New York City Environmental Quality Review

Environmental Assessment Statement

2069 Bruckner Boulevard Rezoning

Prepared For:

Azimuth Development Group LLC

40 Fulton Street

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Lead Agency:

New York City Department of City Planning

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New York, NY 10271

CEQR Number: 19DCP082X

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2069 Bruckner Boulevard Rezoning EAS

Environmental Assessment Statement

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

FOR UNLISTED ACTIONS ONLY • *Please fill out and submit to the appropriate agency* (see instructions)

Part I: GENERAL INFORMATION

1. *Does the Action Exceed Any Type I Threshold in 6 NYCRR Part 617.4 or 43 RCNY §6-15(A) (Executive Order 91 of 1977, as amended)?* ☐ YES ☒ NO

If "yes," **STOP** and **complete the FULL EAS FORM**.

2. *Project Name* 2069 Bruckner Boulevard Rezoning EAS

3. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency)	BSA REFERENCE NUMBER (if applicable)
19DCP082X	
ULURP REFERENCE NUMBER (if applicable)	OTHER REFERENCE NUMBER(S) (if applicable) (*e.g.*, legislative intro, CAPA)
190103ZRX 190102ZMX	

4a. *Lead Agency Information*			**4b. *Applicant Information***		
NAME OF LEAD AGENCY Department of City Planning			NAME OF APPLICANT Azimuth Development Group LLC		
NAME OF LEAD AGENCY CONTACT PERSON Laura Kenny			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON Guido Subotovsky		
ADDRESS 120 Broadway, 31st Floor			ADDRESS 40 Fulton Street, 12th Floor		
CITY New York	STATE NY	ZIP 10271	CITY New York	STATE NY	ZIP 10038
TELEPHONE 212-720-3419	EMAIL lkenny@planning.nyc.gov		TELEPHONE 212-414-9414	EMAIL guido@azimuthdg.com	

5. *Project Description*

Azimuth Development Group LLC (the "Applicant") requests approval of discretionary actions including a zoning map amendment, a zoning text amendment, and discretional construction financing from the New York City (NYC) Department of Housing Preservation and Development (HPD) and the NYC Housing Development Corporation (HDC), which is a State agency (the "Proposed Actions"). The proposed zoning map and zoning text amendment would rezone Lot 33 of Block 3797 (the "Project Site") in Bronx Community District (CD) 9 from an R5 district to an R7A/C2-4 district and designate the Project Site a Mandatory Inclusionary Housing (MIH) Area pursuant to Option #1. The Project Site would be the same as the entire rezoning area and would be the only projected development site. The Proposed Actions would facilitate the development of an approximately 366,007 gross square foot (gsf) mixed-use residential and commercial development comprised of 350 affordable dwelling units (DUs), approximately 18,023 gsf of ground floor commercial/retail space, 159 indoor and outdoor parking spaces, and 173 bicycle parking spaces with a maximum height of 95 feet (the "Proposed Project"). The Proposed Project would consist of two adjoining buildings constructed as a single development. The Applicant would complete construction by 2022. See Attachment A, "Project Description."

Project Location

BOROUGH Bronx	COMMUNITY DISTRICT(S) 9	STREET ADDRESS 2069 Bruckner Boulevard
TAX BLOCK(S) AND LOT(S) Block 3797, Lot 33		ZIP CODE 10472
DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS Chatterton Avenue to the north, Bruckner Boulevard to the south, Pugsley Avenue to the west, and Olmstead Avenue to the east		
EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY R5		ZONING SECTIONAL MAP NUMBER 4b

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

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

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

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

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

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

☐ VARIANCE (use)

☐ VARIANCE (bulk)

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

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

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

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

☐ LEGISLATION

☒ FUNDING OF CONSTRUCTION, specify: HPD Mix & Match Program

☐ 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: NYC Housing Development Corporation (HDC)

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

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

☒ SITE LOCATION MAP ☒ ZONING MAP ☒ SANBORN OR OTHER LAND USE MAP

☒ TAX MAP ☐ FOR LARGE AREAS OR MULTIPLE SITES, A GIS SHAPE FILE THAT DEFINES THE PROJECT SITE(S)

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

Physical Setting (both developed and undeveloped areas)

Total directly affected area (sq. ft.): 61,101

Waterbody area (sq. ft) and type: 0

Roads, buildings, and other paved surfaces (sq. ft.): 61,101

Other, describe (sq. ft.): 0

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

SIZE OF PROJECT TO BE DEVELOPED (gross square feet): 366,007

NUMBER OF BUILDINGS: 2

GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): 366,007 total, constructed as single development

HEIGHT OF EACH BUILDING (ft.): 70 feet and 95 feet

NUMBER OF STORIES OF EACH BUILDING: 7 and 9 stories

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: 61,101

The total square feet not owned or controlled by the applicant: 0

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

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

AREA OF TEMPORARY DISTURBANCE: 61,101 sq. ft. (width x length)

VOLUME OF DISTURBANCE: 183,303 cubic ft. (width x length x depth)

AREA OF PERMANENT DISTURBANCE: 61,101 sq. ft. (width x length)

Description of Proposed Uses (please complete the following information as appropriate)

	Residential	***Commercial***	***Community Facility***	***Industrial/Manufacturing***
Size (in gross sq. ft.)	291,283	18,023	0	
Type (*e.g.,* retail, office, school)	350 units	Local retail		

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

If "yes," please specify: NUMBER OF ADDITIONAL RESIDENTS: 1,001 NUMBER OF ADDITIONAL WORKERS: 18

Provide a brief explanation of how these numbers were determined: Residents: 350 new units x 2.86 persons per household = 1,001

residents (Source: ACS, U.S. Census); Employees: 18,023 x 0.003 = 54 employees (Source: DCP)

Does the proposed project create new open space? ☒ YES ☐ NO If "yes," specify size of project-created open space: 3,423 sq. ft.

Has a No-Action scenario been defined for this project that differs from the existing condition? ☒ YES ☐ NO

If "yes," see Chapter 2, "Establishing the Analysis Framework" and describe briefly: Development of 84 DUs under existing R5 zoning

9. *Analysis Year* CEQR Technical Manual Chapter 2

ANTICIPATED BUILD YEAR (date the project would be completed and operational): 2022

ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: 24 months

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

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE: Excavation and Foundations: 6 months; Superstructure: 5 months; Interiors & Enclosures: 15 months. Construction would begin in late 2019/early 2020.

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

☒ RESIDENTIAL ☐ MANUFACTURING ☒ COMMERCIAL ☐ PARK/FOREST/OPEN SPACE ☒ OTHER, specify: Institutional, Mixed Residential & Commercial

Part II: TECHNICAL ANALYSIS

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

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

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

	YES	NO
5. *SHADOWS*: CEQR Technical Manual Chapter 8		
(a) Would the proposed project result in a net height increase of any structure of 50 feet or more?	☒	☐
(b) Would the proposed project result in any increase in structure height and be located adjacent to or across the street from a sunlight-sensitive resource?	☐	☒
6. *HISTORIC AND CULTURAL RESOURCES*: CEQR Technical Manual Chapter 9		
(a) Does the proposed project site or an adjacent site contain any architectural and/or archaeological resource that is eligible for or has been designated (or is calendared for consideration) as a New York City Landmark, Interior Landmark or Scenic Landmark; that is listed or eligible for listing on the New York State or National Register of Historic Places; or that is within a designated or eligible New York City, New York State or National Register Historic District? (See the GIS System for Archaeology and National Register to confirm)	☐	☒
(b) Would the proposed project involve construction resulting in in-ground disturbance to an area not previously excavated?	☒	☐
(c) If "yes" to either of the above, list any identified architectural and/or archaeological resources and attach supporting information on whether the proposed project would potentially affect any architectural or archeological resources. The NYC Landmarks Preservation Commission (LPC) and the New York State Historic Preservation Office (SHPO) have determined that the Project Site and adjacent land within 400 feet of the Project Site do not include architectural or archaeological resources of significance (see consultation letters: LPC letter dated April 3, 2018 and SHPO letter dated September 7, 2018 in Appendix H, "Historic & Cultural Resources Consultation.")		
7. *URBAN DESIGN AND VISUAL RESOURCES*: CEQR Technical Manual Chapter 10		
(a) Would the proposed project introduce a new building, a new building height, or result in any substantial physical alteration to the streetscape or public space in the vicinity of the proposed project that is not currently allowed by existing zoning?	☒	☐
(b) Would the proposed project result in obstruction of publicly accessible views to visual resources not currently allowed by existing zoning?	☐	☒
8. *NATURAL RESOURCES*: CEQR Technical Manual Chapter 11		
(a) Does the proposed project site or a site adjacent to the project contain natural resources as defined in Section 100 of Chapter 11?	☐	☒
○ If "yes," list the resources and attach supporting information on whether the proposed project would affect any of these resources.		
(b) Is any part of the directly affected area within the Jamaica Bay Watershed?	☐	☒
○ If "yes," complete the Jamaica Bay Watershed Form, and submit according to its instructions.		
9. *HAZARDOUS MATERIALS*: CEQR Technical Manual Chapter 12		
(a) Would the proposed project allow commercial or residential uses in an area that is currently, or was historically, a manufacturing area that involved hazardous materials?	☐	☐
(b) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to hazardous materials that preclude the potential for significant adverse impacts?	☐	☒
(c) Would the project require soil disturbance in a manufacturing area or any development on or near a manufacturing area or existing/historic facilities listed in Appendix 1 (including nonconforming uses)?	☐	☒
(d) Would the project result in the development of a site where there is reason to suspect the presence of hazardous materials, contamination, illegal dumping or fill, or fill material of unknown origin?	☒	☐
(e) Would the project result in development on or near a site that has or had underground and/or aboveground storage tanks (*e.g.*, gas stations, oil storage facilities, heating oil storage)?	☒	☐
(f) Would the project result in renovation of interior existing space on a site with the potential for compromised air quality; vapor intrusion from either on-site or off-site sources; or the presence of asbestos, PCBs, mercury or lead-based paint?	☐	☒
(g) Would the project result in development on or near a site with potential hazardous materials issues such as government-listed voluntary cleanup/brownfield site, current or former power generation/transmission facilities, coal gasification or gas storage sites, railroad tracks or rights-of-way, or municipal incinerators?	☐	☒
(h) Has a Phase I Environmental Site Assessment been performed for the site?	☒	☐
○ If "yes," were Recognized Environmental Conditions (RECs) identified? Briefly identify: See Attachment I: Hazardous Materials.	☐	☒
10. *WATER AND SEWER INFRASTRUCTURE*: CEQR Technical Manual Chapter 13		
(a) Would the project result in water demand of more than one million gallons per day?	☐	☒
(b) If the proposed project located in a combined sewer area, would it result in at least 1,000 residential units or 250,000 square feet or more of commercial space in Manhattan, or at least 400 residential units or 150,000 square feet or more of commercial space in the Bronx, Brooklyn, Staten Island, or Queens?	☐	☒
(c) If the proposed project located in a separately sewered area, would it result in the same or greater development than the	☐	☒

	YES	NO
amounts listed in Table 13-1 in Chapter 13?		
(d) Would the proposed project involve development on a site that is 5 acres or larger where the amount of impervious surface would increase?	☐	☒
(e) If the project is located within the Jamaica Bay Watershed or in certain specific drainage areas, including Bronx River, Coney Island Creek, Flushing Bay and Creek, Gowanus Canal, Hutchinson River, Newtown Creek, or Westchester Creek, would it involve development on a site that is 1 acre or larger where the amount of impervious surface would increase?	☐	☒
(f) Would the proposed project be located in an area that is partially sewered or currently unsewered?	☐	☒
(g) Is the project proposing an industrial facility or activity that would contribute industrial discharges to a Wastewater Treatment Plant and/or generate contaminated stormwater in a separate storm sewer system?	☐	☒
(h) Would the project involve construction of a new stormwater outfall that requires federal and/or state permits?	☐	☒
11. *SOLID WASTE AND SANITATION SERVICES*: CEQR Technical Manual Chapter 14		
(a) Using Table 14-1 in Chapter 14, the project's projected operational solid waste generation is estimated to be (pounds per week): 15,774		
○ Would the proposed project have the potential to generate 100,000 pounds (50 tons) or more of solid waste per week?	☐	☒
(b) Would the proposed project involve a reduction in capacity at a solid waste management facility used for refuse or recyclables generated within the City?	☐	☒
12. *ENERGY*: CEQR Technical Manual Chapter 15		
(a) Using energy modeling or Table 15-1 in Chapter 15, the project's projected energy use is estimated to be (annual BTUs): 40.8 million		
(b) Would the proposed project affect the transmission or generation of energy?	☐	☒
13. *TRANSPORTATION*: CEQR Technical Manual Chapter 16		
(a) Would the proposed project exceed any threshold identified in Table 16-1 in Chapter 16?	☒	☐
(b) If "yes," conduct the screening analyses, attach appropriate back up data as needed for each stage and answer the following questions:		
○ Would the proposed project result in 50 or more Passenger Car Equivalents (PCEs) per project peak hour?	☐	☒
If "yes," would the proposed project result in 50 or more vehicle trips per project peak hour at any given intersection? ***It should be noted that the lead agency may require further analysis of intersections of concern even when a project generates fewer than 50 vehicles in the peak hour. See Subsection 313 of Chapter 16 for more information.*	☐	☐
○ Would the proposed project result in more than 200 subway/rail or bus trips per project peak hour?	☐	☒
If "yes," would the proposed project result, per project peak hour, in 50 or more bus trips on a single line (in one direction) or 200 subway trips per station or line?	☐	☐
○ Would the proposed project result in more than 200 pedestrian trips per project peak hour?	☒	☐
If "yes," would the proposed project result in more than 200 pedestrian trips per project peak hour to any given pedestrian or transit element, crosswalk, subway stair, or bus stop?	☒	☐
14. *AIR QUALITY*: CEQR Technical Manual Chapter 17		
(a) *Mobile Sources*: Would the proposed project result in the conditions outlined in Section 210 in Chapter 17?	☐	☒
(b) *Stationary Sources*: Would the proposed project result in the conditions outlined in Section 220 in Chapter 17?	☒	☐
○ If "yes," would the proposed project exceed the thresholds in Figure 17-3, Stationary Source Screen Graph in Chapter 17? (Attach graph as needed) See Figure K-2.	☒	☐
(c) Does the proposed project involve multiple buildings on the project site?	☒	☐
(d) Does the proposed project require federal approvals, support, licensing, or permits subject to conformity requirements?	☐	☒
(e) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to air quality that preclude the potential for significant adverse impacts?	☐	☒
15. *GREENHOUSE GAS EMISSIONS*: CEQR Technical Manual Chapter 18		
(a) Is the proposed project a city capital project or a power generation plant?	☐	☒
(b) Would the proposed project fundamentally change the City's solid waste management system?	☐	☒
(c) If "yes" to any of the above, would the project require a GHG emissions assessment based on the guidance in Chapter 18?	☐	☒
16. *NOISE*: CEQR Technical Manual Chapter 19		
(a) Would the proposed project generate or reroute vehicular traffic?	☒	☐
(b) Would the proposed project introduce new or additional receptors (see Section 124 in Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed rail line with a direct line of site to that rail line?	☒	☐

	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?	☐	☒
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. The Proposed Project would not result in any significant adverse impacts in the following technical areas: Land Use, Zoning, and Public Policy; Socioeconomic Conditions; Open Space; Historic and Cultural Resources; Urban Design and Visual Resources; Shadows; Transportation; and Noise. Nor would the Proposed Project result in a combination of moderate effects to several elements that cumulatively may affect neighborhood character. Therefore, the Proposed Project would not result in a significant adverse impact on Neighborhood Character.		
19. *CONSTRUCTION*: CEQR Technical Manual Chapter 22		
(a) Would the project's construction activities involve:		
○ Construction activities lasting longer than two years?	☐	☒
○ Construction activities within a Central Business District or along an arterial highway or major thoroughfare?	☒	☐
○ Closing, narrowing, or otherwise impeding traffic, transit, or pedestrian elements (roadways, parking spaces, bicycle routes, sidewalks, crosswalks, corners, *etc.*)?	☒	☐
○ Construction of multiple buildings where there is a potential for on-site receptors on buildings completed before the final build-out?	☐	☒
○ The operation of several pieces of diesel equipment in a single location at peak construction?	☒	☐
○ Closure of a community facility or disruption in its services?	☐	☒
○ Activities within 400 feet of a historic or cultural resource?	☐	☒
○ Disturbance of a site containing or adjacent to a site containing natural resources?	☐	☒
○ Construction on multiple development sites in the same geographic area, such that there is the potential for several construction timelines to overlap or last for more than two years overall?	☐	☒
(b) If any boxes are checked "yes," explain why a preliminary construction assessment is or is not warranted based on the guidance in Chapter 22, "Construction." It should be noted that the nature and extent of any commitment to use the Best Available Technology for construction equipment or Best Management Practices for construction activities should be considered when making this determination. Construction of the Proposed Project would be short term and would be completed within two years. Standard construction techniques commonly used in construction projects in New York City would be utilized. Any related sidewalk or lane closure would be temporary. A screening assessment is provided as in Attachment M, "Construction."		

20. *APPLICANT'S CERTIFICATION*

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

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

APPLICANT/REPRESENTATIVE NAME	DATE
Kovid Saxena (Sam Schwartz Engineering, DPC)	1/4/2019

SIGNATURE



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

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

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

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

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

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

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

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

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

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

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

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

TITLE	LEAD AGENCY
Acting Director, Environmental Assessment and Review Division	Department of City Planning, acting on behalf of the City Planning Commission
NAME: Olga Abinader	DATE: 1/4/2019

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, the Department of City Planning, acting on behalf of the City Planning Commission assumed the role of lead agency for the environmental review of the proposed project. Based on a review of information about the project contained in this environmental assessment statement and any attachments hereto, which are incorporated by reference herein, the lead agency has determined that the proposed project would not have a significant adverse impact on the environment.

Reasons Supporting this Determination

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

1. Hazardous Materials, Air Quality, and Noise

An (E) designation (E-515) for hazardous materials, air quality, and noise has been incorporated into the proposed actions. Refer to Appendix 1:(E) Designation", attached to this Determination of Significance, for a list of sites affected by the (E) designation and applicable (E) designation requirements. The analyses conducted for hazardous materials, air quality, and noise conclude that with the (E) Designation requirements in place, the proposed actions would not result in significant adverse impacts to hazardous materials, air quality, or noise.

2. Land Use, Zoning and Public Policy

The EAS includes a detailed Land Use, Zoning and Public Policy section. The proposed rezoning from R5 to R7A/C2-4 district would facilitate the development of a new mixed use residential, commercial, and community facility building, and would have no significant adverse impacts related to land use, zoning, or public policy. The proposed actions would facilitate an increase in residential density in an area characterized by residential and commercial uses. The existing R5 zoning district is made up of one and two-family residencies and multi-family walk up residencies with a small retail presence in some buildings. The analysis concludes that no significant adverse impacts related to Land Use, Zoning and Public Policy would result from the proposed actions.

3. Community Facilities

A detailed analysis of Community Facilities and Services was conducted for Public Schools and Child Care. No significant adverse impacts are expected as a result of the Proposed Actions.

Public Schools

Pursuant to CEQR Technical Manual methodology, a significant impact on schools may occur if the collective utilization rate of the elementary and/or intermediate schools in the Sub-district study area that is equal to or greater than 100% with the proposed actions and if the project results in an increase of 5% or more in the collective utilization rate. The collective utilization rates for both elementary and intermediate schools would exceed the CEQR utilization rate threshold of 100% in the future with the proposed actions. However, the increase in the collective utilization rate would be less than the CEQR threshold of 5%. The utilization rate would increase by 1.18% for elementary schools and 1.05% for intermediate schools. As the proposed actions would not exceed the 5% threshold, significant adverse impacts are not expected.

Child Care

The Proposed Actions would result in an increase in the collective utilization rate by 3.08%. According to CEQR Technical Manual guidelines, a significant adverse impact on child care centers may occur if the proposed actions would result in a collective utilization rate of group child care or Head Start centers in the study area would be greater than 100% and if there would be an increase of 5% or more in the collective utilization rate. The proposed actions are not expected to result in significant adverse impacts on publicly-financed child care facilities and no further analysis is required.

4. Open Space

A detailed analysis of the effects of the proposed actions on Open Space was conducted and concludes that no significant adverse impacts are expected to result from the proposed actions. The analysis concludes that the proposed actions would result in a reduction of the Open Space Ratio by 2.24% for the area. The CEQR threshold for impact in an area that is neither well-served nor under-served, such as this, is a reduction of 5% or more. A number of parks located within a thirty-minute walk outside the study area were also considered in a qualitative assessment. Based on the results of this analysis, no significant adverse impacts are expected.

5. Transportation
The EAS includes a detailed transportation analysis of pedestrian trips generated by the proposed actions. The proposed actions are not expected to result in an increase of more than 200 pedestrians at any intersection corner, sidewalk, or crosswalk - the threshold warranting a Level 2 analysis. As a result, the analysis concludes that the proposed actions would not result in any significant adverse impacts related to traffic flow, transit operations, pedestrian movement, or vehicular and pedestrian safety, and no further analysis is needed.

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
Acting Director, Environmental Assessment and Review Division	Department of City Planning, acting on behalf of the City Planning Commission
NAME	DATE
Olga Abinader	1/4/2019
SIGNATURE	

TITLE	
Chair, Department of City Planning	
NAME	DATE
Marisa Lago	1/7/2019
SIGNATURE	

Appendix 1: (E) Designations

To ensure that there would be no significant adverse hazardous material, air quality or noise impacts associated with the proposed project, an E designation (E-515) will be placed on the project site as follows:

The E designation requirements related to hazardous materials, air quality, and noise would apply to:

Projected Development Site 1:
Block 3797, Lot 33

Hazardous Material

Task 1-Sampling Protocol

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

Task 2-Remediation Determination and Protocol

A written report, such as a Phase II ESA, with findings and a summary of the data must be submitted to OER after completion of the testing phase and laboratory analysis for review and approval. After receiving such results, a determination is made by OER if the results indicate that remediation is necessary. If OER determines that no remediation is necessary, written notice shall be given by OER.
If remediation is indicated from test results, a proposed remediation plan must be submitted to OER for review and approval. The Selected Developer must complete such remediation as determined necessary by OER. The Selected Developer should then provide proper documentation that the work has been satisfactorily completed.
A construction-related health and safety plan should be submitted to OER and would be implemented during excavation and construction activities to protect workers and the community from potentially significant adverse impacts associated with contaminated soil, groundwater and/or soil vapor. This plan would be submitted to OER prior to implementation.

Air Quality

Any new residential and/or commercial development on Block 3797, Lot 33 in the Bronx must use natural gas as the type of fuel for space heating and hot water systems. A single

stack must be used for the development site, and it must have a minimum height of 102 feet above ground level.

Noise

To ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed-window condition with a minimum of 31 dBA window/wall attenuation on facades facing west (Pugsley Avenue) or south (Bruckner Boulevard) or the portion of façade facing east (Olmstead Avenue) within 100 feet north of Bruckner Boulevard to maintain an interior noise level not greater than 45 dBA for residential uses or not greater than 50 dBA for commercial uses. To maintain a closed window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Attachment A: Project Description

I. INTRODUCTION

Azimuth Development Group LLC (the "Applicant") requests approval of the following discretionary actions subject to the Uniform Land Use Review Procedure (ULURP) for property located on Block 3797, Lot 33 (the "Project Site") in the Bronx neighborhood of Unionport in Community District (CD) 9:

- A zoning map amendment to rezone the Project Site from its existing zoning designation of R5 to R7A, with a C2-4 commercial overlay mapped to the centerline of Block 3797 from Bruckner Boulevard (a depth of approximately 105 feet from Bruckner Boulevard) and to a depth of 100 feet from the property line along Olmstead Avenue; and

- A zoning text amendment to Appendix F (Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing Areas) of the Zoning Resolution (ZR) to designate the Project Site as a Mandatory Inclusionary Housing (MIH) Area pursuant to Option #1, which requires that 25% of residential area be affordable at 60% of Area Median Income (AMI), with 10% affordable at 40% AMI.

The Applicant also requests the following approvals that are subject to CEQR:

- Construction financing from the New York City (NYC) Department of Housing Preservation and Development (HPD)'s Mix & Match mixed-income program, which requires that at least 50% of residential dwelling units (DUs) be affordable at 60% of AMI and the remaining 50% of DUs be affordable at up to 130% of AMI; and

- Financing from the NYC Housing Development Corporation (HDC).

The zoning map amendment, zoning text amendment, and funding from HPD and HDC are collectively referred to as the "Proposed Actions". The Proposed Actions would allow the Applicant to develop an approximately 366,007 gross square feet (gsf) mixed-use development consisting of two adjoining buildings that would be constructed simultaneously, and which would be comprised of 350 affordable DUs, approximately 18,023 gsf of ground floor commercial/retail space, approximately 159 parking spaces, and approximately 173 bicycle parking spaces (the "Proposed Project").

The Project Site is currently occupied by a vacant, single-story building formerly used as a house of worship and a 5,000-sf tent structure used as a temporary house of worship. The Project Site is bounded by Chatterton Avenue to the north, Bruckner Boulevard to the south, Pugsley Avenue to the west, and Olmstead Avenue to the east **(Figure A-1: Site Location Map** and **Figure A-2: Tax Lot Map).** The Project Site would be the entire rezoning area and, consequently, would be the only projected development site.

The Proposed Actions are subject to review pursuant to the State Environmental Quality Review Act (SEQRA) and in conformance to City Environmental Quality Review (CEQR) guidelines and is classified as an Unlisted Action under SEQRA. The NYC Department of City Planning (DCP) will serve as the CEQR Lead Agency, and HPD would serve as an involved agency since the developer will seek construction financing pursuant to HPD's Mixed Income Program: Mix and Match Term Sheet for both buildings as a single project. This attachment establishes the analytical framework for technical analyses presented in this Environmental Assessment Statement (EAS).

II. DESCRIPTION OF THE SURROUNDING AREA

The Project Site is in Bronx CD 9, which encompasses the neighborhoods of Soundview, Parkchester, Unionport, and Castle Hill. Major thoroughfares near the Project Site include (1) the Bruckner Boulevard Expressway located south of the Project Site, (2) the Cross Bronx Expressway located north of the Project Site, (3) White Plains Road located west of the Project Site, and (4) Castle Hill Avenue located east of the Project Site. Public transit access includes the Number 6 subway train at the Parkchester station, which is approximately 0.5 miles north of the Project Site. Bus routes near the Project Site include the Q44 (Bronx Zoo – Jamaica) Select Bus Service route, and the Bx5 (Pelham Bay – West Farms Road/Southern Boulevard), the Bx22 (Bedford Park – Castle Hill), the Bx36 (Soundview – George Washington Bridge), and the Bx39 (Wakefield – Clasons Point) bus routes. Three express bus routes run immediately south of the Project Site: the BxM7 (Co-op City – Midtown), the BxM8 (Pelham Bay – Midtown), and the BxM9 (Throgs Neck – Midtown) express bus routes.

Existing land uses within a 400-foot radius of the Project Site (the "study area") consist primarily of residential land uses **(Figure A-3: Land Use Map)**, a majority of which are either one and two-family residences or multi-family walkup residences. Higher density multi-family elevator apartments are located west and south of the Project Site. Existing commercial uses in the study area consist primarily of local retail uses, such as convenience stores and dry cleaners, are located on the ground floor of mixed-use residential/commercial buildings to the north and east of the Project Site. Other land uses near the Project Site include surface parking and vacant lots located north of the Project Site along Blackrock Avenue, and south of the Project Site along Bruckner Boulevard. There are no public open spaces or industrial/manufacturing uses within the study area.

The study area is primarily zoned R5 with a transition to R6 zoning south of the Bruckner Expressway, and to R3-2 zoning southeast of the Project Site **(Figure A-4: Existing and Proposed Zoning Map)**. There are no commercial overlays in the study area; however, several C1-2, C2-1, and C2-2 commercial overlays as well as a C4-1 zoning district are mapped within a half-mile radius from the Project Site.

III. DESCRIPTION OF THE PROJECT SITE

The 61,101-sf Project Site is located on Lot 33 in Block 3797, and is a corner lot that fronts three streets, with a 289'-6" frontage on Chatterton Avenue (a narrow street[1]) to the north, 211'-1" along Bruckner Boulevard (a wide street[2]) to the south, and 289'-6" along Olmstead Avenue (wide street) to the east[3] (**Figure A-5: Aerial Map** and **Keyed Photographs 1-8)**. The Project Site includes three existing curb cuts: one along Bruckner Boulevard on the far west side of the lot, and two along Olmstead Avenue at the northern and southern ends of the lot, respectively. The Project Site is within a Transit Zone.

The Project Site is currently improved with a vacant, approximately 10,200 gsf one-story building that formerly served as a place of worship, a 5,000-sf tent structure used as a temporary house of worship, and approximately 95 unused surface parking spaces surrounding the vacant permanent building[4]. According to NYC Department of Buildings (DOB) records, prior to being the site of the house of worship, the Project Site was formerly improved with a supermarket. The existing one-story building received a commercial use designation at the time of its construction in 1961.

The Project Site is mapped with an R5 zoning designation. R5 zoning districts typically produce three- and four-story attached houses and small apartment buildings with a height limit of 40 feet. The purpose of

[1] A narrow street is a street that is less than 75 feet wide as defined by the NYC Zoning Resolution.
[2] A wide street is a street that is 75 feet or more in width as defined by the NYC Zoning Resolution.
[3] DCP Zoning Database 2017.
[4] Based on approved DOB permit in 2003 for the legal conversion from supermarket to house of worship.

these districts is to provide a transition between lower- and medium-density neighborhoods. The maximum residential floor area ratio (FAR) permitted in R5 zoning districts is 1.25, and the maximum lot coverage is up to 55%. In addition to the 40-foot height limit, R5 zoning districts set a maximum street wall height at 30 feet, which, if surpassed, triggers a 15-foot setback requirement. Any portion of the building that exceeds a height of 33 feet must be set back from a rear and/or side yard line. Regulations vary for detached and semi-detached houses within R5 zoning districts. Detached houses must have two side yards that total at least 13 feet, each with a minimum width of 5 feet. Semi-detached houses require one 8-foot wide side yard. Apartment houses require two side yards, each at least 8 feet wide. Front yards must be 10 feet deep or, if deeper, a minimum of 18 feet to prevent cars parked on-site from protruding onto the sidewalk. Cars may park in the side or rear yard, in the garage, or in the front yard within the side lot ribbon. Parking is also allowed within the front yard if the lot is wider than 35 feet. Off-street parking is required for 85% of the DUs in a building.

IV. DESCRIPTION OF THE PROPOSED PROJECT

The Applicant proposes to develop a mixed-use development on the Project Site that conforms to the Quality Housing Program requirements. The Proposed Project would consist of two adjoining buildings (referenced to as “Building A” and “Building B” below) that together would result in an approximately 366,007 gsf (281,064 zoning square feet (zsf)) structure. The Proposed Project would have a residential FAR of 4.31 and a commercial/retail FAR of 0.29 for a total FAR of 4.6. The Proposed Project would provide approximately 159 parking spaces and approximately 173 bicycle parking spaces. Proposed uses would include approximately 291,283 gsf (263,041 zsf) of residential uses comprised of 342 income-restricted DUs and approximately 18,023 gsf of retail space on the ground floor of Building B. The Reasonable Worst Case Development Scenario (RWCDS) considers 350 DUs, as noted in **Table A-1: Increment between No-Action and With-Action Conditions**. Approximately 144 DUs would be restricted to households with incomes below 80% of AMI, and approximately 206 DUs would be restricted to households with incomes between 81% and 130% of AMI, of which approximately 103 DUs may have a home ownership option.

The proposed 159 parking spaces would be self-service and for use by residents. Accessory parking for commercial uses would be waived, pursuant to ZR §36-21 and ZR §36-232. Residential parking would be provided despite the waiver of parking allowed for all income-restricted DUs in designated Transit Zones, pursuant to ZR §25-251. Access to parking would be from two entrances, one on Chatterton Avenue approximately in the middle of the lot and one on Bruckner Boulevard on the far west side of the lot.

Program distribution for the Proposed Project is outlined below:

- **Building A** would consist of seven stories of approximately 71 residential DUs (71,895 gsf residential). The 71 DUs would consist of seven studio units, 21 one-bedrooms, 26 two-bedrooms, and 17 three-bedrooms. Building A would occupy the northern portion of the lot facing Chatterton Avenue and have a maximum height of 70 feet.
- **Building B** would consist of nine stories of approximately 279 residential DUs (124,530 gsf residential), and 18,023 gsf of commercial uses. The 279 DUs would include 65 studios, 116 one-bedrooms, 84 two-bedrooms, and 14 three-bedrooms located on the second through the ninth floor. Commercial/retail uses would be located on the first floor (with a floor to ceiling height of 15 feet). A rooftop recreational area would be located over a rear extension of the ground floor. Building B would occupy the eastern and southern portions of the lot facing Olmstead Avenue and Bruckner

Boulevard. Building B would have a maximum height of 95 feet with qualifying ground floors[5] pursuant to ZR §23-664.

Both buildings would be constructed as a single development, and together would provide 72 studios, 137 one-bedrooms, 110 two-bedrooms, and 31 three-bedrooms. The average size of DUs that are restricted to incomes up to 80% of AMI would be compliant with HPD's minimum rooms sizes for affordable DUs set forth in HPD's Mixed Income: Mix and Match Program Term Sheet. Pursuant to ZR 23-96(d)(2), HPD may waive the minimum size requirements for any affordable housing units that are participating in a Federal, State, or local program where the development cannot comply with the regulations of the Federal, State, or local program and the MIH minimum apartment size requirements. The Proposed Project would comply with MIH requirements under Option #1, which requires that 25% of residential area be affordable at 60% of AMI, with 10% affordable at 40% AMI. For purposes of the RWCDS analyzed in the EAS (see Section IX, "No-Action Condition" and Section X, "With-Action Condition"), the Proposed Project would have 350 income-restricted DUs (approximately 144 of which would be restricted to households with incomes up to 80% of AMI and approximately 206 of which would be restricted to households with incomes between 81% and 130% of AMI).

V. ACTION(S) NECESSARY TO FACILITATE THE PROJECT

The Applicant requests approval of the following actions subject to CEQR:

- Zoning map amendment to rezone the Project Site from its existing zoning designation of R5 to an R7A zoning district with a C2-4 commercial overlay mapped to a depth of approximately 105 feet from Bruckner Boulevard to the centerline of Block 3797 and to a depth of 100 feet from the property line along Olmstead Avenue;
- Zoning text amendment to Appendix F (Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing Areas) of the ZR to designate the Project Site as an MIH Area pursuant to Option #1, which requires that 25% of residential area to be affordable at 60% of AMI, with 10% affordable at 40% AMI;
- Construction financing from NYC HPD's Mix & Match mixed-income program, which requires that at least 50% of newly-constructed DUs be income-restricted up to 60% of AMI and the remaining 50% of DUs be income-restricted up to 130% of AMI; and
- Funding from NYC HDC.

The zoning map amendment, text amendment, and funding from HPD and HDC are collectively referred to as the "Proposed Actions."

VI. ANALYSIS YEAR

The Proposed Project would to be operational and available for occupancy in 2022. The construction period would be less than two years. Both buildings would be constructed in a single phase.

[5] A Qualifying Ground Floor refers to ground floors of at least 13 feet in height, as defined in the Zoning for Quality and Affordability (ZQA) text amendment in the NYC Zoning Resolution. Qualifying ground floors are subject to additional regulations pursuant to ZR §26-50, including use and depth, maximum width for certain uses, and parking wrap and screening requirements.

VII. PURPOSE AND NEED OF THE PROPOSED ACTIONS

The Project Site is in the Unionport neighborhood of the Bronx and is surrounded predominately by residential uses ranging from one-to-two family walkup houses to medium-density apartment buildings. R5 zoning districts, for which the Project Site is zoned, typically produce three- and four-story attached houses and small apartment buildings and provide a transition between lower- and higher-density neighborhoods. Current development trends in the area include the redevelopment of vacant land into low/moderate-density, multi-family housing in both R5 and R6 zoning districts nearby. Moderate-density buildings can be developed in both R5 and R6 zoning districts.

The Project Site had been zoned as an R5 zoning district at the time of the enactment of the ZR in 1961 nearly 57 years ago, a designation it has maintained regardless of the current development patterns or needs of the area regarding housing and neighborhood development in 2017. Between 2000 and 2010, the total Bronx population grew by 3.94%[6]. According to the 2013 report by DCP, "New York City Population Projections by Age/Sex & Borough," the population of the Bronx is projected to increase 4.5% between 2010 and 2020, 5.0% between 2020 and 2030, and 4.0% between 2030 and 2040. This substantial increase in population in the Bronx would require additional housing to provide for adequate supply. In addition, according to the DCP Profile for Bronx CD 9, approximately 47.7% of households in CD 9 are rent-burdened, meaning that they spend 35% or more of their income on rent,. The development of additional income-restricted housing at a range of affordable income levels as proposed by the Applicant's Mix and Match Term Sheet would help address these needs.

A maximum of 84 DUs would be permitted under the existing R5 zoning designation for the Project Site.[7] No affordable housing would be required for an as-of-right development under existing zoning. The proposed R7A zoning designation would increase the number of DUs that can be developed on the Project Site to 350 DUs. Based on an average household population of 2.86 people per DU in the Bronx, the project that would result under the proposed zoning would accommodate 1,001 residents, compared to 240 residents under existing zoning. Therefore, compared to the existing zoning, the proposed zoning would better utilize the 61,101-sf Project Site to provide income-restricted housing for the growing Bronx population.

In addition, the C2-4 commercial overlay would allow for much-needed local retail space in the Unionport neighborhood and would be located on two wide commercial streets, Bruckner Boulevard and Olmstead Avenue. Commercial uses in the 400-foot study area include a real estate office, convenience store, dry cleaner, and salon, all of which are located on the ground floor of small mixed-use buildings. These neighborhood commercial spaces serve a moderately-dense residential neighborhood where walkup homes have small side yards and there are several mid-rise residential buildings reaching between nine and 14 stories. The Project Site would provide additional ground floor retail uses within the area and connect existing retail uses on Bruckner Boulevard and Olmstead Avenue. A C2-4 commercial overlay would be appropriate since it permits local retail uses and would facilitate mixed-use development with ground floor retail at an FAR of 2.0 within the R7A zoning district. C2-4 commercial overlays are often mapped within areas that are well-served by mass transit because less parking is required for commercial spaces.

Based on the observed and projected growth in the Bronx population, there is a strong need to provide both new affordable housing opportunities at a range of income levels, and additional retail opportunities to serve the growing residential community in this substantially built-out area. The Proposed Actions would address both needs of the Bronx community in which the Project Site is located than would be achievable under the existing R5 zoning district.

[6] U.S. Census Bureau, DP-1, 2000 and 2010, Bronx County.
[7] The DU count was estimated using residential zsf (76,376 zsf) and assumed a 900 factor for built-up areas, yielding approximately 84 DUs. This estimation accounts for all as-of-right zoning requirements.

VIII. KNOWN DEVELOPMENTS WITHIN THE PROJECT VICINTY

Based on coordination with the DCP Bronx Borough Office and DOB, four known, ongoing or proposed developments were identified within 0.5-miles of the Project Site with anticipated build completion dates in 2022 or earlier.

2053 Newbold Avenue & 2044 Westchester Avenue: The "Westchester Mews" project is a multi-phase development located north of the Project Site. The first phase, on Site 1, would involve development of two buildings at 10 and 11 stories, producing 203 inclusionary residential units, 5,549 sf of commercial retail, and 1,276 zsf of community facility uses. Site 2 would be a 92,635-gsf mixed-use development consisting of 62 residential DUs and 20,557 zsf of commercial retail. Site 3 would be a 40,978-gsf residential development consisting of 37 DUs. The project sought rezoning from R5/C2-2 and R6/C2-2 to R6 and R6/C2-4 zoning, which the City Council recently approved. The completion date for Site 1 would be 2019, Site 2 would be complete by 2021, and Site 3 would be complete by the 2022 analysis year.

1965 Lafayette Avenue: Located southwest of the Project Site, the project at 1965 Lafayette Avenue (part of Lot 1 of Block 3687) involved a rezoning from R6 to R8 and R8/C2-4 to construct two, 14-story attached buildings that would produce 425 inclusionary residential units for families and seniors as well as 19,938 sf of commercial retail space. The estimated year of completion is 2020.

2160 Powell Avenue: According to DOB records, the development at 2160 Powell Avenue would consist of a two-story mixed-use building with 2,283 sf of residential space and 2,703 sf of commercial space, for a total of 4,986 sf and an FAR of 1.55. The development is located north and east of the Project Site along the Cross Bronx Expressway.

909 Castle Hill Avenue: Located southeast of the Project Site, a four-story, mixed-use development is planned for 909 Castle Hill Avenue resulting from a rezoning from R3-2 to R5D/C1-3. The 31,075-sf development would consist of 31 DUs, 6,203 sf of commercial use, and 21 parking spaces.

IX. NO-ACTION CONDITION

Absent the Proposed Actions (the "No-Action condition"), an as-of-right development conforming to the current R5 zoning designation would occur on the Project Site. As-of-right development permitted on the Project Site would consist of three- to four-story attached houses or small apartment houses and community facility uses, with a maximum permitted residential FAR of 1.25 a maximum permitted community facility FAR of 2.0, and a maximum building height of 40 feet. Under the No-Action condition, it is assumed that the Project Site would be improved with development of attached, multi-family walkup apartments totaling 90,097 gsf of residential use, resulting in approximately 84 market rate DUs and 56 accessory parking spaces (pursuant to ZR §23-22 and ZR §25-23), with an average DU size of approximately 1,073 gsf, which is consistent with other as-of-right market-rate developments in the area. As-of-right development on the Project Site is reasonable given the critical need for new housing in the City and the general need for more housing options within the Bronx, including market-rate housing.

Recent development trends indicate that development under the existing R5 zoning district, as well as the similar R6 district, in the Unionport neighborhood is both attractive and feasible. At 2023-2029 Chatterton Avenue, on Lots 72-75 of Block 3798, just one block north of the Project Site, for example, recent R5 infill development occurred in 2012 that is like the proposed No-Action development with four, three-story walkup residential developments with three, approximately 1,159-sf DUs in each building. There are also several developments under the existing zoning that are currently in progress, including at 607-637 Bolton Avenue, which is located over 0.5-mile from the Project Site and in an R5 zoning district, where permits have been filed for an as-of-right development within 16 two- and three-story buildings providing 40 DUs. An as-of-right development project at 2160 Powell Avenue is also anticipated and would result in a mixed-use, two-

story building with residential and commercial space located in its existing R5 zoning district and less than 0.5-mile from the Project Site (see Section VIII, "Known Developments Within the Project Vicinity"). Nearby R6 zoning districts have experienced similar as-of-right development trends. These include a new four-story apartment building with 10 DUs at 716 Beach Avenue, which is located less than one mile from the Project Site. On existing vacant lots located approximately 0.5-mile from the Project Site, two developments are planned at 1358 Odell Street and 1360 Purdy Street, where a five-story mixed-use building with 73 apartments and medical space would be developed, and where two four-story residential buildings providing eight DUs would be developed, respectively.

These recent mid-rise developments have been developed as-of-right in R5 and R6 zoning districts at densities lower than the Proposed Project, and several of which are occurring on vacant lots like the Project Site. Based on these development trends, it is reasonable to expect that, absent the Proposed Actions, the Project Site would be developed by the 2022 analysis year under its existing R5 zoning.

The study area and the surrounding area within a 0.5-mile radius is anticipated to develop as described in Section VIII, "Known Developments within the Project Vicinity," bringing additional mixed-use residential and commercial developments with Inclusionary Housing designations by the 2022 analysis year.

X. WITH-ACTION CONDITION

In the future with the Proposed Actions (the "With-Action condition"), the Project Site would be rezoned from its existing zoning designation of R5 to an R7A zoning district with C2-4 commercial overlay, mapped to a depth of approximately 105 feet from Bruckner Boulevard to the centerline of Block 3797 and to a depth of 100 feet from the property line along Olmstead Avenue. In addition, the Project Site would be designated as an MIH area **(Figure A-4: Existing and Proposed Zoning Map)**. Based on the proposed R7A/C2-4 zoning, several uses can be developed on the Project Site. The proposed R7A zoning district permits residential uses (Use Groups 1 and 2) as well as community facility uses (Use Groups 3 and 4), and the proposed C2-4 overlay permits local retail and commercial uses (Use Groups 5-9 and 14). The maximum permitted FAR within an MIH-designated area is 4.6 for residential uses and 2.0 for commercial uses. The maximum permitted base height is 75 feet at the street line with a maximum building height of 90 feet or 95 feet with a qualifying ground floor after a 15-foot setback (required on a narrow street) or a 10-foot setback (required on a wide street). Residential buildings in R7A districts require off-street parking for 50% of DUs (0 spaces are required for income-restricted DUs within a Transit Zone). The RWCDS establishes the appropriate framework for analysis to allow the lead agency to make reasonable conclusions regarding a proposal's likely environmental effects. The RWCDS focuses on the increment between potential development that would be permitted on the Project Site with and without the proposed action(s).

The With-Action condition for the RWCDS assumes that a scenario like the Proposed Project, as described in Section IV of this attachment, would be built on the Project Site. The With-Action condition would permit approximately 281,064 zsf of mixed residential and commercial uses, calculated based on a lot size of 61,101 sf and a maximum FAR of 4.6. Both buildings would be constructed as a single development and would provide approximately 291,283 gsf of residential space, comprised of 350 income-restricted DUs and 18,023 gsf of local retail space on the ground floor, which would be similar to existing local retail as described in Section II, "Description of the Surrounding Area". Accessory parking for commercial uses would be waived, pursuant to ZR §36-21 and ZR §36-232. The Proposed Project would include approximately 159 parking spaces and approximately 173 bicycle parking spaces, **(Table A-1, Figure A-6: With-Action Schematic Plot Plan,** and **Figure A-7: With-Action 3D Model).**

Table A-1: Increment between No-Action and With-Action Conditions

	No-Action (gsf)	**With-Action** (gsf)	**Increment** (gsf)
Residential	90,097 *(84 DUs)*	291,283 *(350 DUs)*	201,186 *(266 DUs)*
Income-restricted DUs up to 80% of AMI	0	144	144
Market rate / Income-restricted DUs at 81% to 130% of AMI	84	206	122
Commercial (Retail)	0	18,023	18,023
Parking	0	56,701	56,701
	56 spaces	159 spaces	103 spaces
Total	**90,097**	**366,007**	**275,910**



Source: 2017 PLUTO, DCP

Project Site / Rezoning Area (Projected Development Site)

400-foot Study Area

LOCATION MAP

Figure A-1

2069 Bruckner Boulevard EAS



Source: 2017 PLUTO, DCP

Project Site / Rezoning Area (Projected Development Site)

400-foot Study Area

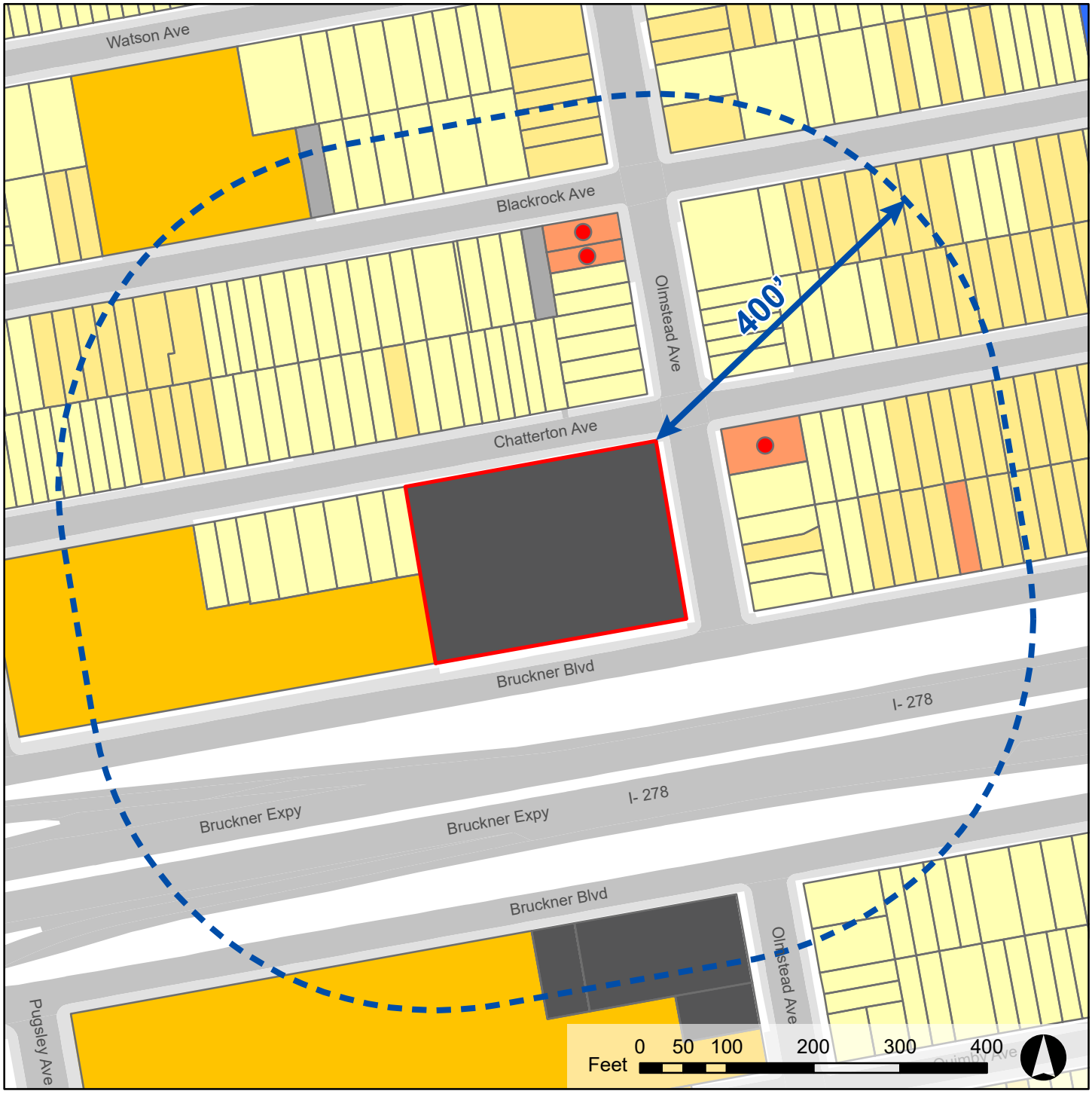
3797 Block Number

33 Lot Number

TAX LOT MAP

Figure A-2

2069 Bruckner Boulevard EAS



Source: 2017 PLUTO, DCP

Project Site

400-foot Study Area

One & Two Family Residence

Multi-Family Residence (Walkup)

Multi-Family Residence (Elevator)

Mixed Residential & Commercial

Ground Floor Commercial

Public Facilities & Institutions

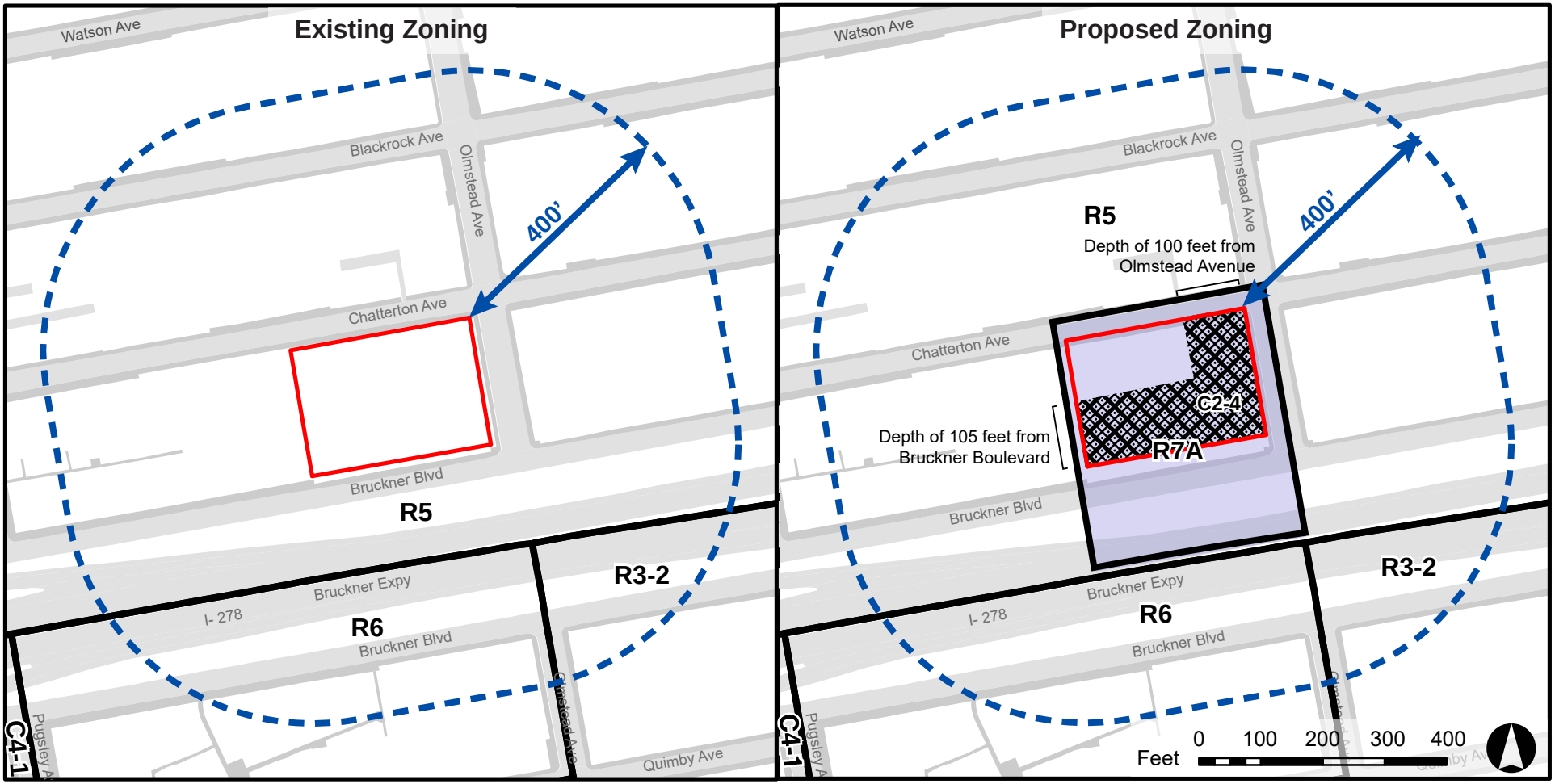
Parking

All Others or No Data (Vacant Structure)

LAND USE MAP

Figure A-3

2069 Bruckner Boulevard Rezoning EAS



Source: 2017 PLUTO, DCP

Project Site / Rezoning Area (Projected Development Site)

400-foot Study Area

R Residential District

C Commercial District

Commercial Overlay

EXISTING AND PROPOSED ZONING MAP

Figure A-4



Source: Google Earth Pro 2017

Project Site / Rezoning Area (Projected Development Site)

400-Foot Study Area

Photograph Location

AERIAL AND KEYED PHOTOS MAP

Figure A-5

2069 Bruckner Boulevard Rezoning EAS

Photograph 1: *Southeast corner of the Project Site, looking northwest from Bruckner Boulevard*



Photograph 2: *Southwest corner of the Project Site, looking northeast from across Bruckner Boulevard*



Note: All photographs taken on September 14, 2018

Figure A-5: Keyed Photographs

Photograph 3: *Northeast corner of the Project Site, looking southwest from the corner of Olmstead Avenue/Chatterton Avenue*



Photograph 4: *Northwest corner of the Project Site, looking east along Chatterton Avenue*



Figure A-5: Keyed Photographs

Photograph 5: *View of property south of Bruckner Boulevard and Expressway, looking south-west.*



Photograph 6: *View of adjacent properties from the Project Site, looking northeast.*



Figure A-5: Keyed Photographs

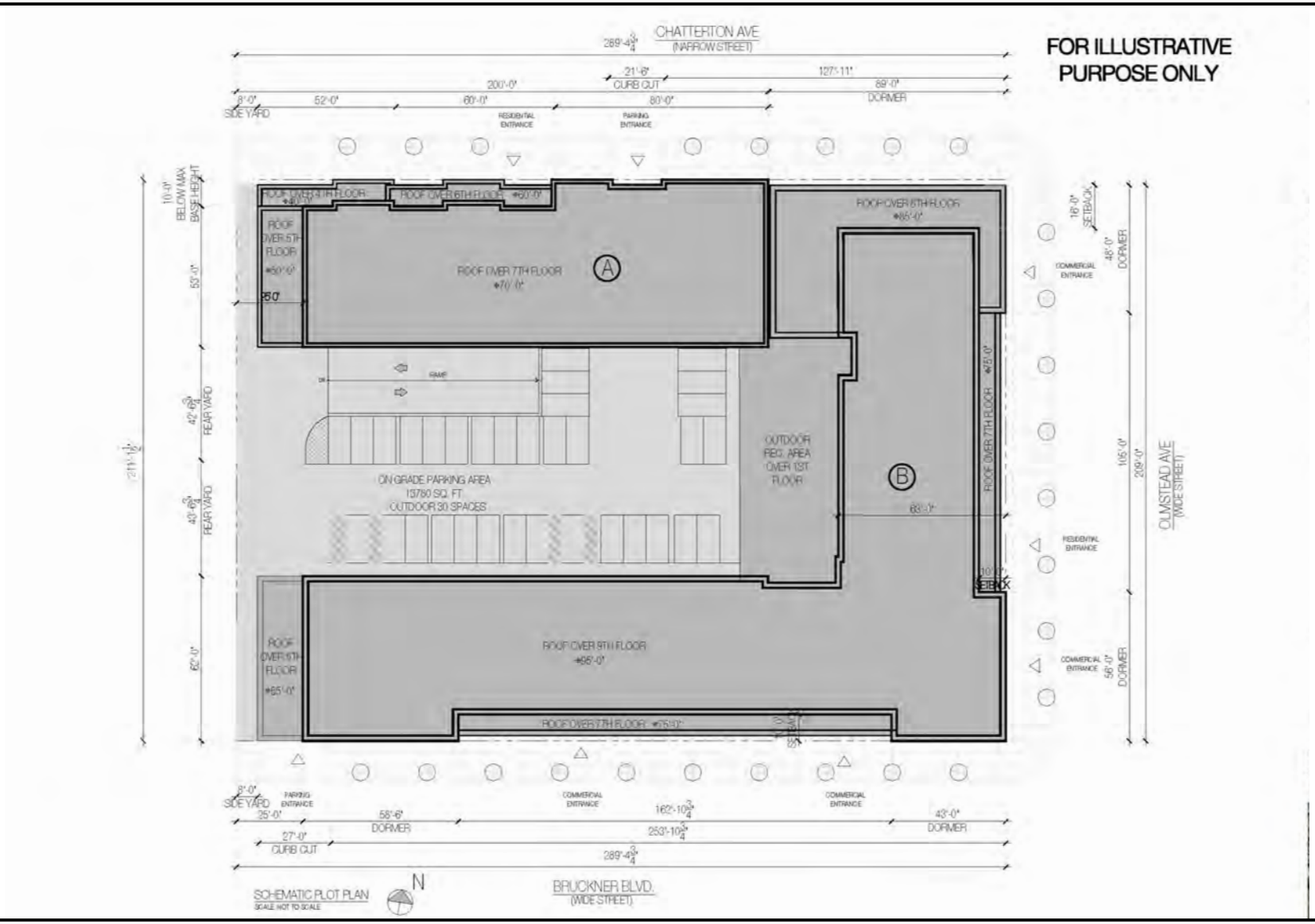
Photograph 7: *View of nearby properties from the Project Site, looking north.*



Photograph 8: *View of nearby properties, looking west along Chatterton Avenue from its intersection with Olmstead Avenue.*



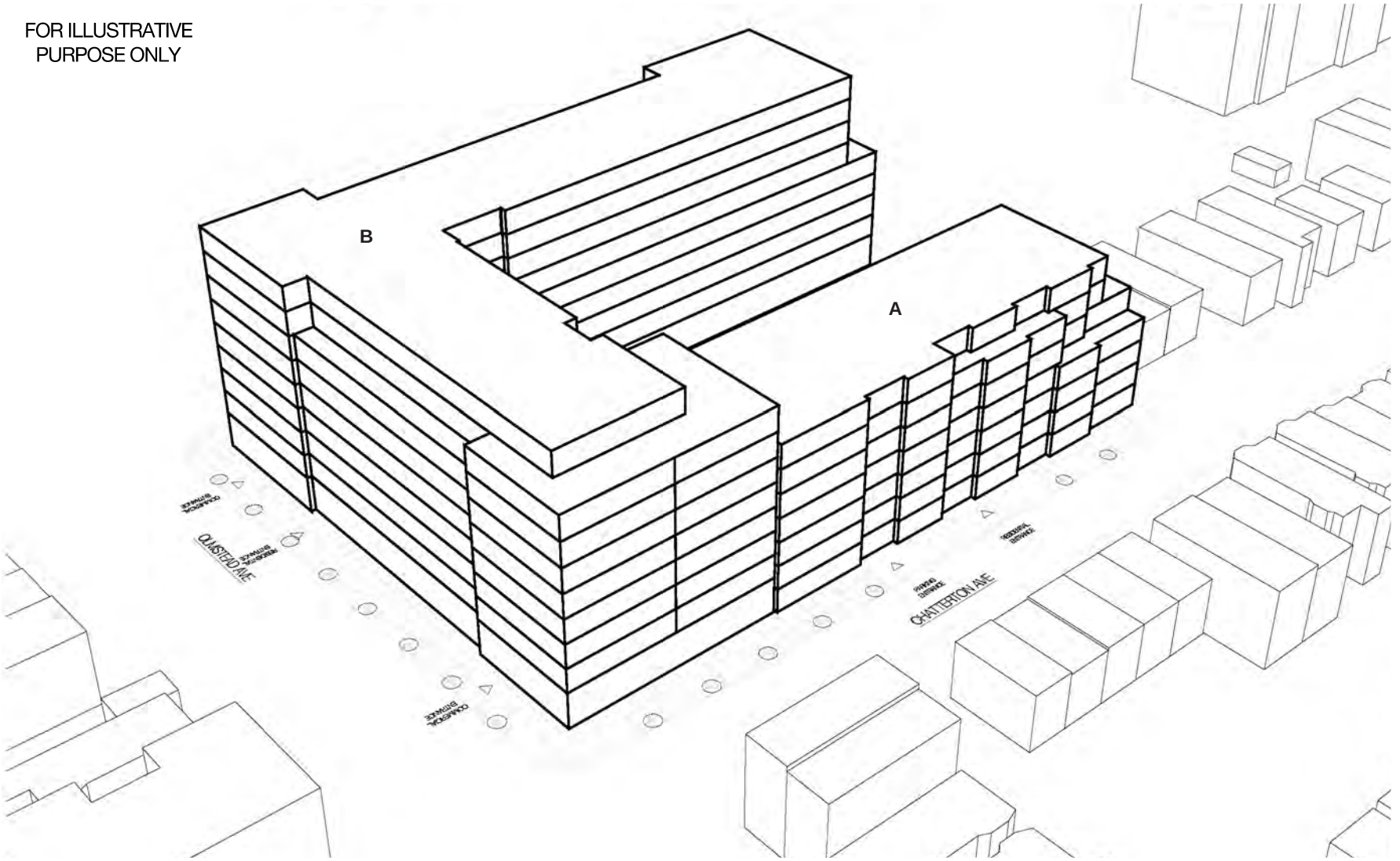
Figure A-5: Keyed Photographs



Source: Aufgang Architects

WITH-ACTION SCHEMATIC PLOT PLAN

Figure A-6



Source: Aufgang Architects

WITH-ACTION 3D MODEL

Figure A-7

Attachment B: Land Use, Zoning, and Public Policy

I. INTRODUCTION

This attachment assesses the potential for significant adverse impacts of the Proposed Project on land use, zoning, and public policy in the surrounding area. As described in Section 210 of Chapter 4 of the *City Environmental Quality Review (CEQR) Technical Manual*, the land use, zoning, and public policy assessment evaluates the uses and development trends in the area and considers whether a proposed project is compatible with those conditions or may affect them. Similarly, the assessment considers the project's compliance with, and effect on, the area's zoning and other applicable public policies.

As described in Attachment A, "Project Description," the Proposed Actions would facilitate development of an approximately 366,007 gross square feet (gsf) mixed-use development consisting of two adjoining buildings and comprised of 350 affordable dwelling units (DUs) within 291,283 gsf of residential space, approximately 18,023 gsf of ground floor commercial retail space, approximately 159 parking spaces for resident use, and approximately 173 bicycle parking spaces (the "Proposed Project"). Approximately 144 DUs would be restricted to households with incomes up to 80% of Area Median Income (AMI), and approximately 206 DUs would be restricted to households with incomes between 81% and 130% of AMI, of which approximately 71 DUs may have a home ownership option. The height of the buildings would range from 70 feet for Building A to 95 feet for Building B.

CEQR guidelines require that an assessment, which includes a basic description of existing and future land uses and zoning, should be provided for all projects that would affect land use or would change the zoning on a site, regardless of the project's anticipated effects. This assessment describes existing, No-Action and With-Action conditions related to land use, zoning and public policy issues in the 2022 analysis year for the Project Site and within a 400-foot land use study area. Changes that would occur between the No-Action and With-Action conditions are disclosed.

II. PRINCIPAL CONCLUSIONS

The Proposed Project would not result in a significant adverse impact on land use, zoning, or public policy. The Proposed Project would be a mixed-use residential and commercial redevelopment of the site of a vacant one-story building and a 5,000-sf tent structure used as a house of worship in a predominantly built-out residential neighborhood. The Proposed Project would be similar in uses, size, and density to other developments in the study area.

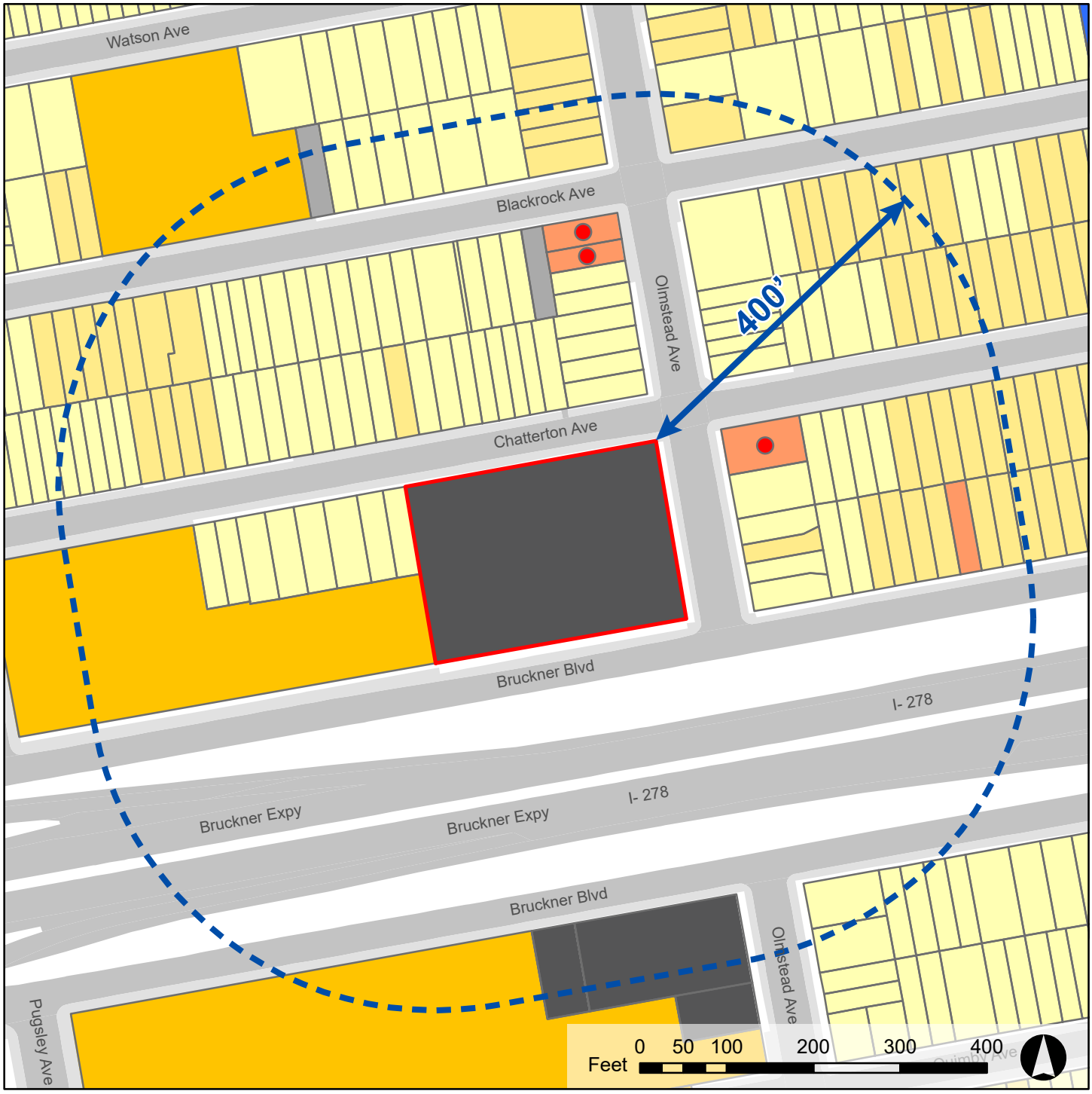
The Project Site would be rezoned from R5 to R7A, with C2-4 commercial overlay mapped to the centerline of Block 3797 from Bruckner Boulevard (a depth of approximately 105 feet from Bruckner Boulevard) and to a depth of 100 feet from the property line along Olmstead Avenue. A zoning text amendment to Appendix F (Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing Areas) of the Zoning Resolution (ZR) is requested to designate the Project Site as a Mandatory Inclusionary Housing (MIH) Area pursuant to Option #1, which requires that 25% of residential area be affordable at 60% of Area Median Income (AMI), with 10% affordable at 40% AMI. The new zoning designation would increase the permitted floor area ratio (FAR) from 1.25 to 4.6, permit mixed-use residential and commercial development, and require the provision of affordable housing on the Project Site. The MIH program offers a construction financing incentive to developers that comply with MIH affordability requirements as part of a rezoning for new construction. The goal of the program is to increase the number of permanently affordable housing units in newly-constructed medium- and high-density developments.

The Proposed Project would be consistent with relevant public policies, including *Housing New York: A Five-Year, Ten-Year Plan* and *Housing New York 2.0 (HNY 2.0)*, since it would utilize the MIH designation to provide income-restricted housing and provide more homeownership options for first-time homebuyers. In addition, the Proposed Project would be consistent with *PlaNYC: A Greener, Greater New York (PlaNYC)* and its continuation, *OneNYC: The Plan for a Strong and Just City (OneNYC)* since the Proposed Project would provide additional housing and encourage thriving neighborhoods through mixed-use development.

III. METHODOLOGY

Existing land uses were identified through the NYC Zoning and Land Use (ZoLa) database and PLUTO™ 17v1 shapefiles and verified by site visits in June 2017. NYC Zoning Maps and the ZR of the City of New York were consulted to describe existing zoning districts in the land use study area and provided the basis for the zoning evaluation of the future No-Action and With-Action conditions. Research was conducted to identify relevant public policies recognized by the NYC Department of City Planning (DCP) and other City agencies. In conformance to *CEQR Technical Manual* guidance, land use, zoning, and public policy are addressed and analyzed for a land use study area that extends approximately 400 feet from the boundary of the Project Site and encompasses areas most likely to experience indirect impacts due to the Proposed Project.

The appropriate study area for land use and zoning is related to the type and size of the project proposed as well as the location and neighborhood context of the area that could be affected by the project. Since the Proposed Actions are site-specific, a 400-foot study area was defined based on *CEQR Technical Manual* guidelines and will be used for the land use and zoning assessments.



Source: 2017 PLUTO, DCP

Project Site

400-foot Study Area

One & Two Family Residence

Multi-Family Residence (Walkup)

Multi-Family Residence (Elevator)

Mixed Residential & Commercial

Ground Floor Commercial

Public Facilities & Institutions

Parking

All Others or No Data (Vacant Structure)

LAND USE MAP

Figure B-1

2069 Bruckner Boulevard Rezoning EAS

IV. EXISTING CONDITIONS

Land Use

Project Site

The Project Site is currently improved with a vacant, single-story building formerly used as a house of worship and a 5,000-sf tent structure used as a temporary house of worship. It is bounded by Chatterton Avenue to the north, Bruckner Boulevard to the south, Pugsley Avenue to the west, and Olmstead Avenue to the east. The Project Site would be the same as the entire rezoning area and, consequently, would be the only projected development site.

The 61,101-sf Project Site is located on Lot 33 in Block 3797, and is a corner lot that fronts three streets, with a 289'-6" frontage on Chatterton Avenue (a narrow street[1]) to the north, 211'-1" along Bruckner Boulevard (a wide street[2]) to the south, and 289'-6" along Olmstead Avenue (wide street) to the east[3]. The Project Site includes three existing curb cuts: one along Bruckner Boulevard on the far west side of the lot, and two along Olmstead Avenue at the northern and southern ends of the lot, respectively. The Project Site is within a Transit Zone.

Study Area

Existing land uses within a 400-foot radius of the Project Site (the "study area") consist primarily of residential land uses, a majority of which are either one and two-family residences or multi-family walkup residences **(Figure B-1: Land Use Map)**. Higher density multi-family elevator apartments are located west and south of the Project Site. Existing commercial uses in the study area consist primarily of local retail uses, such as convenience stores and dry cleaners, are located on the ground floor of mixed-use residential/commercial buildings to the north and east of the Project Site. Other land uses near the Project Site include surface parking and vacant lots located north of the Project Site along Blackrock Avenue, and south of the Project Site along Bruckner Boulevard. There are no public open spaces or industrial/manufacturing uses within the study area.

Zoning

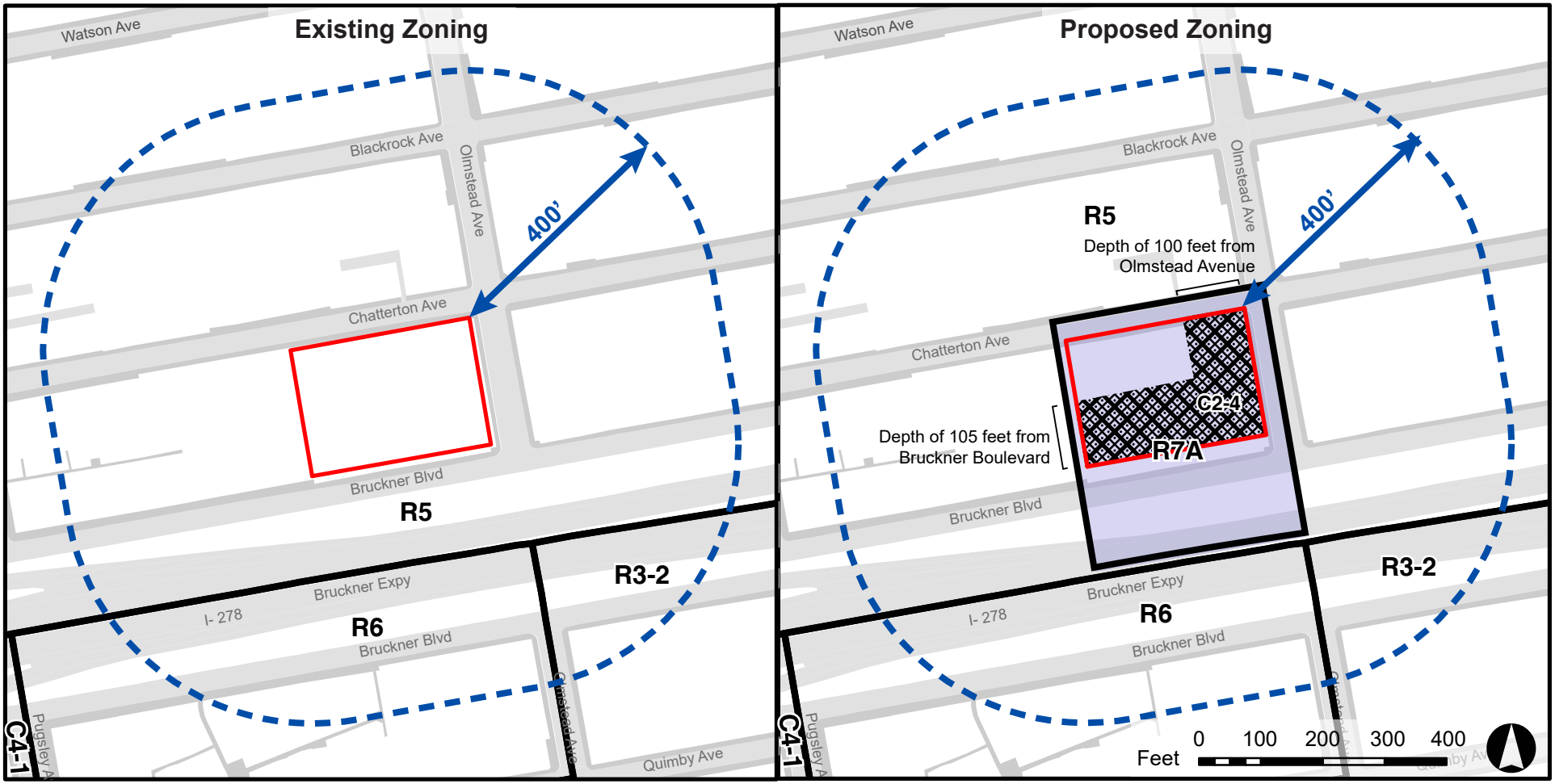
Project Site

The Project Site is mapped with an R5 zoning designation **(Figure B-2: Existing Zoning Map)**. R5 zoning districts typically produce three- and four-story attached houses and small apartment buildings with a height limit of 40 feet. The purpose of these districts is to provide a transition between lower- and medium-density neighborhoods. The maximum residential floor area ratio (FAR) permitted in R5 zoning districts is 1.25, and the maximum lot coverage is 55%. In addition to the 40-foot height limit, R5 zoning districts set a maximum street wall height at 30 feet, which, if surpassed, triggers a 15-foot setback requirement. Any portion of the building that exceeds a height of 33 feet must be set back from a rear and/or side yard line. Regulations vary for detached and semi-detached houses within R5 zoning districts. Detached houses must have two side yards that total at least 13 feet, each with a minimum width of 5 feet. Semi-detached houses require one 8-foot wide side yard. Apartment houses require two side yards, each at least 8 feet wide. Front yards must be 10 feet deep or, if deeper, a minimum of 18 feet to prevent cars parked on-site from protruding onto the sidewalk. Cars may park in the side or rear yard, in the garage, or in the front yard within the side lot ribbon. Parking is also allowed within the front yard if the lot is wider than 35 feet. Off-street parking is required for 85% of the DUs in a building.

[1] A narrow street is a street that is less than 75 feet wide as defined by the NYC Zoning Resolution.
[2] A wide street is a street that is 75 feet or more in width as defined by the NYC Zoning Resolution.
[3] DCP Zoning Database 2017.

Study Area

The study area is primarily zoned R5 with a transition to R6 zoning south of the Bruckner Expressway, and to R3-2 zoning southeast of the Project Site. There are no commercial overlays in the study area; however, several C1-2, C2-1, and C2-2 commercial overlays as well as a C4-1 zoning district are mapped within a half-mile radius from the Project Site.



Source: 2017 PLUTO, DCP

Project Site / Rezoning Area (Projected Development Site)

400-foot Study Area

R Residential District

C Commercial District

Commercial Overlay

EXISTING AND PROPOSED ZONING MAP

Figure B-2

Public Policy

Public policies that apply to the Project Site and study area include the Food Retail Expansion to Support Health (FRESH) Program, *One New York: The Plan for a Strong and Just City (OneNYC)/PlaNYC: A Greener, Greater New York*, and *Housing New York: A Five-Borough, Ten-Year Plan*. The land use study area falls outside of NYC's coastal zone boundary and consequently would not be subject to the City's Waterfront Revitalization Program. Neither the Project Site nor land use study area are governed by a 197-a plan.

Food Retail Expansion to Support Health (FRESH) Program

The FRESH program promotes the establishment and retention of neighborhood grocery stores in underserved communities by providing zoning and financial incentives to eligible grocery store operators and developers. The land use study area is located within a FRESH program area that provides discretionary financial incentives to promote the establishment and retention of neighborhood grocery stores, including real estate tax reductions, sales tax exemption, and mortgage recording tax deferral.

Stores that benefit from the FRESH program must also meet the following criteria:

- Provide a minimum of 6,000 sf of retail space for a general line of food and non-food grocery products intended for home preparation, consumption and utilization;
- Provide at least 50% of a general line of food products intended for home preparation, consumption and utilization;
- Provide at least 30% of retail space for perishable goods that include dairy, fresh produce, fresh meats, poultry, fish and frozen foods; and
- Provide at least 500 sf of retail space for fresh produce.

The Proposed Project includes 18,023 gsf of commercial retail space, which has not been designated for any retail use such as a supermarket. Consequently, the FRESH Program would not apply to the Proposed Project.

PlaNYC/OneNYC

The City's long-term sustainability plan, *PlaNYC*, continued and enhanced in *OneNYC*, advances the City's sustainability initiatives and goals related to land use, open space, brownfields, energy use and infrastructure, transportation systems, water quality and infrastructure, and air quality, while reducing greenhouse gas emissions and increasing the City's resilience to climate change.

In 2007, the Bloomberg administration released *PlaNYC,* a comprehensive plan for a sustainable and resilient NYC. The 2007 plan, and 2011 update, include policies to address three key challenges the City faces over the next 20 years: population growth, aging infrastructure, and global climate change. Elements of the plan are organized into six categories—land, water, transportation, energy, air quality, and climate change—with corresponding goals and objectives for each. In 2015, *OneNYC* was released by the De Blasio administration, building upon the sustainability goals established by *PlaNYC*. *OneNYC* includes updates on the progress toward the 2011 sustainability initiatives and 2013 resiliency initiatives, with additional goals and new initiatives under the organization of four visions: growth, equity, resiliency, and sustainability. *PlaNYC/OneNYC* would apply to the Proposed Project since the redevelopment would relate to the challenge of housing a growing population forecast in *PlaNYC,* and it would relate to housing equity issues outlined in *OneNYC.*

Housing New York: A Five-Borough, Ten-Year Plan/Housing New York 2.0

In 2014, the De Blasio administration released *Housing New York: A Five-Borough, Ten-Year Plan*, which was a comprehensive plan to build or preserve 200,000 affordable housing units over the next decade,

comprised of 120,000 preserved and 80,000 newly built. In November 2017, the De Blasio administration committed to completing the initial goal of 200,000 affordable homes two years ahead of schedule, by 2022, and generating an additional 100,000 homes over the following four years. To accomplish this accelerated and expanded plan, the administration launched *Housing New York 2.0*, a roadmap for how the City will help reach a new goal of 300,000 homes by 2026. So far, the original *Housing New York* plan has financed over 87,557 affordable homes since its inception in 2014. The plans emphasize affordability for a wide range of incomes, with the program serving households ranging from middle- to extremely low-income (under $25,150 for a family of four). The original plan, which was created through coordination with 13 agencies and with input from more than 200 individual stakeholders, outlined more than 50 initiatives to accelerate affordable construction, protect tenants, and deliver more value from affordable housing. *Housing New York 2.0* also introduced a suite of new initiatives to help thousands more families and seniors afford their rent, buy a first home, and stay in their neighborhoods. *Housing New York 2.0* would apply to the Proposed Project since the redevelopment would result in new, permanently affordable housing for households with a range of incomes.

V. FUTURE WITHOUT PROPOSED ACTIONS (NO-ACTION CONDITION)

Land Use and Zoning

Project Site

Absent the Proposed Actions (the "No-Action condition"), an as-of-right development conforming to the current R5 zoning designation would occur on the Project Site. As-of-right development permitted on the Project Site would consist of three- to four-story attached houses or small apartment houses and community facility uses, with a maximum permitted residential FAR of 1.25 a maximum permitted community facility FAR of 2.0, and a maximum building height of 40 feet. Under the No-Action condition, it is assumed that the Project Site would be improved with development of attached, multi-family walkup apartments totaling 90,097 gsf of residential use, resulting in approximately 84 market rate DUs and 56 accessory parking spaces (pursuant to ZR §23-22 and ZR §25-23), with an average DU size of approximately 1,073 gsf, which is consistent with other as-of-right market-rate developments in the area. As-of-right development on the Project Site is reasonable given the City's current housing crisis and the general need for more housing options within the Bronx, including market-rate housing.

Study Area

Based on coordination with the DCP Bronx Borough Office and the NYC Department of Buildings (DOB), four known, ongoing or proposed developments were identified within 0.5-mile of the Project Site with anticipated build completion date in 2022 or earlier (**Table B-1** and **Figure B-3: Known Development Sites Within 0.5-Mile of Project Site**).

2053 Newbold Avenue & 2044 Westchester Avenue: The "Westchester Mews" project is a multi-phase development located north of the Project Site. The first phase, on Site 1, would involve development of two buildings at 10 and 11 stories, producing 203 inclusionary residential units, 5,549 sf of commercial retail, and 1,276 zsf of community facility uses. Site 2 would be a 92,635-gsf mixed-use development consisting of 62 residential DUs and 20,557 zsf of commercial retail. Site 3 would be a 40,978-gsf residential development consisting of 37 DUs. The project sought rezoning from R5/C2-2 and R6/C2-2 to R6 and R6/C2-4 zoning, which the City Council recently approved. The completion date for Site 1 would be 2019, Site 2 would be complete by 2021, and Site 3 would be complete by the 2022 analysis year.

1965 Lafayette Avenue: Located southwest of the Project Site, the project at 1965 Lafayette Avenue (part of Lot 1 of Block 3687) involved a rezoning from R6 to R8 and R8/C2-4 to construct two, 14-story attached

buildings that would produce 425 inclusionary residential units for families and seniors as well as 19,938 sf of commercial retail space. The estimated year of completion is 2020.

2160 Powell Avenue: According to DOB records, this development would consist of a two-story mixed-use building with 2,283 sf of residential space and 2,703 sf of commercial space, for a total of 4,986 sf and an FAR of 1.55. The development is located north and east of the Project Site along the Cross Bronx Expressway.

909 Castle Hill Avenue: Located southeast of the Project Site, a four-story, mixed-use development is planned for 909 Castle Hill Avenue resulting from a rezoning from R3-2 to R5D/C1-3. The 31,075-sf development would consist of 31 DUs, 6,203 sf of commercial use, and 21 parking spaces.

Table B-1: Known Developments Within 0.5-Mile of Project Site[4]

Map No.	Project	Block Lot	Description	Status
1	2053 Newbold Avenue & 2044 Westchester Avenue: *"Westchester Mews"*	Block 3805, Lots 123 & 124 (Site 1); Block 3805, Lots 30, 34, 41 (Site 2); Block 3805, Lot 55, 56 (Site 3)	Rezoning from R5/C2-2 and R6/C2-2 to R6 and R6/C2-4 for a multi-phase project. Site 1 (of 5) would be a 219,736 gsf mixed-use development with two buildings at 10 and 11 stories, consisting of 203 residential DUs, 5,549 zsf of commercial retail, 1,276 zsf of community facility uses, and an Inclusionary Housing designation. Site 2 would be a 92,635 gsf mixed-use development with 62 residential DUs (30% affordable at 80% AMI) and 20,557 zsf of commercial retail. Site 3 would be a 40,978 gsf residential development with 37 DUs (30% affordable at 80% AMI).	Estimated completion of Site 1 in 2019; Site 2 in 2021; Site 3 in 2022; Sites 4 & 5 in 2024[5]. *City Council-approved the project.*
2	1965 Lafayette Avenue	Block 3672, p/o Lot 1	Rezoning from R6 to R8 and R8/C2-4 for two attached 14-story buildings with approximately 425 family & senior residential units, 19,938 sf of commercial retail, and an Inclusionary Housing designation. The size of the buildings would be approximately 384,271 gsf.	Estimated completion in 2020[6]
3	2160 Powell Avenue	Block 3810, Lot 77	Mixed-use, 2-story building with 2,283 sf of residential space and 2,703 sf of commercial space, for a total of 4,986 sf and an FAR of 1.55.	Latest DOB permits issued in January 2017
4	909 Castle Hill Avenue	Block 3687, Lot 43	Rezoning from existing R3-2 to R5D/C1-3 to allow for an approximately 31,075 sf mixed-use development consisting of 31 DUs and 6,203 sf of commercial space. Would rise to four stories and provide 21 parking spaces.	Estimated completion by 2022

Public Policy

Project Site

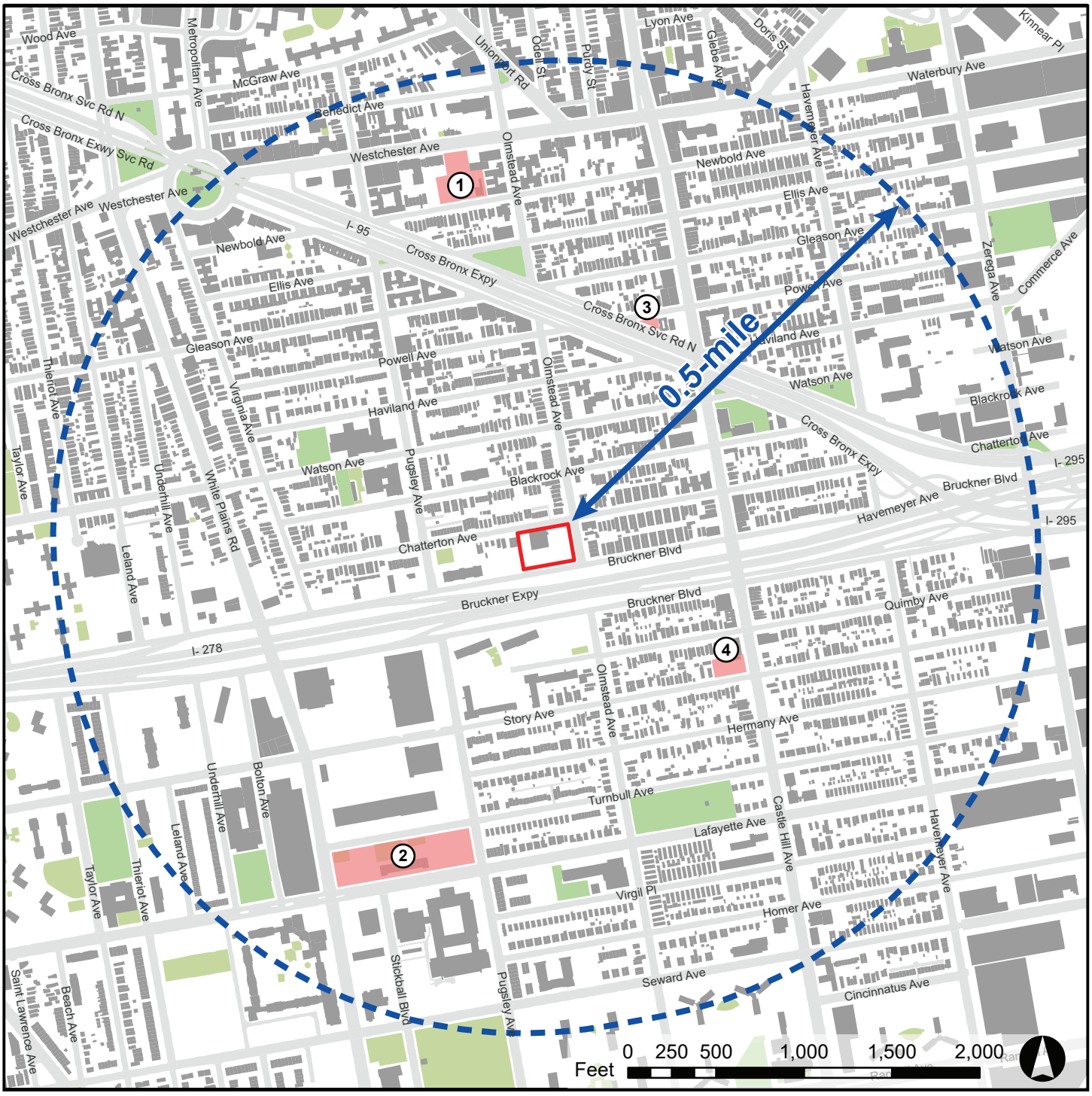
In the No-Action condition, the Project Site would not be subject to any public policies. Since no grocery store would occur on the Project Site in the No-Action condition, the FRESH Program would not be applicable. Additional housing would be provided on the Project Site, which is consistent with goals in the PlaNYC/OneNYC plans. However, since there would not be any affordable housing or mixed-use

[4] Information based on conversation with DCP Bronx Borough Office Planner Manny Lagares on June 12, 2017.
[5] Estimated completion dates and rezoning information are based on the publicly available EAS Short Form dated March 3, 2017. https://www1.nyc.gov/assets/planning/download/pdf/applicants/env-review/eas/17dcp080x_eas.pdf
[6] Estimated completion dates and rezoning information are based on the publicly available EAS Short Form dated June 2, 2017. https://www1.nyc.gov/assets/planning/download/pdf/applicants/env-review/eas/17dcp172x-eas.pdf

development on the Project Site in the No-Action condition, additional goals of the *PlaNYC/OneNYC* and *Housing New York/HNY 2.0* policies would not be directly applicable to the Project Site.

Study Area

The Westchester Mews and 1965 Lafayette Avenue development projects would be consistent with the Mayor's *Housing New York/HNY 2.0* plan and goals of the *PlaNYC/OneNYC* plans, which encourage the development of mixed uses and affordable housing in NYC through designation as an MIH area and the associated provision of income-restricted housing. Since no grocery stores would be built in the study area, the FRESH Program would not be applicable to the study area.



Source: 2017 PLUTO, DCP; NYCDOB

Project Site / Rezoning Area (Projected Development Site)

0.5-Mile Radius

No-Action Sites

① No-Action Sites Keyed to Table B-1

KNOWN DEVELOPMENT SITES WITHIN 0.5-MILE OF PROJECT SITE

Figure B-3

2069 Bruckner Boulevard Rezoning EAS

VI. FUTURE WITH PROPOSED ACTIONS (WITH-ACTION CONDITION)

Land Use and Zoning

Project Site

In the future with the Proposed Actions (the "With-Action condition") the Project Site would be rezoned from its existing zoning designation of R5 to an R7A zoning district with C2-4 commercial overlay, mapped to a depth of approximately 105 feet from Bruckner Boulevard to the centerline of Block 3797 and to a depth of 100 feet from the property line along Olmstead Avenue. In addition, the Project Site would be designated as an MIH area **(Figure B-2: Existing and Proposed Zoning Map)**.

R7A districts typically produce seven- to eight-story buildings that have high lot coverage and blend with existing buildings in established neighborhoods. Under Standard Height Factor (SHF) regulations, R7A districts have an FAR of 4.0, base building heights ranging from 40 feet to 65 feet, and a maximum height of 80 feet. Under an Inclusionary Housing area designation, buildings in the R7A district are subject to Quality Housing Program (QHP) regulations in place of SHF regulations. Since the Proposed Actions would designate the Project Site as an Inclusionary Housing area, the QHP would apply to the Project Site and yield a maximum FAR of 4.6, a base building height that ranges from 40 feet to 75 feet, and a maximum building height of nine stories and 95 feet with qualifying ground floors. Requirements for off-street parking accessory to residential uses are waived in designated Inclusionary Housing areas. Lot coverage in R7A district is 80% on corner lots and 65% on interior lots.

Commercial overlays are mapped within residential districts to provide neighborhood retail, typically in lower- and medium-density areas. The maximum FAR for commercial uses within R7A districts is 2.0 and the depth of the commercial overlay district is 100 feet. The maximum FAR of an underlying residential district is applicable to both the residential and commercial uses on a development site. Requirements for off-street parking for general retail or service uses in a C2-4 overlay are one parking space per 1,000 sf of commercial floor area.

Based on the proposed R7A/C2-4 zoning, several uses can be developed on the Project Site. The proposed R7A zoning district permits residential uses (Use Groups 1 and 2) as well as community facility uses (Use Groups 3 and 4), and the proposed C2-4 overlay permits local retail and commercial uses (Use Groups 5-9 and 14). The maximum permitted FAR within an MIH-designated area is 4.6 for residential uses and 2.0 for commercial uses. The maximum permitted base height is 75 feet at the street line with a maximum building height of 90 feet or 95 feet with a qualifying ground floor after a 15-foot setback (required on a narrow street) or a 10-foot setback (required on a wide street). Residential buildings in R7A districts require off-street parking for 50% of DUs (0 spaces are required for income-restricted DUs within a Transit Zone). The Reasonable Worst-Case Development Scenario (RWCDS) establishes the appropriate framework for analysis to allow the lead agency to make reasonable conclusions regarding a proposal's likely environmental effects. The RWCDS focuses on the increment between potential development that would be permitted on the Project Site with and without the proposed action(s) in the analysis year of 2022.

As described in Attachment A, "Project Description," the With-Action condition, two buildings would be constructed as a single development and would provide approximately 291,283 gsf of residential space, comprised of 350 affordable DUs with an average DU size of approximately 627 zsf[7], and 18,023 gsf of local retail space on the ground floor, which would be similar to existing local retail. Accessory parking for commercial uses required under ZR §36-21 would be waived pursuant to ZR §36-232, which permits a waiver of required parking if fewer than 40 spaces are required. Residential parking would be provided despite the waiver of parking allowed for income-restricted DUs in the Transit Zone pursuant to ZR §25-

[7] The average DU size assumes compliance with the unit distribution requirements and DU sizes of HPD's Mix and Match Term Sheet and similar recently approved 100% affordable housing developments similar to the Proposed Project.

251. The Proposed Project would include approximately 159 parking spaces and approximately 173 bicycle parking spaces, **(Table B-2: Increment between No-Action and With-Action Conditions).**

Table B-2: Increment between No-Action and With-Action Conditions

	No-Action (gsf)	**With-Action** (gsf)	**Increment** (gsf)
Residential	90,097 *(84 DUs)*	291 *(350 DUs)*	201,186 *(266 DUs)*
Income-restricted DUs up to 80% of AMI	0	144	144
Income-restricted DUs at 81% to 130% of AMI (*Market Rate)	84*	206	122
Commercial (Retail)	0	18,023	18,023
Parking	56 spaces	159 spaces	103 spaces
Total	**90,097**	**366,007**	**275,910**

Study Area

In the With-Action condition, land use and zoning designations would remain unchanged from the No-Action condition in the study area. Since a majority of the study area is fully built-out for residential uses, land use patterns would tend to remain unchanged in study area resulting from the Proposed Actions.

Public Policy

Project Site

FRESH Program

Since a supermarket is not proposed in the With-Action condition, the FRESH Program would not be applicable to the Proposed Project. In addition, the Proposed Project would not result in the direct displacement of any FRESH grocery stores.

PlaNYC/OneNYC

The Proposed Project would be consistent with *OneNYC*, specifically initiatives in *OneNYC* related to Vision 1: *Our Growing, Thriving City*. Vision 1 strives to retain NYC's position as the world's most dynamic urban economy where families, businesses, and neighborhoods thrive. The Proposed Project would support Initiative 1 under Goal 3 (Housing), which aims to "create and preserve 200,000 affordable housing units over ten years to alleviate New Yorker's rent burden and meet the needs of a diverse population; and to support efforts by the private market to produce 160,000 additional new units of housing over ten years to accommodate a growing population." The Proposed Project would provide 350 affordable DUs, of which 144 would be restricted to households with incomes up to 80% of AMI, and the remainder of which would be restricted to households with incomes between 81% and 130% of AMI.

In addition, the Proposed Project would support Initiative 1 under Goal 4 (Thriving Neighborhoods), which seeks to, "Support creation of vibrant neighborhoods by alleviating barriers to mixed-use development and utilizing available financing tools." The Proposed Project would provide mixed-use development on the Project Site, including residential DUs and commercial retail space to serve the building's residents and the surrounding community in an area with few local retail uses.

Housing New York 2.0

The Proposed Project would directly support the goals and principles outlined in *Housing New York: A Five-Borough, Ten-Year Plan* and its newest iteration, *Housing New York 2.0*. As noted above, *Housing New York*'s five guiding policies and principles are fostering diverse, livable neighborhoods; preserving the affordability and quality of the existing housing stock, building new affordable housing for all New Yorkers promoting homeless, senior, supportive, and accessible housing; and refining City financing tools and expanding funding sources for affordable housing. *Housing New York 2.0* placed additional emphasis and programs to support preserving and rehabilitating housing for seniors, providing more homeownership options for first-time homebuyers, protect neighborhoods through anti-displacement strategies, expand the use of new construction methods, and promote new housing on underutilized sites. The Proposed Project would include development of 350 DUs that would be subject to MIH, a key policy of *Housing New York*, and would provide 144 DUs restricted to households with incomes up to 80% of AMI. In addition, the Proposed Project would have a homeownership option for approximately 71 DUs that would be restricted to households with incomes between 81% and 130% of AMI. Consequently, the Proposed Project would be consistent with the *Housing New York* goal to provide housing that is affordable for all New Yorkers.

Study Area

As described in Section V, "Future Without the Proposed Actions (No-Action Condition)," the Westchester Mews and 1965 Lafayette Avenue development projects would be consistent with the Mayor's *Housing New York/HNY 2.0* plan and goals of the *PlaNYC/OneNYC* plans, which encourage the development of mixed uses and affordable housing in NYC through designation as an MIH area and the associated provision of income-restricted housing. Since no grocery stores would be built in the study area, the FRESH Program would not be applicable to the study area.

Attachment C: Socioeconomic Conditions

I. INTRODUCTION

This chapter assesses the potential for the Proposed Actions to result in a significant adverse impact on socioeconomic conditions in conformance to Chapter 5, Section 200 of the City Environmental Quality Review (*CEQR) Technical Manual,* the socioeconomic conditions assessment evaluates whether a proposed project would result in significant adverse impacts based on its direct and indirect effects on residential displacement, direct and indirect effects on business/institutional displacement, and its projected adverse effects on specific industries of importance to the City.

As described in Attachment A, "Project Description," the Proposed Actions would facilitate redevelopment of the Project Site from a vacant lot into a 366,007 gross square feet (gsf) mixed-use development with 350 affordable dwelling units (DUs) within 291,283 gsf of residential space, 18,023 gsf of commercial space, approximately 159 parking spaces for resident use, and approximately 173 bicycle parking spaces (the "Proposed Project"). Approximately 144 DUs would be restricted to households with incomes below 80% of Area Median Income (AMI), and approximately 206 would be restricted to households with incomes between 81% and 130% of AMI, of which approximately 71 DUs may have a home ownership option.

The incremental increase in residential uses from the No-Action to the With-Action condition would be 266 DUs, and the incremental increase in commercial space would be the full 18,023 gsf. Consequently, the Proposed Actions would result in a net increase in residential population of approximately 761 residents[1] and a net increase in non-residential population of approximately 54 workers[2].

II. PRINCIPAL CONCLUSIONS

The Proposed Project would not result in significant adverse impacts on socioeconomic conditions, including direct residential displacement, direct business/institutional displacement, indirect residential displacement, indirect business/institutional displacement, and adverse effects on specific industries. Conclusions for each of the five socioeconomic areas of concern as identified in the *CEQR Technical Manual* are summarized below.

Direct Residential Displacement

The Proposed Project would not directly displace any residents since the Project Site does not contain any existing residential units. Consequently, the Proposed Project would not result in significant adverse impacts due to direct residential displacement.

Indirect Residential Displacement

An indirect residential displacement assessment was prepared since the Proposed Project would generate more than 200 DUs. The results of this assessment indicate that the Proposed Project would not result in significant adverse impacts due to indirect residential displacement. As indicated in the *CEQR Technical Manual*, indirect displacement of a residential population most often occurs when an action increases

[1] (Increment of 266 DUs) x (2.86 multiplier for household population, per the *CEQR Technical Manual*) = 761 residents (conservatively rounded up).
[2] (Increment of 18,023 gsf commercial uses) x (0.003 worker multiplier) = 54 workers.

property values, and thus rents, making it difficult for existing residents to continue to afford to live in the area.

The *CEQR Technical Manual* indicates that a population increase of less than five percent within the study area would not affect real estate market conditions. Since the study area population change due to the Proposed Project would be approximately 2.2%, the Proposed Project would not have a significant adverse impact on socioeconomic conditions due to indirect residential displacement.

Direct Business Displacement

Since there are no active businesses on the Project Site, the Proposed Project would not directly displace any businesses.

Indirect Business Displacement

CEQR Technical Manual guidelines indicate that projects resulting in less than 200,000 square feet (sf) of commercial development would not typically result in significant socioeconomic impacts. Since the Proposed Project would include 18,023 gsf of commercial space, the Proposed Project would not have a significant adverse impact on socioeconomic conditions due to indirect business displacement.

Adverse Effects on Specific Industries

The Proposed Project would not result in significant adverse impacts on any specific industries since it would not affect conditions within a specific industry, nor would it result in the loss or substantial reduce employment or impair the economic viability of any industry.

The Proposed Project would not have a significant adverse impact on socioeconomic conditions and, consequently, no further assessment is necessary.

III. METHODOLOGY

Background

As defined in the *CEQR Technical Manual*, the socioeconomic character of an area includes its population, housing, and economic activity. Although socioeconomic changes may not result in impacts under CEQR, they are disclosed if they would affect land use patterns, low-income populations, the availability of goods and services, or economic investment in a way that changes the socioeconomic character of the area. 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 analysis of socioeconomic conditions is to disclose whether any changes created by a proposed project as compared to conditions in the future without the proposed project would result in a significant impact on residents, business, or industries of importance to the City.

The assessment of socioeconomic conditions distinguishes between the impacts on the residents and business in an area and further separates these impacts into analyzing direct and indirect displacement. Direct displacement occurs when residents or businesses are involuntarily displaced from the site of a proposed project or sites directly affected by it. Indirect displacement occurs when residents, businesses, or employees are involuntarily displaced due to a change in socioeconomic conditions in the area caused by the proposed project. Some projects may also affect conditions within a specific industry.

Determining Whether a Socioeconomic Assessment is Appropriate

As indicated in *CEQR Technical Manual* guidelines, 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 need for an assessment of socioeconomic conditions as identified in the *CEQR Technical Manual* is based on whether a proposed project would result in one or more the following thresholds: *1. Direct Residential Displacement: Would the project 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 Project would not directly displace any residents since the Project Site does not contain any existing residential units. Therefore, an assessment of direct residential displacement is not warranted needed.

2. Direct Business Displacement: Would the project directly displace more than 100 employees? If so, assessments of direct business displacement and indirect business displacement are appropriate. Would the project 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 Project would not directly displace any businesses since the Project Site does not contain any existing commercial uses. Therefore, an assessment of direct business displacement is not warranted.

3. Indirect Residential and Business Displacement due to Increased Rents: Would the project result in 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 (sf) 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.

The Proposed Project would generate a residential development with over 200 units. Therefore, an assessment of indirect residential displacement is needed. Since the Proposed Project would include less than 200,000 sf of commercial development, an assessment of indirect businesses displacement is not warranted.

4. Adverse Effects on Specific Industries: Is the project 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 project would result in the loss or substantial diminishment of a particularly important product or service within the city.

The Proposed Project would not affect conditions within a specific industry, nor substantially reduce employment or impair the economic viability in the industry or category of businesses. Therefore, an assessment of adverse effects on specific industries is not warranted.

Based on the screening assessment presented above, the assessment of the potential impact of the Proposed Project on socioeconomic conditions is limited to an assessment of the potential impact of the Proposed Project on indirect residential displacement.

Analysis Framework

Indirect Residential Displacement

According to *CEQR Technical Manual* guidelines, the objective of an indirect residential displacement assessment is to determine whether a proposed project may either introduce a trend or accelerate trends that exist near to or within smaller portions of the study area that may potentially displace a vulnerable population to the extent that the socioeconomic character of the neighborhood would change.

Study Area Definition

CEQR Technical Manual guidelines state that the socioeconomic study area boundary should encompass the project site and adjacent area within a 400-foot, 0.25-mile, or 0.5-mile radius from the Project Site depending on the project size and area characteristics. If the data includes geographic units such as census tracts or zip-code areas, it may be appropriate to adjust the size of the study area to make its boundaries contiguous with those of the data sets. The socioeconomic conditions assessment seeks to examine the potential to change socioeconomic character relative to the study area population. For projects that would result in an increase in residential population, the scale of the relative change is typically represented as a percent increase in population. *CEQR Technical Manual* guidelines indicate that a project that would result in a relatively large increase in population may be expected to affect a larger study area. A 0.5-mile study area is appropriate for projects that would increase population by five percent compared to population in the future without the proposed project in a 0.25-mile study area.

Based on *CEQR Technical Manual* guidelines, the preliminary assessment considered census tracts with at least 50% of their area within a 0.25-mile radius of the Project Site, including Census Tracts 40.01, 78, and 98. The Proposed Project would result in a net increase of 266 DUs, which would generate approximately 761 persons, an increase in the residential population of 5.2% between the conditions in the future with the proposed actions compared to conditions in the future without the proposed actions, **(Table C-1: Estimated Population Within 0.25-Mile of the Project Site)**.

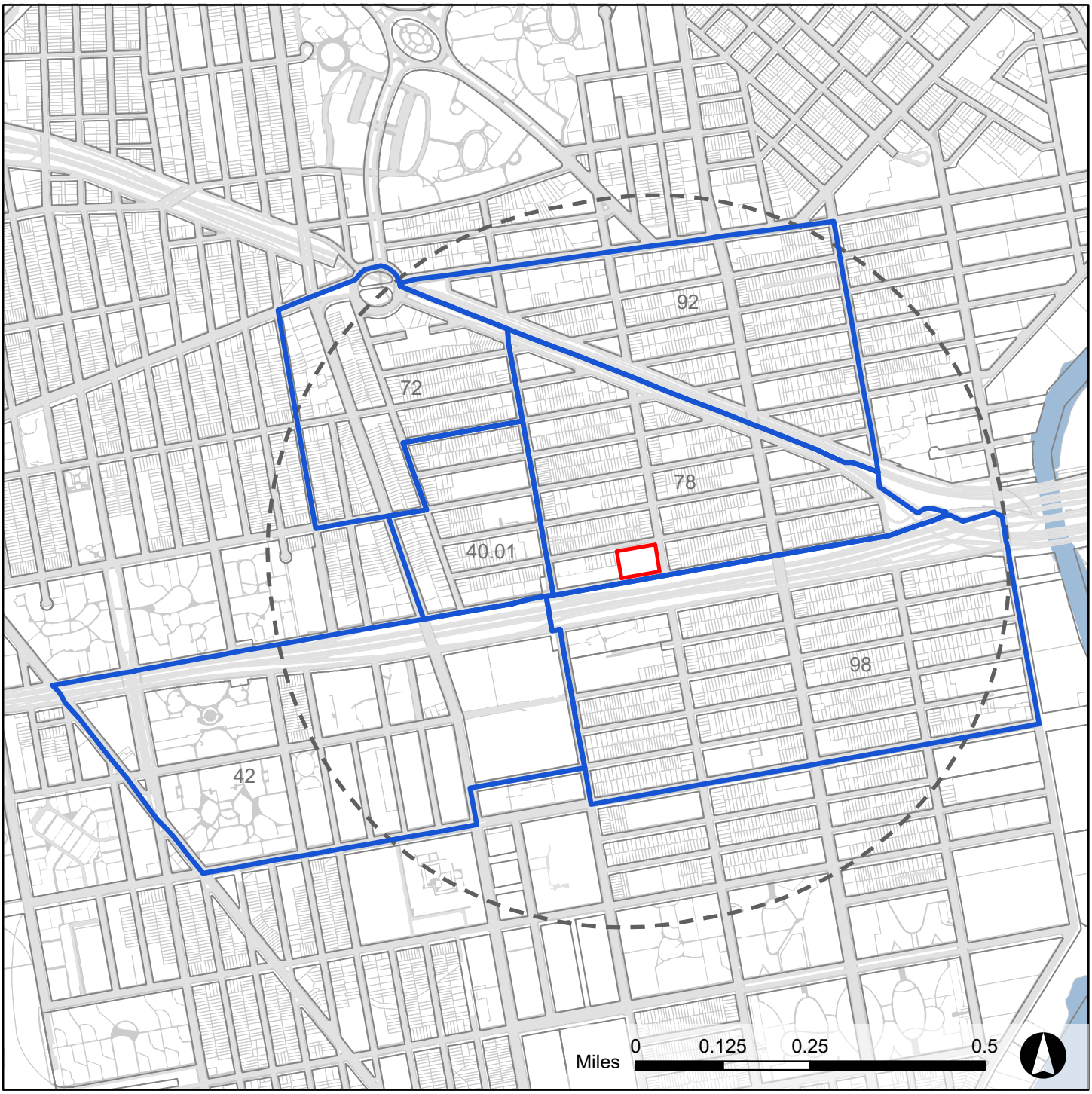
Table C-1: Estimated Population Within 0.25-Mile of the Project Site

Census Tracts Within 0.25-Mile Radius	Existing Condition (persons)	No-Action Condition (persons)	With-Action Condition Increment (persons)	Percent Change
Total	13,330	13,570	14,274	**5.2%**

Source: U.S. Census, ACS 5-Year Estimates, 2012-2016

Note:
No-Action, Project Site: 84 DUs x 2.86 persons per household = 240 persons.
With-Action (increment), Proposed Project: 266 DUs x 2.86 persons = 761 persons.

Since the population would increase by 5.2% between the No-Action and With-Action conditions, census tracts with at least 50% of their area within a 0.5-mile radius of the Project Site were considered to demarcate the socioeconomic study area, comprised of Census Tracts 40.01, 42, 72, 78, 92, and 98, **(Figure C-1: Socioeconomic Study Area Map)**. The study area has an existing total population of 32,716 persons, **(Table C-2: Existing Study Area Population Within 0.5-Mile of the Project Site)**.



Source: 2016 PLUTO, DCP

Project Site

0.5-Mile Radius

Socioeconomic Study Area Census Tracts

01 Study Area Census Tract Number

SOCIOECONOMIC STUDY AREA MAP

Figure C-1

2069 Bruckner Boulevard Rezoning EAS

Table C-2: Existing Study Area Population Within 0.5-Mile of the Project Site

Study Area	
Existing Condition (persons)	**32,716**

Source:
U.S. Census, 2012-2016 five-year estimates, DP05

Data Sources

The U.S. Census Bureau's 2010 Decennial Census and the American Community Survey (ACS) 2012-2016 five-year estimates were used to determine median household income and total employment by industry within the study area, the Bronx, and New York City. The income limits for affordable rental units were computed using the New York City (NYC) Department of Housing Preservation and Development's (HPD) "Area Median Income" guide for 2018.

IV. EXISTING CONDITIONS

The Project Site is currently improved with a vacant, approximately 10,200-gsf one-story building that formerly served as a place of worship and approximately 95 unused surface parking spaces that surround the building on three sides. The study area includes a mixture of low- and high-density residential uses and vacant land. The predominant housing types are owner- and renter-occupied single-family and two-family housing, and multi-family rental developments. The study area contains one NYC Housing Authority (NYCHA) development, the Monroe Houses, located southwest of the Project Site between Bruckner Boulevard to the north, Lafayette Avenue to the south, Taylor Avenue to the east, and Rosedale Avenue to the west. The subsidized rental development consists of approximately 1,100 DUs within 12 buildings[3]. Chatterton Terrace, located northwest of the Project Site, is a Mitchell-Lama co-op building with approximately 125 DUs. As shown in **Table C-3: Housing Tenure in Study Area, Existing Condition**, renter-occupied housing units account for most of the housing units in the study area.

Table C-3: Housing Tenure in Study Area, Existing Condition

Occupied Housing Units	Owner-Occupied		Renter-Occupied	
	Number	Percent	Number	Percent
10,517	2,457	23%	8,060	77%

Source: U.S. Census, 2012-2016 five-year estimates, DP04

The median household income for the study area is $36,731 in the existing condition, as shown in **Table C-4: Study Area Median Income, Existing Condition (2016)**.

[3] Official NYCHA Map 2018, https://www1.nyc.gov/assets/nycha/downloads/pdf/officialmap-2018.pdf

Table C-4: Study Area Median Income, Existing Condition

Study Area	
Median Income	**$36,731**

Source: DCP Population Factfinder, 2012-2016 five-year estimates

V. FUTURE WITHOUT THE PROPOSED ACTIONS (NO-ACTION CONDITION)

Project Site

Absent the Proposed Actions (the "No-Action condition"), the Applicant would pursue an as-of-right development that would be like the existing land uses near the Project Site and conform to the current R5 zoning designation. As-of-right development permitted on the Project Site would consist of three- to four-story attached houses or small apartment houses and community facility uses, with a maximum permitted residential FAR of 1.25 a maximum permitted community facility FAR of 2.0, and a maximum building height of 40 feet. Under the No-Action condition, it is assumed that the Project Site would be improved with development of attached, multi-family walkup apartments totaling 90,097 gsf of residential use, resulting in approximately 84 market rate DUs and 56 accessory parking spaces.

Study Area

Based on information from the DCP Bronx Borough Office and DOB, four ongoing or proposed developments were identified within 0.5-miles of the Project Site with anticipated build completion dates in 2022 or earlier, as shown in **Table C-5: Known Developments Within 0.5-Mile of Project Site**.

Table C-5: Known Developments Within 0.5-Mile of Project Site[4]

Map No.	Project	Block Lot	Description	Status
1	2053 Newbold Avenue & 2044 Westchester Avenue: *"Westchester Mews"*	Block 3805, Lots 123 & 124 (Site 1); Block 3805, Lots 30, 34, 41 (Site 2); Block 3805, Lot 55, 56 (Site 3)	Rezoning from R5/C2-2 and R6/C2-2 to R6 and R6/C2-4 for a multi-phase project. Site 1 (of 5) would be a 219,736 gsf mixed-use development with two buildings at 10 and 11 stories, consisting of 203 residential DUs, 5,549 zsf of commercial retail, 1,276 zsf of community facility uses, and an Inclusionary Housing designation. Site 2 would be a 92,635 gsf mixed-use development with 62 residential DUs (30% affordable at 80% AMI) and 20,557 zsf of commercial retail. Site 3 would be a 40,978 gsf residential development with 37 DUs (30% affordable at 80% AMI).	Estimated completion of Site 1 in 2019; Site 2 in 2021; Site 3 in 2022; Sites 4 & 5 in 2024[5]. *City Council-approved the project.*
2	1965 Lafayette Avenue	Block 3672, p/o Lot 1	Rezoning from R6 to R8 and R8/C2-4 for two attached 14-story buildings with approximately 425 family & senior residential units, 19,938 sf of commercial retail, and an Inclusionary Housing designation. The size of the buildings would be approximately 384,271 gsf.	Estimated completion in 2020[6]
3	2160 Powell Avenue	Block 3810, Lot 77	Mixed-use, 2-story building with 2,283 sf of residential space and 2,703 sf of commercial space, for a total of 4,986 sf and an FAR of 1.55.	Latest DOB permits issued in January 2017
4	909 Castle Hill Avenue	Block 3687, Lot 43	Rezoning from existing R3-2 to R5D/C1-3 to allow for an approximately 31,075 sf mixed-use development consisting of 31 DUs and 6,203 sf of commercial space. Would rise to four stories and provide 21 parking spaces.	Estimated completion by 2022

The study area population projection in the No-Action condition would be 35,130 persons, as shown in **Table C-6: Study Area Population, No-Action Condition.**

Table C-6: Study Area Population, No-Action Condition

Existing Condition (persons)	No-Action Projects Population Increase	Project Site As-of-Right Population Increase	No-Action Condition (persons)
32,716	2,174	240	35,130

Notes:

No-Action on Project Site: 84 DUs x 2.86 persons per household (Bronx) = +240 persons;
No-Action Projects in Study Area: 760 DUs x 2.86 persons per household = 2,174 persons

VI. FUTURE WITH THE PROPOSED ACTIONS (WITH-ACTION CONDITION)

[4] Information based on conversation with DCP Bronx Borough Office staff on June 12, 2017.
[5] Estimated completion dates and rezoning information are based on the publicly available EAS Short Form dated March, 3, 2017. https://www1.nyc.gov/assets/planning/download/pdf/applicants/env-review/eas/17dcp080x_eas.pdf
[6] Estimated completion dates and rezoning information are based on the publicly available EAS Short Form dated June 2, 2017. https://www1.nyc.gov/assets/planning/download/pdf/applicants/env-review/eas/17dcp172x-eas.pdf

In the With-Action condition, the Proposed Actions would result in a mixed-use development with 350 affordable DUs, 18,023 gsf of commercial space, and approximately 159 parking spaces under the proposed R7A/C2-4 zoning. The as-of-right development in the No-Action condition would consist of 84 DUs and 56 parking spaces under the existing R5 zoning. Consequently, the increment between the No-Action and With-Action conditions would be 266 DUs and 761 residents[7], resulting in a total population in the With-Action condition of 35,891 persons.

Indirect Residential Displacement

In conformance to *CEQR Technical Manual* guidelines, the indirect residential displacement assessment first determines whether a proposed project 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. If the expected average incomes of the new population would be like the average incomes of the study area populations, no further analysis is necessary.

Median Household Income for Existing Population

In 2010, the median household income in the socioeconomic study area was $45,737 compared to $36,731 in 2016, representing an overall decrease **(Table C-7: Median Household Income, 2010-2016)**.

Table C-7: Study Area Median Household Income, 2010-2016

2010	2016	Direction of Change
$45,737	$36,731	Decrease

Sources:

DCP Population Factfinder, ACS 2006-2010 five-year estimates and ACS 2012-2016 five-year estimates

Note:

Only the direction of the change is reported since the margin of error of the difference is greater than a third of the difference, but less than the difference itself, per DCP guidance.

With the Proposed Actions, approximately 144 DUs would be restricted to households with incomes up to 80% of AMI, and 206 DUs would be restricted to households with incomes between 81% and 130% of AMI, of which approximately 71 DUs may have a home ownership option. HPD standards for affordability, as shown in **Table C-8: Income Limits for Affordable Housing in New York City**, indicate that the average income of households in the Proposed Project would vary by household size, but at minimum would average $58,480 for a household size of one person at the 80% of AMI level and $95,030 for a household size of one person at the 130% of AMI level. In addition, the Proposed Project would have a range of household sizes as it would consist of 72 studios, 137 one-bedrooms, 110 two-bedrooms, and 31 three-bedrooms and, consequently, would likely have higher average household incomes ven when compared with those indicated for one-person household sizes. Based on these estimated household incomes using HPD standards for affordability, household incomes of the Proposed Project would be higher than the median household income of $36,731 for the study area. Consequently, according to *CEQR Technical Manual* guidelines, a Step 2 level of assessment for indirect residential displacement is necessary.

[7] Uses a multiplier of 2.86 for the Bronx.

Table C-8: Income Limits for Affordable Housing in New York City

Household Size	80% of AMI	130% of AMI
1	$58,480	$95,030
2	$66,800	$108,550
3	$75,120	$122,070
4	$83,440	$135,590
5	$90,160	$146,510
6	$96,800	$157,300

Source:

NYC HPD, "2018 NYC Income Limits by Household Size."
http://www1.nyc.gov/site/hpd/renters/what-is-affordable-housing.page

Study Area Population Change

In conformance with *CEQR Technical Manual* guidelines, the next step (Step 2) in a preliminary socioeconomic assessment is to determine whether the Proposed Project's increase in population is large enough relative to the size of the population expected to reside in the study area without the project to affect real estate market conditions in the study area. If the population increase is less than five percent within the study area, further analysis is not necessary as this change would not be expected to affect real estate market conditions.

The change in population between the No-Action and With-Action conditions would be 2.2%, as shown in **Table C-9: Study Area Population Change**.

Table C-9: Study Area Population Change

No-Action Condition (persons)	With-Action Condition (persons)	Percent Change (No-Action to With-Action)
35,130	35,891	2.2%

Notes:

With-Action increment on Project Site: 266 DUs x 2.86 persons per household (Bronx) = 761 persons

Since the population increase would be less than 5% within the study area, further analysis to determine whether the Proposed Project would result in indirect residential displacement is not necessary. Consequently, the Proposed Project would not result in a significant adverse impact on socioeconomic conditions.

Attachment D: Community Facilities

I. INTRODUCTION

The *City Environmental Quality Review (CEQR) Technical Manual* indicates that a community facilities assessment should be conducted if a project would directly or indirectly affect existing community facilities, including publicly supported day care, libraries, public schools, health care facilities, and fire and police protection services. A project can affect community services when it physically displaces or alters a community facility or causes a change in population that may affect the services delivered by a community facility, as might happen if a facility is already over-utilized, or if a project is large enough to create a demand that could not be met by the existing facility.

As described in Attachment A, "Project Description," the Proposed Actions would facilitate the development of an approximately 366,007 gross square feet (gsf) mixed-use development consisting of two adjoining buildings and comprised of 350 income-restricted dwelling units (DUs) within approximately 291,283 gsf of residential space, approximately 18,023 gsf of ground floor commercial retail space, approximately 159 parking spaces, and approximately 173 bicycle parking facilities (the "Proposed Project"). Of the total DUs, 144 DUs would be restricted to households with incomes up to 80% of Area Median Income (AMI), and the remaining 206 DUs would be restricted to households with incomes between 81% and 130% of AMI, of which approximately 71 DUs may have a home ownership option.

The Proposed Project would increase demand on public schools and publicly-funded child care centers and trigger the need for an assessment for public elementary/intermediate schools and publicly-funded day care facilities.

II. PRINCIPAL CONCLUSIONS

Elementary and Intermediate Schools

According to *CEQR Technical Manual* guidelines, a significant adverse impact on public elementary and intermediate schools may result if a proposed project would result in both of the following:

- A collective utilization rate of the elementary or intermediate schools that is equal to or greater than 100% in the With-Action condition; and
- An increase of 5% or more in the collective utilization rate between the No-Action and With-Action conditions.

The collective elementary school utilization rate in Sub-district 2 in the With-Action condition would increase from 106.31% in the No-Action condition to 107.49% in the With-Action condition, and an increase in the projected shortfall of 445 seats in the No-Action condition to 528 seats in the With-Action condition.

The collective intermediate school utilization rate in Sub-district 2 in the With-Action condition would increase from 101.84% to 102.88%, and the projected shortfall in the capacity of seats would increase from a shortfall of 70 seats in the No-Action condition to 110 seats in the With-Action condition.

Although the collective utilization rates for both elementary and intermediate schools would exceed 100% in the With-Action condition, the increase in the collective utilization rate between the No-Action and With-Action conditions would be less than 5%. Therefore, no significant adverse impact on elementary or intermediate schools would result from the Proposed Project and no further assessment is necessary.

Publicly-Funded Group Child Care and Head Start Centers

According to *CEQR Technical Manual* guidelines, significant adverse impacts on publicly-funded child care and Head Start centers may result if a proposed project would result in both of the following:

- A collective utilization rate of publicly-funded group child care/Head Start centers in the study area that is greater than 100% in the With-Action condition; and
- An increase of 5% or more in the collective utilization rate of publicly-funded child care/Head Start centers in the study area between the No-Action and With-Action conditions.

The study area would have a utilization rate of 99.27% and capacity for 5 available slots with the Proposed Project. Since the Proposed Project would not result in a collective utilization rate of group child care/Head Start centers that is greater than 100%, the Proposed Project would not result in a significant adverse impact on publicly-funded child care and Head Start centers and, consequently, no further assessment is necessary.

III. METHODOLOGY

A community facilities assessment is warranted if a proposed project would potentially result in appreciable direct or indirect effects on a facility or service provided to the community. Detailed community facilities assessments are most commonly associated with residential projects since the increased demand for community services strongly correlates with the introduction of new residents to an area. The *CEQR Technical Manual* establishes thresholds that may be used to determine whether detailed studies are necessary to determine potential indirect impacts on community facilities, (see **Table D-1: Community Facilities Thresholds for Detailed Analyses).**

The Proposed Project would not directly displace a community facility nor place a physical barrier to service delivery. The Proposed Project would result in an incremental increase of approximately 266 DUs, including 144 affordable DUs (for households with incomes up to 80% of AMI), between the No-Action and With-Action conditions. Based on a comparison of the Proposed Project with *CEQR Technical Manual* thresholds, a detailed assessment of the potential impact of the Proposed Project on community facilities and services would be limited to potential impact of the Proposed Project on elementary/intermediate schools, and publicly-funded child care. The community facilities assessment is consequently limited to consideration of indirect effects of the Proposed Project on these facilities and services.

Preliminary and detailed assessments for public schools and publicly-funded child care facilities were based on data provided the NYC Department of City Planning (DCP), the NYC Department of Education (DOE), and the NYC School Construction Authority (SCA). The analysis was conducted in accordance with *CEQR Technical Manual* guidelines.

Table D-1: Community Facilities Thresholds for Detailed Analyses

Community Facility Type	Thresholds for Detailed Analyses*	Detailed Analysis Required
Public Schools	50 or more elementary/middle school students (total of elementary and intermediate) based on # of DUs OR Direct Effect	Yes
	150 or more high school students based on # of DUs OR Direct Effect	No
Group Child Care and Head Start Centers (publicly-funded)	20 or more eligible children under age 6 based on number of low or low/moderate income DUs OR Direct Effect	Yes
Libraries	More than 5% increase in ratio of DUs to library branches OR Direct Effect	No
Police/Fire Services and Health Care Facilities	Introduction of Sizeable New Neighborhood (e.g. Hunters' Point South) OR Direct Effect	No

***Source:** *CEQR Technical Manual*

IV. PRELIMINARY ASSESSMENT

Public Schools

Indirect Effects

The *CEQR Technical Manual* defines the thresholds for a detailed assessment of the impact of a project on public schools to be the addition of 50 or more students for elementary and intermediate schools, and an addition of 150 or more students for high schools. Based on student generation rates for public elementary, intermediate, and high schools for the Bronx CSD 8, as provided by the SCA adapted from 2012-2016 American Community Survey (ACS) Public Use Microdata Sample (PUMS) data, the incremental increase of approximately 266 DUs generated by the Proposed Project would result in an addition of approximately 83 elementary school students, 40 intermediate school students, and 40 high school students (See **Table D-2: Public School Threshold Calculations**). Consistent with *CEQR Technical Manual* guidelines, this projected number of students warrants a detailed assessment of the potential impact of the Proposed Project on elementary and intermediate schools since the total number of students generated by the Proposed Project would be greater than 50. The number of high school students generated by the Proposed Project would be below the threshold of 150 students, and consequently a detailed analysis of the potential impact of the Proposed Project on public high schools is not warranted.

Table D-2: Public School Threshold Calculations

	Incremental Increase in DUs from Proposed Project	Multiplier (Students/Unit in Bronx CSD 8)	Additional Students from Proposed Project	Threshold for Detailed Analysis
Elementary/ Intermediate School Students	266	0.31	**83**	**50 (combined)**
	266	0.15	**40**	
High School Students	266	0.15	40	150

***Source:** *CEQR Technical Manual, SCA Projected Public School Ratio 2018 Housing Multipliers*

Publicly-Funded Group Child Care and Head Start Centers

Indirect Effects

The *CEQR Technical Manual* threshold for determining the need for a detailed assessment for publicly-funded child care and Head Start centers is an addition of 20 or more eligible children under the age of six based on the number of low or low/moderate income DUs that would be created with a project. Based on the generation rates for the Bronx in the *CEQR Technical Manual*, the approximately 144 affordable DUs with the Proposed Project would generate approximately 21 eligible children (See **Table D-3: Child Care Center Threshold Calculations**). Consequently, a detailed assessment of the impact of the Proposed Project on publicly-funded group child care and Head State centers is warranted.

Table D-3: Child Care Threshold Calculations

	Incremental Increase in Affordable DUs from Proposed Project	Multiplier (Children Under the Age of Six/Unit for Bronx)	Additional Children Eligible for Publicly-Funded Child Care + Head Start from Proposed Project	Threshold for Detailed Analysis (Bronx)
Group Child Care and Head Start (publicly-funded)	144	0.139	**21**	**20**

Source: **CEQR Technical Manual*

V. DETAILED ASSESSMENT – Public Schools

Analysis Approach

Study Area

In conformance to *CEQR Technical Manual* guidelines, the study area for the analysis of elementary and intermediate schools is the "Sub-district" of the school district in which the project is located. The Project Site is located entirely within Sub-district 2 of Bronx CSD 8 (See **Figure D-1: Public Elementary and Intermediate Schools**). Sub-district 2, or "Soundview", is the second largest of the three (3) Sub-districts in CSD 8 and contains nine public elementary schools in twelve buildings and nine intermediate schools in five buildings.

The zoned elementary schools for the Project Site are P.S. 583 (X583), located at 1028 White Plains Road, serving pre-kindergarten education through grade 5 and special education, and "The Dr. Emmett W. Bassett School" (X119), located at 1075 Pugsley Avenue, for grades 3-5 and special education. The zoned middle school for the Project Site is "Blueprint Middle School" (X562), located at 1111 Pugsley Avenue, serving grades 6-8 and special education. There is no zoned high school for the Project Site as high schools participate in the Citywide High School Choice program.

Methodology

In conformance to *CEQR Technical Manual* guidelines, a public schools analysis is based on the most recent DOE data on school capacity, enrollment, and utilization rates for elementary and intermediate schools in the Sub-district study area and projections of future enrollment by the SCA. Specifically, the existing conditions analysis uses data provided in the DOE publication *"Utilization Profiles: Enrollment, Capacity, and Utilization Report 2016-2017"*. Future conditions are then estimated based on SCA enrollment projections and data obtained from the SCA Capital Planning Division on the number of new housing units and students expected at the Sub-district and borough levels. The future utilization rate for school facilities is calculated by adding the estimated enrollment from proposed residential developments

in the schools' study area to the DOE projected enrollment and then comparing that number with projected school capacity. DOE does not include charter school enrollment in its projections. DOE enrollment projections for the years 2016 through 2025, the most recent data currently available, are posted on the SCA website.

The latest available enrollment projections through 2025 have been used in this analysis to project student enrollment to 2022. These enrollment projections are based on broad demographic trends and do not explicitly account for discrete new residential development projects expected to be completed within the study area. Therefore, the estimated student population from other new development projects that would be completed within the study area were obtained from the SCA Capital Planning Division and are added to the projected enrollment to provide a conservative estimate of future enrollment and utilization. In addition, any new school projects identified in the DOE Five-Year Capital Plan are included if construction has begun, or if deemed appropriate to include in the analysis by the lead agency and the SCA.

According to *CEQR Technical Manual* guidelines, a significant adverse impact on public schools may occur if a proposed action would result in both of the following conditions:

1. A utilization rate of the elementary and/or intermediate schools in the Sub-district area, or high schools in the borough study area, that is equal to or greater than 100% in the With-Action condition; and
2. An increase of 5% or more in the collective utilization rate between the No-Action and With-Action conditions.

Existing Conditions

Schools within Study Area

Table D-4: Public Elementary and Intermediate School Enrollment, Capacity, and Utilization for Existing Conditions, School District 8, Sub-District-2, identifies the name, location, current enrollment, target capacity, number of available seats, utilization rate, and grades served by each school in Sub-district 2. Data summarized in **Table D-4** was collected from the SCA Enrollment, Capacity and Utilization Report, 2016-2017.

Elementary Schools

As shown in **Table D-4,** Sub-district 2 has nine elementary schools within the study area for the Proposed Project with a target capacity of 7,052 seats (excluding transportable school and mini-school capacity) and an enrollment of 6,594 students, resulting in a shortfall of 458 seats and a utilization rate of 94%.

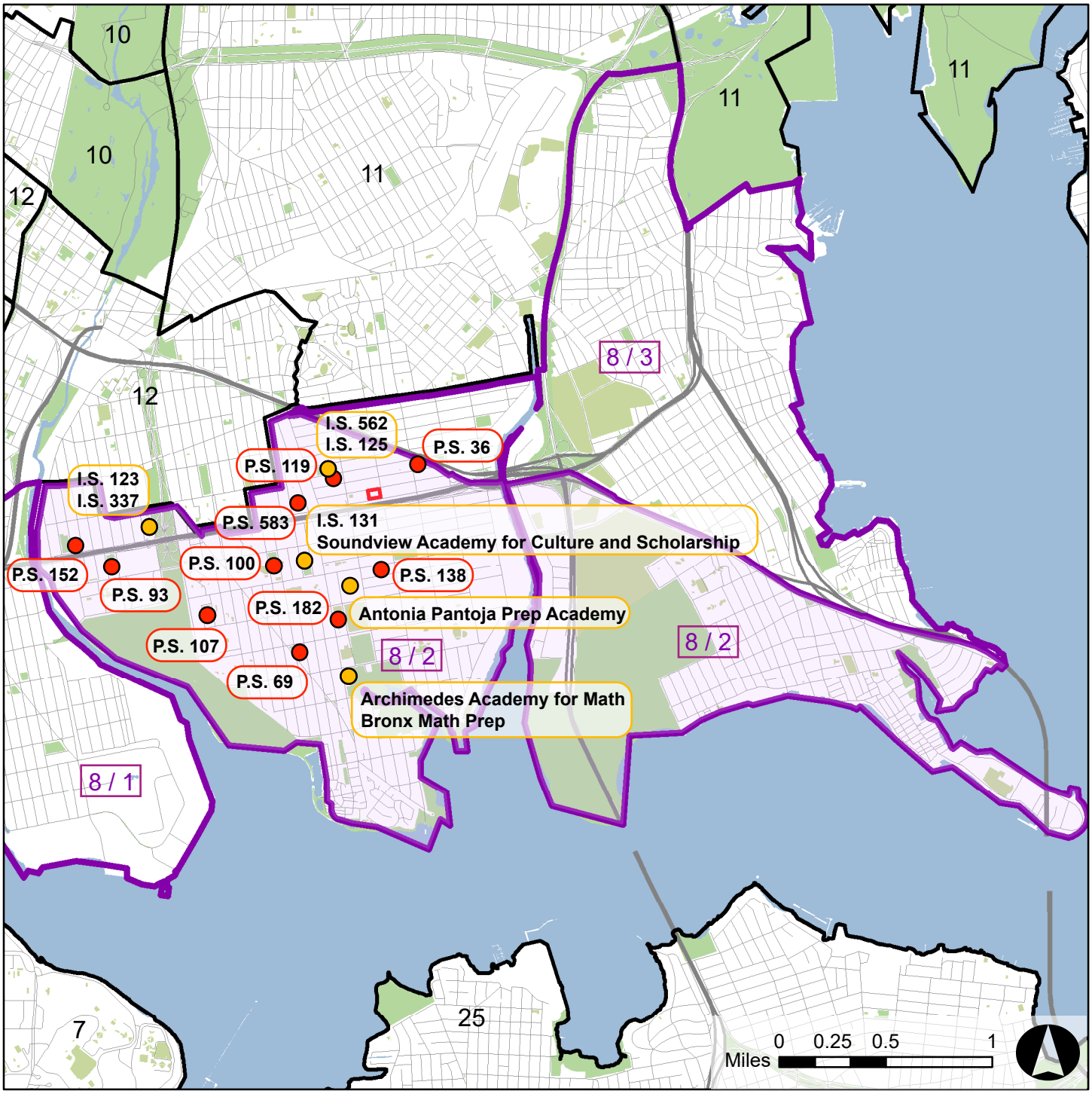
Intermediate Schools

As shown in **Table D-4,** Sub-district 2 has nine intermediate schools within the study area for the Proposed Project with a target capacity of 3,813 seats and an enrollment of 3,113 students, resulting in a surplus of 700 seats and a utilization rate of 82%.

Table D-4: Public Elementary and Intermediate School Enrollment, Capacity, and Utilization for Existing Conditions, School District 8, Sub-district 2 Study Area

Org. ID	School Name	Address	Grades	Bld Exc*	Enrollment	Target Capacity	Available Seats	Utilization
Elementary Schools								
X036	P.S. 36 - X	1070 Castle Hill Avenue	PK-5		743	731	-12	102%
X069	P.S. 69 - X	560 Thieriot Avenue & 639 Thieriot Avenue (Annex X880)	PK-5		605[1]	394	-211	154%
X069	P.S. 69 - X	560 Thieriot Avenue	PK-5	Y	150			
X093	P.S. 93 - X	1535 Story Avenue	PK-5		358[1]	459	101	78%
X093	P.S. 93 - X	1535 Story Avenue	PK-5	Y	200			
X100	P.S. 100 - X	800 Taylor Avenue	PK-5		596	695	99	86%
X107	P.S. 107 - X	1695 Seward Avenue	PK-5		551	441	-110	125%
X119	P.S. 119 - X	1075 Pugsley Avenue & 1111 Pugsley Avenue (X125)	PK-5		961[2]	905	-56	106%
X119	P.S. 119 - X	1075 Pugsley Avenue	PK-5	Y	100			
X138	P.S. 138 - X	2060 Lafayette Avenue	PK-5		739[2]	551	-188	134%
X138	P.S. 138 - X	2060 Lafayette Avenue	PK-5	Y	50			
X152	P.S. 152 - X	1007 Evergreen Avenue	PK-5		936[1]	774	-162	121%
X152	P.S. 152 - X	1025 Morrison Avenue	PK-5	Y	198			
X182	P.S. 182 - X	601 Stickball Blvd	PK-5		990	929	-61	107%
X583	P.S. 583	1028 White Plains Road	PK-5		115	572	457	20%
Study Area Total					**6,594**	**7,052**	**458**	**94%**
Intermediate Schools								
X123	I.S. 123 - X	1025 Morrison Avenue	6-8		325	735	410	44%
X125	I.S. 125 - X	1111 Pugsley Avenue	6-8		365	615	250	59%
X131	I.S. 131 - X	885 Bolton Avenue	6-8		469	543	74	86%
X337	I.S. 337 - X	1025 Morrison Avenue	6-8		541	419	-122	129%
X367	Archimedes Academy for Math - X	456 White Plains Road	6-12**		285	341	56	84%
X375	Bronx Math Prep - X	456 White Plains Road	6-8		239	341	102	70%
X376	Antonia Pantoja Prep Academy - X	1980 Lafayette Avenue	6-12**		181	253	72	72%
X448	Soundview Academy for Culture and Scholarship - X	885 Bolton Avenue	6-8		375	375	0	100%
X562	I.S. 562 - X	1111 Pugsley Avenue	6-8		333	191	-142	174%
Study Area Total					**3,113**	**3,813**	**700**	**82%**

Source: *NYC DOE's "Enrollment, Capacity and Utilization Report 2016-2017", SCA*
Notes: * Denotes Transportable Classroom Units (TCUs) and Mini-Schools
**Enrollment and capacity data for IS only
[1]Includes mini-school enrollment
[2]Includes transportable school enrollment



Project Site

School District 8

Sub-district 2

NY School Districts

Elementary Schools

Intermediate Schools

PUBLIC ELEMENTARY + INTERMEDIATE SCHOOLS SCHOOL DISTRICT 8-2

Figure D-1

Future without the Proposed Actions (No-Action Condition)

Enrollment Changes

Projected public elementary and intermediate school enrollments in the study area for the 2022 analysis year in the No-Action condition were based on 10-year enrollment projections by DOE for the period 2016-2025[1]. These are the most recent projections available from the DOE.

According to those projections, CSD 8 would have an enrollment of approximately 13,941 elementary school-level students and 6,057 intermediate-level students in the 2022-2023 school year. Based on SCA-approved percentages for the Sub-district share of the total CSD enrollment, Sub-district 2 would have an elementary school enrollment of approximately 6,919 elementary school students and an intermediate-level school enrollment of 3,630 intermediate-level school students by the 2022 analysis year.

Table D-5: SCA Enrollment Projections Apportioned to Sub-district 2, 2022 Analysis Year

	Elementary	Intermediate
2022 Projected CSD 8 Enrollment*	13,941	6,057
Percentage Provided for Sub-district 2**	49.63%	59.92%
2022 Projected Enrollment for CSD 8 Sub-district 2	6,919	3,630

Source: **Statistical Forecasting, "Enrollment Projections for the NYC Public Schools 2016-17 to 2025-26 by Statistical Forecasting"*
***DOE 2019 Enrollment by Zone Projections, as of December 2016*

Project Site

As described in Attachment A, "Project Description", absent the Proposed Actions (the "No-Action condition"), the Applicant would pursue as-of-right development in conformance with the existing R5 zoning designation and land uses surrounding the Project Site. As-of-right development permitted on the Project Site would consist of three- to four- story attached houses or small apartment houses and community facility uses, with a maximum permitted residential FAR of 1.25 a maximum permitted community facility FAR of 2.0, and a maximum building height of 40 feet. In the No-Action condition, it is assumed that the Project Site would be improved with attached, multi-family walkup apartments totaling 90,097 gsf of residential use, resulting in approximately 84 market rate DUs and 56 accessory parking spaces (pursuant to ZR §23-22 and ZR §25-23). The average DU size would be approximately 1,073 gsf, which would be consistent with the DU size of other as-of-right market rate developments in the area.

No-Action Development Projects

As described in Attachment A, "Project Description," based on coordination with the DCP Bronx Borough Office and the NYC Department of Buildings (DOB), four known, ongoing, or proposed development projects were identified within a 0.5-mile radius of the Project Site with anticipated completion dates in 2022 or earlier. Two of these developments, located at 1965 Lafayette Avenue and 909 Castle Hill Avenue, would be located within CSD 8, Sub-district 2. Neither development project was included in the SCA Housing Pipeline which accounts for additional increases in student enrollment, based on housing projections. The

[1] DOE Enrollment Projections (Projected 2015-2024), provided by DCP

remaining two No-Action development projects are excluded from the assessment of a potential increase in capacity since they are located outside the boundary of CSD 8, Sub-district 2.

An additional No-Action development project was identified at 760 Sound View Avenue on Block 3596, Lot 1.[2] In pursuing as-of-right development in a R6 zoning district, the 23,250-sf lot would conservatively generate 83 DUs with a residential FAR of 2.43 and a maximum DU factor of 680. The DU factor denotes residential density allowances such that the maximum number of DUs permitted on a zoning lot would be in accordance with approximate average unit sizes, plus common areas, for each zoning district.[3] This project is included in the assessment of public schools as well as the analysis of publicly-funded group child care and Head Start centers since the project is situated within CSD 8, Sub-district 2 and within a 1.5-mile study area of the Project Site, respectively. For the purposes of the publicly-funded group child care and Head Start centers assessment, it is conservatively assumed that the 83 DUs would be affordable units. This development project was not included in the SCA Housing Pipeline.

Of the four No-Action development projects identified within 0.5-mile radius of the Project Site, to include the No-Action as-of-right development permitted on the Project Site, these projects would bring an additional 623 DUs to Sub-district 2. As shown in **Table D-6: No-Action Developments in Sub-district 2, 2022 Analysis Year**, the No-Action development project DUs would thereby generate approximately 194 elementary students and approximately 94 intermediate students. Furthermore, an additional 384 elementary students and 159 intermediate students would be added to Sub-district 2 according to SCA housing projections.

Based on review of the SCA publication, *Proposed Five-Year Capital Plan Report (FY 2020-2024),* there would be no capacity changes in public elementary or public intermediate schools in Sub-district 2 by the 2022 analysis year.

Table D-6: No-Action Developments in Sub-district 2, 2022 Analysis Year

	Elementary		Intermediate	
	Enrollment	Capacity	Enrollment	Capacity
SCA No Build Housing Enrollment Apportioned to Sub-district Housing Generated Pipeline # of Students[1]	384	N/A	159	N/A
No-Action Development (Not included in SCA Projections - 623 units)*	194	0	94	0
Total No-Action Development Enrollment and Capacity	578	0	253	0

Notes: *[1]Housing by SD 2016, SCA*
**Includes 84 DUs from the No-Action scenario for the Project Site, 425 DUs from 1965 Lafayette Avenue, 31 DUs from 909 Castle Hill Avenue, and 83 DUs from 760 Sound View Avenue*

[2] Information based on contact with DCP Bronx borough office
[3] DCP Residence Districts and Glossary of Planning Terms

Summary

As shown in **Table D-7: School Enrollment, Capacity, and Utilization for 2022 No-Action Condition Sub-district 2 Study Area**, elementary student enrollment in Sub-district 2 would increase from approximately 6,919 students to 7,497 students by the 2022 analysis year. In the No-Action condition, elementary school capacity in the study area would remain the same as in the existing condition. Therefore, elementary schools in Sub-district 2 would have a utilization rate of 106.31% based on a capacity of 7,052 seats. Intermediate student enrollment would increase from approximately 3,630 students to 3,883 students in Sub-district 2. Intermediate school capacity in the study area would remain the same as in the existing condition. Therefore, intermediate schools in Sub-district 2 would have a utilization rate of 101.84% based on a capacity of 3,813 seats.

Table D-7: School Enrollment, Capacity, and Utilization for 2022 No-Action Condition, Sub-District 2 Study Area

	Projected Enrollment 2022	Students Generated by No-Action Developments	Total No-Action Enrollment	Capacity	Available Seats	Utilization
Elementary Schools						
CSD 8, Sub-district 2	*6,919*	*578*	*7,497*	*7,052*	*-445*	*106.31%*
Intermediate Schools						
CSD 8, Sub-district 2	*3,630*	*253*	*3,883*	*3,813*	*-70*	*101.84%*

Future with the Proposed Actions (With-Action Condition)

Elementary and Intermediate Schools

Project Generated Enrollment

The Proposed Actions would generate an incremental increase of approximately 266 DUs on the Project Site, 144 of which would be affordable. This would generate an increment of approximately 83 public elementary school students and 40 intermediate school students, estimated using the multipliers of 0.31 elementary school students per household and 0.15 intermediate students per household, respectively, as provided for Bronx CSD 8 in the SCA publication, *Projected Public School Ratio 2018 Housing Multipliers.*

As shown in **Table D-8: School Enrollment, Capacity, and Utilization for 2022 With-Action Condition, Sub-District 2 Study Area**, in the With-Action condition, the total number of public elementary school students in Sub-district 2 would be approximately 7,580 students. The Sub-district would have a utilization rate of 107.49% and a capacity shortfall of 528 seats.

In the With-Action condition, there would be approximately 3,883 students in public intermediate school students in Sub-district 2 by the year 2022. This would result in a utilization rate of 102.88% and a capacity shortfall of 110 seats in Sub-district 2.

The collective utilization rates for both elementary and intermediate schools would exceed the CEQR threshold of 100%. However, the increase in the collective utilization rate between the No-Action and With-Action conditions would be less than the CEQR threshold of 5%. The utilization rate would increase by 1.18% for elementary schools and it would increase by 1.05% for intermediate schools. Consequently, there would be no significant adverse impact on elementary or intermediate public schools in the study area.

Table D-8: School Enrollment, Capacity, and Utilization for 2022 With-Action Condition, Sub-District 2 Study Area

	Projected No-Action Enrollment	Students Generated by the Proposed Project	Total With-Action Enrollment	Capacity	Available Seats	Utilization
Elementary Schools						
CSD 8, Sub-district 2	*7,497*	*83*	*7,580*	*7,052*	*-528*	*107.49%*
Intermediate Schools						
CSD 8, Sub-district 2	*3,883*	*40*	*3,932*	*3,813*	*-110*	*102.88%*

VI. DETAILED ASSESSMENT – Publicly-Funded Group Child Care and Head Start Centers

Existing Conditions

Study Area

In conformance to *CEQR Technical Manual* guidelines, the study area for the analysis of publicly-funded group child care and Head Start centers is an area approximately 1.5 miles from the boundary of the Project Site. This 1.5-mile buffer from the Project Site touches eight community districts (CD): Bronx CDs 2, 6, 9, 10, 11, and 27 (See **Figure D-2: Child Care and Head Start Centers within 1.5 miles of Project Site**).

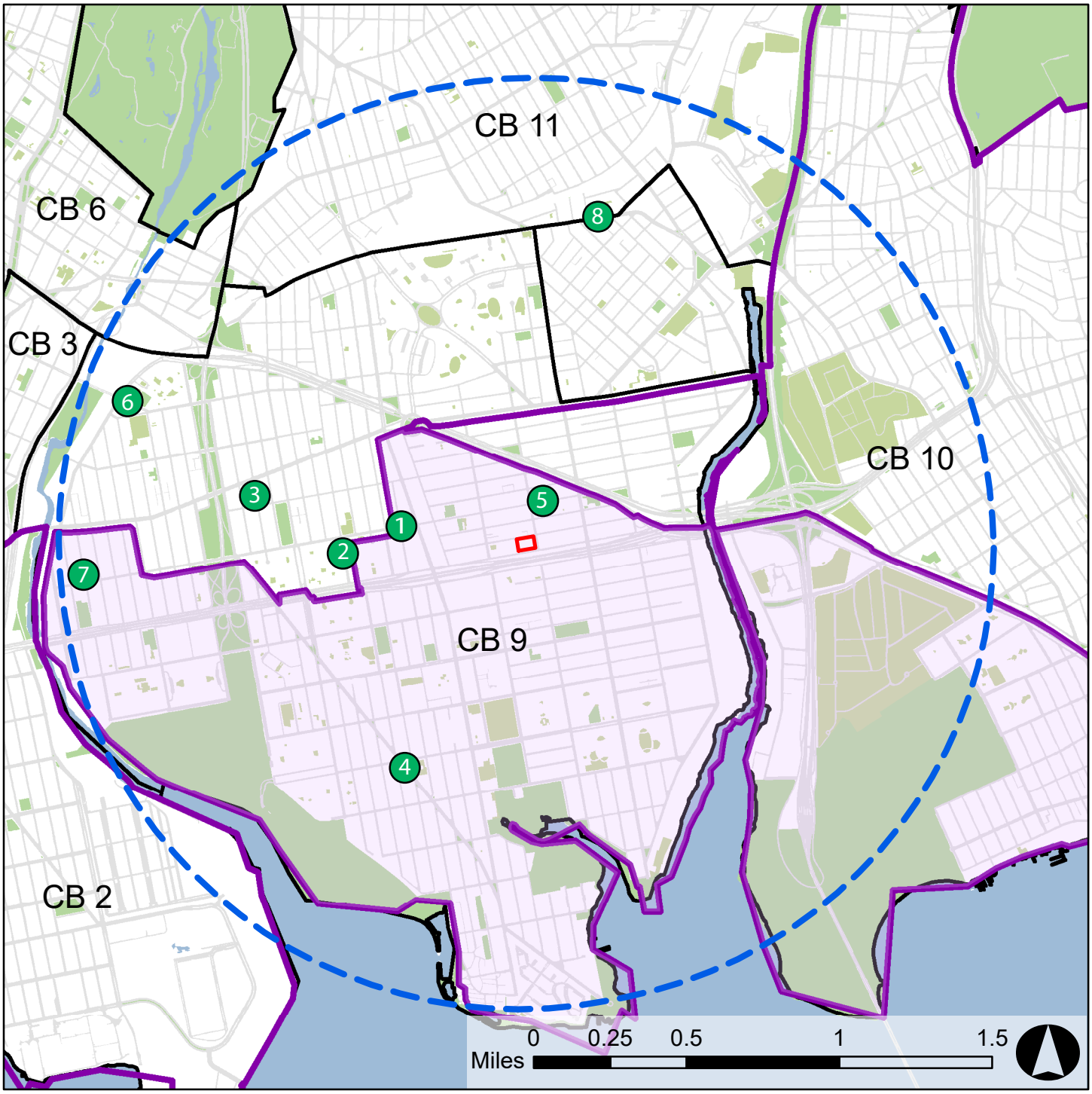
Publicly-Funded Group Child Care and Head Start Centers in the Study Area

There are eight publicly-funded group day care and Head Start centers within the 1.5-mile study area. These facilities have a total capacity of approximately 682 seats (**Table D-9: Child Care and Head Start Centers within 1.5 Miles of Project Site**).

Table D-9: Child Care and Head Start Centers within 1.5 Miles of Project Site

Map Key	Program Name	Program Address	Budget capacity	Enrollment	Available Slots	% Capacity
1	Watson Avenue Early Childhood Center	1880 Watson Avenue	87	70	17	80.46%
2	NYCHA Sotomayor Houses Day Care Center	1065 Beach Avenue	60	51	9	85.00%
3	Sound Dale Day Care Center	1211 Croes Avenue	169	140	29	82.84%
4	Seabury Day Care Corporation	575 Soundview Avenue	82	62	20	75.61%
5	Early LIFE Early Childhood Education	2125 Watson Avenue	107	106	1	99.07%
6	Bronx River Day Care Center	1555 East 174th Street	37	35	2	94.59%
7	East Bronx NAACP Day Care	1113 Colgate Avenue	54	50	4	92.59%
8	Westchester Tremont Day Care Center	2547 East Tremont Avenue	86	75	11	87.21%
		Total, Child Care and Head Start	682	589	93	86.36%

Source: Administration for Children's Services, June 2018



Source: Administration for Children's Services, June 2017

Project Site (Rezoning Area (Projected Development Site)

1.5 mile Study Area

Child Care/ Head Start Programs

School District 8

School District 8 Sub-District 2

Bronx Community Boards

CHILD CARE AND HEAD START CENTERS WITHIN 1.5 MILES OF PROJECT SITE

Figure D-2

Future without the Proposed Actions (No-Action Condition)

Enrollment and Capacity Changes

As described in Attachment A, "Project Description," four projects have been identified within approximately 0.5-mile of the Project Site that would potentially be completed and occupied by 2022. These development projects combined would introduce approximately 821 DUs (of which 397 would be affordable units), approximately 54,950 sf of commercial use, and approximately 1,276 sf of community facility use to the surrounding area. Since the No-Action development project located at 760 Sound View Avenue is within the 1.5-mile study area of the Project Site, the approximately 83 DUs resulting from that project are conservatively assumed to be affordable units, resulting in a total of 480 affordable DUs that would be generated by the five No-Action development projects. These 480 affordable DUs would generate approximately 67 additional children eligible for publicly-funded child care and Head Start, based on the multiplier of 0.139 children per household provided for the Bronx in Table 6-1b of the *CEQR Technical Manual*.

As described in Section V, "Detailed Assessment – Public Schools," the Applicant would pursue as-of-right development on the Project Site in the No-Action condition. It is assumed that the Project Site would be improved with attached, multi-family walkup apartments totaling 90,097 gsf of residential use, resulting in a total of approximately 84 market rate DUs and 56 accessory parking spaces. Since no affordable units would be generated under the No-Action condition, it is not considered in the analysis of publicly-funded group child care and Head Start centers. Therefore, accounting for No-Action development projects within 0.5-miles of the Project Site, the study area would have a utilization rate of 96.19% with a surplus of 26 available slots (**Table D-10: Day Care and Head Start Program Capacity and Utilization 2022 No-Action Condition**).

Table D-10: Day Care and Head Start Program Capacity and Utilization 2022 No-Action Condition

Capacity, Existing Condition	682
Capacity Generated by No-Action Development Projects	0
2022 Capacity, No-Action Condition	**682**
Enrollment. Existing Condition	589
Enrollment Generated by No-Action Development Projects	67
2022 Enrollment, No-Action Condition	**656**
Available Slots	26
2022 Utilization, No-Action Condition	**96.19%**

Future with the Proposed Actions (With-Action Condition)

The Proposed Actions would generate an incremental increase of 266 DUs, 144 of which would be affordable, between the No-Action and With-Action conditions. These DUs would generate approximately 21 students eligible for publicly-funded child care or Head Start programs, based on the multiplier of 0.139 children per household provided for the Bronx in Table 6-1b of the *CEQR Technical Manual*.

With the addition of the 21 children that would be generated by the Proposed Project, the total number of eligible children for publicly-funded child care and Head Start within 1.5 miles of the Project Site would be approximately 677 students in the With-Action condition. The capacity of publicly-funded child care and Head Start centers in the study area would not increase between the No-Action and With-Action conditions.

The study area would have a utilization rate of 99.27% and an available unused capacity of 5 seats in the With-Action condition (**Table D-11: Day Care and Head Start Program Capacity and Utilization 2022 With-Action Condition**).

The collective utilization rate would increase from 96.19% utilization in the No-Action condition to 99.27% in the With-Action condition, for a 3.08% increase. According to *CEQR Technical Manual* guidelines, a significant adverse impact on child care centers may occur if the Proposed Project would result in a collective utilization rate of group child care or Head Start centers in the study area would be greater than 100% in the With-Action condition and if there would be an increase of 5% or more in the collective utilization rate between the No-Action and With-Action conditions. Consequently, the Proposed Project would not result in a significant adverse impact on publicly-funded group child care or Head Start centers, and no further assessment is necessary.

Table D-11: Day Care and Head Start Program Capacity and Utilization 2022 With-Action Condition

2022 Capacity, No-Action Condition	682
Capacity Generated by the Proposed Project	0
2022 Capacity, With-Action Condition	**682**
2022 Enrollment, No-Action Condition	656
Enrollment Generated by the Proposed Project	21
2022 Enrollment, With-Action Condition	**677**
Available Seats	5
2022 Utilization, With-Action Condition	**99.27%**

Attachment E: Open Space

I. INTRODUCTION

This attachment assesses the potential impact of the Proposed Project on open space resources. Open space is defined in the *City Environmental Quality Review (CEQR) Technical Manual* as publicly-accessible, publicly- or privately-owned land that is available for leisure, play, or sport, or serves to protect or enhance the natural environment. *CEQR Technical Manual* guidelines indicate that open space analysis should be conducted if an action would result in a direct effect, such as the physical loss or alteration of 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," the Proposed Actions would facilitate the development of an approximately 366,007 gross square feet (gsf) mixed-use development with 350 affordable dwelling units (DUs) within 291,283 gsf of residential space, 18,023 gsf of ground floor commercial retail space, approximately 159 parking spaces for resident use, and approximately 173 bicycle parking spaces (the "Proposed Project"). Approximately 144 of the DUs would be restricted to households with incomes below 80% of Area Median Income (AMI), and approximately 206 DUs would be restricted to households with incomes between 81% and 130% of AMI, of which approximately 71 DUs may have a home ownership option. The height of the buildings would range from 70 feet for Building A to 95 feet for Building B.

The incremental increase in residential uses from the No-Action to the With-Action condition would be 266 DUs, and the incremental increase in commercial space would be the full 18,023 gsf. Consequently, the Proposed Actions would result in an incremental increase in residential population of approximately 761 residents[1] and a net increase in non-residential population of approximately 54 workers[2]. The *CEQR Technical Manual* states that for a project that is in neither an underserved nor a well-served area for open space resources, a preliminary open space assessment should be conducted for projects that would generate more than 200 additional residents. Since the Proposed Project is in an area that is neither an underserved nor a well-served area for open space resources and would generate more than 200 residents, an open space assessment was prepared.

II. PRINCIPAL CONCLUSIONS

The Proposed Project would not result in a significant adverse impact on open space.

The Proposed Project would neither result in the physical loss of open space resources or result in any significant adverse shadow, air quality, noise, or other environmental impacts that would affect the utilization of any public open space in the study area. Since the Proposed Actions would generate approximately 761 residents and approximately 54 workers in the With-Action condition compared to the No-Action condition, a preliminary open space assessment was completed to assess its potential impact on active open space resources. In conformance to *CEQR Technical Manual* guidelines, the assessment was completed for a 0.5-mile study area. The *CEQR Technical Manual* defines active open space as open space that is used for sports, exercise, or active play, and defines passive open space as open space that is used for relaxation, such as sitting or strolling. In many cases, open space may be used for both active and passive

[1] (Increment of 266 DUs) x (2.86 multiplier for household population, per the *CEQR Technical Manual*) = 761 residents (conservatively rounded up).
[2] (Increment of 18,023 gsf commercial uses) x (0.003 worker multiplier) = 54 workers.

recreation, including, for example, lawns and beaches, which permit both sunbathing and *ad hoc* ball or frisbee games.

As indicated in the *CEQR Technical Manual*, a residential population makes use of both passive and active open space, while the use of open space resources by worker populations is generally limited to passive open space. Since the largest increase in population that would occur with the Proposed Actions would be the residential population, the assessment of impacts on active open space is particularly relevant to the Proposed Project.

The availability of open space resources is characterized based on the number of acres of open space per 1,000 residents, also known as the open space ratio (OSR). In New York City (NYC), local open space ratios vary widely, and the median ratio at the Citywide Community District level is 1.5 acres of open space per 1,000 residents. As a planning goal, a ratio of 2.5 acres per 1,000 residents represents an area well-served by open space resources and is consequently used as an optimal benchmark for residential populations in large-scale plans and proposals. Ideally, this would comprise 0.50 acres of passive space and 2.0 acres of active open space per 1,000 residents. Although a typical population mix may call for such a goal, it may not be attainable for some areas of the City or for certain populations skewed toward certain age groups. Therefore, the City does not consider these ratios as its open space policy for every neighborhood, and consequently, these ratios do not constitute an impact threshold. Rather, the ratios are benchmarks that represent how well an area is served by its open space.

The preliminary open space assessment revealed that the OSR for the residential study area is 0.328 acres of publicly-accessible open space per 1,000 residents under existing conditions. This is lower than the citywide median ratio of 1.5 acres per 1,000 residents.

According to the *CEQR Technical Manual,* projects that reduce the OSR by more than five percent in areas that are currently below the citywide median ratio of 1.5 acres per 1,000 residents may result in a significant adverse impact, and, for areas that are extremely lacking in open space, a reduction as small as one percent may be considered a significant adverse impact. Although the existing OSR for the study area is below 1.5 acres per 1,000 residents, the indirect effects analysis demonstrated that the Proposed Project would decrease the OSR by 2.24% for the residential population, **(Table E-1: Open Space Ratios Summary)**. While the OSR of the study area with the Proposed Project would continue to be less than the optimal CEQR benchmark of 2.5 acres per 1,000 residents, in accordance with the *CEQR Technical Manual,* since the study area is neither underserved nor well-served by open space resources, the decrease in the OSR due to the Proposed Project would be less than five percent and would not be not considered a significant adverse impact on open space.

In addition, open space resources located outside the study area were considered qualitatively and supplemented in the quantitative assessment. Open space resources outside the study area included approximately 240.76 acres of active open space in regional and neighborhood-level open space resources accessible within a 30-minute walk of the Project Site. Based on the results of the quantitative and qualitative assessments, the Proposed Project would not result in a significant adverse impact on publicly-accessible open space resources and, consequently, no further assessment is necessary.

Table E-1: Open Space Ratios Summary

Type	CEQR Benchmark OSR	Open Space Ratio (acres per 1,000 persons)			Percent Change (No-Action condition to With-Action condition)
		Existing	No-Action	With-Action	
Residential – Total	2.5	0.328	0.301	0.295	-2.24%
Residential – Active	2.0	0.265	0.243	0.238	-2.24%
Residential – Passive	0.5	0.063	0.058	0.057	-2.24%
Non-Residential – Passive	0.15	0.304	0.296	0.274	-7.05%

III. METHODOLOGY

Direct Effects

As described in 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. Since the Proposed Actions would not directly displace any public open space, nor change the usefulness of or access to any public open space, it would not result in a direct effect on open space, and further assessment of direct effects on open space resources is not warranted.

Indirect Effects

The *CEQR Technical Manual* indicates that open space can be indirectly affected by a proposed action if the project would add enough population, either non-residential or residential, to noticeably diminish the capacity of open space in the area to serve the future population. An open space analysis is generally conducted if a proposed project would generate more than 200 residents or 500 workers. However, the need for an analysis varies in certain areas of the City that have been identified as either underserved, well-served, or neither underserved nor well-served by open space.[3] If a project is in an underserved area, the threshold for an open space analysis is 50 residents or 125 workers. If a project is in a well-served area, the threshold for an open space analysis is 350 residents or 750 workers. If a project is not located within an underserved or well-served area, an open space analysis should be conducted if the project would generate more than 200 residents or 500 workers.

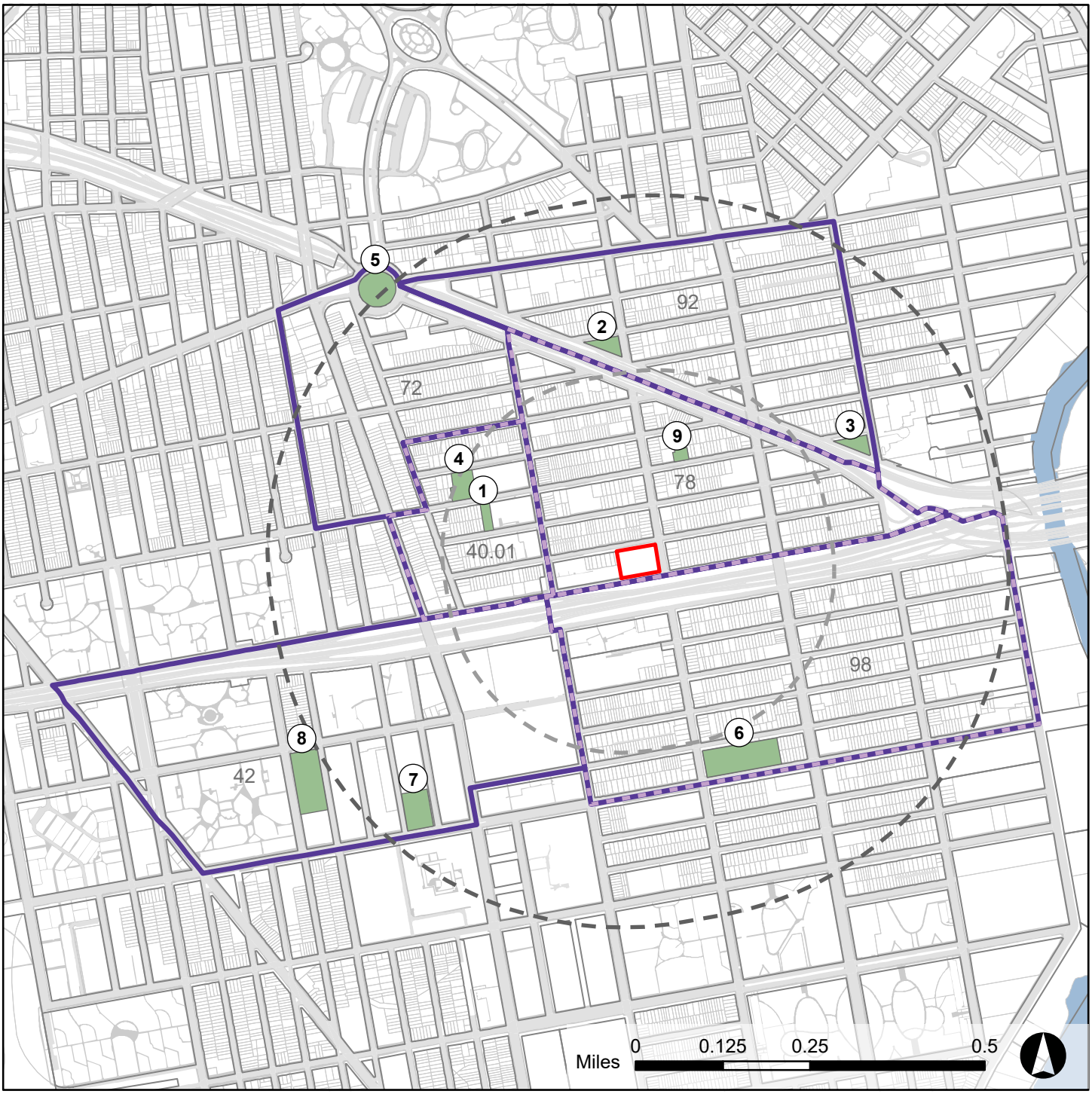
A review of maps in the Open Space Appendix to the *CEQR Technical Manual* indicates that the Project Site is in an area that is neither underserved nor well-served by open space. Consequently, a preliminary assessment is warranted if the Proposed Actions would result in an increase of more than 200 residents or 500 workers. Since the Proposed Actions would result in a net increase of approximately 761 residents and 18 workers, a preliminary open space assessment for residential and non-residential populations is warranted.

[3] The *CEQR Technical Manual* defines underserved areas as areas of high population density in the City that are generally the greatest distance from parkland, where the amount of open space per 1,000 residents is currently less than 2.5 acres. Well-served areas are defined as having an OSR above 2.5 accounting for existing parks that contain developed recreational resources; or are located within 0.25 mile (approximately a 10-minute walk) from developed and publicly-accessible portions of regional parks.

Study Area

In conformance to *CEQR Technical Manual* guidelines, the first step in assessing potential open space impacts is to establish the appropriate study area(s) for the new residential and/or non-residential population(s) that would be added by the Proposed Actions. According to the *CEQR Technical Manual*, the open space study areas is based on the distance a person is assumed to walk to reach a neighborhood open space. This distance differs by user group. Workers typically use passive open spaces within a short walking distance of their workplaces. Residents are more likely to travel farther to reach parks and recreational facilities and use both passive and active open spaces. Workers are assumed to walk up to a 0.25-mile distance to reach neighborhood open spaces, while residents are assumed to walk up to a 0.5-mile distance. While they may visit certain regional parks, such open spaces are not included in the quantitative analysis, but their effects are described qualitatively.

The residential study area for the open space assessment was based on a 0.5-mile distance from the Project Site and the non-residential study area was based on a 0.25-mile distance from the Project Site, which was adjusted in conformance to *CEQR Technical Manual* guidance to include all census tracts with at least 50% of their area within these respective boundaries. As shown in **Figure E-1: Existing Open Space Map**, the 0.5-mile residential study area is defined by Bronx census tracts 40.01, 42, 72, 78, 92, and 98, and the 0.25-mile non-residential study area is defined by Bronx census tracts 40.01, 78, and 98.



Source: 2016 Pluto, NYCDCP

Project Site / Rezoning Area (Projected Development Site)

0.25-Mile Radius

0.5-Mile Radius

Existing Public Open Space

Non-Residential Open Space Study Area Census Tracts

Residential Open Space Study Area Census Tracts

01 Study Area Census Tract Number

(1) Open Space Keyed to Table E-4

EXISTING OPEN SPACE MAP

Figure E-1

2069 Bruckner Boulevard EAS

Level of Assessment

According to the *CEQR Technical Manual*, an initial quantitative open space assessment may be useful to determine if a detailed open space analysis is necessary, or whether the open space assessment can be targeted to a user group. In the initial assessment, the OSR is calculated by comparing the existing residential population to the total open space in the study area. It then compares that OSR with the OSR in the future with the proposed action. If there is a decrease in the OSR that would approach or exceed 5%, or if the study area exhibits a low open space ratio from the onset (indicating a shortfall of open spaces in an area), a detailed analysis is warranted. Although the Proposed Project would reduce the OSR by less than five percent for residents, a detailed assessment was warranted since the study area exhibits a low OSR (i.e., an OSR below the median Citywide Community District OSR of 1.5 acres per 1,000 residents).

Impact Assessment

The availability of open space resources is characterized based on the number of acres of open space per 1,000 residents. In NYC, local open space ratios vary widely, and the median ratio at the Citywide Community District level is 1.5 acres of open space per 1,000 residents. As a planning goal, a ratio of 2.5 acres per 1,000 residents represents an area well-served by open space resources and is consequently used as an optimal benchmark for residential populations in large-scale plans and proposals. Ideally, this would comprise 0.50 acres of passive space and 2.0 acres of active open space per 1,000 residents. Although a typical population mix may call for such a goal, it may not be attainable for some areas of the City or for certain populations skewed toward certain age groups. Therefore, the City does not consider these ratios as its open space policy for every neighborhood, and consequently these ratios do not constitute an impact threshold. Rather, the ratios are benchmarks that represent how well an area is served by its open space. In addition, the *CEQR Technical Manual* recommends consideration of qualitative factors in the assessment of the potential for open space impacts, including the availability of nearby open space resources.

IV. PRELIMINARY OPEN SPACE ASSESSMENT

Pursuant to the guidelines included in the *CEQR Technical Manual*, a preliminary open space assessment was conducted. The non-residential study area exhibits a passive OSR of 0.304 in the existing condition, while the residential study area exhibits an OSR of 0.328 acres per 1,000 residents in the existing condition. This OSR is lower than the median Citywide Community District OSR of 1.5 acres of open space per 1,000 residents, indicating a shortfall of open space. Therefore, a detailed assessment was warranted and is provided below.

V. DETAILED OPEN SPACE ASSESSMENT

Existing Conditions

Study Area Residential Population

Data from the 2010 U.S. Decennial Census (2010 Census) was compiled for the census tracts comprising the study area to identify the residential population served by existing open space resources. The study area is comprised of the six census tracts listed in **Table E-2: Existing Study Area Residential Population**. Data from the 2010 Census shows that the study area had an estimated residential population of 30,468.

Table E-2: Existing Study Area Residential Population

Census Tract	Residential Population[1]
40.01	1,420
42	7,143
72	5,432
78	6,418
92	5,017
98	5,038
Study Area Total (2010)	**30,468**

[1] U.S. Census Bureau, 2010 Decennial Census, DP-1

Within a given area, the age distribution of a population affects the way open spaces are used and the need for various types of recreational facilities. Typically, children four years or younger use traditional playgrounds with play equipment for toddlers and preschool children. Children between the ages of five and nine typically use traditional playgrounds, as well as grassy and hard-surfaced open spaces, which are important for activities such as ball playing, running, and skipping rope. Children between the ages of 10 and 14 use playground equipment, court spaces, and ball fields. Teenagers and young adults tend to use court facilities such as basketball courts and sports fields such as football or soccer fields. Adults between the ages of 20 and 64 continue to use court facilities and fields for sports, as well as space for more individualized recreation, such as rollerblading, biking, and jogging, which require bike paths, esplanades, and vehicle-free roadways. Adults also gather with families for picnicking, *ad hoc* active sports such as frisbee, and recreational activities in which all ages may participate. Senior citizens engage in active recreation such as handball, tennis, gardening, and swimming, as well as recreational activities that require facilities appropriate for passive recreation. As shown in **Table E-3: Study Area Residential Population Age Breakdown**, the demographic data for the residential open space study area show a high percentage of residents in the 20-64 age bracket, suggesting a need for facilities geared towards adults. Compared to NYC overall, the study area has a higher proportion of children and adolescents.

Table E-3: Study Area Residential Population Age Breakdown

Census Tract	Total Residential Population	Age Distribution												Median Age
		Under 5		5-9		10-14		15-19		20-64		65+		
		#	%	#	%	#	%	#	%	#	%	#	%	
40.01	**1,420**	85	5.99%	94	6.62%	97	6.83%	82	5.77%	837	58.94%	225	15.85%	39.7
42	**7,143**	469	6.57%	481	6.73%	564	7.90%	645	9.03%	4,037	56.52%	947	13.26%	35.1
72	**5,432**	430	7.92%	403	7.42%	414	7.62%	393	7.23%	3,346	61.60%	446	8.21%	32.1
78	**6,418**	497	7.74%	510	7.95%	529	8.24%	510	7.95%	3,847	59.94%	525	8.18%	31.4
92	**5,017**	353	7.04%	343	6.84%	342	6.82%	357	7.12%	3,210	63.98%	412	8.21%	33.3
98	**5,038**	318	6.31%	315	6.25%	356	7.07%	395	7.84%	3,077	61.08%	577	11.45%	36.9
Total for 0.5-Mile Study Area	***30,468***	***2,152***	***7.06%***	***2,146***	***7.04%***	***2,302***	***7.56%***	***2,382***	***7.82%***	***18,354***	***60.24%***	***3,132***	***10.28%***	***34.0[1]***
Total for The Bronx	***1,385,108***	***103,144***	***7.45%***	***98,664***	***7.12%***	***99,159***	***7.16%***	***115,662***	***8.35%***	***822,597***	***59.39%***	***145,882***	***10.53%***	***32.8***
Total for NYC	***8,175,133***	***517,724***	***6.33%***	***473,159***	***5.79%***	***468,154***	***5.73%***	***535,833***	***6.55%***	***5,187,105***	***63.45%***	***993,158***	***12.15%***	***35.5***

Source: U.S. Census Bureau, 2010 Decennial Census, DP-1

[1] Weighted Average for study area census tracts

Study Area Non-Residential Population

Data from the *OnTheMap*, a service of the U.S. Census, was compiled for the census tracts comprising the study area to assess the non-residential population served by existing passive open space resources. The study area is comprised of census tract 40.01, 78, and 98. Data from 2014 show that the study area had a worker population of approximately 694 workers.

Inventory of Publicly-Accessible Open Space

According to the *CEQR Technical Manual*, open space may be public or private and may be used for active or passive recreational purposes. Public open space is defined as facilities that are open to the public at designated hours on a regular basis and should be assessed for impacts in conformance to the *CEQR Technical Manual*. The *CEQR Technical Manual* indicates that private open space not accessible to the public on a regular basis should only be considered qualitatively.

Publicly-accessible open space resources within the study area were identified by name and size based on information available from the NYC Department of Parks & Recreation ("NYC Parks") and field surveys as conducted on weekdays in the after-school hours in April 2016 and June 2017, **(Table E-4: Inventory of Existing Open Space)**. The geographic locations of these open spaces are shown on **Figure E-1: Existing Open Space Map** and are keyed to **Table E-4**.

Black Rock Playground

Black Rock Playground (Map Reference No. 1) is located on Watson Avenue, between Virginia Avenue and Pugsley Avenue. The 0.32-acre playground offers a variety of amenities including two swing sets for both toddlers and children, a range of climbing elements and jungle gyms, five slides, monkey bars, and rings. The playground is lined with benches where parents sit and watch the children. Adjacent to the main playground area is a basketball court that is fenced off from the rest of the playground area. The park was observed to be clean and in good condition with moderate utilization by young children, older teenagers, and adults during the June 2017 field survey. Black Rock Playground is jointly operated under the jurisdiction of NYC Parks and the NYC Department of Education (DOE).

Chief Dennis L. Devlin Park

Chief Dennis L. Devlin Park (Map Reference No. 2) is bounded by Olmstead Avenue, Ellis Avenue, and the Cross Bronx Expressway Service Road. The 0.52-acre park is a large, tree-lined park with views to the south of the Cross Bronx Expressway. Several benches are located on the interior perimeter and a paved open area occupies a majority of the center of the park. The park was observed to be in good condition and was moderately utilized by adults during the June 2017 field survey. This park is operated under the jurisdiction of NYC Parks.

Havemeyer Playground

Havemeyer Playground (Map Reference No. 3) is bounded by the Cross Bronx Expressway Service Road, Watson Avenue, and Havemeyer Avenue. The 0.44-acre park is located along the Cross Bronx Expressway and includes a jungle gym, swings, spray showers, a basketball court, benches, and a restroom facility. The park was observed to be in good condition and had a low/moderate utilization overall; however, the basketball court was heavily utilized. Toddlers, adolescents and teenagers, and adults were observed using the playground during the June 2017 field survey. This playground is operated under the jurisdiction of NYC Parks.

Haviland Playground

Haviland Playground (Map Reference No. 4) is located on Haviland Avenue and Watson Avenue between Virginia Avenue and Pugsley Avenue. The 0.84-acre playground is located adjacent to P.S. 562X, a junior high school; as such, the park is often occupied by primarily/middle school-aged students. The space is allocated mainly for sporting activities and includes basketball courts and a baseball diamond. A bench along the edge of the baseball diamond is the only passive space provided. The playground was observed to be moderately utilized during the June 2017 field survey. This playground is jointly operated under the jurisdiction of NYC Parks and DOE.

Hugh J. Grant Circle

Hugh J. Grant Circle (Map Reference No. 5) is located on Westchester Avenue between Virginia Avenue and Pugsley Ave. The space serves as a landscaped public plaza, offering benches and seating surrounded by gated landscaped lawns. The Parkchester (number 6 line) subway station entrance is located within the plaza and the elevated subway line partially runs over the open space. Hugh J. Grant Circle was observed to be in good condition and was moderately utilized by adults and seniors during the June 2017 field survey, with the majority using the space to walk to and from the subway station. NYC Parks plans to reconstruct the entirety of the Hugh J. Grant Circle, along with the adjacent Virginia Park to the north, through the Parks Without Borders Program. The redesign endeavors to improve pedestrian movement between the train station and nearby bus stops in addition to enhancing aesthetics and usability through a reconfiguration of pathways, upgrades to lighting and paving, expanding seating areas, and allowing more access to lawns and gardens. The acreage of each open space resource is not expected to change. Hugh J. Grant Circle is operated under the jurisdiction of NYC Parks.

P.O. Serrano Playground

P.O. Serrano Playground (Map Reference No. 6) is located on Olmstead Avenue between Turnbull Avenue and Lafayette Avenue. The 2.62-acre park provides a variety of active recreational uses for residents that are in good condition. Features include a jungle gym, spray showers, basketball courts, a large soccer field, a handball court, hopscotch, benches and picnic tables, bicycle racks, and a restroom building. Utilization was observed to be moderate during the June 2017 field survey: the basketball court, handball court, and spray showers were heavily used, and the soccer field and passive uses such as benches and picnic tables were moderately used. The jungle gym, bike racks, and hopscotch area were not used. Users included adolescents, teenagers, and adults were using the park, with no toddlers, young children, or seniors using the park. This playground is operated under the jurisdiction of NYC Parks.

Space Time Playground

The Space Time Playground (Map Reference No. 7) is an approximately 1.28-acre playground and is located on Lafayette Avenue, between Bolton Avenue and Underhill Avenue. The playground includes basketball courts, handball courts, playgrounds, bathrooms, eateries, benches, and chess/checkers tables. Overall, the playground was observed to be in good condition and heavily utilized by toddlers, children, adolescents, teenagers, and adults during the June 2017 field survey. This playground is jointly operated under the jurisdiction of NYC Parks and DOE.

Story Playground

Story Playground (Map Reference No. 8) is located on Story Avenue between Taylor Avenue and Thieriot Avenue. The 2.22-acre playground includes a range of active spaces including basketball courts, handball courts, a running track, fitness equipment, and a playground with jungle gyms, slides, and swings. Benches and chess/checkers tables provide passive activity space. Overall, the park was observed to be in good condition and moderately utilized by a range of age groups during the April 2016 field surveys; the playground was heavily used by elementary school children and toddlers, the basketball courts were

primarily used by adolescents and adults, while adult parents tended to utilize the surrounding benches and chess tables. This playground is jointly operated under the jurisdiction of NYC Parks and DOE.

P.S. 36 Unionport Playground

The Public School (P.S.) 36 Unionport Playground (Map Reference No. 9) is located on Castle Hill Avenue between Blackrock Avenue and Watson Avenue. The 0.78-acre open space resource is programmed for children through Grade 5, and facilities include a jungle gym, basketball courts, and a running track. The playground was not observed during the field survey. The open space area at P.S. 36 Unionport is operated under the jurisdiction of DOE.

Table E-4: Inventory of Existing Open Space

Map No.	Park Name	Location	Owner/ Agency	Amenities	Total Acres	Active		Passive		Condition	Utilization
						Acres	%	Acres	%		
1	Black Rock Playground*	Watson Ave. and Blackrock Ave. bet. Virginia Ave. and Pugsley Ave.	NYC Parks/DOE	Jungle gym, benches	**0.32**	0.24	75%	0.08*	25%	Acceptable	Moderate
2	Chief Dennis L. Devlin Park	Olmstead Ave., Ellis Ave., and Cross Bronx Exwy Service Rd.	NYC Parks	Benches, paved open area	**0.52**	0.00	0%	0.52	100%	Acceptable	Moderate
3	Havemeyer Playground	Cross Bronx Exwy Service Rd., Watson Ave., and Havemeyer Ave.	NYC Parks	Jungle gym, swings, spray showers, basketball courts, benches, flagpole, restrooms	**0.44**	0.35	80%	0.09	20%	Acceptable	Moderate (overall); Heavy (basketball)
4	Haviland Playground*	Haviland Ave. and Watson Ave. bet. Virginia Ave. and Pugsley Ave.	NYC Parks/DOE	Basketball courts, baseball diamond, benches	**0.84**	0.84	100%	0.00*	0%	Acceptable	Moderate
5	Hugh J. Grant Circle	Westchester Ave. bet. Virginia Ave. and Metropolitan Ave.	NYC Parks	Circular plaza with benches and gated off landscaped/grassy lawns, subway station entrances in center	**1.11**	0.00	0%	1.11	100%	Acceptable	Moderate
6	P.O. Serrano Playground*	Olmstead Ave. bet. Turnbull Ave. and Lafayette Ave.	NYC Parks	Jungle gym, hopscotch, spray showers, basketball courts, soccer field, handball court, benches, picnic tables, bicycle racks, restrooms	**2.62**	2.49	95%	0.13*	5%	Acceptable	Moderate
7	Space Time Playground	Lafayette Ave. bet. Bolton Ave. and Underhill Ave.	NYC Parks/DOE	Jungle gym, basketball courts, food vendors, handball courts, spray showers, benches, chess/checkers tables, restrooms	**1.28**	1.28	100%	0.00	0%	Acceptable	Heavy
8	Story Playground	On Story Ave, between Taylor Ave and Thieriot Ave	NYC Parks/DOE	Jungle gym, basketball courts, handball court, running track, fitness equipment, chess/checkers tables, benches	**2.08**	2.08	100%	0	0%	Acceptable	Moderate
9	P.S. 36 Unionport Playground*	Castle Hill Ave. bet. Watson Ave. and Blackrock Ave.	NYC Parks/DOE	Jungle gym, running track, basketball	**0.78**	0.78	100%	0.0	0%	No data	No data
Total, Residential Study Area					**9.99**	8.06	80.7%	1.93	19.3%		
Total, Non-Residential Study Area*								0.21*			

Sources: NYC Parks; site visit conducted in June 2017 and April 2016 (Story Playgrounds); Revised Westchester Mews EAS, dated March 3, 2017 (for P.S. 36 only).

Notes:
[1] The condition of the open spaces are estimates based on observations from a site visit. They also incorporate inspection ratings from the NYC Parks when applicable.
[2] Utilization levels are estimates based on observations from a site visit. The site visit in June 2017 was conducted on a warm, sunny weekday in June 2017 during the school year and in afterschool hours (3:30pm – 5:30pm). The site visit in April 2016, applicable only to Story Playground, was also conducted on a warm, sunny weekday afternoon, primarily during afterschool hours (2pm – 5pm).
[3] Active and passive spaces were calculated based on a list of active spaces (sports fields, playgrounds) from the NYC Parks. Observational estimates from the site visit were also considered.

Assessment of the Adequacy of Open Space Resources

Quantitative Assessment

The *CEQR Technical Manual* indicates that the adequacy of an open space resources in an area is assessed by evaluating the ratio of open space acreage to user population. The residential study area contains a total of 9.99 acres of usable publicly-accessible open space, serving approximately 30,468 residents in the residential study area, yielding an OSR of 0.328 acres of improved open space per 1,000 residents (**Table E-5: Adequacy of Open Space Resources, Existing Condition**). The *CEQR Technical Manual* indicates that the median OSR at the citywide Community District level is approximately 1.5 acres of open space 1,000 residents. The active OSR is 0.265 acres of active open space per 1,000 residents, and the passive OSR is 0.063 acres of passive open space per 1,000 residents.

The non-residential study area contains a total of 0.21 acres of usable public passive open space, serving approximately 694 workers in the non-residential study area, yielding an OSR of 0.304 acres of improved open space per 1,000 workers. The *CEQR Technical Manual* establishes a benchmark OSR of 0.15 to define a non-residential study area as well-served by passive open space resources.

Table E-5: Adequacy of Open Space Resources, Existing Condition

Residential Study Area									
Residential Population	**Existing Acreage**			**Existing OSR**			**CEQR Benchmark OSR**		
	Total	**Active**	**Passive**	**Total**	**Active**	**Passive**	**Total**	**Active**	**Passive**
30,468	9.99	8.06	1.93	0.328	0.265	0.063	2.50	2.00	0.50

Non-Residential Study Area			
Non-Residential Population	**Existing Acreage**	**Existing OSR**	**CEQR Benchmark OSR**
694	0.21	0.304	0.15

Qualitative Assessment

As summarized in **Table E-4: Inventory of Existing Open Space**, most open spaces in the study area were observed to be in good condition and had moderate use levels on a weekday afternoon. The types of open spaces vary and include landscaped green streets, some with benches or seating; standalone basketball courts; playgrounds primarily used by children; and multi-use parks that include a wide range of active uses. Many of the active open space resources in the study area cater to activities for children, adolescents, and teenagers. The most commonly found open spaces used for active recreation were jungle gyms and basketball courts.

As shown in **Table E-3: Residential Study Area Population Age Breakdown**, the largest age group in the study area is adults between the ages of 20 and 64. In addition, the proportion of the population that are youth (from toddlers to teenagers) is higher in the study area and the Bronx than in NYC overall, while the percentage of adults and seniors is lower. The relatively higher proportion of youth is reflected in the usage of active open spaces in the study area. Younger children were observed to account for most playground users, while adolescents and teenagers tended to utilize sports fields, especially basketball

courts. Adults were observed to utilize some active facilities but primarily passive facilities, such as benches and picnic tables, and often were supervising children playing.

No-Action Condition

Study Area Residential and Non-Residential Population

Absent the Proposed Actions, the No-Action condition would result in an as-of-right development on the Project Site under the existing zoning of R5. In addition, three new developments were identified in the census tract study areas that together would result in a total of approximately 389,410 gsf of development, consisting of approximately 335 residential DUs within the residential study area and approximately 6,203 sf of commercial retail within the non-residential study area. The 335 residential DUs would result in an increase in population of approximately 958, while the population increase resulting from the development of 84 DUs on the Project Site would be approximately 240 residents in the No-Action condition. (**Table E-6: No-Action Population Increase in the Study Area**). In addition, population in the study area is projected to increase due to background growth not associated with the identified No-Action projects. The Bronx experienced a population growth rate of 3.936% between 2000 and 2010, which was applied to the residential population at the 2010 Census. This background population growth was added to the increase in population resulting from the No-Action development projects to determine the projected study area population of 33,137 in the 2022 analysis year, (**Table E-7: No-Action Open Space Study Area Population**).

Table E-6: No-Action Population Increase in the Study Area

Development	Description	Population Increase
2053 Newbold Avenue & 2044 Westchester Avenue Block 3085, Lots 123 & 124 (Site 1); Block 3085, Lots 30, 34, 41 (Site 2); Block 3805, Lot 55, 56 (Site 3)	Rezoning from R5/C2-2 and R6/C2-2 to R6 and R6/C2-4 for a multi-phase project. Site 1 (of 5) would be a 219,736 gsf mixed-use development with two buildings at 10 and 11 stories, consisting of 203 residential DUs, 5,549 zsf of commercial retail, 1,276 zsf of community facility uses, and an Inclusionary Housing designation. Site 2 would be a 92,635 gsf mixed-use development with 62 residential DUs (30% affordable at 80% AMI) and 20,557 zsf of commercial retail. Site 3 would be a 40,978 gsf residential development with 37 DUs (30% affordable at 80% AMI).	864 residents
2160 Powell Avenue Block 3810, Lot 77	Approximately 4,986 gsf mixed-use development with two (2) DUs and approximately 2,703 sf of commercial retail	6 residents
909 Castle Hill Avenue* Block 3687, Lot 43	Approximately 31,075 sf mixed-use development consisting of 31 DUs and 6,203 sf of commercial space	89 residents 19 workers

Note:
* Within the non-residential study area

Table E-7: No-Action Study Area Population Projection

Existing Population 2010	0.394% Annual Population Growth to 2022	No-Action Projects Population Increase	Project Site As-of-Right Population Increase	Total No-Action Population 2022
30,468	1,471	958	240	33,137

Source: U.S. Decennial Census 2000 & 2010

Assessment of Open Space Adequacy

In the No-Action condition, the overall population increase in the analysis year of 2022 compared to the existing condition would be 2,669 residents, comprised of 1,471 residents through background population growth, 958 residents through No-Action development projects in the study area, and 240 residents on the Project Site resulting from as-of-right development. The study area is not projected to have an increase in publicly-accessible open space resources during this time. The study area contains a total of 9.99 acres of publicly-accessible open space, which would serve approximately 33,137 residents in the residential study area in 2022. Therefore, the OSR in the No-Action condition would be 0.296 acres of open space per 1,000 residents, compared to an OSR of 0.328 in the existing condition. The active OSR in the No-Action condition would be 0.243 acres of active open space per 1,000 residents, and the passive OSR would be 0.058 acres of passive open space per 1,000 residents, **(Table E-8: Adequacy of Open Space Resources, No-Action Condition)**. The *CEQR Technical Manual* establishes a benchmark OSR of 2.50 to define an area as well-served by open space resources, where the benchmark active OSR would be 2.00 and the benchmark passive OSR would be 0.50.

In the No-Action condition, the non-residential study area would contain a total of 0.21 acres of usable public passive open space. The worker population would increase by 19 workers through No-Action development in the study area for a total of approximately 713 workers in the non-residential study area, which would yield an OSR of 0.296 acres of improved open space per 1,000 workers. The *CEQR Technical Manual* establishes a benchmark OSR of 0.15 to define a non-residential study area well-served by passive open space resources.

Table E-8: Adequacy of Open Space Resources, No-Action Condition

Residential Population	No-Action Acreage			No-Action OSR			*CEQR* Benchmark OSR		
	Total	Active	Passive	Total	Active	Passive	Total	Active	Passive
33,137	9.99	8.06	1.93	0.301	0.243	0.058	2.50	2.00	0.50

Non-Residential Population	No-Action Acreage	No-Action OSR	CEQR Benchmark OSR
713	0.21	0.296	0.15

With-Action Condition

Study Area Residential and Non-Residential Population

The Proposed Actions in the With-Action condition would result in a mixed-use development with 350 affordable DUs, 18,023 gsf of commercial space, and approximately 159 parking spaces under the proposed R7A/C2-4 zoning, whereas the as-of-right development in the No-Action condition would consist of 84 DUs and 56 parking spaces under the existing R5 zoning. Therefore, the increment between the No-Action and With-Action conditions would be 266 DUs and 761 residents[4], and the total population in the With-Action condition would be 33,898. The Proposed Actions in the With-Action condition would result in an increase of worker population by 54 workers; total non-residential population in the With-Action condition would be 767, (**Table E-9: With-Action Study Area Population**).

Table E-9: With-Action Study Area Population

Residential Study Area		
No-Action Population in 2022	**Project Site Incremental Population Increase**	**Total With-Action Population in 2022**
33,137	761	33,898
Non-Residential Study Area		
No-Action Population in 2022	**Project Site Incremental Population Increase**	**Total With-Action Population in 2022**
713	54	767

Assessment of Open Space Adequacy

There would be a net increase of approximately 761 residents in the With-Action condition compared to the number of residents in the No-Action condition in the residential study area. It is not anticipated that there would be an increase in open space resources in the residential study area or the non-residential study area by the 2022 analysis year. The study area contains a total of 9.99 acres of publicly-accessible open space, serving approximately 33,898 residents in the With-Action condition, yielding an OSR of 0.295 acres of open space per 1,000 residents, **(Table E-10: Adequacy of Open Space Resources, With-Action Condition)**. The *CEQR Technical Manual* considers a median Citywide Community District OSR of 1.5 acres per 1,000 residents. The *CEQR Technical Manual* also considers a benchmark OSR of 2.50 to define an area as well-served by open space resources, where the benchmark active OSR would be 2.00 and the passive OSR would be 0.50.

[4] Uses a multiplier of 2.86 per household for the Bronx.

Table E-10: Adequacy of Open Space Resources, With-Action Condition

Residential Study Area									
Residential Population	**Existing Acreage**			**With-Action OSR**			***CEQR* Benchmark OSR**		
	Total	**Active**	**Passive**	**Total**	**Active**	**Passive**	**Total**	**Active**	**Passive**
33,898	9.99	8.06	1.93	0.295	0.238	0.057	2.50	2.00	0.50

Non-Residential Study Area			
Non-Residential Population	**Existing Acreage**	**With-Action OSR**	**CEQR Benchmark OSR**
767	0.21	0.275	0.15

The decrease in the residential OSR between the No-Action condition and the With-Action condition would be 2.24%. The decrease in the non-residential OSR between the No-Action condition and the With-Action condition would be 7.05%. While the non-residential OSR would decrease by greater than 5% between the No-Action condition and the With-Action condition, the non-residential OSR of 0.275 would remain above the CEQR benchmark optimal ratio for worker populations of 0.15 acres of passive open space per 1,000 nonresidents. , the Proposed Actions would not result in a significant adverse impact on open space resources.

Qualitative Assessment

In addition to the quantitative assessment, a qualitative assessment was completed that supplemented the findings of the quantitative assessment, and included a discussion of on-site recreational resources, the condition of open space resources in the study areas, and open space resources outside of the study areas.

Regarding on-site recreational resources in the With-Action condition, the Proposed Project would include two on-site recreational rooms, including a 1,156-sf room in Building A and a 1,430-sf room in Building B, and an approximately 3,423-sf private outdoor recreational area as amenities to building residents. Specific programming of these spaces has not yet been determined and will be subject to tenant demand, among other factors. The outdoor recreational area would be a rooftop terrace in the rear of Building B over the first floor. These privately-accessible, on-site recreational spaces would help to offset building residents' and workers' needs for active and passive open space resources.

Regarding the condition of open space resources in the study areas, based on field surveys and NYC Parks inspection records, all open space resources in the study area were maintained in acceptable condition and most had a moderate utilization. Planned improvements to Hugh J. Grant Circle are expected to improve usability of the open space resource through improved circulation of pedestrians, increasing access to lawns and gardens, and expanding seating areas.

In addition, several regional parks and other publicly-accessible recreational facilities are accessible within a one-mile radius of the Project Site. Distances to these opens spaces and their acreage are provided in **Table E-11: Other Open Spaces Within 30-Minute Walk from the Project Site** and are shown on **Figure E-2: Other Open Spaces Within 30-Minute Walk from the Project Site**. Active features at these additional open space resources would be suitable to both youth and adults, including football, basketball, baseball, running tracks, handball courts, greenways, kayak/boat launches, and playgrounds, while passive features include community gardens, benches, and walking paths. Soundview Park, the entrance to which

is an approximately 23-minute walk from the Project Site, is a 205.31-acre park with active recreational facilities for adults and youth, including six baseball fields, six basketball courts, a soccer field, bicycling/greenways, a cricket pitch, handball courts, football field, jungle gyms, spray showers, kayak/boat launch, a running track, concessions, and restrooms. Pugsley Creek Park, another regional park totaling 83.61 acres, is an approximately 21-minute walk from the Project Site. Its southern end contains mostly passive open space, though a kayak/boat launch provides active recreation as well as baseball fields in the north end. Other publicly-accessible open spaces are shown in **Table E-11**. These open spaces contribute approximately 240.76 acres of active open space in addition to the open space included in the study area.

Table E-11: Other Open Spaces Within 30-Minute Walk from the Project Site

Key	Name	Block-Lot	Ownership	Active Open Space (acres)	Passive Open Space (acres)	Walking Distance in Minutes	Facilities
1	Park at Trinity Church	3809-18	Trinity Evangelical Lutheran Church	0.07		5	Basketball, benches, paved open area
2	Rosedale Gardens Co-op Park[1]	3663-2	Rosedale Gardens Inc.	0.14		13	Jungle gym, spray shower
3	Sonia Sotomayor Houses[1]	3730-1, 3725-1, 3723-1	NYCHA	0.34		14	Basketball, handball
4	P.S. 138, Equality Charter High School	3609-16	NYC Parks/DOE	0.80		15	Playground, running track, basketball
5	Stevenson Family Health Center[1]	3600-4	The Institute for Family Health	3.90	0.57	15	Basketball, handball, tennis
6	Castle Hill Little League Field	3840-1	NYC Parks	1.77		16	Baseball
7	Monroe Houses[1]	3637-1	NYCHA	1.02		17	Basketball, baseball
8	Virginia Park	3928-50	NYC Parks		0.92	17	Benches
9	Virginia Playground	3928-100	NYC Parks	0.46		18	Jungle gym, spray shower, restrooms
10	Jamie Towers Housing	3567-1	Jamie Towers Housing Co.	0.92	0.57	18	Playground, pool
11	Randall Playground at Castle Hill Houses	3570-100	NYC Parks	1.00		18	Jungle gym, swings, spray showers, handball, basketball, benches, restrooms
12	Watson Gleason Playground	3750-1	NYC PARKS	3.30		19	Basketball, handball, jungle gym, spray showers, concessions, restrooms
13	Kips Bay Boys & Girls Club	3528-17	Kips Bay Boys & Girls Club	2.25	0.73	20	Baseball, soccer
14	Pugsley Creek Park (north end)	3529-1	NYC Parks	7.77		21	Baseball
15	P.S. 47	3786-16	NYC Parks/DOE	0.41[2]		22	Jungle gym, sports fields
16	Wood Park	3882-100	NYC Parks		0.19	22	Benches
17	Soundview Park	3543-1	NYC Parks	205.31		23	Baseball, soccer, cricket, handball, football, bicycle, basketball, spray

							showers, jungle gym, running track
18	St. Lawrence Triangle	3898-1	NYC Parks		0.14	23	Benches
19	I.S. 123	3718-1	NYC DOE	0.73		23	Jungle gyms
20	Taylor-Soundview Block Association	3523-38	NYC Parks		0.07	24	Community garden
21	Parque de los Niños[1]	N/A	NYC Parks	7.07		24	Basketball, baseball, jungle gym, spray shower
22	Pugsley Creek Park (south end)	3478-2	NYC Parks	0.07[1]	75.77	27	Kayak & canoe launch, trail
23	Metcalf Playground	N/A	NYC Parks	3.43	14.61	29	Jungle gyms, spray shower, benches, restrooms
Total Area, Average Time				**240.76**	**93.57**	**19.3**	

Sources: NYC Parks, NYC Department of City Planning: PLUTO 2016.
Notes:
[1] Area estimated using Google Maps measurement tool.
[2] Active open space was conservatively estimated as 1% of the total park area on Lot 2 of Block 3478.
Walking distance was estimated using Google Maps 2017.



OTHER OPEN SPACES WITHIN 30-MINUTE WALK FROM THE PROJECT SITE

Figure E-2

2069 Bruckner Boulevard EAS

Attachment F: Shadows

I. INTRODUCTION

This attachment assesses the potential for significant adverse impacts due to shadows created by the Proposed Project on sunlight-sensitive resources. Section 200 of Chapter 8 of the *City Environmental Quality Review* (*CEQR) Technical Manual* states that a shadows assessment is necessary for projects that would either result in new structures (or additions to existing structures) of 50 feet in height or more, or be located adjacent to, or across the street from, a sunlight-sensitive resource. Sunlight-sensitive resources are those resources that depend on sunlight or for which direct sunlight is necessary to maintain the resource's usability or architectural integrity. Examples include public open spaces, significant architectural resources, and natural resources.

As described in Attachment A, "Project Description," the Proposed Actions would facilitate development of an approximately 366,007 gross square feet (gsf) mixed-use development consisting of three adjoining buildings and comprised of 350 affordable dwelling units (DUs) within 291,283 gsf of residential space, approximately 18,023 gsf of ground floor commercial retail space, 159 parking spaces for resident use, and approximately 173 bicycle parking facilities (the "Proposed Project"). Approximately 144 DUs would be restricted to households with incomes below 80% of Area Median Income (AMI), and approximately 206 DUs would be restricted to households with incomes between 81% and 130% of AMI, of which approximately 71 DUs may have a home ownership option. The height of the buildings would range from 70 feet for Building A to 95 feet for Building B.

II. PRINCIPAL CONCLUSIONS

A Tier 1 screening level shadows assessment shows that shadows cast from the Proposed Project would not cover any sunlight-sensitive resources. As such, the Proposed Project would not have the potential to result in a significant adverse shadow's-related impact and, consequently, no further assessment is necessary.

III. METHODOLOGY

The assessment of shadows impacts begins with a preliminary screening assessment to identify whether a project's shadow may reach any sunlight-sensitive resources at any time of the year. Sunlight-sensitive resources of concern, as defined by the *CEQR Technical Manual*, are those resources that depend on sunlight or require direct sunlight to maintain their usability or architectural integrity. Potential sunlight-sensitive resources include publicly-accessible open space, as identified in Chapter 7, "Open Space" in the *CEQR Technical Manual*, as well as architectural resources, as defined in Chapter 9, "Historic and Cultural Resources" of the *CEQR Technical Manual,* that depend on direct sunlight for their enjoyment by the public. As indicated in the *CEQR Technical Manual*, only the features that are sunlight-sensitive should be considered in the shadows assessment, as opposed to the entire architectural resource.

The preliminary screening assessment was completed in conformance to a tiered assessment process prescribed in the *CEQR Technical Manual*. Major steps in this process included:

- ***Base Map.*** Development of a base map that illustrates the proposed site location in relationship to the sunlight-sensitive resources.

- ***Tier 1 Screening Assessment.*** Development of the longest shadow area. The longest shadow study area encompasses the site of the proposed project and a perimeter around the site's boundary with a radius equal to the longest shadow that could be cast by the proposed project. According to the *CEQR Technical Manual*, the longest shadow that a structure will cast in New York City, except for periods close to dawn or dusk, is 4.3 times its height. The purpose of the Tier 1 Screening Assessment is to determine whether any sunlight-sensitive resources are located within the longest shadow study area.

IV. EXISTING CONDITIONS

Base Map and Sunlight-Sensitive Resources of Concern

A base map was developed that identified the shadows study area in relationship to sunlight-sensitive resources of concern **(Figure F-1: Shadows Base Map)**. A search of sunlight-sensitive open space resources was conducted using PLUTO data from the NYC Department of City Planning (DCP). Sunlight-sensitive architectural and natural resources were identified using the NYC Landmarks Preservation Commission (LPC) Discover Landmarks online mapping tool, the New York State (NYS) Cultural Resource Information System (CRIS) online mapping tool, and the NYS Department of Environmental Protection (DEC) Environmental Resource Mapper online tool. As shown on **Figure F-1**, there are no resources of concern near the Project Site.

V. WITH-ACTION CONDITION

Tier 1 Screening Assessment

In conformance with guidance in Section 312 of Chapter 8 of the *CEQR Technical Manual*, a Tier 1 Screening Assessment was completed that identified the longest shadow that could be cast by the Proposed Project, which is 4.3 times the height of the structure and occurs on December 21st (winter solstice) **(Figure F-2: Tier 1 Screening)**. As shown in **Figure F-2**, the tallest building of the Proposed Project would be 95 feet in height. The top of the HVAC stack would reach 112 feet, which would cast a shadow to a maximum radius of 481.6 feet from the Project Site. No sunlight-sensitive resources of concern are in the Tier 1 shadow coverage area. Therefore, no further assessment of shadows is needed and the Proposed Project would not result in a significant adverse impact related to shadows.



Source: 2016 Pluto, NYCDCP

Project Site / Rezoning Area (Projected Development Site)

SHADOWS BASE MAP

Figure F-1

2069 Bruckner Boulevard Rezoning EAS



Source: 2016 Pluto, NYCDCP

Project Site / Rezoning Area (Projected Development Site)

Longest Shadow Study Area

TIER 1 SHADOWS ASSESSMENT

Figure F-2

2069 Bruckner Boulevard Rezoning EAS

Attachment G: Urban Design and Visual Resources

I. INTRODUCTION

This attachment assesses the potential impact of the Proposed Project on urban design and visual resources. Urban design is the composite of elements that may affect a pedestrian's experience of public space. These elements include streets, buildings, visual resources, open space, natural features, and wind. As described in Chapter 10 of the *City Environmental Quality Review (CEQR) Technical Manual*, the urban design and visual resources assessment evaluates whether the Proposed Project may have effects on one or more elements of pedestrian experience.

As described in Attachment A, "Project Description," the Proposed Actions would facilitate development of an approximately 366,007 gross square feet (gsf) mixed-use development consisting of two adjoining buildings and comprised of 350 affordable dwelling units (DUs) within 291,283 gsf of residential space, approximately 18,023 gsf of ground floor commercial retail space, 159 parking spaces for resident use, and approximately 173 bicycle parking spaces (the "Proposed Project"). Approximately 144 DUs would be restricted to households with incomes below 80% of Area Median Income (AMI), and approximately 206 DUs would be restricted to households with incomes between 80% and 130% of AMI, of which approximately 71 DUs may have a home ownership option. The height of the buildings would range from 70 feet for Building A to 95 feet for Building B.

A Reasonable Worst-Case Development Scenario (RWCDS) for the Project Site was used as the basis of the assessment for urban design and visual resources, which is defined as the reasonable worst-case development that could be constructed under the Proposed Actions and would have a maximum bulk floor area ratio (FAR) of 4.6 and a maximum height of 95 feet. The height and bulk of the Proposed Project under the RWCDS would have the potential for a pedestrian to observe, from the street level, a physical alternation beyond that allowed by existing zoning. As such, a preliminary urban design assessment has been conducted.

II. PRINCIPAL CONCLUSIONS

Based on guidance in the *CEQR Technical Manual*, the Proposed Project would not result in a significant adverse impact on urban design and visual resources. The Proposed Actions would facilitate the development of two adjoining buildings with a maximum height of nine stories (95 feet) and a density of 4.6 FAR. The Proposed Project would result in an improved streetscape that would be like the No-Action condition and the surrounding context and include sidewalk improvements and more street trees than currently exist on the Project Site. In addition, the Proposed Project would be like other multi-family developments with moderate density in the study area. The style and character of the Proposed Project would be consistent with existing residential buildings, including brick exteriors and a design that breaks up the exterior wall of Building A that would be more consistent with adjacent one- and two-family homes. Consequently, the Proposed Project would not result in a change to the arrangement, appearance, or functionality of the built environment in a way that would adversely affect a pedestrian's experience of the area.

In addition, since no significant visual resources were identified in the study area, the Proposed Project would not have the potential to obstruct any important visual resources. Consequently, the Proposed Project would not result in a significant adverse impact on visual resources and no further assessment is necessary.

III. METHODOLOGY

According to *CEQR Technical Manual* guidelines, urban design is the totality of components that may affect a pedestrian's experience of public space, and that the following elements play an important role in that experience:

1. **Streets.** For many neighborhoods, streets are the primary component of public space. The arrangement and orientation of streets define the location and flow of activity in an area, set street views, and create the blocks on which buildings and open spaces are organized. The apportionment of street space between cars, bicycles, transit, and sidewalks and the careful design of street furniture, grade, materials used, and permanent fixtures, including plantings, street lights, fire hydrants, curb cuts, or newsstands are critical to making a successful streetscape.
2. **Buildings.** Buildings support streets. A building's street walls are the most common backdrop in the city for public space. A building's size, shape, setbacks, lot coverage, and placement on the zoning lot and block; the orientation of active uses; and pedestrian and vehicular entrances all play major roles in the vitality of the streetscape. The public realm also extends to building facades and rooftops, offering more opportunity to enrich the visual character of an area.
3. **Visual Resources.** A visual resource is the connection from the public realm to significant natural or built features including views of the waterfront, public parks, landmark structures or districts, otherwise distinct buildings or groups of buildings, or natural resources.
4. **Open Space.** For the purposes of urban design, open space includes public and private areas such as parks, yards, cemeteries, parking lots, and privately owned public spaces.
5. **Natural Features.** Natural features include vegetation and geologic, topographic, and aquatic features. Rock outcroppings, steep slopes or varied ground elevation, beaches, or wetlands may help define the overall visual character of an area.
6. **Wind.** Channelized wind pressure from between tall buildings and downwashed wind pressure from parallel tall buildings may cause winds that affect pedestrian comfort and safety.

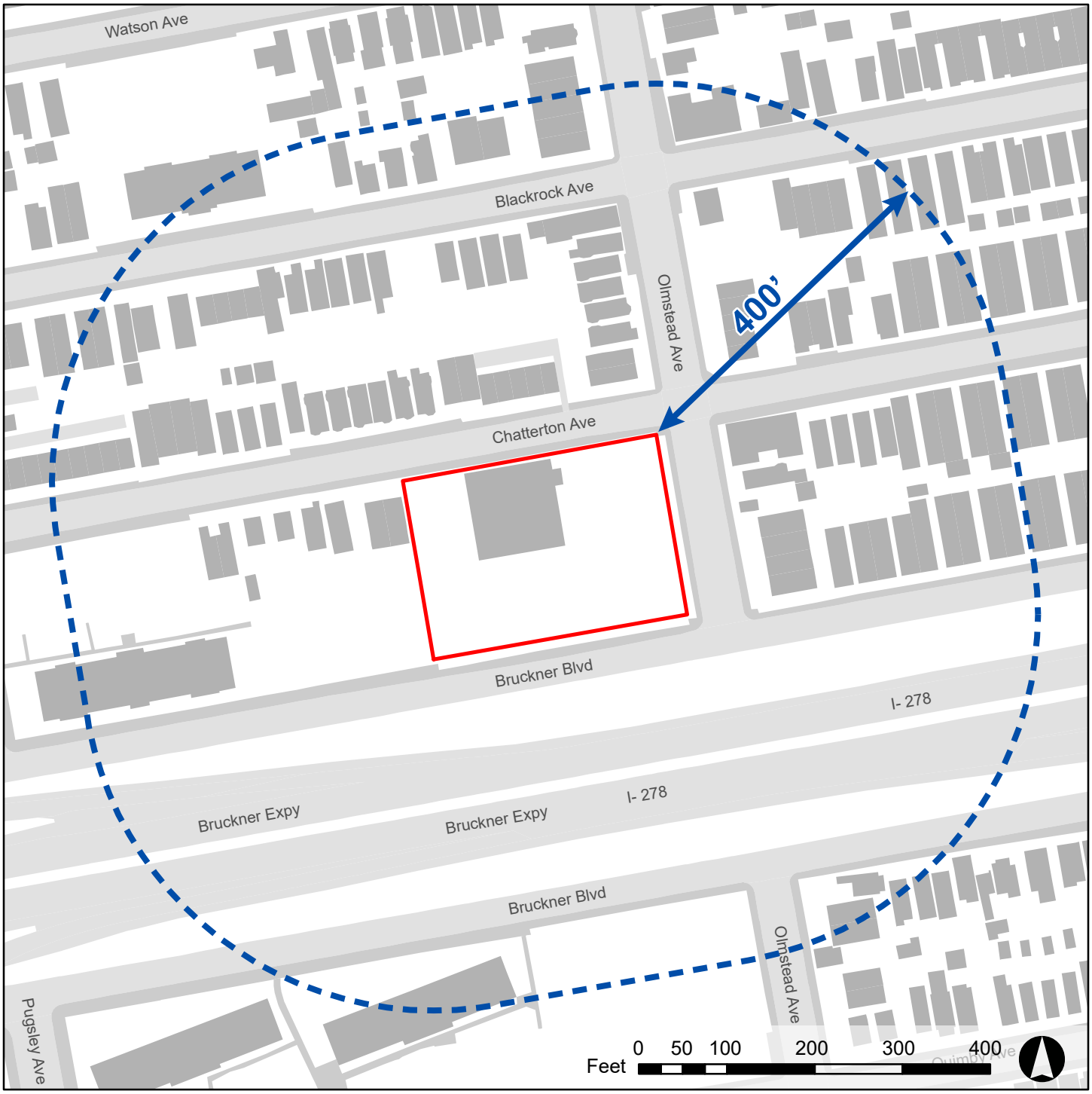
An urban design and visual resources assessment is necessary when a project may affect one or more of the defined elements that contribute to the pedestrian experience. According to *CEQR Technical Manual* guidelines, a preliminary assessment for urban design is appropriate when there is the potential for a pedestrian to observe, from the street, a physical alteration beyond that allowed by existing zoning, including projects that:

1. Permit the modification of yard, height, and setback requirements;
2. Result in an increase in built floor area beyond what would be allowed 'as-of-right' or in the future without the proposed project.

The Proposed Actions includes the rezoning of Lot 33 of Block 3797 in Bronx CD 9 (the "Project Site") from R5 to R7A/C2-4 and a text amendment of Appendix F of the Zoning Resolution (ZR) of the City of New York to classify the Project Site as a Mandatory Inclusionary Housing (MIH) designated area. The Proposed Actions would facilitate development that would have the potential for a pedestrian to observe, from the street level, a physical alternation beyond that allowed by existing zoning. Consequently, a preliminary assessment has been completed to determine what, if any, potential impact of the Proposed Project would have on urban design and visual resources. The preliminary assessment describes existing urban design features and visual resources within a 400-foot study area from the Project Site, and future (2022) urban design features and visual resources in the study area in the No-Action and With-Action conditions **(Figure G-1: Urban Design and Visual Resources Study Area Map)**. In conformance to guidance in the *CEQR Technical Manual*, changes that would occur between the No-Action and With-Action conditions are disclosed.

In addition, *CEQR Technical Manual* guidelines state that the construction of projects involving multiple tall buildings at or near waterfront sites may result in exacerbation of wind conditions due to 'channelization' or

'downwash' that may affect pedestrian comfort and safety. The Proposed Actions would not facilitate the construction of a large building at a location along the waterfront, nor would it include multiple tall buildings. Consequently, a wind assessment is not warranted.



Source: 2016/2017 PLUTO, DCP

Project Site

400-foot Study Area

URBAN DESIGN & VISUAL RESOURCES STUDY AREA MAP

Figure G-1

2069 Bruckner Boulevard Rezoning EAS

IV. EXISTING CONDITIONS

Project Site

The Project Site has an approximate lot area of 61,101 square feet (sf) and is bound by Chatterton Avenue to the north, Bruckner Boulevard to the south, Olmstead Avenue to east, and Lots 1 and 32 of Block 3797 to the west. The Project Site is mapped as an R5 district.

Study Area

The study area is mainly comprised of residential uses of varying densities, including multi-family elevator and walk-up buildings as well as one- and two-family homes. Multi-family housing in the study area is characterized by rectangular-shaped brick buildings with modernist architecture and heights between five and 14 stories. One- and two-family homes generally range in height between two and three stories, with exteriors of either brick and vinyl or wood siding. Most residential buildings are set back from the sidewalk and have front yards large enough for vehicle parking or a small garden.

According to the *CEQR Technical Manual,* the study area for the urban design and visual resources assessment is the area where the project may influence land use patterns and the built environment and is generally consistent with that used for the land use analysis. Since the land use analysis used a study area radius of 400 feet, the urban design and visual resources study area consists of the area within a 400-foot radius of the Project Site.

Streets

Streets in the study area generally follow a grid pattern. Bruckner Boulevard consists of two one-way service roads located to the north and south of the Bruckner Expressway/Interstate-278. Both service roads are designated under the ZR as wide[1], two-lane roads. The northern road is westbound while the southern road is eastbound. The westbound service road directly south of the Project Site merges onto the Bruckner Expressway approximately 0.5 miles west of the Project Site.

Located north of the Project Site, Chatterton Avenue and Blackrock Avenue are designated under the ZR as narrow[2], one-lane, one-way local roads and follow an east-west direction. Olmstead Avenue, located adjacent to and east of the Project Site, is a wide, two-lane, two-way street and forms a perpendicular intersection with westbound Bruckner Boulevard. On-street parallel parking is located on either side of Chatterton Avenue, Blackrock Avenue, and Olmstead Avenue, while on-street parallel parking is located on the northern (westbound)Bruckner Boulevard only.

Streetscape elements within the study area are limited primarily to sidewalks lined with trees without tree guards. Street furniture includes cobra head lampposts, wooden electrical poles, standard street signs, bus stop signs, fire hydrants, trash cans, mail boxes, wrought-iron fencing, and chain-link fencing. All rights-of-way in the study area include sidewalks of varying widths and conditions ranging from adequate to poor. In the lower-density residential areas north of Bruckner Boulevard, decorative metal gates are common along property lines, and vehicles are seen parked along the street, in garages, or in driveways, which are located either in the front yard or at the rear of residential buildings.

Views along the northern and southern Bruckner Boulevard service roads include single-family, two-family, and multi-family walkup buildings along with surface parking lots maintained in varying conditions. South of Bruckner Boulevard, Olmstead Avenue consists of lower-density housing on the east side of the street and a vacant lot with a basketball court in poor condition on the west side of the street. These properties are surrounded by chain-link fencing.

[1] The Zoning Resolution of the City of New York defines wide streets as being 75 feet or more in width.
[2] The Zoning Resolution of the City of New York defines narrow streets as being less than 75 feet in width.

Buildings

The study area is generally characterized by a mixture of low-, medium-, and high-density residential uses and occasional neighborhood commercial uses. Building heights range in height between one-and 14-stories **(Figure G-2: Existing Building Heights);** FARs range between zero and 4.67 **(Figure G-3: Existing Density)**.

The 61,101-sf Project Site is located on a corner lot that extends the entire depth of the block and midway through the width of the block. It is currently improved with a vacant one-story building that was formerly used as a place of worship. The 10,200-sf building has a built FAR of 0.167 **(Figure G-3)**. The building was constructed in 1961 and is comprised of two adjoining structures: a main building with stucco exterior in beige and brick colors and a shingled, gabled roof; and a brick building attached to the rear of the main building, which is painted white on side elevations and has a flat roof. The front elevation of the main building includes four doors and six small windows, while the side elevations each contain one small window. The rear of the building extends to the lot line along Chatterton Avenue and does not contain any entrances or windows. The remainder of the lot consists of surface parking, chain-link fencing along the property line, and wide sidewalks in the right-of-way on all sides. The surface parking lot and sidewalks are in poor condition due to cracked asphalt and cement, overgrown vegetation, dumping, and litter.

Multi-family walk-up buildings in the study area are typically brick or have vinyl siding, and tend to feature flat roofs, but low-gabled roofs are also present. Buildings are either connected and present a continuous street frontage or they have narrow side yards. Stoops, small front yard gardens, and awnings are also common. Most buildings have shallow front yard setbacks and narrow side yard setbacks. Multi-family elevator buildings in the study area have long, rectangular floors, red or tan brick exteriors, flat roofs, balconies, and are generally have an unadorned, modernist architectural style. Mixed-use buildings with neighborhood retail on the ground floor use banner and awning-style signage and occasionally use posters in the storefront windows, **(Figure G-4: Aerial Map and Keyed Photographs)**.

Open Space

The study area for urban design and natural resources does not contain any publicly-accessible open space resources. Privately-accessible open spaces include a seating area and basketball court that are in poor condition on a multi-family residential property south of the Project Site and the Bruckner Expressway. This private open space was not utilized during a site visit in June of 2017.

Natural Resources

The study area does not contain any significant visual resources or natural features as defined in the *CEQR Technical Manual*, such as waterfronts, public parks, natural resources, landmark structures or districts, or otherwise distinct buildings or groups of buildings.

Visual Resources

An inaccessible lawn lined with mid-sized and large trees forms a barrier and experiences a grade change between the Bruckner Boulevard service road and the Bruckner Expressway. The lawn is inaccessible due to a fence along Bruckner Boulevard. A patch of the lawn does not include trees, which is located south of the Project Site along approximately half of the lot length. The area surrounding the Project Site do not include any other significant visual resources, such as views of the waterfront, public parks, landmark structures or districts, distinct buildings or groups of buildings, or natural resources.



Source: 2016/2017 PLUTO, DCP

Project Site

400-foot Study Area

0 Floors

1 Floor

2 Floors

3 Floors

4 - 9 Floors

10+ Floors

EXISTING BUILDING HEIGHTS

Figure G-2

2069 Bruckner Boulevard Rezoning EAS



Source: 2016/2017 PLUTO, DCP

Project Site

400-foot Study Area

0 FAR

0.1 - 1.0 FAR

1.01 - 2.0 FAR

2.01 - 3.0 FAR

3.01 - 5.0 FAR

EXISTING DENSITY (BUILT FAR)

Figure G-3

2069 Bruckner Boulevard Rezoning EAS



Source: Google Earth Pro 2017

Project Site

400-Foot Study Area

Photograph Location

AERIAL AND KEYED PHOTOS MAP

Figure G-4

2069 Bruckner Boulevard Rezoning EAS

Photograph 1: *Southeast corner of the Project Site, looking northwest from Bruckner Boulevard*



Photograph 2: *Southwest corner of the Project Site, looking northeast from across Bruckner Boulevard*



Note: All photographs taken on September 14, 2018

Figure G-4: Keyed Photographs

Photograph 3: *Northeast corner of the Project Site, looking southwest from the corner of Olmstead Avenue/Chatterton Avenue*



Photograph 4: *Northwest corner of the Project Site, looking east along Chatterton Avenue*



Figure G-4: Keyed Photographs

Photograph 5: *View of adjacent property, looking east along Bruckner Boulevard toward the Project Site.*



Photograph 6: *View of property south of Bruckner Boulevard and Expressway, looking south-west.*



Figure G-4: Keyed Photographs

Photograph 7: *View of Project Site and nearby properties looking west along Bruckner Boulevard.*



Photograph 8: *View of Project Site and nearby properties, looking west toward the intersection of Olmstead Avenue and Bruckner Boulevard.*



Figure G-4: Keyed Photographs

Photograph 9: *View of adjacent properties from the Project Site, looking northeast.*



Photograph 10: *View of nearby properties from the Project Site, looking north.*



Figure G-4: Keyed Photographs

Photograph 11: *View of nearby properties, looking west along Chatterton Avenue from its intersection with Olmstead Avenue.*



Photograph 12: *View of nearby properties and Project Site, looking east along Chatterton Avenue.*



Figure G-4: Keyed Photographs

V. FUTURE WITHOUT PROPOSED ACTIONS (NO-ACTION CONDITION)

Land Use and Zoning

Project Site

Absent the Proposed Actions (the "No-Action condition"), the Applicant would pursue an as-of-right development that would be like existing land uses near the Project Site and would conform to the current R5 zoning designation. As-of-right development permitted on the Project Site under the R5 zoning designation would consist of three- to four-story attached houses or small apartment buildings and community facility uses. The Project Site would have a maximum permitted residential FAR of 1.25, a maximum community facility FAR of 2.0, and a maximum building height of 40 feet. In the No-Action condition, it is assumed that the Project Site would be improved with attached, multi-family walkup apartments totaling 90,097 gsf of residential use, resulting in approximately 84 market rate DUs and 56 accessory parking spaces (pursuant to ZR §23-22 and ZR §25-23). The average DU size would be approximately 1,073 gsf, which would be consistent with other as-of-right market-rate developments in the area.

Study Area

Based on coordination with the Bronx Borough Office of the NYC Department of City Planning (DCP) and the NYC Department of Buildings (DOB), no known, ongoing or proposed developments were identified within the urban design study area with anticipated build completion dates in 2022 or earlier.

VI. FUTURE WITH PROPOSED ACTIONS (WITH-ACTION CONDITION)

Streets

It is the Applicant's intent to make improvements to the streetscape environment, including repaving of sidewalks and planting of street trees adjacent to the Project Site. Residential entrances would be located on Chatterton Avenue, Olmstead Avenue, and Bruckner Boulevard. Commercial entrances would be located on Olmstead Avenue and Bruckner Boulevard, with vehicular entrances to off-street parking located on Chatterton Avenue and Bruckner Boulevard. The Proposed Project would not alter the arrangement or orientation of streets within the study area. Streetscape elements include sidewalks lined with trees without tree guards. The Proposed Project would maintain similar or improved streetscape conditions at the perimeter and near the Project Site

Buildings

The Proposed Project would have a brick exterior like other residential buildings in the study area. The RWCDS for the assessment of urban design and visual resources impacts assumes that both buildings would have a height of nine stories (95 feet), which would be shorter than two other multi-family elevator developments in the study area. The Proposed Project would extend to the property line on all three frontages. The exterior of Building A, which would face Chatterton Avenue, would be broken up with small setbacks approximately every 20 feet. This would give the impression of variety and multiple buildings rather than one singular building mass. This design would be consistent with the context along Chatterton Avenue, which tends to consist of one- and two-family homes that have either narrow or nonexistent side yards. The exterior of Buildings B and C would also be broken up with small setbacks, but at intervals of approximately 100 feet, **(Figure G-5: With-Action Site Plan** and **Figure G-6: Urban Design Views)**.

Open Space

The urban design and visual resources study area does not contain any publicly-accessible open spaces, and there is one privately-accessible open space resource in the study area located adjacent to a building with similar or greater height than the Proposed Project. This privately-accessible resource was observed to be in poor condition and unutilized during a visit to the study area[3]. Consequently, the Proposed Project would not result in any significant adverse impacts on this privately-accessible open space resource.

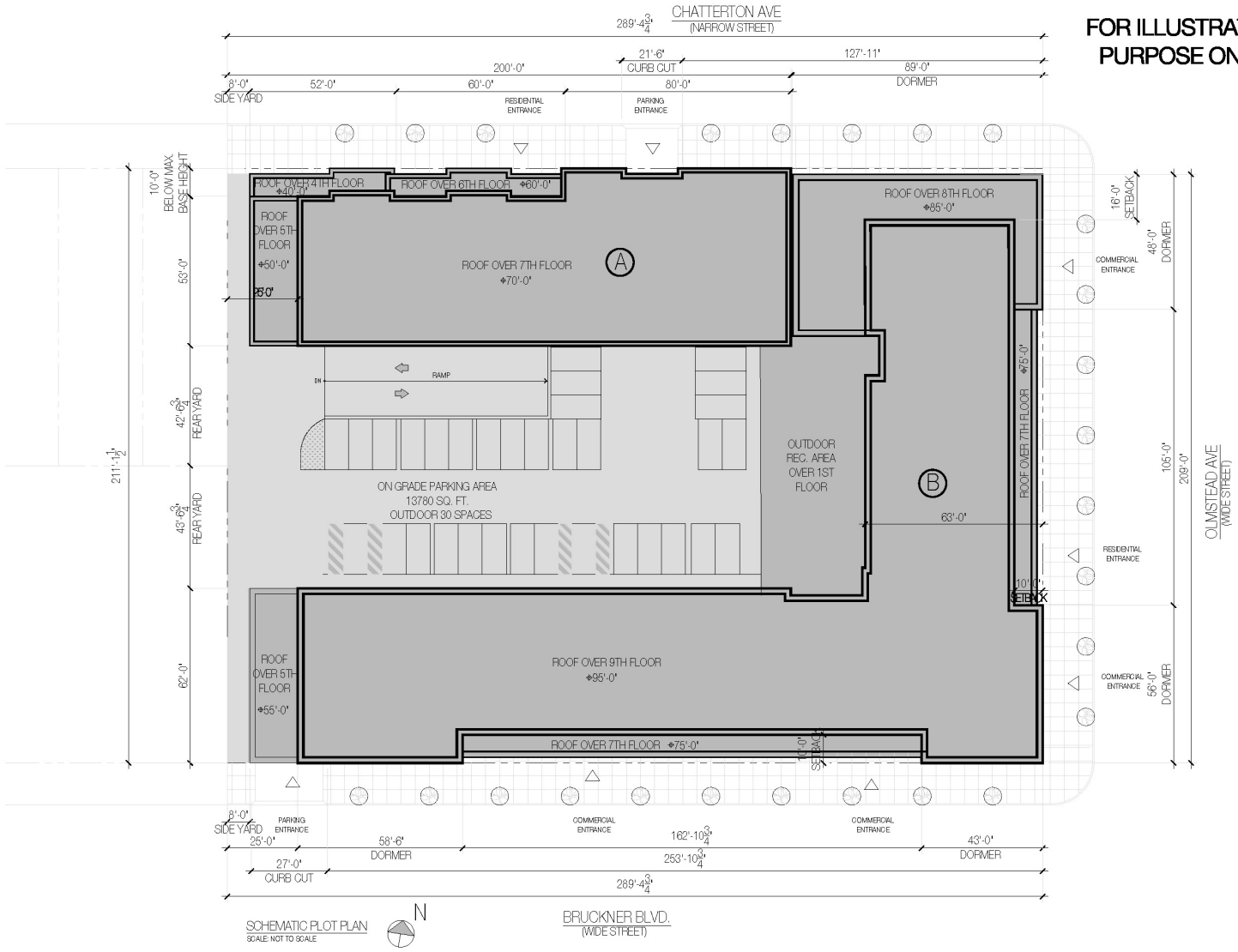
Natural Resources

Since there are no natural resources within the urban design and visual resources study area, the Proposed Project would not result in any direct impact on natural resources.

Visual Resources

Since there are no visual resources within the urban design and visual resources study area, the Proposed Project would not result in any direct impact on visual resources.

[3] Utilization levels are estimates based on observations from a site visit. The site visit in June 2017 was conducted on a warm, sunny weekday in June 2017 during the school year and in afterschool hours (3:30pm – 5:30pm).



Source: Aufgang Architects

WITH-ACTION SITE PLAN

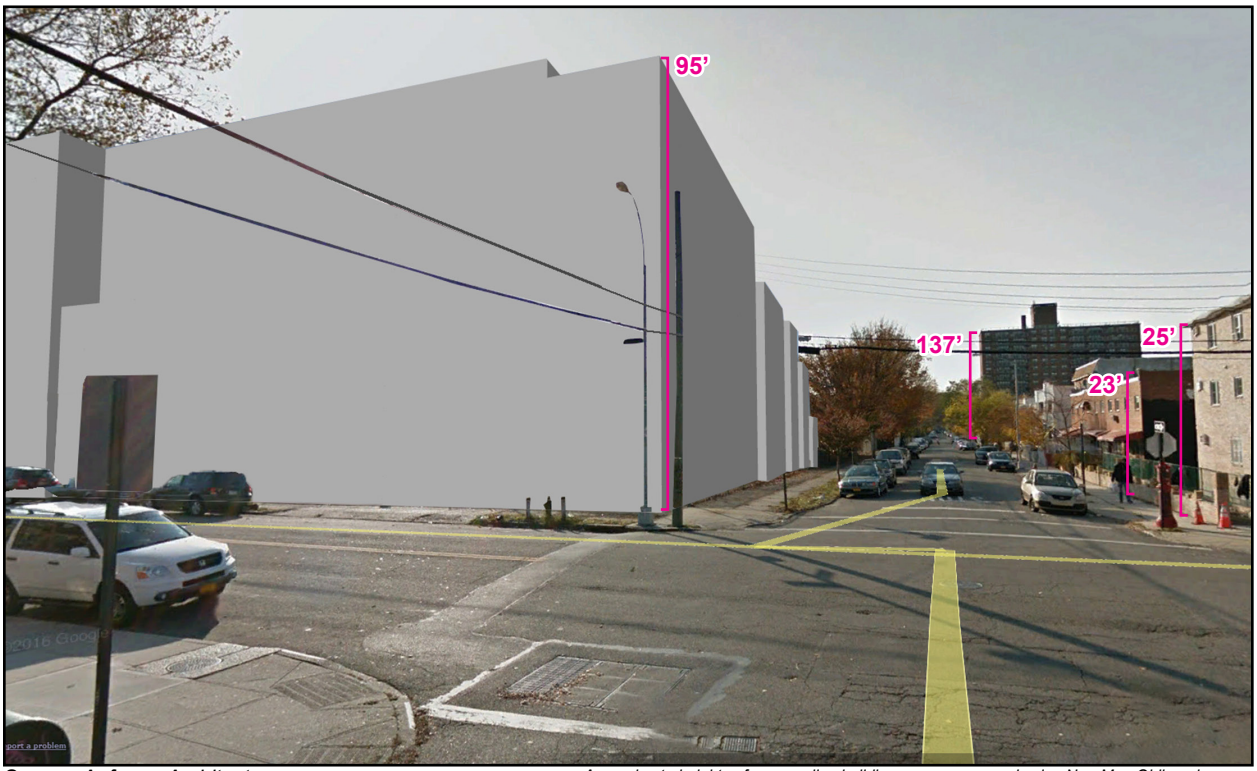
Figure G-5

View 1: *View southwest from the intersection of Chatterton Avenue and Olmstead Avenue.*

Existing Condition



With-Action Condition



Source: Aufgang Architects

Approximate heights of surrounding buildings were measured using NearMap Oblique imagery

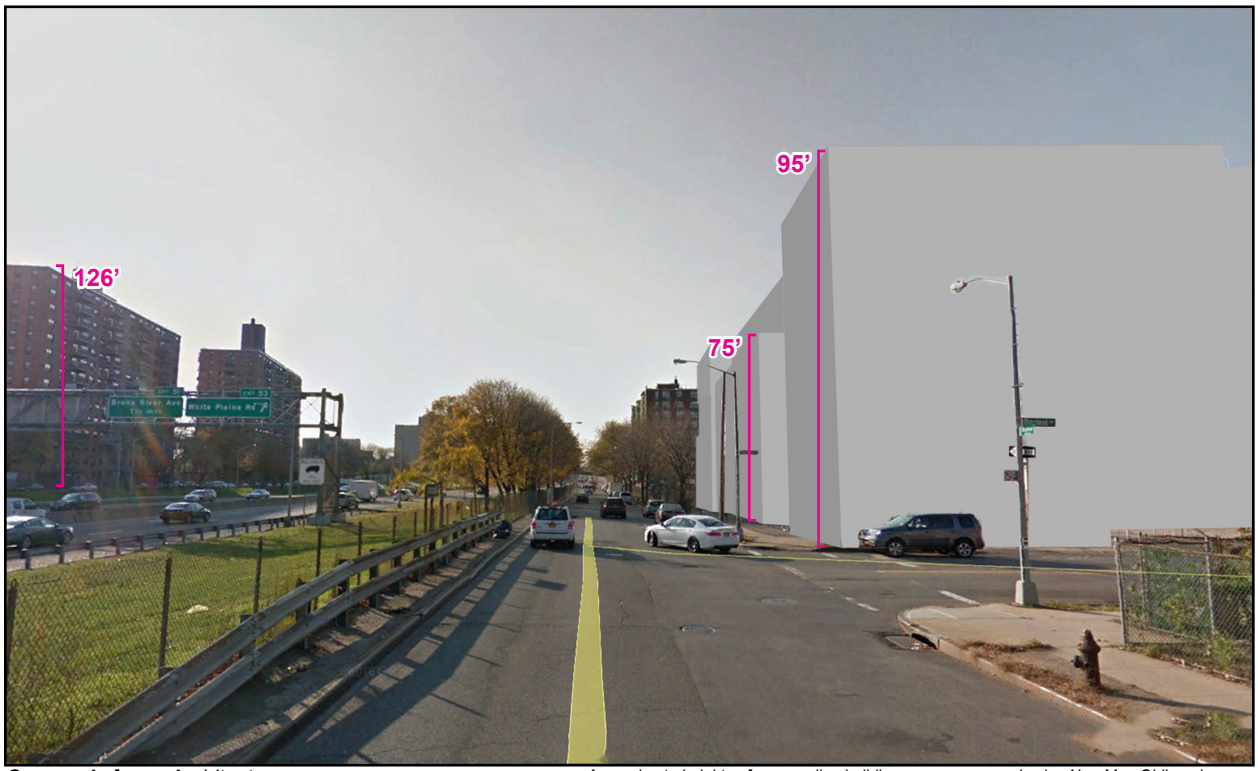
Figure G-6: Urban Design Views

View 2: *View west along Bruckner Boulevard from the intersection with Olmstead Avenue.*

Existing Condition



With-Action Condition



Source: Aufgang Architects

Approximate heights of surrounding buildings were measured using NearMap Oblique imagery

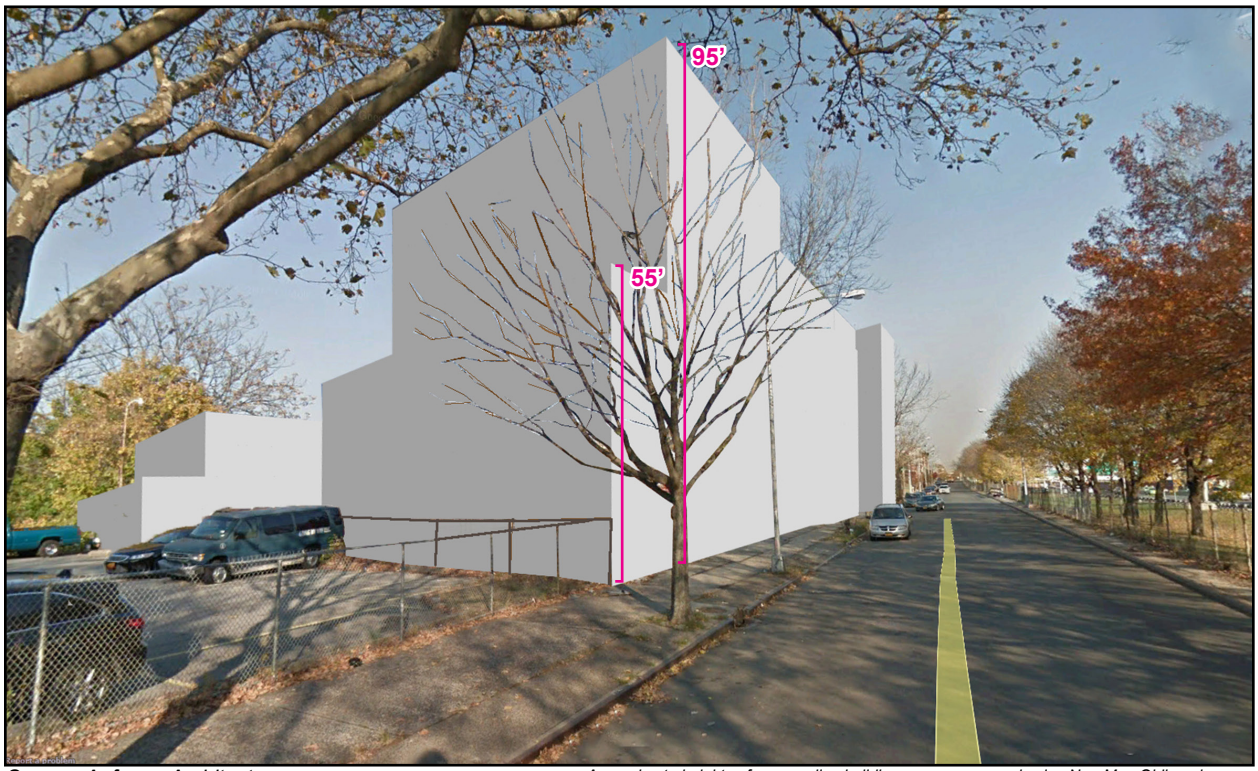
Figure G-6: Urban Design Views

View 3: *View east along Bruckner Boulevard from midblock west of the Project Site.*

Existing Condition



With-Action Condition



Source: Aufgang Architects

Approximate heights of surrounding buildings were measured using NearMap Oblique imagery

Figure G-6: Urban Design Views

View 4: *View east along Chatterton Avenue from midblock west of the Project Site.*

Existing Condition



With-Action Condition



Source: Aufgang Architects

Approximate heights of surrounding buildings were measured using NearMap Oblique imagery

Figure G-6: Urban Design Views

Attachment H: Historic and Cultural Resources

I. INTRODUCTION

This chapter considers the potential for the Proposed Project to affect historic and cultural resources, which include archaeological and architectural resources. The *City Environmental Quality Review (CEQR) Technical Manual* identifies architectural resources to include historically important buildings, structures, objects, sites, and districts, including bridges, canals, piers, wharves, and railroad transfer bridges that may be wholly or partially visible above ground. Archaeological resources are physical remains, usually subsurface, of the prehistoric, Native American, and historic periods—such as burials, foundations, artifacts, wells, and privies. Generally, archaeological resources do not include 20th and 21st century artifacts. An assessment of architectural or archaeological resources is usually needed for projects that involve or are located adjacent to historic or landmark structures or within historic districts, or projects that require in-ground disturbance, unless such disturbance occurs in an area that has already been excavated.

As described in Attachment A, "Project Description," the Proposed Actions would facilitate development of an approximately 366,007 gross square feet (gsf) mixed-use development consisting of two adjoining buildings and comprised of 350 affordable dwelling units (DUs) within 291,283 gsf of residential space, approximately 18,023 gsf of ground floor commercial retail space, approximately 159 parking spaces for resident use, and approximately 173 bicycle parking spaces (the "Proposed Project"). Approximately 144 DUs would be restricted to households with incomes below 80% of Area Median Income (AMI), and approximately 206 DUs would be restricted to households with incomes between 81% and 130% of AMI, of which approximately 71 DUs may have a home ownership option. The height of the buildings would range from 70 feet for Building A to 95 feet for Building B.

The *CEQR Technical Manual* recommends that an analysis of archaeological resources be undertaken for actions that would result in any in-ground disturbance. It also recommends that an architectural resources assessment be performed if a proposed action would result in any of the following (even if no known architectural resources are located nearby): new construction; physical alteration of any building; change in scale, visual context, or visual setting of any building, structure, object, or landscape feature; or screening or elimination of publicly-accessible views. Since the Proposed Actions may result in some of these conditions, an assessment was performed for archaeological and architectural resources.

II. PRINCIPAL CONCLUSIONS

The Proposed Project would not result in any significant adverse impacts to historic and cultural resources.

Consistent with guidance in the *CEQR Technical Manual*, the study area for assessment of archaeological and architectural resources is the area that would be disturbed for project construction, which for the Proposed Project is identified as the Project Site itself. In addition, the surrounding area within 400 feet of the Project site is considered to determine the potential for impacts on other resources. Consultation with the New York City Landmarks Preservation Commission (LPC) and the New York State Historic Preservation Office (SHPO) was undertaken to determine whether the Project Site and surrounding area may contain archaeological or architectural resources. In a comment letter dated April 3, 2018, LPC determined that the Project Site and surrounding area within 400 feet of the Project Site do not possess archaeological or architectural significance **(Figure H-1: LPC-Designated Historic Districts and Landmarks Map)**. In addition, SHPO issued a comment letter dated September 7, 2018 that determined that the Proposed Project would not have any impact on archaeological and/or historic resources listed in or eligible for the New York State and National Registers of Historic Places **(Figure H-2: National and**

State Registered Cultural Resources Map). Therefore, the Proposed Actions would not result in impacts on archaeological resources and no further assessment is necessary. Consultation letters from LPC and SHPO are provided in **Appendix H: Historic and Cultural Resources Consultation**.



Source: NYC LPC

Project Site

400-foot Study Area

Individual Landmarks

Historic Districts

LPC-DESIGNATED HISTORIC DISTRICTS AND LANDMARKS MAP

Figure H-1

2069 Bruckner Boulevard EAS



Source: NYS CRIS

Project Site

400-foot Study Area

Eligible

Listed

Not Eligible

NATIONAL AND STATE REGISTERED CULTURAL RESOURCES MAP

Figure H-2

2069 Bruckner Boulevard EAS

Attachment I: Hazardous Materials

I. INTRODUCTION

This attachment assesses the potential for the presence of hazardous materials in soil, groundwater, and/or soil vapor at the Project Site, and further evaluates the potential for hazardous materials impacts resulting from the discretionary public actions required to implement the Proposed Project (collectively referred to as the "Proposed Actions"). According to *City Environmental Quality Review (CEQR) Technical Manual* guidelines, a hazardous materials assessment may be necessary when a proposed action could lead to increased exposure of people or the environment to hazardous materials, or whether increased exposure would lead to significant public health impacts or environmental damage.

As described in Attachment A, "Project Description," the Proposed Actions would facilitate the redevelopment of a site located on Block 3797, Lot 33 in the Bronx neighborhood of Unionport, in Community District (CD) 9 (the "Project Site"). The redevelopment would result in an approximately 366,007 gross square feet (gsf) mixed-use development consisting of two adjoining buildings that would be constructed simultaneously, and which would be comprised of 350 affordable dwelling units (DUs) within 291,283 gsf of residential space, approximately 18,023 gsf of ground floor commercial retail space, approximately 159 parking spaces, and approximately 173 bicycle parking spaces (the "Proposed Project").

II. PRINCIPAL CONCLUSIONS

Based on the findings of a Phase I Environmental Site Assessment (ESA) for the Project Site completed in compliance with the scope and limitations of ASTM International (ASTM) Standard Practice E 1527-13., the New York City Department of Environmental Protection (DEP) recommends a Phase II ESA be prepared to adequately characterize and identify the surface and subsurface soils of the Project Site in accordance with regulatory standards, although no Recognized Environmental Conditions (REC) identified in connection with the Project Site during the Phase I ESA. Pursuant to City Zoning Resolutions, the Mayor's Office of Environmental Remediation (OER) would oversee the application of an institutional control, such as an (E) designation as stated in a Restricted Declaration, to be placed on the Project Site which requires a Phase II ESA to be conducted in consultation with OER for review and approval.

An (E) designation (E-515) for hazardous materials will be mapped on the Project Site to require a Phase II ESA. Should a hazardous materials impact be identified, a Remediation Action Plan (RAP) and Construction Health and Safety Plan (CHASP) would be developed and overseen by OER. The (E) designation would ensure that the Project Site would not be developed unless remedial measures are implemented in coordination with OER and that there would be no significant adverse impact from the Proposed Actions due to the potential presence of contaminated materials. With this (E) designation in place, no significant adverse impacts related to hazardous materials are expected, and no further analysis is necessary.

III. METHODOLOGY

The potential presence of contaminated materials on the Project Site was analyzed based on the completion of a Phase I ESA. The Phase I ESA was completed by GEI Consulting in April 2017 in compliance with the scope and limitations of ASTM International Standard Practice E 1527-13. Findings were based on user provided information, a site inspection interview, a visual inspection of the Project Site,

a visual survey of adjacent/contiguous and nearby properties, and a review of available historical property and environmental regulatory agency records.

User provided information consisted of a User Questionnaire completed by the Applicant to characterize relative environmental risks for commercial purposes for the completion of the Phase I ESA. The Questionnaire acts as part of the Applicant's regulatory requirement for conducting all appropriate inquiries (AAI) to establish one of the three liability protections established by the Comprehensive Environmental and Liability Act of 1980 (CERCLA). The liability protections include an evaluation of environmental cleanup liens against the Project Site, consideration of specialized knowledge or experience of the Applicant seeking to claim liability protection, and evaluation of the purchase price to fair market value such that the property was not contaminated, as well as other commonly known of reasonably ascertainable information about the Project Site. Furthermore, a site inspection interview was conducted by GEI Consulting with an occupant of the existing building who provided information about historic usage of the Project Site as a church for at least 20 years, though no information was provided pertaining to potential contamination at the Project Site.

A visual site inspection of the Project Site was conducted on April 11, 2017 by GEI Consulting to assess existing conditions of the property. The history of the Project Site was ascertained by review of historical databases maintained by Department of Buildings (DOB) and historical Sanborn fire insurance/real estate maps from 1898 to 1988. Sanborn maps indicated that prior to the construction of the existing building circa 1961, the Project Site was undeveloped. Historical aerial photographs were obtained from Google Earth to confirm similar configuration of the Project Site improved with the existing building between 1995 to 2016. Additionally, visual reconnaissance of the Project Site during the Phase I ESA site inspection noted general uses of adjacent and surrounding properties to the Project Site, which consisted of garages and warehouses with residential dwellings and apartment buildings.

A review of environmental regulatory records and databases was conducted for the Project Site, adjacent/contiguous properties, and the surrounding neighborhood within search distance requirements set forth in ASTM E 1527-13, Section 8.2.1. The Project Site was not listed in any of the environmental databases reviewed, and there were no nearby sites that posed a potential REC in connection with the Project Site. Furthermore, NYC regulatory database records were reviewed. Review of the NYC Historic Utility Facilities database and the CEQR (E) designation Site database determined that the Project Site was not listed, nor were nearby properties in connection with the Project Site.

IV. EXISTING CONDITIONS

Phase I ESA

The Phase I ESA concluded that the Project Site did not have any RECs, HRECs, or CRECs. However, the Phase I ESA identified the following three business environmental conditions related to the existing building on the Project Site:

- **Drum Storage**: Three (3) 55-gallon steel drums with unidentifiable contents were observed in very poor condition in the basement of the on-site building. Typically, drums should be properly labeled to indicate their contents and secured with secondary containment.

- **Lead-Based Paint**: Consumer sale of lead-based paint (containing over .06 percent metallic lead) was banned by the United States Consumer Products Safety Commission in 1977. Given the estimated construction date of the building on the Project Site circa 1961, there is the potential for lead-based paint to be present in the underlying surfaces throughout the building.

- **Suspected Asbestos-Containing Materials (ACMs**): The limited visual survey completed as part of the Phase I ESA investigations identified suspected ACMs in the on-site building. Based on the age of the building, building materials must be assumed to contain asbestos, unless sampling and laboratory analysis documentation proving otherwise can be provided.

NYC DEP Comment Letter

The Phase I ESA was submitted for review to DEP to determine the potential for significant adverse impacts from hazardous materials in connection with the Project Site. The potential for adverse impacts could be avoided as detailed by the comment letter received by DEP dated September 6, 2018 (see **Appendix I, "NYC DEP Comment Letter"**) by conducting a Phase II ESA to characterize and identify the surface and subsurface soils of the Project Site. DEP requests that a Phase II Investigative Protocol/Work Plan be submitted for review to summarize the proposed subsurface drilling, soil, groundwater, and soil vapor sampling activities in accordance with CEQR and applicable regulatory standards. An Investigative Health and Safety Plan (HASP) would also be submitted for DEP review for approval along with the Work Plan prior to site investigation procedures.

Given that there were no RECs identified during the Phase I ESA, institutional controls can be instituted in the form of an (E) designation held within a Restrictive Declaration pursuant to Section 11-15 (Environmental requirements) of the Zoning Resolution of the City of New York and Chapter 24 of Title 15 of the Rules of the City of New York. An (E) designation acts as a regulatory tool for future testing and subsequent mitigation and remediation given the potential for a hazardous materials impact at the Project Site. In consultation with OER, a Phase II ESA would be conducted per DEP recommendation. Construction management, site-specific controls, and monitoring procedures established therein would be submitted to the OER for review and approval. Project sites with (E) designations will not be issued building permits or certificates of occupancy in connection with those investigative actions identified in a Phase II ESA Work Plan and associated HASP.

V. FUTURE WITHOUT THE PROPOSED ACTIONS (NO-ACTION CONDITION)

In the future without the Proposed Actions (the "No-Action condition"), the Applicant would pursue an as-of-right development consisting of three- to four-story attached houses or small apartment houses and community facility uses. Redevelopment on the Project Site would result in demolition of the existing structure and new construction on the Project Site, including removal of underlying material.

The Phase I ESA identified three non-ASTM business environmental conditions should the existing building on the Project Site undergo demolition, renovation, or construction. Recommendations to address these environmental conditions include proper disposal of the steel drums and their contents, and the application of precautions pertaining to the disturbance of suspected lead-based paint that limit dust emissions during renovation and demolition activities in conformance to federal and state rules and regulations to address potential human health concerns. In addition, a licensed NYC asbestos investigator would inspect all areas within the existing building to be demolished to identify any ACMs in need of abatement. The findings of the investigation would be filed and submitted to the responsible NYC and NYS agencies, which includes DOB, DEP, and New York State Department of Labor (NYSDOL). Removal and disposal of ACM would be performed in conformance to the rules and regulations of the NYC Asbestos Control Program, and applicable federal and state regulations. With application of these recommendations, there would be no significant adverse impact resulting from the Proposed Project due to the potential presence of contaminated materials.

In conformance with CEQR, an (E) designation would be administered by OER to oversee future redevelopment of the Project Site. The institutional control ensures compliance with the recommendations

of DEP to require additional hazardous material assessment and testing of surface and subsurface soils, groundwater, and soil vapor collected from the Project Site. Therefore, the Proposed Project would not result in significant adverse impact related to hazardous materials.

VI. FUTURE WITH THE PROPOSED ACTIONS (WITH-ACTION CONDITION)

In the future with the Proposed Actions (the "With-Action condition"), redevelopment would occur on the Project Site to result in an approximately 366,007 gsf mixed-use residential and commercial development. Since the Proposed Project would require demolition and new construction on the Project Site, the same recommendations resulting from the Phase I ESA applied to the No-Action condition would be applied to the With-Action condition. Recommendations from the Phase I ESA would be followed to appropriately manage the non-ASTM business environmental conditions identified at the Project Site. An (E) designation would be administered by OER, in accordance with the requirements identified below, to oversee all construction-related activities and ground disturbance at the Project Site as part of a Phase II ESA and any subsequent necessary remediation in the form of a RAP and CHASP. As with the Future No-Action Condition, the Proposed Project would not result in significant adverse impact related to hazardous materials given the construction requirements held therein by an (E) designation placed on the Project Site.

If potential hazardous materials impacts are identified, remediation in accordance with a RAP would be required, given the results of a Phase II ESA. The RAP would include procedures to identify and manage both known contamination (e.g., petroleum contaminated concrete and copper, lead, and mercury contaminated soil on the rifle range) and unexpectedly encountered contamination. In addition, the RAP will address, as applicable, requirements for items such as soil stockpiling, soil disposal, and transportation; dust control; dewatering procedures; quality assurance; procedures for the closure and removal of known petroleum storage tanks; and contingency measures, should other petroleum storage tanks or contamination be unexpectedly encountered.

In addition to a RAP, a site-specific CHASP would be submitted with the Phase II ESA. The CHASP will identify potential hazards that may be encountered during construction and specify appropriate health and safety measures to be undertaken to ensure that subsurface disturbance is performed in a manner protective of workers, the community, and the environment (such as personal protective equipment, air monitoring including community air monitoring, and emergency response procedures). In addition, during and following demolition related to the Proposed Development, regulatory requirements pertaining to ACMs, lead-based paints (LBPs), and poly-chlorinated biphenyls (PCBs) will be followed. All activities involving disturbance of existing soil would be conducted in accordance with the CHASP.

The following (E) designation (E-515) related to hazardous materials will be mapped for Block 3797, Lot 33:

> **Task 1-Sampling Protocol**
>
> **A Phase I ESA of the site, along with a soil, groundwater and soil vapor testing protocol, including a description of methods and a site map with all sampling locations clearly and precisely represented. If site sampling is necessary, no sampling should begin until written approval of a protocol is received from OER. The number and location of samples should be selected to adequately characterize the site, specific sources of suspected contamination (i.e., petroleum-based contamination and non-petroleum-based contamination), and the remainder of the site's condition. The characterization should be complete enough to determine what remediation strategy (if any) is necessary after review of sampling data. Guidelines and criteria for selecting sampling locations and collecting samples are provided by OER upon request.**

Task 2-Remediation Determination and Protocol

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

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

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

With this (E) designation in place, no significant adverse impacts related to hazardous materials are expected, and no further analysis is warranted.

Attachment J: Transportation

I. INTRODUCTION

This attachment examines the potential traffic, transit, pedestrian, parking, and safety impacts associated with the proposed development of a mixed-used development consisting of two adjoining buildings at 2069 Bruckner Boulevard (Block 3797, Lot 3) located in the Unionport neighborhood in Bronx Community District 9 (CD 9) (the "Project Site").

As described in Attachment A, "Project Description," the Proposed Actions would facilitate development of an approximately 366,007 gross square feet (gsf) mixed-use development consisting of two adjoining buildings and comprised of 350 affordable dwelling units (DUs) within 291,283 gsf of residential space, approximately 18,023 gsf of ground floor commercial retail space, approximately 159 parking spaces for resident use, and approximately 173 bicycle parking spaces (the "Proposed Project"). Approximately 144 DUs would be restricted to households with incomes up to 80% of Area Median Income (AMI), and approximately 206 DUs would be restricted to households with incomes between 80% and 130% of AMI, of which approximately 71 DUs may have a home ownership option. Access to the off-street parking would be provided via driveways on Chatterton Avenue and Bruckner Boulevard.

The Proposed Project is expected to be completed by 2022, which is the analysis year for the environmental review. The Proposed Project and zoning lot are shown on **Figure J-1: Project Area**.

The study area includes two pedestrian elements. Four peak hours were considered for the pedestrian analyses:

- Weekday AM (7:45 AM to 8:45 AM)
- Weekday MD (12:45 PM to 1:45 PM)
- Weekday PM (5:30 PM to 6:30 PM)
- Saturday MD (1:30 PM to 2:30 PM)

II. PRINCIPAL CONCLUSIONS

Traffic Flow and Operating Conditions

The results of the Level 2 screening analysis for vehicle traffic indicate that the Proposed Project would generate fewer than 50 vehicle trips (a maximum of 42 trips during the Weekday PM peak hour) at any intersection in the study area during any of the study peak hours. Therefore, in accordance with the 2014 *City Environmental Quality Review* (*CEQR) Technical Manual*, no further vehicle analysis is needed and there would be no significant adverse traffic impacts associated with the Proposed Project.

Transit Facilities

The results of the Level 2 screening analysis for bus trips indicate that the Proposed Project would generate fewer than 50 buses per bus line, per direction during the Weekday AM and PM commuter peak hours. Therefore, in accordance with the 2014 *CEQR Technical Manual*, no further analysis would be needed. There would be no significant adverse bus impacts associated with the Proposed Project.

The trip generation results show that the Proposed Project would generate less than 200 subway trips in a peak hour (a maximum of 121 trips during the Weekday PM peak hour). Therefore, in accordance with the

2014 *CEQR Technical Manual*, no further analysis is needed. There would be no significant subway impacts associated with the Proposed Project.

Pedestrian Facilities

Under the With-Action condition, all analyzed sidewalks for the platoon conditions are expected to operate at Level of Service (LOS) B or better during all peak hours. Based on the significant adverse impact criteria outlined in the *CEQR Technical Manual*, there would be no pedestrian-related significant adverse impacts associated with the Proposed Project and no further analysis is needed.

Parking Conditions

The on-site parking would not be sufficient to accommodate peak parking demands generated by the Proposed Project; therefore, the parking demand would be accommodated on-street or within off-street parking garages. The off-site parking capacity within the 0.25-mile radius of the Project Site was considered but would not be sufficient to accommodate the parking demand generated by the Proposed Project. Following guidelines outlined in the *CEQR Technical Manual*, the off-site parking capacity located within a 0.5-mile radius of the Project Site was considered. Since there would be sufficient available on and off-street parking within a 0.5-mile radius to accommodate the parking demand from the Proposed Project that could not be met, on-site, there would be no significant adverse parking-related impacts associated with the Proposed Project, and no further assessment is necessary.

Vehicular and Pedestrian Safety Assessment

Based on the latest three years available crash data, none of the study intersections would be classified as high-crash locations per the *CEQR Technical Manual*, and no further analysis is needed.

The Proposed Project would not result in any significant adverse impacts on transportation and, consequently, no further assessment is necessary.



Source: 2017/2018 PLUTO, DCP

Project Site

0.25-mile Surrounding Area

PROJECT AREA

Figure J-1

2069 Bruckner Boulevard Rezoning EAS

III. SCREENING METHODOLOGY

Transportation impact analysis methodologies for proposed projects in New York City are defined in the *CEQR Technical Manual*, which outlines a two-tiered screening process. The Level 1 screening assessment includes a trip generation analysis to determine whether the Proposed Project would result in more than 50 vehicle trips, 200 subway/rail or bus riders, or 200 pedestrian trips in a peak hour. The Level 2 screening is a trip assignment review that identifies intersections with 50 or more vehicle trips, pedestrian elements with 200 or more pedestrian trips, 50 bus trips in a single direction on a single route, or 200 passengers at a subway station or line during any analysis peak hour, which would require detailed analyses. The results of the screening analysis are described below.

Traffic

According to the criteria specified in the *CEQR Technical Manual*, traffic analyses are generally required at intersections where more than 50 new vehicle trips would be generated by a proposed project during an individual peak hour. Based on the results of the vehicle trip assignment, it was determined that the number of vehicle trips generated by the Proposed Project would not exceed the *CEQR Technical Manual* thresholds during any of the peak hours; therefore, further vehicle analyses were not conducted.

Transit

The transit criteria specified in the *CEQR Technical Manual* thresholds established by New York City Transit/Metropolitan Transportation Authority (NYCT/MTA) were used to determine which subway/rail and bus routes in the study area would be analyzed. According to the criteria, if a proposed project is projected to result in fewer than 200 peak hour subway/rail passengers assigned to a single subway station or on a single subway line or 50 bus passengers assigned to a single bus line (in one direction), further transit analyses are not typically required, as a proposed project is considered unlikely to create a significant transit impact.

Subway Transit

It was determined that the number of new subway trips generated by the Proposed Project would not exceed the *CEQR Technical Manual* thresholds at any subway station during any of the peak hours; therefore, analyses of subway station elements were not conducted.

Bus Transit

It was determined that the number of new bus trips generated by the Proposed Project would not exceed the *CEQR Technical Manual* thresholds during any of the peak hours; therefore, analyses of bus routes were not conducted.

Pedestrians

Based on criteria specified in the *CEQR Technical Manual*, projected pedestrian volume increases of more than 200 pedestrians per hour at any intersection corner, crosswalk, or sidewalk would be considered a location with the potential for significant impacts and would require a detailed analysis. The Proposed Project would generate more than 200 pedestrians per hour at three pedestrian elements (one corner and two sidewalks) within the study area during any of the peak hours based on a combination of walk, subway, and bus trips. However, the corner is located at an unsignalized intersection, and it is not possible to analyze corners at unsignalized intersections based on existing methodologies. Therefore, the corner will not be included in the detailed pedestrian analyses. Detailed pedestrian analyses were conducted for the remaining two pedestrian sidewalk elements during the following four peak hours:

- Weekday AM (7:45 AM to 8:45 AM)
- Weekday MD (12:45 PM to 1:45 PM)
- Weekday PM (5:30 PM to 6:30 PM)
- Saturday MD (1:30 PM to 2:30 PM)

Parking

According to the *CEQR Technical Manual*, if the threshold for a detailed traffic analysis is met, it is likely that a parking assessment is warranted. As the Proposed Project is expected to generate fewer than 50 vehicle trips at any individual intersection during any of the peak hours, a detailed traffic analysis was not conducted, and, as such, a parking assessment was not required. However, as the Proposed Project would provide on-site parking spaces for the residential use only, a detailed parking assessment was conducted to determine the capacity and utilization of on- and off-street locations within 0.25-mile of Project Site, and to evaluate the ability to accommodate parking demand generated by the local retail use.

A parking assessment identifies the extent to which on-street and off-street parking is available and utilized under the existing, No-Action, and With-Action conditions. Typically, this assessment encompasses a study area within a 0.25-mile of the Proposed Project. If the assessment identifies a shortfall in parking in the 0.25-mile study area, the study area could be extended to 0.5-mile to identify additional parking supply. Based on parking assessment within a 0.25-mile of the Proposed Project, as shown in **Appendix J**, a shortfall of parking spaces was identified therefore the study area was extended to 0.5-mile. The assessment, which takes into consideration anticipated changes in area parking supply, provides a comparison of parking needs versus availability to determine if a parking shortfall is likely to result from additional demand generated by the Proposed Project.

Vehicular and Pedestrian Safety Assessment

An evaluation of traffic safety is necessary for locations within the study area that have been identified as high-crash locations as specified in the *CEQR Technical Manual*. These locations are defined as those with more than 48 total reportable and non-reportable crashes or five or more pedestrian/bicycle injury crashes that occur during any consecutive 12 months of the most recent three-year period for which data is available. Crash histories are reviewed to determine whether projected vehicular and pedestrian traffic would further impact safety as these locations or whether existing unsafe conditions could adversely impact the flow of the projected new vehicular or pedestrian/bicycle trips.

IV. STUDY AREA

To assess the potential transportation impacts associated with the Proposed Project, the study area was defined based on principal pedestrian access routes to and from the Project Site. In total, two pedestrian elements were selected for the pedestrian analysis. The safety assessment was conducted for the two intersections adjacent to where the pedestrian elements are located.

Study Area Intersection and Roadway Characteristics

The physical and operational characteristics of the major roadways in the study area are as follows:

- Bruckner Boulevard is a one-way westbound roadway that operates with two travel lanes and curbside parking on the north side of the street. To the south, Bruckner Boulevard is bounded by the Bruckner Expressway.
- Olmstead Avenue between Bruckner Boulevard and Chatterton Avenue is a two-way north-south roadway with one travel lane in both directions and parking on both sides of the street.

- Pugsley Avenue between Bruckner Boulevard and Chatterton Avenue is a two-way north-south roadway with one travel lane in both directions and parking on both sides of the street.
- Chatterton Avenue between Pugsley and Olmstead avenues is a one-way eastbound roadway with one travel lane and parking on both sides.
- White Plains Road is a two-way north-south roadway with two travel lanes in both directions and parking on both sides of the street. The Bx36 and Bx39 buses operate on White Plains Road within the study area.
- Castle Hill Avenue is a two-way north-south roadway with two travel lanes in both directions and parking on both sides of the street. The Bx22 and Bx5 buses operate on Castle Hill Avenue within the study area.

Study Area Transit Service

Transit service in the study area includes six bus routes, as shown on **Figure J-2: Transit Map**.

Bus Routes

As shown on **Figure J-2: Transit Map**, the following NYCT/MTA bus routes provide bus service to the study area:

- Q44 SBS
- BxM7, BxM8, BxM9
- Bx22
- Bx5

The bus routes are summarized in **Table J-1: Existing Bus Transit Service.**

Table J-1: Existing Bus Transit Service

Route	Route Type	Direction	Route Start Point	Route End Point	Operating Hours	Peak Period Headway (mins)			
						AM	MD	PM	Sat MD
Bx5	Local	EB	Hunts Point	Pelham Bay Park	All Days: 5:00 AM - 1:00 AM	6	12	8	12
		WB	Pelham Bay Park	Hunts Point	All Days: 5:00 AM - 1:00 AM	6	10	7	12
Bx22	Local	NB	Castle Hill Park	Bedford Park (Weekdays) or Pelham Parkway	All Days: 1:00 AM - 12:00 AM	10	12	8	12
		SB	Bedford Park (Weekdays) or Pelham Parkway	Castle Hill Park	All Days: 1:00 AM - 12:00 AM	7	12	9	12
BxM7	Express	NB	Manhattan	Bronx	Weekdays: 6:00 AM - 2:30 AM Saturdays: 6:00 AM - 2:30 AM	30	30	5	20
		SB	Bronx	Manhattan	Weekdays: 5:00 AM - 1:30 AM Saturdays: 5:00 AM - 1:00 AM	10	30	30	30
BxM8	Express	NB	Manhattan	Bronx	Weekdays: 7:00 AM - 12:00 AM Saturdays: 8:15 AM - 1:00 AM	30	30	6	30
		SB	Bronx	Manhattan	Weekdays: 5:45 AM - 12:45 AM Saturdays: 7:00 AM - 12:00 AM	10	30	30	30
BxM9	Express	NB	Manhattan	Bronx	Weekdays: 7:00 AM - 2:00 AM Saturdays: 8:00 AM - 1:00 AM	-	30	6	60
		SB	Bronx	Manhattan	Weekdays: 4:45 AM - 12:00 AM Saturdays: 6:15 AM - 11:15 PM	6	30	30	30
Q44 SBS	Select Bus Service	NB	Queens	Bronx	24/7	6	8	8	8
		SB	Bronx	Queens	24/7	6	8	7	8

Pedestrian Elements

Pedestrian elements, including two sidewalks, were assessed in the vicinity of the Proposed Project. The pedestrian elements are located along key routes to the Project Site entrances and represent locations where the highest concentration of the pedestrians generated by the Proposed Project are anticipated.

These locations are shown on **Figure J-3: Proposed Project Pedestrian Study Locations** and are listed below:

- **Sidewalks (two elements)**
    - Bruckner Boulevard between Olmstead Avenue and Pugsley Avenue, north sidewalk
    - Olmstead Avenue between Bruckner Boulevard and Chatterton Avenue, west sidewalk



Source: 2017 PLUTO, DCP

Project Site

0.25-mile Surrounding Area

22 Local Bus Route

BxM7 Express Bus Route Section

Q44 SBS Select Bus Service Bus Route

TRANSIT MAP

Figure J-2

2069 Bruckner Boulevard Rezoning EAS



Source: 2017/2018 PLUTO, DCP

Project Site

Sidewalk

PROPOSED PROJECT PEDESTRIAN STUDY LOCATIONS

Figure J-3

2069 Bruckner Boulevard Rezoning EAS

V. OPERATIONAL ANALYSIS METHODOLOGY

The following sections summarize the operational analysis methodologies and significant impact criteria in accordance with the *CEQR Technical Manual* guidelines.

Pedestrian Operations

The pedestrian sidewalk elements were analyzed in accordance with the *CEQR Technical Manual* guidelines. A description of these methodologies is provided below.

Sidewalk

As identified in the *2010 Highway Capacity Manual (HCM 2010)*, pedestrian unit flow rate is the primary performance measure used to evaluate sidewalks. This measure is based on pedestrians per foot per minute (PFM) which is calculated by dividing the average per minute two-way pedestrian volume (during the peak hour) by the effective sidewalk width in feet (taking into account a buffer between walls, curbs, and obstructions). To accurate calculate sidewalk LOS, it is important to determine whether the pedestrian flow is generally "platoon" (with surges from a bus stop, subway station, or a crosswalk) or "non-platoon" (uniform) within the peak period being analyzed. Accounting for platoons generally results in a poorer LOS. **Table J-2: LOS Criteria for Sidewalks** shows the non-platoon and platoon LOS criteria for sidewalks based on PFM.

Table J-2: LOS Criteria for Sidewalks

Level of Service (LOS)	Non-Platoon Flow (ft^2/p)	Platoon Flow (ft^2/p)
A	> 60	> 530
B	> 40 to 60	> 90 to 530
C	> 24 to 40	> 40 to 90
D	> 15 to 24	> 23 to 40
E	> 8 to 15	> 11 to 23
F	≤ 8	≤ 11

Source: Transportation Research Board. *Highway Capacity Manual*, 2010.

Significant Impact Criteria: Sidewalks

The *CEQR Technical Manual* provides guidance on the impact criteria for pedestrian facilities based on the general comfort and convenience levels of pedestrians, according to the location of the study area. Pedestrians in Central Business District (CBD) areas have become accustomed to higher pedestrian volumes and generally are more tolerant of restricted LOS conditions that might not be acceptable in other less congested (non-CBD) locations. An acceptable LOS for CBD areas is generally a mid-LOS D or better while an acceptable LOS for non-CBD areas is generally the upper limit of LOS C or better. For purposes of the pedestrian operations analysis, the pedestrian elements in the study area were considered to be part of a non-CBD area.

For sidewalks in non-CBD areas, the average pedestrian space that is considered acceptable ranges from LOS A to LOS C. If the pedestrian space deteriorates to LOS D or worse (less than 24.0 ft^2/p for non-platoon flow and less than 40.0 ft^2/p for platoon flow), significant impacts are determined based on a sliding scale, as follows:

<u>Non-platoon flow</u>

- If the average pedestrian space under the No-Action condition is greater than 26.6 ft^2/p, then a decrease to 24.0 ft^2/p or less under the With-Action condition is considered a significant impact.

- If the average pedestrian space under the No-Action condition is between 5.1 and 26.6 ft^2/p, a decrease in space under the With-Action condition should be considered significant if it is greater than or equal to ((No-Action pedestrian space ft^2/p / 9.0) – 0.31). The With-Action condition increments are provided in Table 16-14 in the *CEQR Technical Manual.*
- If the average pedestrian space under the No-Action condition is less than 5.1 ft^2/p, then a decrease in pedestrian space greater than or equal to 0.2 ft^2/p under the With-Action condition is considered a significant impact.

Platoon flow

- If the average pedestrian space under the No-Action condition is greater than 44.3 ft^2/p, then a decrease to 40.0 ft^2/p or less under the With-Action condition is considered a significant impact.
- If the average pedestrian space under the No-Action condition is between 6.4 and 44.3 ft^2/p, a decrease in space under the With-Action condition should be considered significant if it is greater than or equal to (No-Action pedestrian space ft^2/p / (9.5 – 0.321)). The With-Action condition increments are provided in Table 16-16 in the *CEQR Technical Manual*.
- If the average pedestrian space under the No-Action condition is less than 6.4 ft^2/p, then a decrease in pedestrian space greater than or equal to 0.3 ft^2/p under the With-Action condition is considered a significant impact.

Vehicular and Pedestrian Safety Assessment

Crash data is collected for the most recent three-year period from NYC Department of Transportation (NYCDOT) and classified as Reportable, Non-Reportable, or Property Damage Only. For locations that are identified as a high-crash location, the assessment of safety should include accident type and severity (including pedestrian and bicycle crashes), type of intersection control, and any discernible patterns of crashes. Other factors should be considered such as high volumes of at-risk pedestrian age groups (children or the elderly), crossing locations with difficult sight lines, or uncontrolled locations. High-crash locations are defined as those with more than 48 total reportable and non-reportable crashes or five or more pedestrian/bicycle injury crashes during any consecutive 12 months of the most recent three-year period for which data is available.

Assessment of Vehicular and Safety Issues

The assessment of safety impacts is often subjective and depends largely on the location of the proposed project and the circumstances under which historic crashes took place. It is the goal of this analysis to determine whether the proposed project would increase the potential for pedestrian and bicycle crashes at study intersections that are considered high-crash locations. In cases where this determination is made, measures to improve pedestrian and bicycle safety should be identified and coordinated with NYCDOT.

VI. EXISTING CONDITION

Once the project characteristics have been defined, baseline conditions (the “existing condition”) are established for traffic, transit, pedestrians, parking, and safety.

Pedestrian Conditions

The existing operations of the study area’s sidewalks were assessed during the four peak hours (Weekday AM, Weekday MD, Weekday PM, and Saturday MD). The specific elements analyzed were selected based on meeting the criteria of a projected pedestrian volume increase of more than 200 pedestrians per hour

during at least one of the four peak hours. The analyses were performed at two sidewalks within the study area.

Pedestrian sidewalk counts were conducted in June 2018 during the four peak periods.

Sidewalks

Two sidewalk locations within the study area were analyzed using the collected pedestrian data. As presented in

Table J-**3: Existing Condition Level of Service Analysis – Sidewalks**, both sidewalks locations included in the transportation analysis operate at LOS A for both the non-platoon conditions and platoon conditions during the four peak hours.

Table J-3: Existing Condition Level of Service Analysis – Sidewalks

Location	Total Width (ft)	Obstruc-tion Width (ft)	Effective Width (ft)	Available Circulation Space (ft^2/p)				Non-Platoon Conditions LOS				Platoon Conditions LOS			
				Weekday			Sat	Weekday			Sat	Weekday			Sat
				AM	MD	PM	MD	AM	MD	PM	MD	AM	MD	PM	MD
Olmstead Ave and Bruckner Blvd (N leg, W sidewalk)	14.7	3.0	11.7	15750	15750	6300	2625	A	A	A	A	A	A	A	A
Olmstead Ave and Bruckner Blvd (W leg, N sidewalk)	10.0	3.0	7.0	2700	2700	900	859	A	A	A	A	A	A	A	A

Parking Conditions

On-Street Parking

Existing study area on-street parking conditions were evaluated by performing a field inventory of parking regulations and utilization within a 0.5-mile radius of the Project Site. On-street parking regulations within 0.5-mile of the study area are summarized on **Figure J-4: On-Street Parking Regulation Map** and in **Table J-6: On-Street Parking Regulation Legend**.

Parking utilization surveys were conducted in the study area under typical weekday and Saturday conditions on Saturday, September 8, 2018 and Wednesday, September 12, 2018, during the Weekday AM, MD, PM, Overnight and Saturday MD and Overnight peak periods, when parking demand is expected to be the greatest. Individual street capacities and an hourly assessment of on-street parking utilization were collected for each street in the study area. **Table J-4: Existing Conditions On- and Off-Street Parking Utilization Summary** presents a summary of the survey results in terms of the average percentage of available on-street spaces utilized during each peak hour.

The results indicate that within 0.5-mile of the Project Site, on-street parking utilization is 82, 80, 82 and 87% of available spaces during the Weekday AM, MD, PM, and Overnight peak periods, respectively. The on-street parking utilization is 80 and 85% for the Saturday MD and Overnight peak periods, respectively.

Table J-4: Existing Conditions On- and Off-Street Parking Utilization Summary

	2018 Existing	Weekday AM	Weekday MD	Weekday PM	Weekday Overnight	Saturday MD	Saturday Overnight
On-Street Parking	Capacity	6,090	6,119	6,359	6,379	6,379	6,379
	Demand	4,995	4,876	5,194	5,541	5,077	5,401
	Available Spaces	1,095	1,243	1,165	838	1,302	978
	Utilization	**82%**	**80%**	**82%**	**87%**	**80%**	**85%**
Off-Street Parking	Capacity	145	145	145	145	145	145
	Demand	100	94	100	100	110	120
	Available Spaces	45	51	45	45	35	25
	Utilization	**69%**	**65%**	**69%**	**69%**	**76%**	**83%**
Total On- and Off-Street Parking	Capacity	6,235	6,264	6,504	6,524	6,524	6,524
	Demand	5,095	4,970	5,294	5,641	5,187	5,521
	Available Spaces	1,140	1,294	1,210	883	1,337	1,003
	Utilization	**82%**	**79%**	**81%**	**86%**	**80%**	**85%**

Off-Street Parking

Existing study area off-street parking conditions were evaluated by performing a field inventory/survey of parking facilities within a 0.5-mile radius of the Project Site, shown on **Figure J-5: Off-Street Parking Facility Map**.

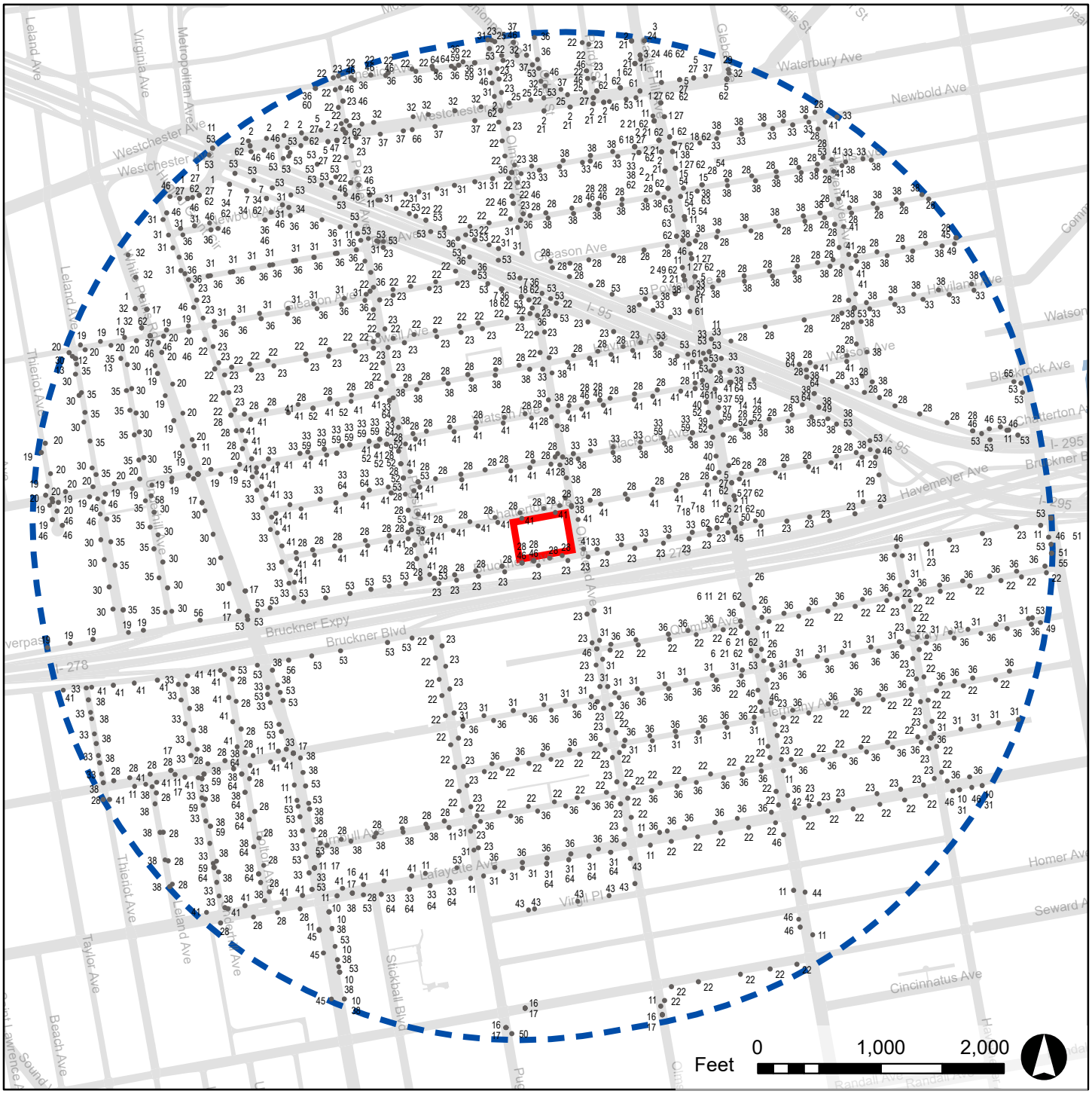
Parking utilization surveys were conducted in the study area under typical weekday and Saturday conditions on Saturday, September 8, 2018 and Wednesday, September 12, 2018 during the Weekday AM, MD, PM, Overnight, and Saturday MD and Overnight peak periods, when parking demand is expected to be the greatest. Existing capacities and an hourly assessment of parking utilization were collected for the off-street parking facility in the study area, as summarized in **Table J-5: Off-Street Parking Facilities Within 0.5-Mile Radius of the Study Area.** These results are included in the overall existing conditions parking utilization assessment shown in **Table J-4: Existing Conditions On- and Off-Street Parking Utilization Summary**.

The results indicate that within 0.5-mile of the Project Site, off-street parking utilization is 69, 65, 69, and 69% of available spaces during the Weekday AM, MD, PM and Overnight peak periods, respectively. The off-street parking utilization is 76 and 83% for the Saturday MD and Overnight periods.

Table J-5: Off-Street Parking Facilities Within 0.5-Mile Radius of the Study Area

	Off-Street Parking Facility	Address	License	Capacity	Existing Parking Utilization						Utilized Spaces						Available Spaces				
					Weekday AM	Weekday MD	Weekday PM	Weekday Overnight	Saturday MD	Saturday Overnight	Weekday AM	Weekday MD	Weekday PM	Weekday Overnight	Saturday MD	Saturday Overnight	Weekday AM	Weekday MD	Weekday PM	Saturday MD	Saturday Overnight
1	2010 Parking Inc.	2010 Westchester Ave	1341282	145	69%	65%	69%	69%	76%	83%	100	94	100	100	110	120	45	51	45	35	25
Total Existing				**145**	**69%**	**65%**	**69%**	**69%**	**76%**	**83%**	**100**	**94**	**100**	**100**	**110**	**120**	**45**	**51**	**45**	**35**	**25**

As shown in **Table J-4: Existing Conditions On- and Off-Street Parking Utilization Summary,** the overall parking results for on- and off-street parking indicate that within a 0.25-mile radius of the Project Site, total parking utilization is 82, 79, 81 and 86% of available spaces during the Weekday AM, MD, PM and Overnight peak periods, respectively. The parking utilization is 80 and 85% for the Saturday MD and Overnight periods.



Project Site

0.5-mile Surrounding Area

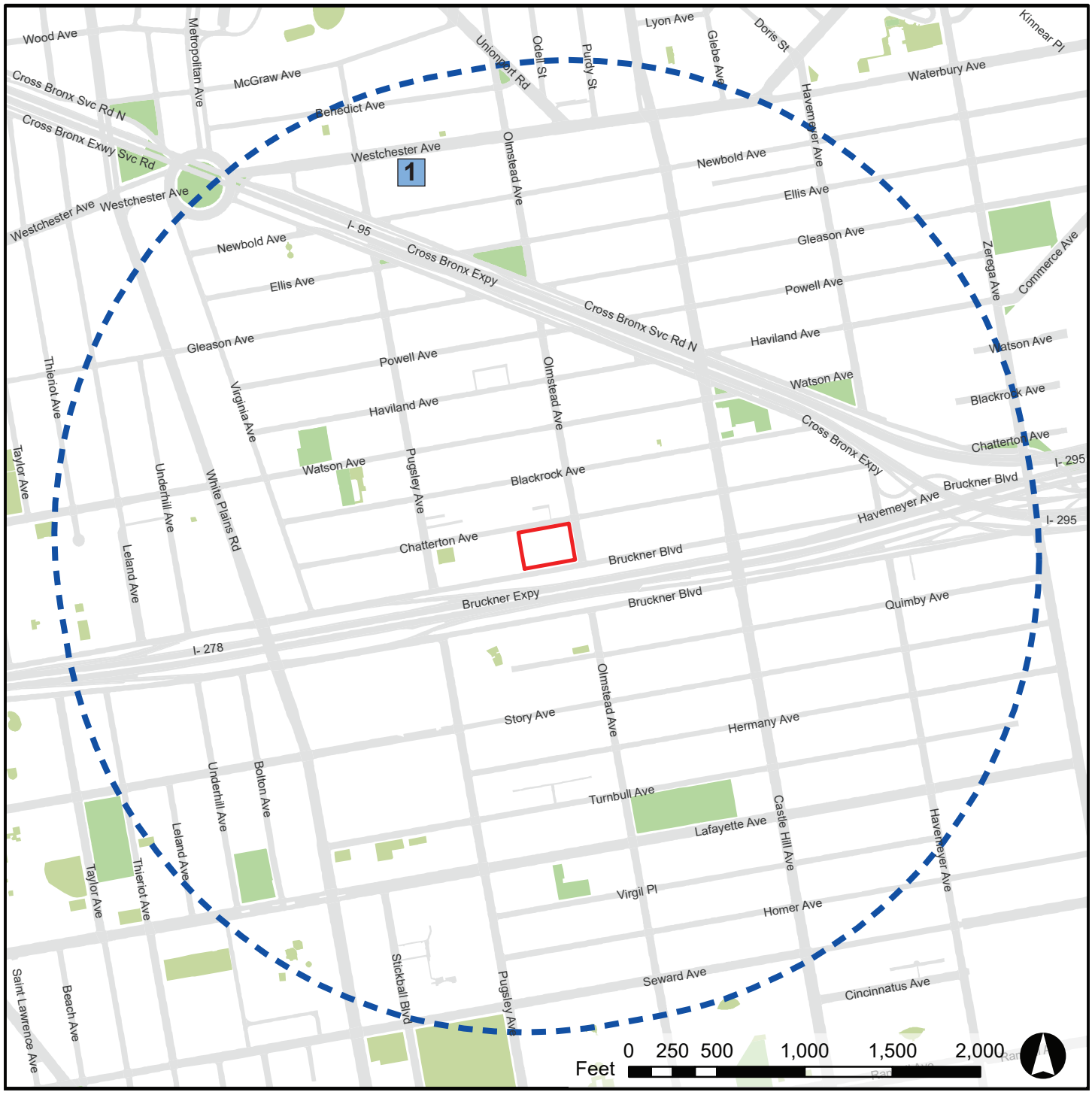
ON-STREET PARKING REGULATION MAP

Figure J-4

2069 Bruckner Boulevard Rezoning EAS

Table J-6: On-Street Parking Regulations Legend

Map #	Regulation
1	1 HOUR METERED PARKING 8:30AM-7PM EXCEPT SUNDAY
2	1 HOUR METERED PARKING 8AM-7PM EXCEPT SUNDAY
3	1 HOUR METERED PARKING 9AM-7PM EXCEPT SUNDAY
4	2 HOUR METERED PARKING 10AM-4PM EXCEPT SUNDAY
5	2 HOUR METERED PARKING 8:30AM-7PM EXCEPT SUNDAY
6	2 HOUR METERED PARKING 8AM-7PM EXCEPT SUNDAY
7	2 HOUR METERED PARKING 9AM-7PM EXCEPT SUNDAY
8	2 HOUR METERED PARKING SATURDAY 8:30AM-7PM
9	ATTENTION DRIVERS IDLING LAW ENFORCED
10	BACK IN ANGLE PARKING ONLY
11	BUS STOP SIGN (BUS & HANDICAP SYMBOLS) NO STANDING
12	CAR (SYMBOL) CARSHARE PARKING ONLY OTHERS NO STANDING ANYTIME
13	CARSHARE SIGN
14	DEPARTMENT OF EDUCATION (DOE)
15	FIRE DEPARTMENT
16	LIMITED MTA BUS
17	LOCAL MTA BUS
18	METERS ARE NOT IN EFFECT ABOVE TIMES
19	NO PARKING (SANITATION BROOM SYMBOL) 11:30AM TO 1PM MON & THURS
20	NO PARKING (SANITATION BROOM SYMBOL) 11:30AM TO 1PM TUES & FRI
21	NO PARKING (SANITATION BROOM SYMBOL) 7:30AM-8AM EXCEPT SUNDAY
22	NO PARKING (SANITATION BROOM SYMBOL) 8:30-10AM MON & THURS
23	NO PARKING (SANITATION BROOM SYMBOL) 8:30-10AM TUES & FRI
24	NO PARKING (SANITATION BROOM SYMBOL) 8:30AM-9AM EXCEPT SUNDAY
25	NO PARKING (SANITATION BROOM SYMBOL) 8-8:30AM MON & THURS
26	NO PARKING (SANITATION BROOM SYMBOL) 8-8:30AM TUES & FRI
27	NO PARKING (SANITATION BROOM SYMBOL) 8AM-8:30AM EXCEPT SUNDAY
28	NO PARKING (SANITATION BROOM SYMBOL) 9:30-11AM MON & THURS
29	NO PARKING (SANITATION BROOM SYMBOL) 9:30-11AM TUES & FRI
30	NO PARKING (SANITATION BROOM SYMBOL) MONDAY THURSDAY 11:30AM-1PM
31	NO PARKING (SANITATION BROOM SYMBOL) MONDAY THURSDAY 8:30AM-10AM
32	NO PARKING (SANITATION BROOM SYMBOL) MONDAY THURSDAY 8AM-8:30AM
33	NO PARKING (SANITATION BROOM SYMBOL) MONDAY THURSDAY 9:30AM-11AM
34	NO PARKING (SANITATION BROOM SYMBOL) MONDAY TUESDAY THURSDAY FRIDAY 8:30AM-9AM
35	NO PARKING (SANITATION BROOM SYMBOL) TUESDAY FRIDAY 11:30AM-1PM
36	NO PARKING (SANITATION BROOM SYMBOL) TUESDAY FRIDAY 8:30AM-10AM
37	NO PARKING (SANITATION BROOM SYMBOL) TUESDAY FRIDAY 8AM-8:30AM
38	NO PARKING (SANITATION BROOM SYMBOL) TUESDAY FRIDAY 9:30AM-11AM
39	NO PARKING (SANITATION BROOM SYMBOL)7:30-8AM MON &THURS
40	NO PARKING (SANITATION BROOM SYMBOL)7:30-8AM MON&THURS
41	NO PARKING (SANITATION BROOM SYMBOL)9:30-11AM TUES & FRI
42	NO PARKING 7AM-4PM MON THRU FRI
43	NO PARKING 7AM-4PM SCHOOL DAYS
44	NO PARKING 7AM-6PM MON THRU FRI CONSTRUCTION
45	NO PARKING 8AM-6PM MON THRU FRI
46	NO PARKING ANYTIME
47	NO PARKING MONDAY-FRIDAY 7AM-6PM
48	NO PARKING MONDAY-FRIDAY 8AM-4PM
49	NO PARKING MONDAY-FRIDAY 8AM-6PM
50	NO STANDING
51	NO STANDING 10PM-5AM INCLUDING SUNDAY
52	NO STANDING 7AM-4PM SCHOOL DAYS
53	NO STANDING ANYTIME
54	NO STANDING ANYTIME EXCEPT AUTHORIZED VEHICLES
55	NO STANDING EXCEPT TRUCKS LOADING & UNLOADING 7AM-7PM MON THRU FRI
56	NO STANDING HANDICAP EXPRESS BUS
57	NO STANDING MONDAY-FRIDAY 7AM-10AM 4PM-6PM
58	NO STANDING MONDAY-FRIDAY 8AM-3PM
59	NO STANDING SCHOOL DAYS 7AM-4PM
60	NO STANDING SCHOOL DAYS 7AM-5PM
61	NO STOPPING ANYTIME
62	PAY-BY-CELL LOCATOR NUMBER
63	STAR (SYMBOL) AUTHORIZED VEHICLES ONLY FIRE DEPARTMENT
64	STAR (SYMBOL) AVO DEPT OF EDUCATION SCHOOL DAYS 7AM-4PM
65	TRUCK (SYMBOL) TRUCK LOADING ONLY MONDAY-FRIDAY 6AM-6PM
66	TRUCK (SYMBOL) TRUCK LOADING ONLY MONDAY-FRIDAY 7AM-4PM



Source: 2017 PLUTO, DCP; NYCDOB

Project Site

0.5-Mile Radius

1 Off-Street Parking Facilities

OFF-STREET PARKING FACILITY MAP

Figure J-5

2069 Bruckner Boulevard Rezoning EAS

VII. THE FUTURE WITHOUT THE PROPOSED ACTIONS

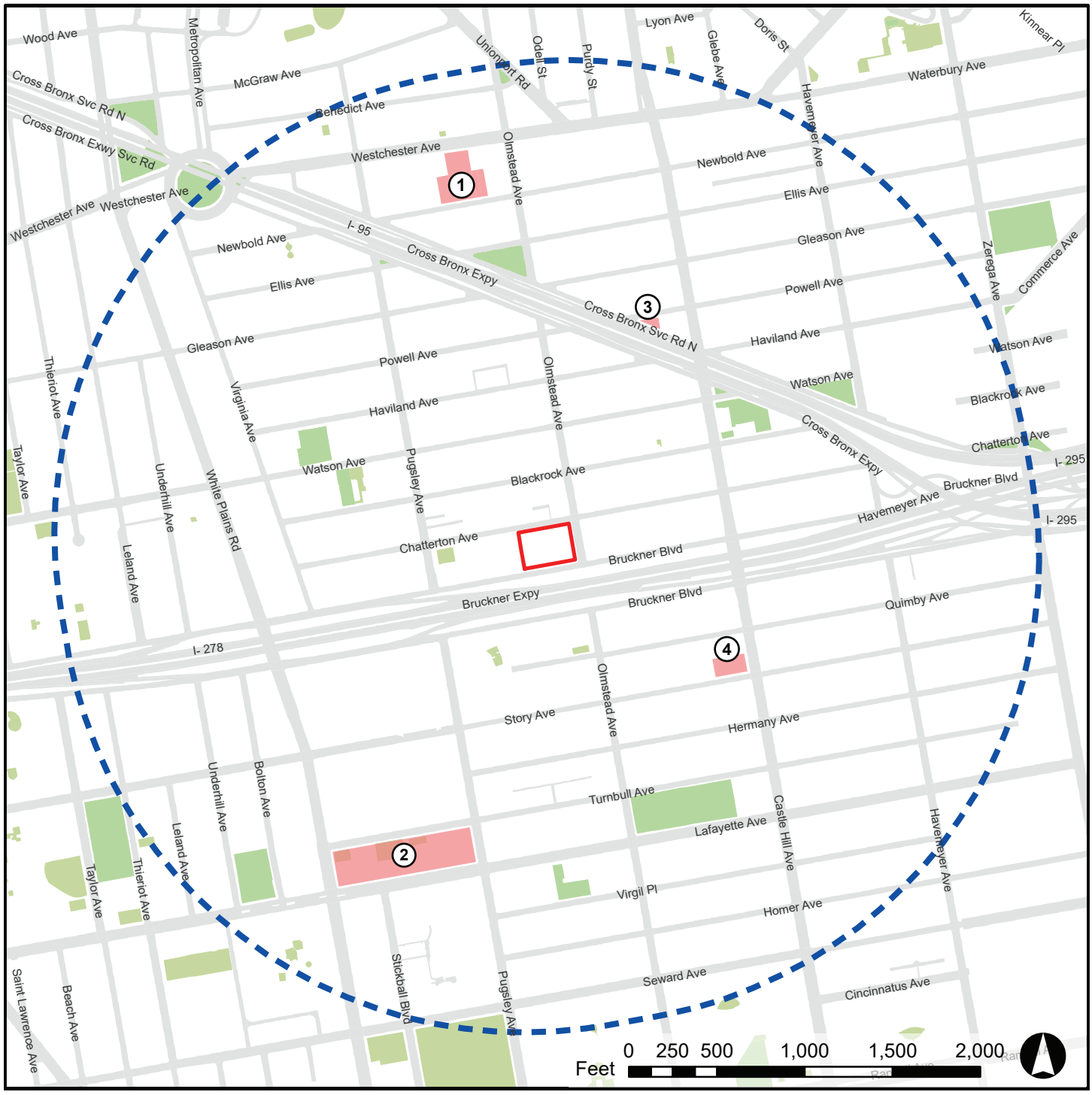
The future condition without the Proposed Actions (the "No-Action condition") builds on the existing condition analysis by incorporating background growth, other nearby projects expected to be completed by the project analysis year (2022), and anticipated changes in the transportation network. The No-Action condition analysis focuses on conditions in 2022, when the Proposed Project is expected to be complete. The analysis of the No-Action condition serves as the baseline to which the future condition with the Proposed Project will be compared to identify potential impacts.

The *CEQR Technical Manual* (Table 16-4) provides an annual background growth rate for the Bronx of 0.25% for the first five years and 0.125% for the years beyond. Therefore, an annual growth rate of 0.25% was applied, over a period of four years, to the 2018 existing condition to develop the No-Action condition background traffic and pedestrian volumes. In addition to the background growth, the development projects expected to be completed by 2022 located within and adjacent to the 0.5-mile radius of the Proposed Project were considered to forecast the No-Action condition volumes, as shown in **Table J-7: No-Action Condition Developments within 0.5-Mile of Project Site** and **Figure J-6: Known No-Action Development Sites within 0.5-Mile of Project Site**.

Table J-7: No-Action Condition Developments within 0.5-Mile of Project Site[1]

Map No.	Project	Block Lot	Description	Status
1	2053 Newbold Avenue & 2044 Westchester Avenue: *"Westchester Mews"*	Block 3805, Lots 123 & 124 (Site 1); Block 3805, Lots 30, 34, 41 (Site 2); Block 3805, Lot 55, 56 (Site 3)	Rezoning from R5/C2-2 and R6/C2-2 to R6 and R6/C2-4 for a multi-phase project. Site 1 (of 5) would be a 219,736 gsf mixed-use development with two buildings at 10 and 11 stories, consisting of 203 residential DUs, 5,549 zsf of commercial retail, 1,276 zsf of community facility uses, and an Inclusionary Housing designation. Site 2 would be a 92,635 gsf mixed-use development with 62 residential DUs (30% affordable at 80% AMI) and 20,557 zsf of commercial retail. Site 3 would be a 40,978 gsf residential development with 37 DUs (30% affordable at 80% AMI).	Estimated completion of Site 1 in 2019; Site 2 in 2021; Site 3 in 2022; Sites 4 & 5 in 2024[2]. *City Council-approved the project.*
2	1965 Lafayette Avenue	Block 3672, p/o Lot 1	Rezoning from R6 to R8 and R8/C2-4 for two attached 14-story buildings with approximately 425 family & senior residential units, 19,938 sf of commercial retail, and an Inclusionary Housing designation. The size of the buildings would be approximately 384,271 gsf.	Estimated completion in 2020[3]
3	2160 Powell Avenue	Block 3810, Lot 77	Mixed-use, 2-story building with 2,283 sf of residential space and 2,703 sf of commercial space, for a total of 4,986 sf and a floor area ratio (FAR) of 1.55. Would provide two parking spaces accessory to residential use.	Latest NYC Department of Buildings (DOB) permits issued in October 2017
4	909 Castle Hill Avenue	Block 3687, Lot 43	Rezoning from existing R3-2 to R5D/C1-3 to allow for an approximately 31,075 sf mixed-use development consisting of 31 DUs and 6,203 sf of commercial space. Would rise to four stories and provide 21 parking spaces.	Estimated completion by 2022

[1] Information based on conversation with DCP Bronx Borough Office on June 12, 2017 and June 21-27, 2018.
[2] Estimated completion dates and rezoning information are based on the publicly available EAS Short Form dated March 3, 2017. https://www1.nyc.gov/assets/planning/download/pdf/applicants/env-review/eas/17dcp080x_eas.pdf
[3] Estimated completion dates and rezoning information are based on the publicly available EAS Short Form dated June 2, 2017. https://www1.nyc.gov/assets/planning/download/pdf/applicants/env-review/eas/17dcp172x-eas.pdf



Source: 2017 PLUTO, DCP; NYCOB

Project Site

0.5-Mile Radius

No-Action Sites

① No-Action Sites Keyed to Table A-1

KNOWN DEVELOPMENT SITES WITHIN 0.5-MILE OF PROJECT SITE

Figure J-6

2069 Bruckner Boulevard Rezoning EAS

Pedestrian Conditions

Pedestrian trips associated with general annual background growth and the No-Action development projects were superimposed onto the existing volumes collected for the pedestrian elements within the study area to generate No-Action condition peak hour volumes for the four peak hours. Pedestrian trips for each No-Action development project were determined and assigned within the study area, which are described in greater detail in **Appendix J**.

Sidewalks

The sidewalk locations included in the transportation analysis are projected to operate at LOS B or better for platoon and non-platoon conditions during the four peak hours for the No-Action condition, as presented in **Table J-8: No-Action Condition Level of Service – Sidewalks**.

Table J-8: No-Action Condition Level of Service – Sidewalks

Location	Total Width (ft)	Obstruc-tion Width (ft)	Effective Width (ft)	Available Circulation Space (ft^2/p)				Non-Platoon Conditions LOS				Platoon Conditions LOS			
				Weekday			Sat	Weekday			Sat	Weekday			Sat
				AM	MD	PM	MD	AM	MD	PM	MD	AM	MD	PM	MD
Olmstead Ave and Bruckner Blvd (N leg, W sidewalk)	14.7	3.0	11.7	15593	15593	6237	2599	A	A	A	A	A	A	A	A
Olmstead Ave and Bruckner Blvd (W leg, N sidewalk)	10.0	3.0	7.0	1343	383	399	329	A	A	A	A	A	B	B	B

Parking Supply and Utilization

The utilization of on-street and off-street parking facilities in the study area is expected to increase due to the area's background growth by an annual growth rate of 0.25% from 2018 to 2022 and based on demand generated by the No-Action development projects. The parking demand generated by each No-Action development project was determined and compared to the number of spaces provided on-site. The shortfall of parking spaces for each No-Action development project was added to on-street parking demand within the study area, as described in **Appendix J**.

As shown in **Table J-9: No-Action Condition Parking Utilization Summary**, the results indicate that within a 0.5-mile radius of the Project Site, the on- and off-street parking utilization is expected to increase to 83, 80, 82, and 88% during the Weekday AM, Weekday MD, Weekday PM, and Weekday Overnight peak periods, respectively, in the No-Action condition. The on- and off-street parking utilization is expected to increase to 80 and 86% during the Saturday MD and Overnight peak periods, respectively.

Table J-9: No-Action Condition Parking Utilization Summary

2022 No-Action Condition Parking Utilization Summary	Weekday				Saturday	
No-Action	**AM**	**MD**	**PM**	**Overnight**	**MD**	**Overnight**
Total Capacity	6,235	6,264	6,504	6,524	6,524	6,524
2018 Existing Demand	5,095	4,970	5,294	5,641	5,187	5,521
No-Action Development Supply (New)	188	188	188	188	188	188
No-Action Development Demand	223	173	284	365	204	345
No-Action Development Surplus (Deficit)[1]	-(38)	-(18)	-(96)	-(177)	-(43)	-(157)
No-Action Development Accommodated Within Proposed Project 0.5-Mile Radius[2]	6	3	15	28	7	25
No-Action Background Growth Increment	52	50	54	57	53	56
Total No-Action Increment	58	53	69	85	60	81
Total No-Action Demand[3]	5,153	5,023	5,363	5,726	5,247	5,602
Available Spaces	1,082	1,241	1,141	798	1,277	922
Utilization	**83%**	**80%**	**82%**	**88%**	**80%**	**86%**

Notes:
1. Surplus is not equal to the difference between Supply and Demand as the supply of no-action sites only accomodates residential vehicles. Further detail of accumulation by facility can be found in Appendix J: Transportation.
2. 10% NA-1: Westchester Mews
   15% NA-2: 1965 Lafayette Avenue
   40% NA-4: 909 Castle Hill Avenue
3. This demand represents the total number of vehicles not accommodated by their respective developments and must park on-street or at off-street facilities.

VIII. DESCRIPTION OF THE PROPOSED PROJECT

The Proposed Actions would result in development of the Proposed Project on the Project Site. The Project Site is located on Block 3797, Lot 33 in the Bronx and is bounded by Chatterton Avenue to the north, Bruckner Boulevard to the south, Pugsley Avenue to the west, and Olmstead Avenue to the east, as shown in **Figure J-1**.

The Proposed Project would consist of two adjoining buildings with the following uses:

- Building A would consist of approximately 71 residential DUs (71,895 gsf residential) with an entrance on Chatterton Avenue.
- Building B would consist of approximately 279 residential DUs (124,530 gsf residential) with an entrance on Olmstead Avenue and 18,023 gsf of commercial uses with entrances on Olmstead Avenue and Bruckner Boulevard.

The Proposed Project would consist of 350 DUs, 18,023 gsf of ground floor commercial/retail, and 159 off-street parking spaces reserved for residential use. Access to the off-street parking would be provided via driveways on Chatterton Avenue and Bruckner Boulevard. Two on-street spaces would be lost due to the creation of new curb cuts associated with the Proposed Project.

The trip generation and assignment estimates were prepared for four peak hours: Weekday AM, Weekday MD, Weekday PM, and Saturday MD.

Trip Generation

The following section describes the assumptions used to develop the trip generation and trip distribution characteristics of the Proposed Project, which are described in greater detail in the Travel Demand Factors Memo (provided in **Appendix J**).

Residential

The Proposed Project would result in an increment of 266 residential DUs. The daily trip generation rates, temporal distribution, daily truck trip generation rates, truck directional distribution, and truck temporal distribution were obtained from the *CEQR Technical Manual*, Table 16-2. The modal split, auto vehicle occupancy, and taxi vehicle occupancy were calculated from the 2012-2016 American Community Survey (ACS) 5-year estimates: Sex of Workers by Means of Transportation to Work for Census Tracts 40.01, 42, 72, 78, 92, 96, and 98 in the Bronx. The directional distribution was obtained from the East 147th Street Rezoning Environmental Assessment Statement (EAS), Table J-20, for the residential land use.

Local Retail

The Proposed Project would include 18,023 gsf of ground floor commercial/retail that would be similar to existing commercial uses in the study area and would consist primarily of local retail uses, such as convenience stores and dry cleaners. The daily trip generation rates, temporal distribution, daily truck trip generation rates, truck directional distribution, and truck temporal distribution were obtained from the *CEQR Technical Manual*, Table 16-2. The modal split (including total transit mode split), auto vehicle occupancy, and taxi vehicle occupancy were provided by NYC Department of City Planning (DCP). The directional distribution was obtained from the Downtown Far Rockaway Redevelopment Project Final Environmental Impact Statement (FEIS), Table 14-6, for the local retail land use, given the similar limited access to transit in the study area compared to the Rockaways.

Linked Trips

No linked trip reduction was applied.

Trip Generation Results

The results of the estimated trip generation for the four peak hours are summarized in **Table J-10: Proposed Project Trip Generation Estimate Summary** for the Proposed Project. Complete travel demand factors are shown in **Table J-11: Travel Demand Factors**, with detailed trip generation estimates shown in **Table J-12: Proposed Project Detailed Trip Generation Estimates** for the Proposed Project.

Table J-10: Proposed Project Trip Generation Estimate Summary

Peak Hour	Vehicle (Auto + Taxi + Truck)	Subway	Bus	Walk/Other	Total Ped
Weekday AM	74	102	37	107	246
Weekday MD	88	76	38	584	698
Weekday PM	98	121	49	321	491
Saturday MD	91	110	45	369	524

Trip Assignment

Vehicular trips were assigned to the study area along main streets and arterials. Pedestrian and transit trips were assigned to the study area along the main walking routes, particularly the shortest paths to the local subway stations and bus stops. Trip distribution characteristics of the Proposed Project are described in greater detail in the Travel Demand Factors Memo in **Appendix J**.

Parking Accumulation

As the Proposed Project is primarily residential, the peak parking demand generated by the Project Site would occur during the Overnight period when residents have all returned home. To estimate the Overnight parking demand, the average number of vehicles available per household of 0.67 (based on 2012-2016 American Community Survey (ACS) 5-year estimates: Household Size by Vehicles Available for Census Tracts 40.01, 42, 72, 78, 92, 96, and 98 in the Bronx) (**Appendix J**) was applied to the total number of residential DUs proposed for the Project Site.

Table J-13: Proposed Project Weekday Parking Accumulation and **Table J-14: Proposed Project Saturday Parking Accumulation** summarize the parking accumulation for a typical Weekday and a typical Saturday for the Proposed Project. The total parking demand during a typical weekday would peak at 257 spaces from 8:00 PM to 9:00 PM. The total parking demand during a typical Saturday would peak at 266 spaces from 6:00 AM to 7:00 AM. A total of 159 spaces on-site would accommodate approximately two thirds of the demand generated by the Proposed Project. The remaining demand would have to be accommodated on-street or in off-street parking facilities.

Table J-11: Travel Demand Factors

	Land Use	Local Retail		Residential	
	Size	18,023		266	
	Unit	gsf		dwelling units	
Daily Person Trip Generation		(1)		(1)	
	Weekday	205.0		8.075	
	Saturday	240.0		9.600	
	Unit	per 1,000 gsf		per dwelling unit	
Daily Truck Trip Generation		(1)		(1)	
	Weekday	0.35		0.06	
	Saturday	0.04		0.02	
	Unit	per 1,000 gsf		per dwelling unit	
Modal Split		Weekday	Saturday	Weekday	Saturday
		(5)		(4)	
	Auto	11.0%	11.0%	30.9%	30.9%
	Taxi	0.0%	0.0%	1.2%	1.2%
	Subway	4.0%	4.0%	45.2%	45.2%
	Bus	3.0%	3.0%	15.6%	15.6%
	Walk/Other	82.0%	82.0%	7.2%	7.2%
		100.0%	100.0%	100.0%	100.0%
Vehicle Occupancy		(5)		(4)	
	Auto	1.50	1.50	1.11	1.11
	Taxi	1.50	1.50	1.11	1.11
Linked Trips		0%	0%	0%	0%
Temporal Distribution		(1)		(1)	
	AM	3.0%		10.0%	
	MD	19.0%		5.0%	
	PM	10.0%		11.0%	
	Sat MD	10.0%		8.0%	
Truck Temporal Distribution		(1)		(1)	
	AM	8.0%		12.0%	
	MD	11.0%		9.0%	
	PM	2.0%		2.0%	
	Sat MD	11.0%		9.0%	
Directional Distribution		In	Out	In	Out
		(2)		(3)	
	AM	50.0%	50.0%	15.0%	85.0%
	MD	50.0%	50.0%	50.0%	50.0%
	PM	50.0%	50.0%	70.0%	30.0%
	Sat MD	55.0%	45.0%	50.0%	50.0%
Truck Directional Distribution		(1)		(1)	
	AM	50.0%	50.0%	50.0%	50.0%
	MD	50.0%	50.0%	50.0%	50.0%
	PM	50.0%	50.0%	50.0%	50.0%
	Sat MD	50.0%	50.0%	50.0%	50.0%

1. *CEQR Technical Manual* (March 2014), Table 16-2.
2. Downtown Far Rockaway Redevelopment Project FEIS, Table 14-6 Transportation Planning Factors. The subway mode share was assigned as bus trips.
3. East 147th Street Rezoning EAS, Transportation Demand Factors, Table J-20.
4. U.S. Census Data. 2012-2016 American Community Survey. Table 08006: Sex of workers by means of transportation to work for Bronx census tracts 40.01, 42, 72, 78,92, 96, and 98.
5. Provided by NYCDCP.

Table J-12: Proposed Project Detailed Trip Generation Estimates

Travel Demand Forecast (Person Trips)

		Local Retail		Residential		TOTAL		
Daily Trips	**Weekday**	3,695		2,148		**5,843**		
	Saturday	4,326		2,554		**6,880**		
Peak Hour Trips	**AM**	111		215		**326**		
	MD	702		107		**809**		
	PM	370		236		**606**		
	Sat MD	433		204		**637**		
		In	**Out**	**In**	**Out**	**In**	**Out**	**TOTAL**
AM	**Auto**	6	6	10	56	**16**	**62**	**78**
	Taxi	0	0	0	2	**0**	**2**	**2**
	Subway	2	2	15	83	**17**	**85**	**102**
	Bus	2	2	5	28	**7**	**30**	**37**
	Walk/Other	46	46	2	13	**48**	**59**	**107**
	Total	56	56	32	182	**88**	**238**	**326**
MD	**Auto**	39	39	17	17	**56**	**56**	**112**
	Taxi	0	0	1	1	**1**	**1**	**2**
	Subway	14	14	24	24	**38**	**38**	**76**
	Bus	11	11	8	8	**19**	**19**	**38**
	Walk/Other	288	288	4	4	**292**	**292**	**584**
	Total	352	352	54	54	**406**	**406**	**812**
PM	**Auto**	20	20	51	22	**71**	**42**	**113**
	Taxi	0	0	2	1	**2**	**1**	**3**
	Subway	7	7	75	32	**82**	**39**	**121**
	Bus	6	6	26	11	**32**	**17**	**49**
	Walk/Other	152	152	12	5	**164**	**157**	**321**
	Total	185	185	166	71	**351**	**256**	**607**
SAT MD	**Auto**	26	21	31	31	**57**	**52**	**109**
	Taxi	0	0	1	1	**1**	**1**	**2**
	Subway	10	8	46	46	**56**	**54**	**110**
	Bus	7	6	16	16	**23**	**22**	**45**
	Walk/Other	195	160	7	7	**202**	**167**	**369**
	Total	238	195	101	101	**339**	**296**	**635**

Travel Demand Forecast (Vehicle Trips)

Taxi Overlap Rate 0%		Local Retail		Residential		TOTAL		
		In	**Out**	**In**	**Out**	**In**	**Out**	**TOTAL**
AM	**Auto**	4	4	9	51	**13**	**55**	**68**
	Taxi	0	0	0	2	0	2	2
	Taxi (Balanced)[1]	0	0	2	2	**2**	**2**	**4**
	Truck	0	0	1	1	**1**	**1**	**2**
	Total	4	4	12	54	**16**	**58**	**74**
MD	**Auto**	26	26	15	15	**41**	**41**	**82**
	Taxi	0	0	1	1	1	1	2
	Taxi (Balanced)[1]	0	0	2	2	**2**	**2**	**4**
	Truck	0	0	1	1	**1**	**1**	**2**
	Total	26	26	18	18	**44**	**44**	**88**
PM	**Auto**	13	13	46	20	**59**	**33**	**92**
	Taxi	0	0	2	1	2	1	3
	Taxi (Balanced)[1]	0	0	3	3	**3**	**3**	**6**
	Truck	0	0	0	0	**0**	**0**	**0**
	Total	13	13	49	23	**62**	**36**	**98**
Sat MD	**Auto**	17	14	28	28	**45**	**42**	**87**
	Taxi	0	0	1	1	1	1	2
	Taxi (Balanced)[1]	0	0	2	2	**2**	**2**	**4**
	Truck	0	0	0	0	**0**	**0**	**0**
	Total	17	14	30	30	**47**	**44**	**91**

Notes
(1) A 0% taxi overlap rate was assumed, based on the *CEQR 2014 Technical Manual*.

Travel Demand Forecast (Total Walk Trips)

		Local Retail		Residential		TOTAL		
		In	**Out**	**In**	**Out**	**In**	**Out**	**TOTAL**
AM	**Total Walk Trips[1]**	50	50	22	124	**72**	**174**	**246**
MD	**Total Walk Trips[1]**	313	313	36	36	**349**	**349**	**698**
PM	**Total Walk Trips[1]**	165	165	113	48	**278**	**213**	**491**
SAT MD	**Total Walk Trips[1]**	212	174	69	69	**281**	**243**	**524**

Notes
(1) Total walk trips includes all trips via transit plus walk only trips.

Table J-13: Proposed Project Weekday Parking Accumulation

	Residential			Local Retail			Total			Parking Surplus/Shortfall
Hour	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation	159 Parking Spaces
Before 12	0	0	239	0	0	0	0	0	239	-80
12-1 AM	7	7	239	0	0	0	7	7	239	-80
1-2 AM	2	2	239	0	0	0	2	2	239	-80
2-3 AM	1	1	239	0	0	0	1	1	239	-80
3-4 AM	1	1	239	0	0	0	1	1	239	-80
4-5 AM	1	1	239	0	0	0	1	1	239	-80
5-6 AM	1	1	239	0	0	0	1	1	239	-80
6-7 AM	1	2	238	0	0	0	1	2	238	-79
7-8 AM	6	21	223	0	0	0	6	21	223	-64
8-9 AM	12	68	167	4	4	0	16	72	167	-8
9-10 AM	13	35	145	4	4	0	17	39	145	0
10-11 AM	16	18	143	6	6	0	22	24	143	0
11-12 PM	17	17	143	10	10	0	27	27	143	0
12-1 PM	17	16	144	26	26	0	43	42	144	0
1-2 PM	21	21	144	27	27	0	48	48	144	0
2-3 PM	16	16	144	14	14	0	30	30	144	0
3-4 PM	16	13	147	9	9	0	25	22	147	0
4-5 PM	61	25	183	9	9	0	70	34	183	-24
5-6 PM	44	24	203	13	13	0	57	37	203	-44
6-7 PM	52	23	232	9	9	0	61	32	232	-73
7-8 PM	42	23	251	4	4	0	46	27	251	-92
8-9 PM	18	12	257	2	2	0	20	14	257	-98
9-10 PM	6	18	245	0	0	0	6	18	245	-86
10-11 PM	13	15	243	0	0	0	13	15	243	-84
11-12 PM	10	13	240	0	0	0	10	13	240	-81

Sources:
Residential: *East 147th Street Rezoning EAS* (2017), Table J-22 and J-23.
Local Retail: *Flushing Commons FEIS* (2010), Table 14-38.

Table J-14: Proposed Project Saturday Parking Accumulation

	Residential			Local Retail			Total			Parking Surplus/Shortfall
Hour	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation	159 Parking Spaces
Before 12	0	0	239	0	0	0	0	0	239	-80
12-1 AM	13	7	245	0	0	0	13	7	245	-86
1-2 AM	10	6	249	0	0	0	10	6	249	-90
2-3 AM	7	5	251	0	0	0	7	5	251	-92
3-4 AM	6	2	255	0	0	0	6	2	255	-96
4-5 AM	7	1	261	0	0	0	7	1	261	-102
5-6 AM	6	2	265	0	0	0	6	2	265	-106
6-7 AM	11	10	266	0	0	0	11	10	266	-107
7-8 AM	15	16	265	0	0	0	15	16	265	-106
8-9 AM	15	32	248	1	1	0	16	33	248	-89
9-10 AM	22	29	241	1	1	0	23	30	241	-82
10-11 AM	26	29	238	5	5	0	31	34	238	-79
11-12 PM	29	30	237	11	11	0	40	41	237	-78
12-1 PM	24	26	235	21	21	0	45	47	235	-76
1-2 PM	38	38	235	21	19	2	59	57	237	-78
2-3 PM	38	29	244	18	20	0	56	49	244	-85
3-4 PM	33	30	247	26	26	0	59	56	247	-88
4-5 PM	30	27	250	23	23	0	53	50	250	-91
5-6 PM	26	26	250	18	18	0	44	44	250	-91
6-7 PM	24	27	247	8	8	0	32	35	247	-88
7-8 PM	23	24	246	4	4	0	27	28	246	-87
8-9 PM	21	24	243	2	2	0	23	26	243	-84
9-10 PM	18	24	237	1	1	0	19	25	237	-78
10-11 PM	15	11	241	1	1	0	16	12	241	-82
11-12 PM	13	10	244	0	0	0	13	10	244	-85

Sources:
Residential: *East 147th Street Rezoning EAS* (2017), Table J-22 and J-23.
Local Retail: *Flushing Commons FEIS* (2010), Table 14-38.

IX. THE FUTURE WITH THE PROPOSED ACTIONS

The No-Action condition analysis forms the future baseline to which projected trip increments associated with the Proposed Project are added to generate the future with the Proposed Actions (the "With-Action condition"). The *CEQR Technical Manual* defines how impacts to traffic, pedestrians, safety, and parking are to be determined. If the analysis results show that the Proposed Project would result in significant transportation-related impacts, mitigation measures are recommended to alleviate these impacts.

Pedestrian Conditions

Trips associated with the Proposed Project were added to the No-Action condition pedestrian network to generate With-Action condition peak hour volumes for the four peak hours.

Sidewalks

The With-Action condition results for the two sidewalk locations were compared with the No-Action condition results for all four peak hours. As shown in **Table J-15: With-Action Condition Level of Service – Sidewalks**, the sidewalks are expected to operate at LOS B or better during all peak hours for the non-platoon and platoon conditions. Therefore, based on the significant adverse impact criteria in the *CEQR Technical Manual*, the Proposed Project would not result in any significant adverse impacts on either sidewalk element.

Table J-15: With-Action Condition Level of Service – Sidewalks

Location	Total Width (ft)	Obstruction Width (ft)	Effective Width (ft)	Available Circulation Space (ft^2/p)				Non-Platoon Conditions LOS				Platoon Conditions LOS			
				Weekday			Sat	Weekday			Sat	Weekday			Sat
				AM	MD	PM	MD	AM	MD	PM	MD	AM	MD	PM	MD
Olmstead Ave and Bruckner Blvd (N leg, W sidewalk)	13.3	3.0	10.3	611	382	467	482	A	A	A	A	A	B	B	B
Olmstead Ave and Bruckner Blvd (W leg, N sidewalk)	9.7	3.0	6.7	611	145	182	166	A	A	A	A	A	B	B	B

Parking Occupancy and Utilization

The Proposed Project would provide 159 on-site parking spaces to serve residential parking demands. Additional parking demand generated by the Proposed Project was assumed to be accommodated by on- and off-street parking spaces within a 0.25-mile radius of the Project Site. The off-site parking capacity within the 0.25-mile radius of the Project Site would not be sufficient to accommodate the parking demand generated by the Proposed Project. Following guidelines outlined in the *CEQR Technical Manual*, the off-site parking capacity located within a 0.5-mile radius of the Project Site was considered and assumed to accommodate the additional parking demand generated by the Proposed Project. As a result, the utilization of on- and off-street parking spaces in the study area is expected to increase due to the auto trips generated by the Proposed Project. Additionally, two on-street spaces would be lost due to the creation of new curb cuts associated with the Proposed Project.

The With-Action condition parking utilization analysis is summarized in **Table J-16: With-Action Condition Parking Utilization Summary.** The parking utilization is expected to increase to 83, 80, 83 and 89% during the Weekday AM, Weekday MD, Weekday PM, and Weekday Overnight peak periods, respectively. The on- and off-street parking utilization is expected to increase to 82 and 87% during the Saturday MD and Saturday Overnight peak periods. Since there would be sufficient available on- and off-street parking to accommodate the Proposed Project, there would be no significant adverse parking-related impacts.

Table J-16: With-Action Condition Parking Utilization Summary

2022 With-Action Condition Parking Utilization Summary	Weekday				Saturday	
No-Action	**AM**	**MD**	**PM**	**Overnight**	**MD**	**Overnight**
Total Capacity	6,235	6,264	6,504	6,524	6,524	6,524
Spaces Lost due to New Project Driveway	2	2	2	2	2	2
Future Capacity	6,233	6,262	6,502	6,522	6,522	6,522
2018 Existing Demand	5,095	4,970	5,294	5,641	5,187	5,521
No-Action Development Supply (New)	188	188	188	188	188	188
No-Action Development Demand	223	173	284	365	204	345
No-Action Development Surplus (Deficit)[1]	-(38)	-(18)	-(96)	-(177)	-(43)	-(157)
No-Action Development Accommodated Within Proposed Project 0.5-Mile Radius[2]	6	3	15	28	7	25
No-Action Background Growth Increment	52	50	54	57	53	56
Total No-Action Increment	58	53	69	85	60	81
Total No-Action Demand[3]	5,153	5,023	5,363	5,726	5,247	5,602
Project Supply	159	159	159	159	159	159
Project Demand	167	144	203	257	237	243
Project Surplus (Deficit)	-(8)	0	-(44)	-(98)	-(78)	-(84)
Total With-Action Demand[3]	5,161	5,023	5,319	5,628	5,169	5,518
Available Spaces	1,074	1,241	1,185	896	1,355	1,006
Utilization	**83%**	**80%**	**82%**	**86%**	**79%**	**85%**

Notes:
1. Surplus is not equal to the difference between Supply and Demand as the supply of no-action sites only accomodates residential vehicles. Further detail of accumulation by facility can be found in Appendix J: Transportation.
2. 10% NA-1: Westchester Mews
15% NA-2: 1965 Lafayette Avenue
40% NA-4: 909 Castle Hill Avenue
3. This demand represents the total number of vehicles not accommodated by their respective developments and must park on-street or at off-street facilities.

X. SAFETY ASSESSMENT

Crash data for the study area intersections were obtained from the NYCDOT for the three-year time period between January 1, 2014, and December 31, 2016, and quantify the total number of reportable crashes (involving fatality, injury, or more than $1,000 in property damage), fatalities, and injuries during the study period, as well as a yearly breakdown of pedestrian- and bicycle-related crashes at each location. According to the *CEQR Technical Manual*, a high-crash location is one with more than 48 total reportable and non-reportable crashes or five or more pedestrian/bicycle injury crashes during any consecutive 12 months of the most recent three-year period for which data is available.

During this three-year period, 11 total crashes, three of which were pedestrian-related or bicycle-related, occurred at the study area intersections. Based on the crash data, none of the study intersections would be classified as high-crash locations per the *CEQR Technical Manual*.

Table J-17: Crash Data depicts total crashes by intersection during the three-year period, as well as a breakdown of pedestrian- and bicycle-related crashes by year and location.

Table J-17: Crash Data

	Total Crashes			Pedestrian			Bicycle			Combined Ped/Bike		
Intersection	**2014**	**2015**	**2016**	**2014**	**2015**	**2016**	**2014**	**2015**	**2016**	**2014**	**2015**	**2016**
Pugsley Ave & Bruckner Blvd WB	1	3	1	1	1	0	0	0	0	1	1	0
Olmstead Ave & Bruckner Blvd WB	3	1	2	0	0	1	0	0	0	0	0	1
Total	**4**	**4**	**3**	**1**	**1**	**1**	**0**	**0**	**0**	**1**	**1**	**1**
Grand Total	**11**			**3**			**0**			**3**		

Attachment K: Air Quality

I. INTRODUCTION

Ambient air quality, or the quality of the surrounding outdoor air, may be affected by air pollutants produced by motor vehicles, referred to as mobile sources, by fixed facilities, usually referenced as stationary sources, or by a combination of both. This chapter examines the potential for the Proposed Actions to result in significant adverse impacts to ambient air quality. The assessment also evaluates the impact of existing air pollutant sources near the Project Site on the Proposed Project. The analyses conformed to the procedures outlined in the *City Environmental Quality Review (CEQR) Technical Manual* and guidance from the New York City (NYC) Department of Environmental Protection (NYCDEP). The results of the analysis were used to determine the potential for the Proposed Actions to cause exceedances of ambient air quality standards, NYC "de minimis" values for carbon monoxide and particulate matter, or health-related guideline values.

As described in Attachment A, "Project Description," the Proposed Actions would facilitate the development of an approximately 366,007 gross square feet (gsf) mixed-use development consisting of two adjoining buildings and comprised of 350 affordable dwelling units (DUs) within approximately 291,283 gsf of residential space, approximately 18,023 gsf of ground floor commercial retail space, approximately 159 parking spaces for resident use, and approximately 173 bicycle parking facilities (the "Proposed Project"). Approximately 144 DUs would be restricted to households with incomes below 80% of Area Median Income (AMI), and approximately 206 DUs would be restricted to households with incomes between 81% and 130% of AMI, of which approximately 71 DUs may have a home ownership option. The height of the buildings would range from 70 feet for Building A to 95 feet for Building B.

II. PRINCIPAL CONCLUSIONS

Air quality analyses addressed mobile sources, parking facilities, stationary Heating Ventilation and Air Conditioning (HVAC) systems, and air toxics. Based on the information and analyses provided in this chapter, no significant adverse impacts are projected for air quality due to the Proposed Actions. This includes the effects of the Proposed Project on the surrounding community, and the effects of air pollution sources in the surrounding community on the Proposed Project. Potential "project-on-project" impacts (i.e., the effect of emissions from previously-completed phases of the Proposed Project on subsequent phases of the Proposed Project) were not a concern because the Proposed Project would be developed in one phase and a single HVAC system would serve the entire development.

The results of the analyses are summarized below:

- A screening analysis and subsequent modeling with a Tier I CAL3QHCR model was completed to determine the impact of $PM_{2.5}$ from additional motor vehicles generated by the Proposed Project. The intersection of Olmstead Avenue and Chatterton Avenue was modeled as a worst-case location. The results showed that motor vehicles due to the Proposed Project would not result in a significant adverse impact on air quality.
- Due to the number of parking spaces (159 spaces) in the proposed on-site parking garage, a detailed analysis of carbon monoxide (CO) and particulate matter ($PM_{2.5}$) emissions from the parking facility was prepared. The results showed no significant adverse impacts on air quality.
- Due to the use of a single HVAC system for the Proposed Project, and the distance between the Project Site and the nearest building of similar or greater height, a screening analysis showed no

potential for significant adverse air quality impacts to existing or future buildings. An (E) designation will be mapped on the Project Site to specify the type of fuel to be used and the stack height.

- One major stationary source of emissions is located within 1,000-feet of the Project Site. Consequently, this source was modeled with the AERMOD air quality dispersion model. The results showed that stationary source would not cause a significant air quality impact to the Proposed Project.

- A review of permitted industrial facilities within 400-feet of the Project Site identified one establishment with an expired permit: Mary Cleaners, a dry-cleaners at 1047 Olmstead Avenue. The make and model of the installed equipment is on New York State Department of Environmental Conservation (NYSDEC)'s list of approved equipment, but the permit for this dry-cleaning business is expired. According to NYCDEP guidelines, since dry-cleaners in NYC use the best available technology for controlling dry cleaning emissions and meet stringent NYCDEP regulations, the dry cleaning facility would not lead to any significant adverse impacts

Based on the results of these assessments, the Proposed Project would not have a significant adverse impact on air quality and, consequently, no further assessment is necessary.

III. METHODOLOGY

Scope of Analysis

The Proposed Actions would introduce new residential and commercial uses to the Project Site. In conformance to *CEQR Technical Manual* guidelines, the goal of the air quality analysis is to determine whether a proposed project would cause an exceedance of air quality standards and guidelines or exacerbate an existing exceedance at: 1) existing locations accessible to the general public; and 2) new sensitive uses associated with the Proposed Actions. This can include placing a sensitive use in an area with pollutant levels exceeding threshold criteria as well as creating project-on-project impacts whereby pollutant emissions from new uses (e.g., multiple buildings) create significant adverse air quality impacts to each other. If significant adverse impacts are identified, CEQR requires such impacts to be mitigated or avoided to the greatest extent practicable.

The scope of work included various screening, analysis, and modeling techniques to determine whether the following would cause pollutant levels to exceed the thresholds identified under the discussion on Evaluation Criteria due to:

- project-generated traffic;
- project-generated parking facilities;
- project-generated sensitive uses (e.g., residential buildings);
- existing major sources; and
- existing industrial operations.

Analysis Year

The assessment of noise was completed for the year 2022, the year at which the Proposed Project is anticipated to be in operation. No interim years were analyzed since the completion year would constitute a worst-case for project-generated traffic and HVAC emissions.

Standards and Guidelines

National Ambient Air Quality Standards

National Ambient Air Quality Standards (NAAQS) have been promulgated by the U.S. Environmental Protection Agency (EPA) for six major pollutants, deemed criteria pollutants, because threshold criteria can be established for determining adverse effects on human health. They consist of primary ambient air quality standards, established to protect public health, and secondary ambient air quality standards, established to protect plants and animals and to prevent economic damage. These six pollutants are:

- Carbon Monoxide (CO), which is a colorless, odorless gas produced from the incomplete combustion of gasoline and other fossil fuels.
- Lead (Pb) is a heavy metal principally associated with industrial sources.
- Nitrogen dioxide (NO_2), which is formed by chemical conversion from nitric oxide (NO), which is emitted primarily by industrial furnaces, power plants, and motor vehicles.
- Ozone (O_3), a principal component of smog, is formed through a series of chemical reactions between hydrocarbons and nitrogen oxides in the presence of sunlight.
- Inhalable Particulates (PM_{10}/$PM_{2.5}$) are primarily generated by diesel fuel combustion, brake and tire wear on motor vehicles, and the disturbance of dust on roadways. The PM_{10} standard covers those particulates with diameters of 10 micrometers or less. The $PM_{2.5}$ standard covers particulates with diameters of 2.5 micrometers or less.
- Sulfur dioxides (SO_2) are heavy gases primarily associated with the combustion of sulfur-containing fuels such as coal and oil.

Table K-1: National and New York State Ambient Air Quality Standards shows the current standards.

Table K-1: National and New York State Ambient Air Quality Standards

Pollutant	Averaging Period	Standard
Sulfur Dioxide	1-hour average[e]	196 µg/m^3 (75 ppb)
Inhalable Particulates (PM_{10})	24-hour average	150 µg/m^3
Inhalable Particulates ($PM_{2.5}$)	3-year average annual mean[c]	12 µg/m^3
	24-hour 3-year average[c]	35 µg/m^3
Ozone	Daily 8-hour average[b]	0.075 ppm
Carbon Monoxide	8-hour average[a]	9 ppm
	1-hour average[a]	35 ppm
Nitrogen Dioxide	12-month arithmetic mean	100 µg/m^3 (53 ppb)
	1-hour average[d]	188 µg/m^3 (100 ppb)
Lead	Quarterly mean	1.5 µg/m^3

Notes: ppm = parts per million; µg/m3 = micrograms per cubic meter.

a. Not to be exceeded more than once a year.
b. Three-year average of the annual fourth highest maximum 8-hour average concentration effective May 27, 2008.
c. Not to be exceeded by the 98th percentile of 24-hour PM2.5 concentrations in a year (averaged over 3 years).
d. Three-year average of the 98th percentile of the daily maximum 1-hour average, effective January 22, 2010.
e. Three-year average of the 99th percentile of the daily maximum 1-hour average, final rule signed June 2, 2010.

Sources: *NYSDEC; New York State Ambient Air Quality Development Report, 2017*

NYC De Minimis Criteria and Interim Guidelines

NYC "*de minimis"* criteria are used to determine the significance of the incremental increases in CO concentrations that would result from a proposed action. These set the minimum change in an 8-hour average CO concentration that would constitute a significant environmental impact. These criteria indicate that a significant CO impact would occur with:

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

NYC has also established *de minimis* criteria for $PM_{2.5}$. These *de minimis* criteria indicate that a significant $PM_{2.5}$ impact would occur with:

- Predicted increase of more than half the difference between the background concentration and the 24-hour standard;
- Predicted annual average $PM_{2.5}$ concentration increments greater than 0.1 ug/m^3 at ground level on a neighborhood scale (i.e., the annual increase in concentration representing the average over an area of approximately one square kilometer, centered on the location where the maximum ground-level impact is predicted for stationary sources; or at a distance from a roadway corridor similar to the minimum distance defined for locating neighborhood scale monitoring stations); or
- Predicted annual average $PM_{2.5}$ concentration increments greater than 0.3 µg/m^3 at a discrete or ground-level receptor location.

Based on the NYSDEC's annual air quality report (2017), which lists a background value of 19.6 ug/m^3 for $PM_{2.5}$ for the Bronx (IS 52), the *de minimis* criterion for the 24-hour concentration of $PM_{2.5}$ would be 7.7 ug/m^3. An incremental increase in ambient concentrations due to a proposed project greater than this value would be considered a significant air quality impact.

New York State Short-Term and Annual Guideline Concentrations

NYSDEC has established Short-Term Guideline Concentrations (SGCs) and Annual Guideline Concentrations (AGCs) for certain toxic or carcinogenic non-criteria pollutants for which EPA has no established standards. They are maximum allowable 1-hour and annual guideline concentrations, respectively, that are considered acceptable concentrations below which there should be no adverse effects on the health on the general public. SGCs are intended to protect the public from acute, short-term effects of pollutant exposures, and AGCs are intended to protect the public from chronic, long-term effects of the exposures. NYSDEC DAR-1 (August 10, 2016) contains the most recent compilation of the SGC and AGC guideline concentrations.

Evaluation Criteria

Based on the foregoing discussions an impact would occur under the following conditions:

- Concentrations of CO, $PM_{2.5}$, PM_{10}, or NO_2 under the With-Action condition would exceed the NAAQS;
- The increments of CO or $PM_{2.5}$, when comparing the With-Action condition to the No-Action condition, would exceed the NYC de minimis criteria; or
- The concentrations of pollutants listed as air toxics would exceed the NYS SGC or AGC guidelines.

Mobile Source Screening

Localized increases in pollutant levels may result from increased vehicular traffic volumes and modified traffic patterns in the study area due to the Proposed Actions. The mobile source analysis outlined in the *CEQR Technical Manual* addresses such actions to determine whether they may have significant adverse air quality impacts. The first step is a screening analysis for CO and $PM_{2.5}$ based on traffic volume.

Table K-2: Traffic Volume Increments 2022 shows the projected traffic volume increments for the adjacent intersections for 2022. All increments were assumed to be autos, pick-up trucks or panel-type delivery trucks that would be classified as either autos or passenger trucks. This is a typical assumption for this type of development, as larger trucks would avoid deliveries during peak periods.

Table K-2: Traffic Volume Increments 2022[1]

ID	Intersection	Increment (Auto Trips/Peak-Hour)				NYSDOT Functional Classifications
		AM	Midday	PM	SAT	
1	Bruckner Boulevard/Pugsley Avenue	29	**36**	23	30	Arterial/Local
2	Chatterton Avenue/Pugsley Avenue	15	29	**33**	30	Local/Local
3	Chatterton Avenue/Olmstead Avenue	**35**	28	32	33	Local/Local
4	Bruckner Boulevard/Olmstead Avenue	12	38	**42**	35	Arterial/Local

Note: *Numbers in bold type are the highest for that intersection*

As identified in the *CEQR Technical Manual*, the threshold volume for a more detailed CO analysis is an increment of 170 vehicles through an intersection during a peak traffic hour. Since the project-generated volumes would be less than the 170-vehicle threshold, no CO modeling is required.

A $PM_{2.5}$ screening analysis was conducted using the spreadsheet referenced on page 17-12 of the *CEQR Technical Manual*. The chemical transport model (CTM) algorithm uses traffic volumes by vehicular class and determines the number of heavy duty diesel vehicles (HDDVs) that would generate equivalent emissions. The lowest vehicular category in the spreadsheet is LDGT1, Light Duty Gasoline Trucks 1; no Auto category is available. Based on the screen, a more detailed analysis is required if a proposed action would meet or exceed the following thresholds:

- 12 HDDV for paved roads with average daily traffic fewer than 5,000 vehicles;
- 19 HDDV for collector-type roads;
- 23 HDDV for principal and minor arterial roads; and
- 23 HDDV for expressways and limited-access roads.

Since the CTM screen uses roadway type, **Table K-2: 2022 Traffic Volume Increments** also shows the relevant New York State Department of Transportation (NYSDOT) functional classifications for the intersection roadways. All are urban roads. For screening purposes, local roads are treated as paved roads with average daily traffic of fewer than 5,000 vehicles. NYC Department of City Planning (DCP) protocols state that the intersection roadway with the higher function (e.g., arterial) determines the classification of the intersection. Thus, Intersections 1 and 4 with Bruckner Boulevard are classified as arterials and Intersections 2 and 3 are classified as local.

Based on the CTM spreadsheet the intersections with arterials pass the screen because the highest increment, 44 vehicles, would be equivalent to two HDDVs, which is lower than the threshold value of 23

[1] The traffic increments were updated after the mobile source analysis was completed. In comparison, they are slightly lower for the weekday peaks and slightly higher for the Saturday peak. Mobile source modeling discussed in subsequent sections and presented in **Table K-10: Mobile Source $PM_{2.5}$ ($\mu g/m^3$) 2022, With-Action Condition** represent a worst case scenario for the Proposed Project.

HDDVs. The intersections with local roads fail the screen. Intersection 3, with the higher increment of 38 vehicles, would have an equivalent volume of 18 HDDVs, and the screen threshold is 12 HDDVS.

For low volume roads, the screen value in the CTM represents total emissions of 6.11 grams/mile, or 12.46 HDD trucks x 0.4904 grams per mile, where 0.4904 is a constant that includes the net calculations for average fleet weight, silt loading, and brake and tire wear for a single HDDV on a local road. Similar calculations for HDDVs on other roadway types also total 6.11 grams/mile.

However, the CTM screen is based on the MOBILE6.2b emissions model, which is outdated. $PM_{2.5}$ emission factors from MOVES14a are different from MOBIL6.2 in many ways, and the following are most significant:

- They vary by speed,
- Some of them are higher than MOBILE6.2,
- The vehicular classes are different, and
- They vary by time of day.

Therefore, an updated screen was developed to further evaluate the two local intersections. MOVES14a was run with one vehicle for each vehicle type for the Bronx for the worst-case volume of 38 vehicles for a weekday AM period in January. The time of day was 7 to 8 am. The speeds were 5, 10, 15, 20, and 25 mph. Higher speeds were excluded because they would be typical of arterials rather than local roads. The year was 2022, the Action Year for 2069 Bruckner Boulevard.

The resulting emission factors for 2022 were placed into a spreadsheet that would calculate a composite emission factor for each speed category if the user inserted incremental volumes, similar to the CTM spreadsheet. The spreadsheet also calculated vehicular mix and fugitive dust for the resulting fleet weight using the silt loading factor for each roadway type. To match the original CTM screen, and to account for the types of peak-hour vehicles that might be generated, all 38 vehicles were input as Passenger Trucks rather than Passenger Cars. The Motor Vehicle Emission Simulator (MOVES) emission factors for Passenger Trucks are similar to those for Passenger Cars, but the vehicular weight is greater, thus leading to higher emissions per vehicle.

Table K-3: Incremental Emissions 2022 (g/mi) compares the total emissions per vehicle mile from the CTM screen value with the total emissions per mile calculated by the updated screening analysis. Adding the increment of 38 vehicles to a local road would exceed the threshold emissions of 6.11 grams per mile, but it would not cause an exceedance if the intersection roadways were collectors or arterials.

Table K-3: Incremental Emissions 2022 (g/mi)

Intersection Roadway Type	Total Grams/Mile (38 Vehicles)					*CEQR Technical Manual* Screen Grams/Mile
	5 mph	10 mph	15 mph	20 mph	25 mph	
Paved road < 5000 veh/day	9.93	9.49	9.34	9.25	9.16	6.11
Collector roads	5.07	4.63	4.48	4.39	4.30	6.11
Principal & minor arterials	3.78	3.33	3.18	3.09	3.00	6.11
Expressways & limited-access roads	1.77	1.33	1.18	1.09	1.00	6.11

The equivalent truck calculations showed that the 38-vehicle increment at a local intersection would exceed the threshold emissions of 6.11 grams/mile. Therefore, the intersection requires further analysis of $PM_{2.5}$ using MOVES 2014a and CAL3QHCR in a Tier I analysis. The Chatterton Avenue/Olmstead Avenue

intersection was modeled as a worst-case for $PM_{2.5}$ for the peak AM period as detailed below in the discussion of Mobile Source Modeling.

Mobile Source Modeling

The EPA CAL3QHCR model was used to determine future (2022) $PM_{2.5}$ concentrations from vehicular traffic. CAL3QHCR is a Gaussian dispersion model that determines pollutant concentrations at specified receptor points. It accounts for pollutant emissions from both free-flowing vehicles and vehicles idling at signalized intersections. In accordance with EPA guidance, the queuing algorithm was not used with the CAL3QHCR model. Therefore, average speeds that included intersection delay were calculated for the roadway links.

Inputs to the model included coordinates for receptors and free-flow approach and departure links, and peak-hour traffic volumes, speeds, and vehicular emission factors for each link. MOVES2014a was used to estimate pollutant emission factors for free-flow links in grams/vehicle-mile. The vehicular mix and speeds used in MOVES2014a were based on field counts and speed runs. Inputs pertaining to inspection/maintenance, anti-tampering programs, age distribution, meteorology, etc., were obtained from NYSDEC. The pollutant processes included running exhaust and crankcase running exhaust, as well as brake and tire wear, for $PM_{2.5}$.

MOVES2014a was run for January 1 for the 2022 analysis year for the weekday AM peak period (8:00 AM to 9:00 AM). Post-processing was carried out to obtain emission factors for use in a Tier I analysis with CAL3QHCR. A Tier I analysis assumes that the traffic is the same for every hour of the day. A more refined Tier II analysis would use traffic volumes, speeds, vehicular mix, and emission factors specific to each hour of the day.

Fugitive dust from re-entrainment of dust was calculated using the formulas from Section 13.2.1-3 of EPA's AP-42 Document. The formulas were based on an average fleet weight that varied according to the vehicular mix for a given roadway and a silt loading factor of 0.4 g/m^2 for paved roads with fewer than 5,000 average daily traffic volumes (ADT), as recommended by the *CEQR Technical Manual*. The resulting fugitive dust emissions were added to the 24-hour emission factors calculated by MOVES2014a.

All links in CAL3QHCR were set up as free-flowing traffic links for a distance of 1,000-feet from the modeled intersection in each direction. The mixing zone for free-flow links was equal to the width of the traveled way plus an additional ten feet (three meters) on each side of the travel lanes. Idle times were incorporated into the calculated average speeds, which included delay periods.

Idle emissions were treated as a link with a length of 0 feet, and the emission factor was obtained as grams per hour. Idle emissions were used in the garage analysis, where outgoing vehicles are assumed to idle for one minute before departing. For free-flow links, the idle emission was averaged into the free-flow and not modeled as a separate link with 0 feet.

For the purposes of the air quality analysis, any point to which the public has continuous access can be deemed a sensitive receptor site. Therefore, receptor points were modeled at on the corners of the intersections, and additional points were modeled at twenty-foot intervals for a distance of 350 feet along both sides of each intersection leg. Receptors for the 24-hour averaging periods of $PM_{2.5}$ were placed at mid-sidewalk and outside the air quality mixing zone. Receptors for $PM_{2.5}$ for the annual period were placed outside the air quality mixing zone and at least 15 meters from the roadway.

CAL3QHCR was run with five years of meteorological data (2013-2017) from LaGuardia Airport and a surface roughness of 321 centimeters (cm). A Tier I analysis was used, which assumes that a set of worst-case peak-hour traffic inputs are the same for all 24 hours of the day. This is a very conservative analysis, as the traffic volumes and speeds would show less congestion during off-peak hours.

The modeled 24-hour and annual concentrations for $PM_{2.5}$ were averaged for the five-year meteorological period. The averages were compared with the NAAQS, and the differences between the modeled No-Action and With-Action concentrations were compared with the NYCDEP *de minimis* criteria.

Stationary Source Screen

Consistent with guidance in the *CEQR Technical Manual*, the assessment of impacts from stationary sources is completed through a multi-step air quality impact assessment procedure. The first step in the HVAC analysis is a screening analysis based on Figure 17-5 (SO_2 boiler screen for residential #2 fuel oil) and Figure 17-6 (SO_2 boiler screen for #2 fuel for commercial and other non-residential development) in the *CEQR Technical Manual Appendices*. The size of the proposed building was plotted against the distance to the nearest building of similar or greater height (receptor building). The nomograph figures are applicable to buildings where the lot lines are at least 30 feet apart.

If the plotted point is below the applicable curve, the site passes the screen, and no further analysis is necessary. If the plotted point is on or above the applicable curve, the potential for a significant air quality impact exists, and further analysis is required using AERSCREEN or AERMOD modeling. If the distance between the lots is less than 30 feet, a more detailed analysis must be carried out, and no nomograph is necessary. If a detailed analysis indicates the potential for impacts using fuel oil #2, then a screen would be carried out for natural gas using Figure 17-7 (NO_2 boiler screen for residential natural gas) or 17-8 (NO_2 boiler screen for commercial and other non-residential development) of the *CEQR Technical Manual Appendices*. More detailed analysis would be required if the project fails the NO_2 screen.

IV. EXISTING CONDITIONS

Description of Site and Surroundings

The site is located at 2069 Bruckner Boulevard (Block 3797, Lot 33) in the Bronx. It is improved with a 10,200 gsf one-story building formerly used as a place of worship. The block is bounded by Chatterton Avenue on the north, Pugsley Avenue on the west, Olmstead Avenue on the east, and Bruckner Boulevard on the south. Chatterton Avenue is one-way eastbound, Bruckner Boulevard is one-way westbound and Olmstead is two-way. The Bruckner Expressway is an at-grade roadway running adjacent to Bruckner Boulevard.

The surrounding area is characterized by low- to mid-rise residential buildings. The highest nearby buildings include a residential building on the adjoining lot (Lot 1) at 2001-2015 Bruckner Boulevard that has 10 floors and is approximately 90 feet high. It is approximately 240 feet from the boundary of the Proposed Actions. The residential building at 2010 Bruckner Boulevard, south of the Project Site, is 14 stories high (about 125 feet) and is about 330 feet away. The only industrial site within 400 feet is the Penske truck rental site at 1985 Bruckner Boulevard (Block 3787, Lot 36). A 653,358-sf shopping plaza is at 1998 Bruckner Boulevard (Block 3673, Lot 1) southwest of the Project Site. One drycleaner is within 400 feet of the site.

Ambient Air Quality

Ambient concentrations for SO_2, NO_2, and PM were obtained from the NYSDEC annual report for 2017 as shown in **Table K-4: Ambient Concentrations**.

Table K-4: Ambient Concentrations

Pollutant	Averaging Period	2017 Monitored Concentrations	Monitoring Station
SO_2	1-Hour[a]	7.9 ppb	IS 52
NO_2	Annual	17.3 ppb	IS 52
NO_2	1-Hour[b]	62.4 ppb	IS 52
PM_{10}	24-Hour	34 ug/m^3	IS 52
$PM_{2.5}$	24-Hour[b]	19.6 ug/m^3	IS 52
$PM_{2.5}$	Annual[c]	8.0 ug/m^3	IS 52
CO	1-Hour[d]	1.4 ppm	Queens College 2
CO	8-Hour[d]	0.9 ppm	Queens College 2

Notes:
a. Average of 99th percentile for last 3 years;
b. Average of 98th percentile for last 3 years;
c. Average of last 3 years.
d. Second highest for past year.

Background Pollutant Concentrations

Background concentrations for SO_2, NO_2, CO, and PM were derived from the NYSDEC annual report for 2017, as shown in **Table K-5: Background Concentrations**. They are identical to the ambient concentrations shown in **Table K-4:** except that all are presented in micrograms per cubic meter.

Table K-5: Background Concentrations

Pollutant	Averaging Period	Background Concentrations (ug/m^3)	Monitoring Station
SO_2	1-Hour	21	IS 52
NO_2	Annual	33	IS 52
NO_2	1-Hour	117	IS 52
PM_{10}	24-Hour	34	IS 52
$PM_{2.5}$	24-Hour	19.6	IS 52
$PM_{2.5}$	Annual	8.0	IS 52
CO	1-Hour[a]	2,166	Queens College 2
CO	8-Hour[a]	1,596	Queens College 2

Notes:
a. Based on highest second highest value from past five years (2013-2017), which is 1.4 ppm for the one-hour period and 0.9 ppm for the eight-hour period.

State Implementation Plan (SIP)

The Clean Air Act (CAA), as amended in 1990, (1) defines non-attainment areas (NAA) as geographic regions that have been designated as not meeting one or more of the NAAQS; and (2) requires states to submit to EPA a State Implementation Plan (SIP) delineating how the state plans to achieve the NAAQS, followed by a plan for maintaining attainment status once the area is in attainment. Bronx County is in attainment of the PM_{10} NAAQS.

Bronx County is part of the NYC CO maintenance area. Although EPA re-designated NYC as in attainment for CO in 2002, site-specific control measures must be implemented in each county to ensure that CO

levels remain in attainment. A second CO maintenance plan for the region was approved by EPA on May 30, 2014.

EPA designated the entire state of New York as "unclassifiable/attainment" of the 1-hour NO_2 standard as of February 29, 2012. Additional monitoring is required for the 1-hour standard; therefore, areas will be reclassified when three years of monitoring data are available. All counties within NYC are currently in attainment of the annual standard for NO_2.

For ozone, Bronx County is part of the New York–Northern New Jersey–Long Island, NY-NJ-CT non-attainment area that was classified in 2012 as Marginal for the 2008 ozone NAAQS. However, EPA reclassified the area to Moderate non-attainment as of April 11, 2016. New York State is currently submitting documents to demonstrate how the ozone NAAQS will be achieved.

As part of the New York–Northern New Jersey–Long Island, NY-NJ-CT, Bronx County was previously designated as a non-attainment area for $PM_{2.5}$. As of April 18, 2014, EPA re-designated the Bronx, Kings, New York, Queens, and Richmond Counties as $PM_{2.5}$ maintenance areas. On April 15, 2005, EPA designated the area as in attainment of the 12 $\mu g/m^3$ NAAQS established in March 2013.

EPA has established a one-hour SO_2 standard, replacing the former 24-hour and annual standards, effective August 23, 2010. All New York State counties currently meet this standard. Draft attainment designations published by EPA in February 2013 indicated that EPA is deferring action to designate areas in New York State and expects to proceed with designations once additional data are gathered.

Traffic Volumes

Traffic volumes for 2018 Existing Conditions were obtained from the traffic classification counts carried out during noise monitoring on June 12, 2018. **Table K-6: Peak-Hour Traffic Volumes, Existing Conditions** shows the resulting peak-hour traffic volumes for the three intersections adjacent to the Proposed Actions. No traffic classification counts were carried out for the Saturday peak period because projections of project-generated traffic showed that the Saturday peak would not be a worst-case condition.

Table K-6: Peak-Hour Traffic Volumes, Existing Conditions

Location	Period	Autos	Medium Trucks	Heavy Trucks	Buses	Total
Bruckner Boulevard	AM	1,086	50	11	53	1,200
	MD	592	30	10	37	669
	PM	939	18	9	11	977
Olmstead Avenue	AM	198	0	3	3	204
	MD	153	6	0	0	159
	PM	321	3	0	9	333
Chatterton Avenue	AM	78	3	0	9	90
	PM	96	0	3	0	99
	PM	63	0	0	3	66

V. FUTURE WITHOUT PROPOSED ACTIONS (NO-ACTION CONDITION)

In the future without the Proposed Actions (the "No-Action condition"), the Applicant would pursue an as-of-right development consisting of three- to four-story attached houses or small apartment houses and community facility uses. Redevelopment on the Project Site would result in demolition of the existing structure and new construction on the Project Site.

Mobile Source Air Quality

The existing traffic volumes were projected to the 2022 No-Action condition, including as-of-right development on the Project Site (as described in Attachment A, "Project Description) under the No-Action condition, using a growth factor of 0.25% per year. The net growth accounting for all No-Action development was one percent. **Table K-7: Traffic Volumes 2022, No-Action Condition,** shows the one-hour traffic volumes.

Table K-7: Traffic Volumes 2022, No-Action Condition

Location	Period	Existing Volumes	No-Action Volumes					Growth Increment
			Total	Autos	Medium Trucks	Heavy Trucks	Buses	
Bruckner Boulevard	AM	1,200	1,212	1,097	51	11	54	12
	MD	669	676	598	30	10	37	7
	PM	977	987	948	18	9	11	10
Olmstead Avenue	AM	204	206	200	0	3	3	2
	MD	159	161	155	6	0	0	2
	PM	333	336	324	3	0	9	3
Chatterton Avenue	AM	90	91	79	3	0	9	1
	MD	99	100	97	0	3	0	1
	PM	66	67	64	0	0	3	1

Mobile source air quality for $PM_{2.5}$ was analyzed for the No-Action condition to establish a baseline against which the impacts of the Proposed Actions can be assessed. Based on the analysis described under Mobile Source Screening, the analysis was carried out for the peak AM period at the intersection of Chatterton Avenue and Olmstead Avenue. The EPA MOVES2014a mobile source emissions model was used to obtain emission factors, and CAL3QHCR was used to estimate pollutant concentrations as described in the Methodology section. **Table K-8: Mobile Source $PM_{2.5}$ ($\mu g/m^3$) 2022, No-Action Condition** shows the modeled results for $PM_{2.5}$. The highest 24-hour and annual concentrations of $PM_{2.5}$ occurred at the southwest corner of the intersection. The total concentrations are within the NAAQS.

Table K-8: Mobile Source $PM_{2.5}$ ($\mu g/m^3$) 2022, No-Action Condition

Time Period	Intersection	Receptor ID	Modeled Average	Back-ground	Total	NAAQS ($\mu g/m^3$)
24-Hour	Chatterton Avenue @ Olmstead Avenue	R001, SW corner of intersection	2.6	19.6	22.2	35
Annual		LR68, SW corner of intersection	0.059	8.1	8.159	12.0

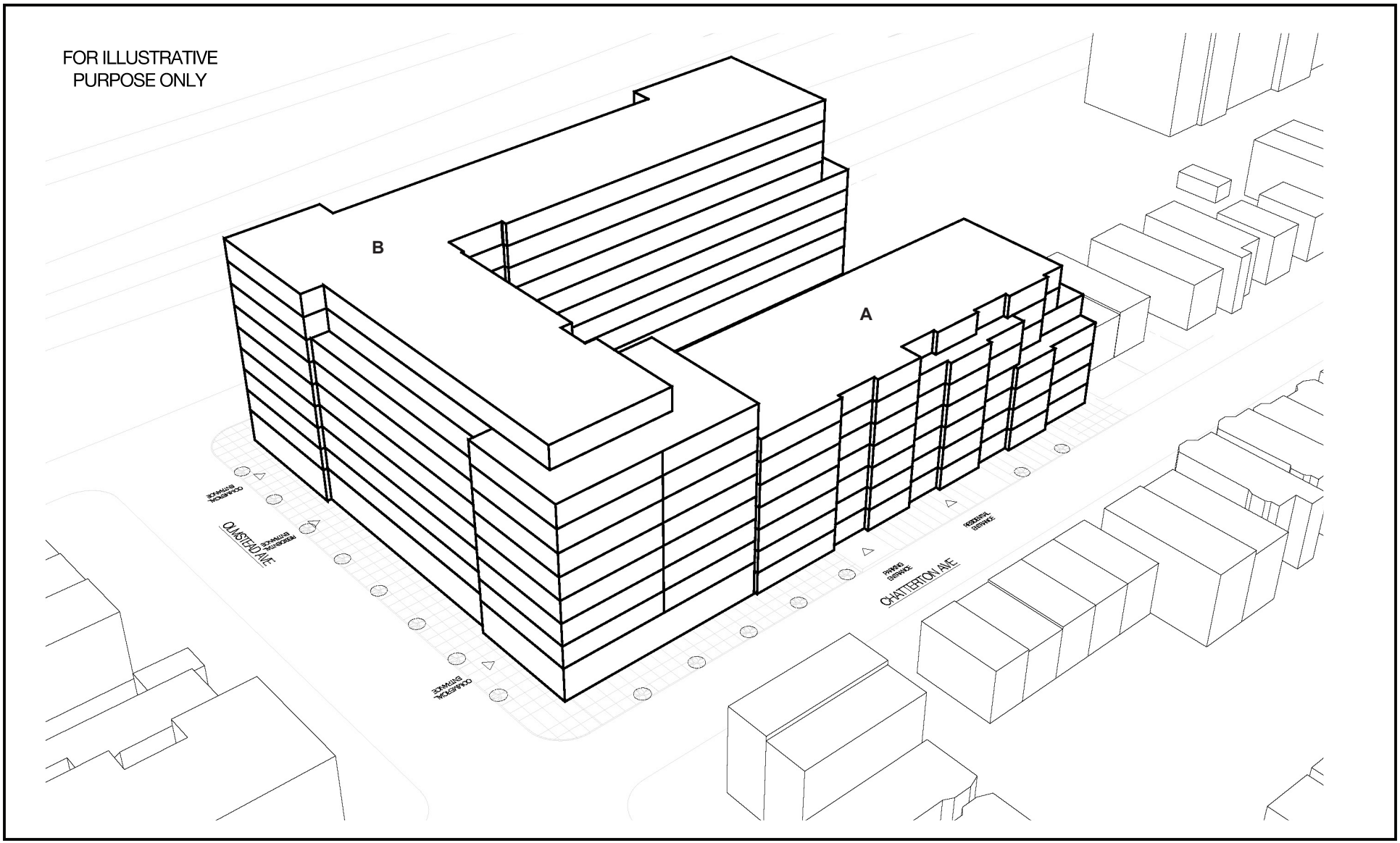
VI. FUTURE WITH PROPOSED ACTIONS (WITH-ACTION CONDITION)

In the future with the Proposed Actions (the "With-Action condition"), redevelopment would occur on the Project Site that would result in an approximately 366,007 gsf mixed-use residential and commercial development. **Figure K-1: With-Action 3D Model** shows the Proposed Project.

The Proposed Actions would consist of two buildings constructed as a single development with a single HVAC system. They are described below.

- **Building A** would consist of seven stories with 85,236 gsf, including approximately 71 residential DUs (71,895 gsf residential) and 13,341 sf of parking on the cellar and first floor levels. Building A would occupy the northern portion of the lot facing Chatterton Avenue and have a maximum height of 70 feet. The cellar floor plan (Drawing A-100.00) shows that Building A would have a cellar area with mechanical space.

- **Building B** would consist of nine stories with 280,771 gsf, including approximately 279 residential DUs (218,388 gsf residential), 18,023 gsf of commercial uses, and 43,360 sf of parking on the cellar and first floor levels. Building B would be L-shaped. One section would occupy the eastern portion of the lot facing Olmstead Avenue and have a maximum height of 95 feet. The second section of the building would occupy the southern portion of the lot facing Bruckner Boulevard and would have a maximum height of 95 feet. Building C would have a cellar that includes mechanical space. The residential units would be located on the second through the ninth floor. Commercial/retail uses would be located on the first floor (with a floor to ceiling height of 15 feet). A rooftop recreational area would be located over a rear extension of the ground floor. The boiler flue would be on the rooftop on the eastern portion of the building and would be seven feet above the bulkhead roof, resulting in an emissions release height of approximately 102 feet above ground level.



Source: Aufgang Architects

WITH-ACTION 3D MODEL

Figure K-1

Traffic

To calculate future traffic volumes, the incremental increases in traffic were added to No-Action volumes. All traffic increments were assumed to be autos and passenger vehicles. Medium trucks, heavy trucks, and buses remained the same as for the No-Action condition. **Table K-9: Traffic Volumes 2022, With-Action Condition** shows the results.

Table K-9: Traffic Volumes 2022, With-Action Condition

Location	Period	No-Action Volumes	With-Action Volumes					Project Increments
			Total	Autos	Medium Trucks	Heavy Trucks	Buses	
Bruckner Boulevard	AM	1,212	1,241	1,126	51	11	54	29
	MD	676	711	633	30	10	37	35
	PM	987	1,010	971	18	9	11	23
Olmstead Avenue	AM	206	212	206	0	3	3	6
	MD	161	180	174	6	0	0	19
	PM	336	356	344	3	0	9	20
Chatterton Avenue	AM	91	121	109	3	0	9	30
	MD	100	116	113	0	3	0	16
	PM	67	82	79	0	0	3	15

Mobile source air quality for $PM_{2.5}$ was modeled for the With-Action condition for the peak AM period and compared with the No-Action condition. The EPA MOVES2014a mobile source emissions model was used to obtain emission factors, and CAL3QHCR was used to estimate pollutant concentrations as described in the Methodology section. **Table K-10: Mobile Source $PM_{2.5}$ ($\mu g/m^3$) 2022, With-Action Condition** shows the results for $PM_{2.5}$. The highest 24-hour and annual concentrations of $PM_{2.5}$ occurred at the southwest corner of the intersection. The total concentrations are within the NAAQS and NYC de minimis values. Therefore, no significant adverse impacts would occur.

Table K-10: Mobile Source $PM_{2.5}$ ($\mu g/m^3$) 2022, With-Action Condition

Time Period	Inter-section	Receptor ID	No-Action Total	Modeled Average	Back-ground	With-Action Total	NAAQS	Incre-ment	De Minimis
24-Hour	Chatterton Avenue @ Olmstead Avenue	R001, SW corner of intersection	22.2	2.9	19.6	22.5	35	0.3	7.7
Annual		LR68, SW corner of intersection	8.159	0.062	8.1	8.162	12.0	0.003	0.3

Heating Ventilation and Air Conditioning (HVAC)

Actions can result in stationary source air quality impacts when they create new stationary sources of pollutants that can affect surrounding uses (such as exhaust from boiler stack(s) used for heating/hot water, ventilation, or air conditioning systems); when they locate new sensitive uses (schools, hospitals, residences) near such stationary sources; and when new emission sources are located within a short distance of each other. As stated in the *CEQR Technical Manual*, air quality impacts from HVAC sources

are unlikely at distances of 400-feet or more, but a large or major emission source within 1,000 feet warrants further evaluation.

Major Sources

A search of major HVAC sources within the 1,000-foot study area was carried out based on a review of air quality operating permits found in the State Facility or Title V permits on the NYSDEC website. A large/major source with an active State Permit (permit# 2-6007-00356/00001 under the facility name of BOULEVARD STORY LLC) is located approximately 840 feet southwest of the Project Site and which is the site of two nine-story residential buildings at 2001-2045 Story Avenue (Block 3681, Lot 1). The buildings contain a total of 421,833 sf and 355 residential units. Based on the NYSDEC Air State Facility permit, the site has a single stack, 132 feet high, with a diameter of 24 inches. The stack vents the emissions from three identical boilers that run on residual oil (#4, #5, and/or #6 fuel oil). Fuel oil #6 is specifically mentioned, and the upper limit on the permit is 666,000 gallons per year, which is equivalent to 76.0 gallons/hour of continuous use. The permit was submitted in 1999.

The site also has an NYCDEP boiler permit in the Clean Air Tracking System (CATS) database with permit # CB602803. The most recent information, submitted 7/16/17, shows three identical boilers using fuel oil #2 as the primary fuel type and natural gas as the secondary fuel type. The stack height is 130 feet, and the stack diameter is 46 inches. The boilers run three hours per day for 365 days per year. For fuel oil #2, the maximum delivery rate is 85.2 gallons per hour, and for natural gas, it is 11,928 cubic feet per hour.

Air quality modeling with AERMOD was carried out using the more recent information in the NYCDEP CATA database. Originally part of the Mitchell-Lama Housing Program, the buildings were sold and renovated in 2005, and were sold again in 2015. Therefore, the boiler information on the 1999 State Permit appears to be outdated. Renovations to the HVAC system would have triggered the provisions of Chapter 2 of Title 15 of the Rules of the City of New York, which would have required conversion to fuel oil #2 in order to receive a permit.

AERMOD, designed to support EPA's regulatory modeling programs, is a steady-state Gaussian plume model with three separate components: AERMOD (a dispersion model), AERMAP (a terrain preprocessor), and AERMET (a meteorological preprocessor). AERMOD can handle emissions from point, line, area, and volume sources. The model is run with five years of meteorological data that include surface mixing height, wind speed, stability class, temperature, and wind direction.

The model used meteorology data from LaGuardia Airport for 2013 through 2017. The upper air station used with La Guardia is Brookhaven. An elevation of 3.4 meters was used. Hourly ozone values for use in modeling NO_2 were obtained from the Queens College 2 monitor for 2013 through 2017.

AERMOD was run both with and without building downwash to determine which condition would provide worst-case results. Receptors were placed at the windows on the southern and western facades of the proposed building at 2069 Bruckner Boulevard, as well as on the roof of the building.

Since the boilers can use either fuel oil #2 or natural gas, scenarios for both fuel types were modeled. Emissions from the three boilers were combined into one emission factor for the stack. Pollutants included NO_2 (one-hour, annual) and $PM_{2.5}$ (24-hour, annual) from natural gas, and SO_2 (one-hour), PM_{10} (24-hour), and $PM_{2.5}$ (24-hour, annual) from #2 fuel oil. Multipliers to convert fuel use to emission factors were obtained from EPA's *AP-42: Fifth Edition Compilation of Air Pollution Emission Factors, Volume 1: Stationary Point and Ara Sources. Chapter 1, External Combustion Sources.*

- $PM_{2.5}$ from natural gas was calculated using 7.6 lbs/1 million sf.
- The SO_2 emission factors for #2 oil assumed the use of low sulfur #2 oil with a sulfur content of 0.0015%, and an emission factor of 0.213 lbs/1000 gallons of oil.

- PM_{10} from #2 oil used an emission factor of 2.38 lbs/1,000 gallons of fuel.
- $PM_{2.5}$ from #2 oil used an emission factor of 2.13 lbs/1,000 gallons of fuel.

For NO_2, the calculated emission factors were used in the AERMOD model. For all other pollutants, the model was run using a generic emission factor of 1 g/s. The results were then multiplied by the calculated emission factors to determine the modeled concentrations. **Table K-11: Pollutant Concentrations, Natural Gas** and **Table K-12: Pollutant Concentrations, Fuel Oil #2** show the worst-case results of the modeling. All pollutants are within the NAAQS and NYC de minimis values. Therefore, no significant adverse impacts would occur.

Table K-11: Pollutant Concentrations, Natural Gas (µg/m^3)

Source	Total Concentrations* (µg/m^3)				Increment	
	1-Hr NO_2	Annual NO_2	24-Hr $PM_{2.5}$	Annual $PM_{2.5}$	24-Hr $PM_{2.5}$	Annual $PM_{2.5}$
2001-2045 Story Avenue	120.0	32.6	20.1	8.01	0.5	0.006
NAAQS (ug/m^3)	**188**	**100**	**35**	**12**		
De Minimis					**7.7**	**0.3**

Note: *Includes background concentrations
Source: Sandstone Environmental Associates, Inc.

Table K-12: Pollutant Concentrations, Fuel Oil #2 (µg/m^3)

Project-on-Project Scenario	Total Concentrations* (µg/m^3)				Increment	
	1-Hr SO_2	24-Hr PM_{10}	24-Hr $PM_{2.5}$	Annual $PM_{2.5}$	24-Hr $PM_{2.5}$	Annual $PM_{2.5}$
2001-2045 Story Avenue	22.9	28.1	20.6	8.00	1.0	0.002
NAAQS (ug/m^3)	**188**	**100**	**35**	**12**		
De Minimis					**7.7**	**0.3**

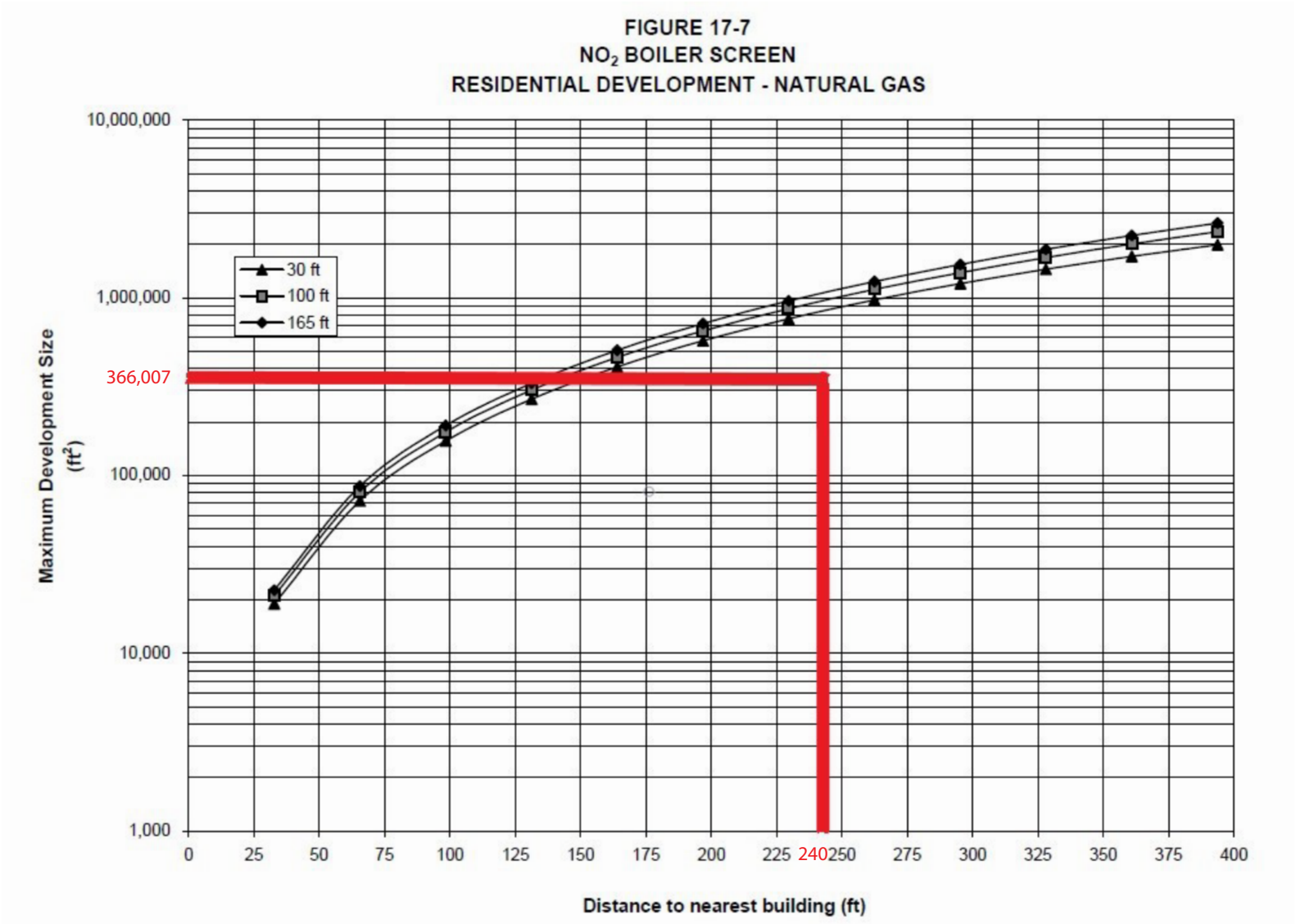
Note: *Includes background concentrations
Source: Sandstone Environmental Associates, Inc.

Impact of the Proposed Actions on Existing Buildings

As depicted in **Figure K-1: With-Action 3D Model,** Buildings A and B adjoin each other. The two buildings would share the same HVAC, with the boiler stack located on the roof of Building B, the taller building. It would be 7 feet higher than the 95-foot high building, or 102 feet above ground level. The Proposed Project would utilize natural gas fuel for heat and hot water. Therefore, Figure 17-7 (NO_2 boiler screen for residential natural gas) was used to screen the Proposed Actions for the potential to result in air quality impacts. As a worst-case analysis, the screen was used to determine the potential for impacts at 2001-2015 Bruckner Boulevard, which is approximately 240 feet from the Project Site and is the nearest building of similar or greater height. **Figure K-2: Building B HVAC Screen on 2001 Bruckner Boulevard** shows that no significant adverse impacts would occur. Therefore, the Proposed Project screens out, and no further analysis of the potential impacts of on-site HVAC facilities is necessary.

The following (E) designation (E-515) will be mapped for Block 3797, Lot 33 to specify the type of fuel to be used and the stack height:

> **Any new residential and/or commercial development on Block 3797, Lot 33 in the Bronx must use natural gas as the type of fuel for space heating and hot water systems. A single stack must be used for the development site, and it must have a minimum height of 102 feet above ground level.**



Proposed Project
(Stack Height = 102')

BUILDING B HVAC SCREEN ON 2001 BRUCKNER BOULEVARD

Figure K-2

Parking Facilities

Since the number of off-site parking spaces provided in the proposed parking lot and garage would exceed DCP's screening threshold of 85 spaces, a garage analysis was carried out for $PM_{2.5}$. In the With-Action condition, the proposed accessory parking garage of 159 spaces would be developed with access to/from Chatterton Avenue. Fifty-eight spaces would be at-grade, with 30 outdoors and 28 covered. The remaining 101 spaces would be in a 46,220-sf garage at the cellar level that would be shared by both buildings. Vehicles would enter through a curb cut on the south side of Chatterton Avenue or the north side of Bruckner Boulevard, drive through the common courtyard, and drive down the entrance ramp to the below-grade parking level. This is a distance of approximately 330 feet. The cellar would have an average width of 180 feet and an average length of 257 feet. **Table K-13: Garage Volumes** shows the peak-hour volumes of vehicles entering and exiting the garage.

The garage analysis was based on the guidelines provided in the *CEQR Technical Manual Appendices*. Per guidance from NYCDEP, a persistence factor of 0.40 was used to convert one-hour values to 24-hour $PM_{2.5}$ values, and a persistence factor of 0.08 was used to convert the one-hour values to annual values. EPA's MOVES2014a emissions model was used to obtain emission factors for entering and exiting vehicles, as well as idling vehicles. Exiting vehicles were assumed to idle for one minute before departing, and speeds within the facility were five miles per hour (mph).

Table K-13: Garage Volumes

Period	Driveway	Entering	Exiting	Total
AM	Chatterton	4	31	35
	Bruckner	6	25	31
	Total	**10**	**56**	**66**
MD	Chatterton	7	9	16
	Bruckner	9	7	16
	Total	**16**	**16**	**32**
PM	Chatterton	22	12	34
	Bruckner	29	9	38
	Total	**51**	**21**	**72**
SAT	Chatterton	13	17	30
	Bruckner	18	14	32
	Total	**31**	**31**	**62**

As a conservative analysis, the cars accessing the 58-space parking at ground level were combined with the garage volumes and treated as if all vehicles were inside the garage and were using one access driveway instead of two. The garage would have the highest number of incoming vehicles (51) during the peak PM period and the highest number of exiting vehicles (56) during the peak AM period. These were combined to estimate the highest potential hourly volume (107) at the garage driveway.

The exhaust vent for the garage was placed above the Chatterton Avenue entrance, 12 feet above street level. The Chatterton Avenue driveway was selected as a worst-case because Chatterton Avenue is a narrow street with less space for pollutant dispersion. Receptor points included the near and far sidewalks, a window five feet above the vent, and a window across the street at the same height as the vent. **Table K-14: $PM_{2.5}$ Concentrations from Accessory Parking Garage** shows the results of the garage analysis based on the methodology presented above. No significant adverse impacts would occur.

Table K-14: $PM_{2.5}$ Concentrations from Accessory Parking Garage

Receptor Locations								
Chatterton Avenue Entrance	**Near Sidewalk**		**Far Sidewalk**		**Window Above**		**Window Above**	
Distance to Vent (ft.)	7.5		34.5		0		0	
Vent Height (ft.)	12.0		12.0		12.0		12.0	
Receptor Height (ft.)	6.0		6.0		17.0		17.0	
Averaging Period	24-Hour	Annual	24-Hour	24-Hour	24-Hour	Annual	24-Hour	Annual
Garage PM2.5 (µg/m3)	0.5876	0.1175	0.4160	0.0832	0.5598	0.1120	0.3606	0.0721
Line Source (µg/m3)	N/A	N/A	2.6	0.059	N/A	N/A	N/A	N/A
Background (µg/m3)	19.6	8.1	19.6	8.1	19.6	8.1	19.6	8.1
Total (µg/m3)	20.2	8.2	22.6	8.2	20.2	8.2	20.2	8.2
NAAQS	35	12	35	35	35	12	35	12
De Minimis (µg/m3)	7.7	0.3	7.7	0.3	7.7	0.3	7.7	0.3
Impact	**No**		**No**		**No**		**No**	

Air Toxics and Odors

A variety of commercial, residential, institutional, commercial, and transportation-oriented uses are located near the Project Site. As indicated in the *CEQR Technical Manual*, existing facilities with the potential to cause adverse air quality impacts are those that would require permitting under City, State and Federal regulations. The *CEQR Technical Manual* lists the following types of uses as a source of concern for the residential uses that would occur under the Proposed Actions:

- large emission source (e.g., solid waste or medical waste incinerators, cogeneration facilities, asphalt and concrete plants, or power generating plants) within 1,000 feet,
- a medical, chemical, or research laboratory nearby,
- a manufacturing or processing facility within 400-feet, and
- an odor producing facility within 1,000-feet.

Consistent with guidance in the *CEQR Technical Manual*, on-line searches were completed of the NYSDEC Air Permit Facilities Registry, the EPA Facility Registry System for permitted facilities, the NYC Department of Buildings (DOB) data base, and the NYC Open Accessible Space Information System Cooperative (OASIS) data base. In addition, available aerial photos provided by Google and Bing were reviewed to identify emissions sources. Field reconnaissance further augmented the gathering of information.

No large emission sources or medical, chemical, or research laboratories were identified within the search radii. No odor producing facilities or industrial land uses were found. However, a dry-cleaners was identified within 400 feet of the Project Site. It is Mary Cleaners at 1047 Olmstead Avenue. Two DEP permits were found for this establishment. PA014691 is shown as cancelled and would have expired on 5/9/2000. PB003900, which expired on 5/25/15, lists the business type as dry cleaning. The equipment on the permit is a Union Model U2000 P-735. This model is on NYSDEC's approved list of Fourth Generation Perchloroethyelene Dry Cleaning machines. According to DEP guidance, dry cleaning machines that meet stringent NYC standards are not subject to further environmental review.

Attachment L: Noise

I. INTRODUCTION

Noise, in its simplest definition, is unwanted sound. While high noise levels may cause hearing loss, the noise levels associated with projects reviewed under the *City Environmental Quality Review (CEQR) Technical Manual* are generally below this hazardous range. However, noise levels that are not considered hazardous may cause stress-related illnesses, disrupt sleep, and interrupt activities requiring concentration. This chapter assesses the potential for the Proposed Actions to result in significant noise impacts. As described in Section 200 of Chapter 19 of the *CEQR Technical Manual*, the noise assessment defines technical terms, identifies evaluation methods and criteria used to assess the potential for noise impacts, discloses the impacts of the Proposed Actions, and, where significant adverse noise impacts are anticipated, identifies measures to avoid or mitigate potential impacts. Included are (1) an assessment of the Proposed Project's potential effects on sensitive noise receptors, including the effects of noise levels on sensitive receptors, and (2) an assessment of the potential effects of ambient noise levels on new sensitive uses introduced by the Proposed Project.

As described in Attachment A, “Project Description,” the Proposed Actions would facilitate the development of an approximately 366,007 gross square feet (gsf) mixed-use development consisting of three adjoining buildings and comprised of 350 affordable dwelling units (DUs) within approximately 291,283 gsf of residential space, approximately 18,023 gsf of ground floor commercial retail space, approximately 159 parking spaces for resident use, and approximately 173 bicycle parking facilities (the “Proposed Project”). Approximately 144 DUs would be restricted to households with incomes below 80% of Area Median Income (AMI), and approximately 206 DUs would be restricted to households with incomes between 81% and 130% of AMI, of which approximately 71 DUs may have a home ownership option. The height of the buildings would range from 70 feet for Building A to 95 feet for Building B.

II. PRINCIPAL CONCLUSIONS

Based on the information and analyses in this attachment, no significant adverse impacts due to noise would occur as a consequence of the Proposed Actions. The primary source of noise associated with the Proposed Project is increased auto traffic on nearby streets that would be generated by the Proposed Project. The assessment of increased vehicular noise utilized the methods prescribed in the *CEQR Technical Manual.* The results indicated that no sensitive receptors would experience a relative increase of 3 dBA or more with the Proposed Actions. Increases of 3 dBA or less are generally not perceptible to the human ear. With regard to the potential impact of future noise levels on sensitive uses (i.e., residential units) introduced by the Proposed Project, the assessment indicates that no significant impacts would occur provided that the Proposed Project incorporate window/wall attenuation sufficient to ensure that interior noise levels are 45 dBA or less. To accomplish this, an (E) designation will be placed some building façades on the Project Site requiring a minimum level of window/wall attenuation. An (E) designation provides notice of the presence of an environmental requirement pertaining to potential high ambient noise levels on a particular tax lot. (E) designations will comply with US Department of Housing and Urban Development (HUD) guidelines and CEQR requirements. Alternate means of ventilation will be required for all sites with an exterior noise level of 70 dBA. With these measures in place, no noise significant adverse noise impacts would occur with the Proposed Project and, consequently, no further assessment is necessary. All/any buildings associated with the proposed actions would meet all applicable noise regulations and would not result in any significant increase in ambient noise levels.

III. METHODOLOGY

Scope of Analysis

In accordance with the *CEQR Technical Manual*, the goal of the noise analysis is to determine both: 1) a proposed project's potential effects on sensitive noise receptors, including the effects on the level of noise inside residential, commercial, and institutional facilities (if applicable), and at open spaces, and 2) the effects of ambient noise levels on new sensitive uses introduced by the proposed project.

The Proposed Project would introduce new residential and commercial uses to the Project Site. Bruckner Boulevard and Bruckner Expressway, adjacent to the Project Site on the south, are major sources of existing traffic noise at the Project Site. No new schools or playgrounds are proposed for the Project Site, and none are within 400 feet of it. The proposed rooftop recreation area would be for passive recreation and would not be a significant source of noise. The Project Site is located nearly three miles from La Guardia Airport. Therefore, aircraft flyovers would not be a significant source of noise. No industrial noise sources are within 400 feet of the Project Site. Based on this information, the scope of work included:

- obtaining traffic noise levels and vehicular mix at intersections subject to project-generated traffic;
- projecting existing traffic noise levels into the future analysis year;
- determining whether the relative increase in future traffic noise levels would exceed the thresholds identified under the discussion on Evaluation Criteria; and
- identifying new sensitive receptors that may need protection from future noise levels by incorporating specific noise attenuation criteria into the construction plans.

Analysis Year

The assessment of noise was completed for the year 2022, the year at which the Proposed Project would be complete. No interim years were analyzed because the completion year would constitute a worst case for project-generated traffic and noise conditions.

Noise Fundamentals

Noise Descriptors

Noise is measured in sound pressure level (SPL), which is converted to a decibel scale. The decibel is a relative measure of the sound level pressure with respect to a standardized reference quantity. Decibels on the A-weighted scale are termed "dBA." The A-weighted scale is used for evaluating the effects of noise in the environment because it most closely approximates the response of the human ear. On this scale, the threshold of discomfort is 120 dBA, and the threshold of pain is about 140 dBA. **Table L-1: Sound Pressure Level and Loudness of Typical Noises in Indoor and Outdoor Environments** shows the range of noise levels for a variety of indoor and outdoor sources. Because the scale is logarithmic, a relative increase of 10 decibels represents an SPL that is 10 times higher.

However, humans do not perceive a 10 dBA increase as 10 times louder, they perceive it as twice as loud. The following are typical human responses to relative changes in noise level:

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

Table L-1: Sound Pressure Level and Loudness of Typical Noises in Indoor and Outdoor Environments

Noise Level (dBA)	Subjective Impression	Typical Sources		Relative Loudness (Human Response)
		Outdoor	Indoor	
120-130	Uncomfortably Loud	Air raid siren at 50 feet (threshold of pain)	Oxygen torch	32 times as loud
110-120	Uncomfortably Loud	Turbo-fan aircraft at take-off power at 200 feet	Riveting machine Rock band	16 times as loud
100-110	Uncomfortably Loud	Jackhammer at 3 feet		8 times as loud
90-100	Very Loud	Gas lawn mower at 3 feet Subway train at 30 feet Train whistle at crossing Wood chipper shredding trees Chain saw cutting trees at 10 feet	Newspaper press	4 times as loud
80-90	Very Loud	Passing freight train at 30 feet Steamroller at 30 feet Leaf blower at 5 feet Power lawn mower at 5 feet	Food blender Milling machine Garbage disposal Crowd noise at sports event	2 times as loud
70-80	Moderately Loud	NJ Turnpike at 50 feet Truck idling at 30 feet Traffic in downtown urban area	Loud stereo Vacuum cleaner Food blender	Reference loudness (70 dBA)
60-70	Moderately Loud	Residential air conditioner at 100 feet Gas lawn mower at 100 feet Waves breaking on beach at 65 feet	Cash register Dishwasher Theater lobby Normal speech at 3 feet	2 as loud
50-60	Quiet	Large transformers at 100 feet Traffic in suburban area	Living room with TV on Classroom Business office Dehumidifier Normal speech at 10 feet	1/4 as loud
40-50	Quiet	Bird calls, Trees rustling, Crickets, Water flowing in brook	Folding clothes Using computer	1/8 as loud
30-40	Very quiet		Walking on carpet Clock ticking in adjacent room	1/16 as loud
20-30	Very quiet		Bedroom at night	1/32 as loud
10-20	Extremely quiet		Broadcast and recording studio	
0-10	Threshold of hearing			

Sources: Noise Assessment Guidelines Technical Background, by Theodore J. Schultz, Bolt Beranek and Newman, Inc., prepared for U.S. HUD, Office of Research and Technology, Washington, D.C., undated; Sandstone Environmental Associates, Inc.; Highway Noise Fundamentals, prepared by the Federal Highway Administration, U.S. Department of Transportation, September 1980; Handbook of Environmental Acoustics, by James P. Cowan, Van Nostrand Reinhold, 1994.

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

- L_{eq} is the continuous equivalent sound level. The sound energy from the SPLs is averaged over time to create a single number to describe the mean energy or intensity level. High noise levels during a monitoring period will have greater effect on the L_{eq} than low noise levels. The L_{eq} has an advantage over other descriptors because L_{eq} values from different noise sources can be added and subtracted to determine cumulative noise levels.

- L_{max} is the highest SPL measured during a given period of time. It is useful in evaluating L_{eq}s for time periods that have an especially wide range of noise levels.
- L_{10} is the SPL exceeded 10%of the time. Similar descriptors are the L_{01}, L_{50}, and L_{90}.
- L_{dn} is the day-night equivalent sound level. It is similar to a 24-hour L_{eq}, but with 10 dBA added to SPL measurements between 10 pm and 7 am to reflect the greater intrusiveness of noise experienced during these hours. L_{dn} is also termed DNL.

Noise Attenuation

Noise levels from a given source reduce with distance. Noise from a "line" source (e.g., roadways) typically attenuates at the rate of 3 dBA per distance doubling, based on a reference distance of 50 feet, for noise traveling through air or over a hard surface. Noise traveling over a soft surface may attenuate at 4.5 dBA. Noise from a stationary source attenuates at a rate of 6 dBA when traveling through air or over a hard surface and up to 7 or 8 dBA when traveling over a soft surface.

Passenger Car Equivalent Values

Vehicular volumes can be converted into Passenger Car Equivalent (PCE) values, where one medium-duty truck (with a gross weight between 9,900 and 26,400 pounds) would generate the noise equivalent of 13 cars, one bus (capable of carrying more than nine passengers) would generate the noise equivalent of 18 cars, and one heavy duty truck (having a gross weight of more than 26,400 pounds) would to generate the noise equivalent of 47 cars, as summarized below from the *CEQR Technical Manual*.

- autos and light trucks = 1 passenger car,
- medium trucks = 13 passenger cars,
- heavy trucks = 47 passenger cars, and
- buses = 18 passenger cars.

PCEs are the numbers of autos that would generate the same noise level as the observed vehicular mix of autos, medium trucks, and heavy trucks. PCEs are useful for comparing the effects of traffic noise on different roadways or for different future scenarios.

Where traffic volumes are projected to change, proportional modeling techniques, as described in the *CEQR Technical Manual*, typically are used to project incremental changes in traffic noise levels. This technique uses the relative changes in traffic volumes to project changes between (e.g.) No-Action and With-Action noise levels. The change in future noise levels is calculated using the following proportionality equation:

$FNL=ENL + 10 \times \log_{10} (FPCE/EPCE)$ where:

FNL= Future Noise Level

ENL= Existing Noise Level

FPCE= Future PCEs

EPCE= Existing PCEs

Because sound levels use a logarithmic scale, this model proportions logarithmically with traffic change ratios. For example, assume that traffic is the dominant noise source at a location. If the existing traffic volume on a street is 100 PCEs, and if the future traffic volume were increased by 50 PCEs to a total of 150 PCEs, the noise level would increase by 1.8 dBA. If the future traffic were increased by 100 PCEs, (i.e., doubled to a total of 200 PCEs), the noise level would increase by 3.0 dBA.

Window/Wall Attenuation Ratings

The attenuation of noise for 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 Heating, Ventilation, and Air Conditioning (HVAC) systems in various ratios of area. All new façades would need to provide composite Outdoor-Indoor Transmission Class (OITC) ratings greater than or equal to the attenuation needed to ensure that interior noise levels are 45 dBA or less. The OITC classification is defined by the American Society of Testing and Materials (ASTM E1332-90) and provides a single-number rating that is used for designing a building façade including walls, doors, glazing, and combinations thereof. The OITC rating is designed to evaluate building elements by their ability to reduce the overall loudness of ground and air transportation. It is designed to evaluate building elements by their ability to reduce the overall loudness of ground and air transportation noise. Higher OITC values reflect greater efficiencies to block airborne sound.

HUD uses the Sound Transmission Class (STC) rating when specifying attenuation. The STC rating system is an older classification system which uses different factors to weight the noise levels in various frequencies than the OITC rating system. Generally, a window with an STC rating of (e.g.) 31 dBA is not as effective in reducing noise as a window with an OITC rating of 31 dBA.

Noise Standards and Guidelines

CEQR Guidelines

In 1983, the New York City (NYC) Department of Environmental Protection (DEP) adopted the City Environmental Protection Order - CEQR noise standards for exterior noise levels. These standards are used to classify noise exposure into four categories based on the L_{10}: Acceptable, Marginally Acceptable, Marginally Unacceptable, and Clearly Unacceptable, as shown in **Table L-2: CEQR Noise Exposure Guidelines for Use in City Environmental Impact Review**.

Table L-3: Required Attenuation Values to Achieve Acceptable Interior Noise Levels shows the required attenuation for sensitive uses within the last three categories shown in **Table L-2**. For example, an L_{10} may approach 80 dBA provided that buildings are constructed of materials that reduce exterior to interior noise levels by at least 35 dBA to 45 dBA for residential and community facility uses.

Table L-2: CEQR Noise Exposure Guidelines for Use in City Environmental Impact Review[1]

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

Source: NYCDEP (adopted policy 1983).

Notes:

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

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

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

[3] One may use the FAA-approved L_{dn} contours supplied by the Port Authority, or the noise contours may be computed from the federally approved 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 NYC Zoning Resolution, Sections 42-20 and 42-21. The referenced standards apply to M1, M2, and M3 manufacturing districts and to adjoining residence districts (performance standards are octave band standards).

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

Noise Level with Proposed Project	Marginally Unacceptable				Clearly Unacceptable
	$70<L_{10}\leq73$	$73<L_{10}\leq76$	$76<L_{10}\leq78$	$78<L_{10}\leq80$	$80<L_{10}$
Attenuation[A]	(I) 28 dB(A)	(II) 31 dB(A)	(III) 33 dB(A)	(IV) 35 dB(A)	$36 + (L_{10} - 80)$[B] dB(A)

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

[B] Required attenuation values increase by 1 dB(A) increments for L_{10} values greater than 80 dBA.

Source: NYC DEP / *2014 CEQR Technical Manual*, Table 19-3.

Evaluation Criteria

The selection of incremental values and absolute noise levels should be responsive to the nuisance levels of noise and critical time periods when nuisance levels are most acute. During daytime hours (between 7 am and 10 pm), nuisance levels for noise are generally considered to be more than 45 dBA indoors and 70 to 75 dBA outdoors. Indoor activities are subject to task interference above this level, and 70 to 75 dBA is the level at which speech interference occurs outdoors. Nighttime (between 10 pm and 7 am) is a particularly critical time period relative to potential nuisance values for noise level increases. Typical construction techniques used in the past (including typical single-glazed windows) provide a minimum of approximately 20 dBA of noise attenuation from outdoor to indoor areas.

Based on the foregoing, the *CEQR Technical Manual* provides the following relative noise level increases for determining impacts from a proposed action:

- An increase of five dBA or more in With-Action $L_{eq(1)}$ noise levels at sensitive receptors (including residences, play areas, parks, schools, libraries, and houses of worship) over those calculated for the No-Action condition if the No-Action levels are less than 60 dBA $L_{eq(1)}$ and the analysis period is not a nighttime period.
- An increase of four dBA or more in With-Action $L_{eq(1)}$ noise levels at sensitive receptors over those calculated for the No-Action condition if the No-Action levels are 61 dBA $L_{eq(1)}$ and the analysis period is not a nighttime period.
- An increase of three dBA or more in With-Action $L_{eq(1)}$ noise levels at sensitive receptors over those calculated for the No-Action condition if the No-Action levels are greater than 62 dBA $L_{eq(1)}$ and the analysis period is not a nighttime period.
- An increase of three dBA or more in With-Action $L_{eq(1)}$ noise levels at sensitive receptors over those calculated for the No-Action condition if the analysis period is a nighttime period.

Impact thresholds for proposed projects that introduce sensitive receptors are more straightforward. Typically, potential significant impacts on the newly created receptor relate to absolute noise limits. The Noise Exposure Guidelines shown in **Table L-2** are followed by lead agencies for this purpose. If a project is within an area where the project noise levels exceed the marginally acceptable limit shown in the Noise Exposure Guidelines (as measured at the proposed building line or property line), a significant impact would occur. For this project, a potential impact would be identified if the project would place new residential uses in an area with an L_{10} noise level of 70 dBA or more.

If a significant impact is projected, the project would be subject to mitigation measures to reduce the interior noise levels by 25 dBA or more below the maximum marginally acceptable levels for external exposure shown in **Table L-2**.

IV. EXISTING CONDITIONS

Noise Monitoring

Ambient noise levels were monitored on Tuesday, June 12, 2018. Noise monitoring was carried out for the peak AM, Midday, and PM weekday traffic periods at three sites along the frontages of the proposed buildings on Bruckner Boulevard, Olmstead Avenue, and Chatterton Avenue. They are on the eastern end of the block, as shown on **Figure L-1: Noise Monitoring Locations**. Chatterton Avenue is one-way eastbound, Bruckner Boulevard is one-way westbound, and Olmstead is two-way.



Source: Google Earth 2018

Noise Monitoring Locations

NOISE MONITORING LOCATIONS

Figure L-1

During each peak period, monitoring took place for one hour on the Project Site and for 20 minutes on Chatterton and Olmstead Avenues. Traffic classification counts were carried out concurrently during the noise monitoring periods. The classifications were:

- Passenger cars and light duty trucks (including small gasoline school buses)
- Medium trucks (two axles, six tires)
- Heavy duty trucks (three or more axles)
- Buses
- Motorcycles (count as medium trucks)

Table L-4: Observed Noise Levels (dBA) summarizes the monitored noise levels. The peak Midday period had the highest L_{eq} noise levels for all sites, primarily because all sites were affected by traffic on Bruckner Boulevard, and the Midday period on Bruckner Boulevard had relatively high numbers of trucks and buses coupled with higher speeds than observed for the peak AM and PM periods. The pattern of noise levels on Chatterton Avenue differed from the other two sites because the L_{10} was highest for the peak PM period, but the L_{eq} was highest for the peak MD period.

Site 1 on Bruckner Boulevard had the highest noise levels. Among the three sites, it had the maximum L_{10}, which was -72.9 dBA. Significant sources of noise at Site 1 were loud trucks and motorcycles and occasional sirens from emergency response vehicles on Bruckner Expressway. L_{10} noise levels during all three time periods were consistently greater than 70 dBA.

L_{10} noise levels at the other two sites were below 70 dBA. Site 2 on Olmstead Avenue had the second highest noise levels, with a maximum observed L_{10} of 67.2 dBA. Sources of noise at this site included trucks and traffic on Bruckner Expressway as well as autos and school buses on Olmstead Avenue.

Table L-4: Observed Noise Levels (dBA)

ID	Location	Period	L_{eq}	L_{10}	L_{min}	L_{max}	L_{01}	L_{90}
1	Bruckner Boulevard	AM	69.1	71.4	61.5	79.4	74.9	61.5
2	Olmstead Avenue		64.3	66.2	59.5	78.6	71.0	61.3
3	Chatterton Avenue		60.8	63.1	55.5	74.7	68.1	57.7
1	Bruckner Boulevard	MD	**70.9**	**72.9**	**64.1**	**83.5**	**76.2**	**66.9**
2	Olmstead Avenue		**68.1**	**67.2**	**61.0**	**90.6**	**72.1**	**63.4**
3	Chatterton Avenue		**62.9**	**63.6**	**57.3**	**82.9**	**63.6**	**59.0**
1	Bruckner Boulevard	PM	70.5	72.8	63.7	84.1	76.8	66.5
2	Olmstead Avenue		65.2	66.3	61.0	81.8	70.3	62.8
3	Chatterton Avenue		61.9	63.7	57.2	69.4	66.8	59.5

Note: Numbers in bold type are the highest for that site.

Site 3 on Chatterton Avenue had the lowest noise levels. The highest L_{10} was 63.7 dBA. Significant sources of noise included traffic and trucks on Bruckner Boulevard and Bruckner Expressway, traffic on Olmstead Avenue, and autos and buses on Chatterton Avenue. The Midday L_{10} is slightly higher than the L_{eq}, which is due to the effects of a police siren on the calculation of the L_{eq}.

Table L-5: Peak Hour Traffic Volumes and Noise Levels, Existing Conditions summarizes the one-hour traffic volumes and noise PCEs for existing conditions. Based on **Table L-2** and **Table L-5,** the noise level at Noise Monitoring Site 1 on Bruckner Boulevard is in the Marginally Unacceptable I category, the noise level at Noise Monitoring Site 2 on Olmstead Avenue is in the Marginally Acceptable category, and the noise level at Noise Monitoring Site 3 on Chatterton Avenue is in the Acceptable category.

Table L-5: Peak Hour Traffic Volumes and Noise Levels (dBA), Existing Conditions

ID	Location	Period	L_{eq}	L_{10}	Autos	Medium Trucks	Heavy Trucks	Buses	Total	PCEs
1	Bruckner Boulevard	AM	69.1	71.4	1,086	50	11	53	1,200	3,207
		MD	70.9	**72.9**	592	30	10	37	669	2,118
		PM	70.5	72.8	939	18	9	11	977	1,794
2	Olmstead Avenue	AM	64.3	66.2	198	0.0	3	3	204	393
		MD	68.1	**67.2**	153	6	0	0	159	231
		PM	65.2	66.3	321	3	0	9	333	522
3	Chatterton Avenue	AM	60.8	63.1	78	3	0	9	90	279
		PM	62.9	63.6	96	0	3	0	99	237
		PM	61.9	**63.7**	63	0	0	3	66	117

V. FUTURE WITHOUT PROPOSED ACTIONS (NO-ACTION CONDITION)

In the future without the Proposed Actions (the "No-Action condition"), an as-of-right development consisting of three- to four-story attached houses or small apartment houses and community facility uses would be constructed on the Project Site. Redevelopment on the Project Site would result in demolition of the existing structure and new construction on the Project Site.

The existing noise levels and traffic volumes were projected to 2022 using a growth factor of 0.25% per year as recommended in the *CEQR Technical Manual*. In conformance with guidance in the *CEQR Technical Manual,* the adjustments were made using the "proportionality equation" for the existing condition volumes and the volumes for the No-Action traffic. The adjustment for all sites was 0.04 dBA which essentially does not change the noise levels. **Table L-6: Traffic Volumes and Noise Levels 2022, No-Action Condition,** summarizes the one-hour traffic volumes and noise PCEs. The noise level at Site 1 on Bruckner Boulevard is in the Marginally Unacceptable I category, while the Site 2 is Marginally Acceptable, and Site 3 is Acceptable.

Table L-6: Traffic Volumes and Noise Levels (dBA) 2022, No-Action Condition

ID	Location	Period	Existing				No-Action					Category
			Vol-umes	PCEs	L_{eq}	L_{10}	Vol-umes	PCEs	Noise Increase	L_{eq}	L_{10}	
1	Bruckner Boulevard	AM	1,200	3,207	69.1	71.4	1,212	3,239	0.043	69.1	71.4	MU I
		MD	669	2,118	70.9	**72.9**	676	2,139	0.043	70.9	**72.9**	
		PM	977	1,794	70.5	72.8	987	1,812	0.043	70.5	72.8	
2	Olmstead Avenue	AM	204	393	64.3	66.2	206	397	0.043	64.3	66.2	Marginally Acceptable
		MD	159	231	68.1	**67.2**	161	233	0.043	68.1	**67.2**	
		PM	333	522	65.2	66.3	336	527	0.043	65.2	66.3	
3	Chatterton Avenue	AM	90	279	60.8	63.1	91	279	0.043	60.8	63.1	Acceptable
		MD	99	237	62.9	63.6	100	237	0.043	62.9	63.6	
		PM	66	117	61.9	**63.7**	67	117	0.043	61.9	**63.7**	

Notes: *MU I = Marginally Unacceptable I; MU II = Marginally Unacceptable II; MU III = Marginally Unacceptable III*

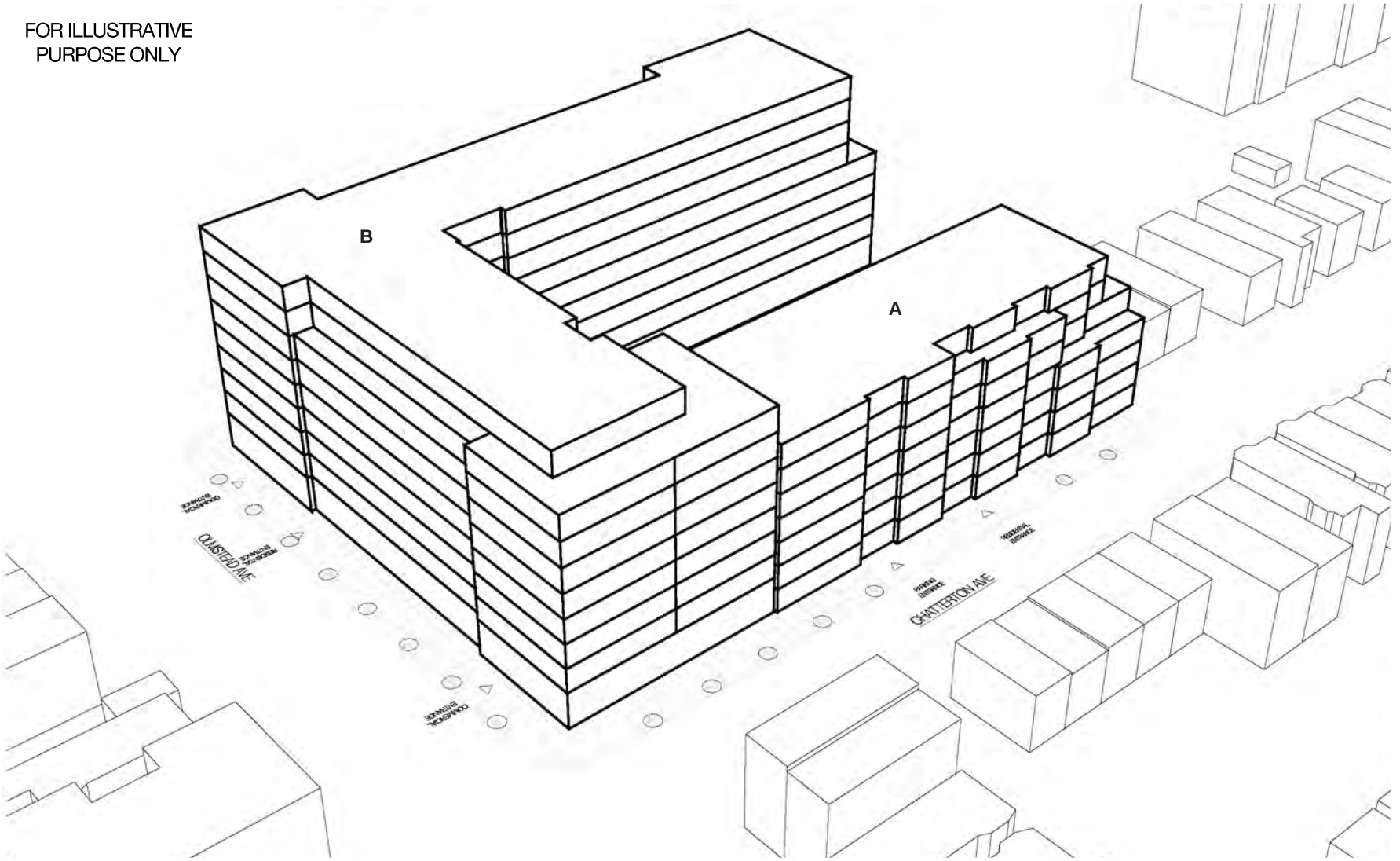
VI. FUTURE WITH PROPOSED ACTIONS (WITH-ACTION CONDITION)

In the future with the Proposed Actions (the "With-Action condition"), redevelopment would occur on the Project Site that would result in an approximately 366,007 gsf mixed-use residential and commercial development. **Figure L-2: With-Action 3D Model** shows the Proposed Project.

The Proposed Actions would consist of two buildings constructed as a single development. They are described below:

- **Building A** would consist of seven stories with 85,236 gsf, including approximately 71residential DUs (71,895 gsf residential) and 13,341 sf of parking on the cellar and first floor levels. Building A would occupy the northern portion of the lot facing Chatterton Avenue and have a maximum height of 70 feet.

- **Building B** would consist of nine stories with 280,771 gsf, including approximately 279 residential DUs (218,388 gsf residential), 18,023 gsf of commercial uses 43,360 sf of parking on the cellar and first floor levels. Building B would be L-shaped, in which one section would occupy the eastern portion of the lot facing Olmstead Avenue and have a maximum height of 95 feet. The second section of the building would occupy the southern portion of the lot facing Bruckner Boulevard and would have a maximum height of 95 feet. Building B would have a cellar that includes mechanical space. The residential units would be located on the second through the ninth floor. Commercial/retail uses would be located on the first floor (with a floor to ceiling height of 15 feet). A rooftop recreational area would be located over a rear extension of the ground floor. Building B would occupy the eastern portion of the lot facing Olmstead Avenue and have a maximum height of 95 feet.



Source: Aufgang Architects

WITH-ACTION 3D MODEL

Figure L-2

Traffic Noise

To calculate future traffic volumes, the incremental increases in traffic were added to No-Action volumes. All traffic increments were assumed to be autos and passenger vehicles. Medium trucks, heavy trucks, and buses remained the same as in the No-Action condition. **Table L-7: Traffic Volumes and Noise Levels (dBA) 2022, With-Action Condition** shows the results.

Table L-7: Traffic Volumes and Noise Levels (dBA) 2022, With-Action Condition

ID	Location	Period	No-Action				With-Action					Category
			Vol-umes	PCEs	L_{eq}	L_{10}	Vol-umes	PCEs	Noise In-crease	L_{eq}	L_{10}	
1	Bruckner Boulevard	AM	1,212	3,239	69.1	71.4	1,241	3,268	0.04	69.2	71.5	MU II
		MD	676	2,139	70.9	**72.9**	711	2,174	0.07	71.0	**73.0**	
		PM	987	1,812	70.5	72.8	1,010	1,835	0.05	70.6	72.9	
2	Olmstead Avenue	AM	206	397	64.3	66.2	212	403	0.07	64.4	66.3	Marginally Acceptable
		MD	161	233	68.1	**67.2**	180	233	0.34	68.5	**67.6**	
		PM	336	527	65.2	66.3	356	527	0.16	65.4	66.5	
4	Chatterton Avenue	AM	91	279	60.8	63.1	121	312	0.44	61.3	63.6	Acceptable
		MD	100	237	62.9	63.6	116	255	0.28	63.2	**63.9**	
		PM	67	117	61.9	**63.7**	82	133	0.52	62.5	64.3	

Notes: *MU I = Marginally Unacceptable I; MU II = Marginally Unacceptable II; MU III = Marginally Unacceptable III*

The noise level increments were small, ranging from 0.00 to 0.47 dBA. This shows that the traffic volumes associated with the Proposed Actions would not cause a project-induced increment of 3 dBA or more to No-Action noise levels. Consequently, no traffic impacts would occur resulting from the Proposed Actions. The CEQR categories would be Marginally Unacceptable II for the Bruckner Boulevard frontage, Marginally Acceptable for the Olmstead Avenue frontage, and Acceptable for the Chatterton Avenue façade.

Window/Wall Attenuation

The noise levels summarized in **Table L-7** are projected noise levels at mid-sidewalk points on the sidewalks adjacent to the Proposed Project. They do not account for the distances between the windows and the sidewalks. In conformance with NYCDEP protocols, monitored noise levels are presumed to be the same for a distance of 100 feet from the noise monitoring locations. After 100 feet, the noise level from traffic sources would attenuate at the rate of 3 dBA per distance doubling. Since all three buildings are less than 100 feet high, no reduction in noise levels at upper floors due to distance attenuation from the mid-sidewalk points was calculated.

As shown in the table, the Proposed Project would place sensitive receptors at locations with L_{10} noise levels that exceed 70 dBA. In conformance with guidance in the *CEQR Technical Manual,* there would be no significant adverse impact provided that window/wall noise attenuation measures are implemented to ensure that L_{10} interior noise levels would be 45 dBA or less (50 dBA for commercial uses).

(E) Designations

The Project Site will be mapped with an (E) designations specifying the identified OITC ratings for the windows with project L_{10} noise levels of 70 dBA or more. The (E) designation also requires that alternate means of ventilation, such as air conditioning, be incorporated in the building design so that windows may remain closed during warm weather.

Window/wall attenuation would be required for residential windows exposed to exterior L_{10} noise levels of 70 dBA or more. This also would apply to other on-site uses that would be termed sensitive receptors, such as a school or daycare center. Window/wall attenuation for commercial uses would be 5 dBA lower than those for residential uses.

Depending on the projected exterior noise levels, windows with an OITC rating of 28 dBA or 31 dBA would be required. Consequently, the following (E) designations (E-515) would be incorporated for Block 3797, Lot 33:

> **Block 3797, Lot 33: To ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed-window condition with a minimum of 31 dBA window/wall attenuation on facades facing west (Pugsley Avenue) or south (Bruckner Boulevard) or the portion of façade facing east (Olmstead Avenue) within 100 feet north of Bruckner Boulevard to maintain an interior noise level not greater than 45 dBA for residential uses or not greater than 50 dBA for commercial uses. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.**

AMV can be achieved by installing double-glazed windows on a heavy frame for masonry structures, or with windows consisting of laminated glass, along with AMV such as central air conditioning, through-wall sleeve fitted air conditioners, packaged terminal air conditioning (ptac) units, trickle vents integrated into window frames, or other approved means.

Based on the projected noise levels, these design measures would provide sufficient attenuation to satisfy CEQR requirements. With the specified attenuation measures in place, the Proposed Project would not result in any significant adverse noise impact.

Attachment M: Construction

I. INTRODUCTION

This chapter assesses the potential impacts of the activities required to construct the Proposed Project. Construction impacts, although temporary, can include noticeable and disruptive effects from an action that is associated with construction or could induce construction. As stated in the City Environmental Quality Review (*CEQR*) *Technical Manual*, determination of the significance of construction impacts and need for mitigation is generally based on the duration and magnitude of the impacts. Construction impacts are usually important when construction activity could affect traffic conditions, hazardous materials, archaeological resources, the integrity of historic resources, community noise patterns, and air quality conditions.

As described in Attachment A, "Project Description," the Proposed Actions would facilitate development of an approximately 366,007 gross square feet (gsf) mixed-use development consisting of two adjoining buildings and comprised of 350 affordable dwelling units (DUs) within 291,283 gsf of residential space, approximately 18,023 gsf of ground floor commercial retail space, approximately 159 parking spaces for resident use, and approximately 173 bicycle parking spaces (the "Proposed Project"). Approximately 144 DUs would be restricted to households with incomes up to 80% of Area Median Income (AMI), and approximately 206 DUs would be restricted to households with incomes between 81% and 130% of AMI, of which approximately 71 DUs may have a home ownership option. The height of the buildings would range from 70 feet for Building A to 95 feet for Building B.

The anticipated construction period for the Proposed Project is short-term, i.e., less than 24 months. Since the Project Site is located along Bruckner Boulevard, which designated as an arterial roadway, a construction period transportation assessment was prepared.

II. PRINCIPAL CONCLUSIONS

The anticipated construction period for the Proposed Project is short-term, i.e., less than 24 months. Construction-related activities would not result in any significant adverse impacts. Since the Project Site is located along Bruckner Boulevard, which designated as an arterial roadway, a construction period transportation assessment was prepared. Results of transportation assessment are summarized below.

Transportation

Traffic

The projected number of vehicle passenger car equivalent (PCE) trips generated during the construction peak hours would be less than the threshold of 50 vehicle trips outlined in the *CEQR Technical Manual*. Since no operation-related traffic impacts were identified in Attachment J, "Transportation," no construction-related traffic impacts would occur during the peak construction period.

According to the *CEQR Technical Manual*, if the threshold for a detailed traffic analysis is not met, it is unlikely that a parking assessment is warranted and, as such, a parking assessment would not be needed.

Transit

A portion of construction workers are expected to take the bus or subway to travel to/from the Project Site. The projected number of transit trips generated during the construction peak hours would be less than those generated during operation of the Proposed Project. Since no operation-related transit impacts were

identified in Attachment J, “Transportation,” no construction-related transit impacts would occur during the peak construction period.

Pedestrians

New pedestrian trips generated during the construction period would consist of construction workers walking between the Project Site and nearby residences, transit stops, and on-street parking spaces. The projected number of pedestrian trips generated during the construction peak hours would be less than those generated during operation of the Proposed Project. Since no operation-related pedestrian impacts were identified in Attachment J, “Transportation,” no construction-related pedestrian impacts would occur during the peak construction period.

The Proposed Project would not result in significant adverse impacts on construction and, consequently, no further assessment is necessary.

III. METHODOLOGY

According to Chapter 22 of the *CEQR Technical Manual*, a detailed assessment of construction period impacts is generally not required when the duration of construction is expected to be short-term, less than two years, unless there is the potential that certain short-term effects may rise to the point of significance.

Governmental Coordination and Oversight

The governmental oversight of construction in New York City (NYC) is extensive and involves a number of City, state, and federal agencies. The primary responsibilities lie with NYC agencies. The NYC Department of Buildings (DOB) has the primary responsibility for ensuring that the construction meets the requirements of the Building Code and that buildings are structurally, electrically, and mechanically safe. In addition, DOB enforces safety regulations to protect both construction workers and the public. The areas of responsibility include installation and operation of construction equipment, such as cranes and lifts, sidewalk shed, and safety netting and scaffolding. The NYC Department of Environmental Protection (NYCDEP) enforces the Noise Code, approves remedial action plans (RAPs) and Construction Health and Safety Plans (CHASPs), and regulates water disposal into the sewer system. The NYC Fire Department (FDNY) has primary oversight for compliance with the Fire Code and for the installation of tanks containing flammable materials. The NYC Department of Transportation (NYCDOT) reviews and approves any traffic lane and sidewalk closures. New York City Transit (NYCT) is in charge of bus stop relocations, and any subsurface construction within 200 feet of a subway. The Landmarks Preservation Commission (LPC) approves studies and testing to prevent loss of archaeological materials and to prevent damage to fragile historic structures.

The New York State Department of Environmental Conservation (NYSDEC) regulates discharge of water into rivers and streams, disposal of hazardous materials, and construction, operation, and removal of bulk petroleum and chemical storage tanks. The New York State Department of Labor (NYSDOL) licenses asbestos workers. On the federal level, the U.S. Environmental Protection Agency (EPA) has wide ranging authority over environmental matters, including air emissions, noise, hazardous materials, and the use of poisons. Much of the responsibility is delegated to the state level. The U.S. Occupational Safety and Health Administration (OSHA) sets standards for work site safety and the construction equipment.

As a result of existing governmental regulations and coordination over construction activities in NYC, construction-related activities resulting from the Proposed Actions is not anticipated to impact archaeological/historical resources, or hazardous materials conditions.

Transportation

The Proposed Project is located along Bruckner Boulevard, which is designated as an arterial roadway. According to the *CEQR Technical Manual*, a transportation assessment is required if the closure would be in an area with high pedestrian activity or near sensitive land uses such as a school, hospital, or park. The Proposed Project faces Chatterton Avenue to the north, Bruckner Boulevard to the south and Olmstead Avenue to the east, and it is not located near any sensitive land uses. The duration of potential closures would be within the approximately 24-month construction period and would typically take place early in the construction process during site clearance, excavation, and pouring the foundation. In addition, NYCDOT reviews and approves any traffic lane and sidewalk closures and would oversee this aspect during the construction process. However, since the Proposed Project is located along Bruckner Boulevard (designated as an arterial roadway), a screening assessment consisting of trip generation for the peak construction period is prepared below.

IV. PRELIMINARY ASSESSEMENT

In accordance with the guidelines of the *CEQR Technical Manual*, a preliminary assessment was completed to evaluate the potential construction period impacts of the Proposed Actions, including impacts on transportation (traffic, transit, pedestrians, and parking).

Conceptual Construction Schedule and Activities

Construction of the Proposed Project would take place over an approximately 24-month period. A construction sequencing plan was developed for use in the assessment of construction period impact and is illustrated in **Table M-1: Anticipated Construction Sequencing**, which shows the different phases of construction. The construction schedule reflects the sequencing of construction events as currently considered.

Table M-1: Anticipated Construction Sequencing

Year	2020			2021				2022
Quarter	2nd	3rd	4th	1st	2nd	3rd	4th	1st
Excavation and Foundations								
Superstructure								
Interiors								

Estimate of Construction Period Trucks and Construction Workers

Average daily construction worker and truck activities by quarter were projected for the entire construction period, as shown in **Table M-2: Average Number of Daily Construction Workers and Trucks by Quarter Weekday**. Construction is anticipated to begin during the second quarter of 2020 and end in the first quarter of 2022.

Table M-2: Average Number of Daily Construction Workers and Trucks by Quarter Weekday

Year	2020			2021				2022
Quarter	2nd	3rd	4th	1st	2nd	3rd	4th	1st
Workers (Total Trips)[1]	35	35	50	52	55	52	45	32
Vehicle	22	22	32	33	35	33	28	20
Transit	16	16	23	24	25	24	21	14
Walk	7	7	10	11	11	11	9	6
Trucks (PCE and In/Out)	5	8	32	32	24	24	24	24
Total Trips	40	43	82	84	79	76	69	56
Total Vehicle Trips	27	30	64	65	59	57	52	44
1. Total worker and trucks based on data provided by Azimuth Development Group LLC.								

Peak construction vehicle worker activities are expected to take place during second quarter of 2021. It is expected that construction activities would generate the highest number of daily worker trips during this quarter, with an estimated average of 55 workers per weekday, as shown above in **Table M-2: Average Number of Daily Construction Workers and Trucks by Quarter Weekday.**

Peak construction traffic is expected to occur during the first quarter of 2021, based on a combination of average daily construction worker vehicle trips and construction-related truck volumes. It is expected that construction activities would generate the highest number of daily trips during this quarter, with an estimated average of 33 workers and 32 truck deliveries per weekday (assuming a truck PCE factor of 2.0), as shown above in **Table M-2: Average Number of Daily Construction Workers and Trucks by Quarter Weekday.**

Construction Working Hours

Construction activities would take place during Monday through Friday, between 7:00 AM and 5:00 PM, with all workers expected to arrive between 7:00 AM and 8:00 AM and leave between 4:00 PM and 5:00 PM. Construction would not occur on the weekends.

Transportation

Traffic

As discussed under “Estimate of Construction Period Trucks and Construction Workers”, peak construction vehicle traffic is expected to take place during the first quarter of 2021, based on a combination of average daily construction workers and construction-related truck volumes (in PCE). To provide an assessment of the reasonable worst-case impacts on transportation during construction, the daily workforce and truck trip projections during this period were used as the basis for estimating peak hour construction trips. It is expected that construction activities would generate the highest number of daily trips during this quarter, generated by an average of 33 workers and 32 truck deliveries per weekday, as shown in **Table M-2: Average Number of Daily Construction Workers and Trucks by Quarter Weekday**.

Worker and truck trip projections were refined to account for worker modal splits and vehicle occupancy, based on the 2000 Census reverse-journey-to-work data for the construction and excavation industry for Census Tracts 72, 78, 92, and 98 in the Bronx, New York adjusted for 2010 Census conditions. Details pertaining to worker modal splits and vehicle occupancy were not available for Census Tracts 40.01, 42, and 96, which were considered in the analyses for the Proposed Action. Approximately 33.9% of the construction workers would be expected to travel to the Project Site by private autos at an average occupancy of 1.08 persons per vehicle. The remaining 66.1% would walk or use public transportation (20.3% on foot, 25.4% by subway, 20.4% by bus).

Worker and truck trip projections were also refined to account for arrival and departure distribution and PCE factors for construction truck traffic.

Peak Hour Construction Worker Vehicle and Truck Trips

The construction activity would occur on weekdays between 7:00 AM and 5:00 PM. Construction truck trips would occur between 7:00 AM and 10:00 AM. Most trucks would remain in the area for only short durations. However, construction workers would typically commute during the hours before and after their work shift. For analysis purposes, it was assumed that each worker vehicle would arrive in the morning and depart in the afternoon or early evening. Each truck delivery was assumed to result in two truck trips during the same hour (one "in" and one "out"). Furthermore, in accordance with guidance in the *CEQR Technical Manual*, the traffic analysis assumed that each truck has a PCE factor of 2.0.

The estimated daily vehicle trips were distributed throughout the workday based on projected work shift allocations and conventional arrival/departure patterns of construction workers and trucks. For construction workers, 100% of the arrival and departure trips would take place during the hour immediately before and after each shift. For construction trucks, deliveries would occur between 7:00 AM and 10:00 AM. Construction truck deliveries typically peak during the early morning (approximately 50% of daily trucks), which overlaps with construction worker arrival traffic. The hourly construction trip projections for the peak construction quarter during the weekday shifts are summarized in **Table M-3: Q1 2021 Peak Weekday Incremental Construction Vehicle Trip Projections (in PCEs).**

Table M-3: Q1 2021 Peak Weekday Incremental Construction Vehicle Trip Projections (in PCEs)

Hour	Auto Trips					Truck Trips					Total Vehicle Trips		
	In		Out		Total	In		Out		Total			
	%	#	%	#		%	#	%	#		In	Out	Total
5 AM - 6 AM	0%	0	0%	0	0	0%	0	0%	0	0	0	0	0
6 AM - 7 AM	0%	0	0%	0	0	0%	0	0%	0	0	0	0	0
7 AM - 8 AM	100%	16	0%	0	16	50%	8	50%	8	16	24	8	32
8 AM - 9 AM	0%	0	0%	0	0	25%	4	25%	4	8	4	4	8
9 AM - 10 AM	0%	0	0%	0	0	25%	4	25%	4	8	4	4	8
10 AM - 11 AM	0%	0	0%	0	0	0%	0	0%	0	0	0	0	0
11 AM - 12 PM	0%	0	0%	0	0	0%	0	0%	0	0	0	0	0
12 PM - 1 PM	0%	0	0%	0	0	0%	0	0%	0	0	0	0	0
1 PM - 2 PM	0%	0	0%	0	0	0%	0	0%	0	0	0	0	0
2 PM - 3 PM	0%	0	0%	0	0	0%	0	0%	0	0	0	0	0
3 PM - 4 PM	0%	0	0%	0	0	0%	0	0%	0	0	0	0	0
4 PM - 5 PM	0%	0	100%	16	16	0%	0	0%	0	0	0	16	16
5 PM - 6 PM	0%	0	0%	0	0	0%	0	0%	0	0	0	0	0
6 PM - 7 PM	0%	0	0%	0	0	0%	0	0%	0	0	0	0	0
Daily Total	100%	16	100%	16	33	100%	16	100%	16	32	32	32	65

Notes:
1. Hourly construction worker and truck trips were derived from an estimated monthly average number of construction workers and truck deliveries per day, with each truck delivery resulting in two daily trips (arrival and departure).
2. Columns labeled as "%" represent the temporal distribution of the construction trips.
3. Sum of in and out trips may not match due to rounding.

During the first quarter of 2021, the peak construction activities would result in 32 PCE trips between 7:00 and 8:00 AM on weekdays. As the Proposed Project would generate fewer than 50 PCE vehicle trips in a peak hour no further analysis would be needed in accordance with the *CEQR Technical Manual*

According to the *CEQR Technical Manual*, if the threshold for a detailed traffic analysis is not met, it is unlikely that a parking assessment is warranted and, as such, a parking assessment would not be needed.

Transit

Approximately 45.8% (25.4% by subway, 20.4% by bus) of construction workers were projected to travel to the Project Site via public transit. Most of these trips would be made during hours outside of the typical commuter peak periods.

While the construction activities would peak during the first quarter of 2021 for the purposes of the vehicular analyses, the peak number of workers are expected during the second quarter of 2021, generating the greatest number of transit trips. During the second quarter of 2021 peak construction period for workers, the 45.8% travel-by-transit distribution would represent approximately 25 daily workers traveling by transit on weekdays. With 100% of these workers arriving during the construction peak hour from 7:00 AM to 8:00 AM and 100% departing during the constriction peak hour from 4:00 PM to 5:00 PM, the total estimated numbers of peak hour transit trips would be approximately 25 trips during the AM peak hour (14 subway, 11 bus) and 25 trips during the PM peak hour (14 subway, 11 bus). The second quarter of 2021 construction worker transit trips are compared to transit trips generated by the Proposed Project in **Table M-4: Transit Construction Trips – Q2 2021.**

Table M-4: Transit Construction Trips – Q2 2021

Hour	2021 (Q2) Construction Trips Subway	2021 (Q2) Construction Trips Bus	2021 (Q2) Construction Trips (Transit)	2022 Operational Trips Subway	2022 Operational Trips Bus	2022 Operational Trips (Transit)
7:00 AM to 8:00 AM	14	11	25			
8:00 AM to 9:00 AM	0	0	0	102	37	139
1:00 PM to 2:00 PM	0	0	0	76	38	114
4:00 PM to 5:00 PM	14	11	25			
5:00 PM to 6:00 PM	0	0	0	121	49	170

No significant adverse subway or bus transit impacts were identified in Attachment J, "Transportation", and, as shown in **Table M-4: Transit Construction Trips – Q2 2021,** the number of subway and bus transit trips generated during the second quarter of 2021 construction peak hours would be fewer than those generated during operation of the Proposed Project. Consequently, no significant adverse transit impacts would be expected during construction of the Proposed Project.

Pedestrians

Construction workers would arrive or depart during the construction peak hours via various modes of transportation. Construction workers traveling by auto would park on-street near the Project Site. Construction workers traveling by subway or bus would also walk between the transit stops and the Project Site. Approximately 66.1% of construction workers were projected to travel to the Project Site on-foot, including those who would take transit (25.4% by subway and 20.4% by bus).) and those who would walk directly to the Project Site (20.3%).

While the construction activities would peak during the first quarter of 2021 for the purposes of the vehicular analyses, the peak number of workers are expected during the second quarter of 2021, generating the greatest number of pedestrian trips. During the second quarter of 2021 peak construction period, the 66.1% pedestrian distribution would represent approximately 36 daily workers traveling on foot on weekdays. With 100% of these workers arriving during the construction peak hour from 7:00 AM to 8:00 AM and 100% departing during the construction peak hour from 4:00 PM to 5:00 PM, the total estimated numbers of peak hour pedestrian trips would be approximately 36 trips during the AM peak hour and 36 trips during the PM peak hour. The second quarter of 2021 construction worker pedestrian trips are compared to pedestrian trips generated by the Proposed Project in **Table M-5: Pedestrian Construction Trips – Q2 2021.**

Table M-5: Pedestrian Construction Trips – Q2 2021

Hour	2021 (Q2) Construction Trips	2022 Operational Trips
7:00 AM to 8:00 AM	36	
8:00 AM to 9:00 AM	0	246
1:00 PM to 2:00 PM	0	698
4:00 PM to 5:00 PM	36	
5:00 PM to 6:00 PM	0	491

No significant adverse pedestrian impacts were identified in Attachment J, “Transportation”, and, as shown in **Table M-5: Pedestrian Construction Trips – Q2 2021,** the number of pedestrian trips generated during the second quarter of 2021 construction peak hours would be fewer than those generated during operation of the Proposed Project. Consequently, no significant adverse pedestrian impacts would be expected during construction of the Proposed Project.

APPENDIX H:

HISTORIC & CULTURAL RESOURCES CONSULTATION

Landmarks Preservation Commission

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

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

ENVIRONMENTAL REVIEW

Project number: DEPARTMENT OF CITY PLANNING / LA-CEQR-X
Project:
Address: 2069 BRUCKNER BOULEVARD, **BBL:** 2037970033
Date Received: 4/3/2018

[X**] No architectural significance**

[X**] No archaeological significance**

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

[ ] Listed on National Register of Historic Places

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

[ ] May be archaeologically significant; requesting additional materials

Gina Santucci 4/3/2018

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 33255_FSO_DNP_04032018.doc

NEW YORK STATE OF OPPORTUNITY.

Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ROSE HARVEY
Commissioner

September 07, 2018

Ms. Spach Trahan
Sam Schwartz Engineering, D.P.C.
322 Eighth Avenue
Fifth Floor
New York, NY 10001

Re: HPD
Redevelopment of 2069 Bruckner Boulevard
2069 Bruckner Blvd., Bronx, NY 10472
18PR05593

Dear Ms. Trahan:

Thank you for requesting the comments of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the project 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 OPRHP 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 (6 NYCRR Part 617).

Based upon this review, it is the New York State Office of Parks, Recreation and Historic Preservation's opinion that your project will have no impact on archaeological and/or historic resources listed in or eligible for the New York State and National Registers of Historic Places.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,

Michael F. Lynch, P.E., AIA

Director, Division for Historic Preservation

APPENDIX I:

NYC DEP COMMENT LETTER

NYC Environmental Protection

Vincent Sapienza, P.E.
Commissioner

Angela Licata
Deputy Commissioner of Sustainability

59-17 Junction Blvd.
Flushing, NY 11373

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

September 6, 2018

Laura Kenny
Project Manager
Environmental Assessment and Review Division
New York City Department of City Planning
120 Broadway, 31st Floor
New York, New York 10271

Re: 2069 Bruckner Boulevard
Block 3797, Lot 33
CEQR # 77DCP510X

Dear Ms. Kenny:

The New York City Department of Environmental Protection, Bureau of Sustainability (DEP) has reviewed the August 2018 Environmental Assessment Statement prepared by Sam Schwartz Engineering, DPC., and the April 2017 Phase I Environmental Site Assessment (Phase I) prepared by GEI Consultants Inc., on behalf of Azimuth Development Group LLC., (applicant) for the above referenced project. It is our understanding that the applicant is seeking:

1. A zoning map amendment from the New York City Department of City Planning (DCP) to rezone the project area from a R5 zoning district to a R7A/C2-4;
2. A zoning text amendment to Appendix F of the Zoning Resolution to designate the project site as a Mandatory Inclusionary Housing Area; and
3. Discretional construction financing from the New York City Department of Housing Preservation and Development and the New York State Housing Development Corporation.

The proposed actions would facilitate the development of an approximately 343,088 gross square foot (gsf) mixed-use residential and commercial development consisting of three buildings containing 330 affordable dwelling units, approximately 21,470 gsf of ground floor commercial/retail space, 76 indoor and outdoor parking spaces and 167 bicycle parking spaces. The project site is located between Olmstead Avenue and Pugsley Avenue in the Unionport neighborhood of Bronx Community District 9. It should also be noted that the project site is partially developed with a single-story building which is currently utilized for religious meetings on weekends.

The April 2017 Phase I report revealed that historical on-site and surrounding area land uses consists of residential uses including a supermarket, a church, a gas station, a deli, Penske Truck Rental, a laundromat, as well as several residential dwellings. Regulatory databases such as the New York State Department of Environmental Conservation SPILLS, Leaking Storage Tanks, Resource Conservation and Recovery Act Generators, and Petroleum Bulk Storage (PBS) identified several sites in close proximity to the project site. The SPILLS database reported 91 SPILLS within a 1/2-mile radius of the project site and the PBS database reported 4 sites within a 1/8-mile radius of the project site. Based on the

age of the building that currently occupies the project site, asbestos containing materials and lead based paint could be present in the structure.

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

- DCP should inform the applicant that based on the historical on-site and surrounding area land uses, a Phase II Environmental Site Assessment (Phase II) is necessary to adequately identify/characterize the surface and subsurface soils of the subject parcels. A Phase II Investigative Protocol/Work Plan summarizing the proposed drilling, soil, groundwater, and soil vapor sampling activities should be developed in accordance with the *City Environmental Quality Review Technical Manual* and submitted to DEP for review and approval. The Work Plan should include blueprints and/or site plans displaying the current surface grade and sub-grade elevations and a site map depicting the proposed soil, groundwater, and soil vapor sampling locations. Soil and groundwater samples should be collected and analyzed by a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certified laboratory for the presence of volatile organic compounds (VOCs) by United States Environmental Protection Agency (EPA) Method 8260, semi-volatile organic compounds by EPA Method 8270, pesticides by EPA Method 8081, polychlorinated biphenyls by EPA Method 8082, Target Analyte List metals (filtered and unfiltered for groundwater samples). The soil vapor sampling should be conducted in accordance with NYSDOH's October 2006 Guidance for Evaluating Soil Vapor Intrusion in the State of New York. The soil vapor samples should be collected and analyzed by a NYSDOH ELAP certified laboratory for the presence of VOCs by EPA Method TO-15. An Investigative Health and Safety Plan (HASP) should also be submitted to DEP for review and approval.

- DCP should also instruct the applicant that the Phase II Work Plan and HASP should be submitted to DEP for review and approval prior to the start of any fieldwork.

Future correspondence and submittals related to this project should include the following CEQR number **77DCP510X**. If you have any questions, you may contact Ms. Cassandra Scantlebury at (718) 595-6756.

Sincerely,

Wei Yu
Deputy Director, Hazardous Materials

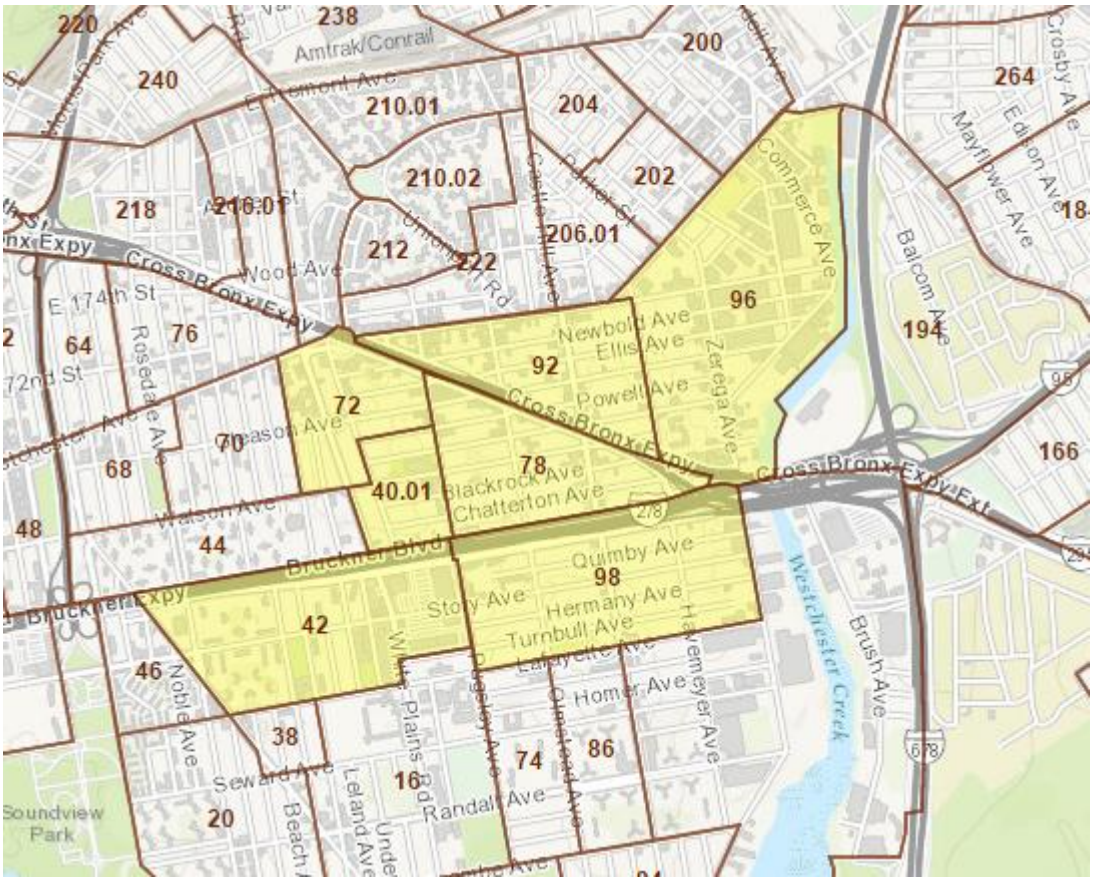
cc: R. Weissbard
T. Estesen
C. Scantlebury
M. Wimbish
R. Dobruskin - DCP
O. Abinader - DCP

APPENDIX J:

TRANSPORTATION

TRANSPORTATION DEMAND FACTORS MEMORANDUM

MEANS OF TRANSPORTATION TO WORK(B08006)



Tract (Bronx)	78	%	40.01	%	42	%	72	%	92	%	96	%	98	%	Total	%
Total:	2,506		597		2,109		2,098		2,496		861		2,334		**13,001**	
Car, truck, or van:	607	24%	195	33%	570	27%	652	31%	514	21%	277	32%	1,196	51%	**4,011**	31%
Drove alone	399		190		503		628		357		216		1,030		**3,323**	
Carpooled:	208		5		67		24		157		61		166		**688**	
2-person	131		0		18		0		135		41		166		**491**	
3-person	37		0		0		24		22		20		0		**103**	
4-or-more-person	40		5		49		0		0		0		0		**94**	
Public transportation:	1,707		363	0%	1,267	0%	1,287	0%	1,795	0%	461	0%	1,022	0%	**7,902**	
Bus or trolley bus	180	7%	79	13%	520	25%	333	16%	369	15%	101	12%	443	19%	**2,025**	16%
Streetcar/trolley car	51	2%	0	0%	0	0%	0	0%	128	5%	0	0%	0	0%	**179**	1%
Subway or elevated	1,453	58%	268	45%	747	35%	938	45%	1,291	52%	360	42%	573	25%	**5,630**	43%
Railroad	23	1%	16	3%	0	0%	16	1%	7	0%	0	0%	6	0%	**68**	1%
Ferryboat	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	**0**	0%
Bicycle	0	0%	0	0%	0	0%	33	2%	0	0%	0	0%	14	1%	**47**	0%
Walked	95	4%	39	7%	226	11%	85	4%	121	5%	77	9%	78	3%	**721**	6%
Taxicab/Other	38	2%	0	0%	25	1%	9	0%	44	2%	18	2%	24	1%	**158**	1%
Worked at home	59	2%	0	0%	21	1%	32	2%	22	1%	28	3%	0	0%	**162**	1%
Total Check	**2,506**	**100%**	**597**	**100%**	**2,109**	**100%**	**2,098**	**100%**	**2,496**	**100%**	**861**	**100%**	**2,334**	**100%**	**13,001**	**100%**
	OK	*OK*	*OK*	*OK*	*OK*	*OK*	*OK*	*OK*	*OK*	*OK*	*OK*	*OK*	*OK*	*OK*	*OK*	*OK*

Modal Split

Mode	78	%	40.01	%	42	%	72	%	92	%	96	%	98	%	Total	%
Auto	607	24.2%	195	32.7%	570	27.0%	652	31.1%	514	20.6%	277	32.2%	1,196	51.2%	4,011	30.9%
Taxi	38	1.5%	0	0.0%	25	1.2%	9	0.4%	44	1.8%	18	2.1%	24	1.0%	158	1.2%
Bus	180	7.2%	79	13.2%	520	24.7%	333	15.9%	369	14.8%	101	11.7%	443	19.0%	2,025	15.6%
Subway	1,527	60.9%	284	47.6%	747	35.4%	954	45.5%	1,426	57.1%	360	41.8%	579	24.8%	5,877	45.2%
Walk/Other	154	6.1%	39	6.5%	247	11.7%	150	7.1%	143	5.7%	105	12.2%	92	3.9%	930	7.2%
Total	**2,506**	**100.0%**	**597**	**100.0%**	**2,109**	**100.0%**	**2,098**	**100.0%**	**2,496**	**100.0%**	**861**	**100.0%**	**2,334**	**100.0%**	**13,001**	**100.0%**
			0	*0*	*0*	*0*	*0*	*0*								

Vehicle Occupancy

	78		40.01		42		72		92		96		98		All	
	Persons	Vehicles	Persons	Vehicles	Persons	Vehicles	Persons	Vehicles	Persons	Vehicles	Persons	Vehicles	Persons	Vehicles	Persons	Vehicles
Alone	399	399	190	190	503	503	628	628	357	357	216	216	1,030	1030	3,323	3323
2	131	66	0	0	18	9	0	0	135	68	41	21	166	83	491	246
3	37	12	0	0	0	0	24	8	22	7	20	7	0	0	103	34
4+	40	10	5	1	49	12	0	0	0	0	0	0	0	0	94	24
Total	**607**	**487**	**195**	**191**	**570**	**524**	**652**	**636**	**514**	**432**	**277**	**243**	**1196**	**1113**	**4011**	**3626**
Occupancy	**1.25**		**1.02**	**0.00**	**1.09**	**0.00**	**1.03**	**0.00**	**1.19**		**1.14**		**1.07**		**1.11**	

Source: 2012-2016 American Community Survey 5-Year Estimates. Table B08006.

QUARTER-MILE PARKING ANALYSIS SUMMARY

2018 Existing Condition Parking Utilization Summary

	2018 Existing	Weekday AM	Weekday MD	Weekday PM	Weekday Overnight	Saturday MD	Saturday Overnight
Total Parking	Capacity	1,549	1,569	1,661	1,681	1,681	1,681
	Demand	1,224	1,304	1,438	1,488	1,373	1,470
	Available Spaces	325	265	223	193	308	211
	Utilization	**79%**	**83%**	**87%**	**89%**	**82%**	**87%**

2022 No-Action Condition Parking Utilization Summary

	No-Action	Weekday AM	Weekday MD	Weekday PM	Weekday Overnight	Saturday MD	Saturday Overnight
Total On-Street Parking	Capacity	1,549	1,569	1,661	1,681	1,681	1,681
	2018 Existing Demand	1,224	1,304	1,438	1,488	1,373	1,470
	Background Growth Increment	13	14	15	15	14	15
	No-Action Development Increment	0	0	1	6	4	5
	Total No-Action Demand	1,237	1,318	1,454	1,509	1,391	1,490
	Available Spaces	312	251	207	172	290	191
	Utilization	**80%**	**84%**	**88%**	**90%**	**83%**	**89%**

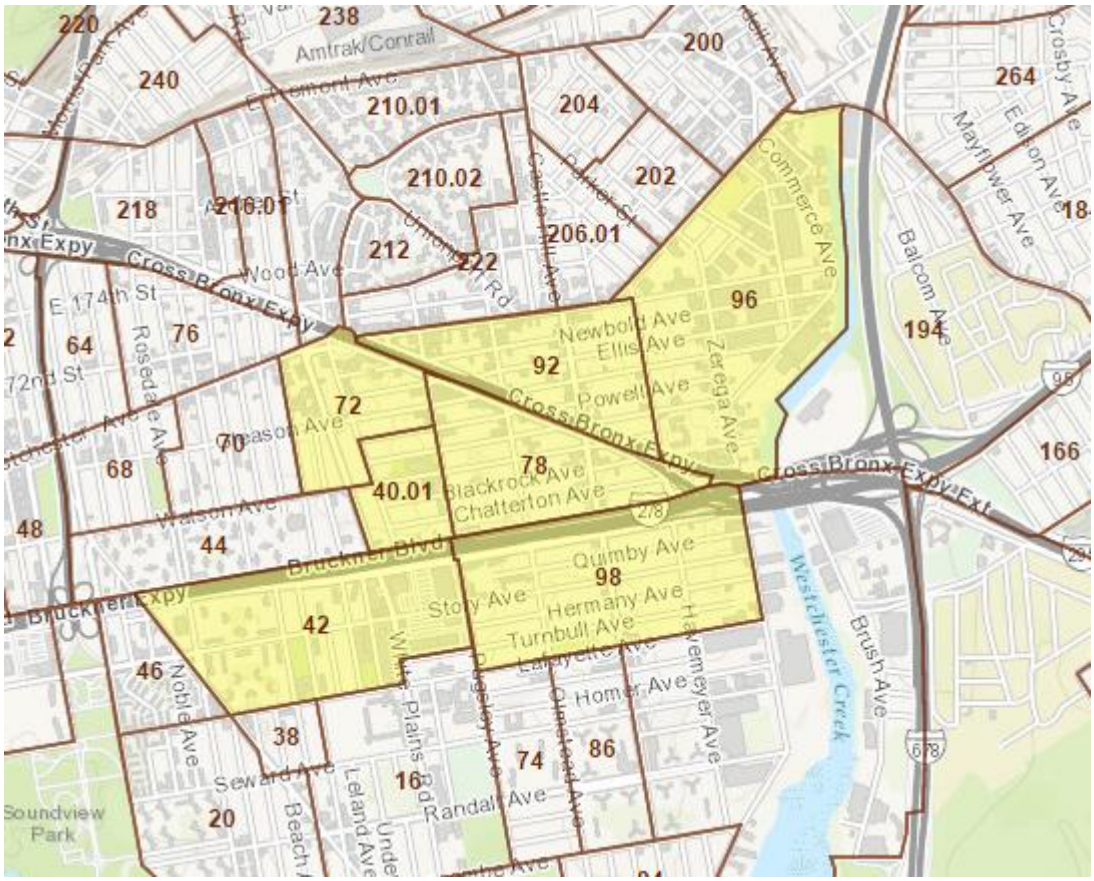
2022 With-Action Condition Parking Utilization Summary

	No-Action	Weekday AM	Weekday MD	Weekday PM	Weekday Overnight	Saturday MD	Saturday Overnight
Total On-Street Parking	Capacity	1,549	1,569	1,661	1,681	1,681	1,681
	Spaces Lost due to Project Improvement	2	2	2	2	2	2
	With-Action Capacity	1,547	1,567	1,659	1,679	1,679	1,679
	Total No-Action Demand	1,237	1,318	1,454	1,509	1,391	1,490
	With-Action Increment	8	0	44	98	78	84
	Total With-Action Demand	1,245	1,318	1,498	1,607	1,469	1,574
	Available Spaces	302	249	161	72	210	105
	Utilization	**80%**	**84%**	**90%**	**96%**	**87%**	**94%**

CEQR Parking Utilization Impact Criteria Check

CEQR Impact Criteria	Half of No-Action Available Spaces	156	126	104	86	145	96
	With-Action Increment + Spaces Lost due to Project Improvement	10	2	46	100	80	86
	CEQR Impact?	NO	NO	NO	YES	NO	NO
	Impact by how many Spaces	N/A	N/A	N/A	14	N/A	N/A

HOUSEHOLD SIZE BY VEHICLES AVAILABLE (B08201)



Tract (Bronx)	40.01	42	72	78	92	96	98	Total
Total Household	506	2748	1704	1999	1805	747	1,755	11,264
No vehicle available	146	1567	860	929	1093	348	570	5513
1 vehicle available	268	1060	608	820	481	243	778	4258
2 vehicles available	78	78	146	231	206	119	282	1140
3 vehicles available	14	43	65	19	25	17	77	260
4 or more vehicles available	0	0	25	0	0	20	48	93

Total Household	506	2,748	1,704	1,999	1,805	747	1,755	11,264
Total Vehicles	466	1345	1195	1339	968	612	1765	7690
Average Vehicles per Household	0.921	0.489	0.701	0.670	0.536	0.819	1.006	0.683

Source: 2012-2016 American Community Survey 5-Year Estimates. Table B08006.

NO-ACTION CONDITION: PROJECT 1 – WESTCHESTER MEWS

Table 2.9-6: With-Action Retail Trip Generation

Floor area (1000 square foot)			26.126			Peak Hour Trips		Percent Auto Use =	5%
Daily visitors (per 1000 ft)			205		a.m.	3.0%		Auto Occupancy =	1.6
Daily visitors			5356		midday	19.0%		Percent Taxi Use=	1%
					p.m.	10.0%		Taxi Occupancy=	2
Peak Hour Person Trips								Percent Bus Use=	6%
	Inbound	Outbound	Total					Percent Subway Use=	3%
AM	80	80	161					Percent Walk=	85%
Midday	509	509	1018					Directonal Distributior	50%/50%
PM	268	268	536					(all periods)	
Net Peak Hour Person Trips						Peak Hour Auto Trips			
	Inbound	Outbound	Total				Arriving	Departing	Total
AM	60	60	121			AM	2	2	4
Midday	382	382	763			Midday	12	12	24
PM	201	201	402			PM	6	6	13
Peak Hour Person Trips by Auto									
	Arriving	Departing	Total			Peak Hour Taxi Trips			
AM	3	3	6				Arriving	Departing	Total
Midday	19	19	38			AM	1	1	2
PM	10	10	20			Midday	2	2	4
						PM	1	1	2
Peak Hour Person Trips by Taxi						Peak Hour Vehicle Trips auto, taxi, truck			
	Arriving	Departing	Total				Arriving	Departing	Total
AM	1	1	1			AM	3	3	6
Midday	4	4	8			Midday	14	14	28
PM	2	2	4			PM	7	7	15
Daily Truck		0.35					Peak Hour Subway Trips		
Trip Gen.		(trips/1,000 gsf)					Arriving	Departing	Total
						a.m.	2	2	**4**
Truck Trip		AM (8-9)	8%			midday	11	11	**23**
Temporal		MD(12-1)	11%			p.m.	6	6	**12**
Distribution		PM(5-6	2%						
							Peak Hour Bus Trips		
							Arriving	Departing	Total
Daily Truck Trips						a.m.	4	4	**7**
9						midday	23	23	**46**
						p.m.	12	12	**24**
Balanced Truck Trips									
	Inbound	Outbound	Total				Peak Hour Walk-only Trips		
AM	0.365764	0.365764	0.731528				Arriving	Departing	Total
Midday	0	0	0			a.m.	51	51	**102**
PM	0	0	0			midday	324	324	**649**
						p.m.	171	171	**341**

Trip Assignment Assumptions

- Vehicle Trips: Due to location of project (other side of highway), zero trips passing through two study area intersections of 2069 Bruckner Blvd
- Pedestrian Trips: There are multiple routes available to access the Westchester Mews, conservatively 10% of walk-only trips will pass through the study area intersection.

Parking Accumulation

- To estimate the overnight parking demand, the average number of vehicles available per household of 0.536 (based on 2012-2016 American Community Survey (ACS) 5-year estimates: Household Size by Vehicles Available for Census Tract 92 in the Bronx (where Westchester Mews is located) was applied to the total number of residential dwelling units (DUs) proposed for the Project Site.

Tract (Bronx)	92
Total Household	1805
No vehicle available	1093
1 vehicle available	481
2 vehicles available	206
3 vehicles available	25
4 or more vehicles available	0

Total Household	1,805
Total Vehicles	968
Average Vehicles per Household	0.536

- According to the Reasonable Worst Case Development Scenario (RWCDS) for this project, a parking supply of 119 spaces would be provided exclusively for residents of this development, but would not be sufficient to meet the parking demand of this No-Action project. The peak hour parking demand assumed to be accommodated on- and off-street is shown in the last columns of the following two tables for the Weekday and Saturday conditions, respectively.
- After reviewing the half-mile radius of this No-Action project, 10% of the parking shortfall was added to the No-Action Development Increment.

Weekday Parking Accumulation

	Residential			Local Retail			Medical Facility			Total			Overall Parking Surplus/Shortfall	Parking Surplus/Shortfall Overlap
Hour	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation	119 Parking Spaces	10%
Before 12			162							0	0	162	-43	-4
12-1 AM	5	5	162	0	0	0	0	0	0	5	5	162	-43	-4
1-2 AM	2	2	162	0	0	0	0	0	0	2	2	162	-43	-4
2-3 AM	1	1	162	0	0	0	0	0	0	1	1	162	-43	-4
3-4 AM	1	1	162	0	0	0	0	0	0	1	1	162	-43	-4
4-5 AM	1	1	162	0	0	0	0	0	0	1	1	162	-43	-4
5-6 AM	1	1	162	0	0	0	0	0	0	1	1	162	-43	-4
6-7 AM	1	2	161	0	0	0	0	0	0	1	2	161	-42	-4
7-8 AM	3	13	151	0	0	0	0	0	0	3	13	151	-32	-3
8-9 AM	10	45	116	3	3	0	2	0	2	15	48	118	-2	0
9-10 AM	8	22	102	3	3	0	4	2	4	15	27	106	-4	0
10-11 AM	10	12	100	3	3	0	3	2	5	16	17	105	-5	-1
11-12 PM	11	11	100	6	6	0	3	4	4	20	21	104	-4	0
12-1 PM	10	9	101	16	16	0	2	2	4	28	27	105	-4	0
1-2 PM	24	36	89	14	14	0	3	3	4	41	53	93	-4	0
2-3 PM	9	8	90	11	11	0	3	3	4	23	22	94	-4	0
3-4 PM	10	9	91	6	6	0	3	2	5	19	17	96	-5	-1
4-5 PM	29	13	107	6	6	0	4	5	4	39	24	111	-4	0
5-6 PM	40	20	127	7	7	0	2	5	1	49	32	128	-9	-1
6-7 PM	23	11	139	6	6	0	0	1	0	29	18	139	-20	-2
7-8 PM	19	10	148	2	2	0	0	0	0	21	12	148	-29	-3
8-9 PM	12	8	152	1	1	0	0	0	0	13	9	152	-33	-3
9-10 PM	6	7	151	0	0	0	0	0	0	6	7	151	-32	-3
10-11 PM	12	4	159	0	0	0	0	0	0	12	4	159	-40	-4
11-12 PM	6	3	162	0	0	0	0	0	0	6	3	162	-43	-4
Total	254	254		84	84		29	29		367	367			

Saturday Parking Accumulation

	Residential			Local Retail			Medical Facility			All			Supply	Parking Surplus/Shortfall Overlap
Hour	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation	119 Parking Spaces	10%
Before 12			162							0	0	162	-43	-4
12-1 AM	9	5	166	0	0	0	0	0	0	9	5	166	-47	-5
1-2 AM	6	4	168	0	0	0	0	0	0	6	4	168	-49	-5
2-3 AM	5	3	170	0	0	0	0	0	0	5	3	170	-51	-5
3-4 AM	4	2	172	0	0	0	0	0	0	4	2	172	-53	-5
4-5 AM	5	1	176	0	0	0	0	0	0	5	1	176	-57	-6
5-6 AM	4	2	178	0	0	0	0	0	0	4	2	178	-59	-6
6-7 AM	7	6	179	0	0	0	0	0	0	7	6	179	-60	-6
7-8 AM	9	10	178	0	0	0	0	0	0	9	10	178	-59	-6
8-9 AM	9	20	167	0	0	0	2	0	2	11	20	169	-50	-5
9-10 AM	14	19	162	0	0	0	4	2	4	18	21	166	-47	-5
10-11 AM	16	19	159	3	3	0	3	2	5	22	24	164	-45	-4
11-12 PM	19	20	158	7	7	0	3	4	4	29	31	162	-43	-4
12-1 PM	17	15	160	11	11	0	2	2	4	30	28	164	-45	-4
1-2 PM	24	36	148	14	14	0	3	3	4	41	53	152	-33	-3
2-3 PM	25	17	156	12	12	0	3	3	4	40	32	160	-41	-4
3-4 PM	21	20	157	16	16	0	3	2	5	40	38	162	-43	-4
4-5 PM	20	17	160	14	14	0	3	4	4	37	35	164	-45	-4
5-6 PM	16	16	160	11	11	0	3	5	2	30	32	162	-43	-4
6-7 PM	16	17	159	5	5	0	0	2	0	21	24	159	-40	-4
7-8 PM	15	16	158	3	3	0	0	0	0	18	19	158	-39	-4
8-9 PM	13	16	155	1	1	0	0	0	0	14	17	155	-36	-4
9-10 PM	10	12	153	1	1	0	0	0	0	11	13	153	-34	-3
10-11 PM	9	3	159	0	0	0	0	0	0	9	3	159	-40	-4
11-12 PM	9	6	162	0	0	0	0	0	0	9	6	162	-43	-4
Total	302	302		98	98		29	29		429	429			

Sources:
Residential: East 147th Street Rezoning EAS, Table J-22 and J-23.
Local Retail: Flushing Commons FEIS (2010), Table 14-38.
Medical Office: Based on information provided by NYCDOT for Medical Office.

NO-ACTION CONDITION: PROJECT 2 – 1965 LAFAYETTE AVENUE

Table J-2: Travel Demand Forecast

Land Use:		Residential - Family		Local Retail*		Residential - Senior		Total	
Size/Units:		292	DU	19,938	gsf	133	DU		
Peak Hour Person Trips:									
	AM	236		92		36		364	
	MD	118		584		56		758	
	PM	260		308		46		614	
	Sat MD	226		360		56		642	
Person Trips:									
		In	Out	In	Out	In	Out	In	Out
AM	Auto	13	67	4	2	4	8	21	77
	Taxi	0	0	1	1	0	0	1	1
	Bus-to-Subway	12	65	2	1	4	8	18	74
	Bus Only	10	52	5	3	3	6	18	61
	Walk/Other	3	14	46	27	1	2	50	43
	Total	38	198	58	34	12	24	108	256
		In	Out	In	Out	In	Out	In	Out
MD	Auto	20	20	23	19	10	10	53	49
	Taxi	0	0	5	4	0	0	5	4
	Bus-to-Subway	20	20	12	10	9	9	41	39
	Bus Only	15	15	28	23	7	7	50	45
	Walk/Other	4	4	253	207	2	2	259	213
	Total	59	59	321	263	28	28	408	350
		In	Out	In	Out	In	Out	In	Out
PM	Auto	59	29	11	12	9	6	79	47
	Taxi	0	0	2	3	0	0	2	3
	Bus-to-Subway	58	29	5	6	9	6	72	41
	Bus Only	45	22	13	14	7	5	65	41
	Walk/Other	12	6	114	128	2	2	128	136
	Total	174	86	145	163	27	19	346	268
		In	Out	In	Out	In	Out	In	Out
Sat MD	Auto	41	36	13	13	10	8	64	57
	Taxi	0	0	3	3	0	0	3	3
	Bus-to-Subway	40	35	7	7	10	9	57	51
	Bus Only	31	28	16	16	8	7	55	51
	Walk/Other	8	7	141	141	2	2	151	150
	Total	120	106	180	180	30	26	330	312
Vehicle Trips :									
		In	Out	In	Out	In	Out	In	Out
AM	Auto (Total)	11	59	3	1	3	6	17	66
	Taxi	0	0	1	1	0	0	1	1
	Taxi Balanced	0	0	2	2	0	0	2	2
	Truck	1	1	0	0	0	0	1	1
	Total	12	60	5	3	3	6	20	69
		In	Out	In	Out	In	Out	In	Out
MD	Auto (Total)	18	18	16	14	8	8	42	40
	Taxi	0	0	3	2	0	0	3	2
	Taxi Balanced	0	0	5	5	0	0	5	5
	Truck	1	1	0	0	0	0	1	1
	Total	19	19	21	19	8	8	48	46
		In	Out	In	Out	In	Out	In	Out
PM	Auto (Total)	52	25	8	9	7	5	67	39
	Taxi	0	0	1	2	0	0	1	2
	Taxi Balanced	0	0	3	3	0	0	3	3
	Truck	0	0	0	0	0	0	0	0
	Total	52	25	11	12	7	5	70	42
		In	Out	In	Out	In	Out	In	Out
Sat MD	Auto (Total)	36	32	9	9	8	6	53	47
	Taxi	0	0	2	2	0	0	2	2
	Taxi Balanced	0	0	4	4	0	0	4	4
	Truck	0	0	0	0	0	0	0	0
	Total	36	32	13	13	8	6	57	51

	Total Vehicle Trips			Total Pedestrian Trips**		
	In	Out	Total	In	Out	Total
AM	20	69	89	86	178	264
MD	48	46	94	350	297	647
PM	70	42	112	265	218	483
Sat MD	57	51	108	263	252	515

*assumes 25% linked trip credit
** includes trips from subway-to-bus, bus only and walk/other.

Trip Assignment Assumptions

- Vehicle Trips: Due to location of project (otherside of highway), zero trips passing through two study area intersections of 2069 Bruckner Blvd
- Pedestrian Trips: There are multiple routes available to access 1965 Lafayette Avenue, conservatively 10% of walk-only trips will pass through the study area intersection.

Parking Accumulation

- Parking Accumulation obtained from 1965 Lafayette Avenue Environmental Assessment Statement (EAS) Table J-4a: Weekday Parking Accumulation and Table J-4b: Saturday Parking Accumulation. Based on the project description, a total of 48 parking spaces would be provided on-site exclusively for residents of this development. However, this would not be sufficient to meet the parking demand of this No-Action project. The peak hour parking demand assumed to be accommodated on-and off-street is shown in the last columns of the following two tables for the Weekday and Saturday conditions, respectively.
- After reviewing the half-mile radius of this Project Site, 15% of the parking shortfall was added to the No-Action Development Increment.

Weekday Accumulation

Hour	Family Housing		Local Retail		Senior Housing		Accumulation	Overall Parking Surplus/Shortfall	Parking Surplus/Shortfall Overlap
	IN	OUT	IN	OUT	IN	OUT		48 Parking Spaces	15%
12-1 AM	1	1	0	0	0	0	175	-127	-19
1-2 AM	1	1	0	0	0	0	175	-127	-19
2-3 AM	1	1	0	0	0	0	175	-127	-19
3-4 AM	1	1	0	0	0	0	175	-127	-19
4-5 AM	1	1	0	0	0	0	175	-127	-19
5-6 AM	3	7	0	0	1	0	170	-122	-18
6-7 AM	6	21	0	0	1	0	152	-104	-16
7-8 AM	7	22	0	0	2	0	133	-85	-13
8-9 AM	11	59	3	3	3	0	84	-36	-5
9-10 AM	13	19	2	3	3	2	77	-29	-4
10-11 AM	13	22	6	3	3	2	68	-20	-3
11-12 PM	14	19	6	6	3	4	61	-13	-2
12-1 PM	18	18	16	16	8	2	63	-15	-2
1-2 PM	18	18	7	14	4	3	62	-14	-2
2-3 PM	19	18	7	11	5	3	65	-17	-3
3-4 PM	27	16	6	6	7	2	79	-31	-5
4-5 PM	46	26	6	6	11	5	102	-54	-8
5-6 PM	52	25	8	7	7	5	130	-82	-12
6-7 PM	35	18	4	6	9	1	147	-99	-15
7-8 PM	32	14	4	2	8	0	167	-119	-18
8-9 PM	19	9	3	1	4	0	178	-130	-20
9-10 PM	6	7	2	0	1	0	176	-128	-19
10-11 PM	4	5	0	0	1	0	175	-127	-19
11-12 PM	4	4	0	0	1	0	175	-127	-19
Total	352	352	80	84	82	29			

Source: 1965 Lafayette Avenue EAS

Saturday Accumulation

Hour	Family Housing		Local Retail		Senior Housing		Accumulation	Overall Parking Surplus/Shortfall	Parking Surplus/Shortfall Overlap
	IN	OUT	IN	OUT	IN	OUT		48 Parking Spaces	15%
Before 12	1	1	0	0	0	0	175	-127	-19
12-1 AM	1	1	0	0	0	0	175	-127	-19
1-2 AM	1	1	0	0	0	0	175	-127	-19
2-3 AM	1	1	0	0	0	0	175	-127	-19
3-4 AM	1	1	0	0	0	0	175	-127	-19
4-5 AM	1	1	0	0	0	0	170	-122	-18
5-6 AM	3	9	0	0	0	1	168	-120	-18
6-7 AM	7	25	0	0	1	4	147	-99	-15
7-8 AM	9	34	1	0	1	6	118	-70	-11
8-9 AM	10	36	3	3	1	7	86	-38	-6
9-10 AM	12	34	3	2	2	5	62	-14	-2
10-11 AM	13	34	7	4	2	5	41	7	0
11-12 PM	14	29	7	7	2	4	24	24	0
12-1 PM	25	30	19	19	3	7	15	33	0
1-2 PM	36	32	9	9	8	6	21	27	0
2-3 PM	38	34	10	7	5	5	28	20	0
3-4 PM	32	32	7	7	5	2	31	17	0
4-5 PM	30	30	8	8	4	5	30	18	0
5-6 PM	52	24	10	10	9	1	66	-18	-3
6-7 PM	44	12	5	9	6	2	98	-50	-8
7-8 PM	42	6	5	8	6	1	136	-88	-13
8-9 PM	26	7	4	5	4	1	157	-109	-16
9-10 PM	11	2	2	2	2	1	167	-119	-18
10-11 PM	6	2	0	0	1	0	172	-124	-19
11-12 PM	4	2	0	0	1	0	172	-124	-19
Total	420	420	100	100	63	63			

Source: 1965 Lafayette Avenue EAS

NO-ACTION CONDITION: PROJECT 3 – 2160 POWELL AVENUE

This project would be mixed-use, 2-story building with 2,283 sf of residential space and 2,703 sf of commercial space, for a total of 4,986 sf and would provide two parking spaces accessory to residential use.

The development is negligible in size therefore the pedestrian and vehicle trips, and the parking accumulation are assumed as part of background growth.

NO-ACTION CONDITION: PROJECT 4 – 909 CASTLE HILL AVENUE

Travel Demand Factors

	Land Use	Local Retail		Residential	
	Size	6,203		31	
	Unit	gsf		dwelling units	
Daily Person Trip Generation		(1)		(1)	
	Weekday	205.0		8.075	
	Saturday	240.0		9.600	
	Unit	per 1,000 gsf		per dwelling unit	
Daily Truck Trip Generation		(1)		(1)	
	Weekday	0.35		0.06	
	Saturday	0.04		0.02	
	Unit	per 1,000 gsf		per dwelling unit	
Modal Split		Weekday	Saturday	Weekday	Saturday
		(2)		(4)	
	Auto	11.0%	8.0%	51.2%	51.2%
	Taxi	0.0%	0.0%	1.0%	1.0%
	Subway	0.0%	0.0%	24.8%	24.8%
	Bus	14.0%	12.0%	19.0%	19.0%
	Walk/Other	75.0%	80.0%	3.9%	3.9%
		100.0%	100.0%	100.0%	100.0%
Vehicle Occupancy		(2)		(4)	
	Auto	2.00	2.00	1.07	1.07
	Taxi	2.00	2.00	1.07	1.07
Linked Trips (1)		0%	0%	0%	0%
Temporal Distribution		(1)		(1)	
	AM	3.0%		10.0%	
	MD	19.0%		5.0%	
	PM	10.0%		11.0%	
	Sat MD	10.0%		8.0%	
Truck Temporal Distribution		(1)		(1)	
	AM	8.0%		12.0%	
	MD	11.0%		9.0%	
	PM	2.0%		2.0%	
	Sat MD	11.0%		9.0%	
Directional Distribution		In	Out	In	Out
		(2)		(3)	
	AM	50.0%	50.0%	15.0%	85.0%
	MD	50.0%	50.0%	50.0%	50.0%
	PM	50.0%	50.0%	70.0%	30.0%
	Sat MD	55.0%	45.0%	50.0%	50.0%
Truck Directional Distribution		(1)		(1)	
	AM	50.0%	50.0%	50.0%	50.0%
	MD	50.0%	50.0%	50.0%	50.0%
	PM	50.0%	50.0%	50.0%	50.0%
	Sat MD	50.0%	50.0%	50.0%	50.0%

1. *CEQR Technical Manual* (March 2014), Table 16-2.
2. Downtown Far Rockaway Redevelopment Project FEIS, Table 14-6 Transportation Planning Factors. The subway mode share was assigned as bus trips.
3. East 147th Street Rezoning EAS, Transportation Demand Factors, Table J-20.
4. U.S. Census Data. 2012-2016 American Community Survey. Table 08006: Sex of workers by means of transportation to work. Bronx census tract 98.

Project Increment Trip Generation Estimates

Travel Demand Forecast (Person Trips)

		Local Retail		Residential		TOTAL		
Daily Trips	Weekday	1,272		250		**1,522**		
	Saturday	1,489		298		**1,787**		
Peak Hour Trips	AM	38		25		**63**		
	MD	242		13		**255**		
	PM	127		28		**155**		
	Sat MD	149		24		**173**		
		In	**Out**	**In**	**Out**	**In**	**Out**	**TOTAL**
AM	**Auto**	2	2	2	11	**4**	**13**	**17**
	Taxi	0	0	0	0	**0**	**0**	**0**
	Subway	0	0	1	5	**1**	**5**	**6**
	Bus	3	3	1	4	**4**	**7**	**11**
	Walk/Other	14	14	0	1	**14**	**15**	**29**
	Total	19	19	4	21	**23**	**40**	**63**
MD	**Auto**	13	13	3	3	**16**	**16**	**32**
	Taxi	0	0	0	0	**0**	**0**	**0**
	Subway	0	0	2	2	**2**	**2**	**4**
	Bus	17	17	1	1	**18**	**18**	**36**
	Walk/Other	91	91	0	0	**91**	**91**	**182**
	Total	121	121	6	6	**127**	**127**	**254**
PM	**Auto**	7	7	10	4	**17**	**11**	**28**
	Taxi	0	0	0	0	**0**	**0**	**0**
	Subway	0	0	5	2	**5**	**2**	**7**
	Bus	9	9	4	2	**13**	**11**	**24**
	Walk/Other	48	48	1	0	**49**	**48**	**97**
	Total	64	64	20	8	**84**	**72**	**156**
SAT MD	**Auto**	7	5	6	6	**13**	**11**	**24**
	Taxi	0	0	0	0	**0**	**0**	**0**
	Subway	0	0	3	3	**3**	**3**	**6**
	Bus	10	8	2	2	**12**	**10**	**22**
	Walk/Other	66	54	0	0	**66**	**54**	**120**
	Total	83	67	11	11	**94**	**78**	**172**

Travel Demand Forecast (Vehicle Trips)

Taxi Overlap Rate 0%		Local Retail		Residential		TOTAL		
		In	**Out**	**In**	**Out**	**In**	**Out**	**TOTAL**
AM	**Auto**	1	1	2	10	**3**	**11**	**14**
	Taxi	0	0	0	0	0	0	0
	Taxi (Balanced)[1]	0	0	0	0	**0**	**0**	**0**
	Truck	0	0	0	0	**0**	**0**	**0**
	Total	1	1	2	10	**3**	**11**	**14**
MD	**Auto**	7	7	3	3	**10**	**10**	**20**
	Taxi	0	0	0	0	0	0	0
	Taxi (Balanced)[1]	0	0	0	0	**0**	**0**	**0**
	Truck	0	0	0	0	**0**	**0**	**0**
	Total	7	7	3	3	**10**	**10**	**20**
PM	**Auto**	4	4	9	4	**13**	**8**	**21**
	Taxi	0	0	0	0	0	0	0
	Taxi (Balanced)[1]	0	0	0	0	**0**	**0**	**0**
	Truck	0	0	0	0	**0**	**0**	**0**
	Total	4	4	9	4	**13**	**8**	**21**
Sat MD	**Auto**	4	3	6	6	**10**	**9**	**19**
	Taxi	0	0	0	0	0	0	0
	Taxi (Balanced)[1]	0	0	0	0	**0**	**0**	**0**
	Truck	0	0	0	0	**0**	**0**	**0**
	Total	4	3	6	6	**10**	**9**	**19**

Notes
(1) A 0% taxi overlap rate was assumed, based on the *CEQR 2014 Technical Manual*.

Travel Demand Forecast (Total Walk Trips)

		Local Retail		Residential		TOTAL		
		In	**Out**	**In**	**Out**	**In**	**Out**	**TOTAL**
AM	**Total Walk Trips[1]**	17	17	2	10	**19**	**27**	**46**
MD	**Total Walk Trips[1]**	108	108	3	3	**111**	**111**	**222**
PM	**Total Walk Trips[1]**	57	57	10	4	**67**	**61**	**128**
SAT MD	**Total Walk Trips[1]**	76	62	5	5	**81**	**67**	**148**

Notes
(1) Total walk trips includes all trips via transit plus walk only trips.

Trip Assignment Assumptions

- Vehicle Trips: As the Proposed Project of 2069 Bruckner Blvd is located between 909 Castle Hill Avenue project and the Bruckner Expwy westbound (WB) entrance ramp, conservatively it was assumed that 25% of outbound vehicle trips from the Project Site passed through the intersections of Bruckner Blvd and Olmstead Avenue, and Bruckner Blvd and Pugsley Avenue.
- Pedestrian Trips: There are multiple routes available to access 909 Castle Hill Avenue, conservatively it was assumed that 10% of walk-only trips will passed through north side of Bruckner Blvd between Olmstead Avenue and Pugsley Avenue.

Parking Accumulation

- To estimate the overnight parking demand, the average number of vehicles available per household of 1.006 (based on 2012-2016 American Community Survey (ACS) 5-year estimates: Household Size by Vehicles Available for Census Tract 98 in the Bronx (where 909 Castle Hill Avenue is located) was applied to the total number of residential DUs proposed for the Project Site.

Tract (Bronx)	98
Total Household	1,755
No vehicle available	570
1 vehicle available	778
2 vehicles available	282
3 vehicles available	77
4 or more vehicles available	48

Total Household	1,755
Total Vehicles	1765
Average Vehicles per Household	1.006

- According to the RWCDS for this project, a parking supply of 21 spaces would be provided exclusively for residents of this development. The peak hour parking demand assumed to be accommodated on-and off-street is shown in the last columns of the following two tables for the Weekday and Saturday conditions, respectively.
- After reviewing the half-mile radius of this Project Site, 40% of the parking shortfall was added to the No-Action Development Increment.

Weekday Parking Accumulation

	Residential			Local Retail			Total			Parking Surplus/Shortfall	Parking Surplus/Shortfall Overlap
Hour	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation	21 Parking Spaces	40%
Before 12			31				0	0	31	-10	-4
12-1 AM	1	1	31	0	0	0	1	1	31	-10	-4
1-2 AM	0	0	31	0	0	0	0	0	31	-10	-4
2-3 AM	0	0	31	0	0	0	0	0	31	-10	-4
3-4 AM	0	0	31	0	0	0	0	0	31	-10	-4
4-5 AM	0	0	31	0	0	0	0	0	31	-10	-4
5-6 AM	0	0	31	0	0	0	0	0	31	-10	-4
6-7 AM	0	0	31	0	0	0	0	0	31	-10	-4
7-8 AM	1	3	29	0	0	0	1	3	29	-8	-3
8-9 AM	2	10	21	1	1	0	3	11	21	0	0
9-10 AM	2	5	18	1	1	0	3	6	18	0	0
10-11 AM	2	3	17	1	1	0	3	4	17	0	0
11-12 PM	3	3	17	3	3	0	6	6	17	0	0
12-1 PM	3	2	18	7	7	0	10	9	18	0	0
1-2 PM	3	3	18	7	7	0	10	10	18	0	0
2-3 PM	2	2	18	4	4	0	6	6	18	0	0
3-4 PM	2	2	18	1	1	0	3	3	18	0	0
4-5 PM	9	4	23	4	4	0	13	8	23	-2	-1
5-6 PM	7	4	26	2	2	0	9	6	26	-5	-2
6-7 PM	8	3	31	2	2	0	10	5	31	-10	-4
7-8 PM	6	3	34	2	2	0	8	5	34	-13	-5
8-9 PM	3	2	35	0	0	0	3	2	35	-14	-6
9-10 PM	3	5	33	0	0	0	3	5	33	-12	-5
10-11 PM	2	3	32	0	0	0	2	3	32	-11	-4
11-12 PM	1	2	31	0	0	0	1	2	31	-10	-4
Total	60	60		35	35		95	95			

Saturday Parking Accumulation

	Residential			Local Retail			All			Parking Surplus/Shortfall	Parking Surplus/Shortfall Overlap
Hour	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation	21 Parking Spaces	40%
Before 12			31				0	0	31	-10	-4
12-1 AM	2	1	32	0	0	0	2	1	32	-11	-4
1-2 AM	1	1	32	0	0	0	1	1	32	-11	-4
2-3 AM	1	1	32	0	0	0	1	1	32	-11	-4
3-4 AM	1	0	33	0	0	0	1	0	33	-12	-5
4-5 AM	1	0	34	0	0	0	1	0	34	-13	-5
5-6 AM	1	0	35	0	0	0	1	0	35	-14	-6
6-7 AM	2	1	36	0	0	0	2	1	36	-15	-6
7-8 AM	2	2	36	0	0	0	2	2	36	-15	-6
8-9 AM	2	5	33	0	0	0	2	5	33	-12	-5
9-10 AM	3	4	32	0	0	0	3	4	32	-11	-4
10-11 AM	4	4	32	1	1	0	5	5	32	-11	-4
11-12 PM	4	5	31	2	2	0	6	7	31	-10	-4
12-1 PM	4	4	31	3	3	0	7	7	31	-10	-4
1-2 PM	6	6	31	6	6	0	12	12	31	-10	-4
2-3 PM	6	4	33	2	2	0	8	6	33	-12	-5
3-4 PM	5	5	33	5	5	0	10	10	33	-12	-5
4-5 PM	5	4	34	4	4	0	9	8	34	-13	-5
5-6 PM	4	4	34	3	3	0	7	7	34	-13	-5
6-7 PM	4	4	34	2	2	0	6	6	34	-13	-5
7-8 PM	4	4	34	2	2	0	6	6	34	-13	-5
8-9 PM	3	4	33	0	0	0	3	4	33	-12	-5
9-10 PM	2	5	30	0	0	0	2	5	30	-9	-4
10-11 PM	2	2	30	0	0	0	2	2	30	-9	-4
11-12 PM	2	1	31	0	0	0	2	1	31	-10	-4
Total	71	71		30	30		101	101			

Sources:
Residential: East 147th Street Rezoning EAS, Table J-22 and J-23.
Local Retail: Flushing Commons FEIS (2010), Table 14-38.

NO-ACTION PARKING DEMAND SUMMARY

No Action Parking Demand	Weekday AM	Weekday MD	Weekday PM	Weekday Overnight	Saturday MD	Saturday Overnight
NA-1 Westchester Mews	2	4	9	33	33	36
NA-2 1965 Lafayette Avenue	36	14	82	130	0	109
NA-3: 2160 Powell Ave						
NA-4: 909 Castle Hill Avenue	0	0	5	14	10	12
Total	**38**	**18**	**96**	**177**	**43**	**157**

Note: No-Action Project 3: 2160 Powell Ave is not considered as it is negligble in size and parking demand is assumed as part of background growth.

No Action Increments	Overlap with 1/2 mile of 2069 Bruckner Blvd	Weekday AM	Weekday MD	Weekday PM	Weekday Overnight	Saturday MD	Saturday Overnight
NA-1 Westchester Mews	10%	0	0	1	3	3	4
NA-2 1965 Lafayette Avenue	15%	5	2	12	20	0	16
NA-3: 2160 Powell Ave							
NA-4: 909 Castle Hill Avenue	40%	0	0	2	6	4	5
Total		**6**	**3**	**15**	**28**	**7**	**25**

Note: No-Action Project 3: 2160 Powell Ave is not considered as it is negligble in size and parking demand is assumed as part of background growth.