 328,330,340,342,348,352

4 = East New York Rezoning FEIS

	Residential		Local Retail		Community Facility		Total			
Size (gsf)	409 du		10,000 gsf		-198,616 gsf					
Peak Hour Trips										
AM	311		158		-1440		-971			
MD	187		263		-1649		-1199			
PM	284		359		-1113		-470			
Sat MD	312		419		-1220		-489			
Person Trips										
AM	In	Out	In	Out	In	Out	In	Out	In/Out Total	AM
Auto	14	50	9	8	-473	-290	-450	-232	-682	
Taxi	2	6	0	0	-125	-77	-123	-70	-194	
Bus	5	19	2	1	-62	-38	-56	-18	-74	14
Subway	40	142	3	2	-54	-33	-11	111	100	15
Walk/Other	7	26	70	62	-179	-109	-101	-21	-122	16
Total	68	243	84	74	-893	-547	-741	-230	-971	
MD	In	Out	In	Out	In	Out	In	Out	In/Out Total	MD
Auto	19	19	14	14	-463	-411	-430	-377	-807	
Taxi	2	2	0	0	-122	-109	-120	-106	-226	
Bus	7	7	3	3	-61	-54	-51	-44	-96	21
Subway	55	55	4	4	-52	-47	6	12	19	22
Walk/Other	10	10	111	111	-175	-155	-54	-34	-89	23
Total	94	94	132	132	-874	-775	-649	-550	-1199	
PM	In	Out	In	Out	In	Out	In	Out	In/Out Total	PM
Auto	36	22	20	20	-230	-360	-174	-318	-492	
Taxi	4	3	0	0	-61	-95	-56	-92	-149	
Bus	14	8	4	4	-30	-48	-13	-36	-49	28
Subway	103	63	5	5	-26	-41	83	28	110	29
Walk/Other	19	12	151	151	-87	-136	83	26	109	30
Total	176	108	179	179	-434	-679	-78	-391	-470	
Saturday	In	Out	In	Out	In	Out	In	Out	In/Out Total	SAT
Auto	35	29	23	23	-349	-297	-291	-246	-537	
Taxi	4	4	0	0	-92	-79	-88	-75	-163	
Bus	13	11	4	4	-46	-39	-29	-24	-53	35
Subway	100	82	6	6	-40	-34	67	55	122	36
Walk/Other	18	15	176	176	-132	-112	63	79	141	37
Total	172	140	209	209	-659	-561	-278	-211	-489	
Taxi Overlap Rate										
Vehicle Trips										
AM	In	Out	In	Out	In	Out	In	Out	In/Out Total	AM
Auto	13	47	5	4	-315	-193	-297	-142	-439	42
Taxi	1	5	0	0	-83	-51	-82	-46	-128	
Taxi Balanced	6	6	0	0	-134	-134	-128	-128	-256	44
Truck	1	1	0	0	-3	-3	-2	-2	-4	45
Total	20	54	5	4	-452	-330	-427	-272	-699	
MD	In	Out	In	Out	In	Out	In	Out	In/Out Total	MD
Auto	18	18	7	7	-309	-274	-284	-249	-533	48
Taxi	2	2	0	0	-82	-72	-80	-70	-150	
Taxi Balanced	4	4	0	0	-154	-154	-150	-150	-300	50
Truck	1	1	0	0	-3	-3	-2	-2	-4	51
Total	23	23	7	7	-466	-431	-436	-401	-837	
PM	In	Out	In	Out	In	Out	In	Out	In/Out Total	PM
Auto	34	21	10	10	-153	-240	-109	-209	-318	54
Taxi	3	2	0	0	-41	-63	-38	-61	-99	
Taxi Balanced	5	5	0	0	-104	-104	-99	-99	-198	56
Truck	0	0	0	0	-1	-1	-1	-1	-2	57
Total	39	26	10	10	-258	-345	-209	-309	-518	
Saturday	In	Out	In	Out	In	Out	In	Out	In/Out Total	SAT
Auto	33	27	12	12	-233	-198	-188	-159	-347	60
Taxi	3	3	0	0	-61	-52	-58	-49	-107	
Taxi Balanced	6	6	0	0	-113	-113	-107	-107	-214	62
Truck	0	0	0	0	0	0	0	0	0	63
Total	39	33	12	12	-346	-311	-295	-266	-561	

0% taxi overlap rate

Non-vehicular modes	Residential	Retail	Residential % of retail		
AM	239	141	1.70		
MD	144	234	0.62		
PM	219	319	0.69		
SAT	240	373	0.64	0.5	50% max allowed per CEQR

Peak Hour	AM Peak Hour	Midday Peak Hour	PM Peak Hour	Saturday Peak Hour
Total Walk Only Trip-Ends	-122	-89	109	141
Walk Only Threshold	200	200	200	200
Total Subway Trip-Ends	100	19	110	122
Subway Threshold	200	200	200	200
Total MTA Bus Trip-Ends	-74	-96	-49	-53
MTA Bus Threshold	200	200	200	200
Total Pedestrian Trip-Ends	-95	-166	171	**210**
Pedestrian Threshold	200	200	200	200
Total Vehicular Trip-Ends	-699	-837	-518	-561
Vehicular Threshold	50	50	50	50

Highlighted cells denote trips in exceedance of 200 pedestrians or 50 vehicles per peak hour

APPENDIX F
NOISE APPENDIX



equity environmental engineering
A Division of GZA

PLANNING
GEOTECHNICAL
ENVIRONMENTAL
ECOLOGICAL
WATER
CONSTRUCTION MANAGEMENT

Northern NJ
500 International Drive
Suite 150
Mount Olive, NJ 07828

Manhattan
104 West 29th Street
10th Floor
New York, NY 10001

Noise Assignment Field Sheet

Name of Project: 2950-60-70 West 24th Street 12.0077766.00

Project Address: 2950-60-70 West 24th Street Brooklyn, New York

Date(s) of Field Work: 1/18/2024

Personnel: Shlok Raval

Project Specific Scope of Work:

3 x 20-minute readings AM, Midday, PM

Air Toxics Recon

I. Start of Noise Monitoring Day

Departure Time: 6:15AM Arrival Time: 7:50 AM

Weather Conditions (temp, wind speed, precipitation): -5°C, 11MPH, 0"

Meter Type: CASELLA-63X Meter Serial #: 1488266 Meter Location: Location 1

Meter Type: CEL-63X Meter Serial #: 1488266 Meter Location: Location 2

Meter Type: CEL-63X Meter Serial #: 1488266 Meter Location: Location 3

*If more locations are needed for a project use a second Field Sheet

Calibrator Serial #: 1090999 Meters used on: Location 1

Calibrator Serial #: 1090999 Meters used on: Location 2

Calibrator Serial #: 1090999 Meters used on: Location 3

Were Photos Taken of Each Location? Y / N *Discuss specific photo instructions w/ Project Manager

On a separate sheet of paper (field book) make a sketch of the noise meter locations and the distances to nearest wall, fence, building, or other solid surfaces.

An Equal Opportunity Employer M/F/V/H

Scanned with CamScanner

Scanned with CamScanner

II. Morning Session 7:30 AM – 9:00 AM

Before Measurement:

Meter Serial #: 1488266 **Time:** 7:55 AM **Calibration Passed at 114 dB? Y / N**

Meter Serial #: _____ **Time:** _____ **Calibration Passed at 114 dB? Y / N**

Meter Serial #: _____ **Time:** _____ **Calibration Passed at 114 dB? Y / N**

After Measurement:

Meter Serial #: 1488266 **Time:** 9:03 **Calibration Passed at 114 dB? Y / N**

Meter Serial #: _____ **Time:** _____ **Calibration Passed at 114 dB? Y / N**

Meter Serial #: _____ **Time:** _____ **Calibration Passed at 114 dB? Y / N**

***If more locations are needed for a project use a second Field Sheet**

Location #	Start Time	End Time
Location 1	7:55AM	8:13AM
Location 2	8:19AM	8:34AM
Location 3	8:42 AM	9:02AM

***If more locations are needed for a project use a second Field Sheet**

Location #	Car	SUV	Medium Truck	Heavy Truck	Bus	Train
Location 1	6	16	0	1	1	0
Location 2	62	52	5	0	6	0
Location 3	5	10	0	1	3	0

***If more locations are needed for a project use a second Field Sheet**

Noise Source: please note any loud noises here and time (sirens, garbage truck, etc):

8:00 - Land mower Noise Location 1

8:30 - Street clean Location 2

8:57 - ambulance Siren Location 3

****Please place noise meters in their respective cases between sessions to avoid damage.***

Scanned with CamScanner

III. Midday 12:00 PM – 1:30 PM

Before Measurement:

Meter Serial #: 1488266 Time: 11:59AM Calibration Passed at 114 dB? Y / N

Meter Serial #: _____ Time: _____ Calibration Passed at 114 dB? Y / N

Meter Serial #: _____ Time: _____ Calibration Passed at 114 dB? Y / N

After Measurement:

Meter Serial #: 1488266 Time: 1:04PM Calibration Passed at 114 dB? Y / N

Meter Serial #: _____ Time: _____ Calibration Passed at 114 dB? Y / N

Meter Serial #: _____ Time: _____ Calibration Passed at 114 dB? Y / N

*If more locations are needed for a project use a second Field Sheet

Location #	Start Time	End Time
Location 1	12:00 PM	12:20 PM
Location 2	12:22 PM	12:42 PM
Location 3	12:44 PM	1:04 PM

*If more locations are needed for a project use a second Field Sheet

Location #	Car	SUV	Medium Truck	Heavy Truck	Bus	Train
Location 1	7	9	0	0	1	0
Location 2	40	48	2	0	6	0
Location 3	3	4	1	0	0	0

*If more locations are needed for a project use a second Field Sheet

Noise Source: please note any loud noises here and time (sirens, garbage truck, etc):
12:27 ambulance siren location 3

Please place noise meters in their respective cases between sessions to avoid damage.

Scanned with CamScanner

IV. Evening Session 4:30 PM – 6:00 PM

Before Measurement:

Meter Serial #: 1488266 **Time:** 4:29 **Calibration Passed at 114 dB? Y / N**

Meter Serial #: _____ **Time:** _____ **Calibration Passed at 114 dB? Y / N**

Meter Serial #: _____ **Time:** _____ **Calibration Passed at 114 dB? Y / N**

After Measurement:

Meter Serial #: 1488266 **Time:** 5:35 **Calibration Passed at 114 dB? Y / N**

Meter Serial #: _____ **Time:** _____ **Calibration Passed at 114 dB? Y / N**

Meter Serial #: _____ **Time:** _____ **Calibration Passed at 114 dB? Y / N**

*If more locations are needed for a project use a second Field Sheet

Location #	Start Time	End Time
Location 1	4:30	4:50
Location 2	4:51	5:12
location 3	5:14	5:34

*If more locations are needed for a project use a second Field Sheet

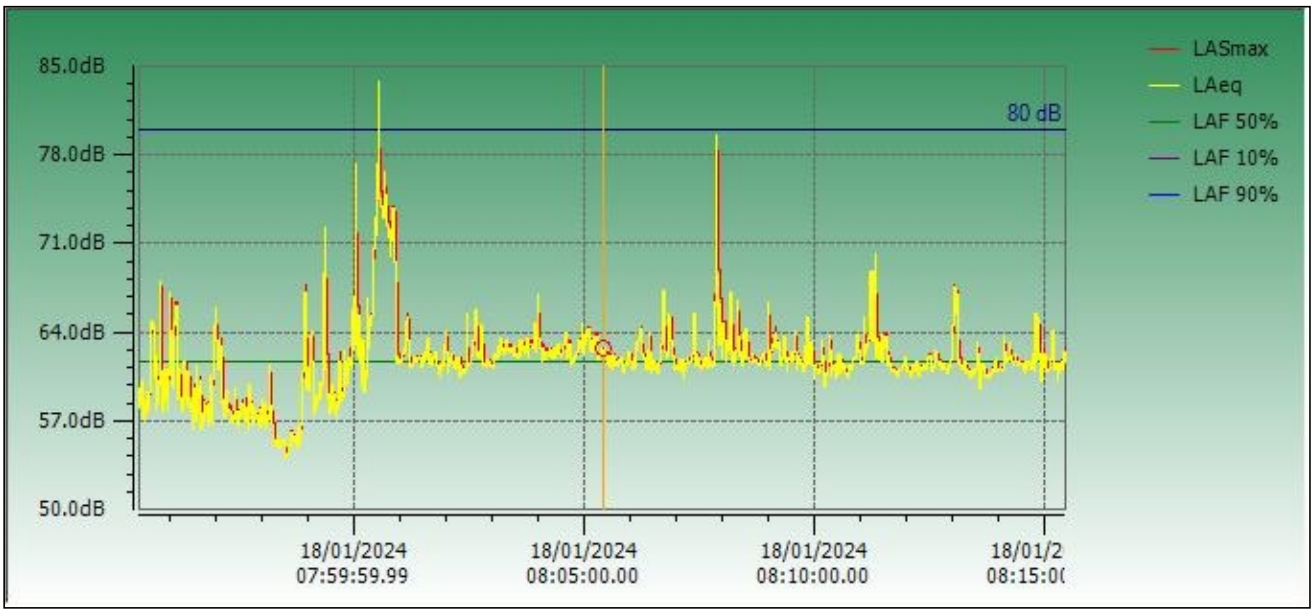
Location #	Car	SUV	Medium Truck	Heavy Truck	Bus	Train
Location 1	7	17	1	1	1	
location 2	42	58	3	1	7	0
location 3	5	11	2	0	0	0

*If more locations are needed for a project use a second Field Sheet

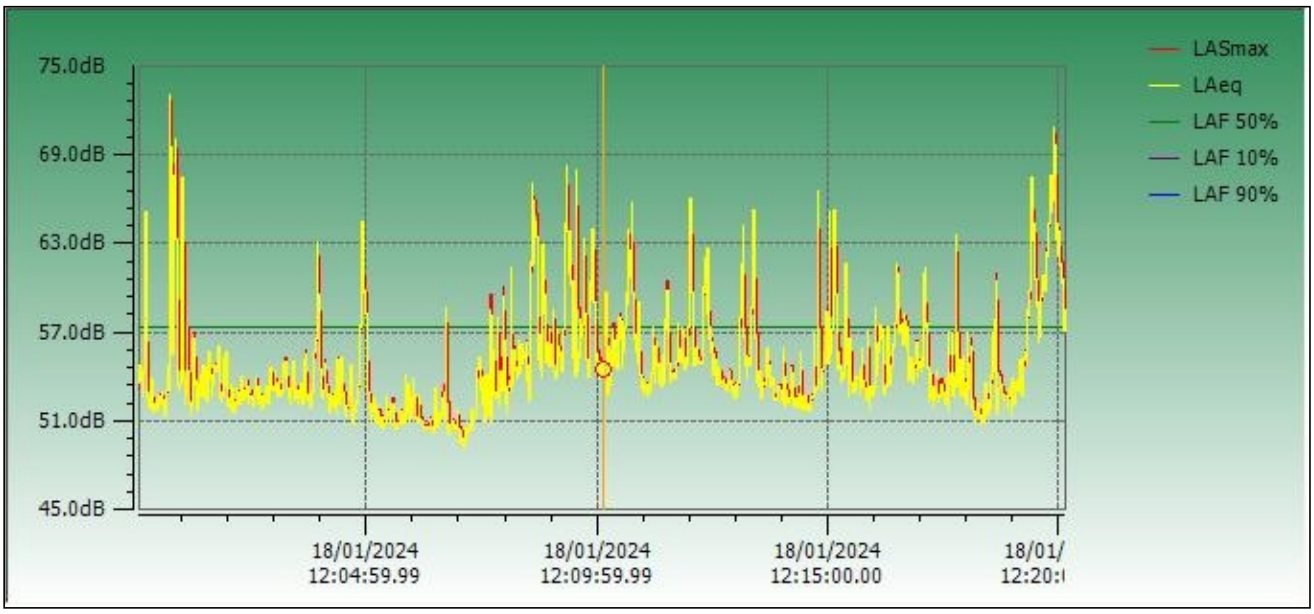
Noise Source: please note any loud noises here and time (sirens, garbage truck, etc):
4:36 people are talking around Location 1
5:01 - 5:02 Fire vehicle siren Location 2
5:25 Fire vechicle siren Location 3

Please place noise meters in their respective cases between sessions to avoid damage.

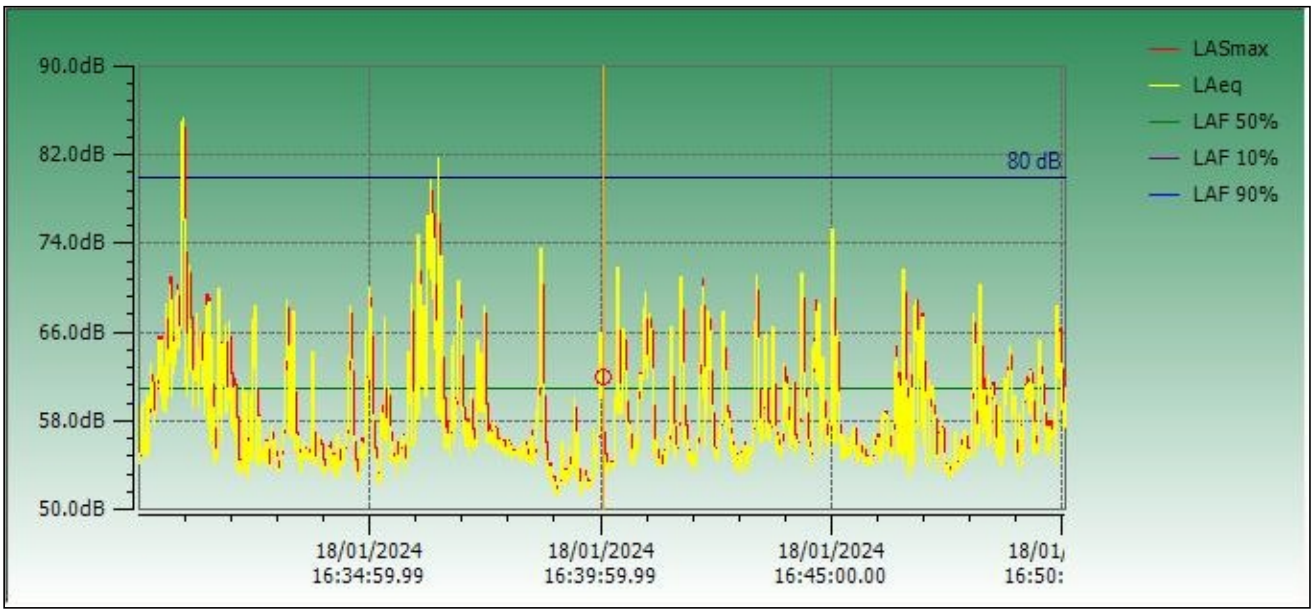
Instrument Model	CEL-633C		
Serial Number	2670911	LASmin	53.2 dB
Start Date & Time	1/18/2024 7:55:20 AM	LAeq	63.7 dB
End Date & Time	1/18/2024 8:15:26 AM	LAS 10%	64 dB
Duration	00:20:06 HH:MM:SS	LAS 50%	61.5 dB
Pause Duration	00:00:00 HH:MM:SS	LAS 90%	58.5 dB
Calibration (Before) Date	1/18/2024 7:55:10 AM	LDN	0
Calibration (After) Date	1/18/2024 9:03:07 AM	Result	Cumulative
LASmax	89.4 dB		



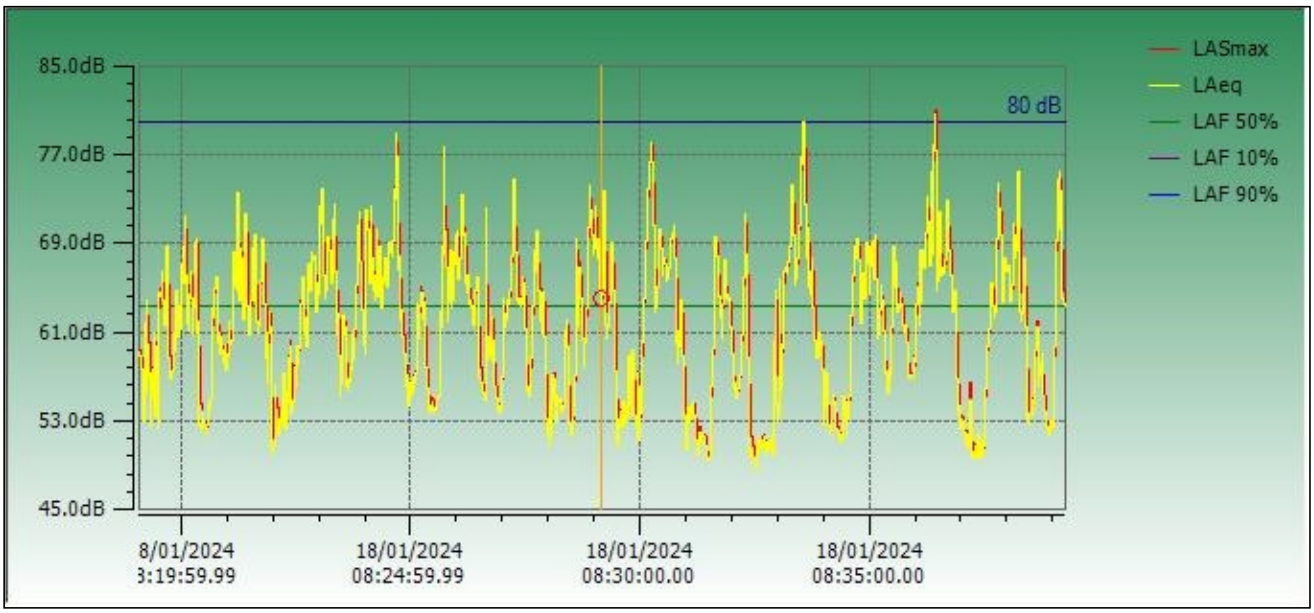
Instrument Model	**CEL-633C**		
Serial Number	2670911	LASmin	48.3 dB
Start Date & Time	1/18/2024 12:00:04 PM	LAeq	57 dB
End Date & Time	1/18/2024 12:20:09 PM	LAS 10%	60 dB
Duration	00:20:05 HH:MM:SS	LAS 50%	54 dB
Pause Duration	00:00:00 HH:MM:SS	LAS 90%	51.5 dB
Calibration (Before) Date	1/18/2024 11:59:55 AM	LDN	0
Calibration (After) Date	1/18/2024 1:04:50 PM	Result	Cumulative
LASmax	79.6 dB		



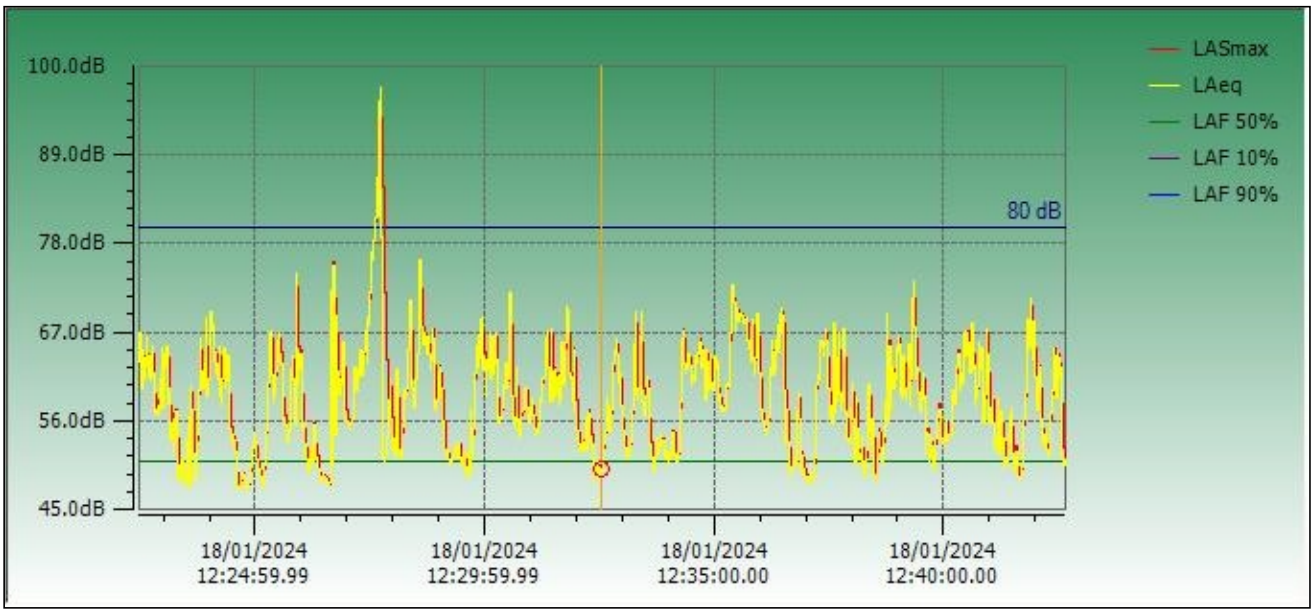
Instrument Model	**CEL-633C**		
Serial Number	2670911	LASmin	50.4 dB
Start Date & Time	1/18/2024 4:30:00 PM	LAeq	63.7 dB
End Date & Time	1/18/2024 4:50:04 PM	LAS 10%	65.5 dB
Duration	00:20:04 HH:MM:SS	LAS 50%	57 dB
Pause Duration	00:00:00 HH:MM:SS	LAS 90%	54 dB
Calibration (Before) Date	1/18/2024 4:29:41 PM	LDN	0
Calibration (After) Date	1/18/2024 5:35:03 PM	Result	Cumulative
LASmax	87.8 dB		



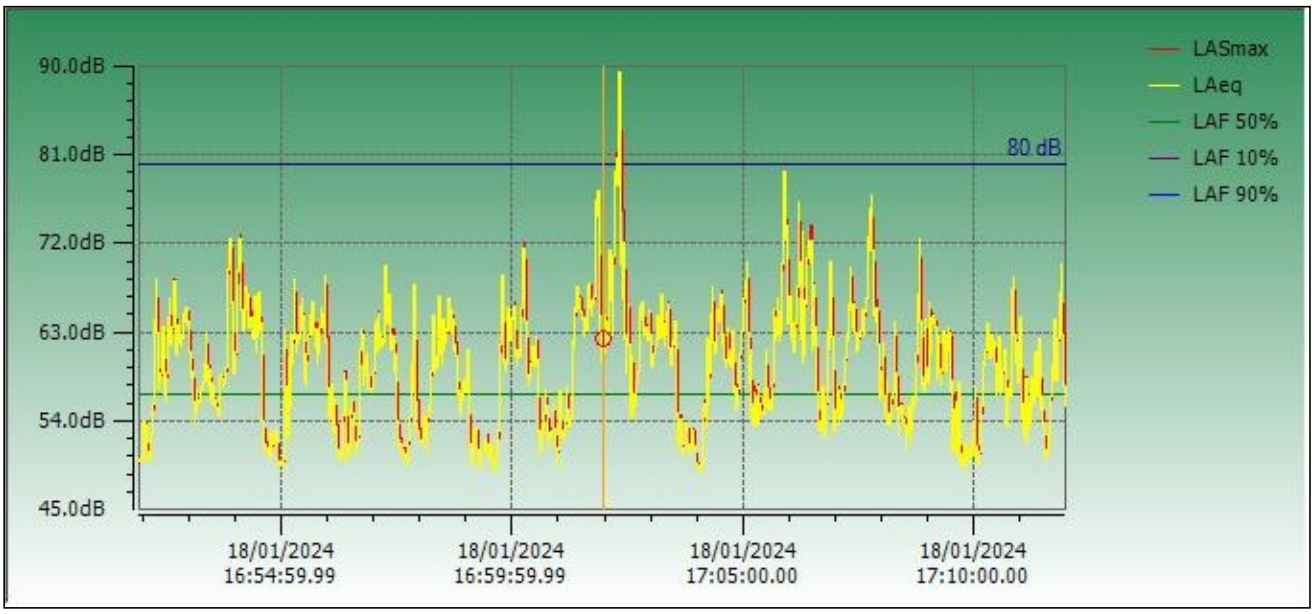
Instrument Model	**CEL-633C**
Serial Number	2670911
Start Date & Time	1/18/2024 8:19:04 AM
End Date & Time	1/18/2024 8:39:16 AM
Duration	00:20:12 HH:MM:SS
Pause Duration	00:00:00 HH:MM:SS
Calibration (Before) Date	1/18/2024 7:55:10 AM
Calibration (After) Date	1/18/2024 9:03:07 AM
LASmax	86.2 dB
LASmin	47.3 dB
LAeq	66 dB
LAS 10%	69.5 dB
LAS 50%	62.5 dB
LAS 90%	53 dB
LDN	0
Result	Cumulative



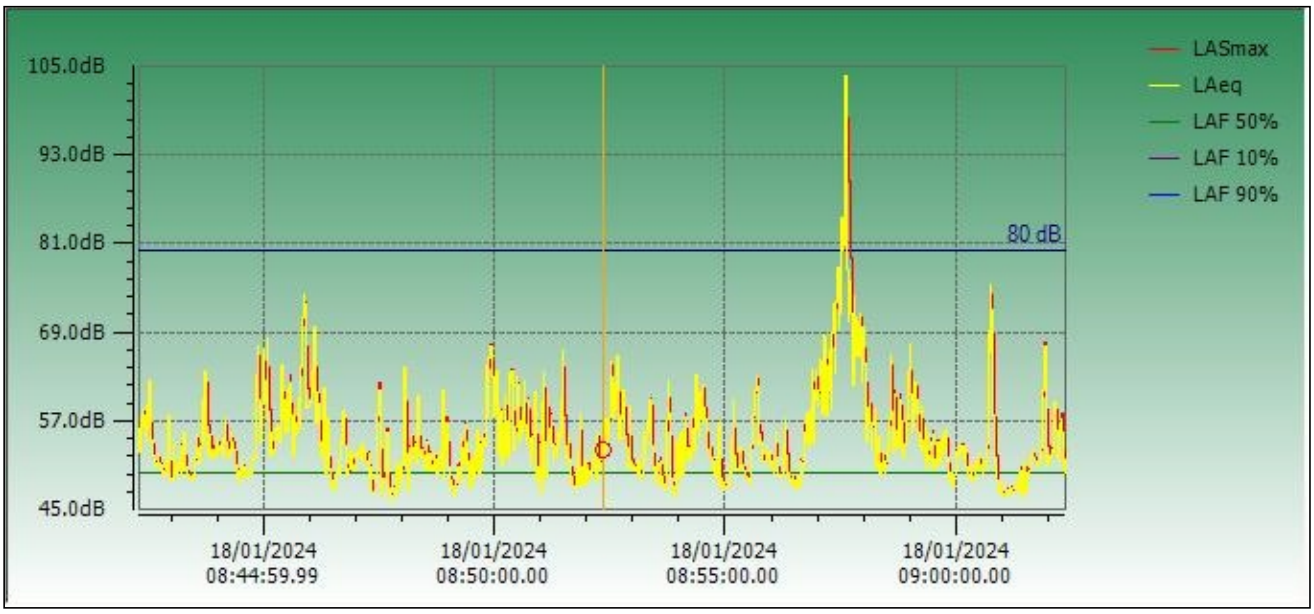
Instrument Model	CEL-633C		
Serial Number	2670911	LASmin	46.7 dB
Start Date & Time	1/18/2024 12:22:28 PM	LAeq	70.6 dB
End Date & Time	1/18/2024 12:42:39 PM	LAS 10%	66.5 dB
Duration	00:20:11 HH:MM:SS	LAS 50%	59 dB
Pause Duration	00:00:00 HH:MM:SS	LAS 90%	51 dB
Calibration (Before) Date	1/18/2024 11:59:55 AM	LDN	0
Calibration (After) Date	1/18/2024 1:04:50 PM	Result	Cumulative
LASmax	100.1 dB		



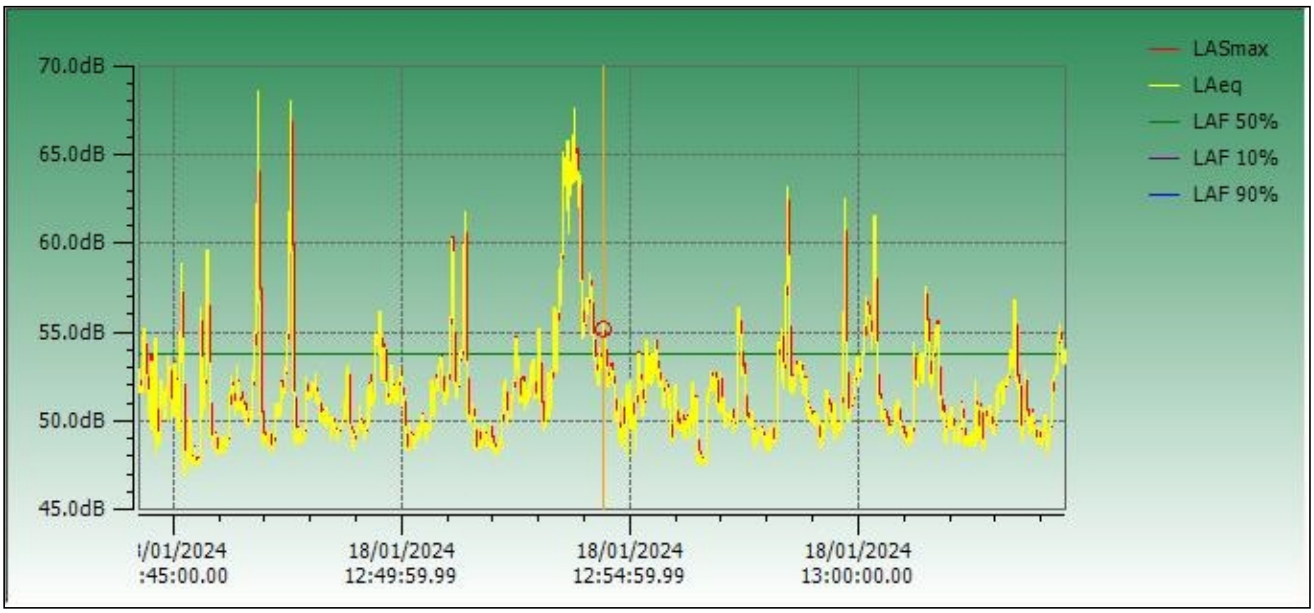
Instrument Model	CEL-633C		
Serial Number	2670911	LASmin	47.8 dB
Start Date & Time	1/18/2024 4:51:55 PM	LAeq	65.5 dB
End Date & Time	1/18/2024 5:12:00 PM	LAS 10%	66 dB
Duration	00:20:05 HH:MM:SS	LAS 50%	59.5 dB
Pause Duration	00:00:00 HH:MM:SS	LAS 90%	51.5 dB
Calibration (Before) Date	1/18/2024 4:29:41 PM	LDN	0
Calibration (After) Date	1/18/2024 5:35:03 PM	Result	Cumulative
LASmax	91.6 dB		



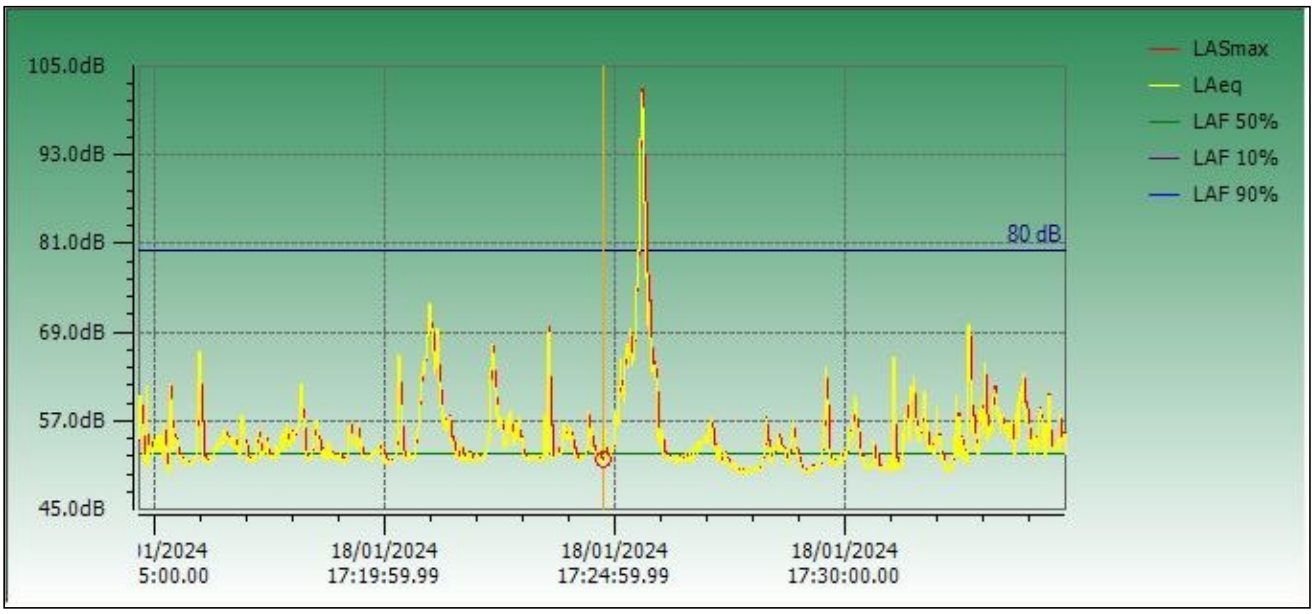
Instrument Model	**CEL-633C**
Serial Number	2670911
Start Date & Time	1/18/2024 8:42:18 AM
End Date & Time	1/18/2024 9:02:22 AM
Duration	00:20:04 HH:MM:SS
Pause Duration	00:00:00 HH:MM:SS
Calibration (Before) Date	1/18/2024 7:55:10 AM
Calibration (After) Date	1/18/2024 9:03:07 AM
LASmax	108.1 dB
LASmin	45.5 dB
LAeq	75.8 dB
LAS 10%	62 dB
LAS 50%	53 dB
LAS 90%	49 dB
LDN	0
Result	Cumulative



Instrument Model	**CEL-633C**		
Serial Number	2670911	LASmin	46.2 dB
Start Date & Time	1/18/2024 12:44:15 PM	LAeq	53.5 dB
End Date & Time	1/18/2024 1:04:32 PM	LAS 10%	54.5 dB
Duration	00:20:17 HH:MM:SS	LAS 50%	51 dB
Pause Duration	00:00:00 HH:MM:SS	LAS 90%	49 dB
Calibration (Before) Date	1/18/2024 11:59:55 AM	LDN	0
Calibration (After) Date	1/18/2024 1:04:50 PM	Result	Cumulative
LASmax	71.8 dB		



Instrument Model	**CEL-633C**		
Serial Number	2670911	LASmin	49.1 dB
Start Date & Time	1/18/2024 5:14:41 PM	LAeq	73.9 dB
End Date & Time	1/18/2024 5:34:47 PM	LAS 10%	60 dB
Duration	00:20:06 HH:MM:SS	LAS 50%	53.5 dB
Pause Duration	00:00:00 HH:MM:SS	LAS 90%	51 dB
Calibration (Before) Date	1/18/2024 4:29:41 PM	LDN	0
Calibration (After) Date	1/18/2024 5:35:03 PM	Result	Cumulative
LASmax	106.3 dB		



Scantek, Inc.
CALIBRATION LABORATORY

ISO 17025: 2017, ANSI/NCSL Z540:1994 Part 1
ACCREDITED by NVLAP (an ILAC MRA signatory)

NVLAP®
CALIBRATION
NVLAP Lab Code: 200625-0

Calibration Certificate No.50080

Instrument: **Sound Level Meter**
Model: **63X**
Manufacturer: **CEL**
Serial number: **1488256**
Tested with: **Microphone 251 s/n 03679**
Preamplifier 495 s/n 004744
Type (class): **1**
Customer: **GZA**
Tel/Fax: **973-774-3300**

Date Calibrated: **7/26/2023** *Cal Due:*

Status:	Received	Sent
In tolerance:	X	X
Out of tolerance:		
See comments:		

Contains non-accredited tests: __Yes _X_ No
Calibration service: __ Basic _X_ Standard
Address: **55 Lane Road Suite 407**
Fairfield, NJ 07004

Tested in accordance with the following procedures and standards:
Calibration of Sound Level Meters, Scantek Inc., Rev. 6/26/2015
SLM & Dosimeters – Acoustical Tests, Scantek Inc., Rev. 7/6/2011

Instrumentation used for calibration: Nor-1504 Norsonic Test System:

Instrument - Manufacturer	Description	S/N	Cal. Date	Traceability evidence Cal. Lab / Accreditation	Cal. Due
483B-Norsonic	SME Cal Unit	31052	Nov 7, 2022	Scantek, Inc./ NVLAP	Nov 7, 2023
DS-360-SRS	Function Generator	88077	Dec 21, 2022	ACR Env./ A2LA	Dec 21, 2024
34401A-Agilent Technologies	Digital Voltmeter	MY47011118	Apr 17, 2023	ACR Env. / A2LA	Apr 17, 2024
PTU300-Vaisala	EnvironmentalMonitor	P5011262	Sept 15, 2022	ACR Env./ A2LA	Sept 15, 2023
PC Program 1019 Norsonic	Calibration software	v.6.1T	Validated Nov 2014	Scantek, Inc.	-
1251-Norsonic	Calibrator	30878	Oct 31, 2022	Scantek, Inc./ NVLAP	Oct 31, 2023

Instrumentation and test results are traceable to SI (International System of Units) through standards maintained by NIST (USA) and NPL (UK).

Environmental conditions:

Temperature (°C)	Barometric pressure (kPa)	Relative Humidity (%)
24.0	100.46	50.1

Calibrated by:	Bailey Partoza	**Authorized signatory:**	William Gallagher
Signature		Signature	
Date	7/26/23	Date	7/27/2023

Calibration Certificates or Test Reports shall not be reproduced, except in full, without written approval of the laboratory.
This Calibration Certificate or Test Reports shall not be used to claim product certification, approval or endorsement by NVLAP, NIST, or any agency of the federal government.

Results summary: Device complies with following clauses of mentioned specifications:

CLAUSES [1] FROM IEC/ANSI STANDARDS REFERENCED IN PROCEDURES:	RESULT[2,3]	EXPANDED UNCERTAINTY (coverage factor 2) [dB]
INDICATION AT THE CALIBRATION CHECK FREQUENCY - IEC61672-3 ED.2 CLAUSE 10	Passed	0.15
SELF-GENERATED NOISE - IEC 61672-3 ED.2 CLAUSE 11	Passed	0.30
FREQUENCY WEIGHTINGS: A NETWORK - IEC 61672-3 ED.2.0 CLAUSE 13	Passed	0.20
FREQUENCY WEIGHTINGS: C NETWORK - IEC 61672-3 ED.2.0 CLAUSE 13	Passed	0.20
FREQUENCY WEIGHTINGS: Z NETWORK - IEC 61672-3 ED.2.0 CLAUSE 13	Passed	0.20
FREQUENCY AND TIME WEIGHTINGS AT 1 KHZ IEC 61672-3 ED.2.0 CLAUSE 14	Passed	0.20
LEVEL LINEARITY ON THE REFERENCE LEVEL RANGE - IEC 61672-3 ED.2 CLAUSE 16	Passed	0.25
TONEBURST RESPONSE - IEC 61672-3 ED.2.0 CLAUSE 18	Passed	0.30
PEAK C SOUND LEVEL - IEC 61672-3 ED.2.0 CLAUSE 19	Passed	0.35
OVERLOAD INDICATION - IEC 61672-3 ED.2.0 CLAUSE 20	Passed	0.25
HIGH LEVEL STABILITY TEST - IEC 61672-3 ED.2.0 CLAUSE 21	Passed	0.10
LONG TERM STABILITY TEST - IEC 61672-3 ED.2.0 CLAUSE 15	Passed	0.10
FILTER TEST 1/1OCTAVE: RELATIVE ATTENUATION - IEC 61260, CLAUSE 4.4 & #5.3	Passed	0.25
FILTER TEST 1/3OCTAVE: RELATIVE ATTENUATION - IEC 61260, CLAUSE 4.4 & #5.3	Passed	0.25
COMBINED ELECTRICAL AND ACOUSTICAL TEST - IEC 61672-3 ED.2.0 CLAUSE 13	Passed	See test report

1 The results of this calibration apply only to the instrument type with serial number identified in this report.

2 Parameters are certified at actual environmental conditions.

3 The tests marked with (*) are not covered by the current NVLAP accreditation.

Comments: The sound level meter submitted for testing has successfully completed the class 1 periodic tests of IEC 61672-3, for the environmental conditions under which the tests were performed. As public evidence was available, from an independent testing organization responsible for approving the results of pattern evaluation tests performed in accordance with IEC 61672-2, to demonstrate that the model of sound level meter fully conforms to the requirements in the IEC 61672-2, the sound level meter submitted for testing conforms to the class 1 requirements of IEC 61672-1.

Note: The instrument was tested for the parameters listed in the table above, using the test methods described in the listed standards. All tests were performed around the reference conditions. The test results were compared with the manufacturer's or with the standard's specifications, whichever are larger. The measurement results are reported as Pass / Fail simple acceptance; measured values are in the tolerance interval.

Tests made with the following attachments to the instrument:

Microphone: CEL 251 s/n 03679 for acoustical test
Preamplifier: CEL 495 s/n 004744 for all tests
Other: line adaptor ADP005 (18pF) for electrical tests
Accompanying acoustical calibrator: CEL 120_1 s/n 1090999
Windscreen: none

Measured Data: in Test Report # 50080 of 9 +1 pages.

Place of Calibration: Scantek, Inc.
6430 Dobbin Road, Suite C
Columbia, MD 21045 USA

Ph/Fax: 410-290-7726/ -9167
callab@scantekinc.com

Calibration Certificates or Test Reports shall not be reproduced, except in full, without written approval of the laboratory.
This Calibration Certificate or Test Reports shall not be used to claim product certification, approval or endorsement by NVLAP, NIST, or any agency of the federal government.

Summary of Test Report No.:50080

CEL Type: 63X Serial no: 1488256

Customer:	**GZA**
Address:	**55 Lane Road Suite 407 Fairfield, NJ 07004**
Contact Person:	**Gene Bove**
Phone No.:	**973-774-3300**
eMail:	**gene.bove@gza.com**

Instrument software version: 006-05

Microphone:	CEL	Type: 251	Serial no: 03679	Sens:-27.67dB
Preamplifier	CEL	Type: 495	Serial no: 004744	
Calibrator:	CEL	Type: 120_1	Serial no: 1090999	Level:114.05dB

Measurement Results:

Indication at the calibration check frequency - IEC61672-3 Ed.2 Clause 10	Passed
Self-generated noise - IEC 61672-3 Ed.2 Clause 11	Passed
Frequency weightings: A Network - IEC 61672-3 Ed.2.0 Clause 13	Passed
Frequency weightings: C Network - IEC 61672-3 Ed.2.0 Clause 13	Passed
Frequency weightings: Z Network - IEC 61672-3 Ed.2.0 Clause 13	Passed
Frequency and time weightings at 1 kHz IEC 61672-3 Ed.2.0 Clause 14	Passed
Level linearity on the reference level range - IEC 61672-3 Ed.2 Clause 16	Passed
Toneburst response - IEC 61672-3 Ed.2.0 Clause 18	Passed
Peak C sound level - IEC 61672-3 Ed.2.0 Clause 19	Passed
Overload indication - IEC 61672-3 Ed.2.0 Clause 20	Passed
High level stability test - IEC 61672-3 Ed.2.0 Clause 21	Passed
Long term stability test - IEC 61672-3 Ed.2.0 Clause 15	Passed
Filter Test 1/1octave: Relative attenuation - IEC 61260, Clause 4.4 & #5.3	Passed
Filter Test 1/3octave: Relative attenuation - IEC 61260, Clause 4.4 & #5.3	Passed
Combined electrical and acoustical test - IEC 61672-3 Ed.2.0 Clause 13	Passed

Environmental conditions:

Pressure:	Temperature:	Relative humidity:
100.46	24.0	50.1

Date of calibration: 7/26/2023
Date of issue: 7/26/2023
Supervisor: Lydon Dawkins
Measurements performed by:

Bailey Partoza

Software version: 6.1 T

Scantek, Inc.
6430 Dobbin Rd., Suite C, Columbia, MD 21045
Ph: 410-290-7726 eMail: callab@scantekinc.com

Test Report No.:50080

Manufacturer:	CEL
Instrument type:	63X
Serial no:	1488256
Customer:	GZA
Department:	
Order No:	
Contact Person:	Gene Bove
Address:	55 Lane Road Suite 407 Fairfield, NJ 07004

Environmental conditions:

Pressure:	100.46
Temperature:	24.0
Relative humidity:	50.1

Supervisor	Lydon Dawkins
Engineer	Bailey Partoza
Date:	7/26/2023

Measurement Results:

Indication at the calibration check frequency - IEC61672-3 Ed.2 Clause 10

```
Reference Calibrator: WSC4 - NOR1251-30878
Reference calibrator level: 113.99
Before calibration:
  Environmental corrections: 0.00
  Other corrections: -0.08
  Notional level: 113.91
Reference calibrator level before calibration: 114.2
After calibration:
  Environmental corrections: 0.00
  Other corrections: -0.08
  Notional level: 113.91
Reference calibrator level after calibration: 114.0
Associated Calibrator: CEL - 120_1 - 1090999
Associated calibrator level: 114.05
Initial level check:
  Environmental corrections: 0.00
  Other corrections: -0.08
  Notional level: 113.97
Indicated level before calibration: 114.3
Final level statement:
  Environmental corrections after calibration: 0.00
  Other corrections: -0.08
  Notional level: 113.97
Indicated level after calibration: 114.0
This value shall be used for adjusting the sound level meter in the future.
Test Passed
```

Self-generated noise - IEC 61672-3 Ed.2 Clause 11

Network	Level (dB)	Max (dB)	Uncert. (dB)	Result	Comment
A	14.4	17.5	0.3	P	Equivalent capacity
C	17.7	21.0	0.3	P	Equivalent capacity
Z	23.4	26.5	0.3	P	Equivalent capacity

Test Passed

Frequency weightings: A Network - IEC 61672-3 Ed.2.0 Clause 13

Freq (Hz)	Ref. (dB)	Meas. (dB)	Tol. (dB)	Tol. (dB)	Uncert. (dB)	Dev. (dB)	Result
63.1	95.0	95.0	1.0	-1.0	0.2	0.0	P
125.9	95.0	95.0	1.0	-1.0	0.2	0.0	P
251.2	95.0	94.9	1.0	-1.0	0.2	-0.1	P
501.2	95.0	95.0	1.0	-1.0	0.2	0.0	P
1000.0	95.0	95.0	0.7	-0.7	0.2	0.0	P
1995.3	95.0	95.0	1.0	-1.0	0.2	0.0	P

Frequency weightings: A Network - IEC 61672-3 Ed.2.0 Clause 13

Freq (Hz)	Ref. (dB)	Meas. (dB)	Tol. (dB)	Tol. (dB)	Uncert. (dB)	Dev. (dB)	Result
3981.1	95.0	94.9	1.0	-1.0	0.2	-0.1	P
7943.3	95.0	94.7	1.5	-2.5	0.2	-0.3	P
15848.9	95.0	92.3	2.5	-16.0	0.2	-2.7	P

Test Passed

Frequency weightings: C Network - IEC 61672-3 Ed.2.0 Clause 13

Freq (Hz)	Ref. Level (dB)	Meas. Value (dB)	Tol. (dB)	Tol. (dB)	Uncert. (dB)	Dev. (dB)	Result
63.1	95.0	94.9	1.0	-1.0	0.2	-0.1	P
125.9	95.0	95.0	1.0	-1.0	0.2	0.0	P
251.2	95.0	95.0	1.0	-1.0	0.2	0.0	P
501.2	95.0	95.0	1.0	-1.0	0.2	0.0	P
1000.0	95.0	95.0	0.7	-0.7	0.2	0.0	P
1995.3	95.0	95.0	1.0	-1.0	0.2	0.0	P
3981.1	95.0	94.9	1.0	-1.0	0.2	-0.1	P
7943.3	95.0	94.7	1.5	-2.5	0.2	-0.3	P
15848.9	95.0	92.3	2.5	-16.0	0.2	-2.7	P

Test Passed

Frequency weightings: Z Network - IEC 61672-3 Ed.2.0 Clause 13

Freq (Hz)	Ref. Level (dB)	Meas. Value (dB)	Tol. (dB)	Tol. (dB)	Uncert. (dB)	Dev. (dB)	Result
63.1	95.0	94.9	1.0	-1.0	0.2	-0.1	P
125.9	95.0	94.9	1.0	-1.0	0.2	-0.1	P
251.2	95.0	94.9	1.0	-1.0	0.2	-0.1	P
501.2	95.0	95.0	1.0	-1.0	0.2	0.0	P
1000.0	95.0	95.0	0.7	-0.7	0.2	0.0	P
1995.3	95.0	95.0	1.0	-1.0	0.2	0.0	P
3981.1	95.0	94.9	1.0	-1.0	0.2	-0.1	P
7943.3	95.0	94.9	1.5	-2.5	0.2	-0.1	P
15848.9	95.0	94.8	2.5	-16.0	0.2	-0.2	P

Test Passed

Frequency and time weightings at 1 kHz IEC 61672-3 Ed.2.0 Clause 14

Weightings Time	Netw	Ref. (dB)	Measured (dB)	Tol. (dB)	Tol. (dB)	Uncert. (dB)	Dev. (dB)	Result
Fast	A	114.0	114.0	0.1	-0.1	0.2	0.0	P
Fast	C	114.0	114.0	0.1	-0.1	0.2	0.0	P
Fast	Z	114.0	114.0	0.1	-0.1	0.2	0.0	P
Slow	A	114.0	114.0	0.1	-0.1	0.2	0.0	P
Leq	A	114.0	114.0	0.1	-0.1	0.2	0.0	P
SEL	A	124.0	124.0	0.1	-0.1	0.2	0.0	P

Test Passed

Frequency and time weightings at 1 kHz IEC 61672-3 Ed.2.0 Clause 14

Weightings Time	Netw	Ref. (dB)	Measured (dB)	Tol. (dB)	Tol. (dB)	Uncert. (dB)	Dev. (dB)	Result

Level linearity on the reference level range - IEC 61672-3 Ed.2 Clause 16

Ref. (dB)	Measured (dB)	Tol. (dB)	Tol. (dB)	Uncert. (dB)	Dev. (dB)	Result
Full scale setting: 140dB						
The following measurements are SPL measurements						
Measured at 31.5 Hz						
94.0	94.1	0.8	-0.8	0.25	0.1	P
96.6	96.6	0.8	-0.8	0.25	0.0	P
97.6	97.7	0.8	-0.8	0.25	0.1	P
98.6	98.7	0.8	-0.8	0.25	0.1	P
99.6	99.6	0.8	-0.8	0.25	0.0	P
100.6	100.7	0.8	-0.8	0.25	0.1	P
94.0	94.0	0.8	-0.8	0.25	0.0	P
89.0	89.0	0.8	-0.8	0.25	0.0	P
84.0	84.0	0.8	-0.8	0.25	0.0	P
79.0	79.0	0.8	-0.8	0.25	0.0	P
74.0	74.0	0.8	-0.8	0.25	0.0	P
69.0	69.1	0.8	-0.8	0.25	0.1	P
64.0	64.1	0.8	-0.8	0.25	0.1	P
59.0	59.1	0.8	-0.8	0.25	0.1	P
54.0	54.3	0.8	-0.8	0.25	0.3	P
49.0	49.7	0.8	-0.8	0.25	0.7	P
44.0	44.0	0.8	-0.8	0.25	0.0	P
43.0	43.0	0.8	-0.8	0.25	0.0	P
42.0	42.0	0.8	-0.8	0.25	0.0	P
41.0	41.0	0.8	-0.8	0.25	0.0	P
40.0	40.0	0.8	-0.8	0.25	0.0	P
Measured at 1 kHz						
114.0	114.0	0.8	-0.8	0.25	0.0	P
119.0	119.0	0.8	-0.8	0.25	0.0	P
124.0	124.0	0.8	-0.8	0.25	0.0	P
129.0	129.0	0.8	-0.8	0.25	0.0	P
134.0	134.0	0.8	-0.8	0.25	0.0	P
136.0	136.0	0.8	-0.8	0.25	0.0	P
137.0	137.0	0.8	-0.8	0.25	0.0	P
138.0	138.0	0.8	-0.8	0.25	0.0	P
139.0	139.0	0.8	-0.8	0.25	0.0	P
140.0	140.0	0.8	-0.8	0.25	0.0	P
114.0	114.0	0.8	-0.8	0.25	0.0	P
109.0	109.0	0.8	-0.8	0.25	0.0	P
104.0	104.0	0.8	-0.8	0.25	0.0	P
99.0	99.0	0.8	-0.8	0.25	0.0	P
94.0	94.0	0.8	-0.8	0.25	0.0	P
89.0	89.0	0.8	-0.8	0.25	0.0	P
84.0	84.0	0.8	-0.8	0.25	0.0	P
79.0	78.9	0.8	-0.8	0.25	-0.1	P
74.0	74.0	0.8	-0.8	0.25	0.0	P
69.0	69.0	0.8	-0.8	0.25	0.0	P
64.0	64.0	0.8	-0.8	0.25	0.0	P
59.0	59.0	0.8	-0.8	0.25	0.0	P
54.0	54.0	0.8	-0.8	0.25	0.0	P
49.0	49.0	0.8	-0.8	0.25	0.0	P

Level linearity on the reference level range - IEC 61672-3 Ed.2 Clause 16

Ref. (dB)	Measured (dB)	Tol. (dB)	(dB)	Uncert. (dB)	Dev. (dB)	Result
44.0	44.0	0.8	-0.8	0.25	0.0	P
43.0	43.0	0.8	-0.8	0.25	0.0	P
42.0	42.0	0.8	-0.8	0.25	0.0	P
41.0	41.0	0.8	-0.8	0.25	0.0	P
40.0	40.0	0.8	-0.8	0.25	0.0	P
Measured at 8 kHz						
114.0	114.0	0.8	-0.8	0.25	0.0	P
119.0	119.0	0.8	-0.8	0.25	0.0	P
124.0	124.0	0.8	-0.8	0.25	0.0	P
129.0	129.0	0.8	-0.8	0.25	0.0	P
134.9	134.9	0.8	-0.8	0.25	0.0	P
135.9	135.9	0.8	-0.8	0.25	0.0	P
136.9	136.9	0.8	-0.8	0.25	0.0	P
137.9	137.9	0.8	-0.8	0.25	0.0	P
138.9	139.0	0.8	-0.8	0.25	0.1	P
114.0	114.0	0.8	-0.8	0.25	0.0	P
109.0	109.0	0.8	-0.8	0.25	0.0	P
104.0	104.0	0.8	-0.8	0.25	0.0	P
99.0	99.0	0.8	-0.8	0.25	0.0	P
94.0	94.0	0.8	-0.8	0.25	0.0	P
89.0	89.0	0.8	-0.8	0.25	0.0	P
84.0	84.0	0.8	-0.8	0.25	0.0	P
79.0	79.0	0.8	-0.8	0.25	0.0	P
74.0	73.9	0.8	-0.8	0.25	-0.1	P
69.0	68.9	0.8	-0.8	0.25	-0.1	P
64.0	64.0	0.8	-0.8	0.25	0.0	P
59.0	59.0	0.8	-0.8	0.25	0.0	P
54.0	53.9	0.8	-0.8	0.25	-0.1	P
49.0	49.0	0.8	-0.8	0.25	0.0	P
44.0	44.0	0.8	-0.8	0.25	0.0	P
43.0	43.0	0.8	-0.8	0.25	0.0	P
42.0	42.0	0.8	-0.8	0.25	0.0	P
41.0	41.0	0.8	-0.8	0.25	0.0	P
40.0	40.0	0.8	-0.8	0.25	0.0	P

Test Passed

Toneburst response - IEC 61672-3 Ed.2.0 Clause 18

Burst type	Ref. (dB)	Measured (dB)	Tol. (dB)	(dB)	Uncert. (dB)	Dev. (dB)	Result
Fast 200 mSec	137.0	136.9	0.5	-0.5	0.3	-0.1	P
Fast 2.0 mSec	120.0	119.8	1.0	-1.5	0.3	-0.2	P
Fast 0.25 mSec	111.0	110.7	1.0	-3.0	0.3	-0.3	P
Slow 200 mSec	130.6	130.5	0.5	-0.5	0.3	-0.1	P
Slow 2.0 mSec	111.0	110.9	1.0	-3.0	0.3	-0.1	P
SEL 200 mSec	131.0	131.0	0.5	-0.5	0.3	0.0	P
SEL 2.0 mSec	111.0	110.9	1.0	-1.5	0.3	-0.1	P
SEL 0.25 mSec	102.0	101.8	1.0	-3.0	0.3	-0.2	P

Test Passed

Peak C sound level - IEC 61672-3 Ed.2.0 Clause 19

Pulse Type	Pulse Freq. (Hz)	Ref. RMS (dB)	Ref. Peak (dB)	Measured Value (dB)	Tol. (+/-dB)	Uncert. (dB)	Dev. (dB)	Result
1 cycle	8k	129.0	132.4	132.3	2.0	0.35	-0.1	P
Pos 1/2 cycle	500	132.0	134.4	134.5	1.0	0.35	0.1	P
Neg 1/2 cycle	500	132.0	134.4	134.5	1.0	0.35	0.1	P

Test Passed

Overload indication - IEC 61672-3 Ed.2.0 Clause 20

	Measured (dB)	Tol. (+/-dB)	Uncert. (dB)	Result
Level difference of positive and negative pulses:	0.0	1.5	0.25	P
Positive 1/2 cycle 4 kHz. Overload occurred at:	141.3			
Negative 1/2 cycle 4 kHz. Overload occurred at:	141.3			

Test Passed

High level stability test - IEC 61672-3 Ed.2.0 Clause 21

Test signal: Sine wave at 1 kHz

Initial level (dB)	Final level (dB)	Diff. (dB)	Tol. value (dB)	Uncert. (dB)	Result
139.0	139.0	0.0	0.1	0.10	P

Test Passed

Long term stability test - IEC 61672-3 Ed.2.0 Clause 15

Test signal: Sine wave at 1 kHz

Time inteval (mm:SS)	StartLevel (dB)	StopLevel (dB)	Difference (dB)	Tolerence (dB)	Result
38:46	114.0	114.0	0.0	0.1	P

Test Passed

Filter Test 1/1octave: Relative attenuation - IEC 61260, Clause 4.4 & #5.3

Test 1/1 octave filter X= 3 fexact=8000.000Hz class 0

Nominal f[Hz]	Measured L[dB]	LoLim [dB]	HiLim [dB]	Result [P/F]
500.000	57.6	0.0	63.0	P
1000.00	75.3	0.0	76.0	P
2000.00	94.4	0.0	95.5	P
4000.00	117.8	0.0	120.0	P
5656.85	134.3	133.5	135.7	P
6168.84	137.0	136.9	138.2	P

Filter Test 1/1octave: Relative attenuation - IEC 61260, Clause 4.4 & #5.3

6727.17	137.8	137.6	138.2	P
7336.03	138.0	137.8	138.2	P
8000.00	138.0	137.9	138.2	P
8724.06	138.0	137.8	138.2	P
9513.66	137.9	137.6	138.2	P
10374.7	137.1	136.9	138.2	P
11313.7	134.2	133.5	135.7	P
16000.0	113.6	0.0	120.0	P
32000.0	49.1	0.0	95.5	P
64000.0	37.6	0.0	76.0	P
128000	40.7	0.0	63.0	P

Test 1/1 octave filter X= 4 fexact=16000.000Hz class 0

Nominal f[Hz]	Measured L[dB]	LoLim [dB]	HiLim [dB]	Result [P/F]
1000.00	56.2	0.0	63.0	P
2000.00	62.5	0.0	76.0	P
4000.00	84.6	0.0	95.5	P
8000.00	114.3	0.0	120.0	P
11313.7	134.0	133.5	135.7	P
12337.7	137.0	136.9	138.2	P
13454.3	137.8	137.6	138.2	P
14672.1	137.9	137.8	138.2	P
16000.0	137.9	137.9	138.2	P
17448.1	137.8	137.8	138.2	P
19027.3	137.9	137.6	138.2	P
20749.4	137.7	136.9	138.2	P
22627.4	134.2	133.5	135.7	P
32000.0	54.0	0.0	120.0	P
64000.0	42.9	0.0	95.5	P
128000	29.3	0.0	76.0	P
200000	56.9	0.0	63.0	P

Test Passed

Filter Test 1/3octave: Relative attenuation - IEC 61260, Clause 4.4 & #5.3

Test 1/3 octave filter X= 12 fexact=16000.000Hz class 0

Nominal f[Hz]	Measured L[dB]	LoLim [dB]	HiLim [dB]	Result [P/F]
2944.02	57.9	0.0	63.0	P
5212.50	64.7	0.0	76.0	P
8479.30	79.9	0.0	95.5	P
12349.0	110.3	0.0	120.0	P
14254.4	134.1	133.5	135.7	P
14709.1	137.3	136.9	138.2	P
15152.4	137.8	137.6	138.2	P
15583.0	137.9	137.8	138.2	P
16000.0	137.9	137.9	138.2	P
16428.1	137.8	137.8	138.2	P
16895.0	137.8	137.6	138.2	P
17404.2	137.4	136.9	138.2	P
17959.4	133.8	133.5	135.7	P
20730.4	102.9	0.0	120.0	P
30191.2	44.1	0.0	95.5	P
49112.7	45.5	0.0	76.0	P
86955.9	47.8	0.0	63.0	P

Test 1/3 octave filter X= 13 fexact=20158.737Hz class 0

Filter Test 1/3octave: Relative attenuation - IEC 61260, Clause 4.4 & #5.3

Nominal f[Hz]	Measured L[dB]	LoLim [dB]	HiLim [dB]	Result [P/F]
3709.24	61.5	0.0	63.0	P
6567.33	68.0	0.0	76.0	P
10683.2	82.9	0.0	95.5	P
15558.8	111.9	0.0	120.0	P
17959.4	134.1	133.5	135.7	P
18532.3	137.2	136.9	138.2	P
19090.8	137.8	137.6	138.2	P
19633.4	137.9	137.8	138.2	P
20158.7	137.9	137.9	138.2	P
20698.2	137.9	137.8	138.2	P
21286.4	137.8	137.6	138.2	P
21927.9	137.5	136.9	138.2	P
22627.4	133.7	133.5	135.7	P
26118.7	97.1	0.0	120.0	P
38038.5	62.4	0.0	95.5	P
61878.2	47.4	0.0	76.0	P
109558	44.6	0.0	63.0	P

Test Passed

Combined electrical and acoustical test - IEC 61672-3 Ed.2.0 Clause 13

A-Weighted results: Free field

Frequency	SLM Val (dB)	SLM U (dB)	Microphone Val (dB)	Microphone U (dB)	Case Refl. Val (dB)	Case Refl. U (dB)	Wind Screen Val (dB)	Wind Screen U (dB)	Uncert (dB)	Tol (dB)	Result (dB)	
63 Hz	0.0	0.2	0.0	0.1					0.2	+-1.0	0.0	P
125 Hz	0.0	0.2	0.0	0.1					0.2	+-1.0	0.0	P
250 Hz	-0.1	0.2	0.0	0.1					0.2	+-1.0	-0.1	P
500 Hz	0.0	0.2	0.0	0.1					0.2	+-1.0	0.0	P
1 kHz	0.0	0.2	0.2	0.1					0.2	+-0.7	0.2	P
2 kHz	0.0	0.2	0.3	0.2					0.3	+-1.0	0.3	P
4 kHz	-0.1	0.2	0.3	0.2					0.3	+-1.0	0.2	P
8 kHz	-0.3	0.2	0.8	0.4					0.5	+1.5/-2.5	0.5	P
16 kHz	-2.7	0.2	0.5	0.7					0.7	+2.5/-16.0	-2.2	P

C-Weighted results: Free field

Frequency	SLM Val (dB)	SLM U (dB)	Microphone Val (dB)	Microphone U (dB)	Case Refl. Val (dB)	Case Refl. U (dB)	Wind Screen Val (dB)	Wind Screen U (dB)	Uncert (dB)	Tol (dB)	Result (dB)	
63 Hz	-0.1	0.2	0.0	0.1					0.2	+-1.0	-0.1	P
125 Hz	0.0	0.2	0.0	0.1					0.2	+-1.0	0.0	P
250 Hz	0.0	0.2	0.0	0.1					0.2	+-1.0	0.0	P
500 Hz	0.0	0.2	0.0	0.1					0.2	+-1.0	0.0	P
1 kHz	0.0	0.2	0.2	0.1					0.2	+-0.7	0.2	P
2 kHz	0.0	0.2	0.3	0.2					0.3	+-1.0	0.3	P
4 kHz	-0.1	0.2	0.3	0.2					0.3	+-1.0	0.2	P
8 kHz	-0.3	0.2	0.8	0.4					0.5	+1.5/-2.5	0.5	P
16 kHz	-2.7	0.2	0.5	0.7					0.7	+2.5/-16.0	-2.2	P

Z-Weighted results: Free field

Frequency	SLM Val (dB)	SLM U (dB)	Microphone Val (dB)	Microphone U (dB)	Case Refl. Val (dB)	Case Refl. U (dB)	Wind Screen Val (dB)	Wind Screen U (dB)	Uncert (dB)	Tol (dB)	Result (dB)	
63 Hz	-0.1	0.2	0.0	0.1					0.2	+-1.0	-0.1	P
125 Hz	-0.1	0.2	0.0	0.1					0.2	+-1.0	-0.1	P
250 Hz	-0.1	0.2	0.0	0.1					0.2	+-1.0	-0.1	P

Combined electrical and acoustical test - IEC 61672-3 Ed.2.0 Clause 13

500 Hz	0.0	0.2	0.0	0.1	0.2	+-1.0	0.0	P
1 kHz	0.0	0.2	0.2	0.1	0.2	+-0.7	0.2	P
2 kHz	0.0	0.2	0.3	0.2	0.3	+-1.0	0.3	P
4 kHz	-0.1	0.2	0.3	0.2	0.3	+-1.0	0.2	P
8 kHz	-0.1	0.2	0.8	0.4	0.5	+1.5/-2.5	0.7	P
16 kHz	-0.2	0.2	0.5	0.7	0.7	+2.5/-16.0	0.3	P

The actual frequency response of CEL / 251 03679 has been used for the calculations.
Test Passed
The overall frequency response of the sound level meter and microphone response has shown to conform with the requirements in IEC 61672-3 for a class 1 sound level meter.



Scantek, Inc.
CALIBRATION LABORATORY

ISO 17025: 2017, ANSI/NCSL Z540:1994 Part 1
ACCREDITED by NVLAP (an ILAC MRA signatory)

NVLAP®
CALIBRATION
NVLAP Lab Code: 200625-0

Calibration Certificate No.50081

Instrument: **Microphone**
Model: **251**
Manufacturer: **CEL**
Serial number: **03679**
Composed of:

Date Calibrated: **7/25/2023** *Cal Due:*

Status:	**Received**	**Sent**
In tolerance:	**X**	**X**
Out of tolerance:		
See comments:		

Contains non-accredited tests: __**Yes** _**X**_ **No**

Customer: **GZA**
Tel/Fax: **973-774-3300**

Address: **55 Lane Road Suite 407**
Fairfield, NJ 07004

Tested in accordance with the following procedures and standards:
Calibration of Measurement Microphones, Scantek, Inc., Rev. 2/25/2015

Instrumentation used for calibration: N-1504 Norsonic Test System:

Instrument - Manufacturer	Description	S/N	Cal. Date	Traceability evidence Cal. Lab / Accreditation	Cal. Due
483B-Norsonic	SME Cal Unit	31052	Nov 7, 2022	Scantek, Inc./ NVLAP	Nov 7, 2023
DS-360-SRS	Function Generator	88077	Dec 21, 2022	ACR Env./ A2LA	Dec 21, 2024
34401A-Agilent Technologies	Digital Voltmeter	MY47011118	Apr 17, 2023	ACR Env. / A2LA	Apr 17, 2024
PTU300-Vaisala	EnvironmentalMonitor	P5011262	Sept 15, 2022	ACR Env./ A2LA	Sept 15, 2023
PC Program 1017 Norsonic	Calibration software	v.6.1T	Validated Nov 2014	Scantek, Inc.	-
1253-Norsonic	Calibrator	28326	Oct 31, 2022	Scantek, Inc./ NVLAP	Oct 31, 2023
1203-Norsonic	Preamplifier	14059	Mar 7, 2023	Scantek, Inc./ NVLAP	Mar 7, 2024
4180-Brüel&Kjær	Microphone	2246115	Oct 6, 2021	DPLA / DANAK	Oct 6, 2023

Instrumentation and test results are traceable to SI - BIPM through standards maintained by NPL (UK) and NIST (USA)

Calibrated by:	Bailey Partoza	**Authorized signatory:**	William Gallagher
Signature		Signature	
Date	7/25/23	Date	7/27/2023

Calibration Certificates or Test Reports shall not be reproduced, except in full, without written approval of the laboratory.
This Calibration Certificate or Test Reports shall not be used to claim product certification, approval or endorsement by NVLAP, NIST, or any agency of the federal government.
Document stored as: Y:\Calibration Lab\Mic 2023\CEL251_03679_M1.doc

Results summary: Device was tested and complies with following clauses of mentioned specifications:

CLAUSES / METHODS[1] FROM PROCEDURES		MET[2,3]	NOT MET	NOT TESTED	MEASUREMENT EXPANDED UNCERTAINTY (coverage factor 2)
Open circuit sensitivity (insert voltage method, 250 Hz)		X			See below
Frequency response	Actuator response	X			63 – 200Hz: 0.3 dB 200 – 8000 Hz: 0.2 dB 8 – 10 kHz: 0.5 dB 10 – 20 kHz: 0.7 dB 20 – 50 kHz: 0.9 dB 50 – 100 kHz: 1.2 dB
	FF/Diffuse field responses	X			63 – 200Hz: 0.3 dB 200 – 4000 Hz: 0.2 dB 4 – 10 kHz: 0.6 dB 10 – 20 kHz: 0.9 dB 20 – 50 kHz: 2.2 dB 50 – 100 kHz: 4.4 dB
	Scantek, Inc. acoustical method			X	31.5 – 125 Hz: 0.16 dB 250, 1000 Hz: 0.12 dB 2 – 8 kHz: 0.8 dB 12.5 – 16 kHz: 2.4 dB

[1] The results of this calibration apply only to the instrument type with serial number identified in this report.

[2] Results are normalized to the reference conditions.

[3] The tests marked with (*) are not covered by the current NVLAP accreditation.

Note: The free field/diffuse field characteristics were calculated based on the measured actuator response and adjustment coefficients as provided by the manufacturer. The measurement results are reported as Pass / Fail simple acceptance; measured values are in the tolerance interval.

Comments:	The instrument was tested and met all specifications found in the referenced procedures.

Environmental conditions:

Temperature (°C)	Barometric pressure (kPa)	Relative Humidity (%)
23.3 ± 1.0	100.41 ± 0.020	50.2 ± 2.0

Main measured parameters:

Tone frequency (Hz)	Measured[4] /Nominal Open circuit sensitivity (dB re 1V/Pa)	Sensitivity (mV/Pa)
250	-27.67 ± 0.12/ -26.0	41.34

[4] The reported expanded uncertainty is calculated with a coverage factor k=2.00

Tests made with following attachments to instrument and auxiliary devices:

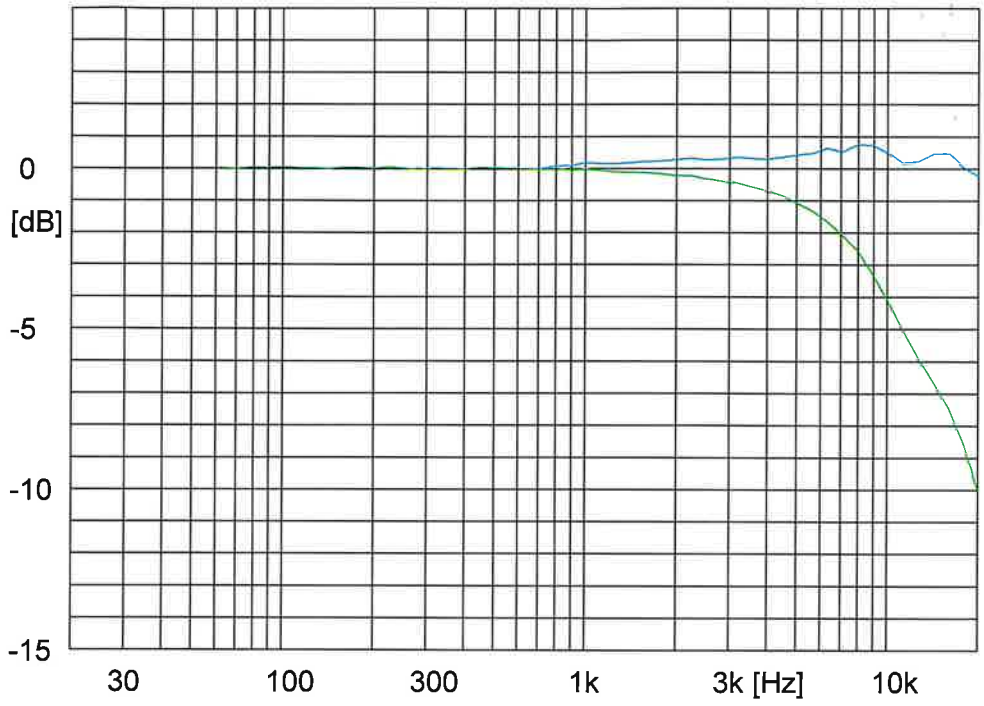
Protection grid mounted for sensitivity measurements
Actuator type: G.R.A.S. RA0014

Measured Data: Found on Microphone Test Report # 50081 of one page.

Place of Calibration: Scantek, Inc.
6430 Dobbin Road, Suite C
Columbia, MD 21045 USA
Ph/Fax: 410-290-7726/ -9167
callab@scantekinc.com

Calibration Certificates or Test Reports shall not be reproduced, except in full, without written approval of the laboratory.
This Calibration Certificate or Test Reports shall not be used to claim product certification, approval or endorsement by NVLAP, NIST, or any agency of the federal government.

Microphone Test Report No.:50081



CEL
Type: 251

Serial no: 03679

Sensitivity: 41.34 mV/Pa
-27.67 ±0.12 dB re. 1 V/Pa

Date: 7/25/2023

Signature:

Measurement conditions:

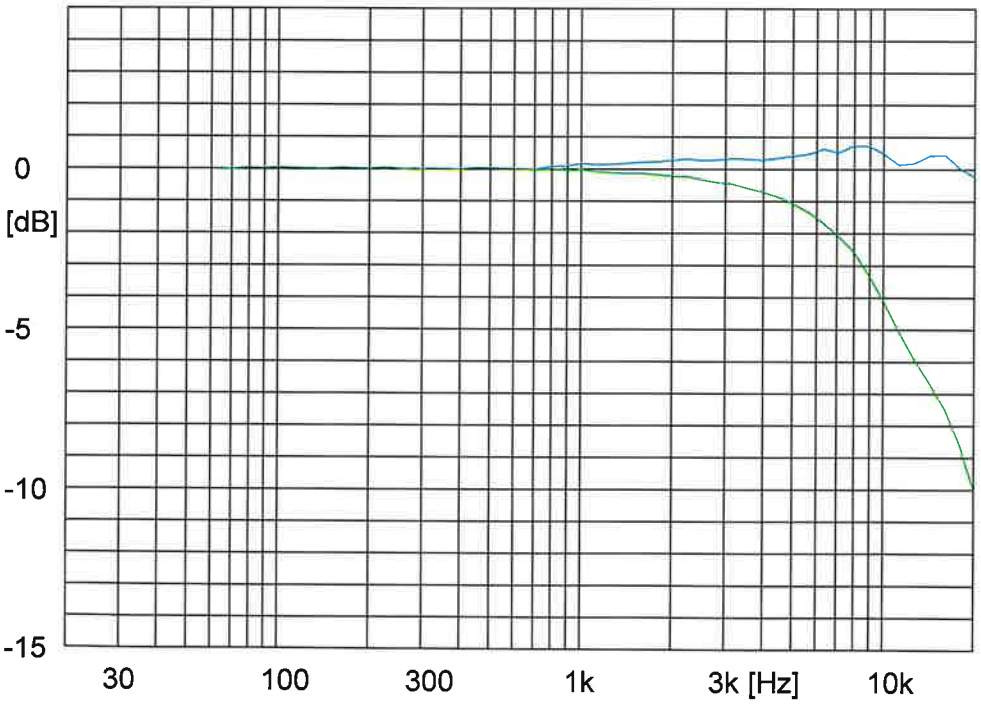
Polarisation voltage:	0.0 V
Pressure:	100.41 ±0.02 kPa
Temperature:	23.3 ±1.0 °C
Relative humidity:	50.2 ±2.0 %RH

Results are normalized to the reference conditions.

Free field response
Pressure response

Scantek, Inc.
6430 Dobbin Rd., Suite C, Columbia, MD 21045
Ph: 410-290-7726 eMail: callab@scantekinc.com

Microphone Test Report No.:50081



CEL
Type: 251

Serial no: 03679

Sensitivity: 41.34 mV/Pa
-27.67 ±0.12 dB re. 1 V/Pa

Date: 7/25/2023

Signature:

Measurement conditions:

Polarisation voltage:	0.0 V
Pressure:	100.41 ±0.02 kPa
Temperature:	23.3 ±1.0 °C
Relative humidity:	50.2 ±2.0 %RH

Results are normalized to the reference conditions.

Free field response
Pressure response

Scantek, Inc.
6430 Dobbin Rd., Suite C, Columbia, MD 21045
Ph: 410-290-7726 eMail: callab@scantekinc.com

Comment:
(Y:\Calibration Lab\Mic 2023\CEL251_03679_M1.nmf)