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 Columbia Street Redevelopment

1. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency)	BSA REFERENCE NUMBER (if applicable)
24HPD039K	
ULURP REFERENCE NUMBER (if applicable)	OTHER REFERENCE NUMBER(S) (if applicable) (*e.g.*, legislative intro, CAPA)
TBD	

2a. *Lead Agency Information*			**2b. *Applicant Information***		
NAME OF LEAD AGENCY NYC Department of Housing Preservation and Development			NAME OF APPLICANT Columbia SF LLC.		
NAME OF LEAD AGENCY CONTACT PERSON Anthony Howard, Director, Environmental Planning, HPD			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON Samuel Braver		
ADDRESS 100 Gold Street, 7th Floor			ADDRESS 144 Spencer Street, Suite 612		
CITY New York	STATE NY	ZIP 10038	CITY Brooklyn	STATE NY	ZIP 11205
TELEPHONE 212-863-7248	EMAIL HowardA@hpd.nyc.gov		TELEPHONE 718-288-3757	EMAIL Sbraver@expressbuildersjb.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):

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*

Columbia SF LLC. (the "project sponsor") is seeking construction funding from the New York City Department of Housing Preservation and Development (HPD) along with funding from the U.S. Department of Housing and Urban Development (HUD) that is expected to include Project-Based Vouchers (PBVs), allocated by the New York City Housing Authority (NYCHA) (combined, the "proposed action") to facilitate the development of an affordable housing project (the "proposed project") located at 37 Otsego and 498 Columbia Streets (Brooklyn Block 579, Lot 1) (the "project site") in the Red Hook neighborhood of Brooklyn, Community District 6. The proposed action would facilitate the construction of three, 8-story buildings containing a total of 659 units of affordable family, senior, and supportive housing (SH) and approximately 5,660 square feet (sf) of community facility space, including space for senior and supportive services. See Attachment A for details.

Project Location

BOROUGH Brooklyn	COMMUNITY DISTRICT(S) 6	STREET ADDRESS 37 Otsego and 428 Columbia Streets
TAX BLOCK(S) AND LOT(S) Block 579, Lot 1		ZIP CODE 11231

DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS Block bounded by Lorraine Street to the north, Otsego Street to the west, Creamer Street to the south and Columbia Street to the east.

EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY R6/C1-3	ZONING SECTIONAL MAP NUMBER 16a

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

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

☐ VARIANCE (use)

☐ VARIANCE (bulk)

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

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

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

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

☐ LEGISLATION

☒ FUNDING OF CONSTRUCTION, specify: HPD-SARA, SHLP and ELLA and HDC-ELLA

☐ RULEMAKING

☐ POLICY OR PLAN, specify:

☐ CONSTRUCTION OF PUBLIC FACILITIES

☐ FUNDING OF PROGRAMS, specify:

☐ 384(b)(4) APPROVAL

☐ PERMITS, specify:

☐ OTHER, explain:

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

☐ PERMITS FROM DOT'S OFFICE OF CONSTRUCTION MITIGATION AND COORDINATION (OCMC)

☐ LANDMARKS PRESERVATION COMMISSION APPROVAL

☐ OTHER, explain:

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

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.): 100,000 sf

Waterbody area (sq. ft.) and type: N/A

Roads, buildings, and other paved surfaces (sq. ft.): 100,000 sf

Other, describe (sq. ft.): N/A

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

SIZE OF PROJECT TO BE DEVELOPED (gross square feet): 536,470*

NUMBER OF BUILDINGS: 3

GROSS FLOOR AREA OF EACH BUILDING (sq. ft.):
Building A: 155,743 gsf
Building B: 62,981 gsf
Building C: 313,537 gsf

HEIGHT OF EACH BUILDING (ft.): 85'

NUMBER OF STORIES OF EACH BUILDING: 8

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

If "yes," specify: The total square feet owned or controlled by the applicant: N/A

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

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: 100,000 sq. ft. (width x length)

VOLUME OF DISTURBANCE: 100,000 cubic ft. (width x length x depth)

AREA OF PERMANENT DISTURBANCE: 100,000 sq. ft. (width x length)

8. *Analysis Year* CEQR Technical Manual Chapter 2

ANTICIPATED BUILD YEAR (date the project would be completed and operational): 2026

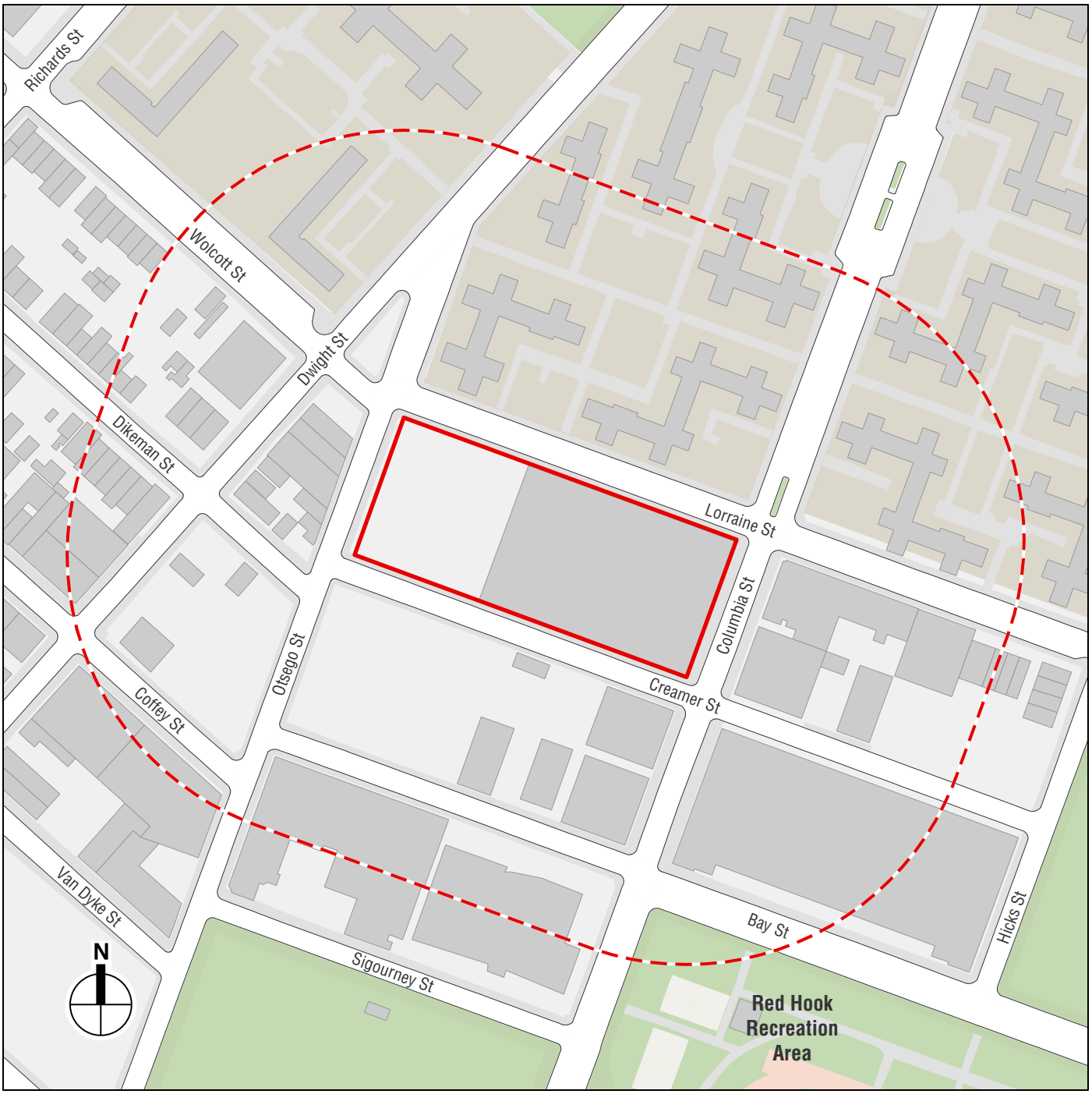
ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: 23 months

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

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE: The duration of construction activities would not exceed 24 months for any of the buildings. Buildings B and C would be constructed simultaneously, with construction commencement of Building A approximately one year later.

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

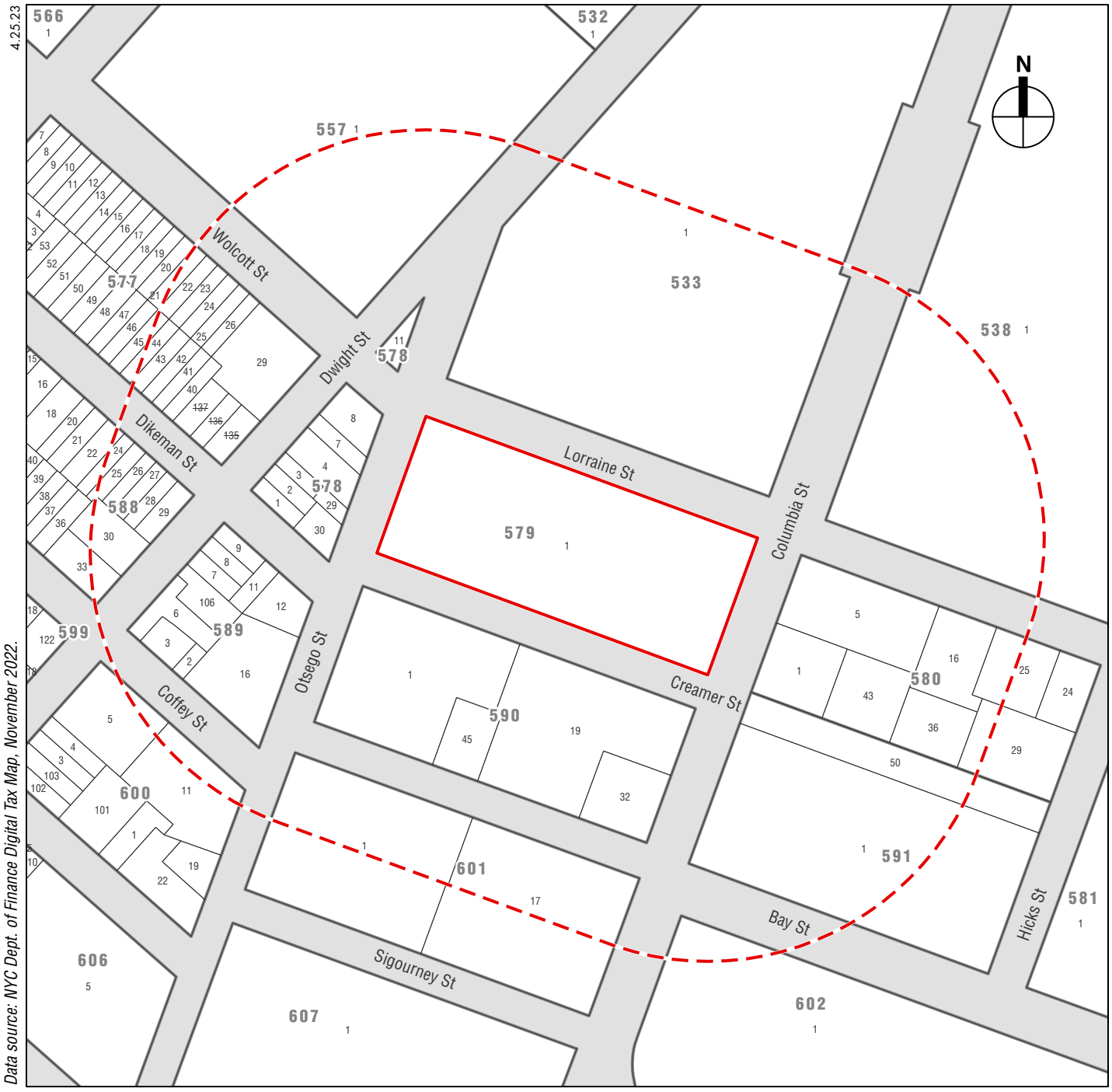
☒ RESIDENTIAL ☒ MANUFACTURING ☒ COMMERCIAL ☐ PARK/FOREST/OPEN SPACE ☐ OTHER, specify:



Project Location

COLUMBIA STREET REDEVELOPMENT

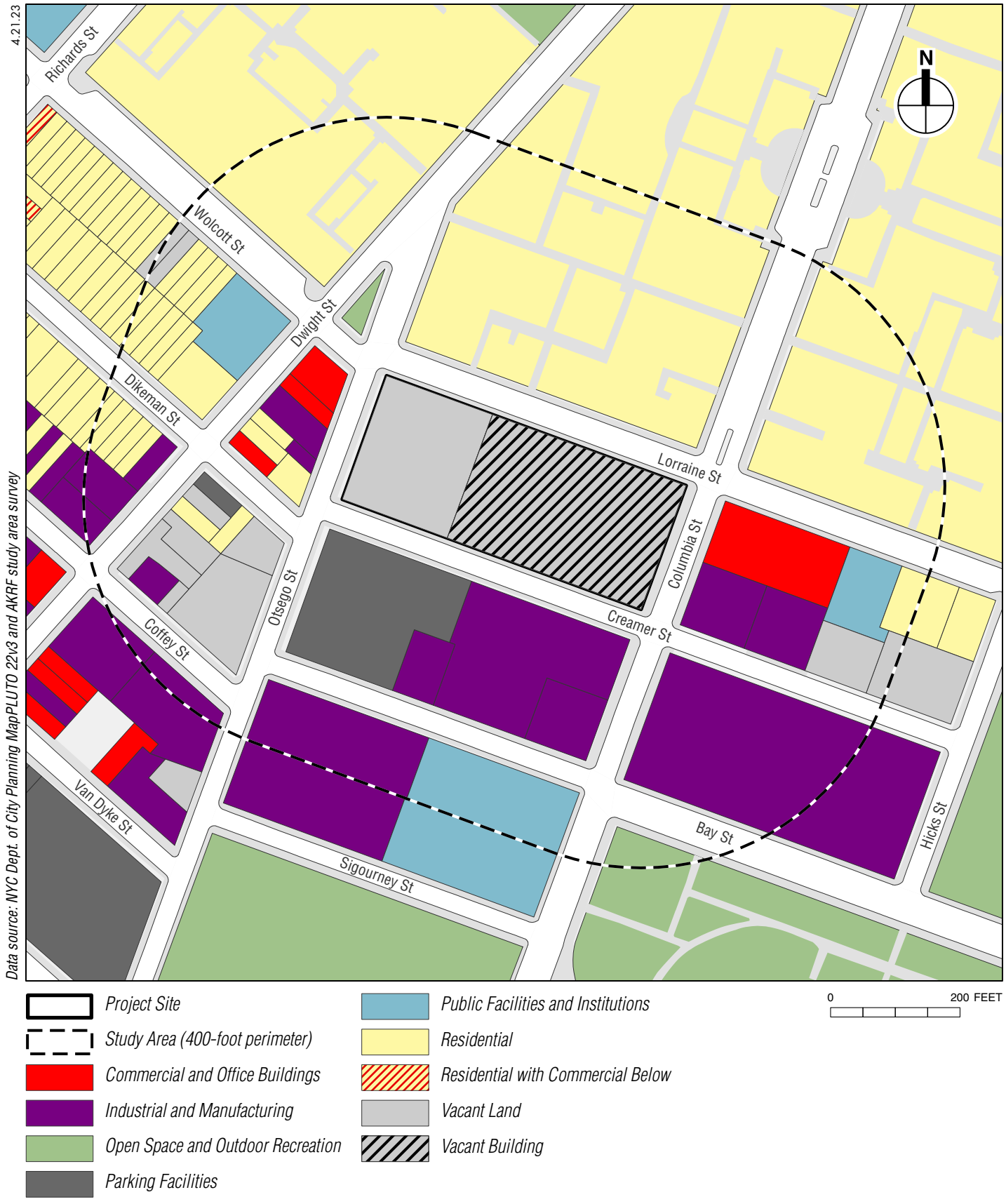
Figure 1



Tax Map

COLUMBIA STREET REDEVELOPMENT

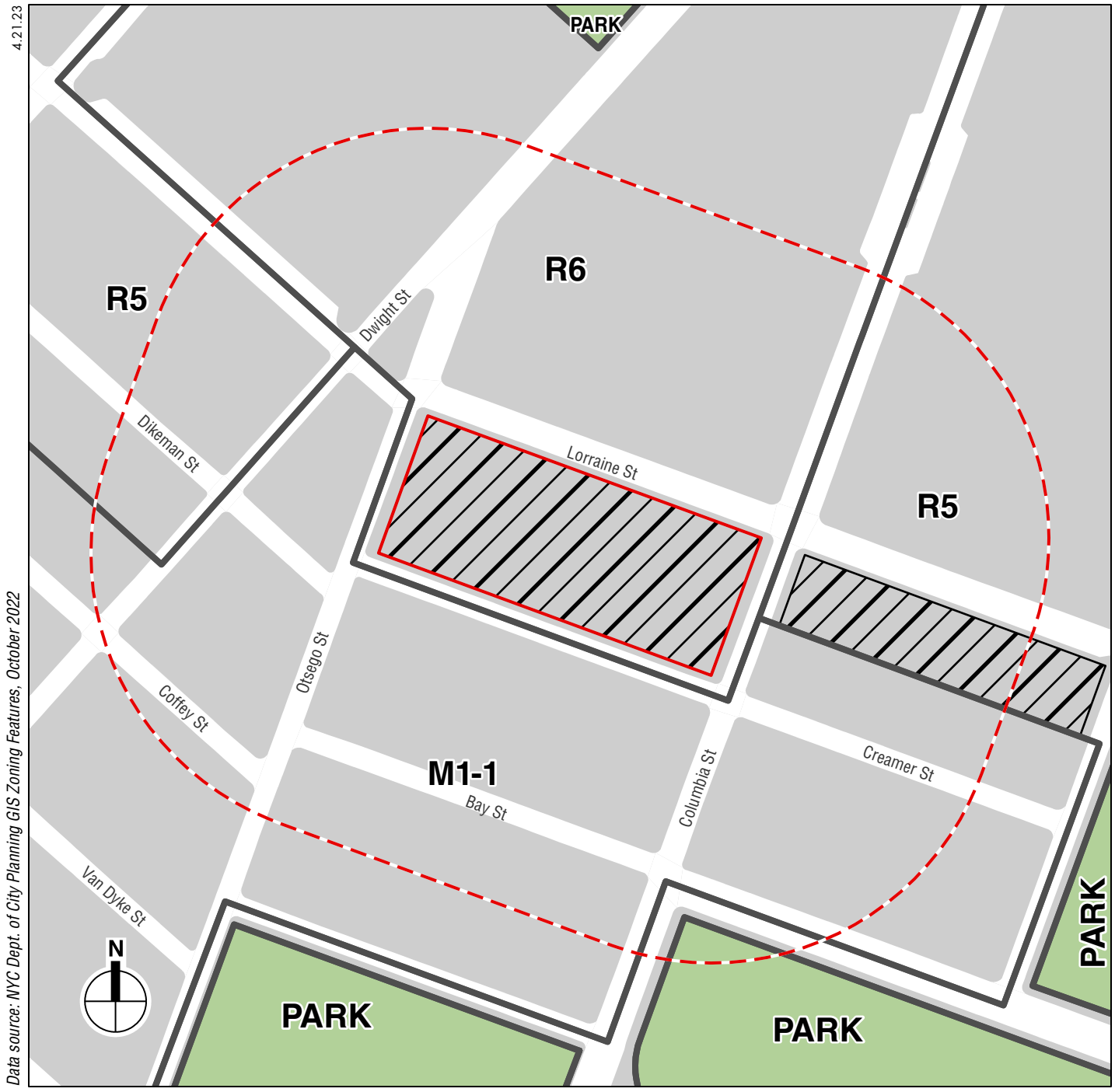
Figure 2



Existing Land Use

COLUMBIA STREET REDEVELOPMENT

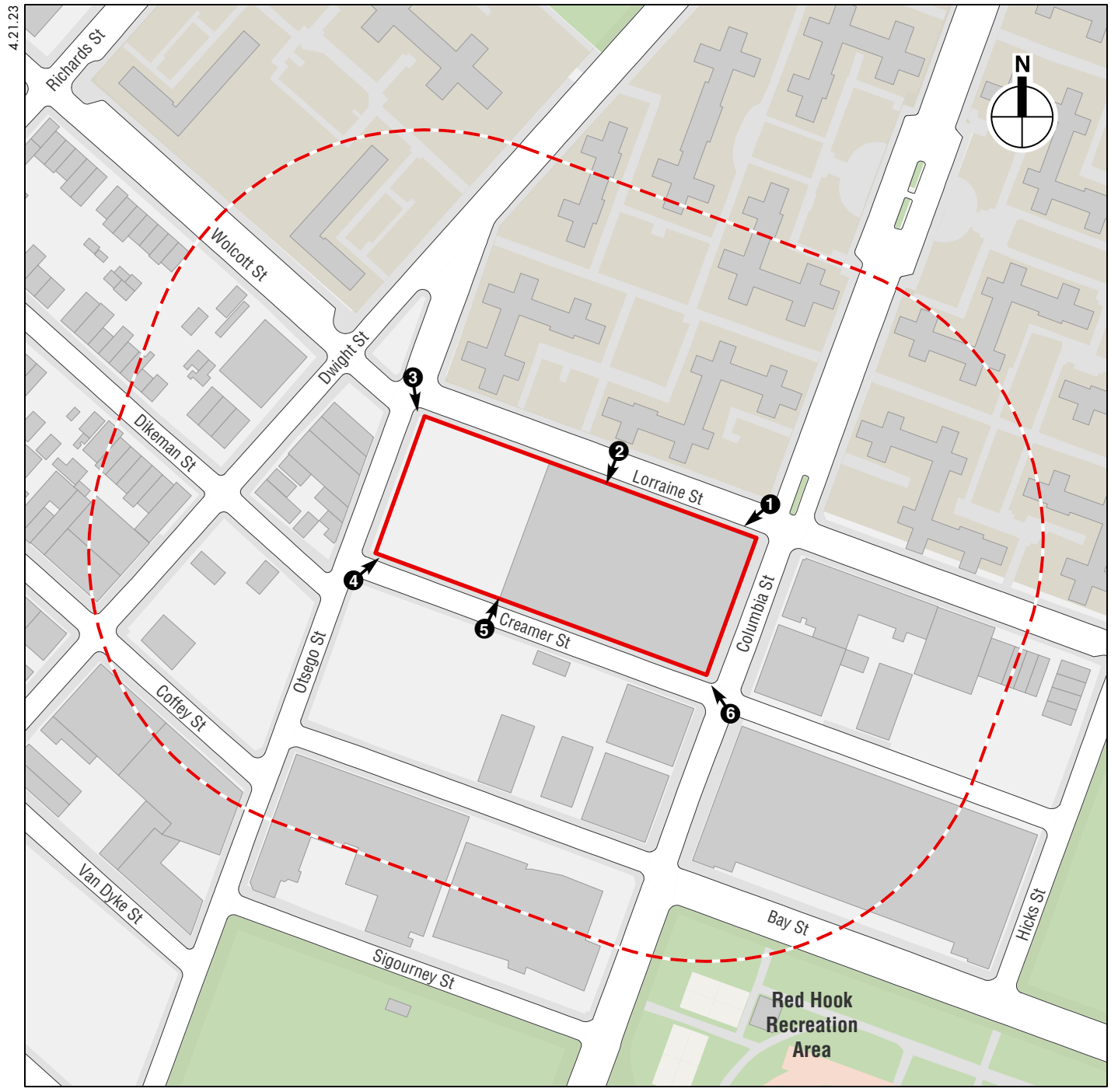
Figure 3



Existing Zoning

COLUMBIA STREET REDEVELOPMENT

Figure 4



Key to Photographs

COLUMBIA STREET REDEVELOPMENT

Figure 5



1



2

Existing Site Photographs

Figure 6a



3



4

Existing Site Photographs

Figure 6b



5



6

Existing Site Photographs

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	N/A	Market	Family/AIRS/SH	
No. of dwelling units	N/A	308	258 (Family); 210 (AIRS) and 191 (SH)	-50 (Market/Family) +210 AIRS +191 SH
No. of low- to moderate-income units	N/A	0	See Above	
Gross floor area (sq. ft.)	N/A	261,394	503,335	241,941
Commercial	☐ YES ☒ NO	☒ YES ☐ NO	☐ YES ☒ NO	
If "yes," specify the following:				
Describe type (retail, office, other)	N/A	TBD	N/A	
Gross floor area (sq. ft.)	N/A	68,302	N/A	-68,302
Manufacturing/Industrial	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
Type of use	N/A	N/A	N/A	
Gross floor area (sq. ft.)	N/A	N/A	N/A	
Open storage area (sq. ft.)	N/A	N/A	N/A	
If any unenclosed activities, specify:	N/A	N/A	N/A	
Community Facility	☐ YES ☒ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify the following:				
Type	N/A	TBD	TBD	
Gross floor area (sq. ft.)	N/A	179,784	5,659	-174,125
Vacant Land	☒ YES ☐ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," describe:	99,999 sf of vacant land/building			
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	
Other Land Uses	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," describe:	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	N/A	N/A	
No. of accessory spaces	N/A	N/A	10	10
Operating hours	N/A	N/A	TBD	
Attended or non-attended	N/A	N/A	TBD	
Lots	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
No. of public spaces	N/A	N/A	N/A	
No. of accessory spaces	N/A	N/A	N/A	
Operating hours	N/A	N/A	N/A	
Other (includes street parking)	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," describe:	N/A	N/A	N/A	
POPULATION				
Residents	☐ YES ☒ NO	☒ YES ☐ NO	☒ YES ☐ NO	

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
If "yes," specify number:	N/A	699	1105	405
Briefly explain how the number of residents was calculated:	The residential population attributed to market rate units, family units, and 1-BR SH units are based on an average household size of 2.27. SH studio and AIRS studio units assume 1 person per unit and 1-BR AIRS units assume 1.5 persons per unit.			
Businesses	☐ YES ☒ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify the following:				
No. and type	N/A	1 Community Facility 1 Commercial Retail	1 Commercial Retail	
No. and type of workers by business	N/A	180 Community Faclity 205 Commercial Retail =385 Total	6 Community Facility	-379
No. and type of non-residents who are not workers	N/A	N/A	N/A	
Briefly explain how the number of businesses was calculated:	Community Facility workers are based on a rate of 1 worker per 1000 sf and Commercial Retail workers are based on a rate of 1 worker per 333 sf			
Other (students, visitors, concert-goers, *etc.*)	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If any, specify type and number:	N/A	N/A	N/A	
Briefly explain how the number was calculated:	N/A			
ZONING				
Zoning classification	R6/C1-3	R6/C1-3	R6/C1-3	N/A
Maximum amount of floor area that can be developed	0.78-3.0 Residential 2.0 Commercial	0.78-3.0 Residential 2.0 Commercial	0.78-3.0 Residential 2.0 Commercial	N/A
Predominant land use and zoning classifications within land use study area(s) or a 400 ft. radius of proposed project	Residential, Commercial and Manufacturing	Residential, Commercial and Manufacturing	Residential, Commercial and Manufacturing	N/A
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 Attachment A		
(e) Is the project a large, publicly sponsored project?	☐	☒
○ If "yes," complete a PlaNYC assessment and attach.		
(f) Is any part of the directly affected area within the City's Waterfront Revitalization Program boundaries?	☒	☐
○ If "yes," complete the Consistency Assessment Form. See Attachment A		
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.		

	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 Attachment F		
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.		
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:	☐	☐
(j) Based on the Phase I Assessment, is a Phase II Investigation needed? See Attachment G	☐	☐
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): -1,852		
○ 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): -21,783,035		
(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. See Attachment H		
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?	☒	☐
(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?	☐	☒

	YES	NO
(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 Attachment I		
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 A		
19. *CONSTRUCTION*: CEQR Technical Manual Chapter 22		
(a) Would the project's construction activities involve:		
○ Construction activities lasting longer than two years?	☐	☒
○ Construction activities within a Central Business District or along an arterial highway or major thoroughfare?	☐	☒
○ Closing, narrowing, or otherwise impeding traffic, transit, or pedestrian elements (roadways, parking spaces, bicycle routes, sidewalks, crosswalks, corners, *etc.*)?	☐	☒
○ Construction of multiple buildings where there is a potential for on-site receptors on buildings completed before the final build-out?	☐	☒
○ The operation of several pieces of diesel equipment in a single location at peak construction?	☐	☒
○ Closure of a community facility or disruption in its services?	☐	☒
○ Activities within 400 feet of a historic or cultural resource?	☐	☒
○ Disturbance of a site containing or adjacent to a site containing natural resources?	☐	☒
○ Construction on multiple development sites in the same geographic area, such that there is the potential for several construction timelines to overlap or last for more than two years overall?	☐	☒
(b) If any boxes are checked "yes," explain why a preliminary construction assessment is or is not warranted based on the guidance in Chapter 22, "Construction." It should be noted that the nature and extent of any commitment to use the Best Available Technology for construction equipment or Best Management Practices for construction activities should be considered when making this determination. See Attachment A		

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
Patrick Blanchfield, AKRF		8/5/2024

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	

Attachment A: Project Description and Screening Assessments

A. INTRODUCTION

Columbia SF LLC. (the "project sponsor") is seeking construction funding from the New York City Department of Housing Preservation and Development (HPD) to facilitate the development of an affordable housing project (the "proposed project") located at 37 Otsego and 498 Columbia Streets (Brooklyn Block 579, Lot 1) (the "project site") in the Red Hook neighborhood of Brooklyn, Community District 6. Further, it is expected that Project Based Vouchers (PBVs) issued by the U.S. Department of Housing and Urban Development (HUD) and allocated by the New York City Housing Authority (NYCHA) would be utilized to faciliate the proposed project. The requested construction funding and PBVs are herein referred to as the "proposed action." The proposed action would facilitate the construction of the proposed project—three 8-story buildings containing a total of 659 units of affordable family, senior, and supportive housing (SH) and approximately 5,660 square feet (sf) of community facility space, including space for senior and supportive services. Because the project sponsor is seeking construction funding from HPD, the proposed project is subject to City Environmental Quality Review (CEQR). The environmental review process provides a means for public agencies to review proposed discretionary actions for the purpose of identifying the effects those actions may have on the environment. HPD is the lead agency for the proposed project's CEQR environmental review.

B. DESCRIPTION OF THE PROPOSED PROJECT

The proposed project is an approximately 536,470-gross-square-foot (gsf) development consisting of three adjacent 8-story buildings (Buildings A, B, and C). The project site occupies the full block bounded by Otsego, Columbia, Creamer, and Lorraine Streets. The site measures approximately 100,000 sf in area and presently contains vacant commercial space (formerly occupied by a supermarket, laundry service, and door supplier). The proposed project would be developed in accordance with the existing R6 zoning district.

Building A would contain 210 units of senior housing, or Affordable Independent Residences for Seniors (AIRS) units, and approximately 4,580 sf of space for services. Thirty percent of the AIRS units would be designated for formerly homeless seniors referred from the Department of Homeless Services. Building A would occupy the western portion of the block with frontage along Otsego, Creamer, and Lorraine Streets. A residential entrance would be located on Otsego Street, and access to the community facility space would be via an entrance on Lorraine Street. An outdoor recreation area would be located above the first floor at the rear of the building.

Building B would contain 81 units of SH (community facility/non-profit with sleeping accommodations), interior recreation space, and a bicycle storage room. The building would be located midblock with an entrance on Lorraine Street.

Building C would contain 110 SH units, 258 units of family housing, approximately 1,080 sf of community facility space (supportive services, including case management and counseling), and

a 10-space accessory parking garage. Building C would be located on the eastern portion of the block with frontage on Columbia, Lorraine, and Creamer Streets. Residential entrances would be located on Creamer and Columbia Streets; the community facility portion of Building C would be accessed via a separate entrance on Creamer Street. The parking garage would occupy a portion of the ground floor and would be accessed via a curb cut on Creamer Street. Outdoor recreation space would be located above the roof of the garage.

A 60-foot-wide, publicly accessible, landscaped pedestrian corridor would connect Lorraine and Creamer Streets and separate Building A from Buildings B and C. The pedestrian plaza would be approximately 12,000 sf and would include landscaped green space with benches, native plantings, and centrally located pathways between the three buildings. It would also be adjacent to the supportive services suite and across the street from the NYCHA Red Hook West Houses. An axonometric massing of the buildings is shown in **Figure A-1**.

The proposed project would be developed in accordance with the R6 zoning and Quality Housing regulations. The Quality Housing Program, which is optional in the R6 district, encourages development consistent with the character of 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. Accordingly, each building would include residential amenity spaces including community rooms, laundry, property management offices, and social service offices. The buildings would have base heights of six stories (65 feet), before setting back 15 feet, and rising to a maximum building height of eight stories (85 feet). Schematic building heights are shown in **Figure A-2**.

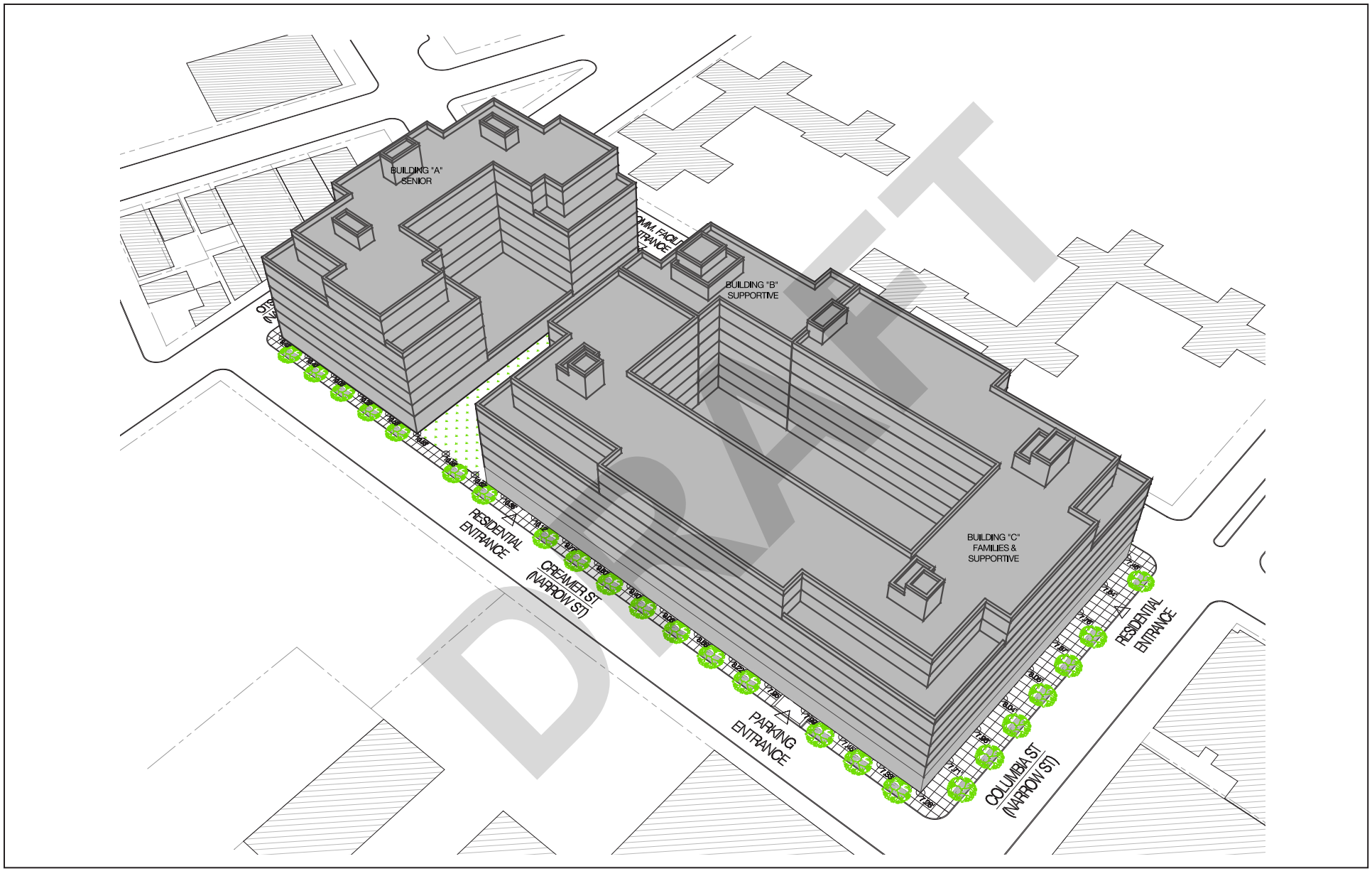
Because the project site is located in the Special Flood Hazard Area, all construction must occur in accordance with Appendix G, "Flood Resistant Construction," of New York City's Building Code. At a minimum, building design measures would include elevating the first floor to the required design elevation (+2'-0" above flood elevation), wet-proofing design at all walls below design elevation to foundations, installation of flood vents at ground-floor doors and/or flood gates in front of all building entrances, and appropriate site drainage and stormwater detention in accordance with all city regulations, including the recently adopted Unified Stormwater Rule. All critical equipment would be placed at design elevation (+2'-0" above flood elevation) on the first floor or building roofs. The ground floors would include crawl spaces and building lobbies. Ground floor and first floor plans are shown in **Figure A-3**.

REQUESTED APPROVALS

The project sponsor is seeking construction funding from HPD through its Senior Affordable Rental Apartments Program (SARA), Supportive Housing Loan Program (SHLP), and Extremely Low and Low-Income Program (ELLA). Building A would be financed through SARA, Building B would be financed through SHLP, and Building C would be developed through ELLA. Other sources of funding include as-of-right and discretionary Low Income Housing Tax Credits (LIHTCs), tax exempt bond proceeds from the New York City Housing Development Corporation (HDC) and funding through HDC's ELLA. In addition, funding would include HUD PBV's.

HPD SARA provides low-interest loans to support the construction and renovation of affordable housing for seniors ages 62 and older. HPD's SARA subsidy is typically paired with other public and private sources, including but not limited to, private institutional lenders, HDC's ELLA, and other state and federal programs.

5.5.23



Source: AUFGANG

All Buildings: Axonometric Plan

COLUMBIA STREET REDEVELOPMENT

Figure A-1

5.5.23



Source: AUFGANG

Elevation: Building A

COLUMBIA STREET REDEVELOPMENT

Figure A-2.1

5.5.23

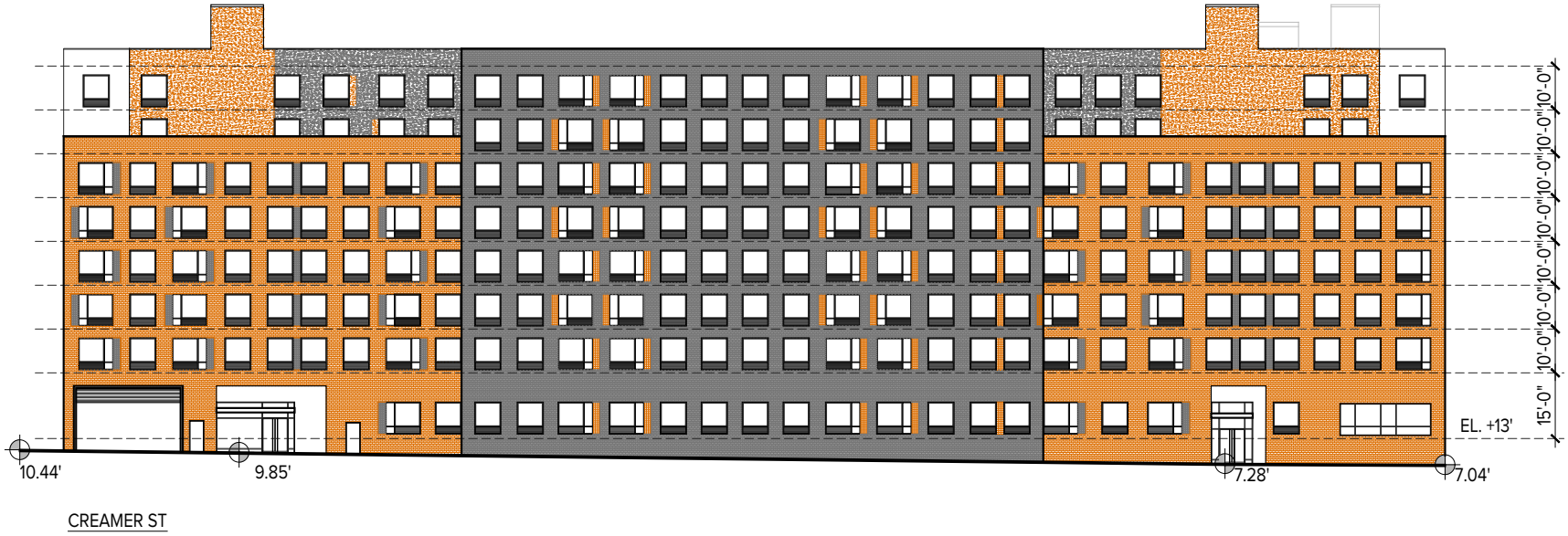


Source: AUFGANG

Elevation: Building B

Figure A-2.2

5.5.23

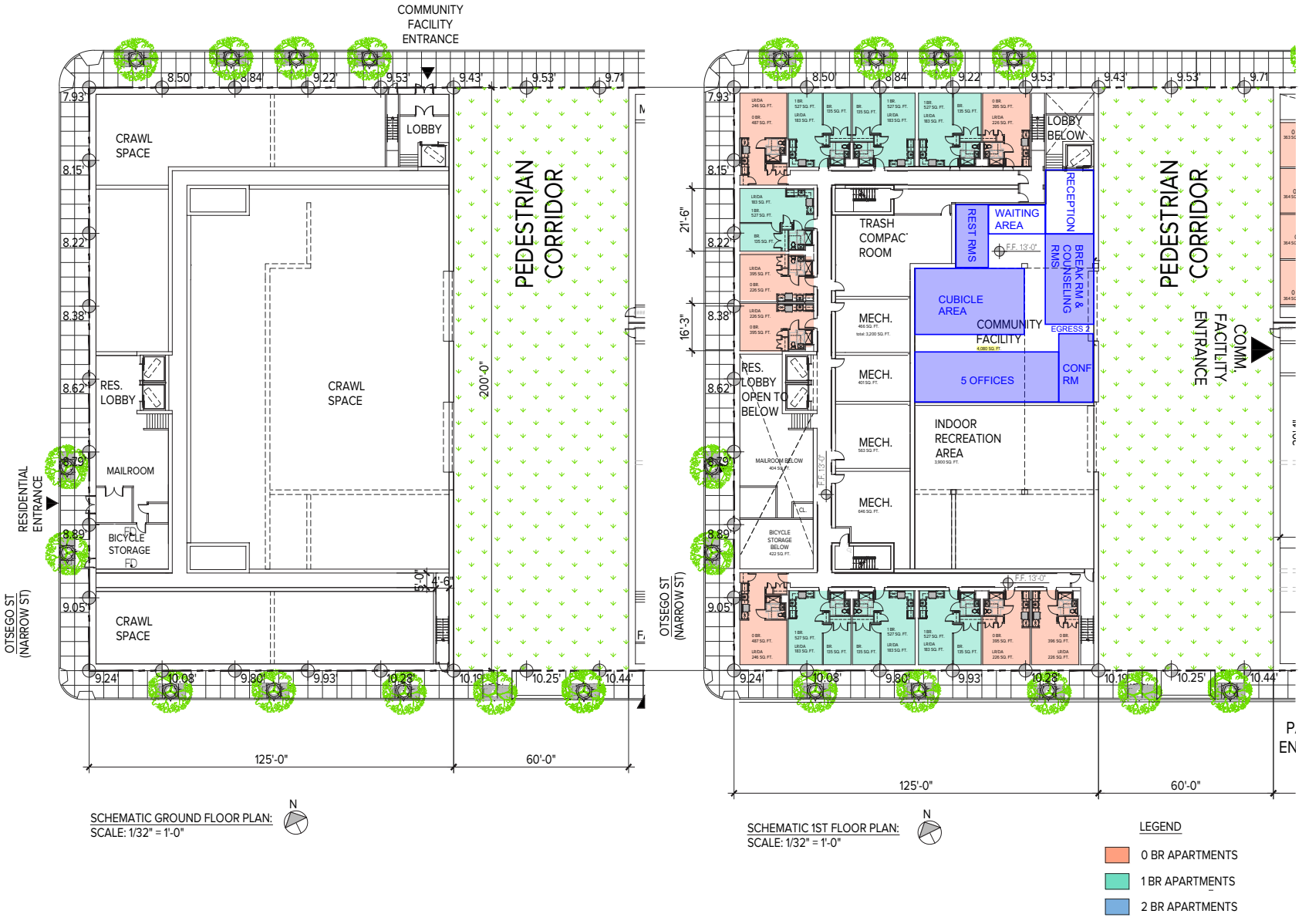


Source: AUFGANG

Elevation: Building C

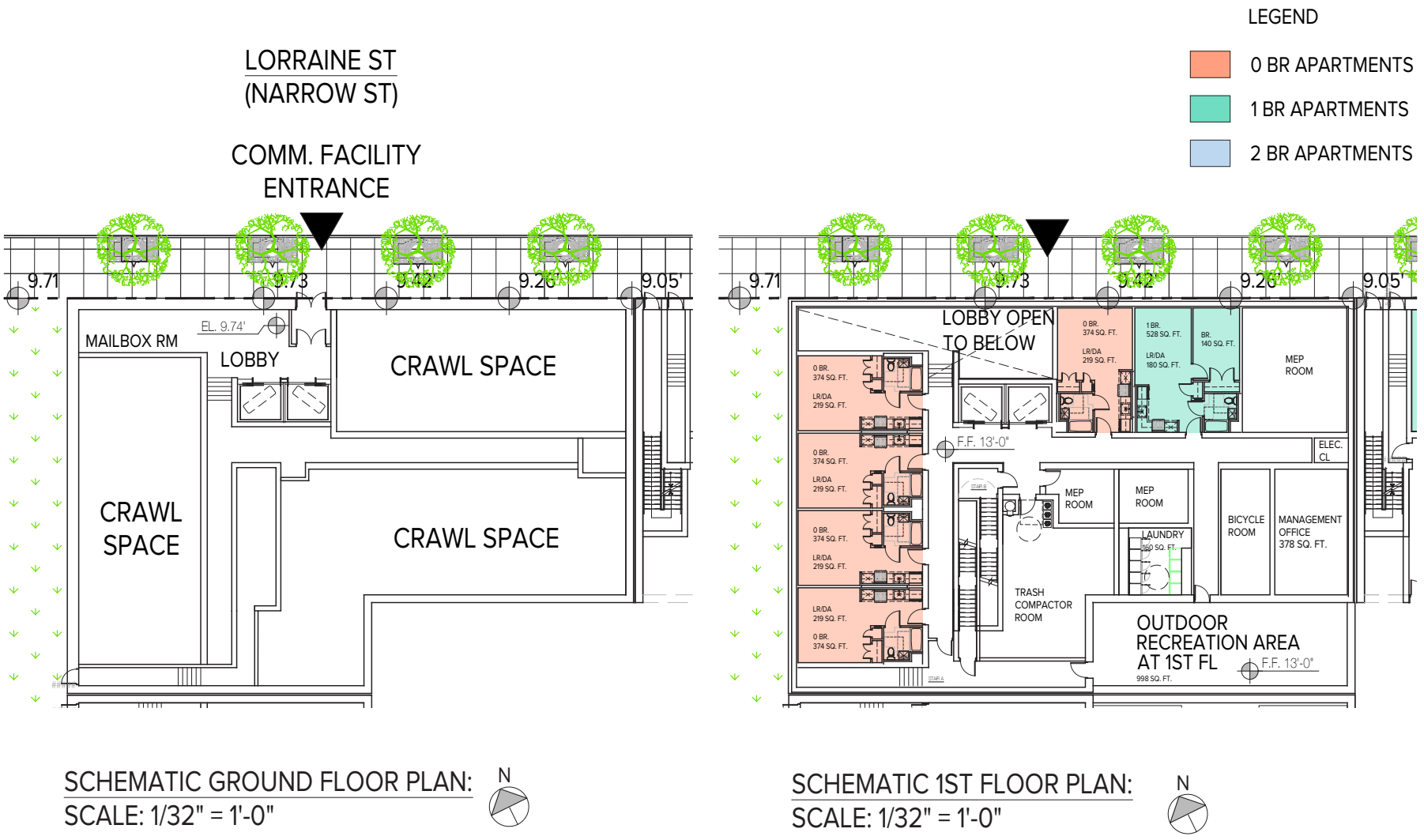
COLUMBIA STREET REDEVELOPMENT

Figure A-2.3



Source: AUFGANG

Ground and First Floor Plans: Building A



SCHEMATIC GROUND FLOOR PLAN:
SCALE: 1/32" = 1'-0"

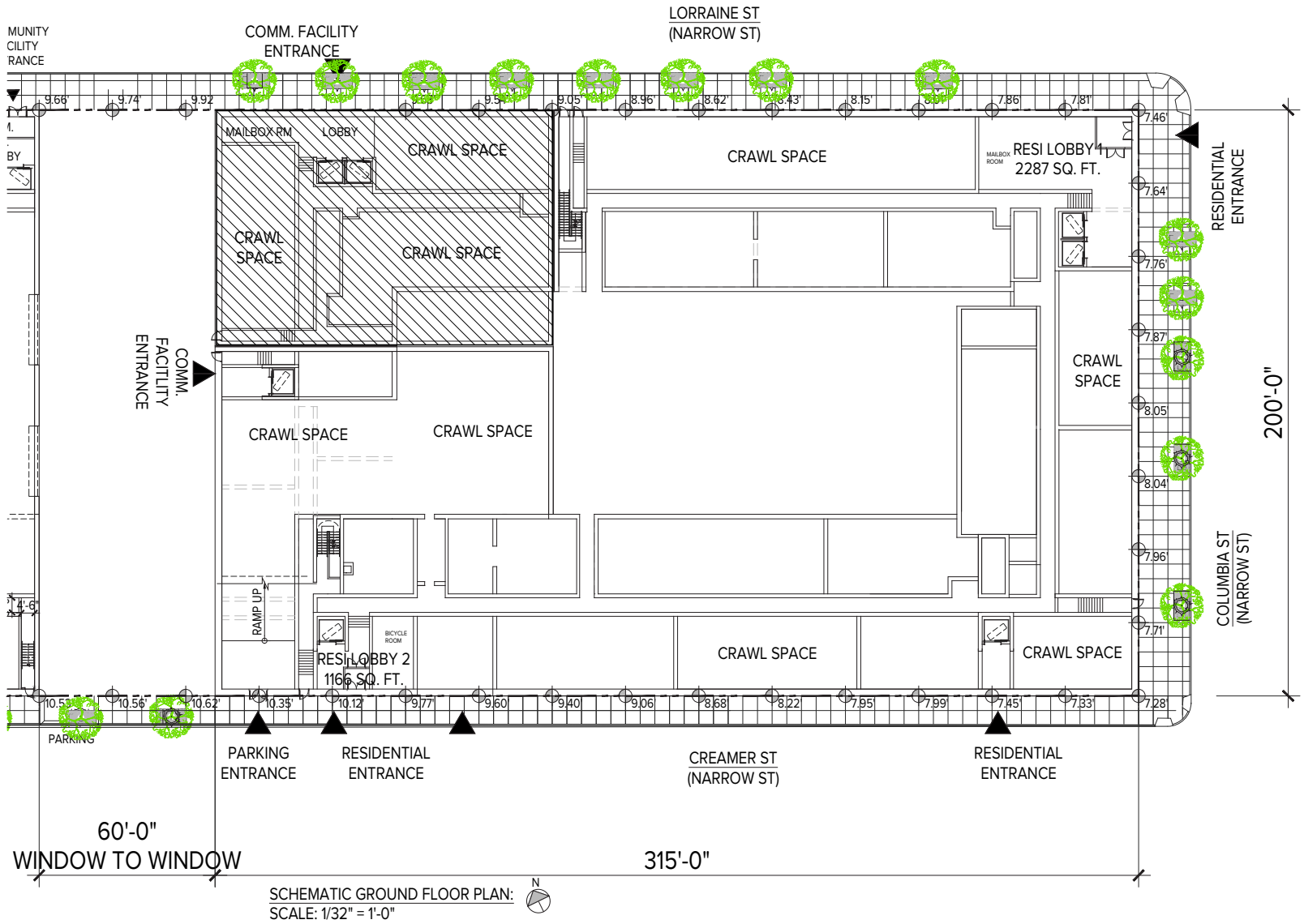
N

SCHEMATIC 1ST FLOOR PLAN:
SCALE: 1/32" = 1'-0"

N

Source: AUFGANG

Ground and First Floor Plans: Building B



Source: AUFGANG

Ground Floor Plan: Building C



Source: AUFGANG

First Floor Plan: Building C

COLUMBIA STREET REDEVELOPMENT

Figure A-3.2b

Construction funding through SHLP consists of low-interest loans to support the development of permanent supportive housing with on-site social services. SHLP loan funds may be used in conjunction with LIHTCs and other loan and subsidy sources. Projects developed with SHLP funding must provide 60 percent of units for homeless, disabled individuals, or homeless families with a disabled head-of-household. The remaining 40 percent can be rented to low-income households from the community. All units must be affordable to households earning 60 percent or less of Area Median Income (AMI). Units for individuals must be studio units.

HDC's ELLA Program funds the new construction of low-income multi-family rental projects in which a minimum of 80 percent of the units are at low-income rents affordable to households earning up to 80 percent of AMI. Up to 20 percent of the units may have rents affordable to moderate-income households earning between 90 percent and 100 percent of AMI. At least 15 percent of units must be set aside for formerly homeless households. The HPD subsidy is generally paired with other public and private sources including, but not limited to LIHTCs, private lenders, HDC's ELLA, and state subsidy programs from HCR for multi-family new construction and SH projects.

PBVs are a component of a Public Housing Authority (PHA) Housing Choice Voucher (HCV) program, where the PHA attaches voucher assistance to specific housing units through a PBV HAP Contract with an owner, according to 24 CFR 983. Unlike a tenant-based voucher, the PBV assistance remains attached to the unit when the family moves and assists the next eligible family in moving into the PBV unit. HUD's Office of Public and Indian Housing administers the PBV program.

C. PURPOSE AND NEED

The proposed project would facilitate the development of 659 units of needed affordable housing on an underutilized site. The proposed redevelopment of the project site would provide affordable family, supportive, and senior housing for a range of household incomes, including housing for formerly homeless families and individuals. As such, the proposed project would address housing for the fastest-growing population in New York City—seniors—who, like people with disabilities, have difficulty finding housing they can afford. Additionally, the proposed project would provide needed supportive housing, a critical tool for providing permanent, affordable homes to New Yorkers who also need social service support to remain stably housed. Supportive housing is an effective tool to address New York City's homelessness crisis, particularly for the chronically homeless, those with mental disabilities, and/or substance use disorders.

D. FRAMEWORK FOR ANALYSIS

This document has been prepared in accordance with the guidelines presented in the *CEQR Technical Manual.* The proposed project is expected to be completed and in operation by 2026, which is the analysis year or "build year." For each technical area, the analysis includes a description of existing conditions and an assessment of conditions in the future with and without the proposed project in 2026. There are currently several pending developments within the 400-foot study area. These include three single-family homes at 33, 37, and 39 Dikeman Street. A single-story, approximately 22,000 sf warehouse is also proposed 151 Dwight Street.

EXISTING CONDITIONS

The analysis framework begins with an assessment of existing conditions in the project area and surrounding neighborhood because these can be most directly measured and observed. The

assessment of existing conditions does not represent the condition against which the proposed project is measured, but generally serves as a starting point for the projection of future conditions with and without the proposed project and the analysis of project impacts.

As previously noted, the project site occupies the full block bounded by Otsego, Columbia, Creamer, and Lorraine Streets. The site measures approximately 100,000 sf in area and presently contains vacant commercial building formerly occupied by a supermarket, laundry service, and door supplier.

THE FUTURE WITHOUT THE PROPOSED PROJECT

The future without the proposed project (the "No Action" condition) describes a future baseline condition with which changes that are expected to result from the proposed project are compared. The proposed project has a build year of 2026. Absent the proposed project in 2026, it is assumed that the project site would be developed with an as-of-right mixed-use development comprising approximately 308 dwelling units (DUs), 180,000 gsf of community facility space (ambulatory medical facility), and 68,302 gsf of retail space. It is assumed the development would be constructed in accordance with the existing R6/C1-3 district and Height Factor zoning regulations. The development would include an 18-story market-rate residential building on Otsego Street and a 12-story community facility building with ground-floor retail space on Columbia Street.

THE FUTURE WITH THE PROPOSED PROJECT

In the future with the proposed project (the "With Action" condition), the project site would be developed with Buildings A, B, and C, as described above. The net change or incremental development assessed in this Environmental Assessment Statement (EAS) is the difference between the With Action and No Action conditions, which determines the increment for environmental analyses. The incremental development as a result of the proposed action is a net increase in 258 affordable family units,[1] 210 AIRS units, and 191 SH units, and a net loss of 174,125 gsf of community facility space and 68,302 gsf of commercial space (see **Table A-1**). **Table A-2** shows the program by building, including breakdown of family, AIRS, and SH units under the With Action condition.

Table A-1
Incremental Development

Use	No Action	With Action	Increment
Residential* (gsf)	261,394	503,335	241,941
Market Rate / Family Units (DU)	308	258	-50
Senior Housing (AIRS) Units	0	210	210
Supportive Housing (SH) Units	0	191	191
Community Facility	179,784	5,659	-174,125
Commercial	68,302	0	-68,302
Total Programmed gsf	509,480	508,994	-486

Note: * Residential gsf is inclusive of floor area for market rate and affordable family units, AIRS units and SH units.

[1] Compared with the No Action condition, which includes 308 market rate DUs, the proposed project would result in a net increase of 258 affordable DUs; however, if affordability is not taken into consideration, the proposed project would result in a net loss of 50 DUs.

Table A-2
Proposed Program

	AIRS Units	SH Units	Family Units	Residential GSF	Community Facility GSF	Supportive Housing GSF	Parking GSF
Site/Bldg A	210			151,160	4,583		
Site/Bldg B		81				61,927	1,054
Site/Bldg C		110	258	238,131	1,076	52,117	22,213
Total	**210**	**191**	**258**	**389,291**	**5,659**	**114,044**	**23,267**

Source: Columbia SF LLC. and AKRF, Inc.

E. SCREENING ANALYSES

As noted above, it is assumed that in the No Action condition, the project site would be developed with an 18-story market-rate residential building with approximately 308 DUs and a 12-story building with 180,000 gsf of community facility space, and 68,302 gsf of retail space. With approval of the requested housing subsidies, the project site would be developed with three 8-story buildings containing a total of 659 units of affordable family, senior, and supportive housing and approximately 5,660 sf of community facility space, including space for senior and supportive services. Therefore, the proposed project would result in an incremental increase in subsidized housing and overall affordability, decreases in commercial and community facility space, and new buildings with significantly shorter heights. As indicated in the EAS Form, the incremental development generated by the proposed project falls below the thresholds for further assessment of Shadows, Water and Sewer Infrastructure, Solid Waste and Sanitation Services, and Energy; therefore, further assessment of these technical areas is not warranted. Screening-level assessments for Transportation, Neighborhood Character, and Construction are provided below.

Detailed assessments and analyses of the following technical areas are provided in Attachments B through I: Land Use, Zoning and Public Policy; Socioeconomic Conditions; Community Facilities and Services; Open Space; Historic and Cultural Resources; Hazardous Materials; Air Quality; and Noise. All screening assessments and analyses were performed in accordance with the guidance contained in the *CEQR Technical Manual*.

LAND USE, ZONING, AND PUBLIC POLICY

See Attachment B.

SOCIOECONOMIC CONDITIONS

See Attachment C.

COMMUNITY FACILITIES AND SERVICES

See Attachment D.

OPEN SPACE

See Attachment E.

HISTORIC AND CULTURAL RESOURCES

See Attachment F.

HAZARDOUS MATERIALS

See Attachment G.

TRANSPORTATION

According to the *CEQR Technical Manual*, the project site is located in Zone 4, which has minimum development density thresholds of 200 residential units, 15,000 sf of community facility space, and 10,000 sf of local retail space. Based on the incremental development presented above in **Table A-1**, which includes approximately 351 residential units (inclusive of market-rate, senior housing, and supportive housing units), a reduction of approximately 174,000 gsf of community facility space, and the elimination of approximately 68,000 gsf of commercial (ground-floor retail) space, the proposed project would be below the aggregate minimum development density threshold to require further transportation-related assessment. **Table A-3** summarizes the *CEQR Technical Manual* daily trip generation rates, temporal distributions, and the resulting peak hour trip estimates when applied to incremental development. For trip generation purposes, standard residential trip generation assumptions have been applied to all three types of residential units including market-rate, senior housing, and supportive housing units; and medical office trip generation assumptions have been assumed for the No Action community facility space. As summarized in **Table A-3**, the net incremental peak hour trips would be negative—ranging from approximately -2,100 to -3,700 trips during the four analysis peak hours. These incremental trips would be well below the *CEQR Technical Manual* analysis thresholds of 50 or more peak hour vehicle trips, 200 or more peak hour transit trips, or 200 or more peak hour pedestrian trips to warrant further detailed analysis. Therefore, a detailed transportation analysis is not warranted, and the proposed project would not result in any significant adverse transportation impacts.

Table A-3
Transportation—Level 1 Incremental Trip Estimates

		Weekday				Saturday	
		Daily Person	Peak Hours			Daily Person	Peak
Land Use	Size	Trip Rate	AM	Midday	PM	Trip Rate	Hour
Residential (DUs)	351	8.18 per DU	9.3% 267	5.6% 161	8.5% 244	9.08 per DU	8.4% 268
Medical Office (gsf)	-174,125	-11,459 daily trips*	11.0% -1,260	12.6% -1,444	8.5% -974	37.0 per KSF	16.6% -1,069
Local Retail (gsf)	-68,302	329.0 per KSF	4.8% -1,079	8.0% -1,798	10.9% -2,449	358.0 per KSF	11.7% -2,861
Net Increments Total			**-2,072**	**-3,081**	**-3,179**		**-3,662**

Notes:
2021 *CEQR Technical Manual* daily person trip rates and temporal distributions.
* Medical office weekday daily trips calculated using equation: 66.626 x + 141.77 (x = size of gsf in 1,000 sf) since size is greater than 15,000 sf.

AIR QUALITY

See Attachment H.

NOISE

See Attachment I.

NEIGHBORHOOD CHARACTER

Under CEQR, 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. In order to determine a project's effects on neighborhood character, the elements that contribute to a neighborhood's context and feeling are considered together. These elements include land use, zoning, and public policy; socioeconomic conditions; open space; historic and cultural resources; urban design and visual resources; shadows; transportation; and noise. According to the *CEQR Technical Manual*, an assessment of neighborhood character is generally needed when a proposed project has the potential to result in significant adverse impacts in any of the technical areas presented above or when a project may have moderate effects on several of the elements that define a neighborhood's character. As indicated throughout this EAS, the proposed project would not result in significant adverse impacts in any of the elements that define neighborhood character; therefore, the proposed project would not result in significant adverse impacts on neighborhood character.

CONSTRUCTION

The proposed project would not result in significant adverse construction impacts. The construction activities associated with the development of the proposed project would be expected to result in conditions typical of construction sites in New York City. The duration of construction activities would not exceed 24 months for any of the buildings, and the project site could experience construction activity in the No Action condition irrespective of the requested subsidies.

Buildings B and C would be constructed simultaneously, with construction commencement of Building A approximately six months later. During this time, construction activities for the proposed project would normally take place Monday through Friday, although the delivery or installation of certain critical equipment could occur on weekend days. The permitted hours of construction are regulated by the New York City Department of Buildings (DOB) and apply to all areas of the City. In accordance with those regulations, work would begin at 7:00 AM on weekdays, although some workers would arrive and begin to prepare work areas between 6:00 AM and 7:00 AM.

Maintenance and Protection of Traffic (MPT) plans would be developed for any temporary curb-lane and sidewalk closures. Approval of these plans and implementation of the closures would be coordinated with the New York City Department of Transportation's (DOT) Office of Construction Mitigation and Coordination (OCMC). The construction of the proposed project would comply with applicable control measures for construction noise. Construction noise is regulated by the New York City Noise Control Code and by the U.S. Environmental Protection Agency (USEPA) noise emission standards for construction equipment. These local and federal requirements mandate that certain classifications of construction equipment and motor vehicles meet specified noise emissions standards. Except under exceptional circumstances, construction activities must be limited to weekdays between the hours of 7:00 AM and 6:00 PM. Construction material must also be handled and transported in such a manner as not to make unnecessary noise. Therefore, no significant adverse noise impacts are expected to occur as a result of the construction.

During construction of the proposed project, all necessary measures would be implemented to ensure adherence to DEP Construction Dust Rules regulating construction-related dust emissions as well as provisions of the New York City Air Pollution Control Code regulating air pollutant emissions during construction. Through the implementation of these measures, adverse effects associated with the proposed project's construction activities would be minimized. Dust emissions can occur from hauling debris and traffic over unpaved areas. All appropriate fugitive dust control measures would be employed to reduce the generation and spread of dust and to ensure that the New York City Air Pollution Control Code regulating construction-related dust emissions is followed. ✷

Attachment B: Land Use, Zoning, and Public Policy

A. INTRODUCTION

As described in Attachment A, "Project Description and Screening Assessments," the project sponsor is seeking construction funding from the New York City Department of Housing Preservation and Development (HPD) as well as Project Based Vouchers (PBVs) issued by the U.S. Department of Housing and Urban Development (HUD) and allocated by the New York City Housing Authority (NYCHA) (combined, the "proposed action") to facilitate the development of an affordable housing project located at 37 Otsego and 498 Columbia Streets (Brooklyn Block 579, Lot 1) (the "project site") in the Red Hook neighborhood of Brooklyn, Community District 6. The proposed action would facilitate the construction of the proposed project: three, 8-story buildings containing a total of 659 units of affordable family, senior, and supportive housing (SH) and approximately 5,660 square feet (sf) of community facility space, including space for senior and supportive services.

This attachment assesses the potential impacts of the proposed project on land use, zoning, and public policy for the project site and for a study area encompassing the area within 400 feet of the project site. The study area generally extends north to the mid-block between Lorraine Street and Bush Street, south to the mid-block between Bay Street and Sigourney Street, west to the mid-block between Dwight Street and Richards Street and east to the mid-block between Columbia Street and Hicks Street. As described below, the assessment concludes that the proposed project would be compatible with existing uses in the surrounding area and would not result in any significant adverse impacts to land use, zoning, or public policy.

B. EXISTING CONDITIONS

LAND USE

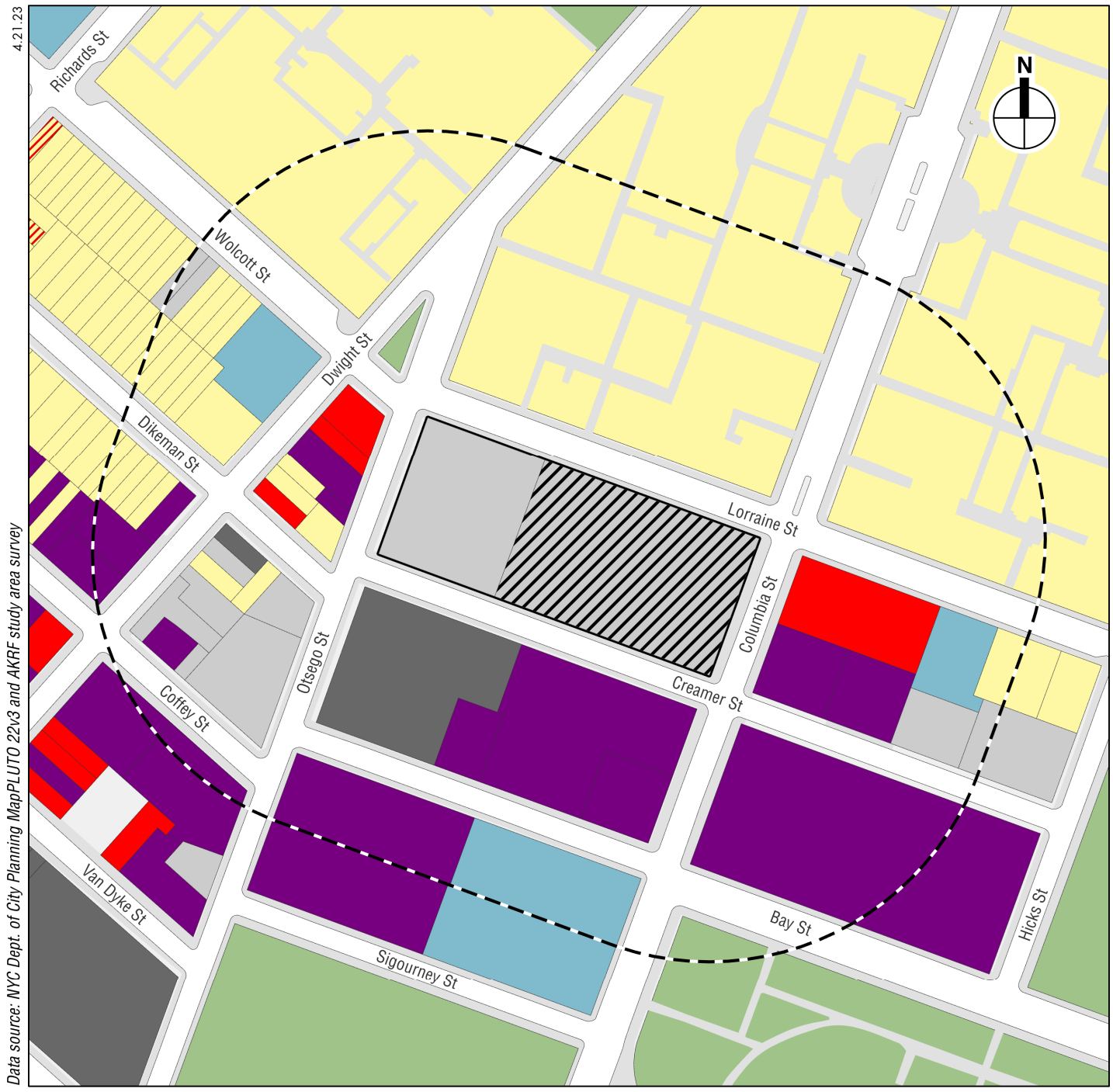
PROJECT SITE

The project site is comprised of the full block bounded by Otsego, Columbia, Creamer and Lorraine Streets. The site measures approximately 100,000 sf and presently contains a vacant commercial building (formerly occupied by a supermarket, laundry service, and door supplier) and adjacent parking lot.

STUDY AREA

The 400-foot land use study area boundaries are described above (see **Figure B-1**). Land uses within 400 feet of the project site include a mix of light industrial; residential; parking facilities and vacant land; public facilities and institutions; and local commercial uses.

The light industrial uses are primarily located within single-story buildings interspersed throughout the study area and include studio space, warehouse facilities, demolition facilities—



Existing Land Use

COLUMBIA STREET REDEVELOPMENT

Figure B-1

such as the Breeze demolition facility located at the intersection of Creamer and Columbia Streets—and an Amazon warehouse, located on the block bounded by Creamer, Hicks, Bay, and Columbia Streets.

Residential uses are primarily located to the north and west of the project site. The Red Hook Houses, a New York City Housing Authority (NYCHA) complex, sits to the north. The complex spans nearly 20 acres and includes 30 buildings with approximately 3,000 dwelling units (DUs); most buildings are six stories tall. Single-family and multi-family two- and three-story rowhomes are the predominate land use west of Dwight Street.

Beyond the 400-foot land use study area, seven residential developments, both new construction and conversions, have been constructed in Red Hook since 2015. Although located beyond the study area, the developments are market-rate rental and homeownership (condominiums) buildings and demonstrate an existing trend of largely market rate residential development in the surrounding neighborhood. The developments contain approximately 185 units and have been generally developed in areas zoned for residential use; however, it is noteworthy that a loft conversion to residential use occurred at 160 Imlay Street—a block that is zoned for manufacturing use. Parking facilities and vacant land are primarily concentrated within the southwestern portion of the study area, particularly on the block bounded by Dwight, Dikeman, Otsego, and Coffey Streets.

Community facilities and institutional uses within the study area include the Brooklyn Public Library-Red Hook Branch, located at the intersection of Dwight Street and Wolcott Street; BASIS Independent Brooklyn Upper School, in the southernmost portion of the study area; and a daycare facility, BumbleBeesRUs, located along the eastern edge of the study area.

Commercial uses including neighborhood retail such as grocery stores, fast-food restaurants, and a supermarket, are located at the intersection of Wolcott, Dwight, and Otsego Streets and at the intersection of Columbia and Lorraine Streets.

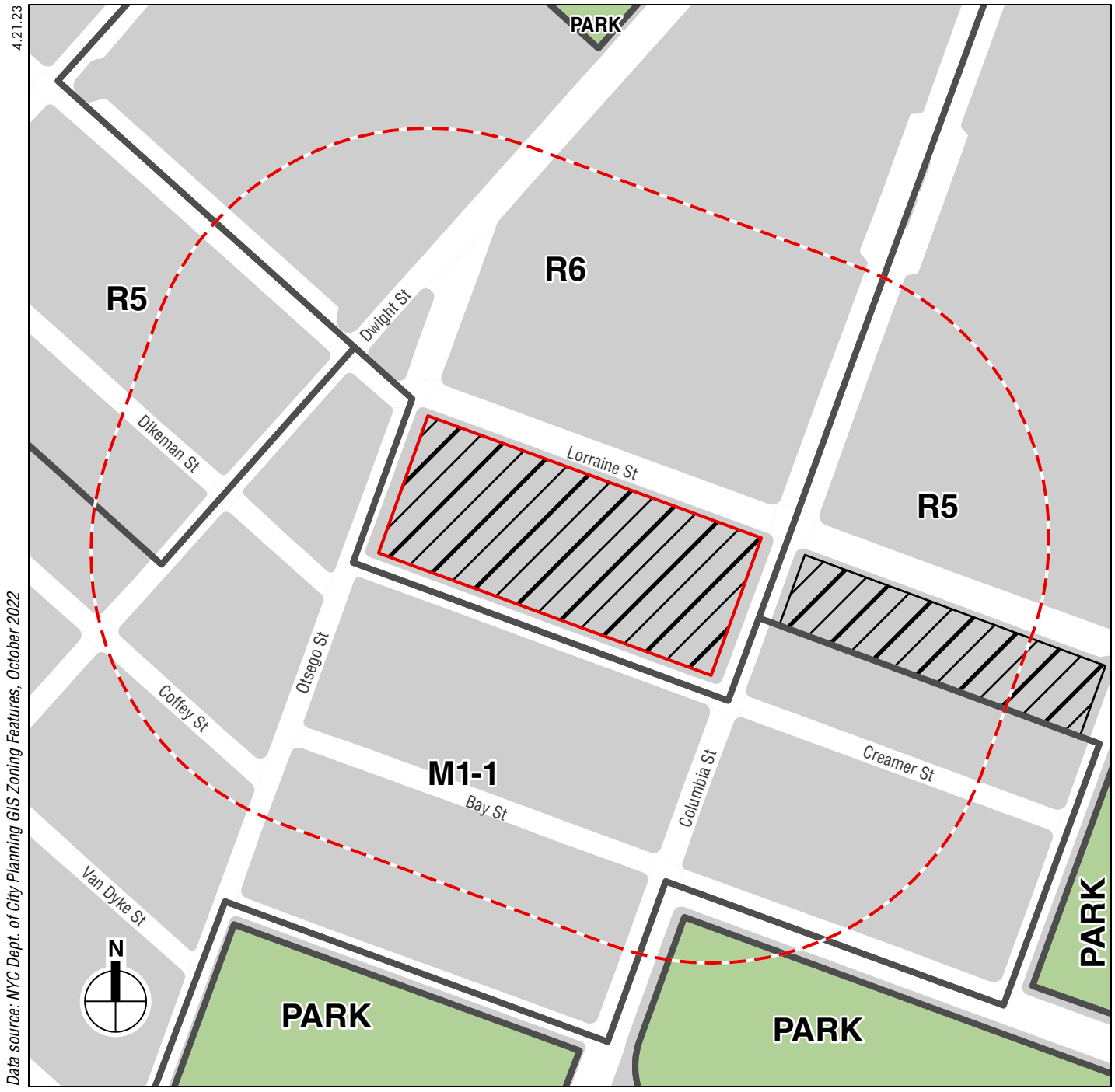
ZONING

PROJECT SITE

The zoning on the project site and the surrounding study area is shown in **Figure B-2**. The project site is located within an R6 zoning district with a C1-3 overlay. R6 zoning districts are medium-density residential districts mapped throughout Brooklyn, Queens, and the Bronx. The R6 district permits a maximum floor area ratio (FAR) of 2.43 for residential uses under Height Factor regulations and 3.0 under Quality Housing regulations or up to 3.6 with Mandatory Inclusionary Housing (MIH). A maximum FAR of 4.8 is permitted for community facility uses. However, the maximum FAR for Affordable Independent Residences for Seniors (AIRS) is 3.90 when combined with Quality Housing.

The C1-3 commercial overlay allows local retail and service uses such as grocery stores and restaurants and, when combined with R6, has a commercial FAR of 2.0. Commercial buildings within C1-3 districts are subject to commercial bulk rules, while commercial uses in mixed-use buildings are restricted to one or two floors that must be located below residential uses. One parking space per 400 sf of commercial space is required under the C1-3 commercial overlay district.

Under Height Factor regulations, residential bulk, including building height, is determined by a corresponding range of height factors, FARs, and open space ratios, and is set within a sky



Existing Zoning

COLUMBIA STREET REDEVELOPMENT

Figure B-2

exposure plane. The optional Quality Housing has height, setback, and bulk regulations designed to produce a building form that is consistent with the existing character of the neighborhood. The Quality Housing regulations permit a slightly denser development in exchange for height limits and consistent street walls. Buildings on wide streets are permitted at an FAR of 3.0 with a maximum building height of 70 feet, or 75 feet if providing a qualifying ground floor. The maximum FAR on narrow streets is 2.20, with a maximum building height of 55 feet.

With MIH, higher maximum FAR and heights are permitted. For sites located on a wide street, the R6 district allows a maximum FAR of 3.6. A maximum height of 11 stories (or 115 feet) is allowed for buildings developed under MIH or that provide certain facilities. On a narrow street, a maximum FAR of 2.42 is permitted.

Off-street parking is generally required for 50 percent of a building's DUs, or 25 percent of income-restricted housing units (IRHU). Off-street parking requirements can be waived if 15 or fewer parking spaces are required or if the zoning lot is 10,000 sf or less. Further, off-street parking is not required for developments within the Transit Zone.

STUDY AREA

As shown in **Figure B-2 and Table B-1**, portions of the study area are within zoning districts M1-1, R5, R5/C1-3, and R6.

Table B-1
Existing Zoning Districts in the Study Area

Zoning District	Max. Base FAR	Uses/Zone Type
M1-1	1.0 (manufacturing and commercial) 2.4 (community facility)	Light industrial manufacturing district
R5/ C1-3	1.25 (residential) 1.0 (commercial)	Low-density residential district with local commercial overlay
R6/ C1-3	0.78-3.6 (residential) 2.0 (commercial)	Medium-density residential district with local commercial overlay

Source: *New York City Zoning Resolution*

An M1-1 district is mapped to the south of the project site. M1-1 districts are manufacturing districts characterized by one- to two-story light industrial uses, such as repair shops, wholesale service, and storage facilities. Building height and setbacks are controlled by a sky exposure plane which may be penetrated by a tower in certain districts. Permitted maximum FARs include 1.0 for manufacturing and commercial uses, and 2.4 for community facility uses. Parking is required at a rate of one space per 300 sf. Office, hotel, and most retail uses are also permitted; residential uses are not permitted.

An R5 district is located to the west of the project site and an R5 district with a C1-3 overlay is located directly to the east of it. R5 districts are low-density residential districts permitting three- to four-story attached homes and small apartment buildings. A maximum FAR of 1.25 is permitted, and building heights may reach a maximum of 40 feet. Parking is required for 85 percent of DUs (42.5 percent of affordable units). When combined with a C1-3 commercial overlay, local commercial uses are permitted at an FAR of 1.0, and parking is required at a rate of one space per 400 sf.

The R6 district zoning covering the project site is also mapped directly to the north of it. The regulations for this district are described above.

PUBLIC POLICY

HOUSING OUR NEIGHBORS: A BLUEPRINT FOR HOUSING AND HOMELESSNESS

On June 14, 2022, New York City Mayor Adams's Administration released *Housing Our Neighbors: A Blueprint for Housing and Homelessness*, a citywide housing plan that focuses strategies and investment on the creation and preservation of high-quality, affordable housing for all New Yorkers, including seniors and households experiencing homelessness. *Housing Our Neighbors* is the result of an extensive stakeholder, industry, and community engagement process, which included direct engagement with New Yorkers who are experiencing or having experienced homelessness.

Supportive housing is a critical tool for providing permanent, affordable homes to New Yorkers that also need social service support to remain stably housed. It is an effective tool used to address the homelessness crisis in New York City, particularly for the chronically homeless, those with mental disabilities, and/or substance use disorders. *Housing Our Neighbors* accelerates the production of supportive housing by targeting the completion of 15,000 supportive homes promised by 2030—two years ahead of schedule. The plan also prioritizes the needs of seniors by expanding supportive services for seniors and the disabled.

The City is doubling its efforts in senior housing to serve 30,000 households over an extended 12-year plan. To meet this additional commitment, the City has launched Seniors First, a three-pronged strategy aimed at enabling seniors by: (1) making more housing accessible to seniors and people with disabilities, (2) building senior housing on underused public or private land, and (3) targeting federal HUD 202 developments for preservation efforts, such as through the Senior Affordable Rental Apartments (SARA) Program.

RED HOOK 197-A PLAN

Red Hook: A Plan for Community Regeneration, is a 197-A plan published in 1996 which serves to guide growth in Red Hook. The plan outlines a comprehensive strategy for rebuilding Red Hook's population and economy that would: (1) promote opportunities for the development of Red Hook's main asset—its people—including improved housing, social services and youth services, and the expansion of the residential community; (2) support the preservation and expansion of industrial and maritime activity where it is currently solidly positioned in the northwest and southeast sections of Red Hook; (3) promote employment and business opportunities for local residents; (4) promote new residential development in the context of an economically, socially, and physically integrated community; (5) guide future development in a way that minimizes conflicts between industrial and residential communities; (6) strengthen, support, and expand the burgeoning arts community; (7) improve access to, egress from, and circulation within Red Hook by public transportation; (8) strengthen existing retail commercial areas; and (9) revitalize and create public access to the waterfront, one of Red Hook's major assets.

ONENYC

In April 2007, the Mayor's Office of Long-Term Planning and Sustainability released *PlaNYC: A Greener, Greater New York (PlaNYC)*. Since that time, updates to *PlaNYC* have been issued that build upon the goals set forth in 2007 and provide new objectives and strategies. In 2015, *One New York: The Plan for a Strong and Just City (OneNYC)* was released by the Mayor's Office of Sustainability and the Mayor's Office of Recovery and Resiliency. *OneNYC* builds upon the sustainability goals established by *PlaNYC* and focuses on growth, equity, sustainability, and

resiliency. In 2019, *OneNYC 2050: Building a Strong and Fair City* was released by the Mayor's Office; this report outlined progress since 2015 on goals related to fairness, implementing progressive policies, providing global leadership, and securing a sustainable future. *OneNYC 2050* has eight goals and 30 initiatives that broadly address committing to carbon neutrality by 2050 and leading by example on climate change, and creating public spaces, healthcare, and policies that support low-income and working New Yorkers. The eight goals outlined include:

- A vibrant democracy that welcomes newcomers and engages all New Yorkers in civic life;
- An inclusive economy that attracts and grows good-paying jobs and guarantees fair wages and dignified work conditions;
- Thriving neighborhoods with safe, affordable housing and ample community resources;
- Healthy Lives by guaranteeing access to quality health care and a healthy environment for all, regardless of neighborhood, income, race or ethnicity, or gender;
- Equity and excellence in education with a focus on creating strong schools that reflect the diversity of thought, backgrounds, and experiences of the communities they serve;
- A livable climate for the next generation with a just transition that ends our reliance on fossil fuels, fully prepares for the impacts of climate change, and achieves climate justice;
- Efficient mobility for all by restoring subways and buses to world-class status so no New Yorker needs to rely on a car; and
- Modern infrastructure that serves the needs of New Yorkers and creates the systems to better deliver that infrastructure.

WATERFRONT REVITALIZATION PROGRAM

The project site is located within the Coastal Zone, and therefore is subject to the policies and provisions of the Waterfront Revitalization Program (WRP). The WRP establishes the City's policies for waterfront planning, preservation, and development projects to ensure consistency over the long term.

C. THE FUTURE WITHOUT THE PROPOSED PROJECT

LAND USE

PROJECT SITE

Absent the proposed project, the project site would be developed with an as-of-right mixed-use development comprised of approximately 308 DUs, 180,000 gsf of community facility space (ambulatory medical facility), and 68,302 gsf of retail space. The development would include an 18-story market-rate residential building on Otsego Street and a 12-story community facility building with ground-floor retail space on Columbia Street. However, no affordable, AIRS, or SH housing would be constructed on the project site. No changes to zoning or public policy are expected in the study area in the No Action condition.

STUDY AREA

There are no developments anticipated to be constructed by 2026 within the 400-foot study area. As noted above, there is an existing trend in Red Hook of market-rate residential development. Seven residential developments have been constructed since 2015, and an eighth is under

construction at 336 Van Brunt Street. The buildings have largely been developed along Van Brunt Street and the adjacent blocks (see Appendix A).

ZONING

The No Action development would be developed pursuant to the existing R6/C1-3 district and Height Factor zoning regulations. No changes in zoning related to the project site and study area are anticipated in the No Action condition.

PUBLIC POLICY

No new public policies or modifications to current public policies applicable to the project site and the study are expected in the future without the proposed action.

D. THE FUTURE WITH THE PROPOSED PROJECT

LAND USE

PROJECT SITE

The proposed project is an approximately 536,470-gsf development consisting of three adjacent 8-story buildings (Buildings A, B, and C).

Building A would be a senior building with 210 AIRS units and approximately 4,580 gsf of space for services. Building A would occupy the western portion of the block with frontage along Otsego, Creamer, and Lorraine Streets. A residential entrance would be located on Otsego Street. The community facility space would be accessed via an entrance on Lorraine Street. An outdoor recreation area would be located above the first floor at the rear of the building.

Building B would contain 81 units of SH (community facility/non-profit with sleeping accommodations), interior recreation space, and a bicycle storage room. The building would be located midblock with an entrance on Lorraine Street.

Building C would contain 110 SH units, 258 units of family housing, approximately 1,080 gsf of community facility space (supportive services, including case management and counseling), and a 10-space accessory parking garage. Building C would be located on the eastern portion of the block with frontage on Columbia, Lorraine, and Creamer Streets. Residential entrances would be located on Creamer and Columbia Streets; the community facility portion of Building C would be accessed via a separate entrance on Creamer Street. The parking garage would occupy a portion of the ground floor and would be accessed via a curb cut on Creamer Street. Outdoor recreation space would be located above the roof of the garage. A 60-foot-wide, publicly accessible landscaped pedestrian corridor would connect Lorraine and Creamer Streets and separate Building A from Buildings B and C.

The proposed project would be consistent with existing land use trends in the study area and would not result in significant adverse impacts. The proposed project would support the residential and mixed-use character of the study area, which contains existing residential, commercial and light industrial uses.

STUDY AREA

The proposed residential use would complement the existing residential character of the study area to the north. The proposed project buildings would be comparable in bulk and scale to the buildings that comprise Red Hook Houses, and the overall massing has been designed to be respective of the existing built context.

Based on the above, the proposed action would not result in any significant adverse land use impacts on the project site or within the study area.

ZONING

PROJECT SITE

The proposed project would be developed under Quality Housing regulations with height limits and high lot coverage buildings that are set at or near the street line as well as amenities relating to interior space, recreation areas and landscaping. The buildings would have base heights of 6 stories (65 feet), before setting back 15 feet, and rising to a maximum building height of 8 stories (85 feet). Each building would include residential amenity spaces including community rooms, laundry, property management offices, and social service offices.

STUDY AREA

The proposed action is specific to the project site and would not affect zoning regulations applicable to other sites in the study area. Overall, the proposed action would not result in any significant adverse zoning impacts on the project site or within the study area.

PUBLIC POLICY

HOUSING OUR NEIGHBORS: A BLUEPRINT FOR HOUSING AND HOMELESSNESS

The proposed project would contribute to *Housing Our Neighbors* by providing over 650 units of housing to address the City's unprecedented housing crisis—a substantial amount of new housing for low-income families, seniors, and individuals in need of supportive housing—at a time when the City is experiencing a severe housing shortage.

Housing Our Neighbors seeks to accelerate the production of supportive housing by targeting the completion of 15,000 supportive homes promised by 2030. Supportive housing is a critical tool for providing permanent, affordable homes to New Yorkers who also need social service support to remain stably housed. The proposed project includes 191 units of supportive housing plus support services.

The proposed project prioritizes the needs of seniors by providing 210 AIRS units for seniors, including senior households experiencing homelessness. As noted above, the City's Seniors First strategy is intended to make more housing accessible to seniors and people with disabilities and build senior housing on underused public or private land. The proposed project would replace an underutilized block with needed housing and support services for seniors and other New Yorkers in need of housing. In addition to meeting the goals of building much needed senior housing, the proposed project would also provide beneficial amenities and supportive services. The senior building would include a exercise room, lounge, and outdoor landscaped spaces for residents.

Lastly, the proposed project includes over 250 family units, which would address the affordability crisis by providing 100 percent affordable housing to a range of household incomes, including housing for low-income and formerly homeless families.

RED HOOK 197-A PLAN

The proposed action would fulfill multiple goals of Red Hook's 197-A Plan. The proposed project would promote opportunities for the development of Red Hook's main asset—its people—with improved housing; promote new residential development in the context of an economically, socially, and physically integrated community—the existing community within the Red Hook Houses. The proposed project's commercial space would promote employment and business opportunities for local residents.

ONENYC

The mission of *OneNYC* is a plan for growth, sustainability, resiliency, and equity. The proposed action would result in the redevelopment of the project site with new safe and 100 pecent affordable housing for New Yorkers, including 258 affordable family units, 210 AIRS units and 191 SH units. The proposed project would be constructed in accordance with the City's flood-resilient construction measures, and would also include a 12,000-sf pedestrian plaza and open space between Building A and Buildings B/C, connecting Creamer and Lorraine Streets. Therefore, the proposed action would be consistent with *OneNYC*'s goals for growth, sustainability, and equity.

WATERFRONT REVITALIZATION PROGRAM

As described above, the project site is located within the Coastal Zone. Therefore, the proposed action is subject to a consistency review under the City's WRP. The WRP includes policies designed to maximize the benefits derived from economic development, environmental preservation, and public use of the waterfront, while minimizing the conflicts among those objectives. The WRP Consistency Assessment Form (CAF) (see **Appendix B**) lists the WRP policies and asks whether the proposed project would promote or hinder each policy, or if each policy would not be applicable. **Appendix B** also provides additional information for the policies that have been checked "promote" or "hinder" in the WRP CAF. Overall, the proposed project would be consistent with the City's WRP. As required under CEQR, HPD refers the WRP CAF to the Department of City Planning's (DCP) Waterfront and Open Space Division. DCP notified HPD that the proposed project would be consistent with the policies and intent of the City's WRP (see agency correspondence found in **Appendix B**).

Overall, the proposed action would not result in significant adverse impacts to land use, zoning, and public policy. ✷

A. INTRODUCTION

This attachment considers the potential for the proposed action to result in significant adverse impacts to socioeconomic conditions. As stated in the 2021 *City Environmental Quality Review (CEQR) Technical Manual*, the socioeconomic character of an area includes its population, housing, and economic activities. Socioeconomic impacts may occur when a project directly or indirectly affects any of these elements.

As described in Attachment A, "Project Description and Screening Assessments," the proposed action would facilitate the construction of the proposed project: three, 8-story buildings containing a total of 659 units of affordable family, senior, and supportive housing and approximately 5,660 square feet (sf) of community facility space, including space for senior and supportive services. Located at 37 Otsego and 498 Columbia Streets (Brooklyn Block 579, Lot 1), the project site is in the Red Hook neighborhood of Brooklyn, Community District (CD) 6. As described below, a preliminary assessment of indirect residential displacement finds that the proposed project would not result in any significant adverse impacts.

B. METHODOLOGY

Under CEQR, socioeconomic changes are disclosed if they would affect land use patterns, low-income populations, the availability of goods and services, or economic investment in a way that changes the socioeconomic character of the area. In some cases, these changes may be substantial but not adverse. In other cases, these changes may be good for some groups but bad for others. The objective of the CEQR analysis is to disclose whether any changes created by the proposed action would have a significant impact compared with what would happen in the future without the proposed action (the No Action condition).

An assessment of socioeconomic impacts distinguishes between impacts on the residents and businesses in a study area and separates these impacts into direct and indirect displacement for both of those segments. Direct displacement occurs when residents or businesses are involuntarily displaced from the actual site of a proposed project or sites directly affected by it. For example, direct displacement would occur if a currently occupied site were redeveloped for new uses or structures or if a proposed easement or right-of-way encroached on a portion of a parcel and rendered it unfit for its current use. In these cases, the occupants of a particular structure to be displaced can usually be identified, and therefore the disclosure of direct displacement focuses on a known number of residents and/or specific businesses and workers.

Indirect or secondary displacement occurs when residents, businesses, or employees are involuntarily displaced due to a change in socioeconomic conditions in the area caused by a project. Examples include the displacement of lower-income residents who are forced to move due to rising rents caused by higher-income housing introduced by a project. Examples of indirect business displacement include higher-paying commercial tenants replacing industrial uses and

when new uses introduced by a project cause commercial rents to increase. Unlike direct displacement, the exact occupants to be indirectly displaced are not known. Therefore, an assessment of indirect displacement usually identifies the size and type of groups of residents, businesses, or employees potentially affected.

Some projects may affect the operation and viability of a specific industry not necessarily tied to a specific location. An example would be new regulations that prohibit or restrict the use of certain processes that are critical to certain industries. In these cases, the CEQR review process may involve an assessment of the economic impacts of the project on that specific industry.

DETERMINING WHETHER A SOCIOECONOMIC ASSESSMENT IS APPROPRIATE

According to the *CEQR Technical Manual*, a socioeconomic assessment should be conducted if a project may be reasonably expected to create socioeconomic changes in the area affected by the project that would not be expected to occur in the absence of the project. The following screening assessment considers threshold circumstances identified in the *CEQR Technical Manual* (italicized in bold below) that can lead to socioeconomic changes warranting further assessment.

DIRECT DISPLACEMENT

Direct Residential Displacement

Would the proposed action directly displace residential population to the extent that the socioeconomic character of the neighborhood would be substantially altered? Displacement of fewer than 500 residents would not typically be expected to alter the socioeconomic character of a neighborhood.

The proposed action would not result in the direct displacement of any existing residential dwelling units (DUs) as there are no DUs on the project site. As such, the proposed action would not result in significant adverse impacts due to direct residential displacement, and a preliminary assessment of direct residential displacement is not warranted.

Direct Business Displacement

Would the proposed action directly displace more than 100 employees? If so, assessments of direct business displacement and indirect business displacement are appropriate. Would the proposed action directly displace a business whose products or services are uniquely dependent on its location, are the subject of policies or plans aimed at its preservation or serve a population uniquely dependent on its services in its present location? If so, an assessment of direct business displacement is warranted.

The proposed action would not displace any businesses. There are no businesses currently located on the project site; the project site contains a vacant commercial building. As such, the proposed action would not result in significant adverse impacts due to direct business displacement, and a preliminary assessment of direct business displacement is not warranted.

INDIRECT DISPLACEMENT

Would the proposed action result in a substantial new development that is markedly different from existing uses, development, and activities within the neighborhood? Residential development of 200 units or less or commercial development of 200,000 square feet or less would typically not result in significant socioeconomic impacts. For projects exceeding these

thresholds, assessments of indirect residential displacement and indirect business displacement are appropriate.

Indirect Residential Displacement

The proposed action would result in the construction of up to 351 incremental DUs compared with the No Action condition, which is over the 200-unit development threshold identified by the *CEQR Technical Manual.* Therefore, a preliminary assessment of potential indirect residential displacement is warranted.

Indirect Business Displacement Due to Increased Rents

The proposed project would not exceed the 200,000-square-foot commercial development threshold warranting assessment of indirect business displacement. The proposed project would include a total of approximately 5,659 gross square feet (gsf) of community facility space. The proposed community facility space is not a substantial new use that is markedly different from existing uses in the area. The proposed project would add a total of approximately 405 new residents, which is a 3.6 percent increase above the existing population within an approximate half-mile of the project site.[1] Given the fact that Red Hook is already an established residential neighborhood, and the proposed project is 100 percent affordable housing, the residential development that would occur as a result of the proposed action would not have the potential to result in demographic changes in the local market that could lead to indirect business displacement due to increased commercial rents, and an analysis of potential impacts due to indirect business displacement is not warranted.

Indirect Business Displacement Due to Retail Market Saturation

Would the proposed action result in a total of 200,000 square feet or more of retail on a single development site or 200,000 square feet or more of region-serving retail across multiple sites? This type of development may have the potential to draw a substantial amount of sales from existing businesses within the study area, resulting in indirect business displacement due to market saturation.

The proposed project would not include any retail development and, as such, the proposed action does not have the potential to result in significant adverse impacts due to retail market saturation, and an assessment of indirect business displacement due to market saturation is not warranted.

ADVERSE EFFECTS ON SPECIFIC INDUSTRIES

Is the proposed action expected to affect conditions within a specific industry? This could affect socioeconomic conditions if a substantial number of workers or residents depend on the goods or services provided by the affected businesses, or if the proposed action would result in the loss or substantial diminishment of a particularly important product or service within the City.

The proposed action would not significantly affect business conditions in any industry or any category of business. As detailed above, the proposed project would not directly displace any uses located on the project site, nor would the proposed project have the potential to result in significant

[1] The proposed project would add approximately 405 new residents to the area, representing approximately 6.1 percent of the existing population within the quarter-mile study area. The *CEQR Technical Manual* advises that a quarter-mile study area be expanded if a project would increase the population of the study area by more than 5 percent. Therefore, the study area was expanded to a half-mile radius for the proposed project.

adverse impacts due to indirect business displacement. Therefore, the proposed action does not have the potential to result in significant adverse effects on specific industries, and a preliminary assessment of this concern is not warranted.

DETERMINATION

Based on *CEQR Technical Manual* threshold criteria for assessment, the proposed action warrants further assessment of potential indirect residential displacement. This assessment is presented in Section C, "Preliminary Assessment."

ANALYSIS FORMAT

Based on *CEQR Technical Manual* guidelines, the analysis of indirect residential displacement begins with a preliminary assessment. The objective of the preliminary assessment is to learn enough about the potential effects of the proposed action to either rule out the possibility of significant adverse impacts or determine that a more detailed analysis is required to fully determine the extent of the impacts. In this case, a preliminary assessment was sufficient to conclude that the proposed action would not result in significant adverse socioeconomic impacts due to indirect residential displacement.

STUDY AREA

According to the *CEQR Technical Manual*, socioeconomic study area boundaries depend on project size and characteristics. The *CEQR Technical Manual* states that a quarter-mile study area is appropriate for a project that produces a small (below 5 percent) increase to the quarter-mile area population. The proposed action would result in the introduction of an estimated 406 incremental residents, which is an approximately 6.1 percent increase to the existing quarter-mile area population. Therefore, a half-mile study area is appropriate for this analysis.

Because the socioeconomic analysis depends on U.S. Census-based demographic data, it is appropriate to adjust the study area boundary to conform to the census tract delineation that most closely approximates the desired radius (in this case, a half-mile radius surrounding the project site). The census tracts that constitute the "socioeconomic study area," or "study area," are shown in **Figure C-1** and include Census Tracts 53.01, 53.02, 59, and 85. The socioeconomic study area is located within Brooklyn CD 6 and generally encompasses the Red Hook neighborhood, extending north to the BQE, east to the Gowanus Canal/Gowanus Bay, south to the Erie Basin and the Upper New York Bay, and west to Ferris and Inlay Streets. The study area includes the New York City Housing Authority (NYCHA) Red Hook Houses is located entirely within Census Tract 85 and includes 2,875 housing units, which is 61 percent of all housing units in the study area. Because the Red Hook Houses house a large low-income population that will influence data points such as average income and average rent, data for the study area with and without Census Tract 85 are presented.

DATA SOURCES

Information used in the analysis of indirect residential displacement was gathered from the U.S. Census Bureau's 2020 Decennial Census, U.S. Census Bureau 2006–2010 and 2017–2021 American Community Survey (ACS) 5-Year Estimates, and the New York City Department of City Planning (DCP) Housing Database. The DCP Housing Database is consulted to assess a net change in completed construction projects after April 1 of the latest decennial year (now 2020) to present a reasonable estimate of the existing population at the time of the analysis. The DCP NYC Population FactFinder online mapping tool was used to provide comparative census data between geographies



Socioeconomic Study Area

COLUMBIA STREET REDEVELOPMENT

Figure C-1

and to determine the margin of error (MOE) for single variable ACS estimates presented for the study area.[2] Census data were gathered on population, housing, and income. All dollar values for census data were converted to 2022 dollars using the United States Department of Labor Bureau of Labor Statistics Consumer Price Index to allow for comparison between years. Data on market rents within the study area were collected on the real estate listings website StreetEasy.com.

C. PRELIMINARY ASSESSMENT

INDIRECT RESIDENTIAL DISPLACEMENT

As described in the *CEQR Technical Manual*, indirect residential displacement usually occurs when a project results in a substantial new development that is markedly different from existing uses and activities within a neighborhood. This can contribute to increased property values and increased rents, which can make it difficult for some existing residents to remain in their homes.

Generally, an indirect residential displacement analysis is conducted only in cases in which the potential impact may be experienced by renters living in privately held DUs unprotected by rent control, rent stabilization, or other government regulations restricting rents, and whose incomes or poverty status indicates that they may not withstand substantial rent increases. Residents who are homeowners, or who are renters living in rent-protected DUs, are not considered potentially vulnerable populations under CEQR. This analysis follows the step-by-step assessment guidelines of the *CEQR Technical Manual*.

Step 1: Determine if the proposed action would add new population with higher average incomes compared to the average incomes of the existing populations and any new population expected to reside in the study area without the project.

EXISTING CONDITIONS

Based on the 2020 Decennial Census and the DCP Housing Database 2020 Q4 dataset, the study area has an estimated population of 10,690.[3] The study area is located within Brooklyn CD 6, which has an average household size of 2.27.[4] Approximately 62 percent of study area residents live in NYCHA Red Hook Houses, which is located entirely in Census Tract 85 and includes 2,875 housing units. This analysis uses average and median household incomes to describe the household income characteristics of the study area population. As shown in **Table C-1**, in 2021, the average annual household income within the study area was approximately $77,917, lower than that of Brooklyn ($113,889) and New York City ($124,218). The average household income of the study area excluding Census Tract 85 was $171,225, which is notably higher than that of

[2] MOEs describe the precision of an estimate within a 90-percent confidence interval and provide an idea of how much variability (i.e., sampling error) is associated with the estimate. The larger the MOE relative to the size of the estimate, the greater potential for variability within the data. The MOE is partially dependent on the sample size, because larger sample sizes result in a greater amount of information that more closely approximates the population.

[3] According to the DCP Housing Database 2020 Q4 dataset, there has been an increase of 12 DUs within the study area since 2020. Assuming a vacancy rate of 7 percent and an average household size of 2.27, an additional 25 residents were added to the 2020 Decennial Census population.

[4] U.S. Census Bureau 2020 Decennial Census.

the study area overall.[5] Overall, the average household income has increased in the study area, Brooklyn, and New York City since 2010.

Table C-1
Average Annual Household Income (2006–2010, 2017–2021 ACS)

Area	2006–2010 ACS[1]	2017–2021 ACS[1]	Change or Direction of Change
Socioeconomic Study Area	$54,246	$77,917	Increase[2]
Socioeconomic Study Area excluding Census Tract 85	$100,685	$171,225	Increase[2]
Brooklyn	$86,151	$113,889	32.2%
New York City	$107,107	$124,218	16.0%

Notes:
1 All dollar figures have been adjusted to 2022 dollars based on the U.S. Department of Labor Consumer Price Index.
2 The MOE of the difference between the 2006–2010 ACS and 2017–2021 ACS estimates is more than one third of the estimated difference. Therefore, a percent change cannot be estimated with confidence and only the direction of the change can be reported.
Sources: U.S. Census Bureau, 2006–2010 and 2017–2021 ACS 5-Year Estimates via DCP's NYC Population Factfinder.

Given that average income can be heavily influenced by outliers (both high and low) within the data, the median household income is also presented to supplement the analysis (see **Table C-2**). In 2021, the median annual household income within the study area was approximately $34,763, which was lower than the median household income for Brooklyn ($74,272) and New York City as a whole ($77,462). The median household income in the study area is much lower than the average household income, indicating that there is a large number of low-income households and a smaller number of high-income households. When excluding Census Tract 85, the median household income is $125,724, which is notably higher than the median for the study area overall and is higher than that of Brooklyn and New York City.

Table C-2
Median Annual Household Income (2006–2010, 2017–2021 ACS)

Area	2006–2010 ACS[1]	2017–2021 ACS[1]	Change or Direction of Change
Socioeconomic Study Area	$31,784	$34,763[2]	Cannot be reported[3]
Socioeconomic Study Area Excluding Census Tract 85	$79,355	$125,724	Increase[4]
Brooklyn	$59,904	$74,272	24.0%
New York City	$69,141	$77,462	12.0%

Notes:
1 All dollar figures have been adjusted to 2022 dollars based on the U.S. Department of Labor Consumer Price Index.
2 This estimate has low reliability because the MOE is more than one third of the estimate itself. Considering the MOE of $11,407, the estimate of median household income for the study area is between $20,305 and $43,119.
3 The MOE of the difference between the 2006–2010 ACS and 2017–2021 ACS estimates is greater than the difference itself. Therefore, a change or direction of change cannot be estimated with confidence.
4 The MOE of the difference between the 2006–2010 ACS and 2017–2021 ACS estimates is more than one third of the estimated difference. Therefore, a percent change cannot be estimated with confidence and only the direction of the change can be reported.
Sources: U.S. Census Bureau, 2006–2010 and 2017–2021 ACS 5-Year Estimates via DCP's NYC Population Factfinder.

[5] Because the Red Hook Houses (located in Census Tract 85) house a large low-income population that influences data points such as average income and average rent, data for the study area with and without Census Tract 85 are presented.

As shown in **Table C-3**, in 2021, the socioeconomic study area had lower average and median gross monthly rents as compared with Brooklyn and New York City. The median gross rent was estimated at $808 per month, compared with $1,734 in Brooklyn and $1,731 in New York City overall. Similarly, the average gross rent within the study area ($1,119) was lower than Brooklyn ($1,804) and New York City ($1,842). Excluding Census Tract 85, the study area's average and median gross rents are $2,479 and $2,466 respectively, which is notably higher than in the study area overall. The study area excluding Census Tract 85, Brooklyn, and New York City saw increases in average and median gross rent between 2010 and 2021, with Brooklyn seeing increases as high as 27.8 percent for average rent and 22.1 percent for median gross rent.

Table C-3
Average and Median Gross Rent (2006–2010, 2017–2021 ACS)

Area	2006–2010 ACS[1]		2017–2021 ACS[1]		Percent Change	
	Average	Median	Average	Median	Average	Median
Socioeconomic Study Area	$965	$729	$1,199	$808	Cannot be reported [2]	Cannot be reported [2]
Socioeconomic Study Area Excluding Census Tract 85	$1,885	$1,731	$2,479	$2,466	Increase[2]	Increase[2]
Brooklyn	$1,409	$1,393	$1,804	$1,734	28.1%	24.5%
New York City	$1,563	$1,462	$1,842	$1,731	17.8%	18.4%

Notes:
1 All dollar figures have been adjusted to 2022 dollars based on the U.S. Department of Labor Consumer Price Index.
2 The MOE of the difference between the 2006–2010 ACS and 2017–2021 ACS estimates is greater than the difference itself. Therefore, a change or direction of change cannot be estimated with confidence.
3 The MOE of the difference between the 2006–2010 ACS and 2017–2021 ACS data for the study area is greater than one third of the estimated difference. Therefore, a percent change cannot be estimated with confidence.
Sources: U.S. Census Bureau, 2006–2010 and 2017–2021 ACS 5-Year Estimates via DCP's NYC Population Factfinder and Social Explorer.

The U.S. Census ACS data does not provide specific rent information according to regulation status or unit size, but instead can paint a general picture about the rate at which housing costs are changing in a neighborhood. Recent and active rental listings were therefore used to provide a fuller understanding of where the market is today. **Table C-4** presents a summary of the existing market rents within the study area. The study area excluding Census Tract 85 is not presented here as NYCHA public housing units, such as those in the Red Hook Houses are not market rate listings and are already excluded from the data in this table. The average market rent in the study area is $3,764.

Table C-4
Socioeconomic Study Area Market Rents

Unit Type	Average	Median	Upper Quartile
Studio	$2,383	$2,400	$2,563
One Bedroom	$3,168	$3,000	$3,675
Two Bedroom	$3,947	$3,600	$4,200
Three Bedroom	$5,979	$4,975	$7,000
All Unit Types	**$3,764**	**$3,350**	**$4,000**

Sources: StreetEasy (http://streeteasy.com), Apartments.com, and Zillow.com accessed in April 2024 based on sampling of 207 active and recent listings within the study area.

THE FUTURE WITHOUT THE PROPOSED PROJECT

Project Site

The proposed project has a build year of 2026. Absent the proposed project in 2026, it is assumed that the project site would be developed with an as-of-right mixed-use development comprising approximately 308 market rate DUs, 180,000 gsf of community facility space, and 68,302 gsf of retail space.

Study Area

There are four planned residential developments within a half-mile radius of the project site that are anticipated to be completed by the build year of 2026. In total, the No Action condition will see the development of 46 new DUs in the socioeconomic study area. The new DUs would introduce an estimated 104 new residents, which is a less than 1 percent increase in population as compared with existing conditions. All the planned DUs to be developed in the study area in the No Action condition are market rate and many are townhome-style condominium units. Based on existing rent and income trends, it is anticipated that the study area, not including the permanently affordable Red Hook Houses, will continue to show a trend of rising rents and incomes in the No Action condition.

THE FUTURE WITH THE PROPOSED PROJECT

The future with the proposed project (the "With Action" condition) describes the future condition in which the proposed action is approved and implemented, and the proposed project is completed and operational. In the With Action condition, the proposed project would be developed on the project site. The proposed project would construct three, 8-story buildings containing a total of 659 units of affordable family, senior, and supportive housing and approximately 5,660 square feet (sf) of community facility space, including space for senior and supportive services.

The project sponsor is seeking construction funding from the New York City Department of Housing Preservation and Development (HPD) through its Senior Affordable Rental Apartments Program (SARA), Supportive Housing Loan Program (SHLP), and Extremely Low and Low-Income Affordability Program (ELLA). Building A would be financed through SARA, Building B would be financed through SHLP, and Building C would be developed through ELLA. Other sources of funding include as-of-right and discretionary Low Income Housing Tax Credits (LIHTCs), tax exempt bond proceeds from the New York City Housing Development Corporation (HDC) and funding through HDC's ELLA. The affordability requirement for these programs are as follow:

- **SARA**: Projects serve senior households, in which at least one person is 62 years or older, with incomes up to 60 percent of the Area Median Income (AMI). Thirty percent of units should be reserved for homeless individuals or families who reside in shelter facilities operated by or on behalf of the City or are otherwise in need of emergency shelter as determined by the City. Homeless households would pay 30 percent of income toward rent.
- **SHLP:** Projects serve low-income households with incomes up to 60 percent of the AMI.
- **ELLA**: A minimum of 80 percent of the units must be at low-income rents affordable to households earning up to 80 percent AMI. Up to 20 percent of the units may have rents affordable to moderate income households earning between 90 to 100 percent of AMI. At least 15 percent of units must be set aside for formerly homeless households.The weighted average AMI range for LIHTC must be 53 to 54 percent.

For this analysis, the proposed project is assumed to have an average AMI level of 60 percent. New York City AMIs are shown in **Table C-5**. AMIs are calculated yearly by HUD.

Table C-5
2024 New York City Area Median Income (AMI)

Family Size	30% of AMI	40% of AMI	50% of AMI	60% of AMI	70% of AMI	80% of AMI	100% of AMI	120% of AMI	130% of AMI
1	$32,610	$43,480	$54,350	$65,220	$76,090	$86,960	$108,700	$130,440	$141,310
2	$37,290	$49,720	$62,150	$74,580	$87,010	$99,440	$124,300	$149,160	$161,590
3	$41,940	$55,920	$69,900	$83,880	$97,860	$111,840	$139,800	$167,760	$181,740
4	$46,590	$62,120	$77,650	$93,180	$108,710	$124,240	$155,300	$186,360	$201,890
5	$50,310	$67,080	$83,850	$100,620	$117,390	$134,160	$167,700	$201,240	$218,010

Source: HUD https://www1.nyc.gov/site/hpd/services-and-information/area-median-income.page.

The proposed project would have a mix of studio, one-bedroom, and two-bedroom units. The household size of the supportive and senior studio units is assumed to be 1; the household size of the senior one-bedrooms is assumed to be 1.5; the non-studio supportive and family units are assumed to have an estimated average household size of 2.27, which is the average household size of Brooklyn CD 6 as of the 2020 U.S. Decennial Census. **Table C-6** shows the estimated average income levels for each building based on an average of 60 percent AMI and household size. Because the household size estimates for the proposed units fall between two whole numbers, as recommended in the *CEQR Technical Manual*, this analysis splits the difference between the AMI for 1- and 2- and 2- and 3-person households. The average household income for the proposed project would be $71,539, which is less than the average income for the study area in the existing condition and the projected No Action condition, inclusive and exclusive of Census Tract 85.

Table C-6
Estimated Household Income of the Proposed Project

Unit Type	Count	Household Size	60% AMI
Supportive/Senior Studios	267	1	$65,220
Senior One-Bedroom	68	1.5	$69,900
Family and Supportive Units (non-studio)	324	2.27	$77,091
Total/Weighted Average	**659**		**$71,539**

Sources: HUD AMI (see **Table C-5**)

However, due to the large disparity between the average and median household income levels within the study area, particularly when including Census Tract 85, this analysis also considers the median household income of the Proposed Project as compared to the existing conditions. The median household income of the Proposed Project is $69,900, which is greater than the existing condition for the study area including Census Tract 85 ($34,763); if excluding Census Tract 85 from the study area, the Proposed Project would have a median income less than the study area ($125,724). Since the median income level of the Proposed Project is greater than the half-mile study area when accounting for Census Tract 85, the analysis proceeds to Step 2, detailed below.

Step 2: Determine if the proposed action's increase in population is large enough relative to the size of the population expected to reside in the study area without the proposed action to affect real estate market conditions in the study area.

Based on the 2020 Decennial Census and DCP's Housing Database, the half-mile study area has an estimated population of 10,690. As shown in **Table C-7**, under the No Action condition, the estimated population is anticipated to increase to 11,493 residents, resulting in a 7.5 percent increase as a result of the No Action condition and known residential projects in the study area.

Table C-7
Population Estimates and Projections
Existing Conditions and Future Without the Proposed Actions

	2010	2020	DCP Housing Database Projection[1]	2024 Study Area Projection	2026 Population Projection in No Action Condition[2]	Percent Change 2024 to 2026 No Action Condition
Study Area	10,228	10,665	25	10,690	11,493	7.5%

Notes:
[1] An estimated 12 net new units were developed in the study area since the Census data collection in April 2020, according to DCP's Housing Database 2020 Q4. Assuming a vacancy rate of 7 percent an average household size of 2.27, an additional 25 residents were added to the 2020 Decennial Census population in the study area as a result of new developments.
[2] There are four new developments anticipated for completion by the build year of 2026 that are estimated to introduce approximately 104 new residents into the study area. Additionally, the No Action condition would develop the site with 308 units. Overall, the new development would raise the total population of the study area to 11,493 by 2026, absent the Proposed Actions.
Source: 2010 and 2020 Decennial Census; DCP Housing Database

In the With Action condition, the study area would experience an increase compared to the No Action condition (see **Table C-8**). The 351 incremental DUs would introduce an estimated 406 new residents to the study area. This would represent an approximately 3.5 percent increase in the overall study area between the With Action and No Action condition.

Table C-8
With Action Condition Population

	2026 Population Projections No Action Condition	Number of Incremental DUs	With Action Incremental Population	Percent Change from 2026 With Action Condition
Study Area	11,493	351	406	3.5%

According to the *CEQR Technical Manual* analysis thresholds, if the population is greater than 5 percent of a study area or identified subarea, the incremental population may be large enough to affect real estate market conditions, and Step 3 of the preliminary assessment is warranted. The 3.5 percent increase in the study area population as a result of the proposed project would not suggest an increase large enough to substantially alter the market trends of the existing half-mile study area.

Within the more immediate quarter-mile area surrounding the project site, the majority of the residential population lives within the Red Hook East and West NYCHA Campus. Therefore, the proposed project would not have the potential to alter the rents within these units due to changes in market conditions. The proposed project would be entirely affordable and would introduce a mix of permanent, affordable family, senior, and supportive housing. In the long term, the 659 affordable units would preserve the diverse housing opportunities in the area even with rent pressures and would not result in accelerating housing costs. Permanently affordable housing is

unlikely to adversely affect the market conditions in a neighborhood and accelerate trends toward increased housing prices.

D. CONCLUSION

Step 2 of the preliminary assessment determined that the proposed action would not introduce a population sizeable enough or with higher average incomes than the No Action study area population to adversely affect the neighborhood's real estate market conditions within the half-mile study area. Therefore, based on *CEQR Technical Manual* guidelines, the proposed action would not result in significant adverse impacts to socioeconomic conditions due to indirect residential displacement, and no further analysis is warranted. ✷

Attachment D: Community Facilities and Services

A. INTRODUCTION

This attachment assesses the potential impacts of the proposed action on community facilities and services, which are defined in the *City Environmental Quality Review (CEQR) Technical Manual* as public or publicly funded schools, publicly funded early childhood programs, public libraries, health care facilities, and fire and police protection services. The analysis focuses on direct effects on community facilities, such as when a facility is physically displaced or altered, and on indirect effects, which could result from increased demand for community facilities and services generated by new users, such as the new population that would result from the future with the proposed action (the "With Action" condition).

As described in Attachment A, "Project Description and Screening Assessments," the proposed action would facilitate the construction of three 8-story buildings at 37 Otsego and 498 Columbia Streets (Brooklyn Block 579, Lot 1) containing a total of 659 dwelling units (DUs) of affordable family, senior, and supportive housing (SH) and approximately 5,660 square feet (sf) of community facility space, including space for senior and supportive services (the "proposed project"). This assessment concludes that the proposed action would not result in any significant adverse impacts to community facilities.

B. PRELIMINARY SCREENING

The analysis of community facilities has been conducted in accordance with the latest data and guidance from the New York City Department of City Planning (DCP) and New York City Department of Education (DOE).

The purpose of the preliminary screening is to determine whether a community facilities assessment is warranted. A community facilities assessment is warranted if a project has the potential to result in either direct or indirect effects on community facilities. If 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 physical change may have on that service delivery. New population added to an area as a result of a project would use existing services, which may result in 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 schools, libraries, or early childhood programs.

DIRECT EFFECTS

The proposed action would not displace or otherwise directly affect any public schools, early childhood programs, libraries, health care facilities, or fire protection services. Therefore, an analysis of direct effects is not warranted.

INDIRECT EFFECTS

The thresholds for guidance in determining whether a detailed analysis is necessary to assess potential indirect impacts are presented in **Table D-1**. If a project exceeds the threshold for a specific facility type, a more detailed analysis is warranted. As discussed in Attachment A, "Project Description and Screening Analyses," in the With Action condition, a total of 657 DUs would be developed. It is conservatively assumed that all 258 family units would generate children and that the 210 Affordable Independent Residences for Seniors (AIRS) units and 191 SH units would not generate children. As shown in Table A-1 of Attachment A, "Project Description and Screening Analyses," compared with the No Action condition, which includes 308 market rate DUs, the proposed project would result in an overall net decrease of 50 family DUs, if affordability is not taken into consideration. However, since the residential component in the No Action condition is comprised entirely of market rate units, there would be a net increase of 258 affordable family DUs under the No Action condition.

Table D-1
Preliminary Screening Analysis Criteria: Manhattan

Community Facility	Threshold For Detailed Analysis
Public schools	50 or more elementary/intermediate school students (total of elementary and intermediate) or 150 or more high school students based on the number of residential units. New School Construction Authority (SCA) student multipliers that are at the Community School District (CSD) level were released in November 2019. These multipliers were calculated using the latest five-year estimates from the American Community Survey. For CSD 15, where the project is located, the multipliers are approximately 0.17 per residential unit for elementary schools, 0.04 for intermediate schools, and 0.05 for high schools.
Libraries	Greater than five percent increase in ratio of residential units to libraries in borough. In Brooklyn, the minimum number of residential units that triggers a detailed analysis is 834.
Publicly Funded Early Childhood Programs	More than 20 eligible children based on number of low- and low/moderate-income units by borough. In Brooklyn, the minimum number of affordable units that triggers a detailed analysis is 110.
Health care facilities (outpatient)	Introduction of sizeable new neighborhood where none existed before[1]
Fire protection	Introduction of sizeable new neighborhood where none existed before[1]
Police protection	Introduction of sizeable new neighborhood where none existed before[1]

Note: [1] The *CEQR Technical Manual* cites the Hunters' Point South project as an example of a project that would introduce a sizeable new neighborhood where none existed before. The Hunters' Point South project would introduce approximately 5,000 new residential units to the Hunters' Point South waterfront in Long Island City, Queens.
Source: *CEQR Technical Manual*, 2021.

Based on these project increments and the screening criteria in **Table D-1**, a detailed analysis of potential indirect impacts on publicly funded early childhood programs is warranted. Detailed analyses of public schools and libraries are not warranted.

A detailed analysis of indirect impacts on police and fire services, hospitals, and public health clinics is warranted if a proposed action would affect the physical operation of, or access to and from, a station house or healthcare facility, or where a proposed action would create a sizeable new neighborhood where none existed before. The proposed action would not directly displace a station house or healthcare facility, and would not adversely affect the physical operation of, or access to and from, a facility. In addition, the proposed action would not create a sizeable new neighborhood. Therefore, a detailed analysis of potential impacts on police and fire services, hospitals, and public health clinics is not warranted.

C. POTENTIAL INDIRECT EFFECTS ON PUBLICLY FUNDED EARLY CHILDHOOD PROGRAMS

METHODOLOGY

DOE's Division of Early Childhood Education provides subsidized childcare through means-tested early childhood programs to eligible children ages 5 and younger (until the child is eligible to attend Kindergarten for a fall start date). The analysis focuses on services for children under age 5, as eligible children aged 5 through 12 are expected to be in school for most of the day. Publicly funded early childhood programs comprise EarlyLearn NYC and Extended Day/Year programs, 3-K for All, and Pre-K for All. EarlyLearn NYC and Extended Day/Year programs have eligibility requirements, while the 3-K and Pre-K programs are free for all 3- and 4-year-old children in New York City.

As per the 2021 *CEQR Technical Manual*, the early childhood program analysis methodology is limited to these publicly funded means-tested early childhood programs. EarlyLearn NYC is the City's program serving 0–2 year olds, and provides free or low-cost childcare and education options in programs run by community-based organizations in childcare centers or in private homes licensed to private childcare services. Extended Day/Year programs serve 3–4-year-olds, are funded by Head Start and Child Care Block Grants, and located at individual locations or co-located with universal 3-K and Pre-K. Space for one child in such childcare centers is termed a "slot." Slots may be in contracted programs at a childcare center run by a provider, or in private homes licensed to provide childcare services to small numbers of unrelated children. "Group family childcare" serves 6 to 12 children, while "family childcare" serves 3 to 6 children.

In order to receive subsidized seats, families must meet specific financial and social eligibility criteria as established by DOE. In general, children in families that have incomes at or below 200 percent of the Federal Poverty Level (FPL), depending on family size, are financially eligible, although in some cases eligibility can go up to 275 percent of the FPL. To receive subsidized childcare services, a family also must have an approved "reason for care," such as involvement in a child welfare case or participation in a "welfare-to-work" program. Head Start is a federally funded childcare program that provides children with half-day or full-day early childhood education. Program eligibility is limited to families with incomes at 130 percent or less of the FPL.

The City's affordable housing market is pegged to Area Median Income (AMI) rather than the FPL. Lower-income DUs must be affordable to households at or below 80 percent AMI. Since family incomes at or below 200 percent FPL fall under 80 percent AMI, for the purposes of this analysis, the number of DUs in a proposed project expected to be subsidized and targeted for incomes of 80 percent AMI or below provides a conservative estimate of the number of DUs with children that are eligible for publicly funded early childhood programs.

Most children are served through enrollment in contracted EarlyLearn NYC or Extended Day/Year programs or by vouchers for private and non-profit organizations that operate childcare programs throughout the City. Registered or licensed providers can offer family-based childcare in their homes. Informal childcare can be provided by a relative or neighbor for no more than two children. Children ages 6 weeks through 13 years old can be cared for either in group childcare centers licensed by the New York City Department of Health and Mental Hygiene (DOHMH) (or in homes of registered childcare providers), although programs for 6-year-old to 13-year-old children are not analyzed under CEQR. Vouchers are also issued to eligible families, which may be used by parents to pay for childcare from any legal childcare provider in the City.

Since there are no locational requirements for enrollment in early childhood programs, and some parents or guardians choose a childcare center close to their employment rather than their residence, the service areas of these facilities can be quite large and not subject to strict delineation to identify a study area. However, the CEQR methodology for early childhood program analyses considers the locations of publicly funded early childhood programs within approximately 1.5 miles of a project site, recognizing that programs closest to a project site are more likely to be subject to increased demand from new residents introduced by an action. Therefore, the study area for the analysis of publicly funded early childhood programs is the area within 1.5 miles of the project site, which includes the Red Hook and Carroll Gardens neighborhoods and portions of Boerum Hill, Cobble Hill, Park Slope, and Sunset Park in Brooklyn, as shown in **Figure D-1**. Current enrollment data for the publicly funded early childhood programs closest to the project site were obtained from DOE's Division of Early Childhood Education. Capacity data were also obtained from DOE's Division of Early Childhood Education and were supplemented, where necessary due to lack of data, with information obtained from the DOHMH Childcare Inspections dataset.[1]

Additional enrollment in early childhood programs in the No Action condition was estimated by multiplying the number of anticipated DUs for low-income (i.e., affordable, non-senior) residents expected to be completed in the 1.5-mile study area by 2026 by the multipliers for estimating the number of children under age 6 eligible for publicly funded childcare services. For Brooklyn, the multiplier estimates a rate of 0.178 eligible children under age 5 per DU for low- and low/moderate-income residents. As noted above, the analysis focuses on services for children under age 5 because eligible children aged 5 to 12 are expected to be in school for most of the day. The new population of eligible children under age 5 calculated was then added to the existing childcare enrollment to determine enrollment in the No Action condition.

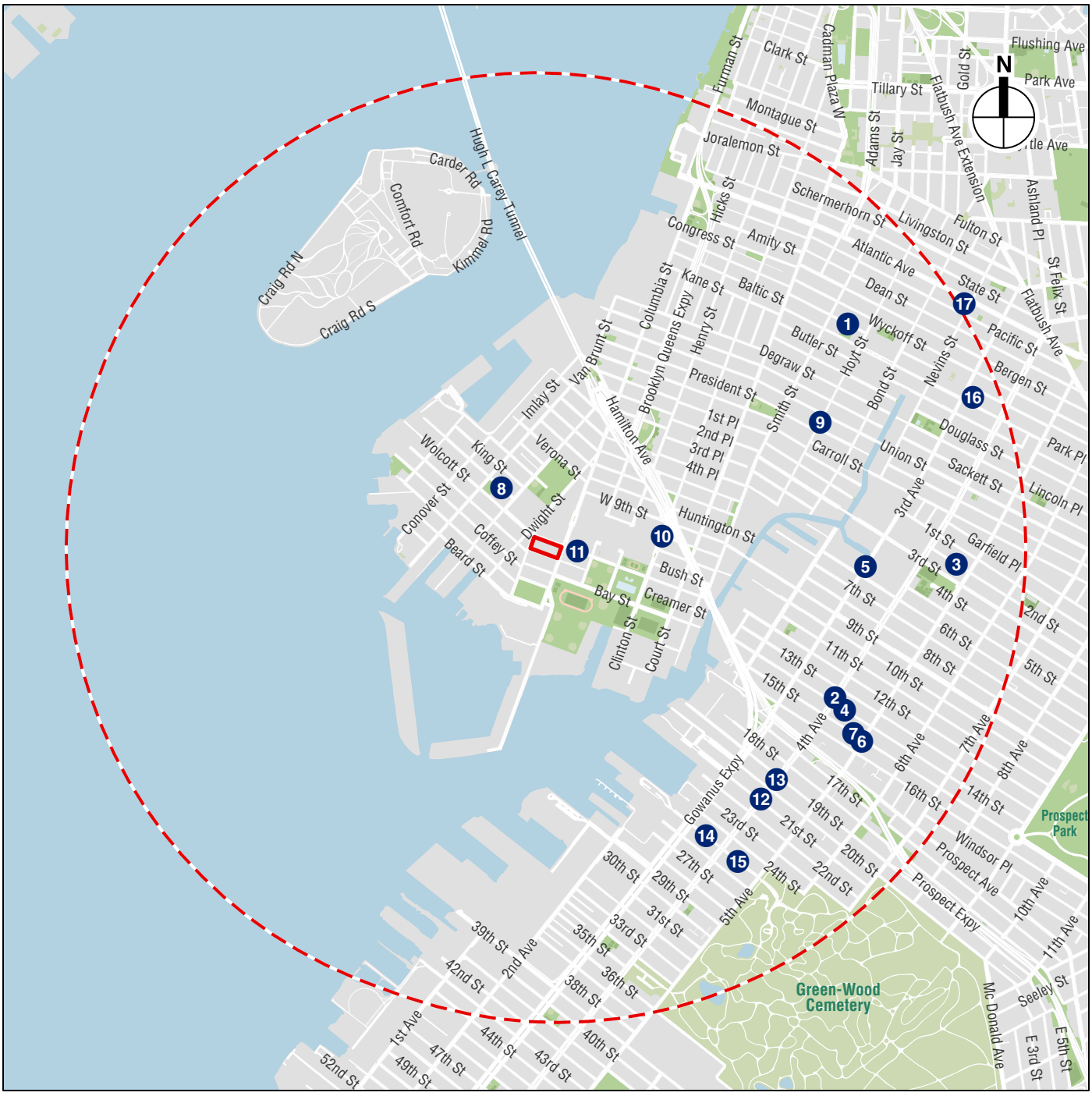
According to the *CEQR Technical Manual*, a significant adverse impact on publicly funded early childhood programs may result if there would be a demand for slots greater than the remaining capacity of the programs (i.e., more than 100 percent utilization), and if the proposed actions would generate demand constituting an increase of five percentage points or more of the collective capacity of the early childhood program facilities serving the study area.

EXISTING CONDITIONS

There are 17 publicly funded early childhood programs within the study area (see **Figure D-1**). The group childcare and Head Start facilities have a total capacity of 512 slots and have a surplus of 141 available slots (72.46 percent utilization) under existing conditions. **Table D-2** shows the current capacity and enrollment for these facilities. Family-based early childhood programs and informal care arrangements may provide additional slots in the study area, but these slots are not included in the analysis.

[1] Where an early childhood program's capacity was not provided in the DOE data, capacity information was obtained from DOHMH inspection data (https://data.cityofnewyork.us/Health/DOHMH-Childcare-Center-Inspections/dsg6-ifza), as accessed on 4/24/2023. The DOHMH dataset provides the maximum capacity for each facility that is inspected, but it does not distinguish between publicly financed and regular early childhood program slots. Due to this uncertainty, and for a conservative analysis, it was assumed that publicly financed early childhood program capacity was the same as the number of enrolled slots provided by the DOE data, even though the actual "maximum capacity" was higher.

4.26.23



Publicly Funded Early Childhood Programs

COLUMBIA STREET REDEVELOPMENT

Figure D-1

Table D-2
Existing Conditions: Early Childhood Programs Enrollment and Capacity

Map No.	Program Name	Address	Enrollment	Capacity
1	WARREN STREET CENTER FOR CHILDREN AND FAMILIES	343 WARREN STREET	14	78
2	P.S. 124 SILAS B. DUTCHER	515 4 AVENUE	30	0
3	STRONG PLACE FOR HOPE DAY CARE (SECOND STREET SITE)	333 2 STREET	17	60
4	14TH STREET PRESCHOOL	199 14 STREET	23	23
5	AL MADINAH SCHOOL	383 3 AVENUE	36	0
6	GIOCARE, LLC	552 5 AVENUE	37	37
7	HONEYDEW NOOK UPK	204 15 STREET	14	14
8	P.S. 015 PATRICK F. DALY	71 SULLIVAN STREET	15	0
9	P.S. 032 SAMUEL MILLS SPROLE	317 HOYT STREET	16	0
10	STRONG PLACE FOR HOPE DAY CARE (CLINTON SITE)	595 CLINTON STREET	34	98
11	BBRU LORRAINE	76 LORRAINE STREET	28	28
12	AL-NOOR SCHOOL	675 4 AVENUE	15	0
13	BROOKLYN TREEHOUSE PRESCHOOL	639 4 AVENUE	29	29
14	THE LITTLE BROOKLYN PRE-K CENTER AT 173-177 25TH STREET	173-177 25 STREET	43	0
15	THE LITTLE BROOKLYN PRE-K CENTER AT 219 25TH STREET	219 25 STREET	20	0
16	ALONZO A. DAUGHTRY MEMORIAL DAY CARE CENTER, INC.	565 BALTIC STREET	0	52
17	STRONG PLACE FOR HOPE DAY CARE CENTER - ATLANTIC	460 ATLANTIC AVENUE	0	93
		Total	**371**	**512**
		Available Slots	**141**	
		Utilization Rate	**72.46%**	

Notes:
1. Since enrollment and capacity estimates come from separate data sources, some locations may appear to have enrollment but no capacity while others may appear to have capacity but no enrollment. Per DCP guidance, it is assumed that enrollment at locations with zero capacity will be absorbed by other early childhood centers, including at locations that show capacity but no enrollment.
2. The applicant is aware of one Pre-K program (Brooklyn Free Space) in the study area that is not in the DOE data, and the program is expected to relocate out of the study area for the 2023-2024 school year. Therefore, it is not included in the quantitative analysis.
Source: DOE Division of Early Childhood Education, April 2023; DOHMH Childcare Center Inspections, April 2023.

THE FUTURE WITHOUT THE PROPOSED PROJECT

Planned or proposed development projects, i.e., No Action projects, in the early childhood program study area (1.5 miles from the project site) that would include affordable DUs were identified utilizing data provided by the New York City Department of Housing Preservation and Development (HPD), New York City Department of Buildings (DOB), and research on planned developments proposing affordable DUs in the study area. A total of eight developments with affordable DUs are expected to be in operation by the 2026 build year. These developments are summarized in **Table D-3** and would introduce approximately 313 new affordable housing units to the study area. Based on the applicable multipliers, this amount of development will introduce a total of approximately 56 new children under the age of 6 who would be eligible for publicly funded childcare programs by the 2026 build year. Based on these assumptions, the number of available slots would decrease.

Table D-3
Background Developments

Project Name/Address	Affordable Dus
145 Wolcott Street	61
875 Fourth Avenue	27
380 Fourth Avenue	21
404 Carrol Street	36
585 Union Street	46
540 Degraw Street	53
120 Fifth Avenue	41
375 Dean Street	28
Total	**313**

Sources: DOB; HPD

As described above, there is currently a surplus of 141 available slots and utilization is at 72.46 percent. When the estimated 56 children under age 6 introduced by planned development projects are added to this total, early childhood programs in the study area will operate with a surplus of 85 slots (83.40 percent utilization) by the 2026 analysis year (see **Table D-4**).

Table D-4
Estimated Early Childhood Program Facility Enrollment, Capacity, and Utilization

	Enrollment	Capacity	Available Slots	Utilization Rate	Change in Utilization
No Action Condition	427	512	85	83.40%	N/A
With Action Condition	473	512	39	92.38%	8.98%

THE FUTURE WITH THE PROPOSED PROJECT

The proposed project's residential units would be affordable at below 80 percent of AMI. Based on childcare multipliers, the development of 258 affordable family DUs would result in approximately 46 children under the age of 5 who would be eligible for publicly funded childcare programs.

With the addition of these children, enrollment in early childhood programs in the study area would increase to 473 children, compared to a capacity of 512 slots with a surplus of 39 slots in the With Action condition (see **Table D-4**). This demand would represent 92.38 percent of the capacity and an increase in the utilization rate of 8.98 percentage points over the No Action condition.

The *CEQR Technical Manual* guidelines indicate a significant adverse impact on publicly funded early childhood programs could result when both of the following criteria are met: (1) a demand for slots greater than the remaining capacity of childcare facilities; and (2) an increase in demand of five percentage points of the study area capacity. In the With Action scenario, early childhood programs in the study area would operate under capacity. Therefore, the proposed action would not result in a significant adverse impact to publicly funded early childhood programs.

In addition, it is noted that several factors may reduce the number of children in need of slots in publicly funded early childhood programs. Families in the study area could make use of alternatives to the early childhood programs. Parents of eligible children also are not restricted to enrolling their children in early childhood programs in a specific geographical area and could use programs outside of the study area, such as programs near their place of work. Three-K and Pre-K are free for all New York children and the City is mandated to provide both universally. The programs are either already available or will soon be available everywhere. These programs have shorter hours and months of operation than the means-tested programs and they can supplement, but not replace, the need for the means-tested programs being analyzed. ✷

A. INTRODUCTION

This attachment assesses the potential impacts of the proposed action on open space resources. Open space is defined by the 2021 *City Environmental Quality Review (CEQR) Technical Manual* as publicly accessible, publicly or privately owned land that operates or is available for leisure, play, or sport, or serves to protect or enhance the natural environment. An open space assessment should be conducted if a project would have a direct effect on open space, such as eliminating or altering a public open space, or an indirect effect, such as when a substantial new population could place added demand on an area's open spaces.

As described in Attachment A, "Project Description and Screening Assessments," the proposed action would facilitate the construction of the proposed project: three 8-story buildings (Buildings A, B, and C) containing a total of 659 units of affordable family, senior, and supportive housing (SH) and approximately 5,660 square feet (sf) of community facility space, including space for senior and supportive services. The proposed project would include a 60-foot-wide, publicly accessible, landscaped pedestrian corridor that runs from Lorraine Street to Creamer Street, separating Building A from Buildings B and C. The pedestrian plaza would contain approximately 12,000 sf of passive open space. The three buildings would also include private indoor and outdoor recreation space, such as enclosed terraces above the ground floor, for building tenants.

As discussed in more detail below, the proposed project would result in the introduction of housing that would increase the residential population that utilizes area open spaces. Therefore, in accordance with *CEQR Technical Manual* guidelines, an open space assessment was conducted to determine whether the proposed action would result in significant adverse open space impacts. This assessment concludes that the proposed action would not result in significant adverse open space impacts.

B. METHODOLOGY

As defined by the *CEQR Technical Manual*, public open space is accessible to the public on a constant and regular basis, including for designated daily periods. Public open space may be under government or private jurisdiction and typically includes City, state, and federal parkland; esplanades; and plazas designated through regulatory approvals, such as zoning. Private open space is not publicly accessible or is available only to limited users on an irregular basis. Examples of private open space are natural areas with no public access, front and rear yards, rooftop recreational facilities, and stoops or landscaped grounds used by community facilities, such as public and private educational institutions, where the open space is accessible only to the institution-related population.

Open spaces can be characterized as either active or passive depending on the activities the space allows. In many cases, open space may be used for both active and passive recreation. Open space that is used for sports, exercise, or active play is classified as "active open space," and consists primarily of recreational facilities. Passive open spaces are used for relaxation, such as sitting or strolling. Active and passive open spaces are further defined in Section C, "Preliminary Assessment."

DIRECT EFFECTS

According to the *CEQR Technical Manual*, a proposed project would directly affect open space conditions if it causes the loss of public open space; changes the use of an open space so that it no longer serves the same user population; limits public access to an open space; or results in increased noise or air pollutant emissions, odor, or shadows that would temporarily or permanently affect the usefulness of a public open space. The proposed action would not result in development that would directly displace any open space resources. Furthermore, there are no open space resources in proximity to the project site (within 400 feet), and therefore there would not be the potential for construction and operational activities from the proposed project to result in noise, air pollutant emissions, odor, or shadows on existing open spaces.

INDIRECT EFFECTS

As described in the *CEQR Technical Manual*, open space can be indirectly affected by a proposed action if a project would add enough population, either residential or non-residential, to noticeably diminish the capacity of open space in the area to serve the future population. Typically, a preliminary assessment of indirect effects is conducted when a project would introduce more than 200 residents or 500 workers to an area. Though the proposed project would not introduce more than 500 workers, the net increment of approximately 258 dwelling units (DUs) compared with the future without the proposed action (the "No Action" condition) would introduce more than 200 residents. Therefore, a preliminary assessment of indirect effects is warranted.

NYC PARKS WALK TO A PARK INITIATIVE

New York City, as part of *OneNYC 2050—Building a Strong and Fair City*, has put forth a goal that calls for 85 percent of New York City residents to live within walking distance of a park by 2030. To help the City reach this goal, the New York City Department of Parks and Recreation (NYC Parks) created the Walk to a Park initiative that focuses on increasing access to parks and open space in areas of the City where residents live farther than a walk to a park.

According to the *CEQR Technical Manual*, as part of the preliminary assessment of open space, a project should be reviewed to determine if it is located within a Walk to a Park Service Area. Project sites that are located outside of a Walk to a Park Service Area (i.e., located in known walk gap areas) suggest the need for a detailed analysis to be performed to determine if a project may further exacerbate a condition of residents living in areas of the City with inadequate park access, potentially leading to a significant impact on open space resources. The project site is located within a Walk to a Park Service Area (see **Figure E-1**). Therefore, a detailed analysis of indirect effects is not required.

STUDY AREA

The *CEQR Technical Manual* recommends establishing a study area or areas as the first step in an open space assessment. The study areas are based on the distances that the respective users—in this case, residents—are likely to walk to an open space. According to the *CEQR Technical Manual*, residents are assumed to walk approximately 10 minutes, or ½ mile, to an open space.

Because the proposed action would introduce an incremental new residential population above the 200-resident population threshold, the adequacy of open space resources was assessed for the ½-mile (residential) study area. This study area was adjusted to include all census tracts with at least 50 percent of their area within the ½-mile boundary. In this way, the study area allows for analysis

4.21.23



Project Site

Study Area (Half-mile perimeter)

Walk to Park Area

0 1,000 FEET

Walk to a Park Service Area

COLUMBIA STREET REDEVELOPMENT

Figure E-1

of both the open spaces in the area as well as population data. As shown on **Figure E-2**, the ½-mile residential study area includes the area within Census Tracts 53.01, 53.02, 59, and 85. The residential study area is generally bounded by Hamilton Avenue to the northeast, Ferris and Inlay Streets to the northwest, and the waterfront, including the Upper New York Bay, Erie Basin, Henry Street Basin, Gowanus Bay, and Gowanus Canal to the south.

ANALYSIS FRAMEWORK

The *CEQR Technical Manual* methodology suggests conducting an initial quantitative assessment, or preliminary assessment, to determine whether more detailed analyses are appropriate. A preliminary assessment is useful if the open space assessment is able to be targeted to a particular user group (in this case, residential population), or if it is not clear whether a full, detailed open space analysis is necessary. Therefore, a preliminary assessment was conducted to determine if a full, detailed analysis is warranted.

C. PRELIMINARY ASSESSMENT

A preliminary assessment of indirect impacts on open space consists of calculating the total population of the study area, tallying the open space acreage within the area, and comparing the open space ratios for the No Action and With Action conditions.

EXISTING CONDITIONS

STUDY AREA POPULATION

According to the *CEQR Technical Manual*, a preliminary open space assessment involves calculating existing, No Action, and With Action total population and open space acreage in a study area and comparing the No Action ratio of total acres of open space per 1,000 residents with the anticipated open space ratio in the With Action condition. As shown in **Table E-1**, based on 2020 Decennial Census data and the New York City Department of City Planning (DCP) Housing Database, there are an estimated 10,690 residents within the ½-mile study area.[1]

Table E-1
Open Space Study Area Census Tracts

Census Tract Number[1]	Population
53.01	2,164
53.02	86
59	1,742
85	6,673
Census Tracts Total Population	**10,665**
DCP Housing Database Additional Residents[2]	**25**
Total	**10,690**

Note: 1. See **Figure C-1** for census tract locations
2. DCP's Housing Database shows a net increase of 12 housing units in the study area since the Census data collection in April 2020, accordingly to DCP Housing Database 2022 Q2 (the latest available data). Assuming a rental vacancy rate of 7.0 percent and an average household size of 2.27 within Brooklyn CD 6, an additional 25 people are estimated over the 10,665 residents identified in the 2020 Census for an existing population estimate of 10,690 residents.
Source: 2020 U.S. Census Bureau Decennial Census; DCP Housing Database

[1] The DCP Housing Database was consulted to assess potential population growth since the data collection in April 2020. Approximately 12 housing units have been constructed within the study area since the 2020 Census, increasing the population by an estimated 25 residents from the 10,665 residents identified within the census tracts.



Open Space Resources

COLUMBIA STREET REDEVELOPMENT

Figure E-2

STUDY AREA OPEN SPACE RESOURCES

Within the open space study area, there are 10 publicly accessible open space resources, described below and shown in **Figure E-2**. As detailed in **Table E-2**, these resources provide approximately 52.73 acres of existing publicly accessible open space.

Table E-2
Open Space Resources

Map ID[1]	Name	Location	Open Space Acreage			Owner/ Agency	Amenities
			Total	Active	Passive		
1	Red Hook Recreation Area[2]	825 Henry St	25.46	25.46	0.00	NYC Parks	Lawn areas, swimming pool and recreation center, basketball, baseball, soccer, and handball courts (some fields currently closed), walking and running paths, playground
2	Louis Valentino, Jr. Park and Pier	104 Ferris St	4.53	2.27	2.27	NYC Parks	Lawn areas, fishing pier, walking path, bench and ledge seating
3	PS 15 Playground	71 Sullivan Street	0.80	0.80	0.00	DOE	Running path, playground, basketball court, baseball diamond
4	Coffey Park	85 Richards St	8.27	4.14	4.14	NYC Parks	Lawn areas, playground, spray showers, basketball and handball courts, playground, bench seating, dog run
5	Erie Basin Park	Between Dwight Street and Columbia Street, south of Beard Street	6.50	3.25	3.25	IKEA	Lawn areas, bike/walking path, sculptures, piers, bench and lounge seating
6	Columbia Street Waterfront Esplanade	Southern and southwestern tip of Columbia Street	2.38	1.19	1.19	NYC Parks	Esplanade and seating
Totals			**47.94**	**37.10**	**10.84**		

Notes:
1. See **Figure E-2** for open space locations.
2. Approximately 20.86 acres of Red Hook Recreation Area is currently under construction and therefore is not included within the total existing acreage within the ½-mile study area.
NYC Parks = New York City Department of Parks and Recreation
DOE = New York City Department of Education
Sources: NYC Parks, DCP MapPLUTO, ArcGIS

Open spaces within the study area include several neighborhood parks, playgrounds, and passive open spaces—such as plazas and esplanades. The largest open space resource in the study area is the Red Hook Recreation Area (currently undergoing construction), which is bounded by Bush Street to the north, Columbia Street to the west, and Court Street to the east, spanning multiple blocks and containing a wide variety of spaces for active uses within 25.46 acres (acreage that is currently open). This open space contains a large green area, playgrounds, ball fields and soccer fields, a recreation center, and outdoor pools that are open to the public on a seasonal basis. Several fields have been recently renovated as part of the Red Hook Recreation Area Remediation project, and the remaining 20.86 acres of the park are anticipated to be reopened by late 2024.

Another large open space resource located within the study area is Coffey Park, an 8.27-acre park bounded by Verona Street, Dwight Street, King Street, and Richards Street. The neighborhood park features lawn areas, a walking path, benches, a playground area, and multiple ball courts. Other open space resources include playgrounds such as the P.S. 15 Patrick F. Daly Community

Playground, a 0.80-acre playground open to the public as part of the Schoolyards to Playgrounds program. P.S. 15 also features a running path, playground, basketball courts, and a baseball diamond. Louis Valentino, Jr. Park and Pier, Erie Basin Park, and the Columbia Street Waterfront Esplanade are all open spaces located along the waterfront that feature a number of amenities such as benches, a walking path, fishing piers, and lawn areas.

ADEQUACY OF OPEN SPACES

As shown in **Table E-3**, the existing total open space ratio for the study area is 4.49 acres of open space per 1,000 residents, which is above the City's guideline of 2.5 acres per 1,000 residents. The existing active open space ratio for the study area is 3.47 acres per 1,000 residents, which is above the City's guideline of 2.0 acres of active open space per 1,000 residents. The existing passive open space ratio for the study area is 1.01 acres per 1,000 residents, which is above the City's guideline of 0.5 acres of passive open space per 1,000 residents. The existing conditions exceed all of the City's guidelines for open space ratios.

Table E-3
Adequacy of Study Area Open Space Resourcess: Existing Conditions

Existing Residential Population	Total Open Space Acreage	Open Space Ratio Acres per 1,000 Residents		
		Total	Active	Passive
10,690	47.94	4.49	3.47	1.01

THE FUTURE WITHOUT THE PROPOSED PROJECT

In the No Action condition, the project site would be developed with an as-of-right, mixed-use building containing residential, commercial, community facility, and parking uses. The No Action condition would result in approximately 308 market-rate DUs, 180,000 gsf of community facility space, and 68,302 gsf of retail space.

STUDY AREA POPULATION

In the No Action condition, four future residential developments are anticipated for completion by the 2026 build year. The four residential developments would introduce 46 DUs to the neighborhood, resulting in approximately 106 additional residents. Furthermore, the No Action condition would result in the development of approximately 308 DUs, introducing an estimated 699 additional residents to the study area. Under the No Action condition, the new population would total 11,493 residents within the ½-mile radius.

STUDY AREA RESOURCES

In the No Action condition, it is expected that the remaining portion of the Red Hook Recreation Area that is currently under construction would be completed and open for the public (see **Table E-4**). The Red Hook Recreation Area currently offers approximately 25 acres of publicly accessible open space to the neighborhood. The remaining approximately 21 acres under construction are anticipated to reopen by late 2024, before the proposed project is developed. The park's reconstruction will include brand new baseball and soccer fields which will be open to the No Action residential population.

Table E-4
No Action Publicly Accessible Open Space Resource Inventory

Map ID[1]	Name / Location	Owner or Agency	Features[2]	Total Acres of Open Space[3]
3	Red Hook Recreation Area (825 Henry St)	NYC Parks	Lawn areas, swimming pool and recreation center, basketball, baseball, soccer, and handball courts, walking and running paths, playground	20.86
			Total Acreage	**20.86**

Notes:
NYC Parks = New York City Department of Parks and Recreation
[1] See **Figure E-2** for location of open spaces in study area.
[2] Anticipated features upon completion of construction.
[3] Acreage was estimated by AKRF, Inc. based off the NYC Parks' Capital Investment Tracker proposed plans.
Sources: NYC Parks open space database; AKRF, Inc.

ADEQUACY OF OPEN SPACES

Quantitative Assessment

As shown in **Table E-5**, in the No Action condition the total open space ratio is projected to increase from 4.49 acres per 1,000 residents to 5.99 acres per 1,000 residents. Similar to existing conditions, the ratio would be above City guidelines.

Table E-5
Adequacy of Study Area Open Space Resourcess: No Action Condition

No Action Residential Population	Total Open Space Acreage	Open Space Ratio Acres per 1,000 Residents		
		Total	Active	Passive
11,493	68.80	5.99	5.04	0.94

THE FUTURE WITH THE PROPOSED PROJECT

STUDY AREA POPULATION

In the With Action condition, the proposed action is anticipated to introduce approximately 405 incremental residents to the project site. The proposed project, along with the background development anticipated in the study area, would result in a With Action condition population of 11,898 residents (a 3.5 percent increase compared with the No Action condition).

STUDY AREA OPEN SPACE RESOURCES

In the With Action condition, the study area's open space resources are expected to remain the same as in the No Action condition.

ADEQUACY OF OPEN SPACES

Quantitative Assessment

As shown in **Table E-6**, the total open space ratio is projected to decrease from 5.99 acres per 1,000 residents in the No Action condition to 5.78 acres per 1,000 residents in the With Action condition. As in the No Action condition, the open space ratio would continue to be above the

City guidelines of 2.5 acres of total open space per 1,000 residents. However, compared with the No Action condition, the total open space ratio under the With Action condition would decrease by 3.41 percent (see **Table E-7**).

Table E-6
Adequacy of Study Area Open Space Resources: With Action Condition

With Action Residential Population	Total Open Space Acreage	Open Space Ratio Acres per 1,000 Residents		
		Total	Active	Passive
11,898	68.80	5.78	4.87	0.91

Table E-7
Study Area Open Space Ratio Summary

Ratio	City Open Space Guideline	Open Space Ratio Acres per 1,000 Residents			Percent Change (No Action to With Action)
		Existing	No Action	With Action	
Total—Residential	2.5	4.49	5.99	5.78	-3.41%

According to the *CEQR Technical Manual*, a decrease in the open space ratio of five percent or more compared with the No Action condition is generally considered to have the potential for a significant adverse impact for projects in study areas where the open space ratio is 2.5 acres per 1,000 residents or more and may warrant further analysis, as these reductions may result in overburdening existing facilities or further exacerbating a deficiency in open space. Under the With Action condition, the open space ratio in the study area continues to be greater than 2.50 acres per 1,000, at 5.78 acres per 1,000 residents. Additionally, the decrease in the open space ratio compared with the No Action is less than five percent. Therefore, detailed analysis is not warranted, and the proposed action would not result in a significant adverse impact. Further qualitative considerations are discussed below.

Qualitative Considerations

Similar to the existing and No Action condition, the With Action condition would continue to offer a variety of open space resources appropriate for all ages. All of the open space resources in the study area are considered to be in adequate to excellent condition, with one of the largest open space resources in the study area being reconstructed and reopened by the 2026 build year. These open spaces would continue to sufficiently serve the existing population and would not be adversely impacted by the projected population increase generated by the proposed project. Furthermore, there are additional open space resources located within the study area that were not included as part of the quantitative analysis, either because they are located just beyond the study area or are community gardens that have limited public hours.

The study area includes two urban farms operated by the Red Hook Initiative, a community-based nonprofit dedicated to youth development and community building. The farms offer food justice and youth-centered programs such as a teen farm apprenticeship, weekly farm stands, community-supported agriculture (CSA), and a school workshop program. The Red Hook Farms are located at Columbia Street and Wolcott Street. The Columbia Street Farm is a 2.75-acre production and compost site, while the Wolcott Street Farm is a 1.1-acre education farm.

Additionally, several community gardens are located just beyond the study area and are concentrated north of Hamilton Avenue between the Brooklyn-Queens Expressway and Van Brunt Street; they total 0.67 acres of community garden space. Although accessible at limited hours, these resources would continue to support the additional population generated by the proposed project, thereby reducing the overall demand for open space within the study area.

Though the incremental growth in the study area population would place demand on area open spaces, it is not large enough to warrant a detailed open space analysis. Additionally, the study area is well-served by open space resources and the user ratio is greater than the City guidelines for total active and passive resources. The proposed project would also include private indoor and outdoor recreation space for building tenants, further alleviating the demand on neighborhood resources. Lastly, the proposed project would include a 60-foot-wide, publicly accessible landscaped pedestrian plaza on the project site, connecting Lorraine and Creamer Streets between Building A and Buildings B and C. The plaza is expected to include landscaping and seating, serving as a passive open space for the neighborhood. Therefore, the proposed action would not result in a significant adverse impact on open space resources. ✷

Attachment F: Historic and Cultural Resources

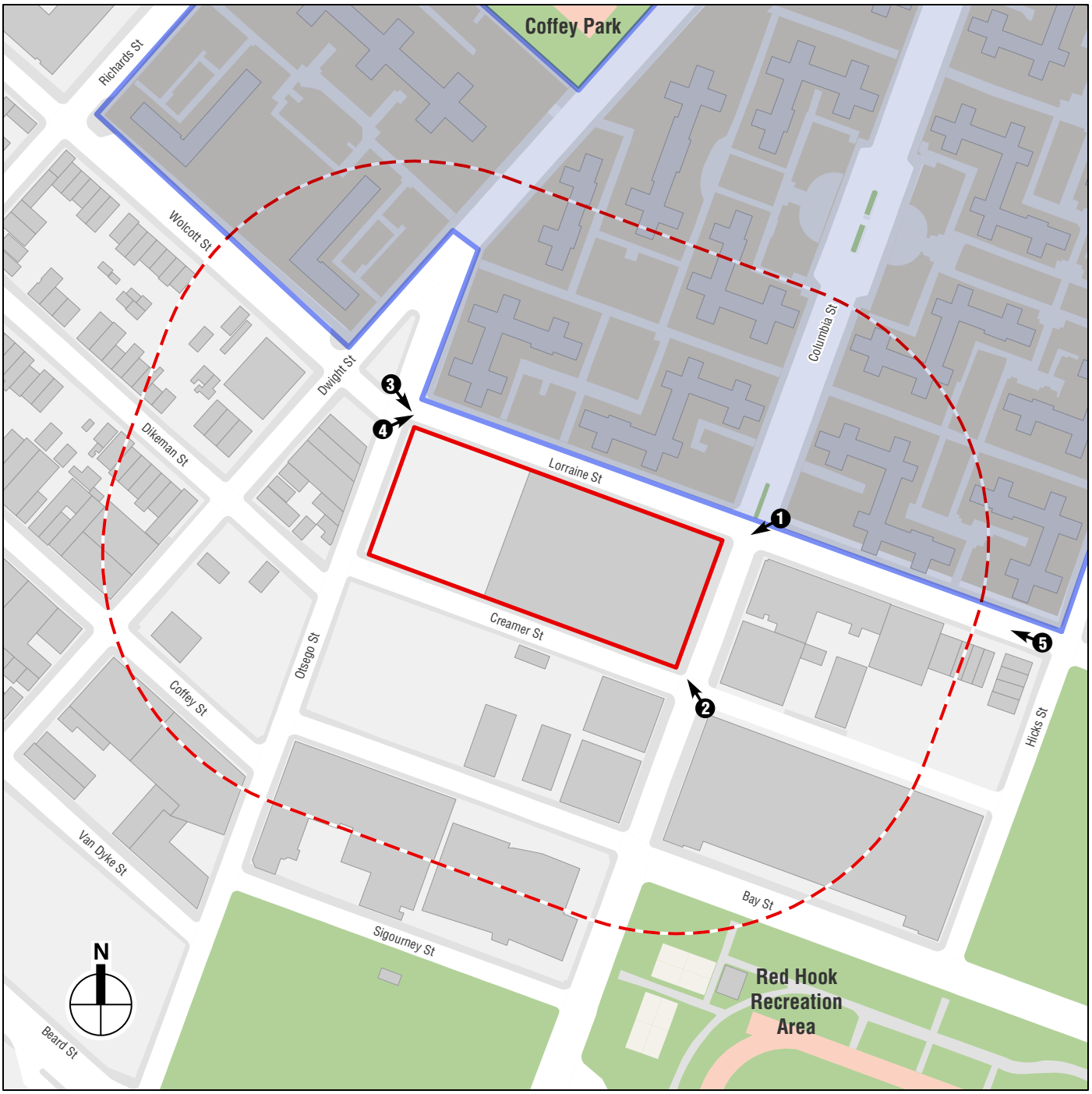
A. INTRODUCTION

This attachment assesses the potential for the proposed project to affect historic and cultural resources, which include archaeological and architectural resources. The project site is located at 37 Otsego and 498 Columbia Streets (Brooklyn Block 579, Lot 1) and includes the entire block bounded by Lorraine, Columbia, Creamer, and Otsego Streets in the Red Hook neighborhood of Brooklyn (see **Figure F-1**). The eastern portion of the project site contains the large, vacant one-story former grocery store at 498 Columbia Street. The western portion of the project site is a vacant parking lot at 37 Otsego Street. With the proposed project, the project site would be redeveloped with with three eight-story residential buildings (including affordable family, senior, and supportive housing), community facility space, and a parking garage.

As described in Attachment A, "Project Description and Screening Assessments," the proposed project would be facilitated by construction funding from the New York City Department of Housing Preservation and Development (HPD) and would be assisted with Project Based Vouchers (PBVs) originating from the U.S. Department of Housing and Urban Development (HUD) and allocated by the New York City Housing Authority (NYCHA), which would be subject to review pursuant to Section 106 of the National Historic Preservation Act. Funding from HDC would be subject to review pursuant to Section 14.09 of the New York State Historic Preservation Act.

The study area for archaeological resources is the project site, where disturbance from excavation and construction for the proposed project would occur. The New York City Landmarks Preservation Commission (LPC) has been contacted requesting an initial evaluation of the project site's potential for archaeological sensitivity. In comments dated May 18, 2023, LPC determined that the project site has no archaeological significance (see **Appendix A**, Historic and Cultural Resources"). In addition, consultation with the New York State Historic Preservation Office (SHPO) was initiated regarding the proposed project, pursuant to both Section 106 and Section 14.09. In a comment letter dated June 7, 2023, SHPO determined that the proposed project "will have No Adverse Impact on historic resources" (see **Appendix A**, Historic and Cultural Resources"). Therefore, this analysis focuses on standing structures only.

To evaluate potential effects due to on-site construction activities, and also to account for visual or contextual impacts, the study area for architectural resources is defined as extending 400 feet from the project site (see **Figure F-1**). Consistent with the guidance of the 2021 *City Environmental Quality Review* (*CEQR) Technical Manual*, designated ("known") architectural resources include New York City Landmarks (NYCL); Interior Landmarks; Scenic Landmarks; New York City Historic Districts (NYCHD); resources calendared for consideration as one of the above by LPC; resources listed on or formally determined eligible for inclusion on the State and National Registers of Historic Places (S/NR) or contained within a district listed on or formally determined eligible for listing on the Registers; resources recommended by the New York State Board for listing on the Registers; and National Historic Landmarks (NHL). In addition, a survey



0 400 FEET

Project Site

Study Area (400-foot perimeter)

Known Architectural Resource

Photograph View Direction and Reference Number



Project Location

COLUMBIA STREET REDEVELOPMENT

Figure F-1

was conducted to identify any previously undesignated properties in the study area that appear to meet NYCL or S/NR eligibility criteria ("potential architectural resources").

As described below, this assessment concludes that the proposed project would have no significant adverse impacts on historic and cultural resources. Further, LPC's May 18, 2023 comment letter indicated that the project site has no archaeological or architectural significance. In addition, SHPO's June 7, 2023 comments determined that the proposed project "will have No Adverse Impact on historic resources" (see **Appendix A**, Historic and Cultural Resources").

B. METHODOLOGY

Consistent with the guidance of the *CEQR Technical Manual*, in order to determine whether the proposed project could potentially affect architectural resources, this attachment considers whether the proposed project would result in a physical change to any resource, a physical change to the setting of any resource (such as context or visual prominence), and, if so, whether the change is likely to alter or eliminate the significant characteristics of the resource that make it important. More specifically, as set forth in the *CEQR Technical Manual*, potential impacts to architectural resources may include the following:

- Physical destruction, demolition, damage, alteration, or neglect of all or part of an historic property;
- Changes to an architectural resource that cause it to become a different visual entity;
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- Introduction of incompatible visual, audible, or atmospheric elements to a resource's setting;
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- Elimination or screening of publicly accessible views of the resource;
- Construction-related impacts, such as falling objects, vibration, dewatering, flooding, subsidence, or collapse; and
- Introduction of significant new shadows, or significant lengthening of the duration of existing shadows, over an historic landscape or on an 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.

C. EXISTING CONDITIONS

PROJECT SITE

The project site is located at 37 Otsego and 498 Columbia Streets and occupies the full block (Block 579, Lot 1) bounded by Otsego, Columbia, Creamer, and Lorraine Streets. The eastern portion of the project site contains the large, vacant one-story former grocery store at 498 Columbia Street.[1] The western portion of the project site is an unused parking lot at 37 Otsego Street (see **Figure F-2 and F-3**). There are no architectural resources on the project site.

[1] The project site building at 498 Columbia Street previously appeared in the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP)'s Cultural Resource Information System (CRIS) as USN No: 04701.014765 with an "undetermined" finding based on a 2002

5.5.23



View southwest on Lorraine Street from Columbia Street to the project site **1**



View northwest on Columbia Street from Creamer Street to the project site **2**



View southeast on Lorraine Street from Otsego Street to the project site **3**

Project Site

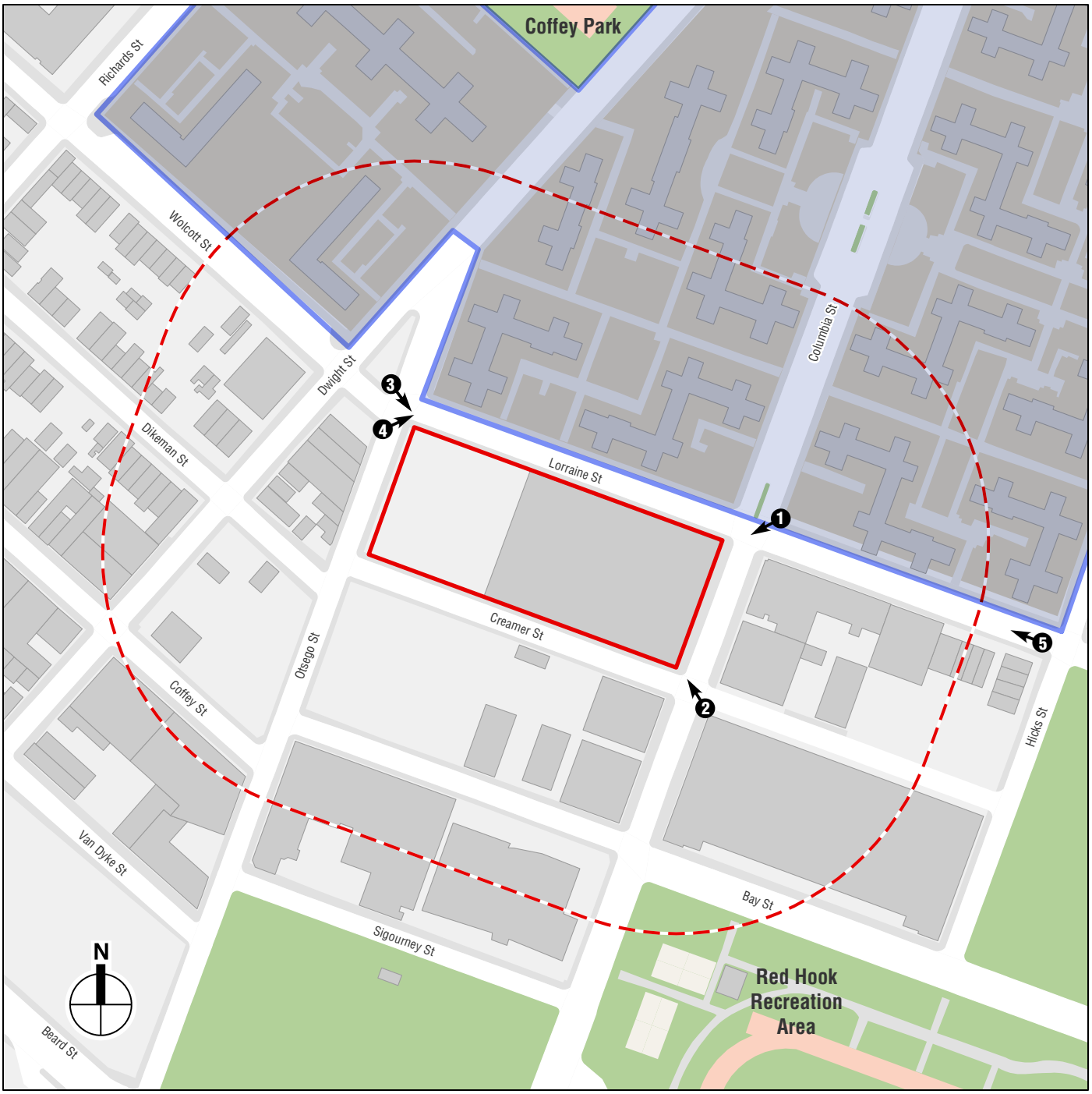
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0 400 FEET

Project Site

Study Area (400-foot perimeter)

Known Architectural Resource

Photograph View Direction and Reference Number



Project Location

COLUMBIA STREET REDEVELOPMENT

Figure F-1

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As described below, this assessment concludes that the proposed project would have no significant adverse impacts on historic and cultural resources. Further, LPC's May 18, 2023 comment letter indicated that the project site has no archaeological or architectural significance. In addition, SHPO's June 7, 2023 comments determined that the proposed project "will have No Adverse Impact on historic resources" (see **Appendix A**, Historic and Cultural Resources").

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C. EXISTING CONDITIONS

PROJECT SITE

The project site is located at 37 Otsego and 498 Columbia Streets and occupies the full block (Block 579, Lot 1) bounded by Otsego, Columbia, Creamer, and Lorraine Streets. The eastern portion of the project site contains the large, vacant one-story former grocery store at 498 Columbia Street.[1] The western portion of the project site is an unused parking lot at 37 Otsego Street (see **Figure F-2 and F-3**). There are no architectural resources on the project site.

[1] The project site building at 498 Columbia Street previously appeared in the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP)'s Cultural Resource Information System (CRIS) as USN No: 04701.014765 with an "undetermined" finding based on a 2002 review of the property. As part of SHPO's review of the current project, a "Not Eligible" determination was made on May 31, 2023.

5.5.23



View southwest on Lorraine Street from Columbia Street to the project site **1**



View northwest on Columbia Street from Creamer Street to the project site **2**



View southeast on Lorraine Street from Otsego Street to the project site **3**

Project Site

STUDY AREA

KNOWN ARCHITECTURAL RESOURCES

There is one known architectural resource located in the study area.

The **Red Hook Houses complex** (S/NR-eligible) is located at 62 Mill Street and 55 Dwight Street in the Red Hook neighborhood of Brooklyn. The building complex was built in 1938-1939 and occupies the blocks bounded by Verona and West 9th Street to the north, Clinton Street to the east, Lorraine Street to the south, and Otsego/Dwight Street to the west. Three additional buildings were built in 1955 as part of Red Hook II that are located immediately to the west on the block bounded by the Coffey Park/King Street to the north, Otsego/Dwight Street to the east, Wolcott Street to the south, and Richards Street to the west. As described in the November 29, 2016 "Resource Evaluation," the Red Hook Houses complex was among the earliest public housing developments in New York City that were built under the National Housing Act of 1934, which created the Federal Housing Administration, and the United States Housing Act of 1937. In 1934, Mayor LaGuardia founded the New York City Housing Authority (NYCHA) which oversaw the development of the Red Hook Houses complex.[2] The Red Hook Houses complex includes 26 six-story (approximately 56-foot-tall) residential buildings along with a community center, a children's center/nursery school, and stores and offices. The brick-faced buildings were designed with minimal detailing by architect Alfred Easton Poor (see Views 4 and 5 of **Figure F-4**). The site plan and the buildings' irregular forms were designed to maximize access to light and air. A wide pedestrian and open space walkway called the Centre Mall extends east-west through the complex. Portions of nine buildings in the Red Hook Houses complex are located in the study area.

POTENTIAL ARCHITECTURAL RESOURCES

There are no potential architectural resources in the study area. The study area east and south of the project site is characterized by older, substantially altered industrial and commercial buildings with large footprints; two large, recently-constructed buildings—a last-mile warehouse and a school. The study area west of the project site includes older one-story industrial buildings and two- to three-story older and newer rowhouses. The older buildings in this part of the study area have also had substantial alterations, including the application of non-original siding and alterations to window and door openings. The western portion of the study area also includes the ca. 1973 one-story Red Hook branch of the Brooklyn Public Library that is currently undergoing a comprehensive exterior and interior renovation. Several large lots used for parking and storage are also located throughout the study area.

D. THE FUTURE WITHOUT THE PROPOSED PROJECT

PROJECT SITE

Absent the proposed project, it is assumed that an as-of-right mixed-use development would be constructed on the project site that would include an 18-story market-rate residential building on Otsego Street and a 12-story community facility building with ground-floor retail on Columbia Street. It is assumed that the buildings would contain approximately 308 dwelling units (DUs),

[2] "Resource Evaluation, Red Hook Houses (East and West), 62 Mill Street and 55 Dwight Street, Red Hook, Brooklyn, Kings; USN: 04701.019316," New York State Parks, Recreation, and Historic Preservation. November 29, 2016.

5.5.23



Red Hook Houses Complex—View northeast on Lorraine Street from Otsego Street **4**



Red Hook Houses Complex—View northwest on Lorraine Street from Hicks Street **5**

Study Area
Known Architectural Resource

COLUMBIA STREET REDEVELOPMENT

Figure F-4

approximately 180,000 gsf of community facility space, and approximately 68,302 gsf of retail space. It is also assumed that the buildings would be constructed in accordance with the existing R6/C1-3 district and Height Factor zoning regulations.

STUDY AREA

There are no developments anticipated to be constructed by 2026 within the study area. There is an existing trend in Red Hook of market-rate residential development. Since 2015, seven residential buildings along Van Brunt Street and the adjacent blocks have been constructed, and an eighth building is under construction at 336 Van Brunt Street.

Historic resources that are listed on the S/NR or that have been found eligible for listing are given a measure of protection under Section 106 of the National Historic Preservation Act from the effects of projects sponsored, assisted, or approved by federal agencies. Although preservation is not mandated, federal agencies must attempt to avoid adverse effects on such resources through a notice, review, and consultation process. Properties listed on the Registers are similarly protected against effects resulting from projects sponsored, assisted, or approved by State agencies under the New York State Historic Preservation Act of 1980. However, private owners of properties eligible for, or even listed on, the Registers using private funds can alter or demolish their properties without such a review process. Privately owned properties that are NYCLs, in NYCHDs, or pending designation as NYCLs are protected under the New York City Landmarks Law, which requires LPC review and approval before any alteration or demolition permits can be issued, regardless of whether the project is publicly or privately funded. Publicly owned resources are also subject to review by LPC before the start of a project. However, LPC's role in projects sponsored by other City or State agencies generally is advisory only.

The New York City Building Code provides some measures of protection for all properties against accidental damage from adjacent construction by requiring that all buildings, lots, and service facilities adjacent to foundation and earthwork areas be protected and supported. While these regulations serve to protect all structures adjacent to construction areas, they do not afford special consideration for historic structures.

E. THE FUTURE WITH THE PROPOSED PROJECT

PROJECT SITE

In the With Action condition, the project site would be developed with three new eight-story (approximately 85-foot-tall) buildings—Buildings A, B, and C—containing a total of approximately 536,470 gross square feet (gsf). Building A would occupy the western portion of the block with frontages on Otsego, Creamer, and Lorraine Streets. It would contain 210 units of senior housing and space for senior services. The building's primary entrance would be on Otsego Street; an entrance to the community facility space would be on Lorraine Street. An outdoor recreation area would be located on the first floor roof at the rear of the building (see EAS Figures A-1, A-2.1, and A-3.1). Building B would be located midblock on Lorraine Street. It would be the smallest of the three buildings and would contain 81 units of supportive housing, supportive offices, indoor recreation space, and bicycle storage. The building's primary entrance would be on Lorraine Street (see EAS Figures A-1, A-2.2, and A-3.2). Building C would be located on the eastern portion of the block with frontages on Columbia, Lorraine, and Creamer Streets. It would be the largest of the three buildings. It would contain 110 supportive housing units, 258 units of family housing, community facility space, and a 10-space accessory parking garage. The building's residential entrances would be located on Creamer and Columbia Streets. A separate

entrance to the community facilities would be on Creamer Street (see EAS Figures A-1, A-2.3, A-3.2a and A-3.2b).

Each eight-story building would have a six-story (approximately 65-foot-tall) base that would be built to the property line. Above the sixth floor, each building would have a 15-foot-deep setback before rising to a maximum building height of eight stories (approximately 85 feet tall). It is anticipated that each building would be faced in brick and stucco, with punched window openings.

A 60-foot-wide, publicly accessible, landscaped pedestrian corridor would extend north-south between Building A and Buildings B and C, connecting Lorraine and Creamer Streets (see EAS Figures A-1 and A-3.1 through A-3.2b).

As there are no architectural resources on the project site, the proposed project would have no adverse impacts on such resources.

STUDY AREA

DIRECT IMPACTS

Using the *CEQR Technical Manual* direct impact criteria noted above, the proposed project would not result in the replication of aspects of any architectural resources so as to cause a false historical appearance, or the introduction of significant new incremental shadows over historic landscapes or historic structures with sunlight sensitive features.

The southern portions of two six-story residential buildings in the Red Hook Houses complex—the buildings located at 9-17 Lorraine Street at the corner of Otsego/Dwight Street and 484-486 Columbia Street/30-38 Bush Street at the corner of Columbia Street—are located within 90 feet of the project site. However, in consultation with HPD, LPC determined that a Construction Protection Plan (CPP) is not warranted (see **Figure F-1**).

INDIRECT IMPACTS

The *CEQR Technical Manual* criteria for indirect, contextual impacts are as follows:

- Isolation of a property from, or alteration of, its setting or visual relationships with the streetscape, including changes to the resource's visual prominence;
- Introduction of incompatible visual, audible, or atmospheric elements to a resource's setting; and
- Elimination or screening of publicly accessible views of the resource.

The proposed project would not result in the isolation of the Red Hook Houses from their settings. The primary façades of the two closest buildings in the Red Hook Houses complex face away from the project site. Further, these two buildings in the Red Hook Houses complex—and the Red Hook Houses complex as a whole—do not have a meaningful visual or contextual relationship with the large one-story vacant grocery store or parking lot on the project site. The proposed project would not adversely affect the streetscape of these two buildings—or the Red Hook Houses complex as a whole—as these buildings would continue to be located within the context of the other buildings in the Red Hook Houses complex, including buildings to the east and west, also located on Lorraine Street. The other buildings in the Red Hook Houses complex located in the study area are farther from the project site and also have no meaningful visual or contextual relationship with the project site.

With the proposed project, the three new eight-story (approximately 85-foot-tall) buildings would be built on the project site that would rise six stories with a setback before rising to the overall

building height. While the proposed buildings would be taller than the six-story (approximately 56-foot-tall) Red Hook Houses, the base of each new building would be consistent with the heights of the six-story buildings in the Red Hook Houses complex. In contrast, the No Action development would include a 12-story building and an 18-story building, which would be inconsistent with the heights of the buildings in the Red Hook Houses complex. It is anticipated that the proposed buildings would have masonry and stucco cladding and punched window openings, consistent with the brick cladding of the buildings in the Red Hook Houses complex. Therefore, although the three proposed eight-story buildings that would be developed with the proposed project would have overall heights that would be taller than the buildings in the Red Hook Houses complex, the proposed buildings would be similar in height and cladding materials to the buildings in the Red Hook Houses complex and would not adversely affect the context of this historic architectural resource.

The proposed project would not introduce incompatible visual, audible, or atmospheric elements to the setting of the Red Hook Houses complex, including the two buildings on Lorraine Street across from the project site, nor would the proposed buildings eliminate any publicly accessible views of these architectural resources. While some views would be altered with the new buildings on the development site, changes to views would also occur in the No Action condition. The construction of new residential buildings in an urban context that includes older buildings of varying heights, as well as newer and taller buildings, would not introduce any incompatible visual elements to the setting of the architectural resources in the study area.

Overall, the proposed project would have no significant adverse impacts on historic and cultural resources (see **Appendix A).**

RESOURCES

"Resource Evaluation, Red Hook Houses (East and West), 62 Mill Street and 55 Dwight Street, Red Hook, Brooklyn, Kings; USN: 04701.019316," New York State Parks, Recreation, and Historic Preservation. November 29, 2016. ✷

A. INTRODUCTION

This attachment addresses the potential for the presence of hazardous materials resulting from previous and existing uses both at the project site and in the surrounding area, and identifies the potential risks related to the proposed development with respect to any such hazardous materials. The proposed action would result in the demolition of the current structure and construction of the proposed project, three new 8-story residential-use buildings (no cellar) with exterior landscaped areas. The project site consists of an approximately 100,000-square-foot (sf) lot and currently features one single-story (no basement), mostly vacant commercial/warehouse building on the eastern portion of the lot and an asphalt-paved parking area on the western portion of the lot. The site is currently enrolled in the New York State Department of Environmental Conservation (DEC) Brownfield Cleanup Program (BCP) (BCP Site No. C224300) and will be remediated in conjunction with the redevelopment.

This assessment is based on the various investigations conducted to date both prior to, and while enrolled in the BCP, including a Phase I Environmental Site Assessment (ESA) prepared by AKRF, Inc. (AKRF) in January 2016; a Subsurface (Phase II) Investigation by AKRF in January 2016; a Subsurface Investigation (SI) by Roux Environmental Engineering and Geology, D.P.C. (Roux) in July 2016; a Corrective Action Plan (CAP) prepared by Roux in January 2017; Periodic Monitoring and Reporting completed by Roux between November 2017 and July 2018; Hotspot Work Excavation Plan dated January 2019 and associated excavation by Roux completed between February and May 2019; Remedial Investigation Report (RIR) by Roux in August 2022; a Phase I ESA by AKRF in February 2023; and a Remedial Action Work Plan (RAWP) dated January 2024.

The RAWP was prepared by AKRF and submitted to DEC and New York State Department of Health (NYSDOH) for review and approval. The RAWP was approved and a Decision Document (DD) was issued by DEC on February 14, 2024 (see **Appendix C**). The RAWP was based on the previous assessments and investigations conducted at the site, summarized the nature and extent of contamination as determined from data gathered from previous investigations, and provided the remedial strategy for the site. The site will be remediated in accordance with the approved RAWP and the DD. Because the BCP is voluntary, in the event the sponsor withdraws from the program, remediation will be required through provisions in the Regulatory Agreement(s) between HPD and the sponsor, and in accordance with a New York City Department of Environmental Protection-approved (DEP) remedy.

B. EXISTING CONDITIONS

TOPOGRAPHY AND SUBSURFACE CONDITIONS

Based on the U.S. Geological Survey mapping, the project site lies at approximately 7 feet above the National Geodetic Vertical Datum of 1929 (an approximation of mean sea level). The site is

generally level. Based on the previous investigations, groundwater was encountered between roughly 8 to 10 feet below grade (fbg). Based on topographic features, groundwater is expected to flow southwest toward the Erie Basin, although actual groundwater flow can be affected by many factors, including bedrock geology, past filling, subsurface openings (especially subway tunnels), and other factors. Groundwater in Brooklyn is not used as a source of potable water (the municipal water supply uses upstate reservoirs).

Based on geotechnical borings conducted at the project site, competent bedrock was first encountered between approximately 120 and 125 fbg.

PREVIOUS ASSESSMENTS AND INVESTIGATIONS

Phase I Environmental Site Assessment (ESA), 37 Otsego Street, AKRF, Inc., January 2016

AKRF performed a Phase I ESA in accordance with ASTM Standard E1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Practice (the standard used at that time). The main objective of the Phase I ESA was to identify recognized environmental conditions (RECs), vapor encroachment concerns (VECs), and other environmental concerns that may have affected the site. Assessment findings included:

- Historical resources indicated that prior to the construction of existing structures, the site consisted of commercial and manufacturing uses, including a machine shop, iron works, metal forging, a filling station, printing company, a motor freight station, and warehouse. The northwest corner of the site may have been utilized as a gasoline service station and underground storage tanks (USTs) were noted on the eastern portion of the site.
- The surrounding area was historically developed with residential, industrial, and commercial properties, including a grease factory, copper works, iron yard, varnish works, junk yards, paint manufacturing, residential apartment buildings, garage, and filling stations.

Based on the findings of the Phase I ESA, AKRF recommended conducting a Subsurface (Phase II) Investigation to investigate subsurface conditions.

Phase II Investigation, 37 Otsego Street, AKRF, Inc., January 2016

AKRF conducted a Phase II investigation to determine whether current or former on- or off-site activities had adversely affected the site subsurface. Field activities were performed in December 2015, and included a geophysical survey and the advancement of 13 borings, with the collection of 17 soil samples, six groundwater samples, six soil vapor samples, and one ambient air sample for laboratory analysis. Soil samples were analyzed for volatile organic compounds (VOCs) by EPA Method 8260, semi-volatile organic compounds (SVOCs) by EPA Method 8270, polychlorinated biphenyls (PCBs) by EPA Method 8082, pesticides by EPA Method 8081, and target analyte list (TAL) metals. Groundwater samples were analyzed for VOCs and SVOCs, and soil vapor samples were analyzed for VOCs by EPA Method TO-15. The results of the investigations indicated the following:

- Elevated photoionization detector (PID) readings of up to a maximum of 192 parts per million (ppm) and evidence of non-aqueous phase liquid (NAPL) were noted in the borings advanced in the parking lot (western portion of the site).
- Analytical results indicated that SVOCs, metals, PCBs and pesticides were detected in the shallow soil samples from across the site at concentrations above the applicable DEC Soil Cleanup Objectives (SCOs).

- Analytical results indicated the presence of VOCs and SVOCs above the DEC Ambient Water Quality Standards and Guidance Values (AWQSGVs) in the groundwater samples.
- Solvent-related and gasoline-related soil vapor concentrations were identified in the northern sidewalk, with detections of compounds that were not identified at elevated concentrations in the soil or groundwater samples.

AKRF's Phase II concluded that the findings of the investigation identified the presence of petroleum contamination, primarily in the western portion of the site (the current parking lot) likely attributed to former on-site uses. NAPL was observed on the groundwater table, and DEC was notified of the observed spill (Spill Number 1509420 was issued for the site in December 2015).

Investigation Work Plan, Roux Environmental Engineering and Geology, D.P.C. (Roux), June 2016 and Subsurface Investigation Summary Report (SISR), Roux, September 2016

Roux completed a subsurface investigation (SI) in July 2016 in order to further investigate the extent of previously identified (during AKRF's Investigation) petroleum impacts associated with DEC Spill Number 1509420 in soil and groundwater. Investigation activities were conducted in accordance with the DEC-approved Investigation Work Plan dated June 20, 2016. Based on the investigation results, Roux identified two distinct areas of contamination at the site: (1) contamination impacts in the northwest portion appeared consistent with degraded fuel oil/diesel fuel; and (2) contamination impacts in the southwest portion appeared consistent with gasoline. The field investigation included completion of 10 soil borings, installation of five monitoring wells within the parking lot, and the collection of one petroleum fingerprint analysis sample, 20 soil samples, and five groundwater samples. The investigation findings included:

- Analytical results indicated concentrations of petroleum related VOCs and SVOCs in soil above their respective SCOs, noted to be typical of degraded petroleum and/or historic fill.
- Groundwater analytical results indicated concentrations of VOCs and SVOCs above the applicable AWQSGVs in multiple samples. The petroleum fingerprint analysis results were consistent with a combination of weathered No. 2 fuel oil/diesel fuel.
- A supplemental off-site investigation was performed to evaluate if contamination was migrating on or off-site. Two monitoring wells were installed upgradient and one monitoring well was installed downgradient of the known petroleum plume. Groundwater results from the off-site wells indicated contamination was not migrating on- or off-site.

A Subsurface Investigation Summary Report (SISR), dated September 12, 2016, was prepared and submitted to DEC. As required by DEC, an interim remedial measure (IRM) was implemented starting on November 22, 2016. This IRM consisted of gauging the monitoring wells on a biweekly basis. All wells with sufficient (LNAPL) thickness were manually bailed using disposable Teflon bailers. During the course of the IRM, LNAPL was recovered from multiple wells and disposed off-site.

Corrective Action Plan (CAP), Roux, January 2017 and Periodic Monitoring Reports, Roux, November 2017, March 2018, July 2018

Roux submitted a CAP for the site, on behalf of former owner at the time. The proposed remedy consisted of the removal of LNAPL by means of manual bailing and absorbent socks and the injection of a chemical oxidation compound to treat petroleum impacts located between 9 and 18 fbg. The CAP was approved by DEC on April 28, 2017.

In July 2017, Roux injected the chemical oxidant RegenOx™ in accordance with the CAP in the two treatment areas in the western portion of the site. Five groundwater sampling events were conducted after the injection event between July 2017 and November 2018. The results showed improvement regarding dissolved phase VOC and SVOCs; however, Roux noted that residual dissolved phase contamination remained beneath the site.

Hot Spot Excavation Work Plan, Roux, January 2019

Roux collected additional soil samples at the site in August 2018 to further characterize soil conditions. The soil sample results identified that the highest concentrations of VOCs in the soil were localized to two main source areas in the western parking lot area. Two hotspots were identified at depths ranging from 8 to 17 fbg. In January 2019, in order to address the two hot spots, which had not been fully remediated by the efforts performed to date, Roux prepared a Hot Spot Excavation Work Plan for the excavation and off-site disposal of contaminated soils from the two identified areas in an attempt to remove the ongoing source of the groundwater contamination.

In accordance with the DEC-approved Hot Spot Excavation Work Plan, between February and May 2019, Roux conducted a limited Hot Spot Excavation consisting of excavation and off-site disposal of soil within the hotspots, and application of Persulfox® within the open excavation at each location. Approximately 1,138 cubic yards (CY) of non-hazardous petroleum contaminated soil was removed for off-site disposal.

All on-site monitoring wells were sampled following the excavation and groundwater results indicated improvement; however, all on-site monitoring wells continued to have petroleum-related VOC and SVOC concentrations in exceedance of the AWQSGVs. Roux concluded that the data suggested that there is a continuing source of groundwater contamination at the site that was not excavated during the hot spot excavations.

Remedial Investigation Report (RIR), Roux, June 2022

Roux completed a site-wide Remedial Investigation (RI) in August 2022 following the execution of a Brownfield Cleanup Agreement (BCA) for the Subject Property (BCP Site Number C224300) to further delineate the nature and extent of contamination at the site in accordance with a DEC-approved Remedial Investigation Workplan (RIWP). The RI included installation of 15 soil borings across the site and the collection of 55 soil samples, the installation of seven temporary well points and three permanent monitoring wells, and collection of seven soil vapor samples.

Field observations indicated that the site is underlain by a continuous layer of historic fill material consisting of sand, gravel, brick, concrete, asphalt, and wood, ranging in thickness from roughly 5 to 15 fbg underlain by a layer of low permeability silt, clay, and fine sand. Organic material (peat) was encountered at depths ranging from approximately 12 to 19 fbg (maximum boring depth was 20 fbg).

The results of the soil samples exhibited exceedances of petroleum-related VOCs, SVOCs, metals (particularly lead and mercury), and pesticides above the applicable SCOs. Per- and polyfluoroalkyl substances (PFAS) exceedances were likely attributable to background levels common in urban areas.

NAPL was noted in one of the temporary well points installed, and the detected petroleum-related VOCs exceeded the AWQSGVs in multiple samples collected from the western portion of the site. The PFAS results in groundwater were associated with background levels common in urban environments.

The soil vapor results detected certain chlorinated VOCs, but with the absence of these compounds detected in soil and groundwater, it was concluded that the detections were associated with regional conditions rather than an on-site contaminant source. Petroleum-related VOCs were detected in the soil vapor results noted to be likely associated with the soil and ground water impacts from Spill No. 1509420.

The RIR was approved by DEC in a letter dated March 22, 2023.

Phase I Environmental Site Assessment (ESA), 37 Otsego Street, AKRF, Inc., February 2023

AKRF conducted a Phase I ESA in conformance with ASTM Standard E1527-21, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The Phase I ESA identified the following:

RECs/VECs

- The site was listed on the NY Spills database with active status Spill No.1509420, which was reported in December 2015 during AKRF's Phase II Investigation.
- Roux completed an RI in August 2022 to further delineate the nature and extent of contamination at the site in accordance with a DEC-approved RIWP. Laboratory analytical results identified certain petroleum-related VOCs in soil above the applicable SCOs and in groundwater above AWQSGVs in samples collected from the western portion of the site consistent with prior investigation activities. The RIR also identified concentrations of polycyclic aromatic hydrocarbons (PAHs), metals (including lead and mercury), pesticides, and PFAS in soil throughout the site above the applicable SCOs. Additionally, certain chlorinated and petroleum-related VOCs were noted in the soil vapor.
- Based on review of historic records, the northwestern portion of the site contained a gasoline service station in 1950. The Sanborn maps depicted four gasoline USTs on the eastern portion of the site between 1938 and 1969. The site was also listed in the Petroleum Bulk Storage (PBS) database: Big R Food Warehouse (a former tenant on the eastern portion of the on-site building) under PBS Facility ID: 2-510750 with two 1,080-gallon gasoline USTs, each with tank statuses listed as 'closed prior to Micro Conversion' in March 1991. No installation dates were provided in the PBS listing. During the site reconnaissance, two apparent fuel oil vent pipes were identified on the eastern exterior wall of the building, along Columbia Street which may be related to potential historical USTs. A 1931 Certificate of Occupancy (C of O) noted two 1,080 and four 550-gallon gasoline tanks were installed, which may correspond with the four gasoline tanks documented in historical Sanborn maps on the eastern side of the building along Columbia Street. The potential exists for historic USTs to be present beneath the site and for them to be encountered during redevelopment activities.
- Historic manufacturing and automotive uses were noted on the surrounding blocks in historic Sanborn maps and city directories, including: auto repair shops, filling stations, fuel oil service yards, scrap and junk yards, a grease factory, stove works, foundry, machine shop, copper works, tin melting and can plant, iron yard, varnish works, paint works, metal works, and flavoring, dying and coloring manufacturing. Regulatory database listings for numerous facilities near the site, including two spill cases on adjacent blocks were identified. Such uses may have affected regional subsurface conditions.

The following considerations outside the scope of ASTM E1527-21 were also identified:

- During the site reconnaissance, four unlabeled 55-gallon steel drums, two of which appeared to be empty and the other two containing unknown materials (potentially investigation derived

waste [IDW] associated with previous remedial activities discussed above) were observed at the site. There were no obvious signs of leakage or breeching associated with the drums.

- Potential buried debris from former on-site structures could contain historic fill of unknown origin; prior investigations identified the presence of historic fill materials containing moderate concentrations of PAHs, metals, and petroleum-related VOCs (associated with the on-site spill). Certain metals, particularly lead, in the soil may require handling and disposal as hazardous waste during the excavation phase of the future proposed development.
- Asbestos containing materials (ACM), lead-based paint (LBP), and/or PCBs could be present in building components at the site. Buried demolition debris from former on-site structures could contain ACM, LBP, PCBs, and/or USTs.

Remedial Action Work Plan (RAWP), 37 Otsego Street, AKRF, Inc., January 2024

Based on the findings of the RIR and previous investigations, AKRF prepared the RAWP in January 2024 which was reviewed and approved by DEC and NYSDOH, and the RAWP approval/DD was issued on February 14, 2024. The RAWP includes the following remedial requirements which will be implemented at the site:

- Demolition and abatement of existing site building.
- An in-situ solidification (ISS) program in the western portion of the site to address the known petroleum contamination.
- Excavation and disposal of contaminated soil to achieve a Track 4 Cleanup.
- Removal of any underground storage tanks (USTs) if encountered during the excavation.
- Implementation of a community air monitoring program (CAMP) during the intrusive work.
- Collection of post-excavation soil endpoint samples to evaluate performance of the remedy.
- Installation of a composite site cover across the site as an engineering control.
- An environmental easement (EE) will be recorded and require compliance with a DEC-approved site management plan (SMP).

C. THE FUTURE WITHOUT THE PROPOSED PROJECT

In the future without the proposed project (the "No Action" condition), the sponsor would construct an as-of-right mixed-use commercial, residential development on the project site (i.e., a development that would not require any discretionary approvals). Excavation for construction of the new building foundations, utilities, etc., and coordination with DEC would be required to remediate the petroleum spill. As discussed above, the site is currently enrolled in the BCP and it is assumed that the site would remain in the BCP and be remediated in conjunction with the redevelopment under the No Action condition.

D. THE FUTURE WITH THE PROPOSED PROJECT

In the future with the proposed project (the "With Action" condition), the site would be remediated and developed with the three multi-story residential-use buildings (no cellar) with exterior landscaped areas, which would require soil disturbance and excavation for construction of foundation elements. In addition, remediation will be required to address the existing petroleum spill, which remains in the western portion of the site. The remedial activities would be completed concurrently with construction in accordance with the DEC-approved RAWP and the DD. Although these activities could temporarily increase pathways for human exposure to the

contaminated materials present in the subsurface, impacts would be avoided by incorporating the following into the proposed redevelopment:

- All construction and soil disturbance activities would continue under the supervision of the BCP and in accordance with the DEC-approved RAWP. The remedy enacted by the plan will be consistent with the cleanup objectives of the BCP and comply with all applicable standards, criteria, and guidance. The RAWP addresses requirements for items such as: soil stockpiling, soil disposal and transportation; ISS for petroleum spill remediation, dewatering requirements; soil sampling requirements; dust control; engineering controls to address thecontamination; quality assurance; and contingency measures should petroleum storage tanks or other unknown contamination be unexpectedly encountered. The RAWP also includes a Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) that provides measures for worker and community protection, including personal protective equipment, dust and vapor control, and air monitoring. The project is also subject to the BCP's public participation program requirements.
- To protect future building occupants and the surrounding community, the RAWP also includes measures to incorporate the site cover system as an engineering control into the new building to address any remaining contamination. In addition, a passive venting system will be installed as part of construction for each of the three new buildings. Each passive system will have the ability to be converted into an active system to mitigate the potential for sub-slab vapor intrusion.
- If dewatering is necessary during construction, water would be discharged to the municipal sewers in accordance with DEP requirements.
- Transportation of material leaving the project site for off-site disposal will be conducted in accordance with federal, state, and local requirements covering licensing of haulers and trucks, placarding, truck routes, manifesting, etc.

A copy of the DEC-approved RAWP and DD will be submitted to DEP prior to start of remedial actions under the BCP. In addition, a copy of the DEC-approved Final Engineering Report (FER) will be provided to DEP, which will document completion of the remedial activities in accordance with the RAWP under the BCP. Because the BCP is voluntary, in the event the sponsor withdraws from the program, remediation will be required through provisions in the Regulatory Agreement(s) between HPD and the sponsor, and in accordance with a DEP-approved remedy. With these measures included as part of the proposed action, no significant adverse impacts related to hazardous materials would occur either during or following construction at the site. ✷

A. INTRODUCTION

As described in Attachment A, "Project Description and Screening Assessments," the proposed action would facilitate the construction of the proposed project, an approximately 536,470-gross-square-foot (gsf) development consisting of three adjacent 8-story buildings (Buildings A, B, and C) and containing a total of 659 units of affordable family, senior, and supportive housing (SH) and approximately 5,660 square feet (sf) of community facility space, including space for senior and supportive services. The project site occupies the full block bounded by Otsego, Columbia, Creamer, and Lorraine Streets. The potential for air quality impacts associated with the proposed project is assessed in this attachment.

As described in Attachment A, "Project Description and Screening Assessments," a detailed transportation analysis is not warranted, and the proposed project would not result in any significant adverse transportation impacts. Consequently, the maximum number of project-generated vehicle trips, as compared with the No Action condition, does not exceed the 170 peak hour vehicle trip screening threshold defined in the *City Environmental Quality Review (CEQR) Technical Manual* for conducting a quantified analysis of carbon monoxide (CO) emissions from mobile sources. The proposed project also does not exceed the particulate matter (PM) emission screening threshold discussed in Chapter 17, Sections 210 and 311 of the *CEQR Technical Manual*. Therefore, a mobile source air quality analysis is not required.

According to the project sponsor, Buildings A, B, and C would utilize electric for all heating, cooling and domestic hot water systems. No fossil-fired fuel would be utilized in connection with operation of the proposed project. Therefore, an analysis of emissions associated with heating and hot water systems is not necessary and no significant adverse impacts would result from the proposed project.

The project site is located adjacent to a manufacturing zoning district. The potential for emissions from existing nearby industrial facilities was assessed, as was the potential for large and/or major sources to impact air quality at the project site.

B. METHODOLOGY FOR PREDICTING POLLUTANT CONCENTRATIONS

INDUSTRIAL SOURCES

Nearby industrial sources were examined to identify any potential air quality impacts on the project site from air toxics. All industrial and manufacturing uses within 400 feet of the project site were considered for inclusion in the air quality impact analyses.

Land use and zoning maps were reviewed to identify potential sources of emissions from manufacturing/industrial operations within the industrial source study area. A search of city permit

data was conducted using the New York City Department of Environmental Protection (DEP) Clean Air Tracking System (CATS) database[5] and a search of federal- and state-permitted and registered facilities was conducted. Subsequent to the permit search, a field survey of uses within 400 feet of the project site was conducted on March 29, 2023, to determine the operating status of permitted industries, and identify any potential industrial sites not included in the permit databases.

No currently permitted manufacturing or processing activities were identified within the 400-foot study area around the project site, and no other sources of emissions were identified in the land use survey. Therefore, no analysis of industrial sources of emissions on the proposed project is required, and no potential for significant impacts on the proposed project are anticipated from industrial sources of emissions.

ADDITIONAL SOURCES

The 2021 *CEQR Technical Manual* requires an analysis of projects that may result in a significant adverse impact due to certain types of new uses located near a "large" or "major" emissions source. Major sources are defined as those located at facilities that have a Title V or Prevention of Significant Deterioration air permit, while large sources are defined as those located at facilities that require a State Facility Permit. To assess the potential effects of these existing sources on the proposed project, a review of existing permitted facilities was conducted. Sources of information reviewed included the DEC Title V and State Facility Permit websites. The review of permits[6] for major and large-scale sources found no such facilities within 1,000 feet of the project site. Therefore, no analysis is required, and no significant adverse impacts would occur on the projected site from major or large stationary sources of emissions.

C. THE FUTURE WITH THE PROPOSED PROJECT

To ensure that there is no potential for significant adverse impacts, the proposed project would be required to utilize electric for all heating, cooling and domestic hot water systems. The restrictions would be required for Buildings A, B and C (Block 579, Lot 1). The implementation of the restrictions would be required through the Regulatory Agreement between New York City Department of Housing Preservation and Development (HPD) and the project sponsor.

The restrictions would be as follows:

Any new development on the above-referenced property must utilize only electrically powered heating, ventilation, air conditioning, and domestic hot water systems to avoid any potential significant adverse air quality impacts. ✷

[5] DEP. Clean Air Tracking System database. https://a826-web01.nyc.gov/DEP.BoilerInformationExt. Accessed December 10, 2019.

[6] DEC. Access to DEC Air Permits. https://www.dec.ny.gov/chemical/8569.html.

Attachment I: Noise

A. INTRODUCTION

This attachment considers the potential for the proposed action to result in significant adverse noise impacts. As described in more detail in Attachment A, the proposed action would facilitate a development of the proposed project: the construction of three adjacent 8-story buildings (Buildings A, B, and C) containing a total of 659 units of affordable family, senior, and supportive housing (SH) and approximately 5,660 square feet (sf) of community facility space, including space for senior and supportive services.

According to the guidelines established in the 2021 *City Environmental Quality Review (CEQR) Technical Manual*, an initial noise impact screening considers whether a proposed action would generate any mobile or stationary source noise or be located in an area with high ambient noise levels. A noise analysis examines an action for its potential effects on sensitive noise receptors, and the effects on the interior noise levels of residential, commercial, and institutional uses.

In terms of mobile sources, the number of vehicle trips generated by the proposed project would be lower than the threshold that would require any detailed transportation analysis. Considering the small number of vehicular trips generated by the proposed project and the relatively high volume of vehicular traffic in the immediate area, it is not expected that the development would generate sufficient traffic to have the potential to cause a significant noise impact (i.e., it would not result in a doubling of noise passenger car equivalents [Noise PCEs], which would be necessary to cause a 3 dBA increase in existing noise levels). Therefore, significant adverse mobile source noise impacts to existing receptors are unlikely, and further assessment is not warranted.

Consequently, the noise analysis is focused on the level of building attenuations necessary to ensure that interior noise levels within the proposed building would satisfy applicable interior noise criteria.

B. ACOUSTICS FUNDAMENTALS

Sound is a fluctuation in air pressure. Sound pressure levels are measured in units called "decibels" (dB). The particular character of the sound that we hear (e.g., a whistle compared with a French horn) is determined by the speed, or "frequency," at which the air pressure fluctuates, or "oscillates." Frequency defines the oscillation of sound pressure in terms of cycles per second. One cycle per second is known as 1 Hertz (Hz). People can hear over a relatively limited range of sound frequencies, generally between 20 Hz and 20,000 Hz, and the human ear does not perceive all frequencies equally well. High frequencies (e.g., a whistle) are more easily discernable and therefore more intrusive than many of the lower frequencies (e.g., the lower notes on the French horn).

"A"-WEIGHTED SOUND LEVEL (DBA)

In order to establish a uniform noise measurement that simulates people's perception of loudness and annoyance, the decibel measurement is weighted to account for those frequencies most audible to the human ear. This is known as the A-weighted sound level, or "dBA," and it is the descriptor of noise levels most often used for community noise. As shown in **Table I-1**, the threshold of human hearing is defined as 0 dBA; very quiet conditions (e.g., a library) are approximately 40 dBA; levels between 50 dBA and 70 dBA define the range of noise levels generated by normal daily activity; levels above 70 dBA would be considered noisy, and then loud, intrusive, and deafening as the scale approaches 130 dBA.

Table I-1
Noise Levels of Common Sources

Sound Source	SPL (dBA)
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
Source: 2021 *CEQR Technical Manual*	

In considering these values, it is important to note that the dBA scale is logarithmic, meaning that each increase of 10 dBA describes a doubling of perceived loudness. Thus, the background noise in an office, at 50 dBA, is perceived as twice as loud as a library at 40 dBA. For most people to perceive an increase in noise, it must be at least 3 dBA. At 5 dBA, the change will be readily noticeable.

SOUND LEVEL DESCRIPTORS

Because the sound pressure level unit of dBA describes a noise level at just one moment and few noises are constant, other ways of describing noise that fluctuates over extended periods have been developed. One way is to describe the fluctuating sound heard over a specific time period as if it had been a steady, unchanging sound. For this condition, a descriptor called the "equivalent sound level," L_{eq}, can be computed. L_{eq} is the constant sound level that, in a given situation and time period (e.g., 1 hour, denoted by $L_{eq(1)}$, or 24 hours, denoted by $L_{eq(24)}$), conveys the same sound energy as the actual time-varying sound. Statistical sound level descriptors such as L_1, L_{10}, L_{50}, L_{90}, and L_x, are used to indicate noise levels that are exceeded 1, 10, 50, 90, and x percent of the time, respectively.

The relationship between L_{eq} and levels of exceedance is worth noting. Because L_{eq} is defined in energy rather than straight numerical terms, it is not simply related to the levels of exceedance. If the noise fluctuates little, L_{eq} will approximate L_{50} or the median level. If the noise fluctuates broadly, the L_{eq} will be approximately equal to the L_{10} value. If extreme fluctuations are present, the L_{eq} will exceed L_{90} or the background level by 10 or more decibels. Thus, the relationship between L_{eq} and the levels of exceedance will depend on the character of the noise. In community noise measurements, it has been observed that the L_{eq} is generally between L_{10} and L_{50}.

C. NOISE STANDARDS AND CRITERIA

NEW YORK CEQR NOISE CRITERIA

The *CEQR Technical Manual* sets external noise exposure standards; these standards are shown in **Table I-2**. Noise exposure is classified into four categories: acceptable, marginally acceptable, marginally unacceptable, and clearly unacceptable. The noise level specified for outdoor areas requiring serenity and quiet is 55 dBA $L_{10(1)}$.

Table I-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
Outdoor area requiring serenity and quiet[2]		$L_{10} \leq 55$ dBA	---------- DNL ≤ 60 dBA ----------	**NA**	---------- 60 < DNL ≤ 65 dBA ----------	**NA**	(i) 65 < DNL ≤ 75 dBA	**NA**	---------- 75 dBA < DNL ----------
Hospital, nursing home		$L_{10} \leq 55$ dBA		$55 < L_{10} \leq 65$ dBA		$65 < L_{10} \leq 80$ dBA		$L_{10} > 80$ dBA	
Residence, residential hotel, or motel	7 AM to 10 PM	$L_{10} \leq 65$ dBA		$65 < L_{10} \leq 70$ dBA		$70 < L_{10} \leq 80$ dBA		$L_{10} > 80$ dBA	
	10 PM to 7 AM	$L_{10} \leq 55$ dBA		$55 < L_{10} \leq 70$ dBA		$70 < L_{10} \leq 80$ dBA		$L_{10} > 80$ dBA	
School, museum, library, court, house of worship, transient hotel or motel, public meeting room, auditorium, outpatient 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)	
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–10PM)	
Industrial, public areas only[4]	Note 4	Note 4		Note 4		Note 4		Note 4	

Notes:
(i) In addition, any new activity shall not increase the ambient noise level by 3 dBA or more.
(ii) *CEQR Technical Manual* noise criteria for train noise are similar to the above aircraft noise standards; the noise category for train noise is found by taking the L_{dn} value for such train noise to be an L^{V}_{dn} (L_{dn} contour) value.
[1] Measurements and projections of noise exposures are to be made at appropriate heights above site boundaries as given by American National Standards Institute (ANSI) Standards; all values are for the worst hour in the time period.
[2] Tracts of land where serenity and quiet are extraordinarily important and serve an important public need, and where the preservation of these qualities is essential for the area to serve its intended purpose. Such areas could include amphitheaters, particular parks, or portions of parks, or open spaces dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet.
[3] One may use Federal Aviation Administration (FAA)-approved L_{dn} contours supplied by the Port Authority of New York and New Jersey, or the noise contours may be computed from the federally approved Integrated Noise Model (INM) Computer Model using flight data supplied by the Port Authority of New York and New Jersey.
[4] External Noise Exposure standards for industrial areas of sounds produced by industrial operations other than operating motor vehicles or other transportation facilities are spelled out in the New York City Zoning Resolution, Sections 42-20 and 42-21. The referenced standards apply to M1, M2, and M3 manufacturing districts and to adjoining residence districts (performance standards are octave band standards).
Source:
New York City Department of Environmental Protection (DEP) (adopted policy 1983).

The *CEQR Technical Manual* defines attenuation requirements for buildings based on exterior noise level (see **Table I-3**). Recommended noise attenuation values for buildings are designed to maintain an interior L_{10} noise level of 45 dBA for residential and community facility uses and 50 dBA for commercial office uses when vehicular traffic is the dominant noise source and an interior

L_{dn} noise level of 40 dBA for residential and community facility uses when rail or aircraft is the dominant noise source.

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

	Marginally Unacceptable				Clearly Unacceptable
Vehicular Traffic	$70 < L_{10} \leq 73$	$73 < L_{10} \leq 76$	$76 < L_{10} \leq 78$	$78 < L_{10} \leq 80$	$80 < L_{10}$
Aircraft[A]	$65 < DNL \leq 68$	$68 < DNL \leq 71$	$71 < DNL \leq 73$	$73 < DNL \leq 75$	$75 < DNL$
Train	$65 < L_{dn} \leq 68$	$68 < L_{dn} \leq 71$	$71 < L_{dn} \leq 73$	$73 < L_{dn} \leq 75$	$75 < L_{dn}$
Attenuation[B]	(I) 28 dBA	(II) 31 dBA	(III) 33 dBA	(IV) 35 dBA	See note [C]

Notes:
[A] DNL descriptor based on average values of L_{dn} 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 dBA less in each category. All the above categories require a closed window situation and hence an alternate means of ventilation.
[C] The required attenuation value is the difference between L_{build} and $L_{interior}$, using the appropriate noise descriptor where:
L_{build} is the projected noise level under the build condition rounded up to the whole number
$L_{interior}$ is the designed interior noise level (45 dBA for vehicular noise, 40 dBA for aircraft and train noise)
Source: New York City Department of Environmental Protection.

D. EXISTING NOISE LEVELS

Existing noise levels at the project site were measured at four locations. Site 1 is located adjacent to the project site on Lorraine Street, midway between Otsego and Columbia Streets. Site 2 is located adjacent to the project site on Columbia Street, midway between Lorraine and Creamer Streets (see **Figure I-1**). Site 3 is located adjacent to the project site on Creamer Street, midway between Otsego and Columbia Streets. Site 4 is located adjacent to the project site on Otsego Street, midway between Lorraine and Creamer Streets.

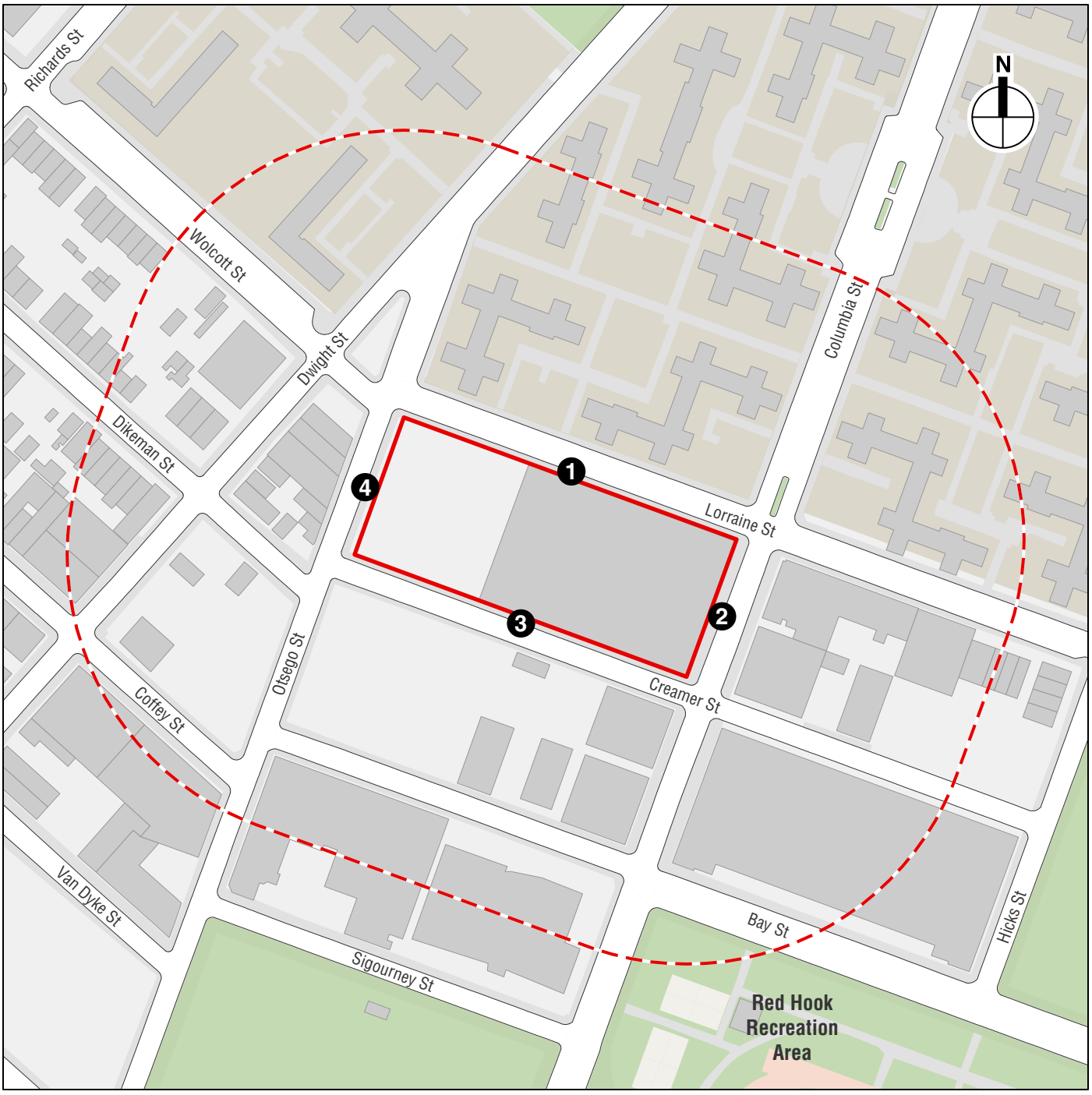
At the receptor sites, the existing noise levels were measured for 20-minute periods during the three weekday peak periods—AM (7:00 AM to 9:00 AM), midday (MD) (12:00 PM to 2:00 PM), and PM (4:00 PM to 6:00 PM). Measurements were conducted on April 5, 2023.

EQUIPMENT USED DURING NOISE MONITORING

Measurements were performed using a Brüel & Kjær Sound Level Meter (SLM) Type 2270, a Brüel & Kjær 1/2-inch microphone Type 4189, and a Brüel & Kjær Sound Level Calibrator Type 4231. The SLM has a valid laboratory calibration within 1 year, as is standard practice. The Brüel & Kjær SLM is a Class 1 instrument according to ANSI Standard S1.4-1983 (R2006). The microphone was mounted on a tripod at a height of approximately 5 feet above the ground and was mounted at least approximately 5 feet away from any large reflecting surfaces. The SLM was calibrated before and after readings with a Brüel & Kjær Type 4231 Sound Level Calibrator using the appropriate adaptor. Measurements were made on the A-scale (dBA). The data were digitally recorded by the sound level meter and displayed at the end of the measurement period in units of dBA. Measured quantities included L_{eq}, L_1, L_{10}, L_{50}, L_{90}, and 1/3 octave band levels. A windscreen was used during all sound measurements except for calibration. All measurement procedures were based on the guidelines outlined in ANSI Standard S1.13-2005.

NOISE MEASUREMENT RESULTS

The results of the existing noise level measurements are summarized in **Table I-4**.



Noise Measurement Locations

COLUMBIA STREET REDEVELOPMENT

Figure I-1

Table I-4
Existing Noise Levels (in dBA)

Receptor Site	Measurement Location	Time	L_{eq}	L_1	L_{10}	L_{50}	L_{90}
1	Adjacent to project site on Lorraine Street, midway between Otsego and Columbia Streets	AM	68.8	80.2	65.7	57.0	54.5
		MD	60.8	70.7	63.2	57.7	55.5
		PM	61.0	72.4	63.2	55.6	53.0
2	Adjacent to project site on Columbia Street, midway between Lorraine and Creamer Streets	AM	69.4	80.7	71.0	64.1	58.6
		MD	63.5	72.5	66.9	59.9	56.7
		PM	64.4	75.5	66.2	58.7	54.7
3	Adjacent to project site on Creamer Street, midway between Otsego and Columbia Streets	AM	53.9	62.0	55.4	52.6	51.1
		MD	55.5	65.7	56.7	53.3	51.3
		PM	55.4	67.8	54.9	50.7	48.4
4	Adjacent to project site on Otsego Street, midway between Lorraine and Creamer Streets	AM	60.3	68.9	63.8	56.9	54.9
		MD	58.6	67.9	60.9	55.8	54.3
		PM	58.8	71.3	60.9	53.3	51.2

Note: Measurements were conducted on April 5, 2023.

At the receptor sites, vehicular traffic on the adjacent roadways was the dominant noise source. Measured levels are low and reflect the level of vehicular activity on the adjacent roadways. In terms of the CEQR criteria, the existing noise levels at Sites 1, 3, and 4 are categorized as "marginally acceptable," and the existing noise levels at Site 2 are in the "marginally unacceptable" category.

E. NOISE ATTENUATION MEASURES

As described above and shown in **Table I-3**, the *CEQR Technical Manual* sets noise attenuation requirements for buildings that constitute newly introduced noise-sensitive receptors. **Table I-5** shows the minimum window/wall attenuation necessary to meet *CEQR Technical Manual* requirements for interior noise levels at each of the noise measurement locations.

Table I-5
Minimum Required Window/Wall Attenuation at Project Site (in dBA)

Façade(s)	Associated Noise Measurement Site	Minimum Required Attenuation
East (along Columbia Street)	2	28
North, South, West, Block Interior	1, 3, and 4	N/A

Notes:
[1] Attenuation values are shown for residential or community facility uses; commercial office uses would require 5 dBA less attenuation.
[2] "N/A" indicates that the highest calculated L_{10} is below 70 dBA. The *CEQR Technical Manual* does not specify minimum attenuation guidance for exterior L_{dn} values below this level.

Window-wall attenuation at the project site would be required through the Regulatory Agreement between New York City Department of Housing Preservation and Development (HPD) and the project sponsor. To ensure an acceptable interior noise environment, future residential/community facility uses must provide a closed-window condition with a minimum of 28 dBA window/wall attenuation on the eastern façade along Columbia Street. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

The attenuation of a composite structure is a function of the attenuation provided by each of its component parts and how much of the area is made up of each part. Normally, a building façade is composed of the wall, glazing, and any vents or louvers for HVAC systems in various ratios of area.

By adhering to the requirements described above, buildings to be developed as a result of the proposed action would provide sufficient attenuation to meet the *CEQR Technical Manual* interior noise level guidelines. Therefore, the proposed action would not result in any significant adverse noise impacts.

F. MECHANICAL SYSTEM

The building mechanical systems (i.e., heating, ventilation, and air conditioning systems) would be designed to meet all applicable noise regulations (i.e., Subchapter 5, §24-227 of the New York City Noise Control Code and the New York City Department of Buildings Code) and to avoid producing levels that would result in any significant increase in ambient noise levels. The requirements would be carried out through a regulatory agreement between HPD and the Project Sponsor and in accordance with the letter dated August 8, 2024 from the architect of record, Ariel Aufgang of Aufgang Architects (see **Appendix D**). ✷

Appendix A
Historic and Cultural Resources

NYC Landmarks Preservation Commission

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

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

ENVIRONMENTAL REVIEW

Project number: LA-CEQR-K (HOUSING PRESERVATION AND DEV)
Project: COLUMBIA ST. REDEVELOPMENT
Address: 37 OTSEGO STREET BBL: 3005790001
Date Received: 5/12/2023

[X**] No architectural significance**

[X**] No archaeological significance**

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

[ ] Listed on National Register of Historic Places

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

[ ] May be archaeologically significant; requesting additional materials

Comments:

S/NR ELIGIBLE RED HOOK HOUSES EAST AND WEST WITHIN RADIUS.

Gina Santucci 5/18/2023

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 37064_FSO_DNP_05182023.docx

New York State
Parks, Recreation and
Historic Preservation

KATHY HOCHUL
Governor

ERIK KULLESEID
Commissioner

June 7, 2023

Elizabeth Meade
Senior Technical Director/Archaeologist
AKRF
440 Park Avenue South, 7th Floor
New York, NY 10016

Re: HDC
Columbia Street Redevelopment
37 Otsego St., Red Hook, Brooklyn, NY 11231
23PR03888

Dear Elizabeth Meade:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the submitted materials in accordance with the New York State Historic Preservation Act of 1980 (section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6NYCRR Part 617).

We note that the project site, 389 Columbia Street, is not eligible for listing in the State and National Registers of Historic Places; and that it is adjacent to the Red Hook Houses, which is eligible for listing in the S/NRHP. We have reviewed the project description and supporting documentation that was provided to our office on May 10th, 2023. Based upon our review, it is OPRHP's opinion that the proposed work will have No Adverse Impact on historic resources.

If you have any questions, I am best reached via e-mail.

Sincerely,

Olivia Brazee
Historic Site Restoration Coordinator
olivia.brazee@parks.ny.gov

cc: G. Santucci and M. Percival, NYC LPC
A. Crader, AKRF, Inc. via e-mail only

APPENDIX B
WATERFRONT REVITALIZATION PROGRAM

FOR INTERNAL USE ONLY	WRP No. 24-046
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: Express Builders

Name of Applicant Representative: Samuel Braver

Address: 144 Spencer Street, Suite 612, Brooklyn, NY 11205

Telephone: 718-288-3757 Email: Sbraver@expressbuildersjb.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

Development of an affordable housing project located at 37 Otsego and 498 Columbia Streets in the Red Hook neighborhood of Brooklyn, Community District 6. Construction of three 8-story buildings (Buildings A, B, and C) containing a total of 659 units of affordable family, senior, and supportive housing and approximately 5,660 square feet of community facility space including senior and supportive services. Project site occupies the full block bounded by Otsego, Columbia, Creamer, and Lorraine Streets. The project will also include a publicly accessible landscaped pedestrian corridor.

2. Purpose of activity

The purpose of the project is to provide housing for a range of household incomes, including housing for formerly homeless families and individuals. The proposed project would address housing needs for seniors, the fastest growing population in New York City. It would provide needed supportive housing, a critical tool for providing permanent, affordable homes to New Yorkers who also need social service support to remain stably housed. Supportive housing is an effective tool to address the homelessness crisis in New York City, particularly for the chronically unhoused, those with mental disabilities and/or substance use disorders.

C. PROJECT LOCATION

Borough: Brooklyn Tax Block/Lot(s): Block 579 Lot 1

Street Address: 37 Otsego and 498 Columbia Streets, Brooklyn NY 11231

Name of water body (if located on the waterfront): n/a

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: _____
- ☐ 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 by: HPD-SARA, SHLP and ELLA, and HDC-ELLA
- ☑ Funding for Construction, specify: see "other" below
- ☐ Policy or Plan, specify: _____
- ☐ Funding of Program, specify: _____
- ☐ 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: NEPA for Building A

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: Samuel Braver

Address: 144 Spencer Street, Suite 612, Brooklyn, NY 11205

Telephone: 718-288-3757 Email: Sbraver@expressbuildersjb.com

Applicant/Agent's Signature: 

Date: 08/06/2024

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

Attachment B: NYC Waterfront Revitalization Program

A. INTRODUCTION

The project site is located within the City's designated Coastal Zone. Therefore, in accordance with the guidelines of the *CEQR Technical Manual*, an evaluation of the proposed project's consistency with the revised WRP policies was performed. New York City's WRP comprises 10 principal policies designed to maximize the benefits derived from economic development, environmental preservation, and public use of the waterfront, while minimizing the conflicts among those objectives. Assessments of the proposed project's conformity with the City's WRP policies are provided below for all policy questions answered "Promote" or "Hinder" on the consistency assessment form. WRP concurrence by the State of New York Department of State (DOS) was issued on May 16, 2024.

Policy 1: Support and facilitate commercial and residential redevelopment in appropriate Coastal Zone areas.

Policy 1.1: Encourage commercial and residential redevelopment in appropriate Coastal Zone areas.

The proposed project would be consistent with existing zoning and land uses in the area, which include light industrial, residential, parking facilities, vacant land, public facilities and institutions, and commercial uses. The project sponsor would redevelop three underutilized lots that are currently occupied by a vacant commercial building and parking with three 8-story buildings that would provide affordable family housing, supportive housing, and Affordable Independent Residences for Seniors (AIRS) units and supportive services. The project site is not on the waterfront or within a Special Natural Waterfront Area (SNWA) or Significant Maritime and Industrial Area (SMIA), and the proposed action would facilitate redevelopment of an underused property to provide housing and community services on a site that is well-suited for redevelopment. Therefore, the proposed project would promote this policy.

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

The project site is in a densely developed neighborhood of Brooklyn in an area with adequate public facilities and infrastructure. The project site is in close proximity to streets and public transportation and, as noted in Attachment A "Project Description and Screenings," the incremental increase in housing units would not impact existing water or sewer infrastructure capacities. Therefore, the proposed project would promote this policy.

Policy 1.4: In areas adjacent to SMIAs, ensure new residential development maximizes compatibility with existing adjacent maritime and industrial uses.

The project site is about four blocks north of the Erie Basin, which is within a designated SMIA. The waterfront nearest the project site is no longer used for industrial purposes and instead contains warehouse uses, ball fields, parking areas, and a waterfront promenade. Given the project

site's distance from any active industrial uses associated with this SMIA, buffers to separate industrial and residential uses are not required. As described in Attachment H "Air Quality," no currently permitted manufacturing or processing activities were identified within the study area and there is no potential for significant impacts related to industrial sources of emissions. Attachment I, "Noise" identifies vehicular traffic on adjacent roadways as the dominant noise source at the project site and notes that the building design would meet CEQR requirements for interior noise levels. Standard design practices for the development of residential buildings in an urban setting would reduce the potential effects of noise, odor, dust, light, and vibration, regardless of surrounding uses. Therefore, the proposed project would promote this policy.

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 6.1.

As described below under Policy 6.2, the proposed project has been designed to minimize the impacts of current and future flooding with sea level rise. Therefore, the proposed project would promote this policy.

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

Policy 5.1: Manage direct or indirect discharges to waterbodies.

The proposed project would not result in artificial input of large quantities of freshwater into tidal or brackish waterbodies, effluent discharge that could result in thermal impacts, or discharge of vessel wastewaters. Therefore, this policy is not applicable.

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

The proposed project would include the construction of three new buildings that would result in stormwater runoff from impervious surfaces, similar to the existing conditions at the site consisting of impervious surfaces associated with vacant commercial space. The proposed project would meet the requirements of DEP's site connection approval process, which addresses stormwater management and requires the implementation of best management practices to bring the buildings into compliance with the required stormwater release rate and the recently adopted Unified Stormwater Rule. This includes requirements for onsite management of a certain volume of stormwater, which would be accomplished through detention designs. The proposed project would also incorporate vegetated spaces throughout the development to promote stormwater infiltration. As under current conditions, stormwater runoff would be conveyed from the site to the existing combined sewer system and would not result in impacts related to stormwater conveyance or treatment. Therefore, the proposed project would promote 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.

Policy 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.

The project site is within the one-percent annual chance floodplain, based on the 2015 FEMA Preliminary FIRMs, in Zone AE (an area of high flood risk subject to inundation by the one-percent annual chance flood event) with a base flood elevation (BFE) of +11 feet NAVD88. Under Policy 6, the primary goal for projects in coastal areas is to reduce risks posed by current and future coastal hazards, particularly major storms that are likely to increase due to climate change

and sea level rise. The project sponsor would construct three new buildings to provide housing and community services on a currently vacant lot previously used for commercial purposes. The buildings would be raised approximately 5 feet above the existing site grade to elevate the new structures approximately 2 feet above the current BFE, as required under Appendix G of the NYC Building Code. Buildings A, B, and C would be constructed at an elevation of approximately +13 feet NAVD88, which is the design flood elevation (DFE) for the project. As described in Policy 6.2, the proposed building designs would also incorporate flood resiliency measures that would minimize the risk of damage or losses from flood impacts. Therefore, the proposed project would promote this policy.

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.

Guidance provided by DCP[1] recommends a detailed methodology to determine consistency with Policy 6.2 for actions that would facilitate the development of new vulnerable features, like the proposed project. A summary of this process is provided below.

1. Identify vulnerabilities and consequences: assess the project's vulnerabilities to future coastal hazards and identify what the potential consequences may be.

a. Complete the Flood Evaluation Worksheet.

The information in the following subsections is based on the results of the completed worksheet provided in **Attachment 1**. The worksheet provides the ground floor, first floor, second floor, and third floor elevations of Buildings A, B, and C to represent the lowest floors with residential uses. Floors four through eight would also provide residential space but were excluded from the worksheet because they are approximately 35 feet above the design elevation. Each building is designed to use the same floor elevations. Mechanical, electrical, and plumbing (MEP) equipment is identified as a separate feature in the worksheet at the ground floor level.

b. Identify any project features that may be located below the elevation of the 1 percent floodplain over the lifespan of the project under any sea level rise scenario.

The lifespan of buildings is generally considered to be about 80 years and MEP equipment is assumed to have a lifespan of 50 years with regular maintenance. Based on these assumed lifespans, the evaluation year for the buildings is 2100 and the evaluation year for the MEP equipment is 2080. The project site is within the one-percent annual chance floodplain in Zone AE with a BFE of +11 feet NAVD88. The New York City Panel on Climate Change (NPCC) projects that sea levels are likely to increase by up to 75 inches by 2100 under High Scenario projections. The projected floodplain elevation for the project site would be +13.5 feet NAVD88 in the 2050s and up to +17.25 feet NAVD88 by 2100.

The sidewalks bordering the project site are at elevations ranging from approximately +7.28 feet to +10.62 feet NAVD88, which is within the current floodplain. Entrances to the proposed buildings would need to meet the sidewalk level, but the ground floor of Buildings A, B, and C would be raised above the existing site grade and constructed at a DFE of +13 NAVD88, in accordance with Appendix G of the NYC Building Code. All MEP equipment would be installed

[1] NYC Department of City Planning. *The New York City Waterfront Revitalization Program: Climate Change Adaptation Guidance.* November 2018.

either on the ground floor, at about +13 feet NAVD88, or on the roof of each building. The residential spaces in each building would begin at the first floor, which would remain above the projected floodplain throughout the 80-year design life of the buildings. Under the High Scenario projections, the ground floors of Buildings A, B, and C would be within the floodplain sometime in the 2050s, which is within the 80-year design life of the structures. The MEP equipment would also be within the floodplain sometime in the 2050s, which is within the 50-year design life of the structures.

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

Based on the range of sea level rise predictions described above, MHHW at the NOAA station closest to the project site (currently +2.61 feet NAVD88) could range up to +7.44 feet NAVD88 in the 2080s and +8.86 feet NAVD88 by 2100. Given these projections, the existing sidewalks would be within range of MHHW by the end of the century, but no vulnerable, critical, or potentially hazardous features at the project site would be below MHHW.

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.

The project site is inland and is not located on the shoreline. Wave action hazards (i.e., Zone VE or Coastal A Zone) have not been designated for the project site. Therefore, storm impacts due to waves, high winds, or debris would not be expected to affect the proposed project.

2. Identify adaptive strategies: assess how the vulnerabilities and consequences identified in Step 1 are addressed through the project's design and planning.

a. For any features identified in Step 1(b), describe how any flood damage reduction elements incorporated into the project, or any natural elevation on the site, provide any additional protection. Describe how would any planned adaptive measures protect the feature in the future from flooding?

The ground floor of Buildings A, B, and C would be below the projected floodplain elevation by the 2050s, which is within the 80-year design life of the buildings. To account for these projected conditions, the walls of each building would incorporate wet floodproofing designs from the foundation up to the design elevation. Flood vents would be installed at the ground floor doors, and deployable flood gates would be installed at all building entrances. All new MEP equipment would be installed either at the roof level or on the ground floor of each building at the DFE of +13 feet NAVD88, in accordance with Appendix G of the New York City Building Code. The MEP equipment would be within the projected floodplain elevations sometime in the 2050s, before the end of its 50-year design life. To account for projected conditions, adaptive measures could be implemented in the future such as elevating the equipment above the ground floor level, moving the equipment to another floor or a dry floodproofed enclosure, or otherwise floodproofing or waterproofing the equipment and connecting appurtenances. Ground floor uses for each building would include crawl spaces and building lobbies, mailroom services, and storage, but no permanently occupied residential spaces.

b. For any features identified in Step 1(c), describe how any flood damage reduction elements incorporated into the project, or any natural elevation on the site, provide

any additional protection. Describe how would any planned adaptive measures protect the feature in the future from flooding?

As described in Step 1(c), no vulnerable, critical, or potentially hazardous features would be below MHHW within their design life under projected conditions.

c. Describe any additional measures being taken to protect the project from additional coastal hazards such as waves, high winds, or debris.

As described in Step 1(d), the project site is not within a wave impact zone in the City's designated flood hazard area. Therefore, no specific measures are required.

d. Describe how the project would affect the flood protection of adjacent sites, if relevant.

Because the floodplain in New York City is controlled by astronomic tide and meteorological forces (e.g., nor'easters and hurricanes) and not by fluvial flooding, the proposed project would not have the potential to adversely affect the floodplain or result in increased coastal flooding at adjacent sites or within the study area. The building construction would not alter the existing site elevation or encroach into adjacent properties. The proposed project would also incorporate vegetated spaces which would facilitate stormwater infiltration and minimize potential effects from runoff.

3. Assess policy consistency: conclude whether the project is consistent with Policy 6.2 of the Waterfront Revitalization Program.

The project site is within the one-percent annual chance floodplain but is not within a wave impact zone in the flood hazard area. Because the project site is in the floodplain, all construction will be conducted in accordance with Appendix G "Flood Resistant Construction" of the NYC Building Code. The proposed buildings would be raised above the existing site grade to a DFE of +13 feet NAVD88, which is 2 feet above the current BFE. MEP equipment would be installed either at the DFE on the ground floor . The ground floor of Buildings A, B, and C would be below the projected flood elevation by the 2050s under the High Scenario projections, which is within their 80-year design life. Any MEP equipment located on the ground floor would also be below the projected flood elevation by the 2050s, which is within its 50-year design life. For this reason and in accordance with Appendix G of the NYC Building Code, the proposed project has incorporated flood protection measures including wet floodproofing designs from the foundation of the buildings up to the DFE of +13 feet NAVD88, flood vents at the ground floor doors, and flood gates at the building entrances. Adaptive measures that could be implemented for the MEP equipment include elevating the equipment above the ground floor level, moving the equipment to another floor or a dry floodproofed enclosure, or otherwise floodproofing or waterproofing the equipment and connecting appurtenances. The ground floor of each building would be used for building access, mailroom, and storage purposes rather than occupied residential units. Residential spaces would begin on the first floor, approximately 15 feet above the ground floor. The incorporation of vegetated spaces and stormwater management practices would also facilitate stormwater infiltration at the site. Therefore, with these measures in place, the proposed project would promote this policy.

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.

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.

Based on previous assessments and investigations conducted at the project site, as described in Attachment G "Hazardous Materials," there is the potential to encounter contaminated or hazardous substances related to historic manufacturing and automotive uses of the site and surrounding area. The most recent Phase I ESA conducted for the proposed project in February 2023 identified petroleum related VOCs in soil and groundwater, and PAHs, metals, pesticides, and PFAS in soil throughout the site, as well as underground storage tanks from a former gasoline service station. Asbestos containing materials, lead-based paint, and/or PCBs may also be present in buried demolition debris from former onsite structures. To avoid impacts from the materials, soil disturbance and excavation for construction of the foundation elements for the proposed project would be performed concurrently with remediation activities and in accordance with a NYSDEC-approved Remedial Action Work Plan (RAWP) that will be prepared for the project as part of the NYSDEC's Brownfield Cleanup Program (BCP). The RAWP would also include a Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) providing measures for worker and community protection as well as any necessary engineering controls in the new buildings (e.g., vapor barrier, groundwater treatment), as required. Groundwater encountered during construction would be discharged to the municipal sewers in accordance with New York City Department of Environmental Protection (DEP) requirements. All hazardous and contaminated materials on the site would be transported for offsite disposal at a licensed facility in accordance with federal, state, and local requirements. Because the BCP is voluntary, in the event the sponsor withdraws from the program, remediation will be required through provisions in the Regulatory Agreement(s) between HPD and the sponsor, and in accordance with a DEP-approved remedy. With these measures in place, the proposed project would promote this policy.

Policy 7.2: Prevent and remediate discharge of petroleum products.

As described in Attachment G "Hazardous Materials," the potential for petroleum contamination from historic uses at the site is primarily confined to the western portion of the property in the parking lot. The Phase I ESA conducted for the project site in February 2023 also identified petroleum-related VOCs in soils onsite. As described under Policy 7.1, the proposed project would be constructed in accordance with the RAWP prepared to address the site contamination, and coordination with NYSDEC would be required to remediate the petroleum spill. The RAWP would also include contingency measures for unexpected discovery of petroleum storage tanks or other unknown contamination during site excavation and construction. With these measures in place, the proposed project would promote this policy.

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.

As stated in Attachment G "Hazardous Materials," transportation of material from the project site for offsite disposal would be conducted in accordance with federal, state, and local requirements covering the licensing of haulers and trucks, placarding, truck routes, manifesting, etc. All contaminated or hazardous materials would be transported to a licensed facility for disposal. Therefore, with these measures in place, the proposed project would promote this policy.

Policy 8: Provide public access to, from, and along New York City's coastal waters.

Policy 8.2: Incorporate public access into new public and private development where compatible with proposed land use and coastal location.

The project site is in a densely developed area inland from the waterfront with limited access to the water. While the proposed project is not along the water's edge, the proposed project would include public access within the development with a 60-foot wide, publicly accessible, landscaped pedestrian corridor to connect Lorraine Street to Creamer Street and separating Building A from Buildings B and C. This pedestrian corridor would provide approximately 12,000 square feet of new publicly accessible open space and would include landscaped green space with benches, native vegetation, and centrally located pathways between the three buildings. It would also be adjacent to the supportive services suite and across the street from the New York City Housing Authority's (NYCHA) Red Hook Houses. Therefore, the proposed project would promote 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.

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

As discussed in Attachment F "Historic and Cultural Resources," the Red Hook Houses complex (S/NR-eligible) is located at 62 Mill Street and 55 Dwight Street. The building complex was built in 1938-1939 and occupies the blocks bounded by Verona and West 9th Street to the north, Clinton Street to the east, Lorraine Street to the south, and Otsego/Dwight Street to the west. Three additional buildings were built in 1955 as part of Red Hook II that are located immediately to the west on the block bounded by the Coffey Park/King Street to the north, Otsego/Dwight Street to the east, Wolcott Street to the south, and Richards Street to the west. As described in the November 29, 2016 "Resource Evaluation," the Red Hook Houses complex was among the earliest public housing developments in New York City that were built under the National Housing Act of 1934, which created the Federal Housing Administration, and the United States Housing Act of 1937. The southern portions of two six-story residential buildings in the Red Hook Houses complex—the buildings located at 9-17 Lorraine Street at the corner of Otsego/Dwight Street and 484-486 Columbia Street/30-38 Bush Street at the corner of Columbia Street—are located within 90 feet of the project site. However, in consultation with HPD, the New York City Landmarks Preservation Commission determined that a Construction Protection Plan is not warranted.

Policy 10.2: Protect and preserve archaeological resources and artifacts.

The proposed project would result in soil disturbance from excavation and construction within the project site, and as such, LPC was contacted for an initial evaluation of the project site's potential for archaeological sensitivity. As discussed in Attachment F "Historic and Cultural Resources," in comments dated May 18, 2023, LPC determined that the project site has no archaeological significance. Therefore, the proposed project does not have the potential to affect archaeological resources and artifacts, and this policy is not applicable.

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	Columbia Street Redevelopment
Location	37 Otsego and 498 Columbia Streets, Brooklyn NY 11231
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	Development of an affordable housing project at 37 Otsego and 498 Columbia Streets in Red Hook neighborhood. Construction of three 8-story buildings (Buildings A, B, and C) containing a total of 659 units of affordable family, senior, and supportive housing and approximately 5,660 sf of community facility space including senior and supportive services. Project site is the full block bounded by Otsego, Columbia, Creamer, and Lorraine Streets. A 60-foot wide publicly accessible landscaped pedestrian corridor would connect Lorraine and Creamer Streets between Building A and Buildings B and C.
Planned Completion Date	2026
Expected Project Lifespan	2100

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	2.61	**2.61**	**NAVD88**	*Appendix A, Station 8518750 (The Battery)*
1% flood height	11.00	**11.00**	**NAVD88**	*NYC Flood Hazard Mapper*
Design flood elevation	13.00	**13.00**	**NAVD88**	*NYC Building Code, schematic floor plans*
As relevant:				
0.2% flood height	-->			

Data will be converted based on the following datums:

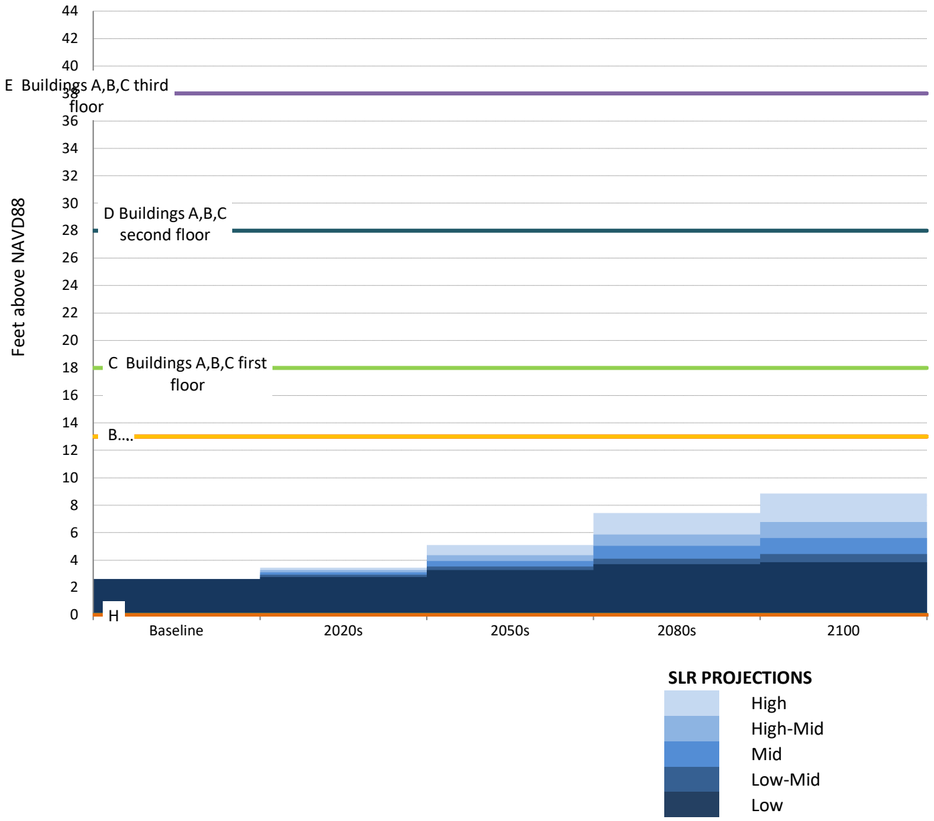
Datum	FT (NAVD88)
NAVD88	*0.00*
NGVD29	*-1.10*
Manhattan Datum	*1.65*
Bronx Datum	*1.51*
Brooklyn Datum (Sewer)	*0.61*
Brooklyn Datum (Highway)	*1.45*
Queens Datum	*1.63*
Richmond Datum	*2.09*

Describe key physical features of the project.

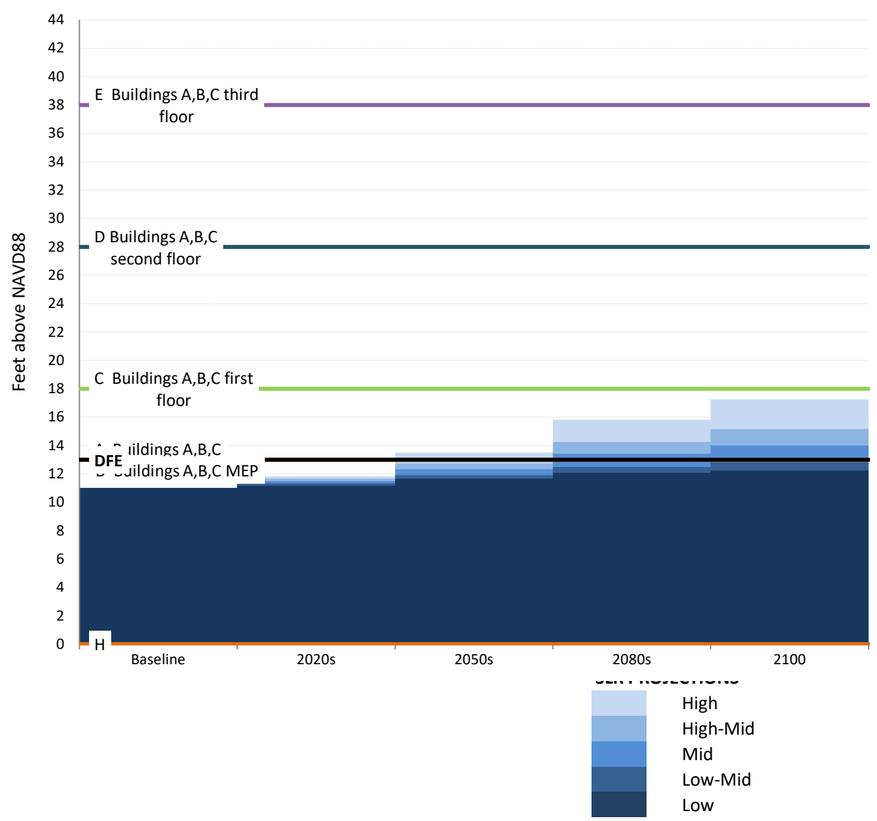
Feature *(enter name)*	Feature Category	Lifespan	Elevation	Units	Datum	Ft	Ft Above NAVD88	Ft Above MHHW	Ft Above 0.2% flood height
A Buildings A,B,C ground floor	☒ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	13.0	Feet	NAVD88	*13.0*	*13.0*	*10.4*	*#VALUE!*
Representative elevation of ground floor for Buildings A, B, and C which will be constructed to the DFE of +13 feet. For purpose of comparison, as shown on the schematic floor plans the lowest elevation at the sidewalk is approximately +7.93 feet NAVD88 for Building A, +9.05 feet NAVD88 for Building B, and +7.28 feet NAVD88 for Building C.									
B Buildings A,B,C MEP	☐ Vulnerable ☒ Critical ☐ Potentially Hazardous ☐ Other	2080	13.0	Feet	NAVD88	*13.0*	*13.0*	*10.4*	*#VALUE!*
MEP equipment in Buildings A, B, and C will be located either on the ground floor (at +13 feet NAVD88) or on the roof of the building. The ground floor elevation is used as the worst case estimate for this analysis.									
C Buildings A,B,C first floor	☒ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	18.0	Feet	NAVD88	*18.0*	*18.0*	*15.4*	*#VALUE!*
Representative elevation of first floor for Buildings A, B, and C which would contain residential spaces									
D Buildings A,B,C second floor	☒ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	28.0	Feet	NAVD88	*28.0*	*28.0*	*25.4*	*#VALUE!*
Representative elevation of second floor for Buildings A, B, and C which would contain residential spaces									
E Buildings A,B,C third floor	☒ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	38.0	Feet	NAVD88	*38.0*	*38.0*	*35.4*	*#VALUE!*
Representative elevation of third floor for Buildings A, B, and C which would contain residential spaces									
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									

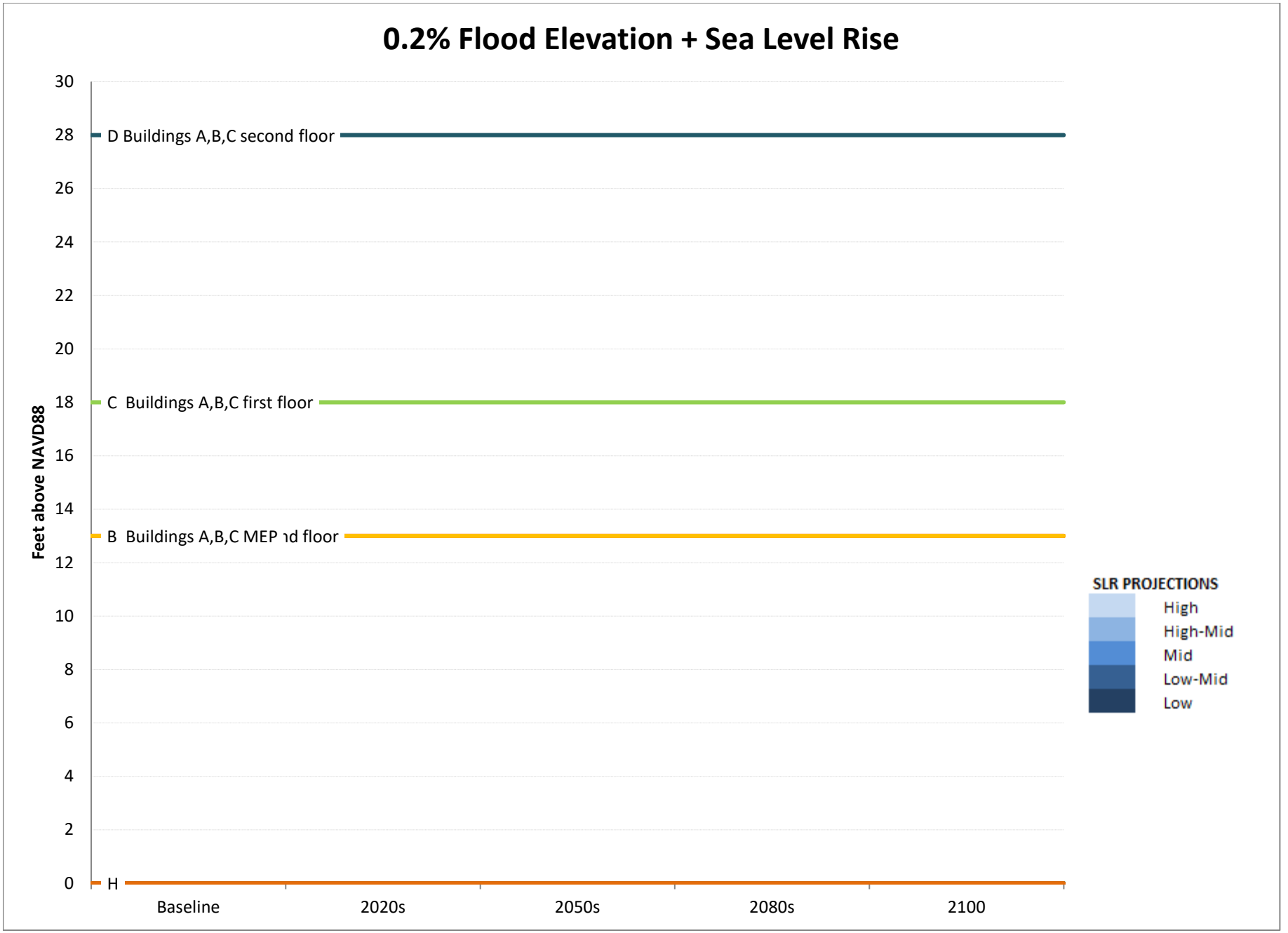
Assess project vulnerability over a range of sea level rise projections.

Mean Higher High Water + Sea Level Rise



1% Flood Elevation + Sea Level Rise




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
D Buildings A,B,C second floor
C Buildings A,B,C first floor
B Buildings A,B,C MEP ıd floor
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	**2014**
2020s	0.17	0.33	0.50	0.67	0.83	**2020s**
2050s	0.67	0.92	1.33	1.75	2.50	**2050s**
2080s	1.08	1.50	2.42	3.25	4.83	**2080s**
2100	1.25	1.83	3.00	4.17	6.25	**2100**

MHHW+SLR (ft above NAVD88)

	Low	Low-Mid	Mid	High-Mid	High
Baseline	2.61	2.61	2.61	2.61	2.61
2020s	2.78	2.94	3.11	3.28	3.44
2050s	3.28	3.53	3.94	4.36	5.11
2080s	3.69	4.11	5.03	5.86	7.44
2100	3.86	4.44	5.61	6.78	8.86

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 Buildings A,B,C ground floo	13	13
B Buildings A,B,C MEP	13	13
C Buildings A,B,C first floor	18	18
D Buildings A,B,C second floor	28	28
E Buildings A,B,C third floor	38	38
F	0	0
G	0	0
H	0	0
DFE	13.00	13.00

SLR (in)				
Low	**Low-Mid**	**Mid**	**High-Mid**	**High**
0	0	0	0	0
2	4	6	8	10
8	11	16	21	30
13	18	29	39	58
15	22	36	50	75

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

* MHHW values include an addition 0.33 feet to account for changes in sea level since the 1983-20(

Source
NOAA Tides and Currents
NOAA Tides and Currents
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)1 tidal epoch.




Alpine
8530095
New
Rochelle
8518490
Dyckman St
8518902
Glen Cove
8516614
Randalls
Island
8518643
Port
Morris
8518639
Throggs
Neck
8518526
Willets
Point
8516990
Worlds Fair
Marina
8517251
Queensboro
Bridge
8518687
Horns Hook
8518668
Williamsburg
Bridge
8518699
he Battery
8518750
North
Channel
8507201
Norton
Point
8516891
CG
9050
Beach
Channel
8517137
Kingsborough
8517756
Sandy Hook
8531680

From:	Amber Nowak (DCP)
To:	Noralez-Brown, Michelle (HPD)
Cc:	Michael Marrella (DCP)
Subject:	Consistency Determination - WRP #24-046
Date:	Wednesday, April 24, 2024 4:00:43 PM

Good afternoon,

We have completed the review of the project as described below for consistency with the policies and intent of the New York City Waterfront Revitalization Program (WRP).

Columbia Street Red Hook- Building C (CEQR # 24-046): Columbia SF LLC. (the "project sponsor") is seeking construction funding (the "proposed action") from the New York City Department of Housing Preservation and Development (HPD) to facilitate the development of an affordable housing project located at 37 Otsego and 498 Columbia Streets (Brooklyn Block 579, Lot 1) (the "project site") in the Red Hook neighborhood of Brooklyn, Community District 6. The proposed action would facilitate the construction of three, 8-story buildings containing a total of 659 units of affordable family, senior, and supportive housing (SH) and approximately 5,660 square feet (sf) of community facility space, including space for senior and supportive services.

Based on the information submitted, the Climate & Sustainability Planning Division, on behalf of the New York City Coastal Commission, having reviewed the waterfront aspect of this action, hereby concurs that the actions will not substantially hinder the achievement of any Waterfront Revitalization Program (WRP) policy.

This determination is only applicable to the information received and the current proposal. Any additional information or project modifications would require an independent consistency review.

For your records, this project has been assigned WRP #23-178. If there are any questions regarding this review, please contact me.

Thank you,

Amber Nowak
Senior Planner • Climate and Sustainability Planning
(She/Her)

NYC Department of City Planning
212-720-3448 (O)
120 Broadway, 31st Floor, New York, NY 10271

anowak@planning.nyc.gov
Visit our website | Twitter | Instagram| NYC Comprehensive Waterfront Plan

Appendix C
DEC Correspondence

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Remedial Bureau B
625 Broadway, 12th Floor, Albany, NY 12233-7016
P: (518) 402-9767 I F: (518) 402-9773
www.dec.ny.gov

Sent via e-mail

March 22, 2023

Solomon Felder
670 Myrtle Avenue, Suite 438
Brooklyn, NY 11205

Re: Remedial Investigation Report (RIR)
37 Otsego Street
37 OTSEGO STREET, Brooklyn, NY 11205
BCP Site ID: C224300

Dear Solomon Felder:

The New York State Departments of Environmental Conservation (NYSDEC) and Health (NYSDOH) have completed their review of the referenced Brownfield Cleanup Program (BCP) site's Remedial Investigation Report (RIR) dated June 2022, revised in August 2022. The report was prepared by Roux Environmental Engineering and Geology, D.P.C. on behalf of the "Columbia SF LLC c/o Key Developers". The RIR substantially addresses the requirements of the Brownfield Cleanup Agreement. Based upon the information and representation given in the RIR it has been determined that the RIR is acceptable and is hereby approved.

Please place a copy of the approved RIR in the project document repositories within two weeks and remove the draft version.

If you have any questions regarding this communication, please contact me at 518 368 5120 and or Sadique.ahmed@dec.ny.gov.

Sincerely

Sadique Ahmed, P.E.
Project Manager
Remedial Bureau B, Section B

ec: Solomon Felder, Columbia SF LLC (jj@keydevelopersny.com)
Robert Kovacs, Roux Associates, (rkovacs@rouxinc.com)
Valerie Sabatasso, Roux Associates, (vsabatasso@rouxinc.com)
William Bennett
Scarlett McLaughlin, NYSDOH
John Robinson, NYSDOH
DecDocs

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Remedial Bureau B
625 Broadway, 12th Floor, Albany, NY 12233-7016
P: (518) 402-9767 I F: (518) 402-9773
www.dec.ny.gov

Sent via e-mail

September 8, 2023

Solomon Felder
670 Myrtle Avenue, Suite 438
Brooklyn, NY 11205
jj@keydevelopersny.com

Re: Remedial Action Work Plan (RAWP)
37 Otsego Street
37 Otsego Street, Brooklyn, NY 11205
BCP Site ID: C224300

Dear Solomon Felder:

The New York Department of Environmental Conservation (NYSDEC) and the New York Department Health (NYSDOH) have reviewed the June 2023 Draft Remedial Action Work Plan (RAWP) related to the 37 Otsego Street BCP Site. The RAWP was prepared by AKRF. In accordance with 6 NYCRR Part 375-1.6(d)(3) the NYSDEC requests the following modifications to the RAWP:

1. **Modification 1, Certification**: The final Remedial Action Work Plan (RAWP) must be certified in accordance with DER-10.

2. **Modification 2, CAMP:** The Community Air Monitoring Plan (CAMP) should be separated from the Health and Safety Plan (HASP) into its own appendix and all references in the report should be updated accordingly.

3. **Modification 3, Pdf page 41, 2.6.3. Identification of Standards, Criteria and Guidance:** Include the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006 (SVI guidance).

4. **Modification 4, 5.4.1 Daily Reports:** This section indicates that daily reports will *include "a summary of CAMP finding, including excursions"*. Revise to read "a summary of CAMP findings, including exceedances"

5. **Modification 5, 6.4.12 Community Air Monitoring Plan:** Modify the second paragraph to reflect that readings should be provided at least on a weekly basis with all exceedances reported to DEC and DOH the same day or next business day if after hours along with the reason for exceedance, what was done to correct it, and if it was effective.

6. **Modification 6, 7.0 In-Situ Solidification Cover:** Where the soil cover is required over the ISS treatment area, it must consist of a minimum of four feet of soil to ensure the underlying monolith remains below the frost line and protected from the freeze-thaw cycle. Consistent with the remainder of the site cover, the upper two feet will meet the SCOs for restricted residential use. For areas where solidified material underlies the cover, the solidified material itself will serve as the demarcation layer due to the nature of the material. Revise applicable portions of the RAWP for consistency with this modification.

7. **Modification 6, 10.2 SSDS Confirmatory Testing:** Post-mitigation indoor and outdoor air sampling should be conducted concurrently with the SSDS performance testing to confirm the system's efficacy in mitigating potential exposures. The post-mitigation sampling should be conducted no sooner than 30 days after installing a depressurization system. If the system is installed outside of the heating season or at the end of a season, post-mitigation air sampling may be postponed until the heating season. In newly constructed buildings, a site-specific and building-specific indoor air sampling plan is recommended due to potential interferences caused by the off gassing of volatile chemicals in new building materials.

8. **Modification 7, Appendix G: HASP and CAMP, Section 2.6.2.3 Community Air Monitoring Action Levels:** This section indicates that "All readings will be recorded and be available for NYSDEC and NYSDOH personnel to review". These readings should be provided at least on a weekly basis with all exceedances reported to DEC and DOH the same day or next business day if after hours along with the reason for exceedance, what was done to correct it, and if it was effective.

9. **Modification 8, Figure 8, Extent of sub-slab depressurization system (SSDS):** In this figure, please include layouts of all three structures as well as layouts for active SSD systems and landscape areas.

10. **Modification 9, Figures:** Ensure all figures are properly compressed / flattened so as to display properly.

Please incorporate the above modifications/comments and submit a revised RAWP within 30 days of receipt of this letter.

Please contact me at sadique.ahmed@dec.ny.gov if you have any questions or require further information.

Sincerely

Sadique Ahmed, P.E.
Project Manager
Remedial Bureau B, Section B

ec: Solomon Felder, Columbia SF LLC (jj@keydevelopersny.com)
Ashutosh Sharma, AKRF, (asharma@akrf.com)
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William Bennett
Scarlett McLaughlin, NYSDOH
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DECDOCS

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Remedial Bureau B
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Sent via e-mail

February 14, 2024

Solomon Felder
Columbia SF LLC
670 Myrtle Avenue, Suite 438
Brooklyn, NY 11205
jj@keydevelopersny.com

Re: 37 Otsego Street, BCP Site ID: C224300
Brooklyn, Kings County
Remedial Action Work Plan & Decision Document

Dear Solomon Felder,

The New York State Department of Environmental Conservation (Department) and the New York State Department of Health (NYSDOH) have reviewed the Remedial Action Work Plan (RAWP) for the 37 Otsego Street site dated January 2024 and prepared by AKRF, Inc. on behalf of the Columbia SF LLC. The RAWP is hereby approved. Please ensure that a copy of the approved RAWP is placed in the document repositories. The draft plan should be removed.

Enclosed is a copy of the Department's Decision Document for the site. The remedy is to be implemented in accordance with this Decision Document. Please ensure that a copy of the Decision Document is placed in the document repositories.

Please contact the Department's Project Manager, Sadique Ahmed, at 518 402 9656 or sadique.ahmed@dec.ny.gov at your earliest convenience to discuss next steps. Please recall the Department requires seven days notice prior to the start of field work.

Sincerely,

R. Scott Deyette

Scott Deyette
Director
Remedial Bureau B
Division of Environmental Remediation

NEW YORK STATE | Department of Environmental Conservation

Enclosure: Decision Document, 37 Otsego Street, BCP Site C224300

ec *w/attachments*:

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DECISION DOCUMENT

37 Otsego Street
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224300
February 2024



Prepared by
Division of Environmental Remediation
New York State Department of Environmental Conservation

DECLARATION STATEMENT - DECISION DOCUMENT

37 Otsego Street
Brownfield Cleanup Program
Brooklyn, Kings County
Site No. C224300
February 2024

Statement of Purpose and Basis

This document presents the remedy for the 37 Otsego Street brownfield cleanup site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (NYSDEC) for the 37 Otsego Street site and the public's input to the proposed remedy presented by NYSDEC.

Description of Selected Remedy

The elements of the selected remedy are as follows:

1. Remedial Design

A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows:

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques to the extent

feasible in the future development at this site, any future on-site buildings shall be constructed, at a minimum, to meet the 2020 Energy Conservation Construction Code of New York (or most recent edition) to improve energy efficiency as an element of construction.

As part of the remedial design program, to evaluate the remedy with respect to green and sustainable remediation principles, an environmental footprint analysis will be completed. The environmental footprint analysis will be completed using an accepted environmental footprint analysis calculator such as SEFA (Spreadsheets for Environmental Footprint Analysis, USEPA), SiteWiseTM (available in the Sustainable Remediation Forum [SURF] library) or similar NYSDEC accepted tool. Water consumption, greenhouse gas emissions, renewable and non-renewable energy use, waste reduction and material use will be estimated, and goals for the project related to these green and sustainable remediation metrics, as well as for minimizing community impacts, protecting habitats and natural and cultural resources, and promoting environmental justice, will be incorporated into the remedial design program, as appropriate. The project design specifications will include detailed requirements to achieve the green and sustainable remediation goals. Further, progress with respect to green and sustainable remediation metrics will be tracked during implementation of the remedial action and reported in the Final Engineering Report (FER), including a comparison to the goals established during the remedial design program.

Additionally, the remedial design program will include a climate change vulnerability assessment, to evaluate the impact of climate change on the project site and the proposed remedy. Potential vulnerabilities associated with extreme weather events (e.g., hurricanes, lightning, heat stress and drought), flooding, and sea level rise will be identified, and the remedial design program will incorporate measures to minimize the impact of climate change on potential identified vulnerabilities.

2. Excavation

The existing on-site building as well as slabs will be demolished and materials which cannot be beneficially reused on site will be taken off-site for proper disposal in order to implement the remedy.

All soils in the upper two feet which exceed the restricted-residential soil cleanup objectives (SCOs) will be excavated and transported off-site for disposal. Approximately 7,500 cubic yards of contaminated soil will be removed from the site. If found on the site, any underground storage tanks (USTs), fuel dispensers, underground piping or other structures will be excavated and properly disposed off-site.

Collection and analysis of documentation samples at the remedial excavation depth.

To ensure proper handling and disposal of excavated material, waste characterization sampling will be completed for all identified contaminated site material. Waste characterization sampling will be performed exclusively for the purposes of off-site disposal in a manner suitable to receiving facilities and in conformance with applicable federal, state and local laws, rules, and

regulations and facility-specific permits.

Excavation of site soils to a depth of six feet below grade in the portion of the site subject to the in-situ solidification (ISS) treatment described in remedy element 5. Approximately 3,500 cubic yards of soil will be excavated to facilitate ISS implementation. All soils excavated as part of the ISS which exceed either RRSCOs or protection of groundwater SCOs for contaminants present in groundwater will be disposed at a permitted off-site facility.

3. Backfill

On-site soil which does not exceed the above excavation criteria or the protection of groundwater SCOs for any constituent may be used to backfill the excavation or re-grade the site. Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to complete the backfilling of the excavation and establish the designed grades at the site.

4. Cover System

A site cover will be required in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs), to allow for future restricted residential use of the site. Where a soil cover is to be used it will be a minimum of two feet of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs.

Where the soil cover is required over the ISS treatment area, it will consist of a minimum of four feet of soil to ensure the underlying monolith remains below the frost line and protected from the freeze-thaw cycle. Consistent with the remainder of the site cover, the upper two feet will meet the SCOs for restricted residential use. For areas where solidified material underlies the cover, the solidified material itself will serve as the demarcation layer due to the nature of the material.

5. In-Situ Solidification

In-situ solidification (ISS) will be implemented in the western portion of the site in an approximately 25,000 square foot area, to treat petroleum related volatile organic compounds (VOCs). The treatment zone will extend from 6 feet below ground surface (bgs) to approximately 28 feet bgs. An approximately 6-foot soil cut will need to be excavated in this area to contain the ISS spoils and increased soil volume created by the soil mixing.

ISS is a process that binds the soil particles in place creating a low permeability mass. The contaminated soil will be mixed in place together with solidifying agents (typically Portland cement) or other binding agents using an excavator or augers. The soil and binding agents are mixed to produce a solidified mass resulting in a low permeability monolith. The solidified mass

will then be covered with a cover system as described in remedial element item 4 above to prevent direct exposure to the solidified mass. The resulting solid matrix reduces or eliminates mobility of contamination and reduces or eliminates the matrix as a source of groundwater contamination. Prior to implementation of ISS treatment, a treatability study will be conducted to determine appropriate ISS design mix necessary to achieve ISS performance criteria.

6. Engineering and Institutional Controls

Imposition of an institutional control in the form of an environmental easement and a Site Management Plan will be required.

Institutional Control

Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

- require the remedial party or site owner to complete and submit to NYSDEC a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allow the use and development of the controlled property for restricted residential use, as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or NYCDOHMH; and
- require compliance with the NYSDEC approved Site Management Plan.

7. Site Management Plan

A Site Management Plan is required, which includes the following:

a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and or engineering controls remain in place and effective:

- Institutional Controls: The Environmental Easement discussed in remedial element 6 above.
- Engineering Controls: The cover system discussed in remedial element 4 and the ISS discussed in remedial element 5.

This plan includes, but may not be limited to:

- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination.
- descriptions of the provisions of the environmental easement including any land use and/or groundwater use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion for any occupied buildings on the site, including provision for implementing actions recommended to

address exposures related to soil vapor intrusion;
- a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described in remedial element 4 above will be placed in any areas where the ISS monolith is present or in areas where the upper two feet of exposed surface soil exceed the applicable SCOs;
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and NYSDEC notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

- monitoring of groundwater to assess the performance and effectiveness of the remedy;
- a schedule of monitoring and frequency of submittals to NYSDEC; and
- monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

c. an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, optimization, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:
- procedures for operating and maintaining the remedy;
- compliance monitoring of treatment systems, if needed, to ensure proper O&M as well as providing the data for any necessary permit or permit equivalent reporting;
- maintaining site access controls and NYSDEC notification; and
- providing the NYSDEC access to the site and O&M records.

Declaration

The remedy conforms with promulgated standards and criteria that are directly applicable, or that are relevant and appropriate and takes into consideration Department guidance, as appropriate. The remedy is protective of public health and the environment.

February 14, 2024
Date

Scott Deyette, Director
Remedial Bureau B

DECISION DOCUMENT

37 Otsego Street
Brooklyn, Kings County
Site No. C224300
February 2024

SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (NYSDEC), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the above referenced site. The disposal of contaminants at the site has resulted in threats to public health and the environment that would be addressed by the remedy. The disposal or release of contaminants at this site, as more fully described in this document, has contaminated various environmental media. Contaminants include hazardous waste and/or petroleum.

The New York State Brownfield Cleanup Program (BCP) is a voluntary program. The goal of the BCP is to enhance private-sector cleanups of brownfields and to reduce development pressure on "greenfields." A brownfield site is real property, where a contaminant is present at levels exceeding the soil cleanup objectives or other health-based or environmental standards, criteria or guidance, based on the reasonably anticipated use of the property.

NYSDEC has issued this document in accordance with the requirements of New York State Environmental Conservation Law and 6 NYCRR Part 375. This document is a summary of the information that can be found in the site-related reports and documents.

SECTION 2: CITIZEN PARTICIPATION

NYSDEC seeks input from the community on all remedies. A public comment period was held, during which the public was encouraged to submit comment on the proposed remedy. All comments on the remedy received during the comment period were considered by NYSDEC in selecting a remedy for the site. Site-related reports and documents were made available for review by the public at the following document repositories:

DECInfo Locator - Web Application
https://gisservices.dec.ny.gov/gis/dil/index.html?rs=C224300

Brooklyn Community Board 6
250 Baltic Street
Brooklyn, NY 11201
Phone: (718) 643 3027

Receive Site Citizen Participation Information By Email

Please note that NYSDEC's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

SECTION 3: SITE DESCRIPTION AND HISTORY

Location: The 37 Otsego Street site is a 2.3-acre parcel located in the Red Hook neighborhood of Brooklyn. The site is bordered by Lorraine Street to the north, Columbia Street to the east, Creamer Street to the south and Otsego Street to the west. The greater surrounding area is mixed use industrial and residential, with some commercial uses.

Site Features: The site is currently improved with a large one-story brick and stucco building which occupies the eastern two thirds of the site and an asphalt parking lot which occupies the western one third of the site. The building is currently vacant.

Current Zoning and Land Use: The site is zoned R-6 (residential) with a C1-3 (commercial) overlay. The site was most recently used for retail commercial purposes.

Past Use of the Site: Prior to 1900, the site was undeveloped and surrounded by industrial development. As of 1904, the western portion of the site was occupied by "Philip H. Gill & Sons Machinists." Additional historic uses of the site from this time period include a machine shop, iron works, metal forging, and printing facility. The machine shop had the same footprint as the current parking lot. More recently, the northwest corner of the site may have been used as a gasoline service station and records show underground storage tanks (USTs) were historically present on the eastern portion of the Property. A spill (1509420) was reported in 2015. Under a Corrective Action Plan with NYSDEC's Spill program, remedial actions including ISCO (in-situ chemical oxidation) and hot spot excavation were implemented in the western portion of the site during 2017 and 2019, respectively.

Site Geology and Hydrogeology: Site soils encountered to approximately 15 feet below ground surface (bgs) generally consist of sandy fill materials including brick, concrete, glass, micaceous schist, plastic, coal slag, wood, and rock fragments. The site is relatively flat. Groundwater was encountered at depths ranging from 8 to 9 feet bgs. Groundwater flows to the southwest, towards the Erie Basin, located approximately 1,500 feet southwest of the site.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

NYSDEC may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, alternatives that restrict the use of the site to restricted-residential as described in Part 375-1.8(g) were evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the Remedial Investigation (RI) to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is available in the RI Report.

SECTION 5: ENFORCEMENT STATUS

The Applicant under the Brownfield Cleanup Agreement is a Volunteer. The Applicant does not have an obligation to address off-site contamination. However, NYSDEC has determined that this site does not pose a significant threat to public health or the environment; accordingly, no enforcement actions are necessary.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A remedial investigation (RI) serves as the mechanism for collecting data to:

- characterize site conditions;
- determine the nature of the contamination; and
- assess risk to human health and the environment.

The RI is intended to identify the nature (or type) of contamination which may be present at a site and the extent of that contamination in the environment on the site, or leaving the site. The RI reports on data gathered to determine if the soil, groundwater, soil vapor, indoor air, surface water or sediments may have been contaminated. Monitoring wells are installed to assess groundwater and soil borings or test pits are installed to sample soil and/or waste(s) identified. If other natural resources are present, such as surface water bodies or wetlands, the water and sediment may be sampled as well. Based on the presence of contaminants in soil and groundwater, soil vapor will also be sampled for the presence of contamination. Data collected in the RI influence the development of remedial alternatives. The RI report is available for review in the site document repository and the results are summarized in section 6.3.

The analytical data collected on this site includes data for:

- groundwater
- soil
- soil vapor

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. NYSDEC has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a contaminant that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized below. Additionally, the RI Report contains a full discussion of the data. The contaminants of concern identified at this site are:

naphthalene
benzo(a)anthracene
benzo(b)fluoranthene
benzo(a)pyrene
chrysene
indeno(1,2,3-cd)pyrene
benzene
ethylbenzene
xylenes
1,2,4-trimethylbenzene
arsenic
copper
barium
lead
mercury
tetrachloroethene (PCE)
trichloroethene (TCE)

The contaminants of concern exceed the applicable SCGs for:

- soil
- groundwater

6.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Decision Document.

There were no IRMs performed at this site during the RI.

6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water. The RI report presents a detailed discussion of any existing and potential impacts from the site to fish and wildlife receptors.

Nature and Extent of Contamination: Soil and groundwater samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, polychlorinated biphenyls (PCBs), pesticides, per- and polyfluoroalkyl substances (PFAS) and 1,4-dioxane. Soil vapor samples were analyzed for VOCs. Based upon the investigations conducted to date, the primary contaminants of concern for the site are petroleum related VOCs, SVOCs and metals in soil, and petroleum related VOCs in groundwater.

Soil - Soils samples were collected from subsurface soils throughout the site. Soil data for VOCs were compared to Restricted Residential Use Soil Cleanup Objectives (RRSCOs) and Protection of Groundwater Soil Cleanup Objectives (PGSCOs), as applicable. Petroleum-related VOCs were encountered in subsurface soil samples above PGSCOs on the western portion of the site at depths ranging from 8 to 18 feet bgs. Benzene (maximum concentration 0.93 parts per million (ppm), PGSCO is 0.06 ppm), 1,2,4-trimethylbenzene (maximum concentration 6 ppm, PGSCO is 3.6 ppm), ethylbenzene (maximum concentration 4.4 ppm, PGSCO is 1 ppm) and xylenes (maximum concentration 2.3 ppm, PGSCO is 1.6 pm) exceeded PGWSCOs but did not exceed RRSCOs. Naphthalene exceeded PGSCOs in six samples and RRSCOs in one sample (maximum concentration 230 ppm, RRSCO is 100 ppm, PGSCO is 12 ppm). Soils impacted by petroleum-related VOCs in subsurface soil also exhibited odors and staining.

Several SVOCs exceeded RRSCOs in site soil samples with the highest concentrations encountered from 7 to 9 feet bgs. These SVOCs include: benzo(a)anthracene at concentrations up to 18 ppm (RRSCO is 1 ppm), benzo(b)fluoranthene at concentrations up to 18 ppm (RRSCO is 1 ppm), benzo(a)pyrene at concentrations up to 16 ppm (RRSCO is 1 ppm), chrysene at concentrations up to 16 ppm (RRSCO is 3.9 ppm), and indeno(1,2,3-cd)pyrene at concentrations up to 9.4 ppm (RRSCO is 0.5 ppm).

Several metals also exceeded RRSCOs in site soil samples. These metals include arsenic at concentrations up to 155 ppm (RRSCO is 16 ppm), barium at concentrations up to 662 ppm (RRSCO is 400 ppm), copper at concentrations up to 974 ppm (RRSCO is 270 ppm), lead at concentrations up to 4,090 ppm (RRSCO is 400 ppm) and mercury at concentrations up to 43.3 ppm (RRSCO is 0.81 ppm).

PCBs, pesticides, and 1,4-dioxane were not detected in site soils above RRSCOs. The emerging contaminants perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) were detected in site soils at concentrations of 0.895 ppb and 0.913 ppb respectively. The restricted residential guidance values for PFOA and PFOS are 33 and 44 parts per billion (ppb) respectively and the protection of groundwater guidance values for PFOA and PFOS are 0.8 ppb and 1.0 ppb respectively.

Data does not indicate any off-site impacts in soil related to this site.

Groundwater - Several petroleum related VOCs were detected in groundwater over their respective ambient water quality standards and guidance values (AWQSGVs). These include 1,2,4-trimethylbenzene at concentrations up to 47 ppb (AWQSGV is 5 ppb), 1,2,4,5-trimethylbenzene at concentration up to 15 ppb (AWQSGV is 5 ppb), benzene at concentrations up to 22 ppb (AWQSGV is 1 ppb), ethylbenzene at concentrations up to 170 ppb (AWQSGV is 5 ppb), isopropylebenzene at concentrations up to 46 ppb (AWQSGV is 5 ppb), naphthalene at concentrations up to 3,600 ppb (AWQSGV is 10 ppb) and n-propylbenzene at concentrations up to 45 ppb (AWQSGV is 5 ppb).

SVOCs were detected in groundwater samples collected from the site at concentrations exceeding AWQSGVs including acenaphthene at 140 ppb (AWQSGV is 20 ppb), benzo(a)anthracene at 0.13 ppb (AWQSGV is 0.002 ppb), benzo(a)pyrene at 0.1 ppb (AWQS is 0.002 ppb), benzo(b)fluoranthene at 0.13 ppb (AWQSGV is 0.002 ppb), benzo(k)fluoranthene at 0.05 ppb (AWQSGV is 0.002 ppb), chrysene at 0.29 ppb (AWQSGV is 0.002 ppb) and indeno(1,2,3-cd)pyrene at 0.09 ppb (AWQSGV is 0.002 ppb). The presence of SVOCs in groundwater is likely due to entrained sediments in groundwater samples from the historic fill present on-site and not an on-site source of SVOCs to groundwater.

Metals were detected in filtered groundwater samples collected from the site at concentrations exceeding AWQSGVs including iron at concentrations up to 19,200 ppb (AWQSGV is 300 ppb), magnesium at concentrations up to 93,700 ppb (AWQSGV is 35,000 ppb), manganese at concentrations up to 1,938 ppb (AWQSGV is 300 ppb), nickel at concentrations up to 132 ppb (AWQSGV is 100 ppb), and sodium at concentrations up to 777,000 ppb (AWQSGV is 20,000 ppb). The presence of metals in groundwater is likely due to naturally occurring minerals or road salt applications.

No PCBs, pesticides and herbicides were detected in groundwater samples above AWQSGVs. 1,4-dioxane was not detected in groundwater samples collected from the site.

Perfluorooctanesulfonic acid (PFOS) was detected at concentrations up to 26.4 ppt (parts per trillion) which exceeds its AWQSGV guidance value of 2.7 ppt. Perfluorooctanoic Acid (PFOA) was detected at concentrations up to 147 ppt which also exceeds its AWQSGV guidance value of 6.7 ppt. PFOA and PFOS were found in most wells and the distribution of PFOA and PFOAS concentrations in groundwater are not indicative of an on-site source.

Data does not indicate any off-site impacts in groundwater related to this site.

Soil Vapor - Several petroleum-related VOCs were detected in soil vapor samples including benzene (maximum concentration 7.12 micrograms per cubic meter, or ug/m3), ethylbenzene (maximum concentration of 13.7 ug/m3) and toluene (maximum concentration of 57.7 ug/m3). Chlorinated VOCs were also detected in soil vapor samples including tetrachloroethylene (PCE) at concentrations up to 8.14 ug/m3 and trichloroethylene (TCE) at concentrations up to 8.65 ug/m3.

6.4: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure.*

The site is fenced and covered by asphalt or building foundation and people will not come in contact with site-related soil and groundwater contamination unless they dig below the surface. People are not drinking the contaminated groundwater because the area is served by a public water supply that is not affected by this contamination. Volatile organic compounds in soil vapor (air spaces within the soil) may move into buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. The site is vacant, therefore the inhalation of site related contaminants due to soil vapor intrusion does not represent a current concern. The potential exists for the inhalation of site related contaminants due to soil vapor intrusion for any future on-site redevelopment and occupancy. Current environmental sampling indicates soil vapor intrusion is not a concern for off-site buildings.

6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

RAOs for Environmental Protection

- Remove the source of ground or surface water contamination.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

SECTION 7: ELEMENTS OF THE SELECTED REMEDY

The alternatives developed for the site and the evaluation of the remedial criteria are presented in the Alternative Analysis. The remedy is selected pursuant to the remedy selection criteria set forth in DER-10, Technical Guidance for Site Investigation and Remediation and 6 NYCRR Part 375.

The selected remedy is a Track 4: Restricted use with site-specific soil cleanup objectives remedy.

The selected remedy is referred to as the Excavation, In-Situ- Solidification (ISS), and Site Cover remedy.

The elements of the selected remedy, as shown in Figure 2 through 4 are as follows:

1. Remedial Design

A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows:

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings shall be constructed, at a minimum, to meet the 2020 Energy Conservation Construction Code of New York (or most recent edition) to improve energy efficiency as an element of construction.

As part of the remedial design program, to evaluate the remedy with respect to green and sustainable remediation principles, an environmental footprint analysis will be completed. The environmental footprint analysis will be completed using an accepted environmental footprint analysis calculator such as SEFA (Spreadsheets for Environmental Footprint Analysis, USEPA), SiteWiseTM (available in the Sustainable Remediation Forum [SURF] library) or similar NYSDEC accepted tool. Water consumption, greenhouse gas emissions, renewable and non-renewable energy use, waste reduction and material use will be estimated, and goals for the project related to these green and sustainable remediation metrics, as well as for minimizing community impacts, protecting habitats and natural and cultural resources, and promoting environmental justice, will be incorporated into the remedial design program, as appropriate. The project design specifications will include detailed requirements to achieve the green and sustainable remediation goals. Further, progress with respect to green and sustainable remediation metrics will be tracked during implementation of the remedial action and reported in the Final Engineering Report (FER), including a comparison to the goals established during the remedial design program.

Additionally, the remedial design program will include a climate change vulnerability assessment, to evaluate the impact of climate change on the project site and the proposed remedy. Potential vulnerabilities associated with extreme weather events (e.g., hurricanes, lightning, heat stress and drought), flooding, and sea level rise will be identified, and the remedial design program will incorporate measures to minimize the impact of climate change on potential identified vulnerabilities.

2. Excavation

The existing on-site building as well as slabs will be demolished and materials which cannot be beneficially reused on site will be taken off-site for proper disposal in order to implement the remedy.

All soils in the upper two feet which exceed the restricted-residential soil cleanup objectives (SCOs) will be excavated and transported off-site for disposal. Approximately 7,500 cubic yards of contaminated soil will be removed from the site. If found on the site, any underground storage tanks (USTs), fuel dispensers, underground piping or other structures will be excavated and properly disposed off-site.

Collection and analysis of documentation samples at the remedial excavation depth.

To ensure proper handling and disposal of excavated material, waste characterization sampling will be completed for all identified contaminated site material. Waste characterization sampling will be performed exclusively for the purposes of off-site disposal in a manner suitable to receiving facilities and in conformance with applicable federal, state and local laws, rules, and regulations and facility-specific permits.

Excavation of site soils to a depth of six feet below grade in the portion of the site subject to the in-situ solidification (ISS) treatment described in remedy element 5. Approximately 3,500 cubic

yards of soil will be excavated to facilitate ISS implementation. All soils excavated as part of the ISS which exceed either RRSCOs or protection of groundwater SCOs for contaminants present in groundwater will be disposed at a permitted off-site facility.

3. Backfill

On-site soil which does not exceed the above excavation criteria or the protection of groundwater SCOs for any constituent may be used to backfill the excavation or re-grade the site. Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to complete the backfilling of the excavation and establish the designed grades at the site.

4. Cover System

A site cover will be required in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs), to allow for future restricted residential use of the site. Where a soil cover is to be used it will be a minimum of two feet of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs.

Where the soil cover is required over the ISS treatment area, it will consist of a minimum of four feet of soil to ensure the underlying monolith remains below the frost line and protected from the freeze-thaw cycle. Consistent with the remainder of the site cover, the upper two feet will meet the SCOs for restricted residential use. For areas where solidified material underlies the cover, the solidified material itself will serve as the demarcation layer due to the nature of the material.

5. In-Situ Solidification

In-situ solidification (ISS) will be implemented in the western portion of the site in an approximately 25,000 square foot area, to treat petroleum related volatile organic compounds (VOCs). The treatment zone will extend from 6 feet below ground surface (bgs) to approximately 28 feet bgs. An approximately 6-foot soil cut will need to be excavated in this area to contain the ISS spoils and increased soil volume created by the soil mixing.

ISS is a process that binds the soil particles in place creating a low permeability mass. The contaminated soil will be mixed in place together with solidifying agents (typically Portland cement) or other binding agents using an excavator or augers. The soil and binding agents are mixed to produce a solidified mass resulting in a low permeability monolith. The solidified mass will then be covered with a cover system as described in remedial element item 4 above to prevent direct exposure to the solidified mass. The resulting solid matrix reduces or eliminates mobility of contamination and reduces or eliminates the matrix as a source of groundwater

contamination. Prior to implementation of ISS treatment, a treatability study will be conducted to determine appropriate ISS design mix necessary to achieve ISS performance criteria.

6. Engineering and Institutional Controls

Imposition of an institutional control in the form of an environmental easement and a Site Management Plan will be required.

Institutional Control

Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

- require the remedial party or site owner to complete and submit to NYSDEC a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allow the use and development of the controlled property for restricted residential use, as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or NYCDOHMH; and
- require compliance with the NYSDEC approved Site Management Plan.

7. Site Management Plan

A Site Management Plan is required, which includes the following:

a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and or engineering controls remain in place and effective:

- Institutional Controls: The Environmental Easement discussed in remedial element 6 above.
- Engineering Controls: The cover system discussed in remedial element 4 and the ISS discussed in remedial element 5,

This plan includes, but may not be limited to:

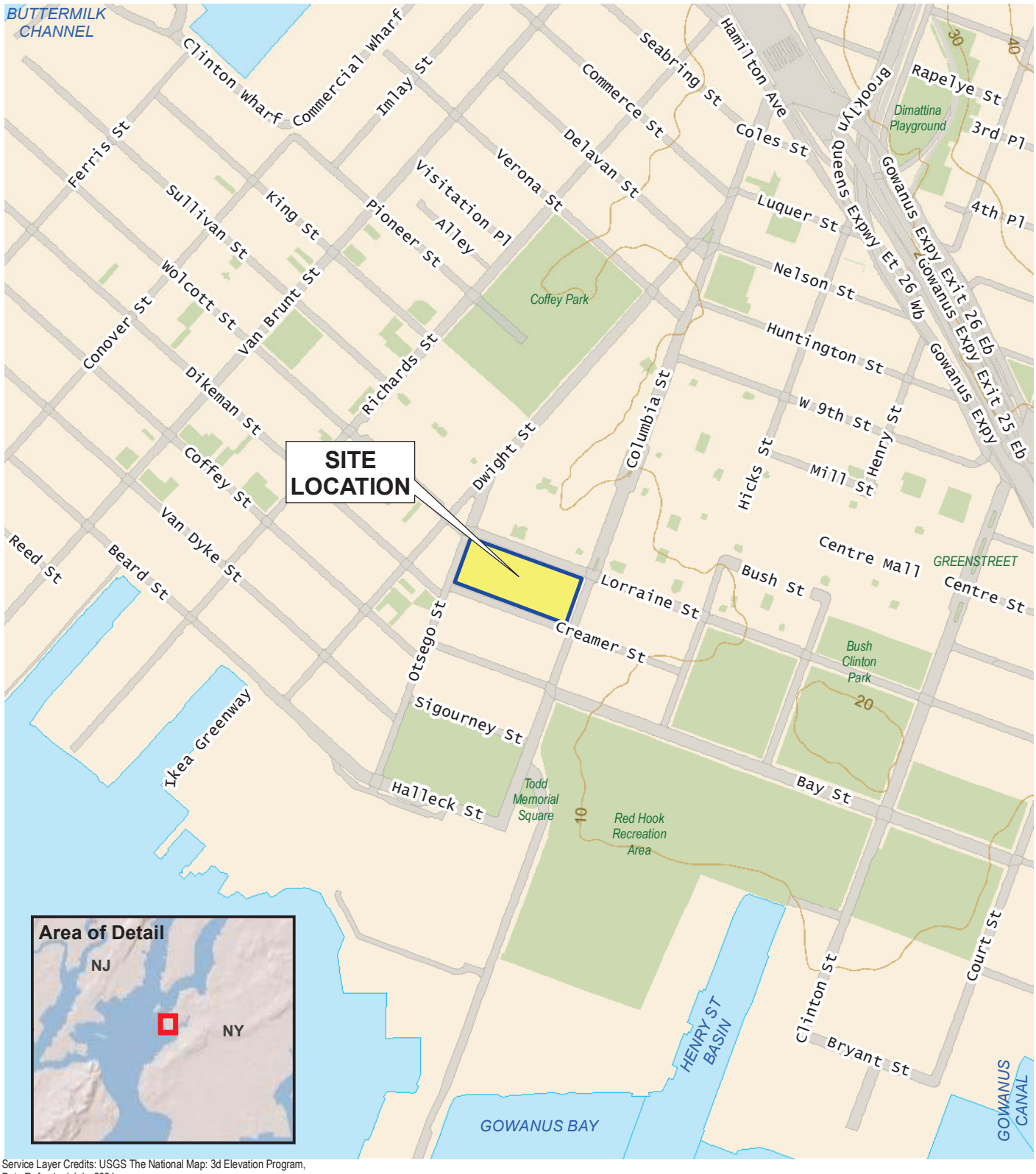
- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination.
- descriptions of the provisions of the environmental easement including any land use and/or groundwater use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion for any occupied buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described in remedial element 4 above will be placed in

any areas where the ISS monolith is present or in areas where the upper two feet of exposed surface soil exceed the applicable SCOs;
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and NYSDEC notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

- monitoring of groundwater to assess the performance and effectiveness of the remedy;
- a schedule of monitoring and frequency of submittals to NYSDEC; and
- monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

c. an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, optimization, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:
- procedures for operating and maintaining the remedy;
- compliance monitoring of treatment systems, if needed, to ensure proper O&M as well as providing the data for any necessary permit or permit equivalent reporting;
- maintaining site access controls and NYSDEC notification; and
- providing the NYSDEC access to the site and O&M records.



Service Layer Credits: USGS The National Map: 3d Elevation Program, Data Refreshed July, 2021

0 600 1,200

SCALE IN FEET

©2023 AKRF O:\Projects\230011 - 37 OTSEGO & 498 COLUMBIA STREETS\SAR\230011 Fig 1 BCP Site Location.mxd5/16/2023 3:27:57 PM jszalus

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440 Park Avenue South, New York, NY 10016

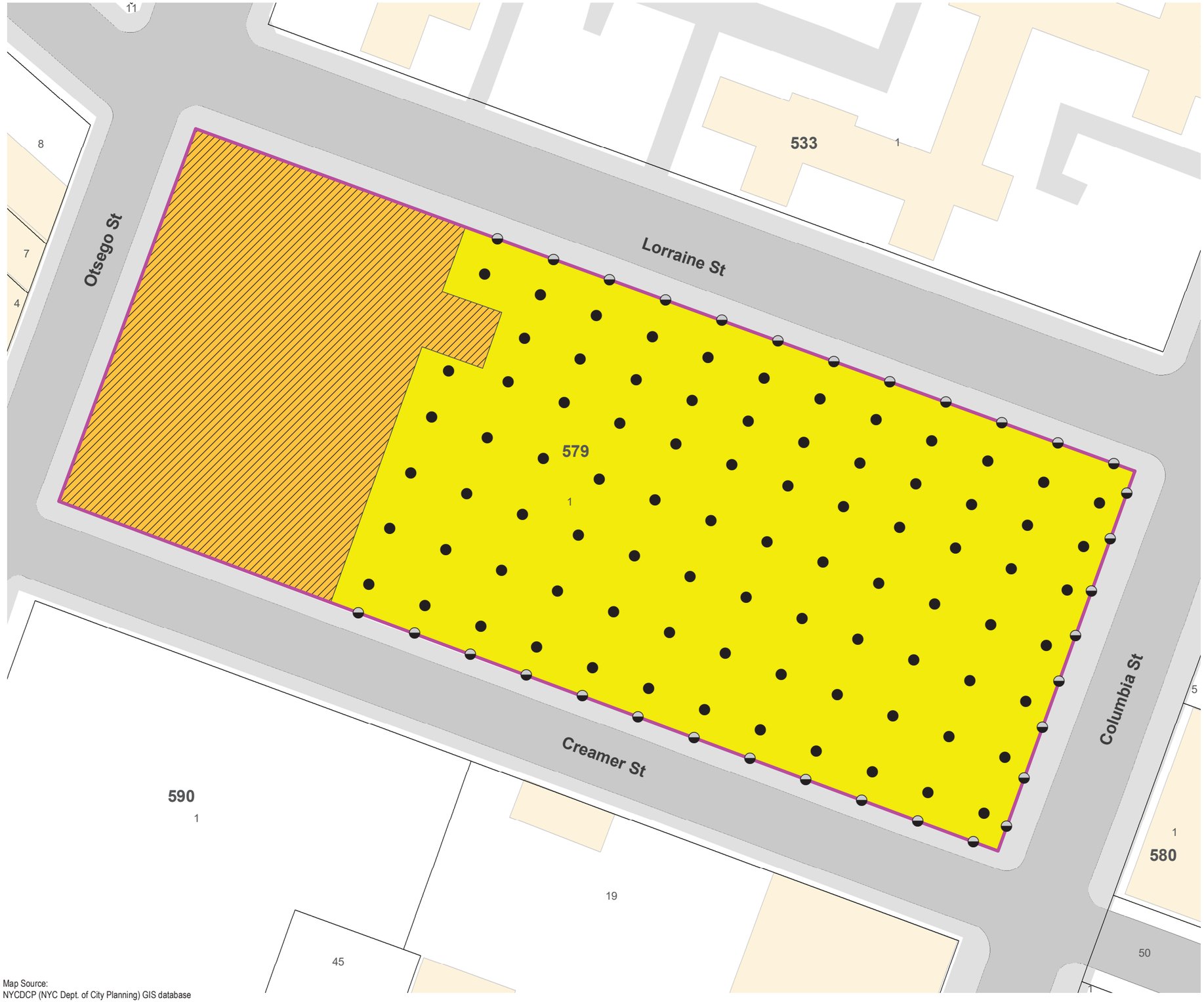
37 Otsego Street
Brooklyn, New York

BCP SITE LOCATION

DATE
5/18/2023

PROJECT NO.
230011

FIGURE
1



LEGEND

- BCP PROJECT SITE BOUNDARY
- 1 — LOT BOUNDARY AND TAX LOT NUMBER
- 579 — BLOCK NUMBER
- APPROXIMATE EXTENT OF IN-SITU SOLIDIFICATION (ISS) AREA
- REMEDIAL EXCAVATION TO APPROXIMATELY 2 FEET BELOW GRADE TO ACHIEVE A TRACK 4 CLEANUP
- REMEDIAL EXCAVATION TO 6 FEET BELOW GRADE FOR THE BENCH CUT REQUIRED AS PART OF THE IN-SITU SOLIDIFICATION (ISS) TREATMENT
- PROPOSED BOTTOM ENDPOINT SAMPLE LOCATION
- PROPOSED SIDEWALL ENDPOINT SAMPLE LOCATION

Note:
No excavation bottom or sidewall samples will be required in the ISS Treatment Area.

0 25 50 100
SCALE IN FEET

Map Source:
NYCDCP (NYC Dept. of City Planning) GIS database

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37 Otsego Street
Brooklyn, New York

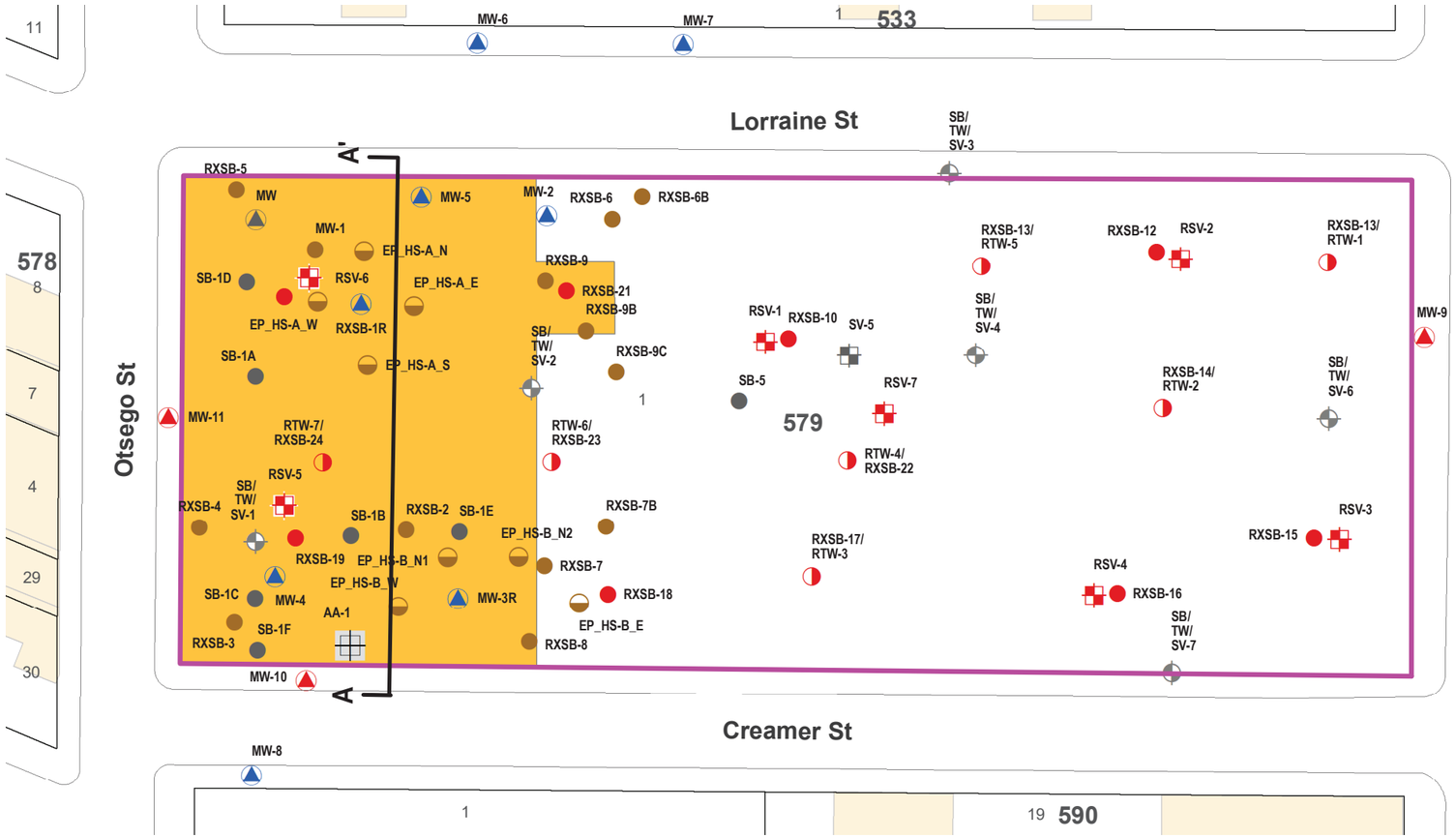
REMEDIAL EXCAVATION EXTENT AND ENDPOINT SAMPLING PLAN

DATE
5/30/2023

PROJECT NO.
230011

FIGURE
2

©2023 AKRF O:\Projects\230011 - 37 OTSEGO & 498 COLUMBIA STREETS\SAR\BCP Rawp\230011 Fig 4 Remedial Excavation Extent and Endpoint Sampling Plan.mxd5/30/2023 2:15:09 PM iszalus

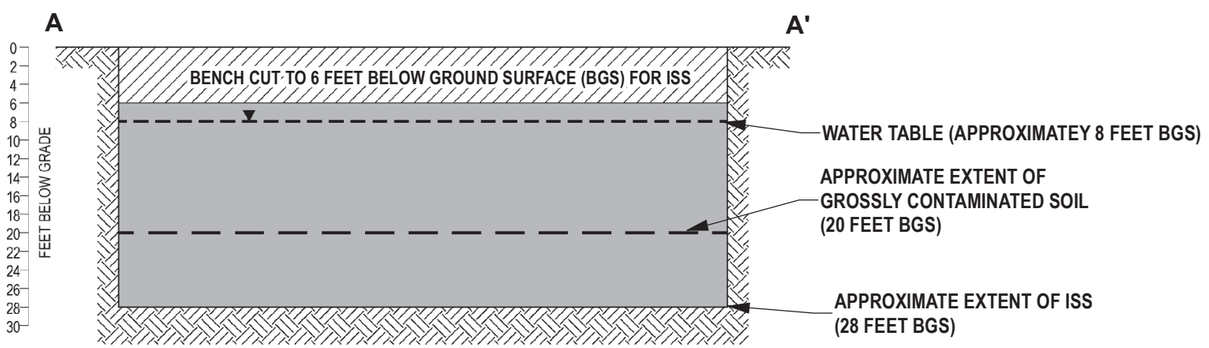


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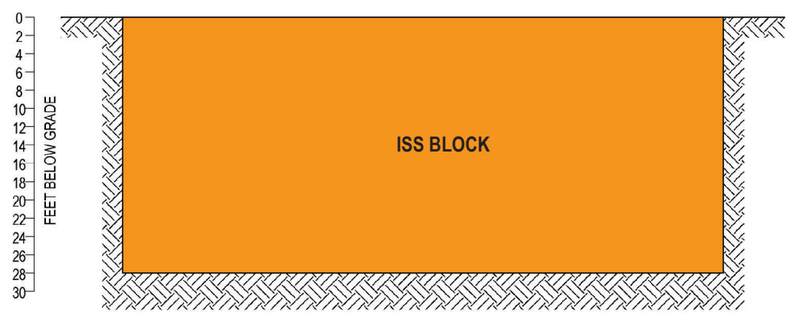
- BCP PROJECT SITE BOUNDARY
- 579 BLOCK NUMBER
- 1 LOT BOUNDARY AND TAX LOT NUMBER
- MONITORING WELL (AKRF)
- SOIL BORING (AKRF)
- SOIL BORING/TEMPORARY WELL/SOIL VAPOR POINT (AKRF)
- AMBIENT AIR (AKRF)
- SOIL VAPOR POINT (AKRF)
- MONITORING WELL (ROUX)
- SOIL BORING (ROUX)
- ENDPOINT SAMPLE (ROUX)
- SOIL BORING (ROUX)
- SOIL BORING/TEMPORARY WELL (ROUX)
- MONITORING WELL (ROUX)
- SOIL VAPOR POINT (ROUX)
- APPROXIMATE EXTENT OF IN-SITU SOLIDIFICATION (ISS) AREA

0 30 60 120

SCALE IN FEET



Cross Section Detail prior to ISS A-A'
not to scale



Cross Section Detail After ISS A-A'
not to scale

Map Source:
NYCDCP (NYC Dept. of City Planning) GIS database

©2023 AKRF C:\Projects\230011 - 37 OTSEGO & 498 COLUMBIA STREETS\SAR\BCP Rawp\230011 Fig 3 ProposedIn-Situ Solidification Plan.mxd5/30/2023 4:53:37 PM iszalus

AKRF
440 Park Avenue South, New York, NY 10016

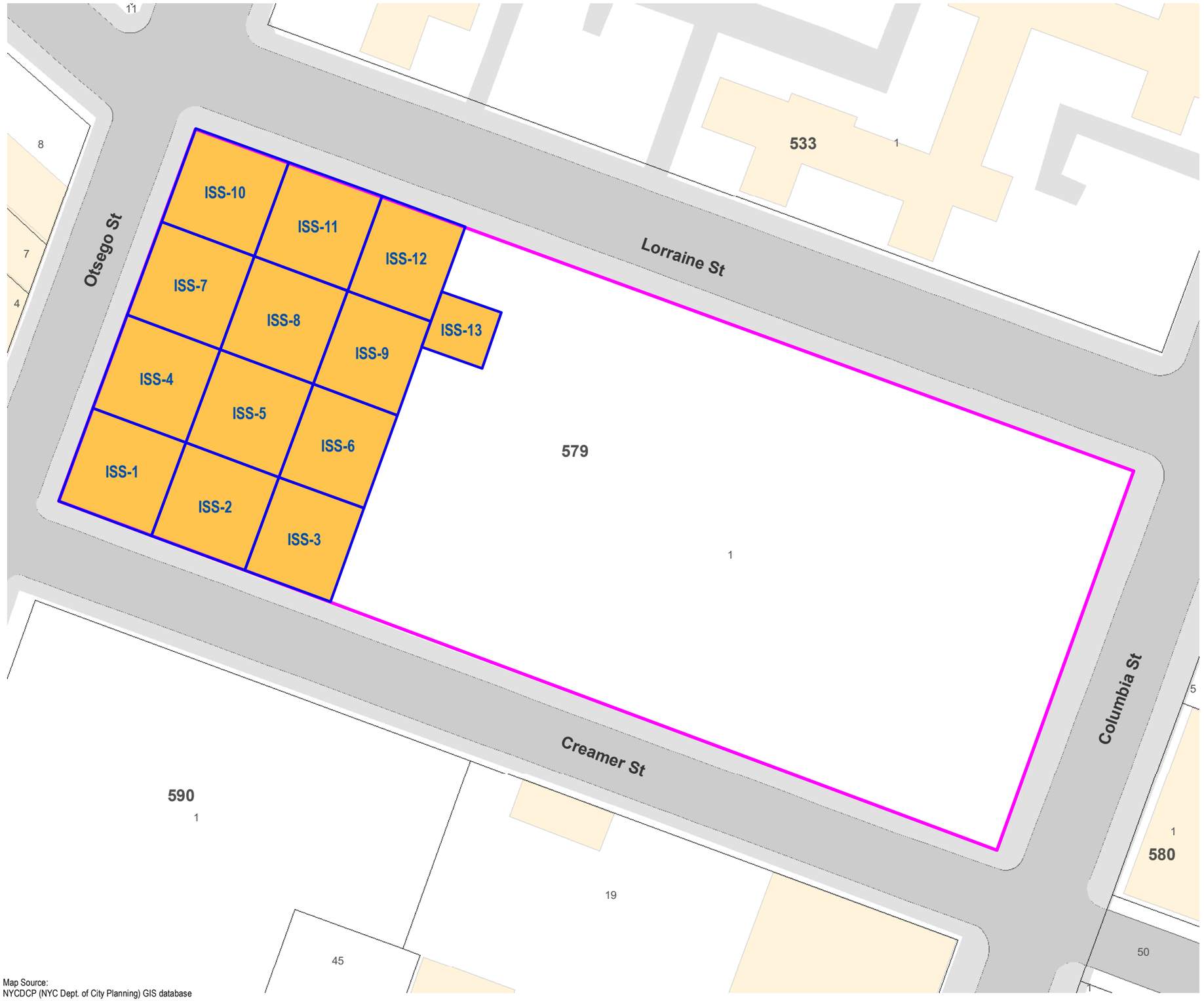
37 Otsego Street
Brooklyn, New York

PROPOSED IN-SITU SOLIDIFICATION PLAN

DATE
5/30/2023

PROJECT NO.
230011

FIGURE
3



LEGEND

- BCP PROJECT SITE BOUNDARY
- 1 — LOT BOUNDARY AND TAX LOT NUMBER
- 579 — BLOCK NUMBER
- APPROXIMATE EXTENT OF IN-SITU SOLIDIFICATION (ISS) AREA
- EXISTING BUILDING
- ISS GRID

0 25 50 100

SCALE IN FEET

Map Source:
NYCDCP (NYC Dept. of City Planning) GIS database

©2023 AKRF O:\Projects\230011 - 37 OTSEGO & 498 COLUMBIA STREETS\SAR\ISS Alphanumeric for DEC\230011 Fig 1 Alphanumeric Grid DEC.mxd 8/25/2023 2:51:09 PM jszalus

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37 Otsego Street
Brooklyn, New York

ISS GRID MAP

DATE
8/25/2023

PROJECT NO.
230011

FIGURE
4

Appendix D
Noise Attenuation
Letter

aufgang
74 Lafayette Ave
Suite 301
Suffern, NY 10901

845 368 0004
aufgang.com

August 8, 2024

Anthony M. Howard
Director, Environmental Planning
Division of Building and Land Development Services
NYC Department of Housing Preservation and Development
100 Gold Street, 7-A3
New York, NY 10038

RE: **Columbia Street Redevelopment, Brooklyn NY**

Dear Mr. Howard:

I am writing to show evidence of the above referenced project's compliance with the window-wall attenuation requirements as presented in the CEQR EAS (CEQR No. 24HPD039K) prepared by AKRF. The building requires a minimum of 28dBA of window wall attenuation along the east facade of Building C (along Columbia Street). The requirement applies to the residential and community facility spaces along the affected facade (east facade) of Building C. In addition, the east facade requires the provision of an alternate means of ventilation.

The project consists of 3 buildings. Building A, an 8-story, 210-unit senior housing residential building. Building B, an 8-story, 81-supportive housing building. Building C, an 8-story building with 258-unit residential and 110-unit supportive housing building. All buildings would be facilitated by funding from the City of New York (through HPD).

The proposed window types will be BluEvolution 82, In-Swing Casement and Fixed and will provide an OITC rating of 28 or better.

The alternate means of ventilation will be achieved by providing PTAC units in each living room and bedroom.

Should there be any questions regarding this information, please do not hesitate to contact me.

Very truly yours,



Ariel Aufgang, A.I.A.
Principal

intertek
Total Quality. Assured.

EKO-OKNA S.A.
ACOUSTICAL PERFORMANCE TEST REPORT

SCOPE OF WORK
ASTM E90 SOUND TRANSMISSION LOSS TESTING ON A BLUEVOLUTION 82, IN-SWING CASEMENT WINDOW

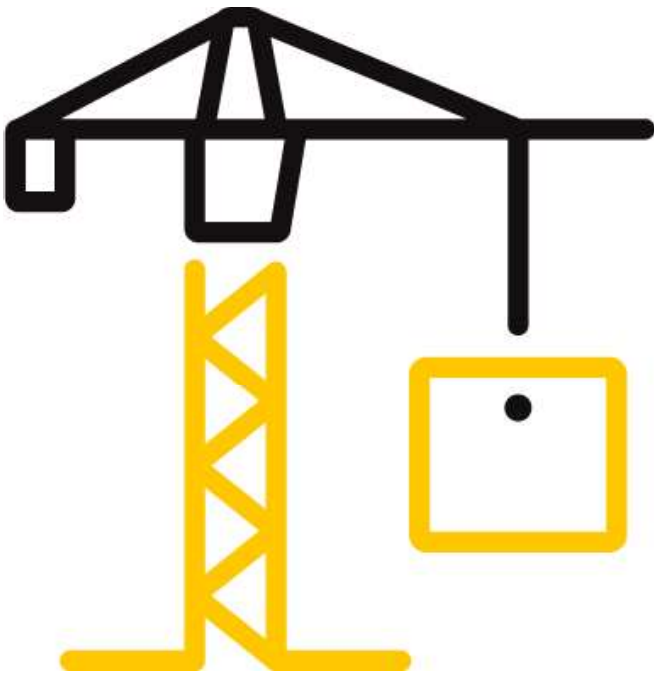
REPORT NUMBER
M2486.01-113-11-R0

TEST DATES
07/21/21; 07/22/21

ISSUE DATE
09/13/21

PAGES
27

DOCUMENT CONTROL NUMBER
RT-R-AMER-Test-2761 (01/17/21)
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www.intertek.com/building

TEST REPORT FOR EKO-OKNA S.A.
Report No.: M2486.01-113-11-R0
Date: 09/13/21

REPORT ISSUED TO

EKO-OKNA S.A.
47-480 Pietrowice Wielkie Kornice ul. Spacerowa 4
Kornice
POLAND

SECTION 1

SCOPE

Architectural Testing, Inc. (an Intertek company) dba Intertek Building & Construction (B&C) was contracted by Eko-Okna S.A. to conduct a sound transmission loss test. Results obtained are tested values and were secured by using the designated test methods. The complete test data is included herein. The client provided the test specimen. All measurements were conducted in the HT test chambers at Intertek B&C located in York, Pennsylvania.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. Intertek B&C will service this report for the entire test record retention period. The test record retention period ends four years after the test date. Test records, such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained for the entire test record retention period.

Unless differently required, Intertek reports apply the "Simple Acceptance" rule, also called "Shared Risk approach," of ILAC-G8:09/2019, Guidelines on Decision Rules and Statements of Conformity.

For INTERTEK B&C:

COMPLETED BY:	Zachary P. Golden	**REVIEWED BY:**	Kurt A. Golden
TITLE:	Technician Team Leader Acoustical Testing	**TITLE:**	Project Lead Acoustical Testing
SIGNATURE:	Digitally Signed by: Zachary Golden	**SIGNATURE:**	Digitally Signed by: Kurt A. Golden
DATE:	09/13/21	**DATE:**	09/13/21

ZPG:jmcs

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IAS ACCREDITED Testing Laboratory

This page alone is not a complete report.

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TEST REPORT FOR EKO-OKNA S.A.
Report No.: M2486.01-113-11-R0
Date: 09/13/21

SECTION 2
SUMMARY OF TEST RESULTS

SERIES/MODEL	BluEvolution 82
TYPE	In-Swing Casement Window

DATA FILE NO.	M2486.01A
GLAZING (Nominal Dimensions)	15/16" (24 mm) IG (5/32" [4 mm] annealed, 5/8" [16 mm] argon, 5/32" [4 mm] annealed)
STC	33
OITC	28

DATA FILE NO.	M2486.01B2
GLAZING (Nominal Dimensions)	1-3/4" (44 mm) IG (1/4" [6 mm] annealed exterior, 5/8" [16 mm] argon, 5/32" [4 mm] annealed center, 9/16" [14 mm] argon, 5/32" [4 mm] annealed interior)
STC	41
OITC	32

DATA FILE NO.	M2486.01C
GLAZING (Nominal Dimensions)	1-5/16" (32.76 mm) IG (7/16" [10.76 mm] laminated exterior, 5/8" [16 mm] argon, 1/4" [6 mm] annealed interior), Glass temperature 75°F
STC	41
OITC	35

DATA FILE NO.	M2486.01D
GLAZING (Nominal Dimensions)	1-3/8" (34.76 mm) IG (5/16" [8.76 mm] laminated exterior, 13/16" [20 mm] argon, 1/4" [6 mm] annealed interior), Glass temperature 75°F
STC	41
OITC	34

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TEST REPORT FOR EKO-OKNA S.A.
Report No.: M2486.01-113-11-R0
Date: 09/13/21

DATA FILE NO.	M2486.01E
GLAZING (Nominal Dimensions)	1-7/8" (48.38 mm) IG (3/8" [10 mm] annealed exterior, 15/32" [12 mm] argon, 1/4" [6 mm] annealed center, 15/32" [12 mm] argon, 5/16" [8.38 mm] laminated interior), Glass temperature 75°F
STC	44
OITC	37

SECTION 3
TEST METHODS

The specimens were evaluated in accordance with the following:

ASTM E90-09 (2016), *Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements*

ASTM E413-16, *Classification for Rating Sound Insulation*

ASTM E1332-16, *Standard Classification for Rating Outdoor-Indoor Sound Attenuation*

ASTM E2235-04 (2020), *Standard Test Method for Determination of Decay Rates for Use in Sound Insulation Test Methods*

SECTION 4
SPECIMEN INSTALLATION

A sound transmission loss test was initially performed on a filler wall.

The specimen plug was removed from the filler wall assembly. The specimen was placed on an isolation pad in the test opening. Duct seal was used to seal the perimeter of the specimen to the test opening on both sides. The interior side of the specimen, when installed, was approximately 1/4" from being flush with the receive room side of the filler wall. A stethoscope was used to check for any abnormal air leaks around the test specimen prior to testing. Operable portions of the test specimen, if any, were cycled at least five times prior to testing.

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York, Pennsylvania 17406

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SECTION 5
EQUIPMENT

The equipment listed below meets the requirements of the test methods stated in Section 3 of this report.

INSTRUMENT	MANUFACTURER	MODEL	DESCRIPTION	ASSET #	CAL DATE
Data Acquisition Card	National Instruments	PXI-4462	Data Acquisition Card	63763-3*	04/20
Data Acquisition Card	National Instruments	PXI-4462	Data Acquisition Card	65125*	05/20
Data Acquisition Card	National Instruments	PXI-4462	Data Acquisition Card	65126*	05/20
Source Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	64902	11/20
Source Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64903	09/20
Source Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	65103	03/21
Source Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64905	03/21
Source Room Microphone	PCB piezotronics	378B20	Microphone and Preamplifier	64906	03/21
Receive Room Microphone	PBC Piezotronics	378B20	Microphone and Preamplifier	64907	01/21
Receive Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	64908	01/21
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64909	01/21
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64910	01/21
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64911	11/20
Receive Room Environmental Indicator	Comet	T7510	Receive Room	64915	01/21
Source Room Environmental Indicator	Comet	T7510	Source Room	64914	02/21
Microphone Calibrator	Norsonic	1251	Acoustical Calibrator	Y002919	04/21

**- Note: The calibration frequency for this equipment is every two years per the manufacturer's recommendation.*

TEST CHAMBER

	VOLUME	DESCRIPTION
RECEIVE ROOM	234 m^3	Rotating vane and stationary diffusers Temperature and humidity controlled Isolation pads under the floor
SOURCE ROOM	207 m^3	Stationary diffusers only Temperature and humidity controlled

	MAXIMUM SIZE	DESCRIPTION
TL TEST OPENING	4.27 m wide by 3.05 m high	Vibration break between source and receive rooms

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SECTION 6
LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Zachary P. Golden	Intertek B&C
Logan Wise	Intertek B&C

SECTION 7
TEST PROCEDURE

The sensitivity of the microphones was checked before measurements were conducted.

The transmission loss values were obtained for a single direction of measurement.

Two background noise sound pressure level and five sound absorption measurements were conducted at each of five microphone positions.

Two sound pressure level measurements were made simultaneously in receive and source rooms at each of five microphone positions.

The air temperature and relative humidity conditions were monitored and recorded during all measurements.

Data for flanking limit tests, repeatability measurements, and reference specimen tests are available upon request.

At the time of the issuance of this report, the disposition of the specimen had not yet been determined.

SECTION 8
ACOUSTICAL TEST CALCULATIONS

Transmission loss (TL) at each 1/3 octave frequency is the average source room sound pressure level minus the average receive room sound pressure level, plus, 10 times the log of the specimen area divided by the sound absorption of the receive room with the sample in place.

STC Rating
To obtain the Sound Transmission Class (STC), read the TL of the contour curve at 500 Hz. The sum of the deficiencies below the contour curve must not exceed 32. The maximum deficiency at any one frequency must not exceed 8.

OITC Rating
The Outdoor-Indoor Transmission Class (OITC) is calculated by subtracting the logarithmic summation of the TL values from the logarithmic summation of the A-weighted transportation noise spectrum stated in ASTM E1332.

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SECTION 9
SPECIMEN DESCRIPTION

	FRAME	VENT
SIZE	23-5/8" by 59" (600.08 mm by 1500)	20-9/16" by 55-7/8" (522.29 mm by 1419.23)
THICKNESS	3-1/4" (83 mm)	3-1/4" (83 mm)
CORNERS	Mitered	Mitered
FASTENERS	Welds	Welds
SEAL METHOD	N/A	N/A
MATERIAL	Vinyl	Vinyl
REINFORCEMENT	N/A	N/A
THERMAL BREAK MATERIAL	N/A	N/A
DAYLIGHT OPENING SIZE	N/A	13-3/4" by 49" (349.25 mm by 1244.60 mm)

OPTION M2486.01A

MEASURED OVERALL INSULATION GLASS UNIT THICKNESS	0.909" (23.09 mm)
SPACER TYPE	Swisspacer Ultimate*

	EXTERIOR SHEET	GAP	INTERIOR SHEET
MEASURED THICKNESS	0.150" (3.81 mm)	0.608" (15.44 mm)	0.151" (3.84 mm)
MUNTIN PATTERN	N/A	N/A	N/A
MATERIAL	Annealed	Argon*	Annealed
LAMINATE MATERIAL	N/A	N/A	N/A

OPTION M2486.01B2

MEASURED OVERALL INSULATION GLASS UNIT THICKNESS	1.747" (44.38 mm)
SPACER TYPE	Swisspacer Ultimate*

	EXTERIOR SHEET	GAP	CENTER SHEET	GAP	INTERIOR SHEET
MEASURED THICKNESS	0.229" (5.82 mm)	0.646" (16.41 mm)	0.146" (3.71 mm)	0.570" (14.48 mm)	0.156" (3.96 mm)
MUNTIN PATTERN	N/A	N/A	N/A	N/A	N/A
MATERIAL	Annealed	Argon*	Annealed	Argon*	Annealed
LAMINATE MATERIAL	N/A	N/A	N/A	N/A	N/A

** - Stated per Client/Manufacturer, N/A-Not Applicable*

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OPTION M2486.01C

MEASURED OVERALL INSULATION GLASS UNIT THICKNESS			1.274" (33.37 mm)
SPACER TYPE	Swisspacer Ultimate*		
	EXTERIOR SHEET	**GAP**	**INTERIOR SHEET**
MEASURED THICKNESS	0.411" (10.44 mm)	0.625" (16.88 mm)	0.238" (6.05 mm)
MUNTIN PATTERN	N/A	N/A	N/A
MATERIAL	Laminated	Argon*	Annealed
LAMINATE MATERIAL	PVB	N/A	N/A

OPTION M2486.01D

MEASURED OVERALL INSULATION GLASS UNIT THICKNESS			1.339" (34.02 mm)
SPACER TYPE	Swisspacer Ultimate*		
	EXTERIOR SHEET	**GAP**	**INTERIOR SHEET**
MEASURED THICKNESS	0.333" (8.46 mm)	0.781" (19.84 mm)	0.225" (5.72 mm)
MUNTIN PATTERN	N/A	N/A	N/A
MATERIAL	Laminated	Argon*	Annealed
LAMINATE MATERIAL	Acoustic PVB*	N/A	N/A

OPTION M2486.01E

MEASURED OVERALL INSULATION GLASS UNIT THICKNESS					1.924" (48.86 mm)
SPACER TYPE	Swisspacer Ultimate*				
	EXTERIOR SHEET	**GAP**	**CENTER SHEET**	**GAP**	**INTERIOR SHEET**
MEASURED THICKNESS	0.394" (10.01 mm)	0.473" (12.01 mm)	0.230" (5.84 mm)	0.471" (11.96 mm)	0.356" (9.04 mm)
MUNTIN PATTERN	N/A	N/A	N/A	N/A	N/A
MATERIAL	Annealed	Argon*	Annealed	Argon*	Laminated
LAMINATE MATERIAL	N/A	N/A	N/A	N/A	Acoustic PVB*

** - Stated per Client/Manufacturer, N/A-Not Applicable*

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GLAZING METHOD	Interior
GLAZING MATERIAL	EPDM
GLAZING BEAD MATERIAL	Vinyl with EPDM

	TYPE	QUANTITY	LOCATION
WEATHERSTRIP	3/8" (9.5 mm) Leaf gasket	1 Row	Perimeter of vent
	1/8" (3.2 mm) Leaf gasket	1 Row	Perimeter of frame
	1/2" (12.7 mm) Leaf gasket	1 Row	Perimeter of frame
HARDWARE	Multi-point hinge	2	Head and sill
	Multi-point lock system	1	Lock stile
	Keeper	7	Perimeter of frame
DRAINAGE	1-1/4" (31 mm) by 1/4" [6 mm] Weep slot with cover	2	Sill face
	1-1/4" (31 mm) by 1/4" (6 mm) Weep slot	12	Head and sill track; top and bottom rail

OPTION	TOTAL WEIGHT	AVERAGE WEIGHT
M2486.01A	80 lbs (36.28 kg)	8.26 lbs/ft^2 (40.31 kg/m^2)
M2486.01B2	94 lbs (42.64 kg)	9.71 lbs/ft^2 (47.38 kg/m^2)
M2486.01C	100 lbs (45.36 kg)	10.33 lbs/ft^2 (50.40 kg/m^2)
M2486.01D	95 lbs (43.09 kg)	9.81 lbs/ft^2 (47.88 kg/m^2)
M2486.01E	122 lbs (55.34 kg)	12.60 lbs/ft^2 (61.49 kg/m^2)

** - Stated per Client/Manufacturer, N/A-Not Applicable*

Photographs are included in Section 11.

Drawings of the test specimen are included in Section 12.

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SECTION 10
TEST RESULTS

M2486.01A DATA

SPECIMEN AREA	0.90 m²	**RECEIVE TEMP.**	22.9 °C	**SOURCE TEMP**	22.0 °C
TECHNICIAN	Logan Wise	**RECEIVE HUMIDITY**	51%	**SOURCE HUMIDIT**	51%

FREQ (Hz)	BACKGROUND SPL (dB)	ABSORPTION (m²)	SOURCE SPL (dB)	RECEIVE SPL (dB)	SPECIMEN TL (dB)	95% CONFIDENCE LIMIT	NUMBER OF DEFICIENCIES
80	40.9	6.3	108	77	24	2.06	-
100	34.9	5.6	108	74	27	2.36	-
125	37.0	5.4	108	71	30	1.16	0
160	41.9	5.2	110	81	21	1.11	0
200	40.8	5.2	110	83	19	0.98	4
250	34.0	5.7	107	81	18	0.77	8
315	27.5	5.8	108	70	29	0.40	0
400	23.3	6.0	110	67	34	0.35	0
500	19.2	6.3	108	63	37	0.26	0
630	20.1	6.1	107	60	38	0.40	0
800	17.2	6.3	106	58	39	0.28	0
1000	15.2	6.5	107	56	43	0.35	0
1250	10.9	7.1	106	54	43	0.32	0
1600	9.4	7.5	105	51	44	0.21	0
2000	8.6	7.9	105	54	42	0.15	0
2500	8.6	8.8	106	62	34	0.28	3
3150	11.4	10.5	104	61	32	0.40	5
4000	10.9	12.9	103	52	39	0.45	0
5000	14.4	16.1	103	44	46	0.38	-
STC RATING	33	*(Sound Transmission Class)*					
DEFICIENCIES	20	*(Sum of Deficiencies)*					
OITC RATING	28	*(Outdoor-Indoor Transmission Class)*					

Notes: *1) Receive Room levels less than 5 dB above the Background levels are red.*
2) Specimen TL levels listed in red indicate the lower limit of the transmission loss.
3) Specimen TL levels listed in green indicate that there has been a filler wall correction applied

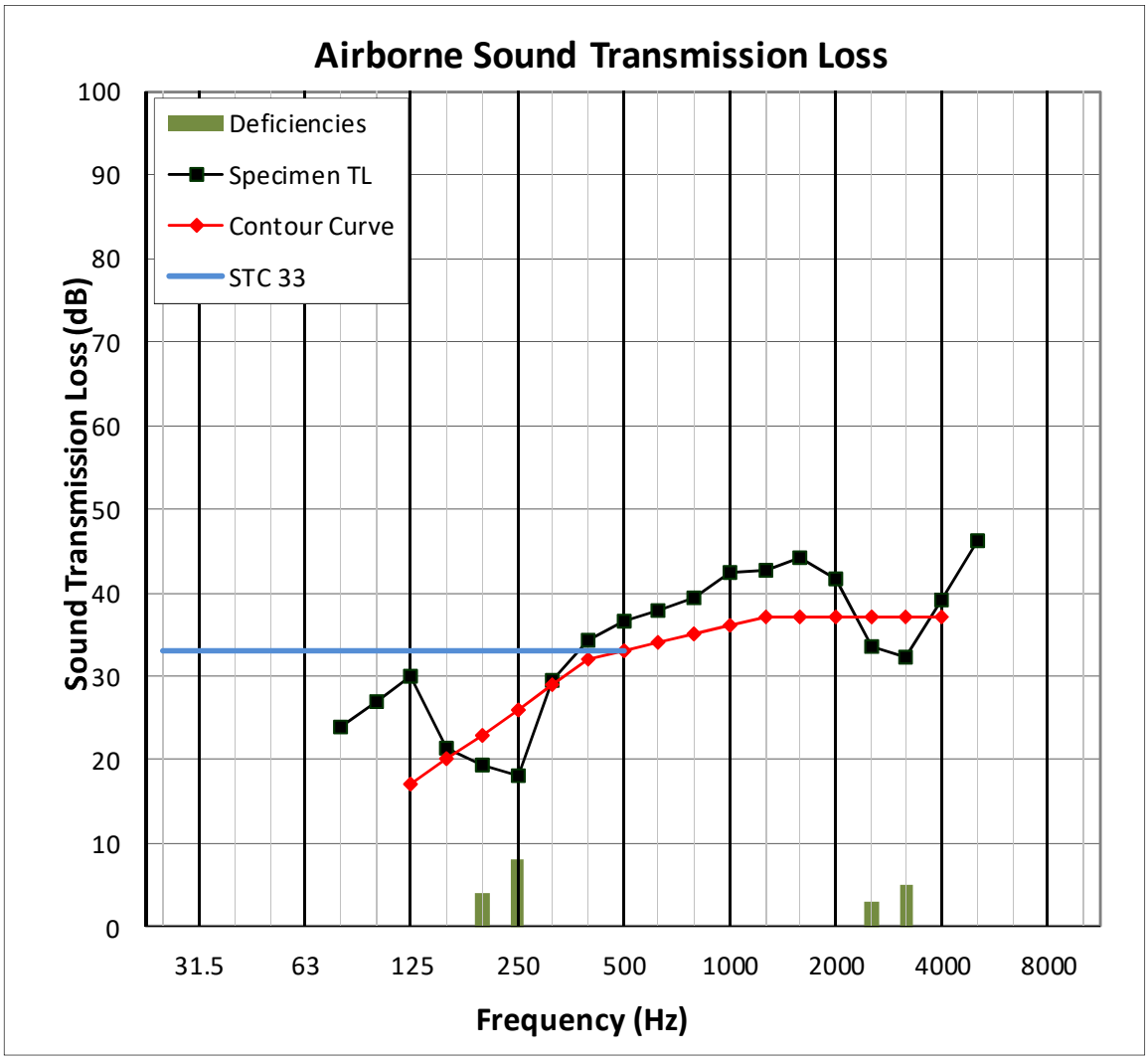
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M2486.01A GRAPH



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M2486.01B2 DATA

SPECIMEN AREA	0.90 m²	**RECEIVE TEMP.**	23.1 °C	**SOURCE TEMP**	21.7 °C
TECHNICIAN	Logan Wise	**RECEIVE HUMIDITY**	44%	**SOURCE HUMIDIT**	44%

FREQ (Hz)	BACKGROUND SPL (dB)	ABSORPTION (m²)	SOURCE SPL (dB)	RECEIVE SPL (dB)	SPECIMEN TL (dB)	95% CONFIDENCE LIMIT	NUMBER OF DEFICIENCIES
80	38.6	6.1	108	77	24	2.47	-
100	39.9	5.6	108	74	27	2.36	-
125	39.2	5.5	108	71	30	1.27	0
160	42.0	5.1	111	83	20	1.40	8
200	41.2	5.1	110	77	26	0.76	5
250	34.6	5.5	107	69	30	0.63	4
315	28.9	5.9	108	65	35	0.31	2
400	26.4	6.1	110	60	42	0.38	0
500	33.0	6.3	108	59	41	0.27	0
630	24.6	6.0	107	54	44	0.36	0
800	19.3	6.3	106	51	46	0.30	0
1000	15.6	6.5	107	52	46	0.37	0
1250	16.2	7.0	106	52	46	0.38	0
1600	12.5	7.4	105	50	46	0.20	0
2000	11.2	7.9	105	53	43	0.19	2
2500	14.1	9.1	106	55	41	0.33	4
3150	9.5	10.8	104	53	41	0.36	4
4000	9.6	13.4	102	45	46	0.45	0
5000	17.7	17.0	102	36	54	0.39	-
STC RATING		41	*(Sound Transmission Class)*				
DEFICIENCIES		29	*(Sum of Deficiencies)*				
OITC RATING		32	*(Outdoor-Indoor Transmission Class)*				

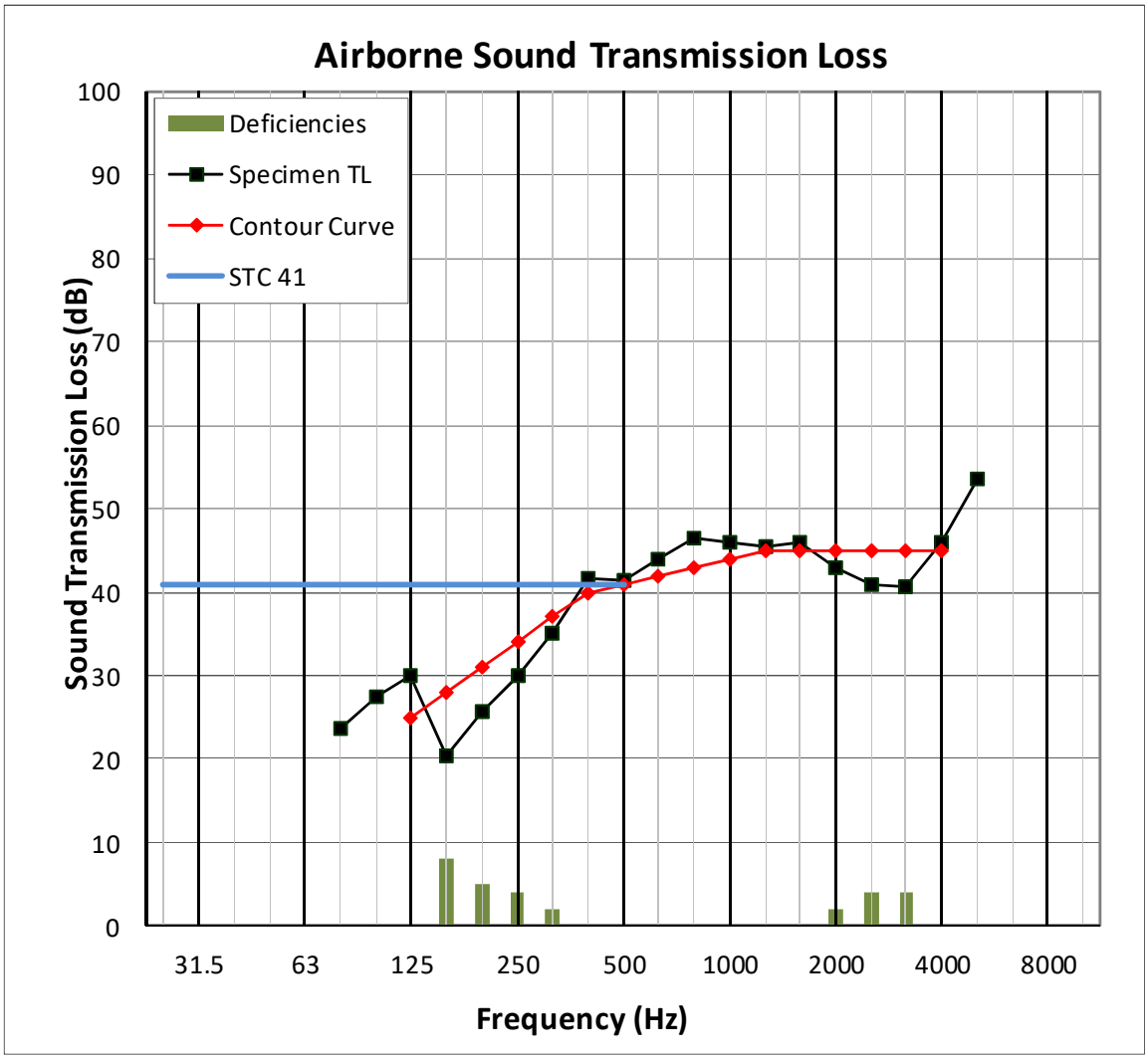
Notes: *1) Receive Room levels less than 5 dB above the Background levels are red.*
2) Specimen TL levels listed in red indicate the lower limit of the transmission loss.
3) Specimen TL levels listed in green indicate that there has been a filler wall correction applied

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M2486.01B GRAPH



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M2486.01C DATA

SPECIMEN AREA	0.90 m²	**RECEIVE TEMP.**	23.1 °C	**SOURCE TEMP**	21.4 °C
TECHNICIAN	Logan Wise	**RECEIVE HUMIDITY**	45%	**SOURCE HUMIDIT**	44%

FREQ (Hz)	BACKGROUND SPL (dB)	ABSORPTION (m²)	SOURCE SPL (dB)	RECEIVE SPL (dB)	SPECIMEN TL (dB)	95% CONFIDENCE LIMIT	NUMBER OF DEFICIENCIES
80	39.1	5.9	108	76	25	2.52	-
100	42.0	6.2	108	73	28	2.17	-
125	40.6	5.5	107	69	32	1.30	0
160	46.1	5.3	111	77	26	1.06	2
200	42.2	5.2	110	76	26	0.54	5
250	34.7	5.5	107	63	36	0.37	0
315	29.7	5.8	108	60	40	0.45	0
400	25.8	6.1	110	62	40	0.48	0
500	27.2	6.3	108	61	39	0.38	2
630	24.6	6.1	107	56	42	0.36	0
800	19.1	6.3	106	53	45	0.32	0
1000	15.9	6.6	107	56	43	0.35	1
1250	14.3	7.0	106	57	40	0.34	5
1600	11.9	7.5	105	55	40	0.21	5
2000	9.0	8.0	105	55	40	0.20	5
2500	8.4	9.0	106	54	42	0.32	3
3150	8.5	10.6	104	49	44	0.38	1
4000	8.3	13.3	102	41	49	0.48	0
5000	9.2	16.8	103	37	53	0.45	-
STC RATING		41	*(Sound Transmission Class)*				
DEFICIENCIES		29	*(Sum of Deficiencies)*				
OITC RATING		35	*(Outdoor-Indoor Transmission Class)*				

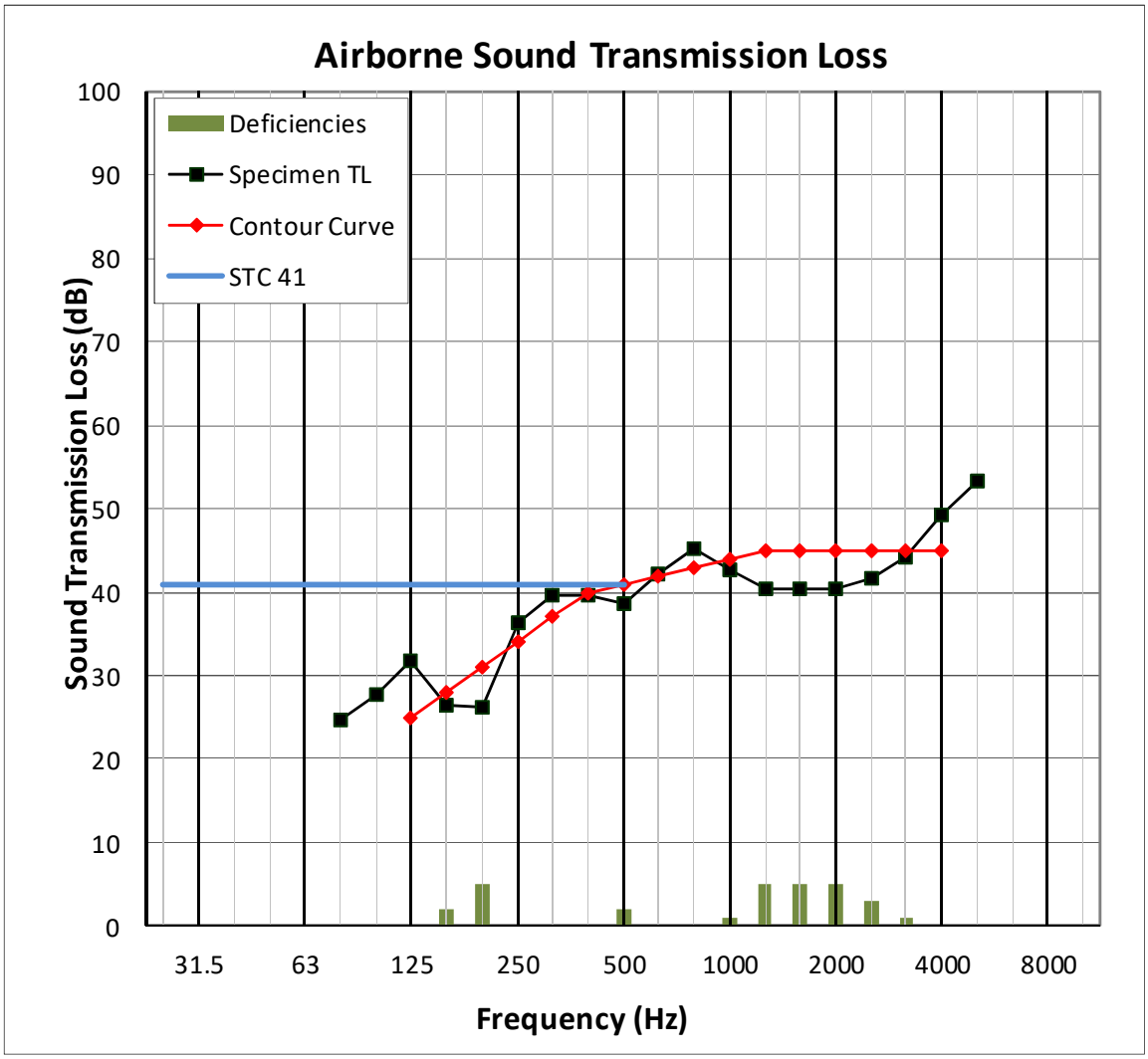
Notes: *1) Receive Room levels less than 5 dB above the Background levels are red.*
2) Specimen TL levels listed in red indicate the lower limit of the transmission loss.
3) Specimen TL levels listed in green indicate that there has been a filler wall correction applied

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M2486.01C GRAPH



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M2486.01D DATA

SPECIMEN AREA	0.90 m²	**RECEIVE TEMP.**	23.1 °C	**SOURCE TEMP**	21.7 °C
TECHNICIAN	Logan Wise	**RECEIVE HUMIDITY**	46%	**SOURCE HUMIDIT**	45%

FREQ (Hz)	BACKGROUND SPL (dB)	ABSORPTION (m²)	SOURCE SPL (dB)	RECEIVE SPL (dB)	SPECIMEN TL (dB)	95% CONFIDENCE LIMIT	NUMBER OF DEFICIENCIES
80	39.7	6.0	108	77	24	2.51	-
100	41.0	6.2	108	73	28	2.24	-
125	39.0	5.8	108	71	30	1.28	0
160	42.4	5.1	110	77	26	0.81	2
200	41.6	5.3	110	79	23	0.76	8
250	34.4	5.6	107	66	33	0.66	1
315	28.8	5.8	108	61	40	0.33	0
400	25.3	6.1	110	60	41	0.36	0
500	31.2	6.4	108	59	41	0.36	0
630	25.2	6.1	107	54	45	0.34	0
800	18.4	6.3	106	51	47	0.29	0
1000	14.6	6.5	107	52	46	0.34	0
1250	13.5	7.0	106	52	45	0.34	0
1600	13.0	7.4	105	50	46	0.18	0
2000	12.9	8.0	105	52	43	0.19	2
2500	9.3	9.0	106	53	43	0.34	2
3150	8.0	10.6	104	49	45	0.37	0
4000	8.4	13.2	102	41	49	0.47	0
5000	9.2	16.8	102	36	54	0.42	-
STC RATING		41	*(Sound Transmission Class)*				
DEFICIENCIES		15	*(Sum of Deficiencies)*				
OITC RATING		34	*(Outdoor-Indoor Transmission Class)*				

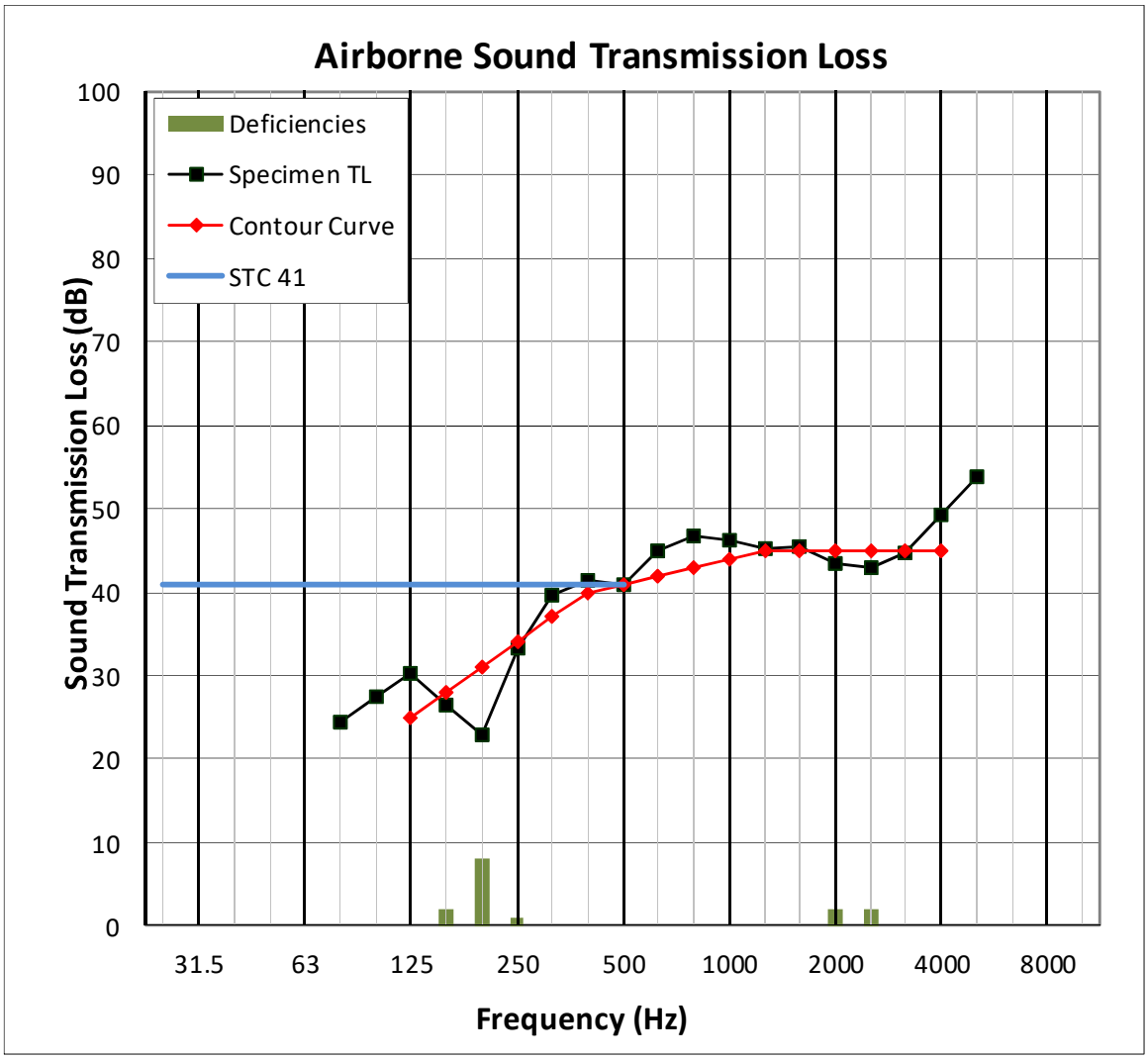
Notes: *1) Receive Room levels less than 5 dB above the Background levels are red.*
2) Specimen TL levels listed in red indicate the lower limit of the transmission loss.
3) Specimen TL levels listed in green indicate that there has been a filler wall correction applied

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M2486.01D GRAPH



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M2486.01E DATA

SPECIMEN AREA	0.90 m²	**RECEIVE TEMP.**	22.6 °C	**SOURCE TEMP**	22.2 °C
TECHNICIAN	Logan Wise	**RECEIVE HUMIDITY**	46%	**SOURCE HUMIDIT**	47%

FREQ (Hz)	BACKGROUND SPL (dB)	ABSORPTION (m²)	SOURCE SPL (dB)	RECEIVE SPL (dB)	SPECIMEN TL (dB)	95% CONFIDENCE LIMIT	NUMBER OF DEFICIENCIES
80	38.1	6.2	108	77	24	2.66	-
100	42.3	5.7	108	73	28	2.21	-
125	38.0	5.9	108	68	33	1.19	0
160	44.1	5.2	111	77	26	1.03	5
200	40.7	5.2	110	72	31	0.65	3
250	33.8	5.6	107	60	40	0.44	0
315	28.9	5.8	108	57	43	0.33	0
400	28.3	6.1	110	59	43	0.36	0
500	33.8	6.4	109	57	43	0.35	1
630	26.1	6.0	107	53	46	0.33	0
800	19.7	6.3	107	52	46	0.34	0
1000	16.7	6.5	107	54	45	0.38	2
1250	17.3	7.0	106	52	46	0.33	2
1600	13.1	7.4	105	50	46	0.25	2
2000	11.8	7.9	105	52	44	0.25	4
2500	12.8	9.0	106	52	44	0.35	4
3150	9.1	10.8	105	49	45	0.40	3
4000	8.7	13.2	103	42	49	0.51	0
5000	9.1	16.7	103	37	54	0.52	-
STC RATING		44	*(Sound Transmission Class)*				
DEFICIENCIES		26	*(Sum of Deficiencies)*				
OITC RATING		37	*(Outdoor-Indoor Transmission Class)*				

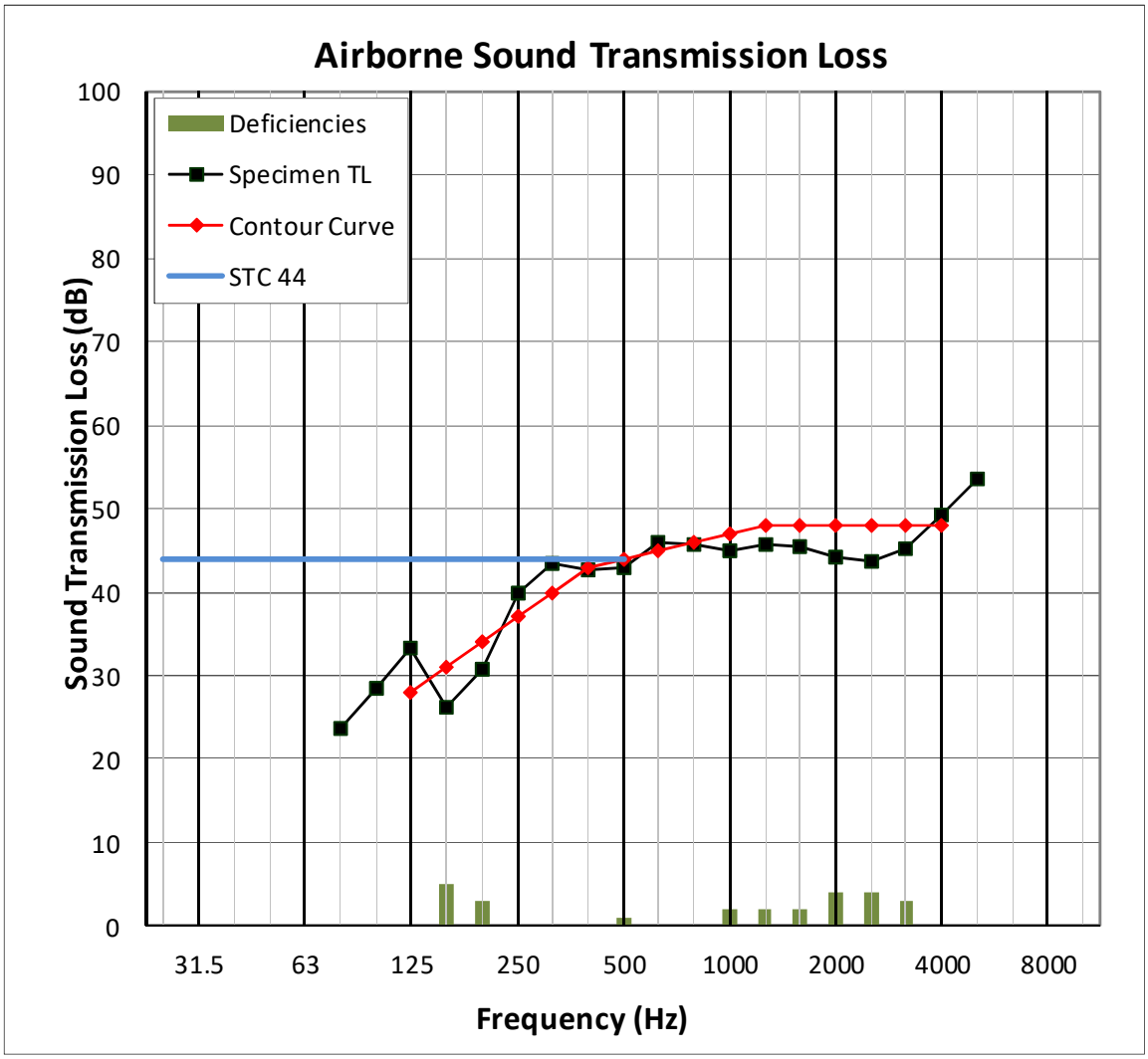
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M2486.01E GRAPH



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SECTION 11
PHOTOGRAPHS



Photo No. 1
Receive Room View of Installed Test Specimen



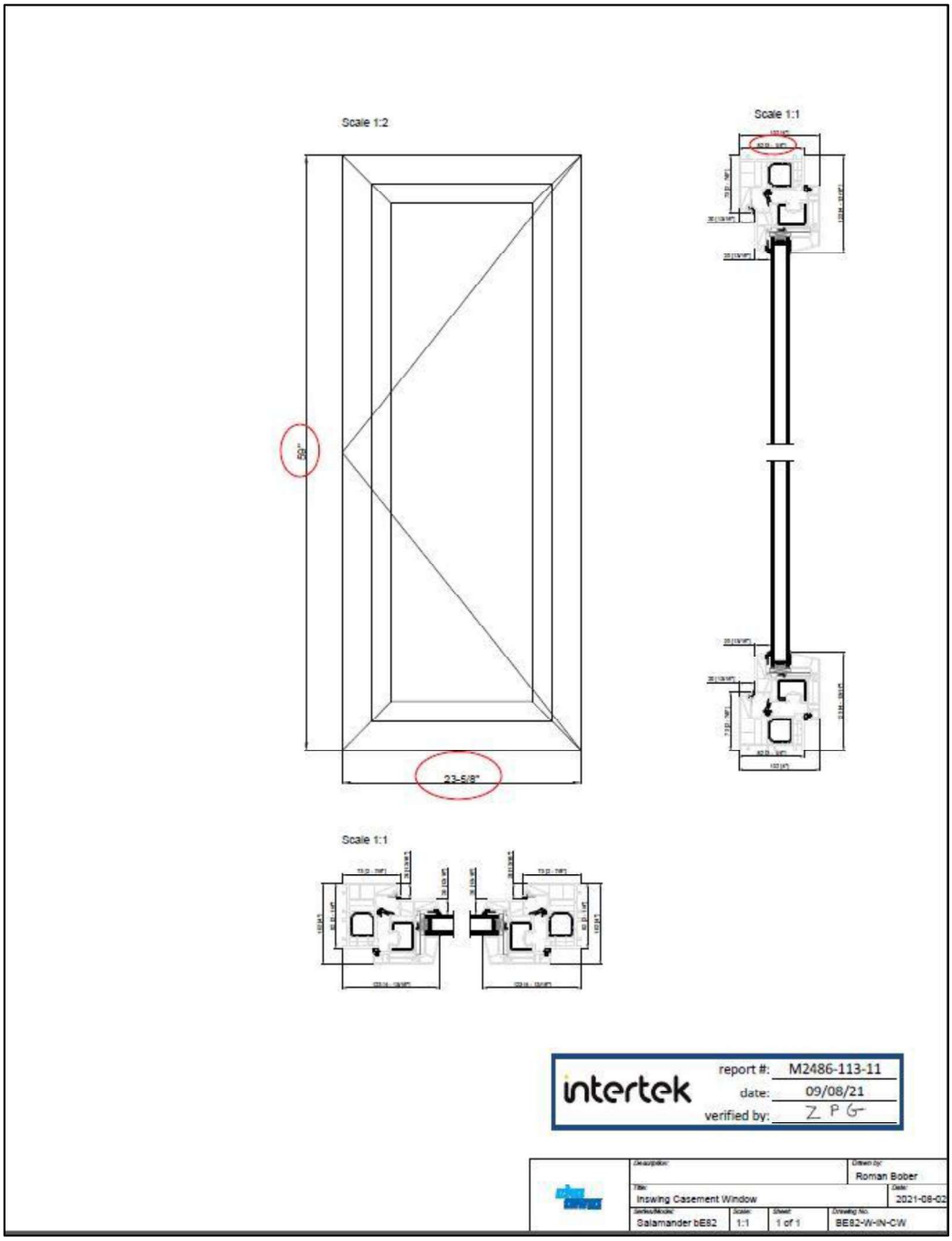
Photo No. 2
Source Room View of Installed Test Specimen

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TEST REPORT FOR EKO-OKNA S.A.
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SECTION 12
DRAWINGS

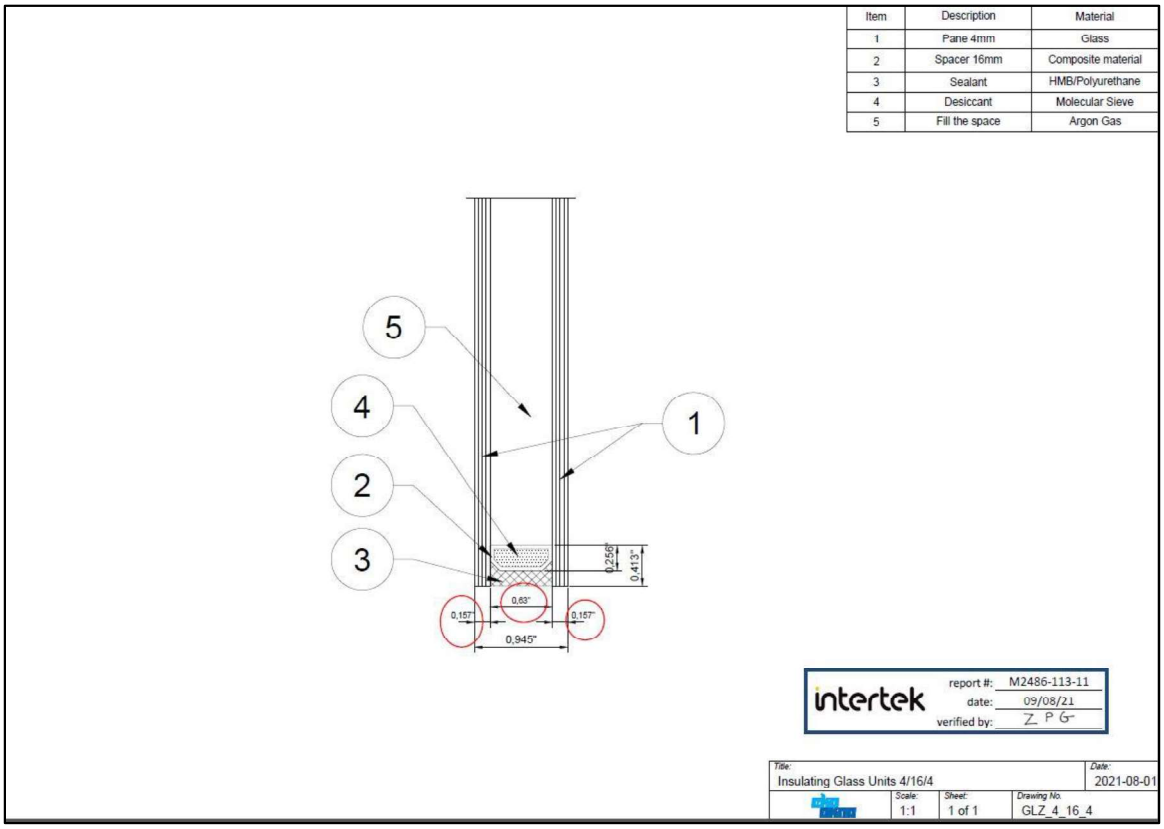


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OPTION M2486.01A

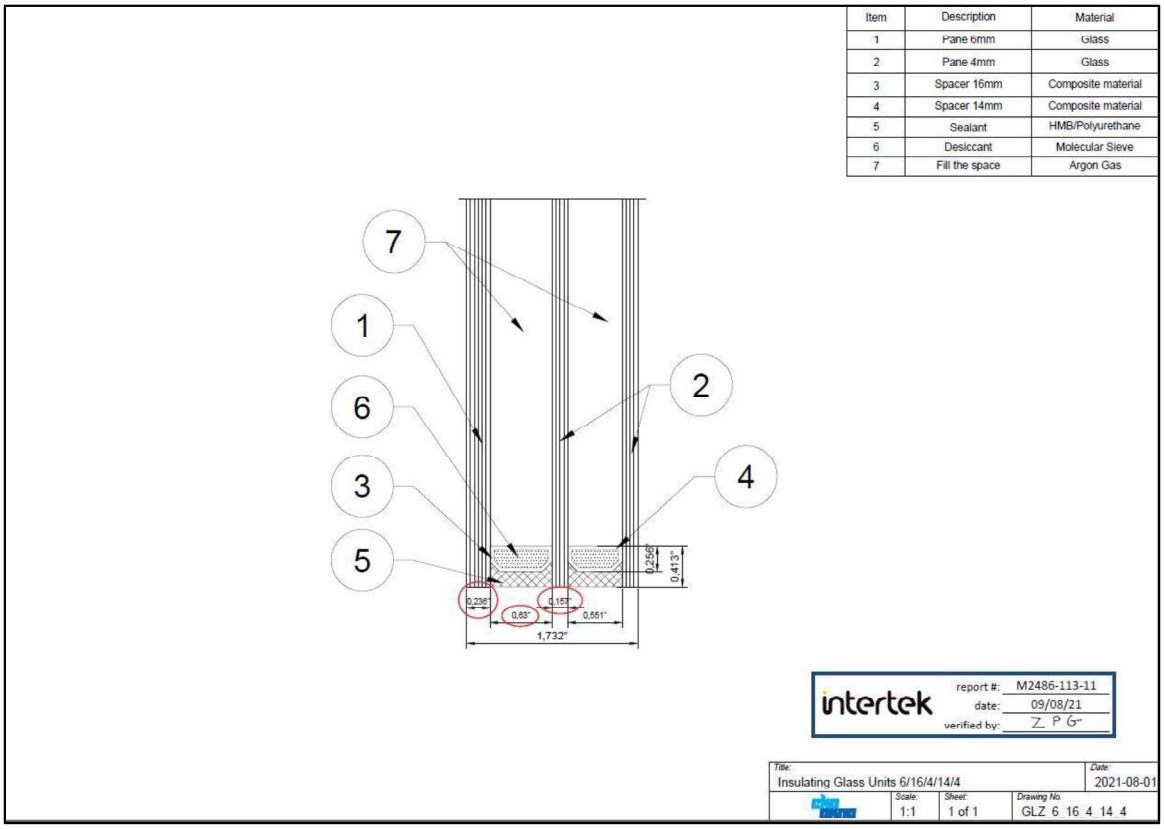


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OPTION M2486.01B

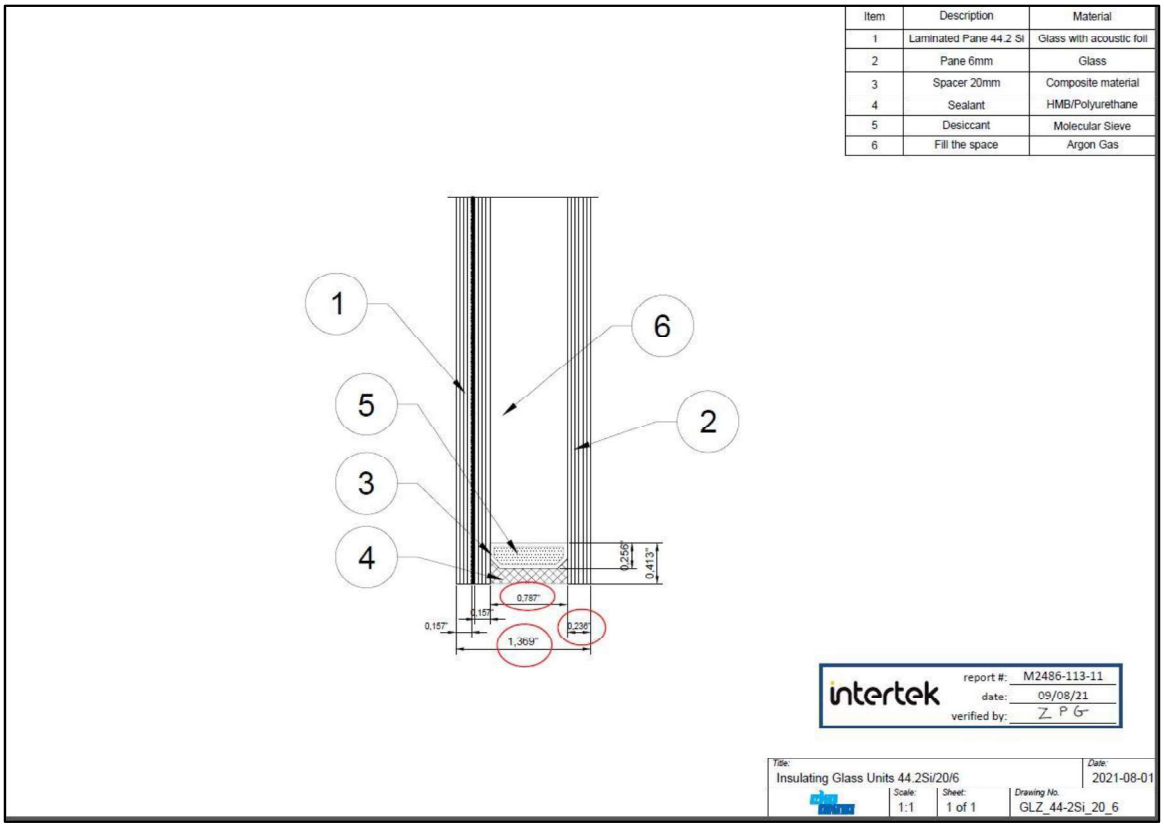


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OPTION M2486.01C

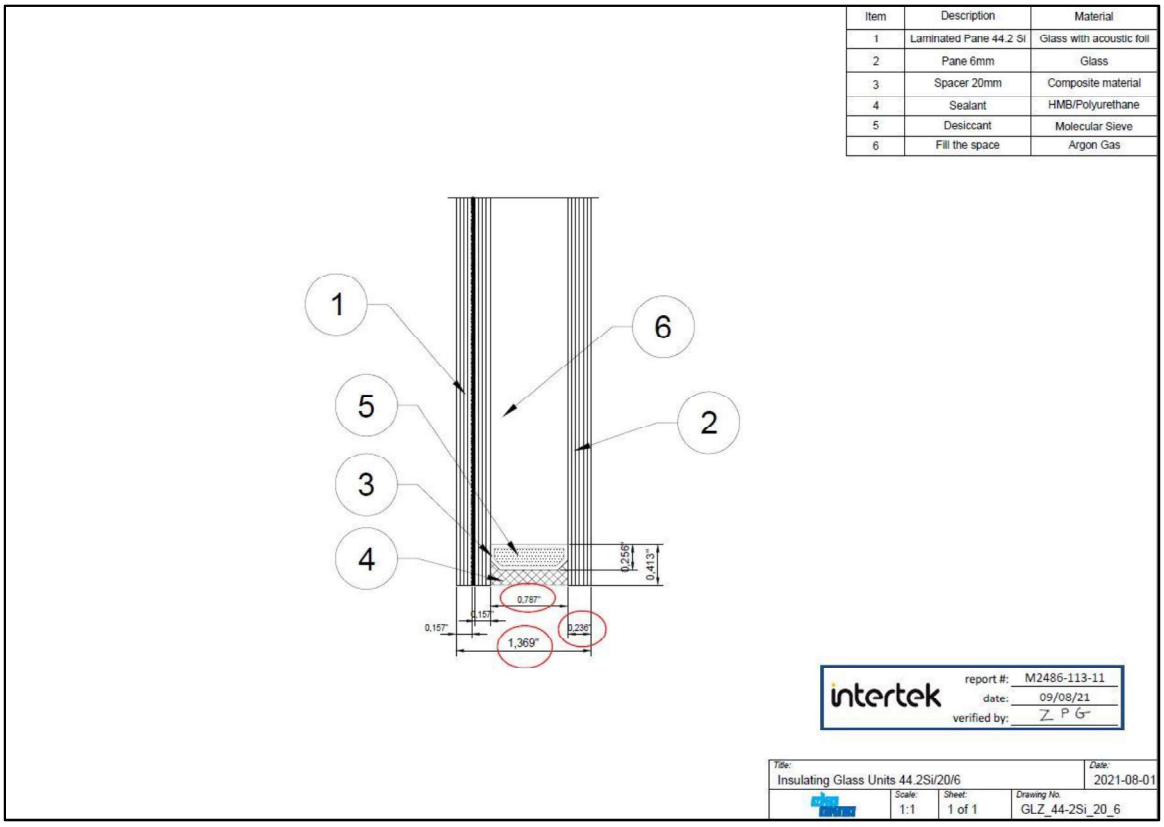


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OPTION M2486.01D

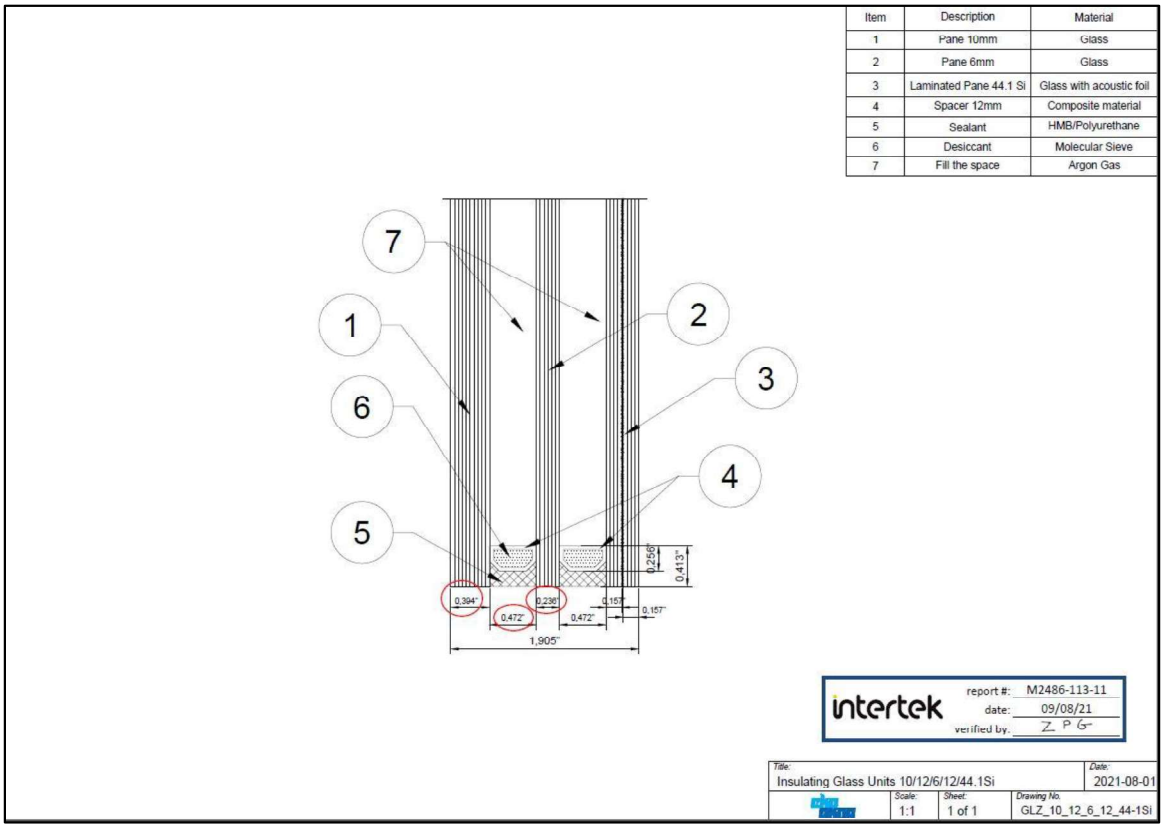


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OPTION M2486.01E



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SECTION 13
REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	09/13/21	N/A	Original Report Issue