equity environmental engineering
A Division of GZA

ENVIRONMENTAL ASSESSMENT STATEMENT (EAS) AND SUPPLEMENTAL STUDIES TO THE EAS

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

Prepared for:
AA Atlantic LLC

Prepared by:
Equity Environmental Engineering
A Division of GZA
55 Lane Road
Fairfield, NJ 07004

September 14, 2023

1289 Atlantic Avenue Rezoning

Brooklyn, NY
Block 1867 and Multiple Lots

CEQR Reference No: 21DCP054K

Table of Contents

1.0 Project Description 16
1.1 Introduction 16
1.2 Background 16
1.3 Description of the Surrounding Area 17
1.4 Description of the Affected Area 18
1.5 Description of the Proposed Development 18
1.6 Action(s) Necessary to Facilitate the Project 19
1.7 Purpose and Need 19
1.8 Analysis Framework 20
2. Environmental Review 27
Chapter 4: Land Use, Zoning, and Public Policy 27
Chapter 5: Socioeconomic Conditions 39
Chapter 7: Open Space 60
Chapter 8: Shadows 79
Chapter 9: Historic and Cultural Resources 101
Architectural Resources 101
Archaeological Resources 107
Chapter 10: Urban Design and Visual Resources 110
Chapter 12: Hazardous Materials 121
Chapter 13: Water and Sewer Infrastructure 124
Water Supply and Demand 126
Wastewater and Stormwater Conveyance and Treatment Systems 128
Chapter 16: Transportation 134
Chapter 17: Air Quality 197
Chapter 19: Noise 214
Chapter 22: Construction 228

Appendices

Appendix A: Agency Correspondence
Appendix B: Architectural Plans
Appendix C: Noise Backup
Appendix D: Transportation Backup
Appendix E: Construction Schedule
Appendix F: Air Quality Backup
Appendix G: Phase IA Archeological Documentary Study

EAS FULL FORM

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

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

Part I: GENERAL INFORMATION

PROJECT NAME 1289 Atlantic Avenue Rezoning

1. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency)	BSA REFERENCE NUMBER (if applicable)
21DCP054K	
ULURP REFERENCE NUMBER (if applicable)	OTHER REFERENCE NUMBER(S) (if applicable) (*e.g.*, legislative intro, CAPA)
200310 ZMK, N 200293 ZRK	

2a. *Lead Agency Information*			**2b. *Applicant Information***		
NAME OF LEAD AGENCY Department of City Planning (DCP)			NAME OF APPLICANT AA Atlantic LLC		
NAME OF LEAD AGENCY CONTACT PERSON Stephanie Shellooe, Director, EARD			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON Amber Kartalyan		
ADDRESS 120 Broadway, 31st Floor			ADDRESS 55 Lane Road		
CITY New York	STATE NY	ZIP 10271	CITY Fairfield	STATE NJ	ZIP 07004
TELEPHONE 646-573-5146	EMAIL sshellooe@planning.nyc.gov		TELEPHONE 201-757-3561	EMAIL amber.kartalyan@gza.com	

3. *Action Classification and Type*

SEQRA Classification

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

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

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

4. *Project Description*

The Applicant, AA Atlantic LLC, is seeking the approval of a zoning map amendment and a zoning text amendment to facilitate the development of 18 lots along New York Avenue and Atlantic Avenue (Block 1867, Lots p/o 85, 84, 80, p/o 78, 77, p/o 72, 68, 66, 65, 64, 63, 62, 61, 60, 59, 58, 57, p/o 56, p/o 53, p/o 42, and p/o 41). The proposed development is the construction of a new 14-story, 145-foot-tall mixed-use building on Lots 68, 66, 65, 64, 63, and 62 (Projected Development Site 1). The building would be 162,422 GSF (151,760 ZSF; 5.60 FAR), including 17,404 GSF of second-floor community facility uses, 21,040 GSF of ground-floor commercial uses, and 123,978 GSF of residential floor area on the upper floors. The building would contain 112 dwelling units (1,106 GSF average size), 25%-30% (28-34 units) of which would be affordable pursuant to MIH at an average of 60-80% AMI depending on the Option selected. The Applicant intends to pursue Option 2, which would result in approximately 34 affordable units. For the purposes of Early Childhood Programs analysis, 20% (22 units) of residential floor area is assumed to be affordable at or below 60% AMI. 39 residential parking spaces would be required, and 39 spaces would be provided at cellar level.

In addition, Projected Development Site 1 is a primary transit-adjacent site, as defined by the Zoning Resolution, and the Metropolitan Transportation Authority has determined that a transit volume is needed for the Development Site, which must be certified by the Chairperson of the City Planning Commission pursuant to Zoning Resolution Section 66-21. Accordingly, the Applicant is concurrently filing a separate related application for a certification of transit volume at the Development Site.

The zoning map amendment would rezone Block 1867, Lots p/o 41, p/o 42, p/o 53, 62, 63, 64, 65, 66, 68, p/o 72, 77, p/o 78, 80, 84, and p/o 85 from an M1-1 zoning district to a C4-5X zoning district; and Block 1867, Lots 61, 60, 59, 58, 57, and p/o 56 from an M1-1 zoning district to an R6B zoning district. The zoning text amendment would affect Zoning Resolution Appendix F by modifying Brooklyn CD 3 Map with MIHA.

Project Location

BOROUGH Brooklyn	COMMUNITY DISTRICT(S) 3	STREET ADDRESS Atlantic Avenue, New York Avenue
TAX BLOCK(S) AND LOT(S) Block 1867, Lots p/o 85, 84, 80, p/o 78, 77, p/o 72, 68, 66, 65, 64, 63, 62, 61, 60, 59, 58, 57, p/o		ZIP CODE 11216

56, p/o 53, p/o 42, and p/o 41

DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS The Affected Area is generally bounded by Herkimer Street to the north, New York Avenue to the east, Atlantic Avenue to the south, and Nostrand Avenue to the west.

EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY M1-1 | ZONING SECTIONAL MAP NUMBER 17a

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

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

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

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

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION ZR Section 66-21

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

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

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

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

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

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

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

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

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

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

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

- ☒ SITE LOCATION MAP
- ☒ TAX MAP
- ☒ ZONING MAP
- ☒ FOR LARGE AREAS OR MULTIPLE SITES, A GIS SHAPE FILE THAT DEFINES THE PROJECT SITE(S)
- ☒ SANBORN OR OTHER LAND USE MAP
- ☒ 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.): 92,000 | Waterbody area (sq. ft.) and type:

Roads, buildings, and other paved surfaces (sq. ft.): | Other, describe (sq. ft.):

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

SIZE OF PROJECT TO BE DEVELOPED (gross square feet): Projected Site 1 -174,039; Projected Site 2 - 254,473 - Incremental increase of 371,779 GSF or 428,512 total

NUMBER OF BUILDINGS: 2

GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): Projected Site 1 - 174,039; Projected Site 2 - 254,473)

HEIGHT OF EACH BUILDING (ft.): 145'

NUMBER OF STORIES OF EACH BUILDING: 14

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: 27,086

The total square feet not owned or controlled by the applicant: 64,914

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

If "yes," indicate the estimated area and volume dimensions of subsurface disturbance (if known):
AREA OF TEMPORARY DISTURBANCE: 66,527 sq. ft. (width x length) VOLUME OF DISTURBANCE: 665,270 cubic ft. (width x length x depth)
AREA OF PERMANENT DISTURBANCE: 66,527 sq. ft. (width x length)

8. *Analysis Year* CEQR Technical Manual Chapter 2

ANTICIPATED BUILD YEAR (date the project would be completed and operational): 2029

ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: Projected Site 1: 19 months from demolition to interior finish completion - August 2024 - February 2026; 14 months of major construction activity. Projected Site 2: 22 months from demolition to interior finish completion - October 2027 - August 2029; 18 months of major construction activity.

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

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE: Assuming ULURP completion by Summer of 2024, the Applicant Site, Projected Development Site 1, would begin demolition in August 2024 with interior finishes complete in February 2026 for a total of 19 months from demolition to interior finishes.

Demolition and clearance of Projected Site 1 is assumed to start in August 2024 and conclude in September 2024. Major Construction Activities post-demolition are expected to commence with excavation and SOE on or around October 2024 and conclude with interior core and shell work (substantial completion) in December 2025 for a period of approximately 14 months of major construction activity. Interior finishes are assumed to complete approximately 2 months later, in February of 2026.

Projected Site 2 consists of 5 separate lots not under common ownership. Therefore, assemblage, financing and design, and permitting would need to be completed prior to development. It is assumed that Projected Site 2 would begin demolition in October of 2027 with interior finishes complete in August of 2029 for a total of 22 months from demolition to interior finishes.

Demolition and clearance of Projected Site 2 is assumed to start in October of 2027 and conclude in December 2027. Major Construction Activities post demolition are expected to commence with excavation and SOE on or around December 2027 and conclude with interior core and shell work (substantial completion) in May 2029 for a period of approximately 18 months of major construction activity. Interior finishes are assumed to complete approximately 3 months later in August of 2029.

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

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

DESCRIPTION OF EXISTING AND PROPOSED CONDITIONS

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

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
LAND USE				
Residential	☐ YES ☒ NO	☐ YES ☒ NO	☒ YES ☐ NO	
If "yes," specify the following:				
Describe type of residential structures			Multi-Family Residential	
No. of dwelling units			425	425
No. of low- to moderate-income units			85	85
Gross floor area (sq. ft.)			361,354	361,354
Commercial	☒ YES ☐ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify the following:				
Describe type (retail, office, other)	Ground floor retail	Ground floor retail	Ground floor retail	
Gross floor area (sq. ft.)	21,048	21,048	49,753	28,705
Manufacturing/Industrial	☒ YES ☐ NO	☒ YES ☐ NO	☐ YES ☒ NO	
If "yes," specify the following:				
Type of use	Light industrial	Light Industrial		
Gross floor area (sq. ft.)	35,685	35,685		-35,685
Open storage area (sq. ft.)	No	No	No	
If any unenclosed activities, specify:				
Community Facility	☐ YES ☒ NO	☐ YES ☒ NO	☒ YES ☐ NO	
If "yes," specify the following:				
Type			UG 4 Medical	
Gross floor area (sq. ft.)			17,404	17,404
Vacant Land	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," describe:				
Publicly Accessible Open Space	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify type (mapped City, State, or Federal parkland, wetland—mapped or otherwise known, other):				
Other Land Uses	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," describe:				
PARKING				
Garages	☐ YES ☒ NO	☐ YES ☒ NO	☒ YES ☐ NO	
If "yes," specify the following:				
No. of public spaces			0	0
No. of accessory spaces			170	170
Operating hours			24/7	
Attended or non-attended			non-attended	
Lots	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
No. of public spaces				
No. of accessory spaces				
Operating hours				
Other (includes street parking)	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," describe:				
POPULATION				
Residents	☐ YES ☒ NO	☐ YES ☒ NO	☒ YES ☐ NO	
If "yes," specify number:			1088	1088
Briefly explain how the number of residents was calculated:	2.56 residents per household per 2020 Decennial Census for BK CD 3			

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
Businesses	☒ YES ☐ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify the following:				
No. and type	5 total (3 wholesalers and 2 automotive)	5 total (3 wholesalers and 2 automotive)	15 total (3 medical offices and 12 local retail)	10
No. and type of workers by business	57	57	201	144
No. and type of non-residents who are not workers	570	570	6,700	6,130
Briefly explain how the number of businesses was calculated:	3 employees per 1,000 gsf retail/medical office (With-Action) and 1 employee per 1,000 sf for Wholesale/Automotive (No-Action); Patrons = 100 per 1,000 sf medical and retail; 100 per 10,000 sf wholesale and automotive			
Other (students, visitors, concert-goers, *etc.*)	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If any, specify type and number:				
Briefly explain how the number was calculated:				
ZONING				
Zoning classification	M1-1; R6B	M1-1 R6B	C4-5X; R6B	
Maximum amount of floor area that can be developed	2.00	2.00	6.00	4.00
Predominant land use and zoning classifications within land use study area(s) or a 400 ft. radius of proposed project	R6, R6A, R6B, R7D, C8-2, C4-5D; Manufacturing, multifamily, commercial, public facilities	R6, R6A, R6B, R7D, C8-2, C4-5D; Manufacturing, multifamily, commercial, public facilities	R6, R6A, R6B, R7D, C8-2, C4-5D; Manufacturing, multifamily, commercial, public facilities	
Attach any additional information that may be needed to describe the project. If your project involves changes that affect one or more sites not associated with a specific development, it is generally appropriate to include total development projections in the above table and attach separate tables outlining the reasonable development scenarios for each site.				

Part II: TECHNICAL ANALYSIS

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

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

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

	YES	NO
enhance, or otherwise protect it?		
iv. Indirect Business Displacement		
○ Would the project potentially introduce trends that make it difficult for businesses to remain in the area?	☐	☒
○ Would the project capture retail sales in a particular category of goods to the extent that the market for such goods would become saturated, potentially resulting in vacancies and disinvestment on neighborhood commercial streets?	☐	☒
v. Effects on Industry		
○ Would the project significantly affect business conditions in any industry or any category of businesses within or outside the study area?	☐	☐
○ Would the project indirectly substantially reduce employment or impair the economic viability in the industry or category of businesses?	☐	☐
3. *COMMUNITY FACILITIES*: CEQR Technical Manual Chapter 6		
(a) Direct Effects		
○ Would the project directly eliminate, displace, or alter public or publicly funded community facilities such as educational facilities, libraries, health care facilities, day care centers, police stations, or fire stations?	☐	☒
(b) Indirect Effects		
i. Early Childhood Programs		
○ Would the project result in 20 or more eligible children under age 6, based on the number of low or low/moderate income residential units? (See Table 6-1 in Chapter 6)	☐	☒
○ If "yes," would the project result in a collective utilization rate of the Early Childhood Programs in the study area that is greater than 100 percent?	☐	☐
○ If "yes," would the project increase the collective utilization rate by 5 percent or more from the No-Action scenario?	☐	☐
ii. Public Schools		
○ Would the project result in 50 or more elementary or middle school students, or 150 or more high school students based on number of residential units? (See Table 6-1 in Chapter 6)	☐	☒
○ If "yes," would the project result in a utilization rate of the elementary or middle schools that is equal to or greater than 100 percent?	☐	☐
○ If "yes," would the project generate 100 or more elementary or middle school students past the 100% utilization rate?	☐	☐
○ If "yes," would the project result in a utilization rate of the high schools that is equal to or greater than 100 percent?	☐	☐
○ If "yes," would the project increase the high school utilization rate by 5 percent or more from the No-Action scenario?	☐	☐
iii. Libraries		
○ Would the project result in a 5 percent or more increase in the ratio of residential units to library branches? (See Table 6-1 in Chapter 6)	☐	☒
○ If "yes," would the project increase the study area population by 5 percent or more from the No-Action levels?	☐	☐
○ If "yes," would the additional population impair the delivery of library services in the study area?	☐	☐
iv. Health Care Facilities		
○ Would the project result in the introduction of a sizeable new neighborhood?	☐	☒
○ If "yes," would the project affect the operation of health care facilities in the area?	☐	☐
v. Fire and Police Protection		
○ Would the project result in the introduction of a sizeable new neighborhood?	☐	☒
○ If "yes," would the project affect the operation of fire or police protection in the area?	☐	☐
4. *OPEN SPACE*: CEQR Technical Manual Chapter 7		
(a) Would the project change or eliminate existing open space?	☐	☒
(b) Would the project generate more than 200 additional residents or 500 additional employees?	☒	☐
5. *SHADOWS*: CEQR Technical Manual Chapter 8		
(a) Would the proposed project result in a net height increase of any structure of 50 feet or more?	☒	☐
(b) Would the proposed project result in any increase in structure height and be located adjacent to or across the street from a sunlight-sensitive resource?	☒	☐
(c) If "yes" to either of the above questions, attach supporting information explaining whether the project's shadow would reach any sunlight-sensitive resource at any time of the year. See EAS Section 2.8		

	YES	NO
6. *HISTORIC AND CULTURAL RESOURCES*: CEQR Technical Manual Chapter 9		
(a) Does the proposed project site or an adjacent site contain any architectural and/or archaeological resource that is eligible for or has been designated (or is calendared for consideration) as a New York City Landmark, Interior Landmark or Scenic Landmark; that is listed or eligible for listing on the New York State or National Register of Historic Places; or that is within a designated or eligible New York City, New York State or National Register Historic District? (See the GIS System for Archaeology and National Register to confirm)	☒	☐
(b) Would the proposed project involve construction resulting in in-ground disturbance to an area not previously excavated?	☒	☐
(c) If "yes" to either of the above, list any identified architectural and/or archaeological resources and attach supporting information on whether the proposed project would potentially affect any architectural or archeological resources. See EAS Section 2.9 and Appendix G/A		
7. *URBAN DESIGN AND VISUAL RESOURCES*: CEQR Technical Manual Chapter 10		
(a) Would the proposed project introduce a new building, a new building height, or result in any substantial physical alteration to the streetscape or public space in the vicinity of the proposed project that is not currently allowed by existing zoning?	☒	☐
(b) Would the proposed project result in obstruction of publicly accessible views to visual resources not currently allowed by existing zoning?	☐	☒
(c) If "yes" to either of the above, please provide the information requested in Chapter 10. See EAS Section 2.10		
8. *NATURAL RESOURCES*: CEQR Technical Manual Chapter 11		
(a) Does the proposed project site or a site adjacent to the project contain natural resources as defined in Section 100 of Chapter 11?	☐	☒
○ If "yes," list the resources and attach supporting information on whether the project would affect any of these resources.		
(b) Is any part of the directly affected area within the Jamaica Bay Watershed?	☐	☒
○ If "yes," complete the Jamaica Bay Watershed Protection Plan Project Tracking Form and submit according to its instructions.		
9. *HAZARDOUS MATERIALS*: CEQR Technical Manual Chapter 12		
(a) Would the proposed project allow commercial or residential uses in an area that is currently, or was historically, a manufacturing area that involved hazardous materials?	☒	☐
(b) Would the proposed project introduce new activities or processes using hazardous materials and increase the risk of human or environmental exposure?	☐	☒
(c) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to hazardous materials that preclude the potential for significant adverse impacts?	☐	☒
(d) Would the project require soil disturbance in a manufacturing area or any development on or near a manufacturing area or existing/historic facilities listed in the Hazardous Materials Appendix (including nonconforming uses)?	☒	☐
(e) Would the project result in the development of a site where there is reason to suspect the presence of hazardous materials, contamination, illegal dumping or fill, or fill material of unknown origin?	☐	☒
(f) Would the project result in development on or near a site that has or had underground and/or aboveground storage tanks (*e.g.*, gas stations, oil storage facilities, heating oil storage)?	☐	☒
(g) Would the project result in renovation of interior existing space on a site with the potential for compromised air quality; vapor intrusion from either on-site or off-site sources; or the presence of asbestos, PCBs, mercury or lead-based paint?	☐	☒
(h) Would the project result in development on or near a site with potential hazardous materials issues such as government-listed voluntary cleanup/brownfield site, current or former power generation/transmission facilities, coal gasification or gas storage sites, railroad tracks or rights-of-way, or municipal incinerators?	☐	☒
(i) Has a Phase I Environmental Site Assessment been performed for the site?	☒	☐
○ If "yes," were Recognized Environmental Conditions (RECs) identified? Briefly identify: See Section 2.12	☒	☐
(j) Based on the Phase I Assessment, is a Phase II Investigation needed? Yes	☒	☐
10. *WATER AND SEWER INFRASTRUCTURE*: CEQR Technical Manual Chapter 13		
(a) Would the project result in water demand of more than one million gallons per day?	☐	☒
(b) If the proposed project located in a combined sewer area, would it result in at least 1,000 residential units or 250,000 square feet or more of commercial space in Manhattan, or at least 400 residential units or 150,000 square feet or more of commercial space in the Bronx, Brooklyn, Staten Island, or Queens?	☒	☐
(c) If the proposed project located in a separately sewered area, would it result in the same or greater development than that listed in Table 13-1 in Chapter 13?	☐	☐
(d) Would the project involve development on a site that is 5 acres or larger where the amount of impervious surface would increase?	☐	☒
(e) If the project is located within the Jamaica Bay Watershed or in certain specific drainage areas, including Bronx River, Coney Island Creek, Flushing Bay and Creek, Gowanus Canal, Hutchinson River, Newtown Creek, or Westchester Creek, would it involve development on a site that is 1 acre or larger where the amount of impervious surface would increase?	☐	☐
(f) Would the proposed project be located in an area that is partially sewered or currently unsewered?	☐	☒

	YES	NO
(g) Is the project proposing an industrial facility or activity that would contribute industrial discharges to a Wastewater Treatment Plant and/or contribute contaminated stormwater to a separate storm sewer system?	☐	☒
(h) Would the project involve construction of a new stormwater outfall that requires federal and/or state permits?	☐	☒
(i) If "yes" to any of the above, conduct the appropriate preliminary analyses and attach supporting documentation. See EAS Section 2.13		
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): 29,971 = (41 x 425 households) + (79 x 149 retail employees) + (13 x 58 community facility employees)		
○ Would the proposed project have the potential to generate 100,000 pounds (50 tons) or more of solid waste per week?	☐	☒
(b) Would the proposed project involve a reduction in capacity at a solid waste management facility used for refuse or recyclables generated within the City?	☐	☒
○ If "yes," would the proposed project comply with the City's Solid Waste Management Plan?	☐	☐
12. *ENERGY*: CEQR Technical Manual Chapter 15		
(a) Using energy modeling or Table 15-1 in Chapter 15, the project's projected energy use is estimated to be (annual BTUs): 56355626.1		
(b) Would the proposed project affect the transmission or generation of energy?	☐	☒
13. *TRANSPORTATION*: CEQR Technical Manual Chapter 16		
(a) Would the proposed project exceed any threshold identified in Table 16-1 in Chapter 16?	☒	☐
(b) If "yes," conduct the appropriate screening analyses, attach back up data as needed for each stage, and answer the following questions:		
○ Would the proposed project result in 50 or more Passenger Car Equivalents (PCEs) per project peak hour?	☒	☐
If "yes," would the proposed project result in 50 or more vehicle trips per project peak hour at any given intersection? ***It should be noted that the lead agency may require further analysis of intersections of concern even when a project generates fewer than 50 vehicles in the peak hour. See Subsection 313 of Chapter 16 for more information.*	☐	☒
○ Would the proposed project result in more than 200 subway/rail, bus trips, or 50 Citywide Ferry Service ferry trips per project peak hour?	☒	☐
If "yes," would the proposed project result, per project peak hour, in 50 or more bus trips on a single line (in one direction), 200 subway/rail trips per station or line, or 25 or more Citywide Ferry Service ferry trips on a single route (in one direction), or 50 or more passengers at a Citywide Ferry Service landing?	☐	☒
○ Would the proposed project result in more than 200 pedestrian trips per project peak hour?	☒	☐
If "yes," would the proposed project result in more than 200 pedestrian trips per project peak hour to any given pedestrian or transit element, crosswalk, subway stair, bus stop, or Citywide Ferry Service landing?	☒	☐
14. *AIR QUALITY*: CEQR Technical Manual Chapter 17		
(a) *Mobile Sources*: Would the proposed project result in the conditions outlined in Section 210 in Chapter 17?	☒	☐
(b) *Stationary Sources*: Would the proposed project result in the conditions outlined in Section 220 in Chapter 17?	☒	☐
○ If "yes," would the proposed project exceed the thresholds in Figure 17-3, Stationary Source Screen Graph in Chapter 17? (Attach graph as needed)	☒	☐
(c) Does the proposed project involve multiple buildings on the project site?	☒	☐
(d) Does the proposed project require federal approvals, support, licensing, or permits subject to conformity requirements?	☐	☒
(e) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to air quality that preclude the potential for significant adverse impacts?	☐	☒
(f) If "yes" to any of the above, conduct the appropriate analyses and attach any supporting documentation. See EAS Section 2.17		
15. *GREENHOUSE GAS EMISSIONS*: CEQR Technical Manual Chapter 18		
(a) Is the proposed project a city capital project or a power generation plant?	☐	☒
(b) Would the proposed project fundamentally change the City's solid waste management system?	☐	☒
(c) Would the proposed project result in the development of 350,000 square feet or more?	☒	☐
(d) If "yes" to any of the above, would the project require a GHG emissions assessment based on guidance in Chapter 18?	☐	☒
○ If "yes," would the project result in inconsistencies with the City's GHG reduction goal? (See Local Law 22 of 2008; § 24-803 of the Administrative Code of the City of New York). Please attach supporting documentation.	☐	☐
16. *NOISE*: CEQR Technical Manual Chapter 19		
(a) Would the proposed project generate or reroute vehicular traffic?	☒	☐
(b) Would the proposed project introduce new or additional receptors (see Section 114 in Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed rail line with a direct line of site to that rail line?	☒	☐

	YES	NO
(c) Would the proposed project cause a stationary noise source to operate within 1,500 feet of a receptor with a direct line of sight to that receptor or introduce receptors into an area with high ambient stationary noise?	☐	☒
(d) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to noise that preclude the potential for significant adverse impacts?	☐	☒
(e) If "yes" to any of the above, conduct the appropriate analyses and attach any supporting documentation. See EAS Section 2.19		
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. No significant unmitigated adverse impact is found in the CEQR analysis areas of air quality, water quality, hazardous materials, or noise; accordingly, no public health analysis is warranted.		
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 actions do not result in a significant impact in other technical areas nor a combination of moderate effects.		
19. *CONSTRUCTION*: CEQR Technical Manual Chapter 22		
(a) Would the project's construction activities involve:		
○ Construction activities lasting longer than two years?	☐	☒
○ Construction activities within a Central Business District or along an arterial highway or major thoroughfare?	☒	☐
○ Closing, narrowing, or otherwise impeding traffic, transit, or pedestrian elements (roadways, parking spaces, bicycle routes, sidewalks, crosswalks, corners, *etc.*)?	☐	☒
○ Construction of multiple buildings where there is a potential for on-site receptors on buildings completed before the final build-out?	☐	☒
○ The operation of several pieces of diesel equipment in a single location at peak construction?	☐	☒
○ Closure of a community facility or disruption in its services?	☐	☒
○ Activities within 400 feet of a historic or cultural resource?	☒	☐
○ Disturbance of a site containing or adjacent to a site containing natural resources?	☐	☒
○ Construction on multiple development sites in the same geographic area, such that there is the potential for several construction timelines to overlap or last for more than two years overall?	☐	☒
(b) If any boxes are checked "yes," explain why a preliminary construction assessment is or is not warranted based on the guidance in Chapter 22, "Construction." It should be noted that the nature and extent of any commitment to use the Best Available Technology for construction equipment or Best Management Practices for construction activities should be considered when making this determination. See EAS Section 2.22		

20. *APPLICANT'S CERTIFICATION*

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

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

APPLICANT/REPRESENTATIVE NAME	SIGNATURE	DATE
Amber Kartalyan	Amber Kartalyan	9/14/2023

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? ☐ ☒

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

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

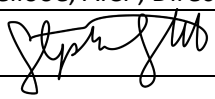
☐ **Positive Declaration**: If the lead agency has determined that the project may have a significant impact on the environment, and if a Conditional Negative Declaration is not appropriate, then the lead agency issues a *Positive Declaration* and prepares a draft Scope of Work for the Environmental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

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

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

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

TITLE	LEAD AGENCY
Director, Environmental Assessment and Review Division	Department of City Planning on behalf of the City Planning Commission
NAME	DATE
Stephanie Shellooe, AICP, Director	October 27, 2023

SIGNATURE 

NEGATIVE DECLARATION

Statement of No Significant Effect

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

Reasons Supporting this Determination

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

Land Use, Zoning, and Public Policy

A detailed analysis of land use, zoning, and public policy is included in the EAS. The Applicant, AA Atlantic LLC, seeks a series of land use actions including a Zoning Map Amendment to rezone Block 1867, Lots 62, 63, 64, 65, 66, 68, 77, 80, 84, and portions of (p/o) Lots 41, 42, 53, 72, 78 and 85 from an M1-1 zoning district to a C4-5X zoning district; to rezone Block 1867, Lots 61, 60, 59, 58, 57, and p/o 56 from an M1-1 zoning district to an R6B zoning district; and a Zoning Text Amendment to establish a Mandatory Inclusionary Housing (MIH) area coterminous with the rezoning area in the Bedford-Stuyvesant neighborhood of Community District 3, Brooklyn (collectively, the "Proposed Actions"). The Proposed Actions would facilitate the development of the Applicant-owned site with a 174,039 gross square foot (gsf) building, consisting of 17,404 gsf of community facility uses, 21,040 gsf of commercial uses, and 135,594 gsf of residential uses on Projected Development Site 1 located at 1289 Atlantic Avenue (Block 1867, Lots 62, 63, 64, 65, 66, and 68). The 14-story, 145-foot-tall building would contain 160 dwelling units (DUs), 25-30% (40-48 units) of which would be affordable pursuant to MIH. 64 residential accessory parking spaces would be required and would be provided at the cellar level. The Proposed Actions would also facilitate the development of 254,473 gsf 14-story, 145-foot-tall mixed-use building consisting of 28,713 gsf of commercial uses and 225,760 gsf of residential uses on Projected Development Site 2 (Block 1867, Lots 77, 78, 80, 84, and 85), which is not applicant-owned. 266 total DUs would be developed, 25-30% (67-80 units) of which would be affordable pursuant to MIH. 106 residential accessory parking spaces would be required at the cellar level of Projected Development Site 2. No commercial parking spaces are required within the proposed C4-5X zoning district. In addition, Projected Development Site 1 is a primary transit-adjacent site, as defined by the Zoning Resolution, and the Metropolitan Transportation Authority has determined that a transit volume is needed for the Development Site, which must be certified by the Chairperson of the City Planning Commission pursuant to Zoning Resolution Section 66-21. The Applicant is filing a separate, concurrent related application for a certification of transit volume at Projected Development Site 1. Although the Proposed Actions would result in changes to land uses and zoning in the affected area, the density and uses permitted by the actions would be compatible with nearby mid-rise multi-family buildings along Herkimer Street and New York Avenue, and would not conflict with relevant public policies. The Proposed Actions would not constitute a significant adverse impact to land use, zoning, and public policy.

Socioeconomic Conditions

A detailed analysis related to socioeconomic conditions is included in the EAS. The Proposed Actions would not result in direct or indirect business displacement, or direct residential displacement. However, given that the Proposed Actions would result in the development of over 200 dwelling units, an analysis of the potential for indirect displacement due to increased rents is warranted and included in the EAS. The assessment determined that the developments facilitated by the Proposed Actions would continue established trends of population growth in the area, and that they would not result in a new population with significantly higher average incomes compared to the average incomes of the existing populations. The Proposed Actions would also not significantly affect socioeconomic conditions. Therefore, the Proposed Actions would not result in significant adverse impacts to socioeconomic conditions and no further analysis is warranted.

Open Space

A detailed analysis related to Open Space is included in the EAS. A significant adverse impact to open space may occur if the Proposed Actions result in the reduction of an area's open space ratio (an indirect impact) by more than the general guidelines provided in the CEQR Technical Manual or if it directly eliminates or alters an open space resource (a direct impact). The Proposed Actions would not directly displace or alter any open space resources, but an assessment of the Proposed Actions' effect upon the area's open space ratio is included. In the No-Action condition, the open space ratio within a .5-mile study area of the project area is 0.281 acres of total open space, 0.211 acres of active open space, and 0.070 acres of passive open space per 1,000 residents. The total, active, and passive ratios are below the City's goals of 2.5 total acres of open space, 2 acres of active open space, and .5 acres of passive open space per 1,000 residents. In the With-Action condition, the open space ratio within the .5-mile study area would be 0.275 acres of total open space, 0.207 acres of active open space, and 0.069 acres of passive open space per 1,000 residents. As described in the CEQR Technical Manual, a project may result in a significant open space impact if the total, active, and passive open space ratios decrease by 1% as a result of the Proposed Actions. Although, the Proposed Actions would result in an approximately 2.01% reduction of the overall, active, and passive open space ratios within the study area compared to the No-Action condition, field observations indicate that utilization levels of open space resources within the study area are moderate and that existing resources have the capacity to serve additional users. Additionally, a subsequent qualitative analysis identified several additional open space resources just outside the .5-mile study area able that are readily available to the study area population. Therefore, the Proposed Actions would not result in a significant adverse impact on open space within the study area, and no further analysis is warranted.

Shadows

A detailed analysis related to Shadows is included in this EAS. The analysis found that incremental shadows from the developments facilitated by the Proposed Actions would be cast on one sunlight sensitive resource: the P.S. 093 Playground, which consists of a running track, various paved playing zones, benches, and playground equipment. New incremental shadows would be cast on the playground during the December 21 analysis day for 2 hours, on the March 21/September 21 analysis day for 2 hours and 9 minutes, on the May 6/August 6 analysis for 1 hour and 23 minutes, and on the June 21 analysis day for 35 minutes. On all four analysis days, the shadows cast from the projected developments would affect the sunlight sensitive P.S. 093 Playground for a limited extent and duration. Therefore, the Proposed Actions would not result in a significant adverse impact related to shadows and no further analysis is warranted.

Project Name: 1289 Atlantic Avenue Rezoning
CEQR # 21DCP054K
SEQRA Classification: Unlisted

Historic and Cultural Resources

A detailed analysis related to Historical and Cultural Resources include in the EAS identified four architectural resources within the study area, including the State and National Register(S/NR)-listed Kismet Tempe at 92 Herkimer Street, the S/NR-eligible properties at 132, 136, 14, and 148 Herkimer Street, the S/NR-eligible P.S. 93 school building located at 31 New York Avenue, and the S/NR-eligible property located at 75 New York Avenue. No impacts to these resources are expected as result of the Proposed Actions. The Proposed Actions would result in new in-ground construction the projected development sites. As a result, the Landmarks Preservation Commission (LPC) was consulted in order to determine whether the developments facilitated by the Proposed Actions have the potential to impact any archaeological resources. After consultation with the LPC, it was determined that there is the potential for the recovery of remains from 19th century occupation on Block 1867, Lots 53, 42, 41, 64, 61, 59, 58, 57, and 56. Of the lots identified, Lot 64 (within Projected Development Site 1) is the only parcel where development is anticipated as a result of the Proposed Actions. A subsequent Phase IA Archaeological Documentary Study was conducted and determined that cultural material with the potential to provide meaningful information regarding the lives of the 19th century residents of the site might be present on Lot 64. A Restrictive Declaration would be recorded in conjunction with approval of the Proposed Actions to ensure that the required testing and, if necessary, the recovery of resources, will be conducted as a project component related to the environment. The Applicant will commit to performing the prescribed archaeological work, pursuant to LPC concurrence of an approved Phase IB Work Plan. In the event that archaeological field testing uncovers significant archaeological resources, additional archaeology may be needed as per the Guidelines for Archaeological Work in New York City. With the Restrictive Declaration in place, there would be no potential for adverse impacts related to Historical and Cultural Resources.

Hazardous Materials, Air Quality, and Noise

An (E) designation (E-732) related to hazardous materials, air quality, and noise would be established as part of the approval of the Proposed Actions. Refer to "Determination of Significance Appendix: (E) designation" for the applicable (E) designation requirements. The hazardous materials, air quality, and noise analyses conclude that with the (E) designation in place, the proposed actions would not result in a significant adverse impact related to hazardous materials, air quality, or noise.

No other significant effects upon the environment that would require the preparation of a Draft Environmental Impact Statement are foreseeable. This Negative Declaration has been prepared in accordance with Article 8 of the New York State Environmental Conservation Law (SEQRA). Should you have any questions pertaining to this Negative Declaration, you may contact Jameson Mitchell at +1 212-720-3422.

TITLE	LEAD AGENCY
Director, Environmental Assessment and Review Division	Department of City Planning on behalf of the City Planning Commission 120 Broadway, 31st Fl. New York, NY 10271 | 212.720.3328
NAME Stephanie Shellooe, AICP	DATE 10/27/2023
SIGNATURE	

TITLE	
Chair, City Planning Commission	
NAME Daniel R. Garodnick	DATE 10/30/2023
SIGNATURE	

Project Name: 1289 Atlantic Avenue Rezoning
CEQR # 21DCP054K
SEQRA Classification: Unlisted

Determination of Significance Appendix

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

Development Site	Borough	Block and Lot
Projected Development Site 1	Brooklyn	Block 1867, Lots 62, 63, 64, 65, 66, and 68
Projected Development Site 2	Brooklyn	Block 1867, Lots 77, 78, 80, 84, and 85

(E) Designation Requirements

To ensure that the proposed actions would not result in significant adverse impacts related to hazardous materials, air quality, and noise an (E) designation (**E-732**) would be established as part of approval of the proposed actions on **Projected Development Site 1 and Projected Development Site 2** as described below:

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

Hazardous Materials

The (E) designation requirements applicable to **Projected Development Site 1 and Projected Development Site 2** for hazardous materials would apply as follows:

Task 1-Sampling Protocol

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

Task 2-Remediation Determination and Protocol

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

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

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

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

Air Quality

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

Projected Development Site 1 (Block 1867, Lots 62, 63, 64, 65, 66, and 68): *Any new residential, commercial, or community facility development on the above-referenced property must ensure that the heating, ventilation, air conditioning (HVAC) and hot water system(s) stack is located at the building's highest level or at least 148 feet above grade and that the stack is located at least 40 feet from the western lot line of lot 68 facing Nostrand Avenue to avoid any potential significant adverse air quality impacts.*

Projected Development Site 2 (Block 1867, Lots 77, 78, 80, 84, and 85)*: Any new residential or commercial development on the above-referenced property must ensure that the heating, ventilation, air conditioning (HVAC) and hot water system(s) stack is located at the building's highest level or at least 148 feet above grade and that the stack is located at least 160 feet from the eastern lot line of lot 77 facing New York Avenue to avoid any potential significant adverse air quality impacts.*

Noise

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

Block 1867 Lots 62, 63, 64, 65, 66, and 68 (Projected Development Site 1 – Applicant Owned) and Block 1867 Lots 77, 78, 80, 84, and 85 (Projected Development Site 2 – Non-Applicant Owned)

In order to ensure an acceptable interior noise environment, future residential/commercial office/community facility uses must provide a closed-window condition with a minimum of 38 dB(A) window/wall attenuation for the façade facing Atlantic Avenue from the street level up to the train track's height, the façades facing New York Avenue and Nostrand Avenue within 50 feet from Atlantic Avenue from the street level up to the train track's height, and 37 dB(A) window/wall attenuation for the façade facing Atlantic Avenue above the train track's height, the façades facing New York Avenue and Nostrand Avenue within 50 feet from Atlantic Avenue above the train track's height, and 31 dB(A) window/wall attenuation for all other façades in order to maintain an interior noise level not greater than 45 dB(A) for the future residential and community facility uses or not greater than 50 dB(A) for future commercial office uses. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Figure 1: Project Location Map

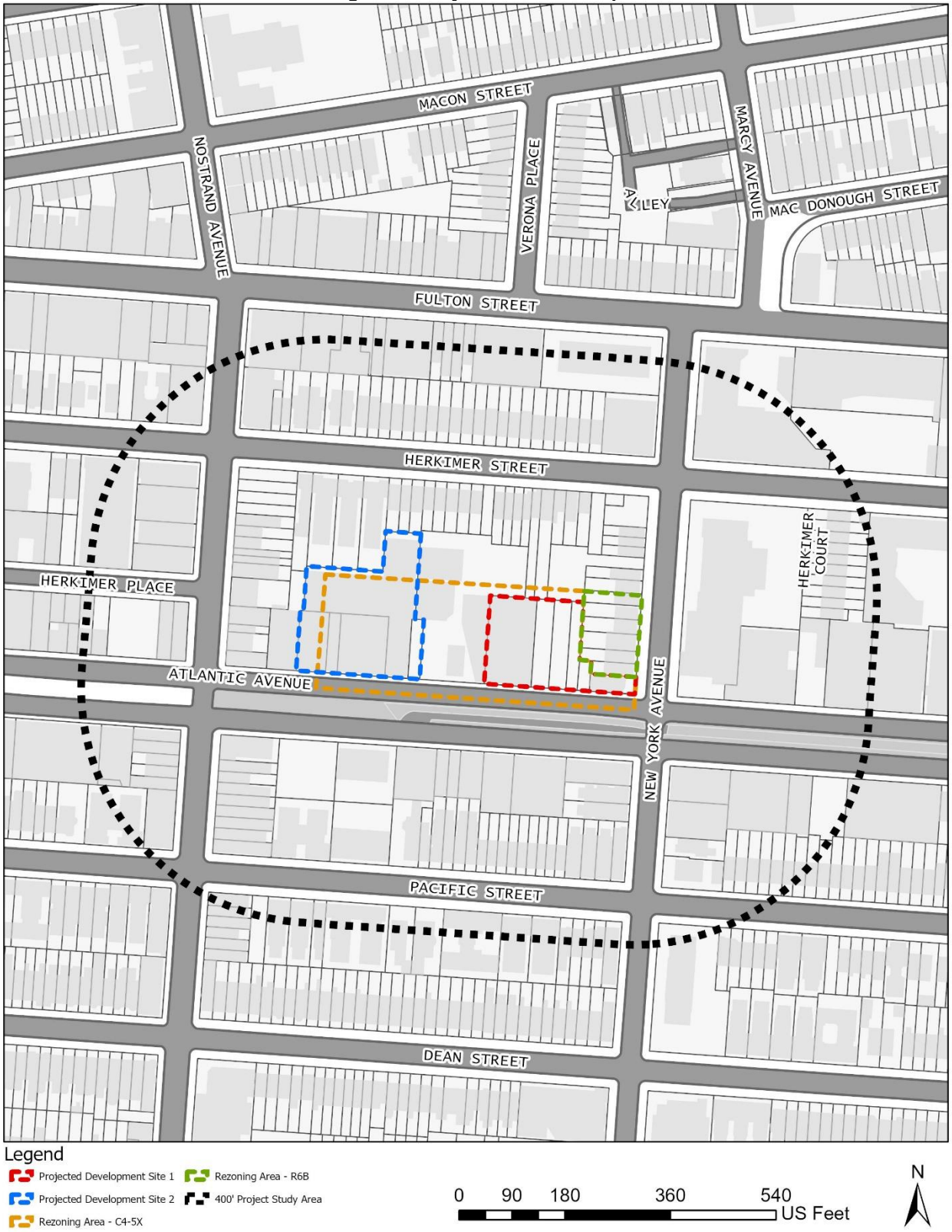


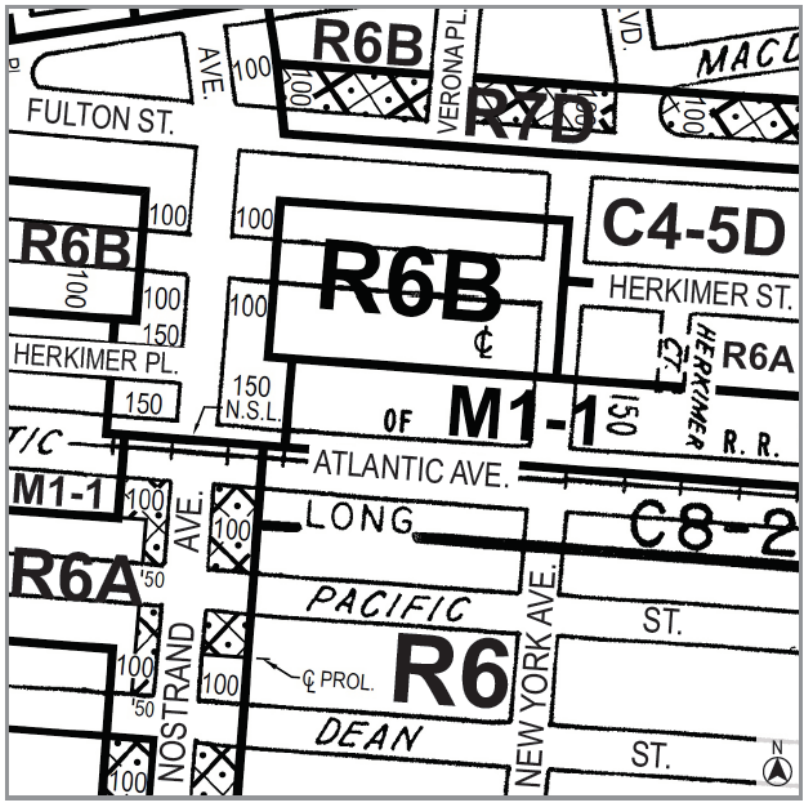
Figure 2: Land Use Map



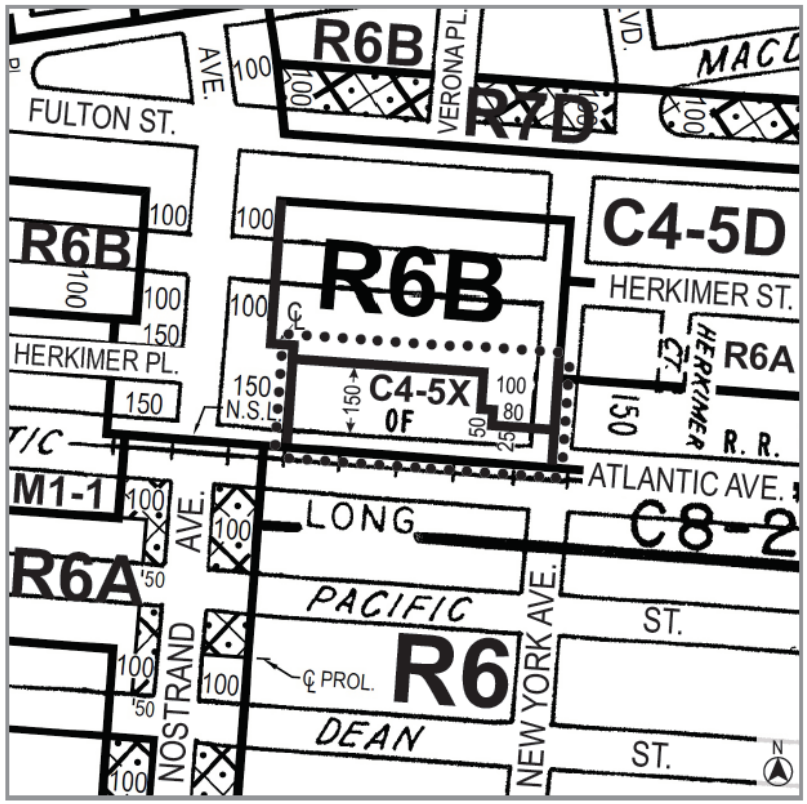
Figure 3: Tax Map



Figure 4: Zoning Change Map



Current Zoning Map (17a)



Proposed Zoning Map (17a) - Area being rezoned is outlined with dotted lines

Rezoning from M1-1 to C4-5X
Rezoning from M1-1 to R6B



Figure 5: Zoning Map

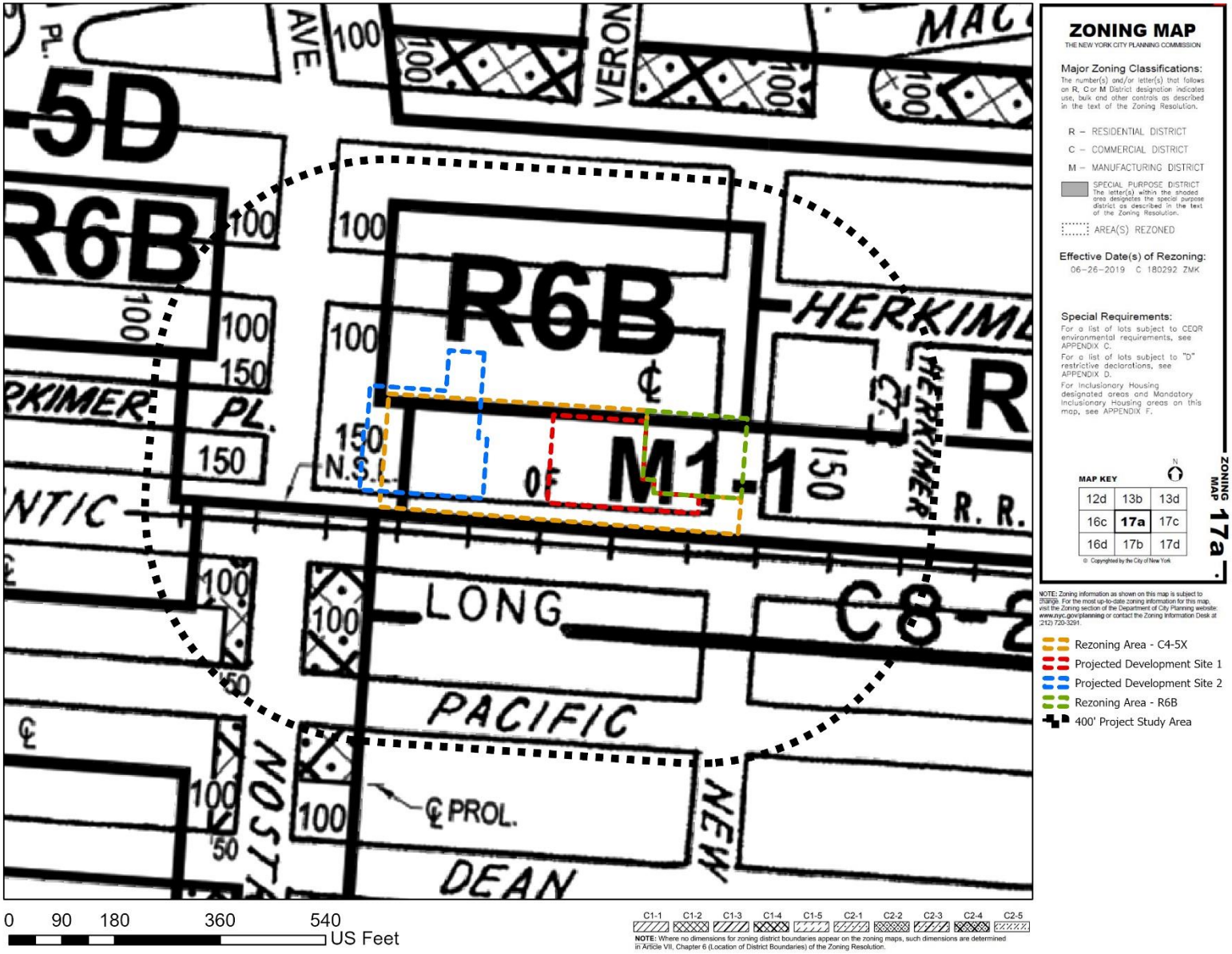


Figure 6: Photo Key (All Photos Taken on August 3rd, 2023)



1 View of New York Avenue facing south (Affected Area at right)



2 View of Affected Area facing southwest from New York Avenue



3 View of Affected Area facing west from New York Avenue

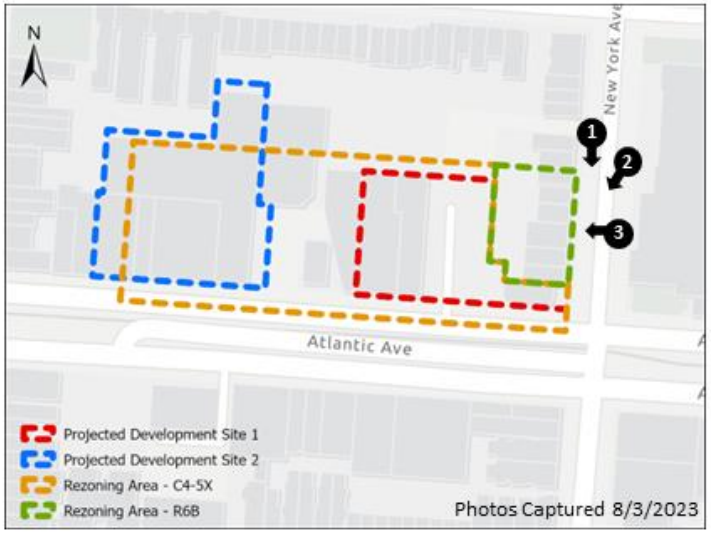


Photo Key



4 View of Affected Area facing northwest from New York Avenue



5 View of Projected Development Site 1 facing southwest from New York Avenue



6 View of Projected Development Site 1 facing west from New York Avenue

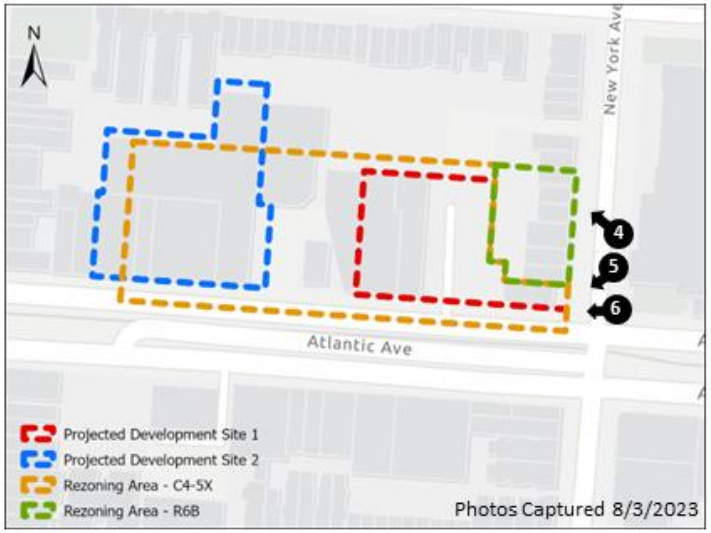


Photo Key



7 View of Atlantic Avenue facing west from New York Avenue (Projected Development Site 1 at right)



8 View of Projected Development Site 1 facing northwest from the intersection of Atlantic Avenue and New York Avenue



9 View of New York Avenue facing north from Atlantic Avenue (Projected Development Site 1 at left)

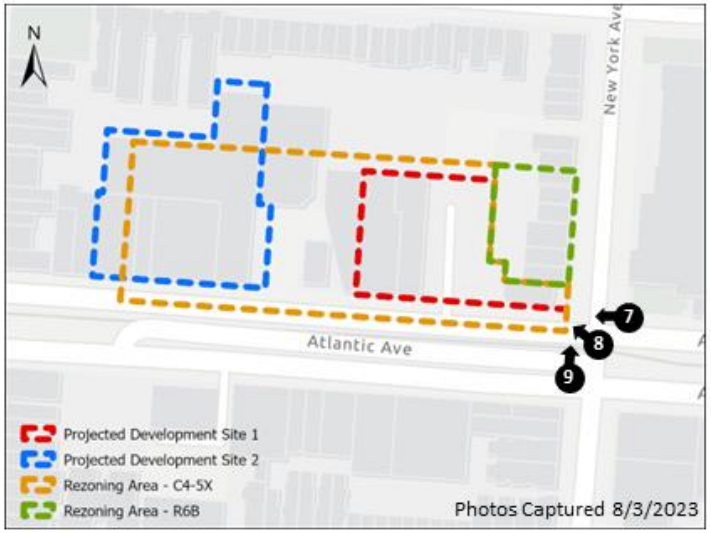


Photo Key



10 View of Projected Development Site 1 facing north from Atlantic Avenue



11 View of Projected Development Site 1 facing north from Atlantic Avenue



12 View of Projected Development Site 1 facing northeast from Atlantic Avenue

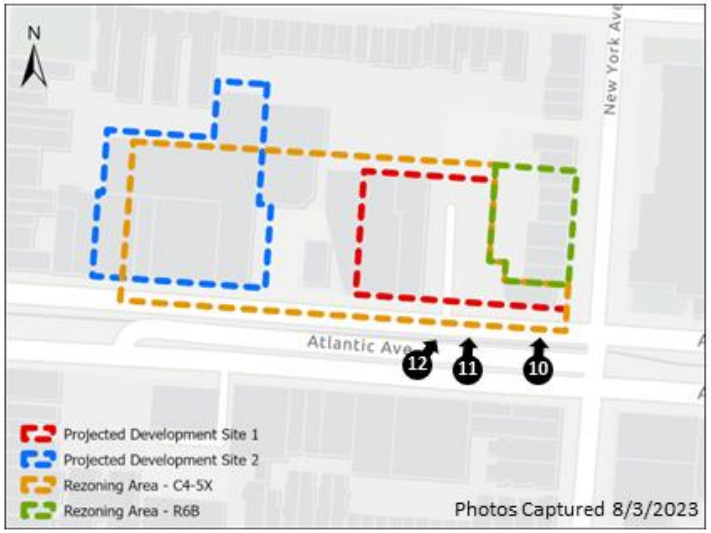


Photo Key



13 View of Projected Development Site 1 facing north from Atlantic Avenue



14 View of Projected Development Site 1 facing northeast from Atlantic Avenue



15 View of Affected Area facing northwest from Atlantic Avenue

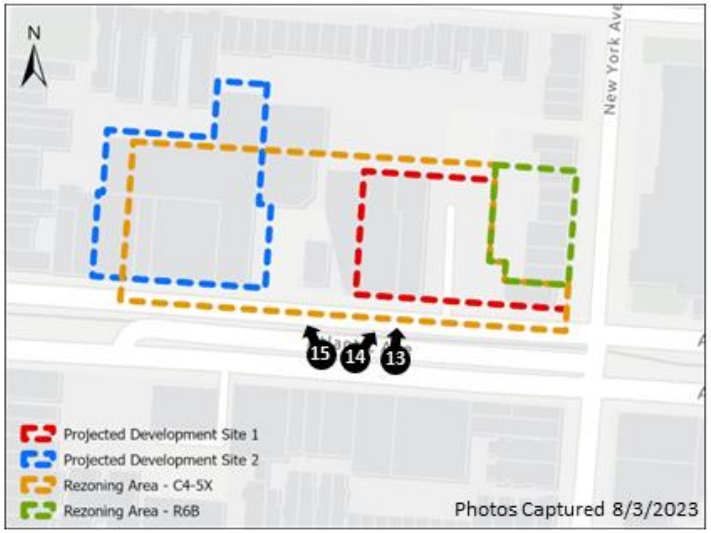


Photo Key



16 View of Atlantic Avenue facing east (Projected Development Site 1 at left)



17 View of Affected Area facing northeast from Atlantic Avenue



18 View of Projected Development Site 2 facing northwest from Atlantic Avenue

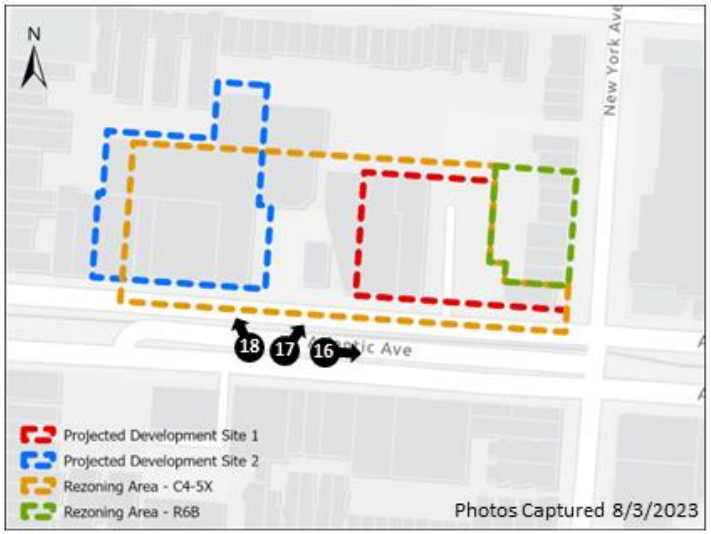


Photo Key



19 View of Projected Development Site 2 facing north from Atlantic Avenue



20 View of Projected Development Site 2 facing northeast from Atlantic Avenue



21 View of Atlantic Avenue facing east (Projected Development Site 2 at left)

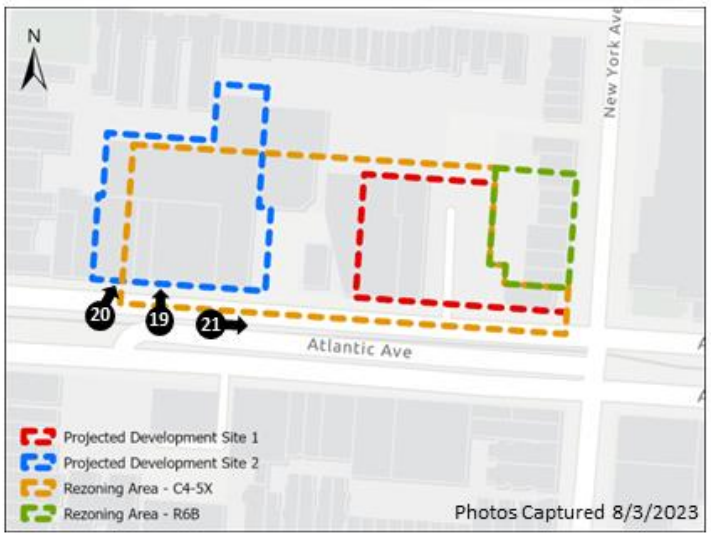


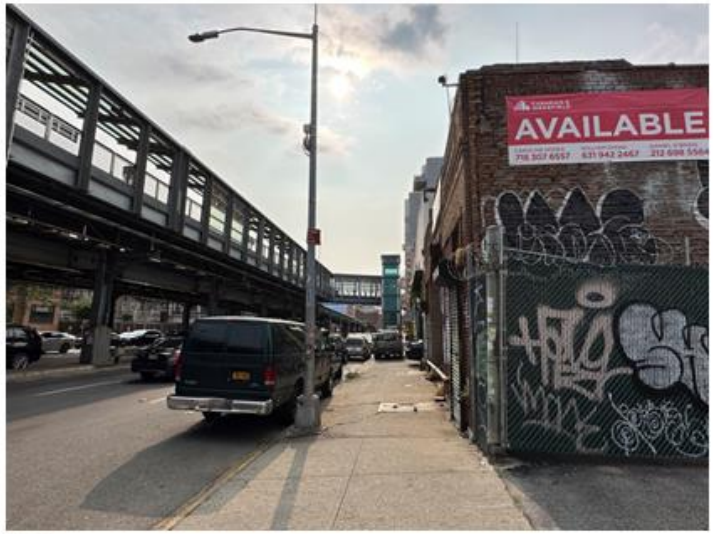
Photo Key



22 View of north side of Atlantic Avenue facing east (Projected Development Site 2 at left)



23 View of south side of Atlantic Avenue facing southwest from Projected Development Site 2



24 View of north side of Atlantic Avenue facing west (Projected Development Site 2 at right)

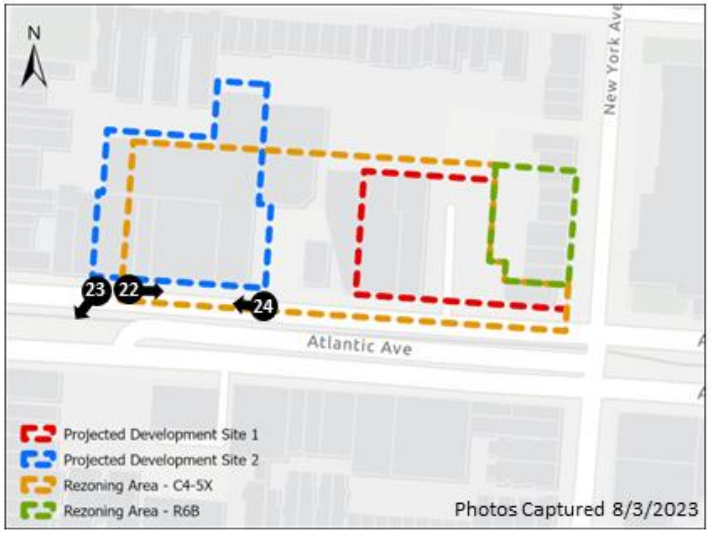
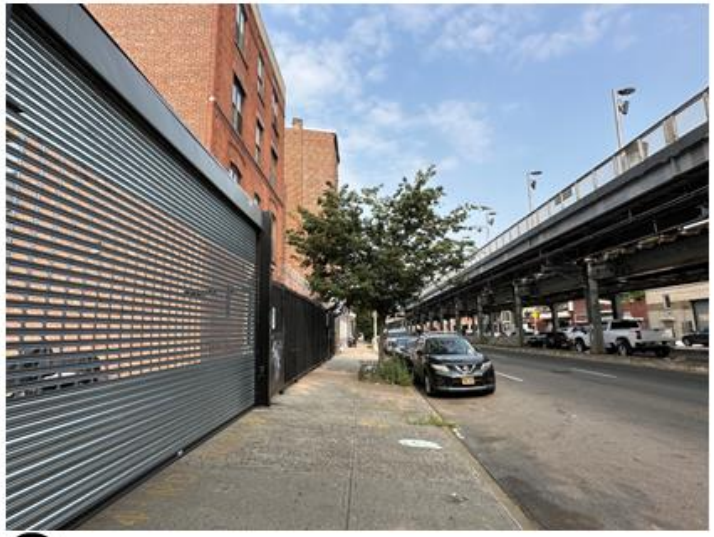


Photo Key



25 View of north side of Atlantic Avenue facing east from Projected Development Site 2



26 View of north side of Atlantic Avenue facing east (Projected Development Site 1 at left)



27 View of south side of Atlantic Avenue facing southwest from Projected Development Site 1

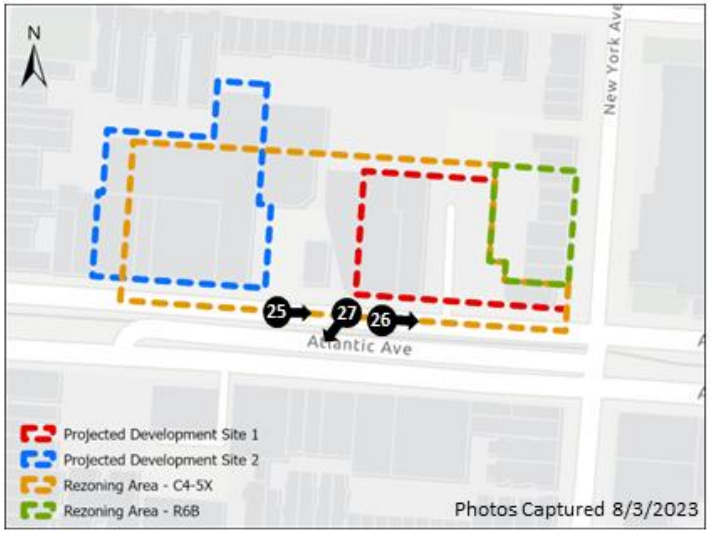
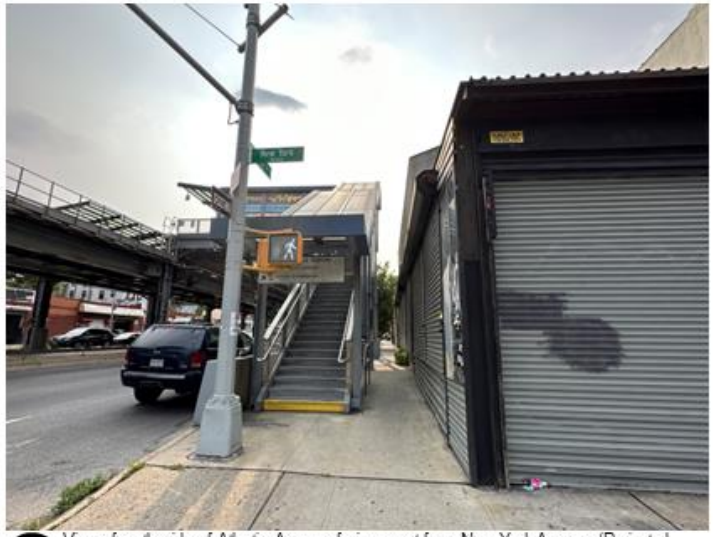


Photo Key



28 View of north side of Atlantic Avenue facing west from New York Avenue (Projected Development Site 1 at right)



29 View of intersection of Atlantic Avenue and New York Avenue facing southeast from Projected Development Site 1



30 View of west side of New York Avenue facing north from Atlantic Avenue (Projected Development Site 1 at left)

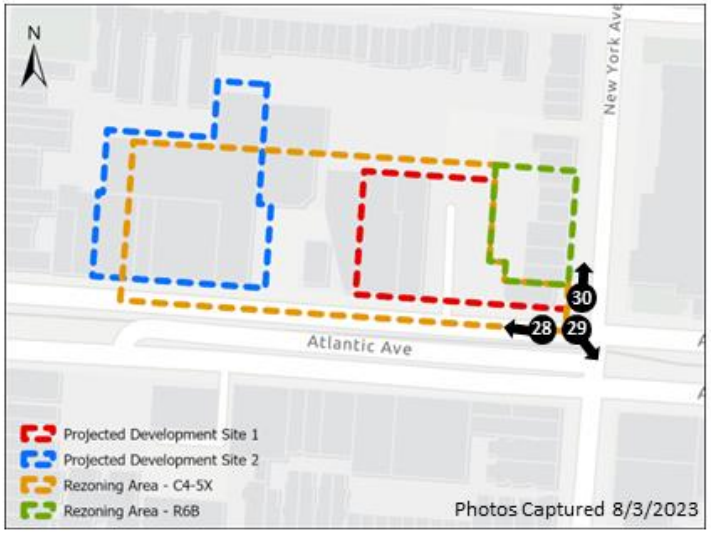


Photo Key

1.0 Project Description

1.1 Introduction

The Applicant, AA Atlantic LLC, proposes a zoning map amendment and a zoning text amendment (the Proposed Actions) affecting an area of approximately 92,000 square feet (sf) comprising Block 1867, Lots p/o 85, 84, 80, p/o 78, 77, p/o 72, 68, 66, 65, 64, 63, 62, 61, 60, 59, 58, 57, p/o 56, p/o 53, p/o 42, and p/o 41 (the Affected Area) located along the north block front of Atlantic Avenue between Nostrand Avenue and New York Avenue in the Bedford-Stuyvesant neighborhood of Brooklyn, Community District 3.

The Proposed Actions would facilitate the development Block 1867, Lots 68, 66, 65, 64, 63, and 62 (the Development Site). The proposed development is the construction of a new 14-story, 145-foot-tall mixed-use building. The building would be 162,422 GSF (151,760 ZSF; 5.60 FAR), including 17,404 GSF of second-floor community facility uses, 21,040 GSF of ground-floor commercial uses, and 123,978 GSF of residential floor area on the upper floors. The building would contain 112 dwelling units (1,106 GSF average size), 25%-30% (28-34 units) of which would be affordable pursuant to MIH at an average of 60-80% Area median Income (AMI) depending on the Option selected. The Applicant intends to pursue Option 2, which would result in approximately 34 affordable housing units. For the purposes of Early Childhood Programs analysis, 20% (22 units) of residential floor area is assumed to be affordable at or below 60% AMI. 39 residential parking spaces would be required, and 39 spaces would be provided at cellar level.

In addition, the Development Site is a primary transit-adjacent site, as defined by the Zoning Resolution, and the Metropolitan Transportation Authority has determined that a transit volume is needed for the Development Site, which must be certified by the Chairperson of the City Planning Commission pursuant to Zoning Resolution Section 66-21. Accordingly, the Applicant is concurrently filing a separate related application for a certification of transit volume at the Development Site.

The Proposed Actions are discretionary actions subject to environmental review. The New York City (NYC) Department of City Planning (DCP) is the lead agency on behalf of the NYC City Planning Commission (CPC) for environmental review under CEQR.

1.2 Background

The Affected Area was originally zoned M1-1 in 1961. The northern portion of the block, including a portion of Lot 56, which is within the Affected Area, was rezoned R6B as part of the Bedford Stuyvesant South Rezoning and Text Amendment (October 29, 2007; 070447ZMK). The structure on Lot 62 was constructed in 2010. Prior to 2010 there are certificates of occupancy on file for a structure in 1924 (illegible), 1955 (3-story two-family home), and 1957 (addition of 3-car garage). The structure on Lot 68 was constructed around 1910 with a 1946 certificate of occupancy for an auto repair shop, and then a 1963 certificate of occupancy for an industrial spray shop.

The Bedford Stuyvesant South Rezoning (C 070447 ZMK), effective October 29, 2007, rezoned all or portions of approximately 206 blocks, including the western and northern portions of the same block shared with the Project Area. Among the goals of the rezoning was to allow opportunities for mid-rise apartment building construction with incentives for affordable housing along the Fulton Street transit and retail corridor.

The Crown Heights West Rezoning & Text Amendment (C 130213 ZMK), effective September 24, 2013, rezoned all or portions of 55 blocks located to the southwest of the Project Area. The Crown Heights West action mapped contextual districts, established new Inclusionary Housing Areas to incentivize the development of affordable housing and modified height and setback regulations to conform to requirements of the Administrative Code.

The Project Area is located to the north of the Crown Heights North Historic District, designated on April 24, 2007, and to the south of the Bedford Historic District, designated on December 8, 2015.

1.3 Description of the Surrounding Area

The Affected Area is located in Community District 3 in the Bedford-Stuyvesant neighborhood of Brooklyn, bordering on the neighborhood of Crown Heights. The Affected Area is distinguished by elevated Long Island Railroad ("LIRR") tracks abutting the southern side of the Affected Area above Atlantic Avenue, a major east-west roadway measuring 120 feet wide and comprising seven driving lanes. Access from the northern side of Atlantic Avenue to the elevated Nostrand Avenue LIRR station is provided by a stairway and elevator located on the western end of the Affected Area and a stairway located on the eastern end of the Affected Area.

The predominant land use in the 400-foot Surrounding Area is residential and is characterized by 3- and 4-story brownstones, townhouses and apartment buildings within R6, R6A, R6B, C4-5D districts; however, mid- to high-rise residential, mixed use and commercial buildings are also in the vicinity. Located to the north of the Affected Area, within a C4-5D district, is a 10-story mixed commercial and residential building with 60 dwelling units located on Fulton Street between Nostrand and New York Avenues (1320 Fulton Street, Block 1861, Lot 119), and a 7-story mixed commercial and residential building with 65 dwelling units at the corner of New York Avenue and Fulton Street (1330 Fulton Street, Block 1861, Lot 20). Located to the southeast of the Affected Area is an 11-story apartment building with 103 dwelling units on New York Avenue between Pacific and Dean Streets (77 New York Avenue, Block 1208, Lot 1) in an R6 district. To the west of the Affected Area is a 7-story commercial and office building on Atlantic Avenue between Herkimer Place and Nostrand Avenue (1225 Atlantic Avenue, Block 1866, Lot 23) in a C4-5D district.

Small scale retail commercial buildings are generally located along Nostrand Avenue north of Atlantic Avenue, within a C4-5D district, and ground floor commercial uses are located along Nostrand Avenue south of Atlantic Avenue, within a C2-4 overlay in an R6A district. A 5-story hotel and one-story auto repair shops are located along Atlantic Avenue, opposite the Project Area in a C8-2 district. One and two-story contractors' establishment, hardware store and woodworking shop are located along the north side of Atlantic Avenue within an M1-1 district.

There are several educational institutions in the area, including Public School 93 located on New York Avenue between Herkimer and Atlantic Avenue; Public School 289 on St. Marks Avenue between Brooklyn and Kingston Avenues; the College of New Rochelle, Brooklyn Campus, located on Fulton Street between New York and Brooklyn Avenues; the headquarters of the Noel Pointer Foundation, which offers a music enrichment program for public school children, located on Herkimer Street between New York and Brooklyn Avenues.

Other public facilities and institutions include the Brooklyn Public Library - Brower Park Branch, located on St. Marks' Avenue between Nostrand and New York Avenues; the Bedford-Atlantic Men's Shelter housed in the landmarked National Guard armory building located on Bedford Avenue between Atlantic Avenue and Pacific Street; and a post office on Atlantic Avenue between Perry Place and Nostrand Avenue.

The traffic grid is regular, and the Surrounding Area includes major commercial thoroughfares including Atlantic Avenue, Nostrand Avenue, and Fulton Street. The area is well-served by transit, and is within a Transit Zone. The Nostrand Avenue subway station is serviced by the MTA with stops for the A and C lines and is two blocks north of the Affected Area. The Nostrand Avenue Long Island Railroad station is immediately adjacent to the Affected Area, elevated above Atlantic Avenue, with trains providing service to various locations, including West Hempstead and Far Rockaway. Stops for the B25, B44, B44-SBS, and B49 buses are in the immediate area.

1.4 Description of the Affected Area

The Affected Area is shown above in **Figures 1 through 6**, and is within an M1-1 zoning district, with a portion of Lot 56 within an R6B zoning district. M1-1 zoning districts allow commercial and industrial development up to 1.00 FAR, and community facility development up to 2.40 FAR.

The Development Site consists of six separate lots along Atlantic Avenue. Lots 63, 64, 65, and 66 are all paved lots used for parking and vehicle storage and are interior lots between 995 SF and 4,473 SF. Lot 62 is a 2,236 SF corner lot with 28 feet of frontage along New York Avenue and 80 feet of frontage along Atlantic Avenue. It is improved with a 2,189 GSF commercial building constructed in 2010 operating as a building supply store. Lot 68 is a 11,927 SF interior lot with 80 feet of frontage along Atlantic Avenue and a depth of 149 feet. The lot is improved with a 11,927 GSF commercial structure constructed around 1910 operating as a kitchen design center.

Other lots within the Affected Area include one- and two-story manufacturing buildings on lots 78 and 80 (.88 and 2.00 FAR); one-story commercial uses on lots 84 and 85 (1.00 FAR); vacant and unimproved lot 77; residential semi-detached multi-family homes along New York Avenue on lots 56, 57, 58, 59, 60, and 61 (between 1.20 and 2.07 FAR); and Lot 72, which is improved with three separate buildings containing residential and commercial uses (1.93 FAR).

1.5 Description of the Proposed Development

The Applicant proposes to develop a new 14-story, 145-foot-tall mixed-use building on Lots 68, 66, 65, 64, 63, and 62. The building would be 162,422 GSF (151,760 ZSF; 5.60 FAR), including 17,404 GSF of second-floor community facility uses, 21,040 GSF of ground-floor commercial uses, and 123,978 GSF of residential floor area on the upper floors. The building would contain 112 dwelling units (1,106 GSF average size), 25%-30% (28-34 units) of which would be affordable pursuant to MIH at an average of 60-80% AMI depending on the Option selected. The Applicant intends to pursue Option 2, which would result in approximately 34 affordable housing units. For the purposes of Early Childhood Programs analysis, 20% (22 units) of residential floor area is assumed to be affordable at or below 60% AMI. 39 residential parking spaces would be required, and 39 spaces would be provided at cellar level.

1.6 Action(s) Necessary to Facilitate the Project

There are three actions necessary to facilitate the Proposed Development:

1. A Zoning Map Amendment to rezone Block 1867, Lots p/o 41, p/o 42, p/o 53, 62, 63, 64, 65, 66, 68, p/o 72, 77, p/o 78, 80, 84, and p/o 85 from an M1-1 zoning district to a C4-5X zoning district; and Block 1867, Lots 61, 60, 59, 58, 57, and p/o 56 from an M1-1 zoning district to an R6B zoning district.
2. A Zoning Text Amendment to ZR Appendix F: Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing Areas for Community District 3, Brooklyn, to establish the Affected Area as an MIH Area, Program Option 2.
3. Projected Development Site 1 is a primary transit-adjacent site, as defined by the Zoning Resolution, and the Metropolitan Transportation Authority has determined that a transit volume is needed for the Development Site, which must be certified by the Chairperson of the City Planning Commission pursuant to Zoning Resolution Section 66-21. Accordingly, the Applicant is concurrently filing a separate related application for a certification of transit volume at the Development Site.

1.7 Purpose and Need

The Proposed Actions are needed to allow the Proposed Development's residential use, 5.6 FAR, and 145-foot height. Within the current M1-1 district, residential uses are not allowed as-of-right, bulk for allowed uses is restricted to 2.4 FAR, and building height is limited by a sky exposure plane beginning at a level 30 feet above curb.

The proposed rezoning would allow the creation of residential apartments, including affordable housing units, permitted as-of-right within the changed zoning district. New affordable housing is a critical need in Brooklyn Community District 3, where more than 40 percent of the households are rent burdened. According to the U.S. Census Bureau, American Community Survey (ACS) 2014-18 Five Year Estimates for Public Use Microdata Area (PUMA) 4003 (which approximates Brooklyn Community District 3), 45.1 percent of households spend 35 percent or more of their income on rent. The number of rent burdened households has dropped slightly by 3.4% from ACS 2006-2010 data to ACS 2014-18 data, indicating that housing affordability remains to be one of the major concerns in the community district for approximately one decade. Meanwhile, the median gross rent in Brooklyn Community District 3 has risen by 23.8% from 1,025 dollar per month to 1,269 dollar per month between the two American Community Surveys. It is slightly lower than the median gross rent in Brooklyn of 1,374 dollar per month and New York City of 1,396 dollar per month. Additionally, 28.6 percent of Brooklyn Community District 3 residents have incomes below the NYC.gov Poverty Threshold, above the estimated 21.1 percent in Brooklyn and 18.9 percent Citywide. According to the Furman Center's "State of New York City's Housing and Neighborhoods in 2018", median monthly rent in Community District 3 has risen from $900 in the year 2000 to $1,270 in 2017 as the demand for housing has placed upward pressure on the supply of housing. It reports median asking rents were substantially higher at $2,570 in 2018, rising from $1,870 in 2010.[1]

The proposed development would add approximately 112 dwelling units, 25%-30% (28-34 units) of which would be affordable pursuant to MIH at an average of 60-80% AMI depending on the Option selected. The Applicant intends to pursue Option 2, which would result in approximately 34 affordable housing units.

[1] See New York University Furman Center, State of New York City's Housing and Neighborhoods in 2018, 52; available at: https://furmancenter.org/files/sotc/2018_SOC_Full_2018-07-31.pdf

Accordingly, the proposed development would help meet the affordable housing demand on an underutilized site in the community district. In addition to the residential use, the Proposed Development would provide space for community facilities and local businesses. The Proposed Development's open landscaped area with seating adjoining a ground floor retail space would be an accessible and inviting environment that eases pedestrian flow near the Nostrand Avenue LIRR station entrance.

The proposed C4-5X district will allow for residential and commercial growth along a wide street with convenient access to public transportation and convenience retail and service establishments. The Affected Area's location on a wide street adjoining elevated LIRR tracks provides adequate light and air to support additional density. The proposed C4-5X district would also maintain continuity with the C4-5D district mapped to the northwest of the Affected Area along Nostrand Avenue and Fulton Street, which are heavily-trafficked streets lined with ground floor retail uses. Although the Surrounding Area is predominantly improved with 3- and 4-story brownstones, townhouses and apartment buildings, the Applicant believes that the Proposed Development will fit in to the existing built context among the several mid- to high-rise residential, mixed use and commercial buildings that exist near the Affected Area: a 10-story mixed commercial and residential building at 1320 Fulton Street, Block 1861, Lot 119; and a 7-story mixed commercial and residential building at 1330 Fulton Street, Block 1861, Lot 20; an 11-story apartment building at 77 New York Avenue, Block 1208, Lot 1; and a 7-story commercial and office building at 1225 Atlantic Avenue, Block 1866, Lot 23.

1.8 Analysis Framework

Discretionary actions sometimes permit a range of project characteristics, or development scenarios, to occur even though the action may be sought in order to facilitate a specific development. From the range of possible scenarios that are considered reasonable and likely, the scenario with the worst environmental consequences is chosen for analysis. This is considered to be the Reasonable Worst-Case Development Scenario (RWCDS), the use of which ensures that, regardless of which scenario actually occurs, its impacts would be no worse than those considered in the environmental review.

The analysis framework described below compares the incremental difference between the RWCDS proposed and potential development under the Proposed Actions (Future With-Action Conditions) and the development which could occur under the existing zoning (Future No-Action Conditions) by the build year specified below. The Environmental Assessment Statement (EAS) and supplemental analyses study the potential for individual and cumulative environmental impacts related to the Proposed Actions occurring in a study area of approximately 400 feet around the Affected Area.

This EAS was prepared in accordance with the latest *2021 CEQR Technical Manual*, with the exception of the analyses provided for Socioeconomic Conditions, and Air Quality, which were prepared pursuant to the *2021 CEQR Technical Manual*. However, no additional or different impacts would occur related to Socioeconomic Conditions or Air Quality based on the *2021 CEQR Technical Manual* update.

Build Year

The analysis year for the Proposed Actions is 2029 assuming ULURP completion by June of 2024.

Projected Site 1 would begin demolition in August 2024 with interior finishes complete in February 2026 for a total of 19 months from demolition to interior finishes. Demolition and clearance for Projected Site 1 is assumed to start in August 2024 and conclude in September 2024. Major Construction Activities post-

demolition are expected to commence with excavation and SOE on or around October 2024 and conclude with interior core and shell work (substantial completion) in December 2025 for a period of approximately 14 months of major construction activity. Interior finishes are assumed to complete approximately 2 months later, in February of 2026.

Projected Site 2 consists of 5 separate lots not under common ownership. Therefore, assemblage, financing and design, and permitting would need to be completed prior to development. It is assumed that Projected Site 2 would begin demolition in October of 2027 with interior finishes complete in August of 2029 for a total of 22 months from demolition to interior finishes.

Demolition and clearance of Projected Site 2 is assumed to start in October of 2027 and conclude in December 2027. Major Construction Activities post demolition are expected to commence with excavation and SOE on or around December 2027 and conclude with interior core and shell work (substantial completion) in May 2029 for a period of approximately 18 months of major construction activity. Interior finishes are assumed to complete approximately 3 months later in August of 2029.

The analysis which follows compares the difference between the future without the Proposed Actions (No-Action condition) and the future with the Proposed Actions (With-Action condition) for the 2029 analysis year.

No-Action Condition

Existing conditions are expected to remain in the future No-Action Condition. The residential lots fronting New York Avenue would continue to be legal, non-conforming uses within the existing M1-1 zoning district, and the zoning district's high parking requirement (1 space per 300 sf) and low FAR (1.00) make redevelopment unlikely.

With-Action Condition

Projected Development Site 1 (Block 1867, Lots 62, 63, 64, 65, 66, 68)

The Applicant-Owned lots would have a projected lot size of 27,086 SF, and would be developed with a 174,039 GSF (162,516 ZSF; 6.00 FAR) mixed-use commercial, community facility, and residential building. There would be 21,040 GSF of ground floor commercial (local retail) uses, 17,404 GSF of second floor community facility (UG 4 ambulatory diagnostic) uses, and 135,594 GSF of residential uses on the upper floors. There would be 160 total dwelling units (1 unit per 850 GSF), 25%-30% (40-48 units) of which would be affordable pursuant to MIH at an average of 60-80% AMI depending on the Option selected. The Applicant intends to pursue Option 2, which would result in approximately 48 affordable housing units. For the purposes of Early Childhood Programs analysis, 20% (32 units) of residential floor area is assumed to be affordable at or below 60% AMI. 64 residential accessory spaces would be required, and 64 spaces would be provided at cellar level. No commercial or community facility accessory parking spaces are required within the C4-5X zoning district.

The proposed development under the With-Action scenario differs from the Applicant's Proposed Development in FAR, average dwelling unit size, and the number of dwelling units to show the worst-case development scenario with more conservative environmental impacts induced by the Proposed Actions. The proposed development under the With-Action scenario would maximize the 6.00 FAR allowed by the proposed C4-5X zoning regulations, which is higher than the 5.60 FAR proposed by the Applicant. It would

also feature a smaller average size of dwelling units of 850 GSF per unit, much smaller compared to the 1,106 GSF per unit with the Applicant's Proposed Development. Given the combined impact of a higher FAR and a smaller average dwelling unit size, there would be 160 total dwelling units under the With-Action scenario while the Applicant's Proposed Development has a smaller number of 112 dwelling units.

Projected Development Site 2 (Block 1867, Lots 77, 78, 80, 84, 85)

The lots would assemble and have a projected lot size of approximately 39,441 SF, and would be developed with a 254,473 GSF (236,646 ZSF; 6.00 FAR) mixed-use commercial and residential building. There would be 28,713 GSF of ground floor commercial (local retail) uses and 225,760 GSF of residential uses on the upper floors. 266 total dwelling units would be provided (1 per 850 GSF), 25%-30% (67-80 units) of which would be affordable pursuant to MIH at an average of 60-80% AMI depending on the Option selected. For the purposes of Early Childhood Programs analysis, 20% (53 units) of residential floor area is assumed to be affordable at or below 60% AMI. 106 residential accessory parking spaces would be required, and 106 spaces would be provided at cellar level. No commercial parking spaces are required within the C4-5X zoning district.

This development site is not under control of the Applicant and is being considered for development for the purposes of a conservative assessment.

Other Affected Sites

The other lots within the rezoning area are not expected to develop:

- Lots 56, 57, 58, 59, 60, and 61 are 1,716 SF to 2,800 SF interior lots along New York Avenue improved with semi-detached multi-family buildings. Each of the buildings is currently legally non-complying within the existing M1-1 zoning district, and the rezoning would bring them into conformance. Development of these lots is not expected because they are all small lots and each are under separate ownership. Additionally, each building was constructed between 1901 and 1910, and are longstanding uses. The northern portion of the block was rezoned to R6B from M1-1 in 2013 as part of the Bedford Stuyvesant South Rezoning, which is the same proposed rezoning as the Proposed Actions. In the six years from the rezoning none of the lots on this block has redeveloped from their multi-family uses, and all buildings were similarly constructed in the early-1900s. Therefore, because of the small lot sizes, separate ownership, and nearby development patterns, redevelopment of these lots is not expected.
- Lot 72 is a 21,394 SF interior lot with approximately 170 feet within the existing M1-1 district and 80 feet within the R6B zoning district that is mapped on the lots fronting Herkimer Street. The lot is improved with three separate buildings containing 41,371 GSF: 35,178 GSF residential and 6,193 GSF commercial. There are also 36 total dwelling units. Because the structures on site were constructed around 1910 and each building contains six or more residential units constructed before 1974, it is highly likely that the lot contains rent-stabilized units. As a result, redevelopment of these lots is considered unlikely because the structures are difficult to legally demolish due to tenant re-location requirements.
- Lots 41, 42, and 53 each have approximately a 20-foot portion within the existing M1-1 zoning district and are governed by the R6B zoning district because of the 25-foot rule. The rezoning would change the M1-1 zoning district to a C4-5X zoning district, but no changes to bulk, height, or permitted uses would occur as a result of the rezoning. Therefore, no development as a result of the Proposed Actions is anticipated.

For the purposes of a conservative analysis the Reasonable Worst Case Development Scenario (RWCDS) will assess the maximum permitted envelope for the urban design and shadows assessment. The shadows assessment will also take into account a reasonable bulkhead height for mechanical equipment (25-foot-tall bulkheads for both projected sites).

The RWCDS Analysis Framework described above is shown below in **Table 1.8-1 and Table 1.8-2.**

Table 1.8-1: Existing, No-Action, and With-Action Conditions											
Site Info				Existing/No-Action Condition			With-Action Condition				
Site ID	Block	Lot	Lot Area (gsf)	Zoning	Com. (gsf)	Mf (gsf)	Zoning	Res. (gsf)	DU	CF (gsf)	Com. (gsf)
Projected Site 1	1867	62, 63, 64, 65, 66, 68	27,086	M1-1	14,116	0	C4-5X	135,594	160	17,404	21,040
Projected Site 2		77, 78, 80, 84, 85	39,441		6,932	35,685		225,760	266	0	28,713
Total			**66,527**		**21,048**	**35,685**		**361,354**	**425**	**17,404**	**49,753**

DU = Dwelling Units

gsf = gross square feet

Res. = Residential

Com. = Commercial

Mf = Manufacturing

CF = Community Facility

Table 1.8-2: RWCDS Analysis Framework Table

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
Land Use				
Residential	☐ Yes ☑ No	☐ Yes ☑ No	☑ Yes ☐ No	
If "yes," specify the following:				
Describe type of residential structures	N/A	N/A	Multi-family Residential	
No. of dwelling units	N/A	N/A	425	425
No. of low- to moderate-income units	N/A	N/A	85	85
Gross floor area (sq. ft.)	N/A	N/A	361,354	361,354
Commercial	☑ Yes ☐ No	☑ Yes ☐ No	☑ Yes ☐ No	☐ No
If "yes," specify the following:				
Describe type (retail, office, other)	Ground floor retail	Ground floor retail	Ground floor retail	
Gross floor area (sq. ft.)	21,048	21,048	49,753	28,705
Manufacturing/Industrial	Yes	Yes	Yes	
If "yes," specify the following:				
Type of Use	Light Industrial	Light Industrial	N/A	
Gross floor area (sq. ft.)	35,685	35,685	0	-35,685
Open storage area (sq. ft.)	No	No	No	
If any enclosed activities, specify:	No	No	No	
Community Facility	☐ Yes ☑ No	☐ Yes ☑ No	☑ Yes ☐ No	
If "yes," specify the following:				
Type of Use	N/A	N/A	UG 4 Medical	
Gross floor area (sq. ft.)	N/A	N/A	17,404	17,404
Vacant Land	☑ Yes ☐ No	☑ Yes ☐ No	☐ Yes ☑ No	
If "yes", describe:	Paved Lots	Paved Lots	N/A	
Publicly Accessible Open Space	☐ Yes ☑ No	☐ Yes ☑ No	☐ Yes ☑ No	
If "yes," specify type (mapped City, State, or Federal Parkland, wetland-mapped or otherwise known, other):	N/A	N/A	N/A	
Other Land Uses	☐ Yes ☑ No	☐ Yes ☑ No	☐ Yes ☑ No	
If "yes," describe:	N/A	N/A	N/A	
Parking				
Garages	☐ Yes ☑ No	☐ Yes ☑ No	☑ Yes ☐ No	
If "yes," specify the following:				
No. of public spaces	N/A	N/A	0	
No. of accessory spaces	N/A	N/A	170	170
Operating hours	N/A	N/A	24/7	
Attended or non-attended	N/A	N/A	Non-attended	
Lots	☐ Yes ☑ No	☐ Yes ☑ No	☐ Yes ☑ No	
If "yes," specify the following:				
No. of public spaces	N/A	N/A	N/A	
No. of accessory spaces	N/A	N/A	N/A	
Operating hours	N/A	N/A	N/A	
Other (includes street parking)	☐ Yes ☑ No	☐ Yes ☑ No	☐ Yes ☑ No	
If "yes," describe:	N/A	N/A	N/A	

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
Population				
Residents	☐ Yes ☑ No	☐ Yes ☑ No	☑ Yes ☐ No	
If "yes," specify number:	0	0	1071	1071
Briefly explain how the number of residents was calculated:	425 units x 2.52 residents per household 2015-2019 ACS for BK CD 3			
Businesses	☑ Yes ☐ No	☑ Yes ☐ No	☑ Yes ☐ No	
If "yes," specify the following:				
No. and type	5 total 3 wholesalers and 2 automotive	5 total 3 wholesalers and 2 automotive	15 total 3 medical offices and 12 local retail	10
No. and type of workers by business	57 total	57 total	201 total	144
No. and type of non-residents who are not workers	570	570	6,700	6,130
Briefly explain how the number of businesses was calculated:	Retail and Medical = 3 employees per 1,000 SF; Wholesale and Automotive = 1 per 1,000 SF			
Other (students, visitors, concert-goers, *etc*.)	☐ Yes ☑ No	☐ Yes ☑ No	☐ Yes ☑ No	
If any, specify type and number:	N/A	N/A	N/A	
Briefly explain how the number was calculated:	Patrons = 100 per 1,000 SF medical and retail; 100 per 10,000 SF wholesale and automotive			
Zoning				
Zoning classification	M1-1; R6B	M1-1; R6B	C4-5X; R6B	
Maximum amount of floor area that can be developed	2.00	2.00	6.00	4.00
Predominant land use and zoning classifications within land use study area(s) or a 400 ft. radius of proposed project	R6, R6A, R6B, R7D, C8-2, C4-5D; Manufacturing, multifamily, commercial, public facilities	R6, R6A, R6B, R7D, C8-2, C4-5D; Manufacturing, multifamily, commercial, public facilities	R6, R6A, R6B, R7D, C8-2, C4-5D; Manufacturing, multifamily, commercial, public facilities	
Attach any additional information that may be needed to describe the project. If your project involves changes that affect one or more sites not associated with a specific development, it is generally appropriate to include total development projections in the above table and attach separate tables outlining the reasonable development scenarios for each site.				

2. Environmental Review

Chapter 4: Land Use, Zoning, and Public Policy

The *2021 CEQR Technical Manual* recommends procedures for analysis of land use, zoning and public policy to ascertain the impacts of a project on the Surrounding Area. Land use, zoning and public policy are described in detail below. This section considers existing conditions, development trends, zoning, and other public policies in relation to the Projected Development Site and the area in which the Proposed Actions may have an effect. Because the Proposed Actions would permit development of uses (multiple family residential) that are not permitted as of right under the existing M1-1 zoning, a preliminary assessment of Land Use, Zoning, and Public Policy is provided.

Methodology

Existing land uses were determined by reference to the New York City Zoning and Land Use (Zola) database and PLUTOTM 20v1 shapefiles. These uses were then confirmed through site visits. The evaluation of lots within the 400-foot Study Area were performed with reference to New York City Zoning Maps and the Zoning Resolution of the City of New York and served as the basis for the zoning evaluation of the Future No-Action and Future With-Action Conditions. Public Policy research was performed through an evaluation of New York City Department of City Planning (NYCDCP) and other city agencies programs and documentation.

Land Use

The *2021 CEQR Technical Manual* suggests that a land use, zoning and public policy study area should generally extend 400 feet from the Affected Area. Existing land uses within approximately 400 feet of the Affected Area are presented in **Figure 2.4-1**.

Figure 2.4-1: Area to be Rezoned Overlaid Existing Land Use Map



Existing Conditions

Land Use Study Area

As shown in **Figure 2.4-1** and stated in **Section 1.3**, the Surrounding Area is predominantly residential, with 3- and 4-story brownstones, townhouses, and apartment buildings. Commercial and office buildings are located to the north along Fulton Street and to the west along Nostrand Avenue, including the 7-story La Quinta hotel at 1225 Atlantic Avenue, and P.S. 93 is located across New York Avenue from the Affected Area. The study area also includes several industrial uses along Atlantic Avenue to the south, such as a contractor, hardware store, and a woodworking shop.

Affected Area

A full breakdown of each lot within the Affected Area can be found in **Section 1.4**.

The Development Site consists of six separate lots along Atlantic Avenue. Lots 63, 64, 65, and 66 are all paved lots used for parking and vehicle storage and are interior lots between 995 SF and 4,473 SF. Lot 62 is a 2,236 SF corner lot improved with a 2,189 GSF commercial building constructed in 2010 operating as a building supply store. Lot 68 is a 11,927 SF interior lot improved with a 11,927 GSF commercial structure constructed around 1910 operating as a kitchen design center.

Other lots within the Affected Area include one- and two-story manufacturing buildings on lots 78 and 80 (.88 and 2.00 FAR); one-story commercial uses on lots 84 and 85 (1.00 FAR); vacant and unimproved lot 77; residential semi-detached multi-family homes along New York Avenue on lots 56, 57, 58, 59, 60, and 61 (between 1.20 and 2.07 FAR); and Lot 72, which is improved with three separate buildings containing residential and commercial uses (1.93 FAR).

Analysis

Future No-Action Condition

Land Use Study Area

There are eight active construction permits in the Surrounding Area, accounting for 94,878 gsf of development and 206 proposed dwelling units. The largest active development, which accounts for roughly half of the proposed floor area and dwelling units, is located at 1325 Atlantic Avenue. It is a 44,551 gsf enlargement of the existing warehouse structure, which will include 151 dwelling units and rise to a height of 5 stories.

Table 2.4-1: Active Major Construction Projects					
Address	Type	Land Use	Additional Floor Area (gsf)	Dwelling Units	Stories
1325 Atlantic Avenue	Alt 1 Enlargement	Residential	44,551	151	5
1419 Pacific Street	Alt 1 Enlargement	Residential	0	2	4
177 Herkimer Street	Alt 1 Enlargement	Residential	933	6	4
570 Nostrand Avenue	New Building	Residential	25,552	25	6
87 Herkimer Street	New Building	Residential	6,772	6	4
75 Herkimer Street	New Building	Residential	4,610	4	5
37 Herkimer Street	New Building	Residential	5,688	6	4
1137 Dean Street	Alt 1 Enlargement	Residential	0	6	5

gsf = Gross Square Feet

Affected Area

Within the Affected Area, existing conditions are expected to remain the same with the No-Action Condition in the future. The residential lots fronting New York Avenue would continue to be legal, non-conforming uses within the existing M1-1 zoning district.

Future With-Action Condition

Land Use Study Area

Land use and development patterns in the land use study area are anticipated to remain unchanged in the future with the Proposed Actions. Any new development in the Surrounding Area would be consistent with the medium-density R6A and R6B residential zoning, C4-5D commercial zoning, or the proposed rezoning from M1-1 to C4-5X as discussed previously.

Affected Area

Projected Development Site 1 (Block 1867, Lots 68, 66, 65, 64, 63, and 62)

Under the With-Action Condition, the Applicant-Owned lots (Projected Development Site 1) would have a projected lot size of 27,086 SF, and would be developed with a 174,039 GSF (162,516 ZSF; 6.00 FAR) mixed-use commercial, community facility, and residential building. There would be 21,040 GSF of ground floor commercial (local retail) uses, 17,404 GSF of second floor community facility (UG 4 ambulatory diagnostic) uses, and 135,594 GSF of residential uses on the upper floors. There would be 160 total dwelling units (1 unit per 850 GSF), 25%-30% (40-48 units) of which would be affordable pursuant to MIH at an average of 60-80% AMI depending on the Option selected. The Applicant intends to pursue Option 2, which would result in approximately 48 affordable housing units. 64 residential accessory spaces would be required, and 64 spaces would be provided at cellar level. No commercial or community facility accessory parking spaces are required within the C4-5X zoning district.

Projected Development Site 2 (Block 1867, Lots 77, 78, 80, 84, 85)

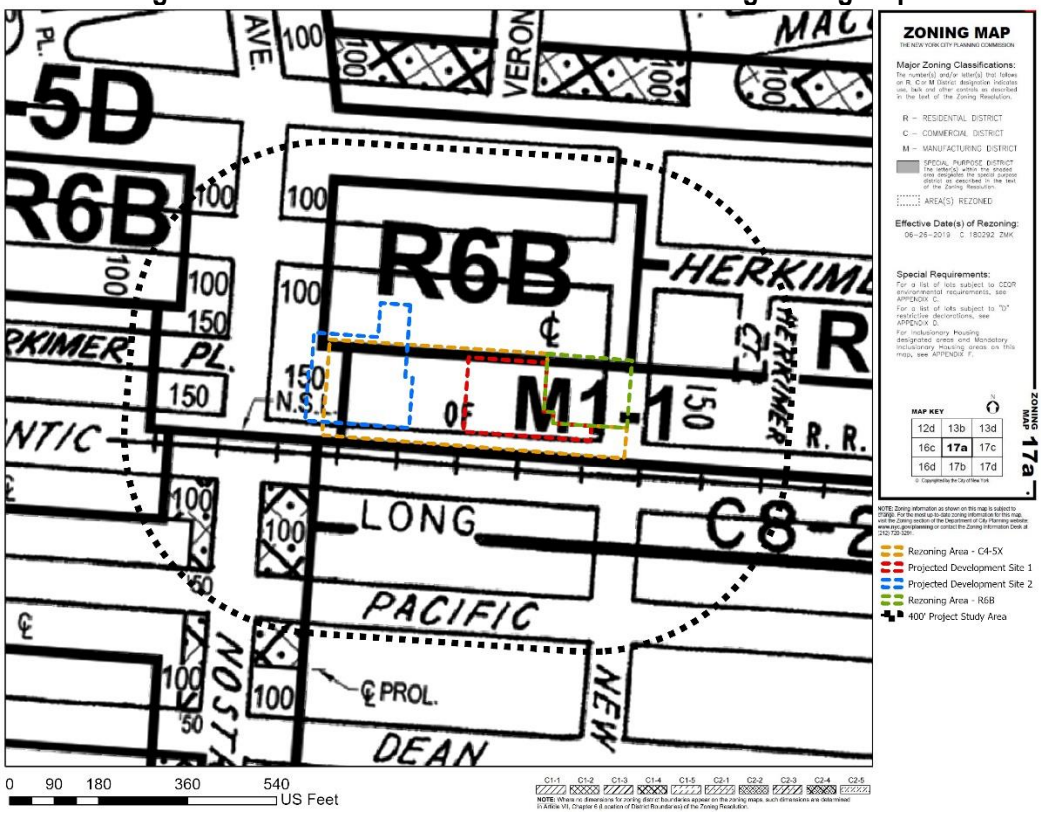
With rezoning actions in the future, the lots would assemble and have a projected lot size of approximately 39,441 SF, and would be developed with a 254,473 GSF (236,646 ZSF; 6.00 FAR) mixed-use commercial and residential building. There would be 28,713 GSF of ground floor commercial (local retail) uses and 225,760 GSF of residential uses on the upper floors. 266 total dwelling units would be provided (1 per 850 GSF), 25%-30% (67-80 units) of which would be affordable pursuant to MIH at an average of 60-80% AMI depending on the Option selected. 106 residential accessory parking spaces would be required, and 106 spaces would be provided at cellar level. No commercial parking spaces are required within the C4-5X zoning district.

The Applicant believes that the density and uses permitted by the Proposed Actions would be consistent with nearby mid-rise multi-family buildings mostly along Herkimer Street and New York Avenue. The development would also continue the recent development trend in the area: DOB records indicate that there are 8 active construction permits with 94,878 gsf of construction proposed, including 206 dwelling units in the area.

Zoning

The *2021 CEQR Technical Manual* suggests that a zoning study area should extend 400 feet from the Affected Area. Existing zoning districts within approximately 400 feet of the Affected Area are presented in **Figure 2.4-2**. The proposed zoning map amendment would affect the following lots: Block 1867, Lots p/o 41, p/o 42, p/o 53, 62, 63, 64, 65, 66, 68, p/o 72, 77, p/o 78, 80, 84, and p/o 85 from M1-1 to C4-5X, and Block 1867, Lots 61, 60, 59, 58, 57, 56, and p/o 55 from M1-1 to R6B.

Figure 2.4-2: Area to be Rezoned Overlaid Existing Zoning Map



Existing Conditions

Zoning Study Area

The zoning districts within 400 feet of the Affected Area are M1-1, R6A, R6B, C4-5D, C8-2, and C2-4 commercial overlays.

Table 2.4-2: Zoning Districts in the Surrounding Area

Zoning District	Type and Use Group (UG)	Floor Area Ratio (FAR)	Parking (Required Spaces)
M1-1	Light Manufacturing UGs 4-14, 16-17	1.0 FAR - Manufacturing 1.0 FAR - Commercial 2.4 FAR - Community Facility	1 per 300 sf
R6A	Contextual Residential UGs 1-4	3.6 FAR - Residential 3.0 FAR - Community Facility	50% of DU; 0 for IRHU
R6B	Contextual Residential UGs 1-4	2.2 FAR - Residential 2.0 FAR - Community Facility	50% of DU; 0 for IRHU
C4-5D	Contextual General Commercial UGs 1-6, 8-10, 12	4.2 FAR - Commercial 5.6 FAR – Residential 4.2 FAR - Community Facility	1 per 1,000 sf
C8-2	General Service UGs 4-14, 16	2.0 FAR - Commercial 4.8 FAR - Community Facility	1 per 400 sf
C2-4 Commercial Overlay	Local Retail UGs 1-9, 14	1.00 FAR - Commercial (R1-R5B) 2.00 FAR - Commercial (R5B - R10X)	1 per 1,000 sf

Source: Zoning Handbook, New York City Department of City Planning, 2019

Existing zoning districts in the Surrounding Area include:

M1-1

M1 districts are often developed with multistory lofts, one- or two-story warehouses characterized by loading bays, serving as a buffer between M2 or M3 districts of intensive industrial uses and adjacent residential or commercial districts. M1 districts typically include light industrial uses, such as woodworking shops, repair shops, and wholesale service and storage facilities. M1-1 Districts are mainly found in areas with one-story industrial buildings, such as the Flatlands neighborhood of Brooklyn. The FAR for manufacturing and commercial are both 1.0 in M1-1 districts while the FAR for community facility is higher, reaching 2.4.

Though one parking space per 300 square feet is common in M1-1 districts, the buildings are subject to parking requirements based on the type of use and size of an establishment. For example, a warehouse in an M1-1 district requires one off-street parking space per 2,000 square feet of floor area or per every three employees, whichever would be less.

R6A

R6A is a contextual district where the Quality Housing bulk regulations are mandatory. These regulations produce high lot coverage, six- to eight-story apartment buildings set at or near the street line. Designed to be compatible with older buildings found in medium-density neighborhoods, R6A districts are mapped in the Bronx, Brooklyn and Queens.

The basic residential FAR in R6A districts is 3.0. Above a minimum base height of 40 feet, the building must set back by at least 10 feet on a wide street and 15 feet on a narrow street before rising to its maximum height of 70 feet, or 75 feet if providing a qualifying ground floor. Higher maximum FAR and heights are available for buildings participating in the Inclusionary Housing Program or that provide certain senior facilities.

Off-street parking is generally required for 50 percent of a building's dwelling units, but requirements are lower for income-restricted housing units (IRHU) and are further modified in certain areas, such as within the Transit Zone and the Manhattan Core, or for lots less than 10,000 square feet. Parking can be waived if five or fewer spaces are required.

R6B

R6B districts are often traditional row house districts, which preserve the scale and harmonious streetscape of neighborhoods of four-story attached buildings developed during the 19th century. Many of these houses are set back from the street with stoops and small front yards that are typical of Brooklyn's "brownstone" neighborhoods, such as Park Slope, Boerum Hill and Bedford Stuyvesant.

The FAR of 2.0 and the mandatory Quality Housing regulations also accommodate apartment buildings at a similar four- to five-story scale. The base height of a new building before setback must be between 30 and 40 feet and the maximum height is 50 feet. For buildings providing a qualifying ground floor, the maximum base height and overall height increase by 5 feet. Higher maximum FAR are available for buildings participating in the Inclusionary Housing program or that provide certain senior facilities.

Off-street parking spaces are required for 50% of the dwelling units. However, requirements are lower for income-restricted housing units (IRHU) and are further modified within the Transit Zone. Parking can be waived if five or fewer spaces are required.

C4-5D

C4 districts are mapped in regional commercial centers that are located outside of the central business districts. In these areas, specialty and department stores, theaters and other commercial and office uses serve a larger region and generate more traffic than neighborhood shopping areas. Use Groups 5, 6, 8, 9, 10 and 12, which include most retail establishments, are permitted in C4 districts. Uses that would interrupt the desired continuous retail frontage, such as home maintenance and repair service stores listed in Use Group 7, are not allowed.

The commercial and residential bulk and density regulations in C4-5D districts can differ from corresponding non-contextual districts as the buildings in C4-5D districts are required to comply with the Quality Housing

Program for residential use in terms of building height and setback. Off-street parking is required for C4-5D, which is one parking space per 1,000 square feet.

C8-2

C8-2 districts, which bridge commercial and manufacturing uses, provide for automotive and other heavy commercial services that often require large amounts of land. They are mapped mainly along major traffic arteries where concentrations of automotive uses have developed.

Typical uses are automobile showrooms and repair shops, warehouses, gas stations, and car washes, although all commercial uses (except large, open amusements) as well as certain community facilities are permitted in C8 districts. Housing is not permitted in C8-2 districts and performance standards are imposed for certain semi-industrial uses. Off-street parking requirements for automotive uses in C8-2 districts require substantial parking, one parking space per 400 square feet.

C2-4 Commercial Overlay

C2-4 districts are commercial overlays mapped within residence districts. Mapped along streets that serve local retail needs, they are found extensively throughout the city's lower- and medium-density areas and occasionally in higher-density districts.

Typical retail uses include neighborhood grocery stores, restaurants and beauty parlors. In mixed buildings, commercial uses are limited to one or two floors and must always be located below the residential use.

When commercial overlays are mapped in R1 through R5 districts, the maximum commercial floor area ratio (FAR) is 1.0; when mapped in R6 through R10 districts, the maximum commercial FAR is 2.0. Commercial buildings are subject to commercial bulk rules.

Overlay districts differ from other commercial districts in that residential bulk is governed by the residence district within which the overlay is mapped. All other commercial districts that permit residential use are assigned a specific residential district equivalent. Unless otherwise indicated on the zoning maps, the depth of overlay districts ranges from 100 to 200 feet.

Affected Area

The Affected Area is zoned M1-1, which permits low-density light manufacturing developments along with commercial or community facility uses.

Analysis

Future No-Action Condition

Zoning Study Area and Affected Area

No changes to zoning would occur within the Zoning Study Area in the future without the Proposed Actions. Existing zoning patterns would remain. The Affected Area would continue to be subject to M1-1 zoning regulations.

Future With-Action Condition

Zoning Study Area

No changes to zoning would occur in the Surrounding Area in the future with the Proposed Actions.

Affected Area – R6B/C4-5X

Block 1867, Lots p/o 41, p/o 42, p/o 53, 62, 63, 64, 65, 66, 68, p/o 72, 77, p/o 78, 80, 84, and p/o 85 would be rezoned from an existing M1-1 zoning district to a C4-5X zoning district. Meanwhile, Block 1867, Lots 61, 60, 59, 58, 57, and p/o 56 would also be rezoned from an M1-1 zoning district to an R6B zoning district, bringing these lots (currently legally nonconforming) into conformance with the Zoning Resolution. The Applicant believes that the proposed C4-5X and R6B envelopes are consistent with the existing C4-5D, R6A, and R6B zoning districts mapped in the area. The proposed zoning districts would allow similar use groups which is also allowed with the existing zoning districts in the Surrounding Area, including residential, commercial, and community facility uses. The proposed zoning districts would permit medium-density mixed-use residential, commercial, and community facility development with a permanent affordable housing set aside pursuant to the MIH program, which, the Applicant believes, would fit in with the existing zoning districts within the study area.

Under the With-Action condition, the proposed R6B districts would permit a maximum of 2.2 FAR for residential use and 2.0 for community facility uses. The maximum building height within the R6B zoning district is 55 feet after a setback from the base height of up to 45 feet. Buildings must set back above the maximum base height to a depth of 10 feet on a wide street and 15 feet on a narrow street before rising to a maximum of 5 floors. Off-street parking is required for 50 percent of the residential dwelling units but is not required for income-restricted housing units within the Transit Zone.

The proposed C4-5X zoning districts would permit a maximum of 6.0 FAR for residential use, 4.0 FAR for commercial use, and 5.0 FAR for community facility uses. The maximum building height within the C4-5X zoning district is 145 feet after a setback from the base height of up to 95 feet. Buildings must set back above the maximum base height to a depth of 10 feet on a wide street and 15 feet on a narrow street before rising to a maximum of 14 floors. Off-street parking is required for 50 percent of the residential dwelling units but is not required for income-restricted housing units within the Transit Zone.

In comparison with the existing M1-1 zoning districts mapped in the Affected Area currently, the proposed R6B/C4-5X zoning districts would not permit manufacturing uses and would allow for greater bulks and higher building heights within the Affected Area, which would enhance the zoning conformity in the Surrounding Area which is predominantly zoned as residential and commercial districts.

Conclusion

The proposed zoning would result in a development consistent with nearby mid-rise multi-family buildings and commercial and office buildings to the north along Fulton Street and to the west along Nostrand Avenue. The proposed zoning district is mapped at the confluence of Atlantic Avenue and New York Avenue, which, from the Applicant's perspective, is appropriate for a higher density of residential and commercial uses while maintaining the residential character of nearby side streets. The rezoning would not adversely affect

surrounding land uses, nor would it be incompatible with those land uses. Therefore, no significant adverse impacts are anticipated to land use and zoning.

Public Policy

The project site is not part of, or subject to, an Urban Renewal Plan (URP), adopted community 197-a Plan, Solid Waste Management Plan, Business Improvement District (BID), Industrial Business Zone (IBZ), the New York City Landmarks Law, Coastal Zone, or Waterfront Access Plan. The Proposed Actions are also not a large publicly sponsored project. Therefore, consistency analyses with the NYC Waterfront Revitalization Program (WRP) and the City's PlaNYC 2050 for sustainability are not warranted.

The Proposed Actions include a Zoning Text Amendment to ZR Appendix F: Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing Areas for Community District 3, Brooklyn, to establish the Affected Area as an MIH Area under Program Option 2.

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

Where We Live NYC/Fair Housing Together Plan
The Where We Live NYC Plan is a city-led planning process developed with the goal of more integrated, equitable, and inclusive neighborhoods and the elimination of barriers that impede fair housing. The Plan is a collaborative approach designed to ensure that the voices of residents and community leaders directly informed the City's analysis, planning, and the creation of goals and strategies. An analysis was provided for the Proposed Actions to determine how the Where We Live NYC/Fair Housing Together Plan would or would not be promoted in the future No Action and With Action conditions.

Atlantic Avenue Mixed Use Plan (AAMUP)
The Atlantic Avenue Mixed-Use Plan is a community-led planning process with a primary study area along an approximately 13-block stretch of Atlantic Avenue and neighboring blocks of Crown Heights and Bedford-Stuyvesant between Vanderbilt and Nostrand Avenues. The plan aims to create an inclusive, mixed-use stretch of Atlantic Avenue that could support new housing with affordable housing, new space for jobs and services, safer and more pedestrian-friendly streets, and investments in neighborhood improvements.

Atlantic Avenue is one of Brooklyn's most important east-west corridors, connecting Downtown Brooklyn to Queens and Long Island. The plan area is in a transit-rich part of Central Brooklyn, surrounded by thriving residential neighborhoods where housing demand and costs have soared in recent decades. The current zoning rules, mostly unchanged since 1961, prevent new housing and limit job growth despite the area's proximity to mass transit, retail, schools, parks, arts and cultural institutions and more. Currently, facilitator WXY is producing an engagement report following summer 2023 community planning events to summarize community priorities and recommendations for the Atlantic Avenue area.

An analysis was provided for the Proposed Actions to determine how the Atlantic Avenue Mixed Use Plan would or would not be promoted in the future No-Action and With-Action conditions.

Analysis

Existing Condition

The Applicant-owned Projected Development Site 1 consists of six separate lots along Atlantic Avenue. Lots 63, 64, 65, and 66 are all paved lots used for parking and vehicle storage. Lot 62 is improved with a 2,189 GSF commercial building constructed in 2010 operating as a building supply store. Lot 68 is improved with a 11,927 GSF commercial structure constructed around 1910 operating as a kitchen design center.

Projected Development Site 2 consists of five separate lots to the west of the Projected Development Site 1 along Atlantic Avenue, including one- and two-story manufacturing buildings on lots 78 and 80 (.88 and 2.00 FAR); one-story commercial uses on lots 84 and 85 (1.00 FAR); and vacant and unimproved lot 77.

Other lots within the Affected Area include residential semi-detached multi-family homes along New York Avenue on lots 56, 57, 58, 59, 60, and 61 (between 1.20 and 2.07 FAR); and Lot 72, which is improved with three separate buildings containing residential and commercial uses (1.93 FAR).

Under existing condition, the two projected sites are improved with six one- and two-story buildings, totaling 21,048 GSF of commercial uses and 35,685 GSF of manufacturing uses. There are no residential units or community facility on the two Projected Development Sites. Other lots within the Affected Area include 69 residential units, which are not within MIH Area and are not considered as affordable units.

Future No-Action Condition

No changes to the residential units or community facility would occur in the future without the Proposed Actions. Existing buildings would remain. The Affected Area would continue to keep the 69 market rate housing units in total.

Future With-Action Condition

In the future with the Proposed Actions, the Applicant-Owned Projected Development Site 1 (Block 1867, Lots 62, 63, 64, 65, 66, 68) would be developed with a 174,039 GSF (162,516 ZSF; 6.00 FAR) mixed-use commercial, community facility, and residential building. There would be 21,040 GSF of ground floor commercial (local retail) uses, 17,404 GSF of second floor community facility (UG 4 ambulatory diagnostic) uses, and 135,594 GSF of residential uses on the upper floors. There would be 160 total dwelling units (1 unit per 850 GSF), 25%-30% (40-48 units) of which would be affordable pursuant to MIH at an average of 60-80% AMI depending on the Option selected. The Applicant intends to pursue Option 2, which would result in approximately 48 affordable housing units.

On Projected Development Site 2 (Block 1867, Lots 77, 78, 80, 84, 85), the lots would assemble and be developed with a 254,473 GSF (236,646 ZSF; 6.00 FAR) mixed-use commercial and residential building. There would be 28,713 GSF of ground floor commercial (local retail) uses and 225,760 GSF of residential uses on the upper floors. 266 total dwelling units would be provided (1 per 850 GSF), 25%-30% (67-80 units)

of which would be affordable pursuant to MIH at an average of 60-80% AMI depending on the Option selected.

Other lots within the Affected Area are not expected to develop and the existing buildings on these lots would remain the same under With-Action condition.

In total, the Proposed Developments on the two Projected Development Sites would add 425 residential units to the area, 25%-30% (107-128 units) of which would be set aside as permanently affordable units pursuant to MIH at an average of 60-80% AMI depending on the Option selected. Additionally, 17,404 GSF of community facility would be provided on the sites. The developments would help foster diverse and livable neighborhoods with the mixed-use buildings consisting of residential, commercial, and community facility uses in an underutilized area and ensures the housing supply increases in an equitable way, building new affordable housing units for local community.

Conclusion

The Projected Developments would provide 17,404 GSF community facility and 425 residential units on the two Projected Development Sites, including 107-128 affordable units. The Proposed Actions comply with the public policies set by Housing New York and Where We Live NYC/Fair Housing Together Plan, which aim to ensure the housing supply increases in an equitable way by activating underutilized sites for new housing. In addition, the Proposed Actions would encourage reinvestment in the Crown Heights Neighborhood, and would align with the AAMUP goals by promoting development on underutilized property proximate to an existing residential community and public transit. Therefore, no significant adverse impacts are anticipated to public policies and no further analysis is warranted.

Chapter 5: Socioeconomic Conditions

According to the *2021 CEQR Technical Manual*, a socioeconomic assessment should be conducted if a project may be reasonably expected to create socioeconomic changes within the area affected by the project that would not be expected to occur without the project. The following circumstances would typically require a socioeconomic assessment:

- The project would directly displace residential population to the extent that the socioeconomic character of the neighborhood would be substantially altered. Displacement of less than 500 residents would not typically be expected to alter the socioeconomic character of a neighborhood. For projects exceeding this threshold, assessments of the direct residential displacement, indirect residential displacement, and indirect business displacement are appropriate.
- The project would directly displace more than 100 employees. For projects exceeding this threshold, assessments of direct business displacement and indirect business displacement are appropriate.
- The project would directly displace a business that is unusually important because its products or services are uniquely dependent on its location; that, based on its type or location, is the subject of other regulations or publicly adopted plans aimed at its preservation; or that serves a population uniquely dependent on its services in its present location. Information provided in Chapter 4, "Land Use, Zoning, and Public Policy," may be useful in determining whether an assessment is appropriate. If any of these conditions is considered likely, assessments of direct business displacement and indirect business displacement are appropriate.
- The project would result in substantial new development that is markedly different from existing uses, development, and activities within the neighborhood. Such a project may lead to indirect displacement. Typically, projects that are small to moderate in size would not have significant socioeconomic effects unless they are likely to generate socioeconomic conditions that are very different from existing conditions in the area. Residential development of 200 units or less or commercial development of 200,000 square feet or less would typically not result in significant socioeconomic impacts. For projects exceeding these thresholds, assessments of indirect residential displacement and indirect business displacement are appropriate.
- The project would add to, or create, a retail concentration that may draw a substantial amount of sales from existing businesses within the study area to the extent that certain categories of business close and vacancies in the area increase, thus resulting in a potential for disinvestment on local retail streets. Projects resulting in less than 200,000 square feet of retail on a single development site would not typically result in socioeconomic impacts. If the proposed development is located on multiple sites located across an Affected Area, a preliminary analysis is likely only warranted for retail developments in excess of 200,000 sq. ft. that are considered regional-serving (not the type of retail that primarily serves the local population). For projects exceeding these thresholds, an assessment of the indirect business displacement due to market saturation is appropriate.
- If the project is expected to affect conditions within a specific industry, an assessment is appropriate. For example, a citywide regulatory change that would adversely affect the economic and operational conditions of certain types of businesses or processes may affect socioeconomic conditions in a neighborhood: (1) if a substantial number of residents or workers depend on the goods or services provided by the affected businesses; or (2) if it would result in the loss or substantial diminishment of a particularly important product or service within the city. Since the range of possible types of projects that may require an analysis of specific industries varies, the lead agency, in consultation

with the Mayor's Office of Environmental Coordination (MOEC), should provide guidance as to whether an analysis is warranted.

Methodology

Typically, the socioeconomic study area boundaries are similar to those of the land use study area. The study area encompasses the project site and adjacent area within 400 feet, 0.25 mile, or 0.5 mile, depending on project size and area characteristics. The socioeconomic assessment seeks to examine the potential to change socioeconomic character relative to the study area population. For projects that result in an increase in residential population, the scale of the relative change is typically represented as a percent increase in population.

Proposed Project Overview

Existing Conditions
The Affected Area is located on Block 1867, Lots p/o 85, 84, 80, p/o 78, 77, p/o 72, 68, 66, 65, 64, 63, 62, 61, 60, 59, 58, 57, p/o 56, p/o 53, p/o 42. In total, the Affected Area is approximately 92,000 square feet (sf) within an M1-1 zoning district, with a portion of Lot 56 within an R6B zoning district. The Projected Development Sites are approximately 66,527 sf, with a combined 35,685 GSF of existing manufacturing uses and 21,048 GSF of existing commercial uses.

Future No-Action Condition
In the future without the Proposed Actions existing conditions would remain. Under the Affected Area's existing M1-1 zoning, development of manufacturing, commercial, and community facility uses would be permitted at 1.00 FAR. No residential use would be permitted in the existing M1-1 zoning district. The residential lots fronting New York Avenue would continue to be legal, non-conforming uses within the existing M1-1 zoning district, and the zoning district's high parking requirement (1 space per 300 sf) and low FAR (1.00) make redevelopment unlikely.

Future With-Action Condition
In the future with the Proposed Actions, the Affected Area would be rezoned to C4-5X. The Applicant-owned Block 1867, Lots 68, 66, 65, 64, 63, and 62, identified as Projected Development Site 1, would develop to the maximum permitted bulk and height within the new zoning district. As a result of the proposed rezoning, the assemblage and development of Block 1867, Lots 77, 78, 80, 84, and 85 are also likely to be induced. Together these lots would assemble as one development site, Projected Development Site 2, and would max out permitted bulk and height.

Preliminary Socioeconomic Assessment

Direct Residential Displacement
There are no residential dwelling units within the Affected Area under existing conditions. The Proposed Actions would not lead to the displacement of residents. Therefore, an assessment of direct residential displacement is not warranted.

Direct Business Displacement
The Proposed Actions would introduce 49,753 GSF of commercial uses (local retail) while the existing 21,048 GSF of commercial uses (wholesaler) and 35,685 GSF of light industrial uses (automotive) would be

displaced. Assuming that the ratio for wholesaler and automotive is 1 employee per 1,000 SF, a total of 57 workers would be displaced due to the Proposed Actions. According to the *2021 CEQR Technical Manual*, for projects not exceeding the threshold of 100 employees, assessments of direct business displacement would not be required. Therefore, an assessment of direct business displacement is not warranted.

Indirect Residential Displacement

The Proposed Actions would result in a net induced development of 425 dwelling units, 25-30% (107-128 units) of which would be affordable pursuant to MIH at an average of 60-80% AMI depending on the Option selected. Pursuant to the *CEQR Technical Manual*, for projects exceeding 200 dwelling units, assessments of indirect residential displacement are appropriate. Therefore, further analysis of the potential for indirect displacement due to increased rents is warranted.

Indirect Business Displacement due to Retail Market Saturation

The Proposed Actions are projected to result in the net incremental development of 17,404 GSF of community facility use and 28,705 GSF of commercial use. Pursuant to the *CEQR Technical Manual*, for projects exceeding 200,000 square feet of retail spaces, assessments of indirect business displacement due to market saturation are appropriate. The commercial spaces of the proposed development would be far below the threshold, and therefore further analysis of indirect business displacement is not warranted.

Adverse Effects on Specific Industries

The Proposed Actions would not affect a business that provides goods or services to a substantial number of residents or workers, and would not result in the loss or substantial diminishment of a particularly important product or service within the city. Therefore, no adverse impacts to any industries would occur as a result of the Proposed Actions.

Indirect Residential Displacement Analysis

Total Population Change

1/4-Mile Study Area

Because the Proposed Actions would result in the induced development of over 200 residential units, further analysis of the potential for indirect impacts associated with increased rents was conducted, relying on the methodology of the *2021 CEQR Technical Manual*. Pursuant to *Chapter 5, Section 310 of the CEQR Technical Manual*, an initial study area of 1/4-mile radius is identified as appropriate. The Study Area was defined to include those census tracts that are more than 50% within a 1/4-mile radius of the Affected Area (**Figure 2.5-1**). The census tracts with more than 50 percent of their land area within a 1/4-mile radius of the Affected Area are census tracts 247, 269, 313, and 315.

Figure 2.5-1: Socioeconomic Study Area – 1/4 Mile

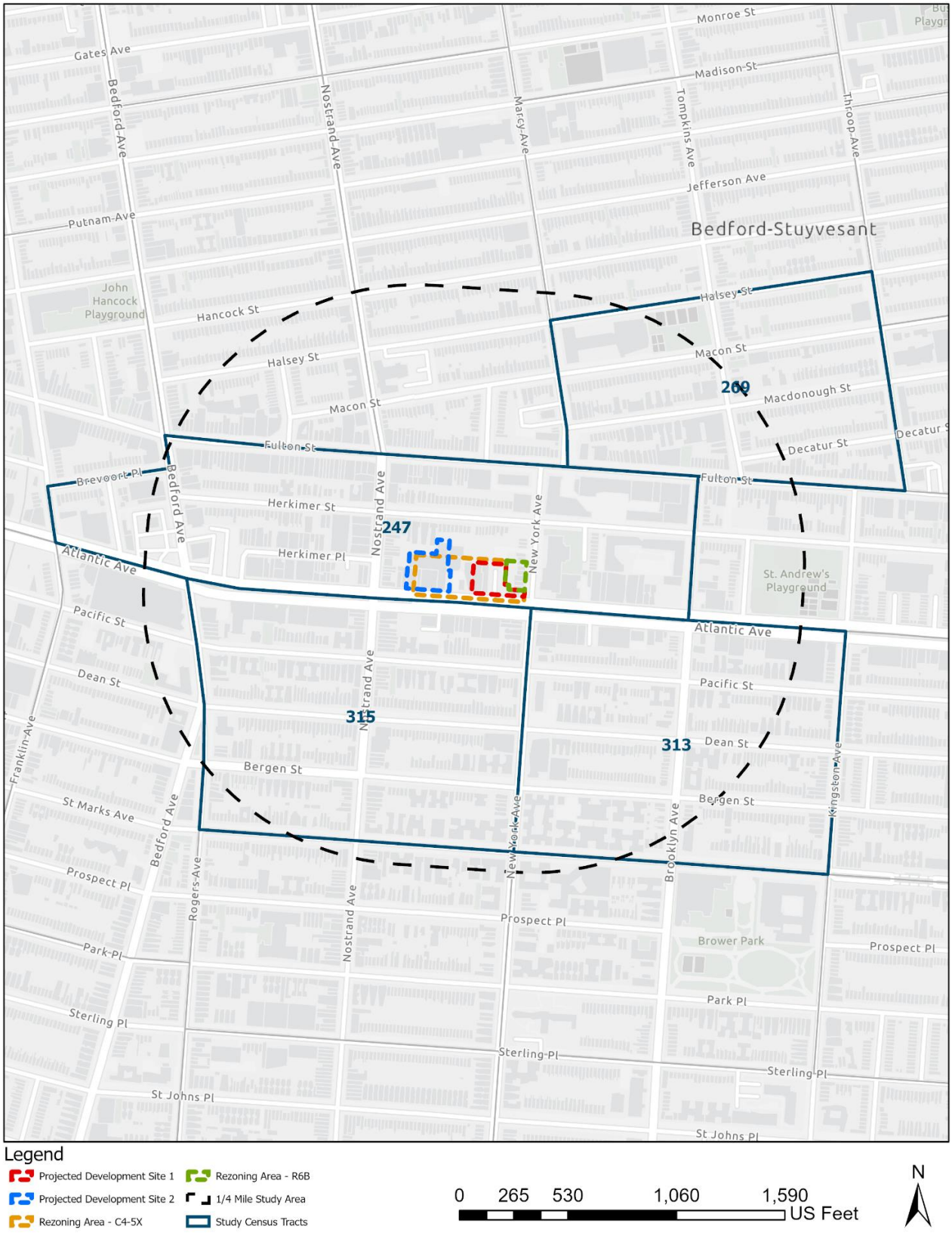


Table 2.5-1: Completed DOB Permits Within 1/4-mile Study Area Since 2020

ID	Census Tract	Address	Job Type	Permit Year	Complete Year	Class A Initial Units	Class A Proposed Units	Class A Net Units
1	247	75 Herkimer Street	New Building	2018	2021	0	4	4
2	247	141 Herkimer Street	Alteration	2019	2022	1	4	3
3	247	37 Herkimer Street	New Building	2017	2022	0	6	6
4	247	1190 Fulton Street	New Building	2019	2022	0	30	30
5	247	1259 Bedford Avenue	New Building	2021	2022	0	46	46
6	247	1255 Bedford Avenue	Alteration	2019	2020	0	12	12
7	247	570 Nostrand Avenue	New Building	2019	2021	0	25	25
8	247	177 Herkimer Street	Alteration	2018	2021	8	6	-2
9	247	25 Herkimer Street	Alteration	2018	2020	4	5	1
10	247	1316 Fulton Street	Alteration	2019	2020	3	4	1
11	247	38 Herkimer Street	Alteration	2019	2021	1	3	2
12	247	1263 Bedford Avenue	Demolition	2020	2020	3	0	-3
13	269	53 Macdonough Street	Alteration	2006	2021	2	3	1
14	269	69 Decatur Street	Alteration	2020	2022	0	4	4
15	269	124 Macdonough Street	Alteration	2016	2021	2	2	0
16	269	116 Macdonough Street	Alteration	2016	2020	1	2	1
17	269	217 Macon Street	Alteration	2017	2021	3	5	2
18	269	1425 Fulton Street	New Building	2019	2021	0	26	26
19	269	441 Tompkins Avenue	Alteration	2020	2022	4	4	0
20	269	55 Decatur Street	Alteration	2017	2021	2	4	2
21	269	38 Decatur Street	Alteration	2018	2020	2	1	-1
22	269	94 Macdonough Street	Alteration	2020	2022	3	2	-1
23	313	1374 Dean Street	Alteration	2010	2021	0	4	4
24	313	1290 Bergen Street	Alteration	2016	2021	3	1	-2
25	313	1420 Pacific Street	Alteration	2019	2022	2	2	0

ID	Census Tract	Address	Job Type	Permit Year	Complete Year	Class A Initial Units	Class A Proposed Units	Class A Net Units
26	313	777 St Marks Avenue	Alteration	2021	2022	66	71	5
27	313	1419 Pacific Street	Alteration	2018	2020	2	2	0
28	313	1308 Dean Street	Alteration	2019	2021	2	5	3
29	313	1274 Bergen Street	Alteration	2019	2021	1	2	1
30	315	132 New York Avenue	Alteration	2013	2022	2	8	6
31	315	1137 Dean Street	Alteration	2013	2021	0	5	5
32	315	685 St Marks Avenue	Alteration	2016	2022	0	8	8
33	315	1214 Pacific Street	New Building	2017	2020	0	4	4
34	315	1070 Bergen Street	Alteration	2018	2022	1	4	3
35	315	1187 Dean Street	Alteration	2019	2021	1	4	3
36	315	1227 Dean Street	Alteration	2019	2021	7	4	-3
Total						**126**	**322**	**196**

Existing Condition

As stated in *2021 CEQR Technical Manual*, to better understand the trends of changing socioeconomic conditions of the Study Area that may potentially displace a vulnerable population, it is useful to include data from the most recent decennial census as well as data from the completed DOB permits between the year of decennial survey and the current year when determining the existing population of the Study Area. The data adopted to determine the existing population includes 2020 decennial census data and DCP Housing Database Project-Level Files.

Based on the 2020 decennial estimates, the total population of the four census tracts within the 1/4-mile Study Area is 16,547 residents. According to the Project-Level DCP Housing Database, 36 permits were completed within the four census tracts in the 1/4-Mile Study Area since January 1, 2020. As shown in **Table 2.5-1** above, an increment of 196 Class A dwelling units were introduced into the 1/4-Mile Study Area as a result of the completed DOB permits. The 196 dwelling units multiplied by the average household size (2.56) for Brooklyn Community District 3 (2020 Decennial Census) comes out to 502 additional residents. In total, there would be 17,049 existing residents in the 1/4-Mile Study Area.

Future No-Action Condition

The No-Action Condition for the Study Area, projecting to the 2029 build year, is based on the household size and known developments within the Study Area. A review of active major construction projects, approved BSA applications, and approved ULURP actions was undertaken to determine known developments in the area. As shown in **Table 2.5-2** below, a total of 9 proposed projects, resulting in 129,819 GSF of development and 250 proposed dwelling units, were identified. The proposed 250 dwelling units multiplied by the average household size (2.56) for Brooklyn Community District 3 (2020 Decennial Census) comes out to 640 additional residents. The No-Action population for the Study Area would be the 640 additional residents plus the existing Study Area population of 17,049, for a total No-Action population of 17,689 residents.

Table 2.5-2: No-Action Developments within 1/4-Mile Study Area

Address	Land Use	Permit Type	SF	DU	Story
1251 Pacific Street	Residential: Walk-Up Houses	ALT 1 Enlargement	6,041	5	4
1462 Atlantic Avenue	Residential: Hotels, Dormitories	New Building	20,556	57	5
1362 Pacific Street	Residential: Apartment Houses	ALT 1 Enlargement	10,117	7	4
1370 Dean Street	Residential: Walk-Up Houses	ALT 1 Enlargement	5,511	4	3
121 Macdonough Street	Residential: 1 & 2 Family Houses	ALT 1 Enlargement	5,227	2	4
485 Tompkins Avenue	Residential: Apartment Houses	ALT 1 Enlargement	11,340	11	4
1325 Atlantic Avenue	Residential: Hotels, Dormitories	ALT 1 Enlargement	54,271	151	5
85 Herkimer Street	Residential: Walk-Up Houses	New Building	6,772	6	4
1346 Pacific Street	Residential: Apartment Houses	New Building	9,984	7	4
Total			**129,819**	**250**	

Future With-Action Condition

Compared to No-Action Conditions, the Proposed Actions would introduce 425 dwelling units, 25-30% (107-128 units) of which would be affordable pursuant to MIH at an average of 60-80% AMI depending on the Option selected. Assuming an average household size of 2.56 persons, there would be 1,088 incremental residents resulting from the Proposed Actions.

In determining whether a detailed analysis of potential indirect residential displacement is warranted, *CEQR Technical Manual Chapter 5, Section 322.1*, Step 2, stated in part, 'if the population increase is greater than 5 percent in the study area as a whole or within any identified subareas, move on to Step 3.' The incremental population increase effectuated by the Proposed Actions would be 6.15 percent (1,088 additional residents divided by 17,689 No-Action population).

1/2-Mile Study Area

The incremental population increase effectuated by the Proposed Actions would result in a population increase of 6.15% (1,088 additional residents divided by 17,689 No-Action population). Because the population increase is greater than 5 percent, the change in population would be expected to affect real estate market conditions. As shown in **Figure 2.5-2**, the study area is expanded to a 1/2-mile study area as the analysis reveals that the increase in population would exceed 5 percent in the 1/4-mile study area.

Figure 2.5-2 Socioeconomic Study Area – 1/2 Mile

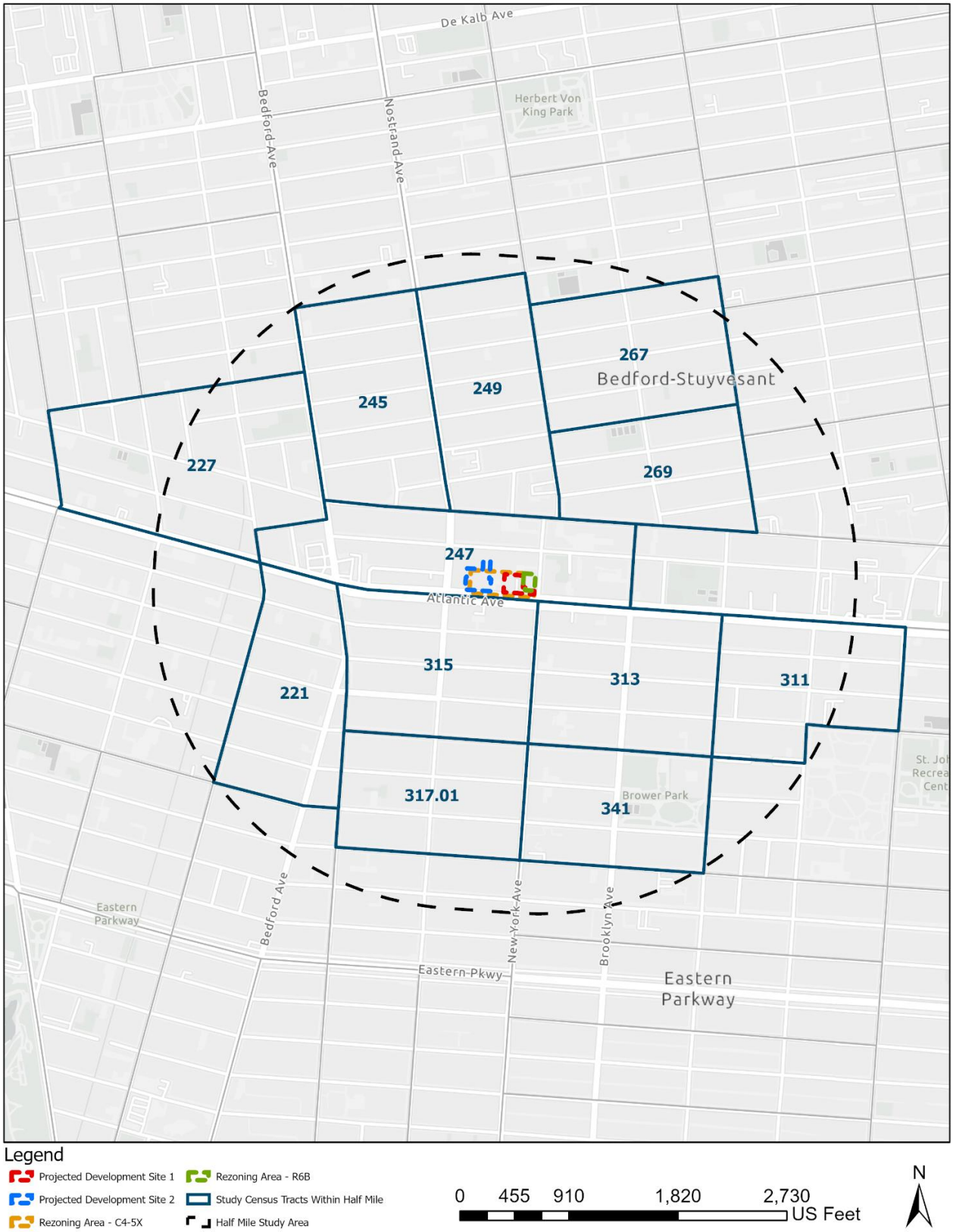


Table 2.5-3: Completed DOB Permits Within 1/2-mile Study Area Since 2020

ID	Census Tract	Address	Job Type	Permit Year	Complete Year	Class A Initial Units	Class A Proposed Units	Class A Net Units
1	221	593 St Marks Avenue	Alteration	2007	2021	2	4	2
2	221	545 St Marks Avenue	New Building	2018	2021	0	8	8
3	221	1336 Bedford Avenue	New Building	2018	2020	0	94	94
4	221	737 Park Place	New Building	2017	2020	0	2	2
5	221	659 Prospect Place	Alteration	2017	2020	2	1	-1
6	221	979 Bergen Street	Alteration	2018	2020	2	2	0
7	221	1094 Dean Street	Alteration	2019	2020	2	6	4
8	221	608 St Marks Avenue	Alteration	2019	2022	4	4	0
9	221	629 Franklin Avenue	Demolition	2020	2020	2	0	-2
10	227	110 Lefferts Place	Alteration	2011	2022	2	2	0
11	227	1043 Fulton Street	New Building	2017	2020	0	37	37
12	227	171 Lefferts Place	New Building	2019	2021	0	8	8
13	227	173 Lefferts Place	New Building	2019	2021	0	8	8
14	227	10 Hancock Street	Alteration	2016	2021	1	1	0
15	227	1134 Fulton Street	New Building	2015	2020	0	182	182
16	227	573 Classon Avenue	New Building	2017	2020	0	4	4
17	227	1111 Fulton Street	New Building	2019	2021	0	18	18
18	227	148 Lefferts Place	Alteration	2018	2021	9	4	-5
19	227	166 Lefferts Place	Alteration	2017	2022	2	2	0
20	227	172 Putnam Avenue	New Building	2018	2021	0	1	1
21	227	1230 Bedford Avenue	Alteration	2020	2022	0	8	8
22	227	84 Putnam Avenue	Alteration	2018	2020	3	2	-1
23	227	108 Downing Street	New Building	2020	2022	0	50	50
24	227	1198 Bedford Avenue	Alteration	2020	2022	2	8	6
25	227	1202 Bedford Avenue	Alteration	2020	2022	2	8	6
26	227	192 Lefferts Place	Alteration	2018	2020	1	2	1

ID	Census Tract	Address	Job Type	Permit Year	Complete Year	Class A Initial Units	Class A Proposed Units	Class A Net Units
27	227	1002 Fulton Street	Alteration	2019	2020	3	7	4
28	227	71 Lefferts Place	Alteration	2018	2022	8	5	-3
29	227	1068 Fulton Street	Alteration	2021	2021	41	41	0
30	227	531 Classon Avenue	Demolition	2021	2021	1	0	-1
31	245	18 Arlington Place	Alteration	2014	2022	2	1	-1
32	245	113 Jefferson Avenue	Alteration	2019	2021	3	2	-1
33	245	24 Halsey Street	Alteration	2015	2022	2	2	0
34	245	1265 Fulton Street	Alteration	2017	2021	8	8	0
35	245	1267 Fulton Street	Alteration	2017	2022	8	8	0
36	245	145 Hancock Street	Alteration	2017	2020	10	1	-9
37	245	244 Putnam Avenue	Alteration	2019	2022	2	2	0
38	245	215 Putnam Avenue	New Building	2020	2022	0	6	6
39	245	250 Putnam Avenue	Alteration	2019	2021	3	3	0
40	245	197 Madison Street	Alteration	2019	2021	2	2	0
41	245	19 Macon Street	Alteration	2020	2022	2	2	0
42	245	177 Madison Street	Alteration	2019	2021	2	2	0
43	245	172 Madison Street	Demolition	2022	2022	3	0	-3
44	247	75 Herkimer Street	New Building	2018	2021	0	4	4
45	247	141 Herkimer Street	Alteration	2019	2022	1	4	3
46	247	37 Herkimer Street	New Building	2017	2022	0	6	6
47	247	1190 Fulton Street	New Building	2019	2022	0	30	30
48	247	1259 Bedford Avenue	New Building	2021	2022	0	46	46
49	247	1255 Bedford Avenue	Alteration	2019	2020	0	12	12
50	247	570 Nostrand Avenue	New Building	2019	2021	0	25	25
51	247	177 Herkimer Street	Alteration	2018	2021	8	6	-2
52	247	25 Herkimer Street	Alteration	2018	2020	4	5	1

ID	Census Tract	Address	Job Type	Permit Year	Complete Year	Class A Initial Units	Class A Proposed Units	Class A Net Units
53	247	1316 Fulton Street	Alteration	2019	2020	3	4	1
54	247	38 Herkimer Street	Alteration	2019	2021	1	3	2
55	247	1263 Bedford Avenue	Demolition	2020	2020	3	0	-3
56	249	226 Hancock Street	Alteration	2009	2021	5	5	0
57	249	245 Jefferson Avenue	Alteration	2009	2022	1	4	3
58	249	125 Halsey Street	Alteration	2018	2021	1	2	1
59	249	204 Jefferson Avenue	Alteration	2015	2022	1	2	1
60	249	163A Halsey Street	Alteration	2016	2021	0	4	4
61	249	160 Hancock Street	Alteration	2017	2022	8	1	-7
62	249	16 Verona Place	Alteration	2018	2022	1	2	1
63	249	256 Jefferson Avenue	Alteration	2018	2021	2	5	3
64	249	325 Putnam Avenue	Alteration	2020	2022	6	8	2
65	249	294 Putnam Avenue	Alteration	2017	2022	1	2	1
66	249	189 Jefferson Avenue	Alteration	2018	2020	8	10	2
67	249	193 Jefferson Avenue	Alteration	2020	2021	8	8	0
68	267	421 Tompkins Avenue	Alteration	2018	2020	5	2	-3
69	267	283 Jefferson Avenue	Alteration	2016	2021	2	2	0
70	267	213 Halsey Street	New Building	2015	2020	0	4	4
71	267	476 Putnam Avenue	Alteration	2016	2021	2	4	2
72	267	199 Halsey Street	Alteration	2017	2021	2	2	0
73	267	327 Hancock Street	Alteration	2020	2022	3	2	-1
74	267	416 Madison Street	Alteration	2021	2022	3	2	-1
75	267	437 Putnam Avenue	Alteration	2018	2020	4	4	0
76	267	293 Halsey Street	Alteration	2019	2020	2	2	0
77	267	392 Jefferson Avenue	Alteration	2020	2022	2	2	0
78	267	360 Hancock Street	Alteration	2020	2022	2	2	0

ID	Census Tract	Address	Job Type	Permit Year	Complete Year	Class A Initial Units	Class A Proposed Units	Class A Net Units
79	267	386 Putnam Avenue	Alteration	2021	2021	1	2	1
80	267	333 Jefferson Avenue	Alteration	2021	2022	4	2	-2
81	267	393A Putnam Avenue	Alteration		2022	3	2	-1
82	269	53 Macdonough Street	Alteration	2006	2021	2	3	1
83	269	69 Decatur Street	Alteration	2020	2022	0	4	4
84	269	124 Macdonough Street	Alteration	2016	2021	2	2	0
85	269	116 Macdonough Street	Alteration	2016	2020	1	2	1
86	269	217 Macon Street	Alteration	2017	2021	3	5	2
87	269	1425 Fulton Street	New Building	2019	2021	0	26	26
88	269	441 Tompkins Avenue	Alteration	2020	2022	4	4	0
89	269	55 Decatur Street	Alteration	2017	2021	2	4	2
90	269	38 Decatur Street	Alteration	2018	2020	2	1	-1
91	269	94 Macdonough Street	Alteration	2020	2022	3	2	-1
92	311	1592 Pacific Street	New Building	2017	2020	0	2	2
93	311	1332 Bergen Street	Alteration	2014	2021	1	12	11
94	311	1572 Pacific Street	New Building	2019	2021	0	8	8
95	311	1633 Pacific Street	New Building	2018	2020	0	2	2
96	311	907 St Marks Avenue	Alteration	2019	2021	0	4	4
97	311	1581 Pacific Street	Alteration	2018	2021	2	4	2
98	311	917 St Marks Avenue	Alteration	2019	2020	4	4	0
99	311	1381 Bergen Street	New Building	2020	2021	0	8	8
100	311	1607 Pacific Street	Demolition	2022	2022	1	0	-1
101	313	1374 Dean Street	Alteration	2010	2021	0	4	4
102	313	1290 Bergen Street	Alteration	2016	2021	3	1	-2
103	313	1420 Pacific Street	Alteration	2019	2022	2	2	0
104	313	777 St Marks Avenue	Alteration	2021	2022	66	71	5

ID	Census Tract	Address	Job Type	Permit Year	Complete Year	Class A Initial Units	Class A Proposed Units	Class A Net Units
105	313	1419 Pacific Street	Alteration	2018	2020	2	2	0
106	313	1308 Dean Street	Alteration	2019	2021	2	5	3
107	313	1274 Bergen Street	Alteration	2019	2021	1	2	1
108	315	132 New York Avenue	Alteration	2013	2022	2	8	6
109	315	1137 Dean Street	Alteration	2013	2021	0	5	5
110	315	685 St Marks Avenue	Alteration	2016	2022	0	8	8
111	315	1214 Pacific Street	New Building	2017	2020	0	4	4
112	315	1070 Bergen Street	Alteration	2018	2022	1	4	3
113	315	1187 Dean Street	Alteration	2019	2021	1	4	3
114	315	1227 Dean Street	Alteration	2019	2021	7	4	-3
115	317	660 St Marks Avenue	Alteration	2014	2022	1	2	1
116	317	800 Park Place	New Building	2016	2020	0	8	8
117	317	636 St Marks Avenue	Alteration	2016	2021	3	4	1
118	317	674 St Marks Avenue	Alteration	2016	2021	5	1	-4
119	317	835 Prospect Place	Alteration	2017	2021	4	2	-2
120	317	896 Park Place	Alteration	2018	2020	1	3	2
121	317	825 Prospect Place	Alteration	2020	2022	1	3	2
122	317	791 Sterling Place	Alteration	2020	2021	6	15	9
123	317	105 Rogers Avenue	Demolition	2020	2020	3	0	-3
124	317	732 St Marks Avenue	Alteration	2020	2022	21	22	1
125	341	208 Brooklyn Avenue	Alteration	2001	2022	1	2	1
126	341	906 Prospect Place	New Building	2017	2020	0	22	22
127	341	970 Park Place	Alteration	2017	2021	1	1	0
Total						**394**	**1,096**	**702**

Existing Condition

The population of the 1/2-Mile Study Area, based on the 2020 decennial estimates, is 47,583 residents. According to the Project-Level DCP Housing Database, 127 permits were completed within the twelve census tracts in the 1/2-mile Study Area since January 1, 2020. As shown in **Table 2.5-3** above, an increment of 702 Class A dwelling units were introduced into the 1/2-Mile Study Area as a result of the completed DOB permits. The 702 dwelling units multiplied by the average household size (2.56) for Brooklyn Community District 3 (2020 Decennial Census) comes out to 1,797 additional residents. In total, there would be 49,380 existing residents in the 1/2-Mile Study Area.

Future No-Action Condition

The No-Action Condition for the 1/2-Mile Study Area, projecting to the 2029 build year, is based on the household size and known developments within the 1/2-Mile Study Area. A review of active major construction projects, approved BSA applications, and approved ULURP actions was undertaken to determine known developments in the area. The 1045 Atlantic Avenue Rezoning, which is located approximately 0.5 mile west of the Projected Development Sites, will be included in this analysis as it is more conservative in terms of the Socioeconomics analysis. As shown in **Table 2.5-4** below, a total of 30 proposed projects with active construction permits and 1 proposed rezoning currently under ULURP process, resulting in 1,275,811 GSF of development and 1,427 proposed dwelling units, were identified. The proposed 1,427 dwelling units multiplied by the average household size (2.56) for Brooklyn Community District 3 (2020 Decennial Census) comes out to 3,653 additional residents. The No-Action population for the Study Area would be the 3,653 additional residents plus the existing Study Area population of 49,380, for a total No-Action population of 53,033 residents.

Table 2.5-4: No-Action Developments within 1/2-Mile Study Area

Address	Land Use	Permit Type	SF	DU	Story
1251 Pacific Street	Residential: Walk-Up Houses	ALT 1 Enlargement	6,041	5	4
1462 Atlantic Avenue	Residential: Hotels, Dormitories	New Building	20,556	57	5
1362 Pacific Street	Residential: Apartment Houses	ALT 1 Enlargement	10,117	7	4
1370 Dean Street	Residential: Walk-Up Houses	ALT 1 Enlargement	5,511	4	3
105 Rogers Avenue	Residential: Apartment Houses	New Building	21,137	14	7
1607 Pacific Street	Residential: Apartment Houses	New Building	7,729	8	4
194 Monroe Street	Residential: Walk-Up Houses	ALT 1 Enlargement	3,514	3	4
131 Madison Street	Residential: Apartment Houses	ALT 1 Enlargement	6,000	8	4
360 Tompkins Avenue	Residential: Walk-Up Houses	ALT 1 Enlargement	5,330	4	4
390 Madison Street	Residential: 1 & 2 Family Houses	ALT 1 Enlargement	2,976	1	3
256 Putnam Avenue	Residential: Walk-Up Houses	ALT 1 Enlargement	0	4	4
357 Hancock Street	Residential: 1 & 2 Family Houses	ALT 1 Enlargement	4,429	2	4
121 Macdonough Street	Residential: 1 & 2 Family Houses	ALT 1 Enlargement	5,227	2	4
485 Tompkins Avenue	Residential: Apartment Houses	ALT 1 Enlargement	11,340	11	4
1325 Atlantic Avenue	Residential: Hotels, Dormitories	ALT 1 Enlargement	54,271	151	5
531 Classon Avenue	Residential: Apartment Houses	New Building	9,708	8	4
448 Franklin Avenue	Residential: Walk-Up Houses	ALT 1 Enlargement	4,860	5	3
1187 Fulton Street	Residential: Walk-Up Houses	New Building	6,982	3	4

Address	Land Use	Permit Type	SF	DU	Story
1118 Fulton Street	Mixed-Use	New Building	13,060	11	6
85 Herkimer Street	Residential: Walk-Up Houses	New Building	6,772	6	4
963 Atlantic Avenue	Residential: Apartment Houses	New Building	119,648	124	9
1147 Bedford Avenue	Residential: Apartment Houses	ALT 1 Enlargement	7,520	8	4
435 Tompkins Avenue	Residential: Apartment Houses	New Building	38,259	40	7
1010 Fulton Street	Mixed-Use	New Building	11,000	8	7
689 Franklin Avenue	Residential: Apartment Houses	New Building	10,130	8	4
174 Madison Street	Residential: Walk-Up Houses	New Building	7,048	4	4
1346 Pacific Street	Residential: Apartment Houses	New Building	9,984	7	4
12 Halsey Street	Mixed-Use	New Building	237,518	222	10
955 Sterling Place	Residential: Apartment Houses	New Building	150,899	158	7
445 Grand Avenue	Mixed-Use	New Building	120,809	112	9
1045 Atlantic Avenue*	Mixed-Use	New Building	357,436	422	17
Total			**1,275,811**	**1,427**	

* 1045 Atlantic Avenue is an ongoing ULURP rezoning

Future With-Action Condition

Compared to No-Action Conditions, the Proposed Actions would introduce 425 dwelling units, 25-30% (107-128 units) of which would be affordable pursuant to MIH at an average of 60-80% AMI depending on the Option selected. Assuming an average household size of 2.56 persons, there would be 1,088 incremental residents resulting from the Proposed Actions.

The incremental population increase effectuated by the Proposed Actions would result in a population increase of 2.05% (1,088 additional residents divided by 53,033 No-Action population) within 1/2-Mile Study Area. Because the population increase is lower than 5 percent, the change in population would not be expected to affect real estate market conditions within the 1/2-Mile Study Area.

Housing Rent and Household Income

Study Area Household Income

Household income characteristics within the 1/2-mile study area can be revealed with the median household income, the mean household income, and the percentage of households below poverty level. The median household income divides the household income distribution into two equal parts with half having income above that amount and half having income below that amount. Unlike the median household income, the mean household income is the amount obtained by dividing the total aggregate income of all households by the number of households, which is more affected by the relatively unequal distribution of the income that tilts towards the top. As a result, the mean household income is typically higher than the median household income given that the top earning households could boost the number. The percentage of households below poverty level is also important in forming a comprehensive understanding of the household income as the poverty level is determined by the Census Bureau with an official poverty measure that compares pre-tax

cash income against a threshold that is set at three times the cost of a minimum food diet in 1963 and adjusted for family size.

Table 2.5-5: Household Income Characteristics of 1/2-Mile Study Area, Brooklyn, and NYC

	Median Household Income	Mean Household Income	Households Below Poverty Level
2006-2010 5-year ACS			
1/2-Mile Study Area	$44,529	$60,442	21.00%
Brooklyn	$51,196	$73,627	18.80%
New York City	$59,090	$91,537	16.20%
2017-2021 5-year ACS			
1/2-Mile Study Area	$83,086	$112,569	10.50%
Brooklyn	$67,753	$103,893	14.90%
New York City	$70,663	$113,315	13.60%

As shown in **Table 2.5-5** above, referencing the 2006-2010 ACS and 2017-2021 ACS estimates at NYC Planning Population FactFinder[2], the 1/2-mile study area has a lower median household income ($44,529) and mean household income ($60,442) than those in Brooklyn ($51,196 for median household income and $73,627 for mean household income) and in NYC ($59,090 for median household income and $91,537 for mean household income) as of 2010. In 2021, the median household income within the 1/2-mile study area has increased by 86.59% to $83,086, which becomes the highest compared to that in Brooklyn ($67,753) and in NYC ($70,663). The mean household income within the 1/2-mile study area also has experienced the biggest jump of 86.24% to reach $112,569 in 2021, which is higher than the mean household income of Brooklyn ($103,893) while is slightly lower than that in NYC ($113,315).

The percentage of the households below poverty level in the 1/2-mile study area is 21.00% as of 2010, which is the highest compared to that in Brooklyn (18.80%) and in NYC (16.20%). In 2021, however, the household poverty rate within the 1/2-mile study area decreased by 10.50% to 10.50%, which becomes the lowest compared to those of Brooklyn (14.90%) and NYC (13.60%) that have decreased by 3.90% and 2.60% from 2010 to 2021, respectively.

Although the changes in the household income numbers and household poverty rates are not considered statistically reliable or significant, it can be viewed as directionally accurate and indicative of increasing household incomes and decreasing household poverty rates within the 1/2-mile study area. The increasing household median and mean incomes and the decreasing household poverty rate show an observable trend towards higher earning residents within the study area census tracts.

Study Area Market Rent

The US Census provides information on median contract rent, which reflects the range of rents for both units of different sizes and ages and occupants who may have moved in recently or lived in their units for a long time. However, these data are of limited use because they fail to distinguish between units subject to market rents and those under some form of rent regulation. To understand the current trends, particularly trends affecting unregulated rental units, the rental data from ACS should be supplemented by information from real estate brokers and examination of current rental apartment listings.

[2] https://popfactfinder.planning.nyc.gov/

Though utilizing the median gross rent from the ACS data to determine market rents in a study area is not recommended as ACS rents do not distinguish between market and rent regulated units, often making the data difficult to parse, the value of ACS rent data lies in its ability to show trends over time as opposed to the actual values. Therefore, the 2006-2010 ACS and 2017-2021 ACS have been adopted to show the trend of rent change in the 1/2-mile study area, Brooklyn, and New York City.

Table 2.5-6: Median Gross Rent of 1/2-Mile Study Area, Brooklyn, and NYC

	2006-2010 ACS	2017-2021 ACS	Percentage Change
1/2-Mile Study Area	$1,140	$1,772	55.44%
Brooklyn	$1,200	$1,582	31.83%
New York City	$1,259	$1,579	25.42%

As shown in **Table 2.5-6** above, the median gross rent within the 1/2-mile study area was the lowest at around $1,140, compared to that in Brooklyn ($1,200) and in New York City ($1,259) in 2010. However, the 1/2-mile study area has a higher median gross rent of $1,772 compared to that in Brooklyn ($1,582) and in New York City ($1,579) in 2021. The median gross rent increase rate within the 1/2-mile study area is the highest from 2010 to 2021, reaching 55.44%, compared to 31.83% increase in Brooklyn and 25.42% increase citywide. As described above, though the ACS median gross rent data is considered to be of limited use, it still indicates that the 1/2-mile study area may have experienced a readily observable trend toward increasing rents in the last decade.

Table 2.5-7: GRAPI Comparison of 1/2-Mile Study Area, Brooklyn, and NYC

	Less than 15%	15% to 30%	30% or more
2006-2010 5-year ACS			
1/2-Mile Study Area	10.10%	40.00%	49.90%
Brooklyn	12.90%	42.80%	44.30%
New York City	14.40%	43.20%	42.40%
2017-2021 5-year ACS			
1/2-Mile Study Area	14.80%	40.90%	44.30%
Brooklyn	13.60%	33.80%	52.60%
New York City	14.70%	33.10%	52.20%

Further investigation was undertaken regarding gross rent as a percentage of household income (GRAPI). The comparisons between the GRAPI values for the 1/2-mile study area and the city/Brooklyn are statistically valid as the margin of error of the difference is no larger than 1/3 of the difference itself. As shown in **Table 2.5-7** above, as of 2010, the households that spend 15% to 30% of their household income on gross rent within the 1/2-mile study area constitute 40.0% of the total households paying rent, which has slightly increased to 40.90% in 2021. As for the households that spend more than 30% of the total income on the gross rent, the percentage of such rent-burdened households in the study area has dropped by 5.60% from the highest (49.90%) in 2010 to the lowest (44.30%) in 2021 compared to those in Brooklyn and New York City. The household percentage structure of GRAPI in the 1/2-mile study area indicates that the area has a healthier rent market compared to the market in Brooklyn and New York City as 55.7% of households in the

area pay less than 30% of the total income on rent in 2021, which is higher than those in Brooklyn (47.4%) and New York City (47.8%).

In addition to the ACS data, a more appropriate data source for determining market rents in the 1/2-Mile Study Area would be from professional market reports of real estate agency websites. Since most real estate reports use neighborhood as the basic geographic unit, Crown Heights, where the Affected Area is located, and Bedford-Stuyvesant, the closest neighborhood which is witnessing a robust rental market, were used as the alternative and comparable of the 1/2-Mile Study Area in the market rate rental price research respectively. Instead of choosing the data from Year 2021, market reports in 2019 were reviewed to eliminate the huge negative impact of COVID pandemic on the NYC rental.

According to *Douglas Elliman's December 2019 Manhattan, Brooklyn, and Queens Rentals Report*[3], Brooklyn experienced yearly rises in the median rental price and average rental price by 9.2% and 9.5%, respectively. Further supplemented by the sliced data from *StreetEasy Data Dashboard* website[4], the median asking rent in Crown Heights was $2,399 in Feb 2019, which increased to $2,640 in Feb 2020. Bedford-Stuyvesant had a comparable median asking rent, which was $2,450 in Feb 2019 and $2,537 in Feb 2020.

The *M.N.S Real Estate NYC 2019 Year End Market Report*[5], which features a more detailed perspective in the average rental prices of different unit types in both Brooklyn and specific neighborhoods, also proves the trend of steadily increasing rent in the area. The report shows that the average rental prices in Brooklyn increased across all unit types in 2019. Average studio rental prices increased by 4.1% from $2,231 to $2,323, one-bedroom rental prices increased by 5.6% from $2,689 to $2,841, and two-bedroom rental prices increased by 6.2% from $3,495 to $3,712. Overall, the average rental price for a unit in Brooklyn was $2,959, up 5.5% from 2018's overall average of $2,805. The 2019 studio average rental price in Crown Heights increased approximately 3.9% from 2018 to $1,946. From 2018 to 2019, the average one-bedroom rental price went up by 1.4% to $2,225, and the average two-bedroom rental price also increased by 3.4% to $2,598. Over 2019, Bedford-Stuyvesant also experienced a rise in the rents, where studio prices increased by 0.3% to $1,898, one-bedroom prices increased by 3.5% to $2,241, and two-bedroom pricing increased by 4.9% to $2,604 in 2019.

To determine the current market-rate rents for the study area, the website StreetEasy[6] was consulted. For the 1/2-mile study area census tracts, rental prices ranged from $1,350 to $5,995, which is indicative of an area in transition that has seen a large number of private rezonings and developments in recent years. The range of market rents is shown below in **Table 2.5-8**, along with two columns showing the estimated annual household income to afford the rent. Typically, rents are estimated to be 30% of the household incomes.

Table 2.5-8: 1/2-Mile Study Area StreetEasy Market Rent

Bedrooms	Low Rent	High Rent	Annual Household Income Estimate (Low)	Annual Household Income Estimate (High)
Studio	$1,350	$2,850	$54,000	$114,000
1BR	$1,500	$3,595	$60,000	$143,800

[3] https://www.elliman.com/resources/siteresources/commonresources/static%20pages/images/corporate-resources/q4_2019/rental%2012_2019.pdf

[4] https://streeteasy.com/blog/data-dashboard/

[5] http://www.mns.com/pdf/brooklyn_year_end_market_report_2019.pdf

[6] https://streeteasy.com/blog/data-dashboard/

2BR	$1,725	$5,995	$69,000	$239,800
3BR	$2,250	$4,900	$90,000	$196,000

Proposed Building Household Income and Market Rent Estimates

Since new development tends to be at the higher end of the rents, the third quantile of market rent range in the study area would be referred as the potential rent of the proposed market-rate units, which is approximately $2,475 for studio, $3,071 for one-bedroom, $4,928 for two-bedroom, and $4,238 for three-bedroom**.** Accordingly, the estimated annual household income to afford the rent would be $99,000 for studio, $122,850 for one-bedroom, $197,100 for two-bedroom, and $169,500 for three-bedroom**.**

The Proposed Actions would introduce an increment of 425 dwelling units on the two Projected Development Sites, with 25-30% (107-128 units) of the residential floor area permanently set aside at an average of 60-80% AMI depending on the Option selected. The expected household income in the proposed market-rate units would be approximately $99,000 for studio, $122,850 for one-bedroom, $197,100 for two-bedroom, and $169,500 for three-bedroom as per StreetEasy market rent data. As described above, since the proposed affordable units would be permanently set aside at or below 80% AMI, the maximum expected household income in the proposed affordable units would be $85,920 for a household of three people in 2021 based on the New York City Area Median Income provided on the New York City Department of Housing Preservation and Development (HPD) shown in **Table 2.5-9** below.

Table 2.5-9: New York City Area Median Income in 2021[7]

Family Size	30% AMI	50% AMI	70% AMI	80% AMI	100% AMI	120% AMI	130% AMI
1 Person	$25,080	$41,800	$58,520	$66,880	$83,600	$100,320	$108,680
2 Persons	$28,650	$47,750	$66,850	$76,400	$95,500	$114,600	$124,150
3 Persons	$32,220	$53,700	$75,180	$85,920	$107,400	$128,880	$139,620
4 Persons	$35,790	$59,650	$83,510	$95,440	$119,300	$143,160	$155,090

As analyzed above, the household income and market rents of the proposed dwelling units on the two Projected Development Sites would be on the higher end of the existing market rate rents and household income. Although the proposed affordable units would be permanently set aside at an average of 60-80% AMI depending on the Option selected, the overall average income of the introduced population would likely be higher than that of the surrounding study area.

A socioeconomics analysis also needs to determine if the Proposed Actions would increase the study area's population in an amount 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 warranted as the change would not be expected to affect real estate market conditions.

As discussed above, the With-Action Condition population would result in a 2.05 percent increase over the No-Action Condition, which would be below the threshold requiring further analysis.

[7] https://www1.nyc.gov/site/hpd/services-and-information/area-median-income.page

Conclusion

Induced development resulting from the Proposed Actions would continue established trends of population growth in the area, would not add new population with much higher average incomes compared to the average incomes of the existing populations, and would not significantly affect socioeconomic conditions. As indicated above, the Proposed Actions are anticipated to result in a 6.15% increase to the 1/4-Mile Study Area population and a 2.05% increase to the 1/2-Mile Study Area, but there would not be a readily observable trend toward increasing rents and new market rate development in the half-mile study area. In addition, no additional or different impacts would occur based on *2021 CEQR Technical Manual* update. Therefore, no further analysis is warranted.

Chapter 7: Open Space

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

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

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

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

Direct effects to open space are addressed in the sections for those specific technical areas where warranted. Construction impacts to open space are not anticipated as there would be no physical loss of public open space, no change in existing open space so that it no longer serves the same user population, would not limit public access and would not increase noise or air pollutant emissions, odors, or shadows on public open space that would affect its usefulness. An assessment of the effects of the Proposed Actions related to shadows on open space resources is provided in **Section 2.8**.

Methodology

According to the guidelines of the *2021 CEQR Technical Manual* for analysis of residential development, census tracts with at least half of their geographic area within a one-half mile radius of the Affected Area comprise the open space study area. Using current population figures, an open space ratio is calculated for both the future no-action and future with-action conditions, expressed as the amount of open space acreage per 1,000 user population. Typically, a comparison is made to the city's planning goal of 2.50 acres per 1,000 residents. Ideally, this would comprise 0.50 acres (20 percent) of passive space and 2.0 acres (80 percent) of active open space per 1,000 residents. For nonresidents who tend to use passive open space, for example workers taking a break in a park, the optimal ratio for nonresidential populations is 0.15 acres of passive open space per 1,000 nonresidents.

In addition to the field survey conducted in the sunny afternoon on July 8th, 2020, information from the NYC Department of City Planning's Community District Needs Statements, NYC Parks Department website, and U.S. Census data were utilized in preparing the open space analysis.

Preliminary Open Space Assessment

The Proposed Actions would result in a net increment of 371,779 GSF of development, including 361,354 GSF of residential floor area, 28,705 GSF of commercial floor area, and 17,404 GSF of community facility floor area. Meanwhile, a reduction of 35,685 GSF of manufacturing floor area would occur as a result of the replacement of the existing buildings. The Proposed Actions are projected to result in the development of 425 dwelling units within the Affected Area. Assuming an average occupancy of 2.56 persons based on the average household size within Brooklyn Community District 3 (2020 Decennial Census), population introduced as a result of the Proposed Actions would be approximately 1,088 residents. Adding together the increase in commercial floor area and community facility floor area, there would be approximately 144 more employees as a result of the Proposed Actions. The threshold for assessment of the potential for indirect impacts is 200 new residents or 500 additional employees. Therefore, an assessment of indirect effects on public open space resources is warranted. The Proposed Actions would introduce fewer than 500 additional employees, as such the preliminary assessment addresses the residential population introduced by the Proposed Actions.

Study Area Definition

In accordance with the guidelines established in the City's *CEQR Technical Manual*, the open space study area is defined to analyze both the nearby open spaces and the population using those open space resources. It is generally defined by a reasonable walking distance that users would travel to reach local open spaces and recreational areas. Pursuant to the *CEQR Technical Manual*, the open space study area includes all U.S. Census Tracts that have 50 percent or more of their area within a half-mile radius of the Affected Area for residential users. As shown in **Figure 2.7-1**, the following Census Tracts that have 50% or more of their area within the 1/2-mile study area are 221, 227, 245, 247, 249, 267, 269, 311, 313, 315, 317.01, and 341.

Figure 2.7-1: Open Space Study Area Census Tracts



Study Area Population

Existing Conditions

Based on the 2020 Decennial Census Data, the study area defined above, as of 2020, had a population of 47,583 residents. According to the Project-Level DCP Housing Database, 127 permits were completed within the twelve census tracts in the 1/2-mile Study Area since January 1, 2020. Accordingly, an increment of 702 Class A dwelling units were introduced into the 1/2-Mile Study Area as a result of the completed DOB permits. The 702 dwelling units multiplied by the average household size (2.56) for Brooklyn Community District 3 (2020 Decennial Census) comes out to 1,797 additional residents. In total, there would be 49,380 existing residents in the 1/2-Mile Study Area.

Future No-Action Conditions

No residential development would occur in the future without the Proposed Actions within the Affected Area. There are 30 active construction permits and 1 ongoing ULURP rezoning (1045 Atlantic Avenue Rezoning) within the study area, with 1,427 proposed new dwelling units. Using the same 2.56 residents per household figure as above, the no-action condition would have 3,653 new residents introduced to the study area by the 2029 build year. The no-action population would therefore be the existing population of 45,963 residents plus the 2,540 new residents introduced by the active construction projects and the proposed rezoning, for a total no-action population of 53,033 residents.

Future With-Action Conditions

The With-Action population would be the no-action population of 53,033 residents described above plus the 1,088 residents anticipated as a result of the Proposed Actions. The With-Action population would be 54,121 residents.

Table 2.7-1: Existing, No-Action, and With-Action Populations

Existing	No-Action	With-Action
49,380	53,033	54,121

Existing = 2020 Decennial Census data plus residents from completed DOB permits since 2020; No-Action = Existing plus 1,427 proposed dwelling units from active DOB permits and filed rezoning under ULURP; With-Action = No-Action plus 1,088 additional residents from the Projected Development Sites

Open Space Resources

Six open space resources within the study area were identified in **Table 2.7-2**. There are 14.91 acres of open spaces resources in the Study Area—11.18 are considered active and 3.73 are considered passive based on field visits and a review of open space site plans. The location of these resources, as well as community gardens present in the Study Area, are shown in **Figure 2.7-1.**

Table 2.7-2: Open Space Resources

Name	Address	Ownership	Acreage	% Active	% Passive	Total Active	Total Passive	Features
P.S. 93 Playground*	Herkimer St. bet. New York Ave. and Brooklyn Ave.	NYC DOE	0.41	75	25	0.31	0.10	Pg
Brower Park	St. Mark's Ave., Park Pl. bet. Brooklyn Ave. and Kingston Ave.	NYC DPR	7.05	75	25	5.29	1.76	BC, Ba, HC, Pg, SP, SS
St. Andrew's Playground	Atlantic Ave., Herkimer St., Kingston Ave., St Andrew's Pl.	NYC DPR	3.39	75	25	2.54	0.85	BC, Ba, HC, Pg, SS
John Hancock Playground	Bedford Ave., Hancock St., Jefferson Ave.	NYC DPR	1.55	75	25	1.16	0.39	BC, HC, Pg, SS
Hattie Carthan Playground	Monroe St. to Madison St. between Marcy Ave. and Tompkins Ave.	NYC DPR	1.20	75	25	0.90	0.30	BC, Ba, HC, Pg, SS
Potomac Playground	Tompkins Ave. between Halsey St. and Macon St.	NYC DPR	1.31	75	25	0.98	0.33	Ba, HC, Pg, SS
Total			14.91	75	25	11.18	3.73	

* This is a Schoolyards to Playgrounds site regularly open to the public during non-school hours.

SS = Spray Showers; Pg = Playgrounds; BC = Basketball Courts; Ba = Bathrooms; BF = Baseball Fields; HC = Handball Courts; SP = Skate Parks

Figure 2.7-2: Open Space Location in Study Area



Analysis

Existing Conditions

The study area has 14.91 acres of open space and an existing residential population of 49,380. The open space ratio (OSR) under existing conditions is 0.302 acres per thousand residents.

Future No-Action Conditions

In the future without the Proposed Actions, the population for the Study Area in the 2029 build year is forecasted to be 53,033 and is projected to be served by the same 14.91 acres of open space as in the existing condition. With this population, the OSR would be 0.281.

Future With-Action Conditions

The Proposed Actions would result in an increase in the No-Action population by 1,088 residents by the 2029 build year. The total 2029 build year With-Action population would be 54,121. With this increase in population, the OSR would be 0.275 acres per 1,000 residents, or a 2.01 percent reduction from the No-Action OSR.

Pursuant to the *2021 CEQR Technical Manual*, projects expected to result in a decrease in the open space ratio should consider the following to determine if a more detailed analysis is warranted:

- Projects in study areas where the open space ratio approaches or exceeds the City's planning goal of 2.5 acres per 1,000 residents, may generally tolerate up to a five percent decrease of the open space ratio before considering the need for more detailed analysis.
- For projects in study areas where the open space ratio is not near the City's planning goal of 2.5 acres per 1,000 residents, the percentage decrease in open space ratio is weighed against how the open space ratio of the study area compares to the City's planning goal for open space. Table 7-1 of the *2021 CEQR Technical Manual* (**Table 2.7-3**Error! Reference source not found. below) provides general guidelines for ranges of open space ratios and acceptable percentage changes.
- Projects that have an effect on a nonresidential population's use of passive open space would not follow the guidelines presented in the below table, and should consider the need for a detailed assessment based on a comparison of the open space ratio to the optimal ratio of 0.15 acres of passive space per 1,000 nonresidents. Projects that lead to the non-residential open space ratio to drop below the optimal ratio of 0.15 acres of passive open space per 1,000 non-residents may warrant a more detailed assessment.

Under the No-Action and With-Action Conditions, the overall residential OSR in the area would be below 2.5 acres per thousand residents, which is the planning goal in NYC. Under Future With-Action Condition, the OSR would be 0.275 acres per 1,000 residents, or a 2.01 percent reduction from the No-Action OSR. Using Error! Reference source not found. **Table 2.7-3**Error! Reference source not found. below, the Proposed Actions would warrant a detailed analysis of open space as the decrease in OSR under the With-Action Condition would exceed 1%.

Table 2.7-3: Preliminary Assessment Guidance for Percentage Change in Open Space Ratio

Open Space Ratio Range	Percentage Change in Open Space Ratio
2.01 to 2.50* or greater	5%
1.51 to 2.00	4%
1.01 to 1.50	3%
0.51 to 1.00	2%
0.50 or Less	1%
*2.5 OSR is the planning goal in NYC	

Walk to a Park Service Area Assessment

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

Per the *2021 CEQR Technical Manual*, part of the preliminary assessment for open space, a project should be reviewed to determine if it is located in an area of the city within a Walk to a Park Service Area. Project sites that are located outside of a Walk to a Park Service Area (i.e., located in a known walk gap areas) suggests there is a need for a detailed analysis to be performed to determine if the project may further exacerbate a condition of residents living in areas of the city with inadequate park access, potentially leading to a significant impact. While the focus of the Walk to a Park initiative is on residents living within walking distance to a park, projects that create a non-residential population (e.g., new workers) should also review if the project is located within a known walk gap and assess if the project would generate a new non-residential population within areas of the City with inadequate access to open space resources. As per the *2021 CEQR Technical Manual*, when determining if a detailed open space assessment is warranted, the preliminary assessment should include a discussion of the Project Site's proximity to nearby regional parks, or other substantial open space resources located within or just outside the 1/2-mile study area boundary.

As shown below in **Figure 2.7-3**, the Affected Area is located within a Walk to a Park Service Area.

Figure 2.7-3: Walk to Park Service Area Map



Preliminary Open Space Assessment Conclusion

Under the existing, No-Action, and With-Action conditions, the OSR in the area would be below the city's planning goal of 2.5 acres per thousand residents. Pursuant to Table 7-1 of the *2021 CEQR Technical Manual* OSR's between 0.50 or less can tolerate up to a 1 percent decrease in the OSR between the Future No-Action and Future With-Action Condition without warranting additional analyses. Given the analysis above, the Proposed Actions would reduce the OSR by 2.01 percent to 0.275 acres per 1,000 residents. Given that the area has a low OSR and the OSR decrease induced by the Proposed Development would be 2.01 percent, a detailed open space analysis is warranted.

Detailed Open Space Analysis

The *CEQR Technical Manual* states that a detailed open space analysis is warranted when the preliminary analysis shows that for a proposed action where the OSR is at or below 0.50, and would decrease the OSR by 1% or more. The detailed analysis typically breaks down study area population by age group and details the amount and quality of various types of open space to assess the availability of particular types of open space for particular age groups. In conducting this assessment, the analysis focuses on where shortfalls in open space exist now or in the future, to identify whether the shortfalls are a result of the project.

Study Area Population Age Group Assessment

The age distribution of the existing population is relied upon as an indicator of types of open space that may be most utilized by the population. The detailed population assessment breaks down the total study area population calculated in the Preliminary Assessment above by 6 age groups: 4-year-old and younger, 5-year-old to 9-year-old, 10-year-old to 14-year-old, 15-year-old to 19-year-old, 20-year-old to 64-year-old, and 65-year-old and above. The total persons of each age group and the percentage of the age group within the total study area population are then summarized as each age group represents a different type of open space user.

As shown in **Table 2.7-4** below, 2017-2021 ACS Census data indicates that the open space study area had a residential population of approximately 47,842 people. Residents between the ages of 20 and 64 make up the majority of the population (approximately 74.52 percent), and adults 65 years and above account for approximately 10.34 percent of the study area population. In general, these population segments are typically expected to utilize passive open space. Children and teenagers (0 to 19 years old) account for approximately 15.14 percent of the study area population, and children under the age of 5 account for approximately 4.72 percent of the population. These population segments are typically expected to utilize active open space areas, including playgrounds, ball courts, and sports fields.

Table 2.7-4: Study Area Population by Age Groups		
Age Category	**Persons**	**Percent of Population**
4 and younger	2,260	4.72%
5-9	1,633	3.41%
10-14	1,914	4.00%
15-19	1,436	3.00%
20-64	35,653	74.52%
65 and older	4,946	10.34%
Total	**47,842**	**100.00%**

* Data Resource: 2017-2021 American Community Survey

Study Area Open Space Assessment

Open spaces are classified as "active" or "passive" by the uses that the design of the space allows. Active open space is the part of a facility used for active play such as sports or exercise and may include playground equipment, playing fields and courts, swimming pools, skating rinks, golf courses, lawns and paved areas for active recreation. Passive open space is used for sitting, strolling, and relaxation, and typically contains benches, walkways and picnicking areas. However, some passive spaces can be used for both passive and active recreation, such as a green lawn or riverfront walkway, which can also be used for ball playing, jogging or rollerblading.

The name, address, ownership, acreage, active and passive acreage, and features of each publicly accessible open space in the study area was included in **Table 2.7-2** above. **Table 2.7-5** further describes the characteristics of the open space facilities each age group would utilize for active use. Combining data collected from site visit, the New York City Department of Education website, and the New York City Department of Parks and Recreation website, detailed assessments regarding the quality, accessibility, specific user groups of different age ranges, and utilization levels of the publicly accessible open space in the study area are summarized in **Table 2.7-6** below, which indicates that the conditions of most existing open spaces are acceptable and the utilization of the open spaces covers all age groups at a moderate level.

Table 2.7-5: Open Space Facility by Age Groups	
Age Appropriate Facilities	**Typical facilities and space**
Toddler facilities Ages 0-4 years	Simple play spaces with features such as sand box, climbing equipment, and seating for caregivers; under 1,000 square feet in size
	Tot lot: a complex of age appropriate play facilities over 1,000 square feet with a range of features such as swings, slides, climbing equipment, water features, sand box, and seating for caregivers
	Unstructured play area, grassy or hard surface
Active Play facilities appropriate for children 5 to 14 years old	Playground with a range of age appropriate features (swings, climbing equipment, sand and water play) and seating for caregivers.
	Age size sports facilities
	Fields (turf or hard surfaced) such as soccer, softball, football, baseball
	Courts such as tennis, handball, basketball
	Unstructured space (grassy or hard surface)
Active open space appropriate for teens and adults; Ages 15 and above.	Fields (turf or hard surface such as baseball, softball, soccer, football)
	Courts such as tennis, handball, basketball
	Courts such as bocci, shuffleboard, basketball, or backboards
	Skate park facility
	Jogging and biking areas (greenways, mountain biking trail, cross country course, track)
	Unstructured spaces designed for active use

Table 2.7-6: Study Area Open Space Resources

Name	Quality	Hours of Access	User Groups (based on Table 2.7-4 inventory)	Utilization Level
P.S. 93 Playground*	Acceptable	Monday – Friday: School close until dusk Saturday, Sunday, & holidays: 8 a.m. until dusk	4 years and younger; 5-9; 10-14; 15-19; 20-64, 65 and older	Moderate
Brower Park	Acceptable	6 a.m. - 1 a.m.	4 years and younger; 5-9; 10-14; 15-19; 20-64, 65 and older	Moderate
St. Andrew's Playground	Unacceptable	6 a.m. - 9 p.m.	4 years and younger; 5-9; 10-14; 15-19; 20-64, 65 and older	Moderate
John Hancock Playground	Acceptable	6 a.m. - 9 p.m.	4 years and younger; 5-9; 10-14; 15-19; 20-64, 65 and older	Moderate
Hattie Carthan Playground	Acceptable	6 a.m. - 9 p.m.	4 years and younger; 5-9; 10-14; 15-19; 20-64, 65 and older	Moderate
Potomac Playground	Acceptable	6 a.m. - 9 p.m.	4 years and younger; 5-9; 10-14; 15-19; 20-64, 65 and older	Moderate

Data collected from site visit and NYCDPR – New York City Department of Parks and Recreation
* Part of the Schoolyards to Playgrounds program (open to public on a consistent basis)

Open Space Adequacy Assessment

The adequacy assessment is to use the open space data gathered to provide an evaluation of the study area's existing open space conditions relative to the open space needs of the study area users. As previously shown in **Table 2.7-2** and **Table 2.7-6**, the study area contains 14.91 acres of existing open space for all age groups, of which approximately 11.18 acres are available for active use and approximately 3.73 acres are available for passive use. As previously described, the study area has a total residential population of 49,380 per the 2020 Decennial Census data and the completed DOB permits since January 2020. Based on this information, the following open space ratios are calculated to determine the existing adequacy of open spaces:

- The study area has an overall open space ratio of 0.302 acres per 1,000 residents. This ratio is far below the planning guideline of 2.5 acres of combined active and passive open space per 1,000 residents, per the *CEQR Technical Manual*.
- The active open space ratio is 0.226 acres per 1,000 residents, which is far below the planning guideline of 2.0 acres of active open space per 1,000 residents, per the *CEQR Technical Manual*.
- The passive open space ratio of 0.076 acres per 1,000 residents, far below the planning goal of 0.5 acres passive open space per 1,000 residents specified in the *CEQR Technical Manual*.

As such, the study area currently has a shortfall of combined open space to serve the residential population, far below the citywide planning goal pursuant to *CEQR Technical Manual*.

Future No-Action Conditions

Population

As described above, the 2029 study area population (CTs 221, 227, 245, 247, 249, 267, 269, 311, 313, 315, 317.01, and 341 combined) is projected to be 53,033 in the future without the Proposed Actions.

Open Space Resources

By the build year of 2029, NYCDPR will have completed one reconstruction on open space resources within the study area, the basketball courts reconstruction at Potomac Playground, and one construction just outside of the study area, St. John's Recreation Center Adult Fitness Area construction, which will be approximately 0.03 acres located close to Brower Park[8].

Overall, the open space within the study area would remain the same as the existing conditions under the Future No Action Condition, which would be 14.91 acres of overall open space (11.18 acres for active uses and 3.73 acres for passive uses) as shown in **Table 2.7-2** above.

Assuming that no other open space would be added to the study area by 2029, a total of 14.91 acres of open space will be available for the projected 53,033 residents in the study area; 11.18 for active recreation and 3.73 for passive recreation.

[8] Data collected from NYCDPR Capital Project Tracker, https://www.nycgovparks.org/planning-and-building/capital-project-tracker

- The overall open space ratio of 0.281 for the No Action conditions would remain considerably below the CEQR recommended ratio of 2.5 acres of combined active and passive open space per 1,000 residents.
- The active open space ratio of 0.211 acres per 1,000 residents would remain far below the targeted goal of 2.0 acres.
- The passive open space ratio of 0.070 would remain far below the *CEQR Technical Manual* guideline of 0.5 acres.

The changes between existing conditions and Future No-Action Condition are not dramatic, both with the overall OSR, active OSR, and Passive OSR falling far below the planning goal. The deficit of the open spaces within the study area remains severe in the future without the Proposed Actions.

Future With-Action Conditions

Population

As described above, the 2029 study area population (CTs 221, 227, 245, 247, 249, 267, 269, 311, 313, 315, 317.01, and 341 combined) is projected to be 54,121 in the future with the Proposed Actions.

Open Space Resources

As with the Future No-Action Condition, the Future With-Action Condition for the study area would have a total of 14.91 acres of open space available for the projected 54,121 residents in the study area; 11.18 for active recreation and 3.73 for passive recreation.

- The overall open space ratio of 0.275 for the With Action conditions would remain considerably below the CEQR recommended ratio of 2.5 acres of combined active and passive open space per 1,000 residents.
- The active open space ratio of 0.207 acres per 1,000 residents would decrease slightly compared to Future No-Action Condition, far below the targeted goal of 2.0 acres.
- The passive open space ratio of 0.069 would decrease slightly from that of Future No-Action Condition, far below the *CEQR Technical Manual* guideline of 0.5 acres.

Thus, the study area would have a deficit of total open space, active open space, and passive open space in the future with the Proposed Actions, which would be greater than the shortfall in the No Action conditions.

Impact Significance

Since the Proposed Development would mainly result in a large increase in residential population, the existing active open space, passive open space, and total open space ratios for residential populations within the study area is summarized in **Table 2.7-7** below, using the population and open space acreage data identified for Existing Conditions, Future No-Action Conditions, and Future With-Action Conditions above. The park acreage would not change by the build year of 2029 while the population would increase from the existing 49,380 to 53,033 under Future No-Action Conditions, or to 54,121 under Future With-Action Conditions.

Table 2.7-7: Study Area Open Space Ratio							
	Population	Open Space Acreage			Overall OSR	Active OSR	Passive OSR
		Total	Active	Passive			
Planning Goal/ CEQR Guideline					2.5	2.0	0.5
Existing Conditions	49,380	14.91	11.18	3.73	0.302	0.226	0.076
Future No-Action Condition	53,033	14.91	11.18	3.73	0.281	0.211	0.070
Future With-Action Condition	54,121	14.91	11.18	3.73	0.275	0.207	0.069
Change from No-Action to With-Action Condition					-2.01%	-2.01%	-2.01%

Quantitative Analysis

As noted in the *2021 CEQR Technical Manual*, a proposed action is considered to have a significant adverse open space impact when:

- *There would be a direct displacement or alteration of existing open space within the study area that has a significant adverse effect on existing users (e.g., an action would result in a net loss of publicly accessible open space).*
- *The project would reduce the open space ratio by more than the general guidelines for the open space percentage change that are presented in Table 7-5 of the 2021 CEQR Technical Manual. Projects which result in a percentage change greater than the guideline shown for the corresponding calculated open space ratio range may be considered significant, as these reductions may result in overburdening existing facilities or further exacerbating a deficiency in open space.*

The Proposed Actions would not directly displace or alter any existing or planned open spaces. As exhibited in **Table 2.7-7** above, the With-Action conditions would result in an approximately 2.01 percent reduction of the overall open space ratio, active open space ratio, and passive open space ratio, compared to conditions in the future without the Proposed Actions. All of the open space ratios would be significantly lower than the target open space ratios specified in Table 7-5 of the *2021 CEQR Technical Manual*. Field observations of open space resources in the study area indicate that utilization levels of the open space resources are moderate, and the existing open spaces appear to have the capacity to serve additional users. Based on these observations, the Proposed Actions would not be expected to overburden existing facilities or further exacerbate a deficiency in open space.

Qualitative Assessment

With respect to qualitative effects, the following factors are useful in determining whether a proposed action would result in a significant adverse impact to open space conditions:

- *The proposed action would have a significant physical effect on an existing or proposed open space due to an increase in shadows, noise, air pollutant emissions, or odors compared to the future no action conditions.*
- *A proposed action causes a qualitative impact such as might occur when the overall open space ratio is adequate, but a specific user group (such as young children or basketball players) would be adversely affected by being underserved or there would be conflicts in the utilization of open space.*

The Proposed Actions would not cause increased shadows, noise, or air pollutant emissions that would affect the usefulness of any study area open space, whether on a permanent or temporary basis. Furthermore, the Proposed Actions would not change the use of a publicly accessible open space so that it no longer serves the same user population, nor would it limit public access to any open spaces.

The amounts of total, active, and passive open space resources in the study area with the Proposed Actions are, and would continue to be, deficient in comparison to New York City guidelines. Field observations conducted for this EAS indicate that the existing open spaces in the study area have moderate utilization levels and are in acceptable condition, and as such, appear to have the capacity to serve additional users.

Although some Open Space resources outside of the Study Area are not included in the open space ratio calculations, they are important to mention in the qualitative assessment of impact significance as they may be utilized by study area residents and are considered in the qualitative assessment. Several open space resources are located within a 15-minute walk from the Affected Area (assumed as 3/4 miles) that are not accounted for in the OSR calculations as they lie outside of the census tracts contained within the study area. These additional resources are shown in **Figure 2.7-4** below, and include Herbert Von King Park, Raymond Bush Playground, Crispus Attucks Playground, Stroud Playground, St. Johns Park, Harmony Park, Decatur Playground, and Fulton Park. These additional existing open spaces would help offset the projected deficit of all types of open space in the study area.

- Herbert Von King Park
  Herbert Von King Park is a 7.82 acre community park located north of the Affected Area. Features include an outdoor amphitheater which hosts free concerts and performances, indoor dance studio, barbecuing areas, fitness equipment, a recreation center, a baseball field, a handball court, spray showers, a dog run and a playground. Pursuant to NYCDPR inspection reports, the park is in acceptable condition.

- Raymond Bush Playground
  Raymond Bush Playground is a 1.79 acre jointly operated playground located northeast of the Affected Area. Features include a well-shaded playground with two sets of play equipment, swings, and a water feature with a synthetic turf lawn, along with a basketball court and handball court. Pursuant to NYCDPR inspection reports, the park is in acceptable condition.

- Crispus Attucks Playground
  Crispus Attucks Playground is a 0.93 acre playground located west of the Affected Area. Features include basketball courts and a handball court, as well as a playground with spray showers. Pursuant to NYCDPR inspection reports, the park is in acceptable condition.

- Stroud Playground
  Stroud Playground is a 1.19 acre jointly operated playground located west of the Affected Area. Features include basketball courts and a handball court, fitness equipment, a running track, as well as a playground with spray showers. Pursuant to NYCDPR inspection reports, the park is in acceptable condition.

- St. Johns Park

St. Johns Park is a 9.34 acre community park located east of the Affected Area. Features include St. Johns Recreation Center, six full-court basketball courts, twelve handball courts, and two large fields, including Buddy Keaton Field. Buddy Keaton Field offers a running track, night lighting, and equipment for soccer and baseball/softball. In addition, the park offers a children's playground with two play areas for younger and older kids, a spray shower, along with a large lawn between them. The park also includes an indoor pool and media labs. Pursuant to NYCDPR inspection reports, the park is in acceptable condition. The Park is currently in the construction phase (anticipated completion March 2023) which involves the construction of an outdoor adult fitness area at St. John's Recreation Center.

- Harmony Park
  Harmony Park is a 1.56 acre neighborhood park located east of the Affected Area. Features include paved walking pathways and seating areas. Pursuant to NYCDPR inspection reports, the park is in acceptable condition.

- Decatur Playground
  Decatur Playground is a 1.50 acre jointly operated playground located east of the Affected Area. Features include basketball courts, tennis courts, and a playground. Pursuant to NYCDPR inspection reports, the park is in acceptable condition.

- Fulton Park
  Fulton Park is a 1.99 acre neighborhood park located east of the Affected Area. Features include V an ornamental garden along Lewis Avenue along with walking pathways and benches. Pursuant to NYCDPR inspection reports, the park is in acceptable condition.

Detailed Open Space Conclusion

Given the changes to the overall, active, and passive open space ratios as a result of the Proposed Actions within the Study Area, the Proposed Actions would not be expected to result in significant adverse impacts to open space resources. Though the total, active, and passive open space ratios within the study area are all below the planning goals in the *2021 CEQR Technical Manual*, indicating a deficiency of open space within the study area. However, the qualitative analysis reveals a moderate utilization rate of existing open space resources, all but one in acceptable condition, and a number of open space resources within ¾ miles of the Affected Area that can be utilized by study area residents. Therefore, the Proposed Actions would not result in a significant adverse impact on open space within the study area, and further analysis is not warranted.
.

Figure 2.7-4: Open Space Resources Within a 15-Minute Walk of the Affected Area



Chapter 8: Shadows

The *CEQR Technical Manual* defines a shadow as the condition that results when a building or other built structure blocks the sunlight that would otherwise directly reach a certain area, space or feature. An incremental shadow is the additional or new shadow that a building or other built structure resulting from a proposed action would cast on a sunlight-sensitive resource during the year. The sunlight-sensitive resources of concern are those resources that depend on sunlight or for which direct sunlight is necessary to maintain the resource's usability or architectural integrity, including public open space, architectural resources and natural resources. Shadows can have impacts on publicly accessible open spaces or natural features by adversely affecting their use and important landscaping and vegetation. In general, increases in shadow coverage make parks feel darker and colder, affecting the experience of park patrons. Shadows can also have impacts on historic resources whose features are sunlight-sensitive, such as stained-glass windows, by obscuring the features or details, which make the resources significant.

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

The *CEQR Technical Manual* states that a shadow assessment considers projects that result in new shadows long enough to reach a sunlight-sensitive resource. Therefore, a shadow assessment is warranted only if the project would either result in: (a) new structures (or additions to existing structures including the addition of rooftop mechanical equipment) of 50 feet or more; or, (b) be located adjacent to, or across the street from, a sunlight-sensitive resource.

The sunlight-sensitive resources of concern are those resources that depend on sunlight or for which direct sunlight is necessary to maintain the resource's usability or architectural integrity, including public open space, architectural resources and natural resources. In general, shadows on city streets and sidewalks or on other buildings are not considered significant. Some open spaces also contain facilities that are not sensitive to sunlight. These are usually paved such as handball or basketball courts, places containing no seating areas and no vegetation, no unusual or historic plantings, or containing only unusual or historic plantings that are shade tolerant. These types of facilities do not need to be analyzed for shadow impacts. Additionally, it is generally not necessary to assess resources located to the south of projected development sites, as shadows cast by the action-generated development would not be cast in the direction of these resources. Furthermore, shadows occurring within one and one-half hour of sunrise or sunset generally are not considered significant in accordance with the CEQR Technical Manual.

Methodology

This preliminary analysis of shadows follows the guidelines set forth in the *2021 CEQR Technical Manual* for a preliminary assessment (Section 310). According to the *2021 CEQR Technical Manual*, a preliminary shadow assessment includes the development of a base map showing the site location in relationship to any sunlight-sensitive resources as per guidelines provided in the *2021 CEQR Technical Manual*. Following these

guidelines, the longest shadow study area is determined, and a Tier 1 screening assessment is conducted to determine if any sunlight-sensitive resources fall within the study area. If no resources are identified, no further analysis would be required. If sunlight-sensitive resources lay within the longest shadow study area, the next tier of screening assessment should be conducted. This preliminary assessment includes a basic description of the proposed project that would be facilitated by the Proposed Actions in order to determine whether a more detailed assessment would be appropriate.

Analysis

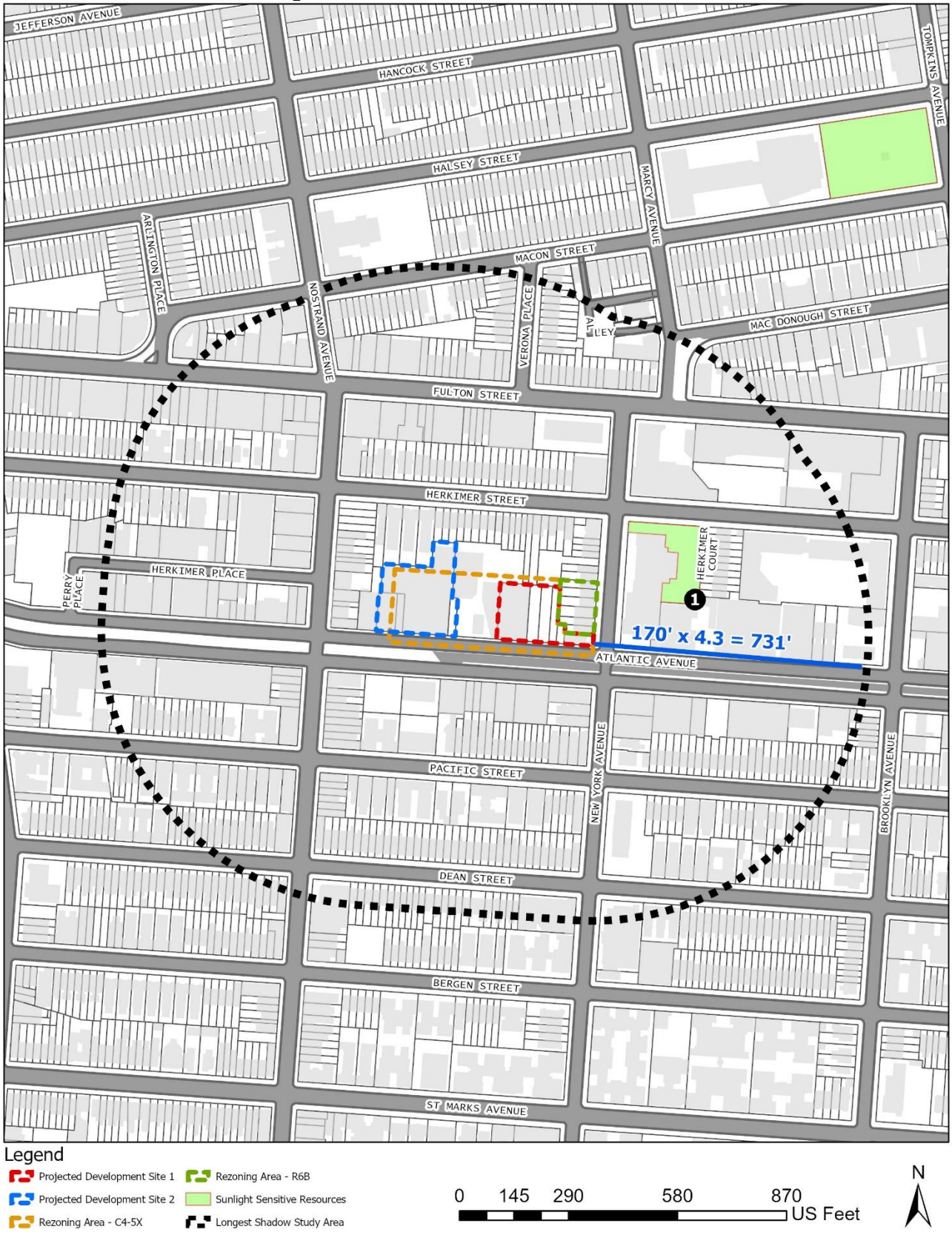
Projected Development Site 1 and 2 would be developed with a building 170 feet in height (145-foot building plus an additional 25 feet for mechanical bulkheads) in the proximity of sunlight sensitive resources. Accordingly, a preliminary assessment of shadows is warranted.

Tier 1 Shadow Screening Assessment

The shadow assessment begins with a preliminary screening assessment to ascertain whether a project's shadow may reach any sunlight-sensitive resources at any time of the year. If the screening assessment does not eliminate this possibility, a detailed shadow analysis may be warranted to determine the extent and duration of the net incremental shadow resulting from the project. The effects of shadows on a sunlight-sensitive resource are site-specific; therefore, as directed in the CEQR Technical Manual, the screening assessment was performed for the relevant Projected Development Site to determine whether it falls within the range of maximum possible shadow cast on potential sunlight sensitive resources as described above. To determine this, a Tier 1 Screening Assessment was performed in accordance with the CEQR Technical Manual. A base map is developed that illustrates the proposed site location in relationship to any sunlight-sensitive resources. The longest shadow study area is then determined, which 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 structure, which is 4.3 times the height of the structure that occurs on December 21st, the winter solstice. A map as shown in **Figure 2.8-1** was prepared placing NYC Department of Parks Resources and Selected Facilities and Program Sites provided on NYC.gov Department of City Planning GIS portal, as well as a list of park and public spaces provided from NYC.gov DOITT- GIS and Mapping Portal, as well as a screen of SHPO and NYC Landmark Listed Properties with sunlight-sensitive building features. After this a buffer map was prepared to display the maximum possible shadow of 731 feet, which could be cast from the Projected Development Sites in the proposed rezoning area. This shadow cast was derived by multiplying the height of 170 feet (the maximum possible height under the proposed rezoning with MIH bonus plus a 25-foot bulkhead) by 4.3 (the CEQR Technical Manual multiplier representing the maximum shadow cast from any object as being 4.3 times its height). The potentially impacted area of shadow from the projected site was then compared to those resources identified above to see if any fell within the shadow cast area.

Based on the Tier 1 analysis in **Figure 2.8-1**, it was determined that one sunlight sensitive resource, P.S. 093 Playground, is within reach of the longest possible shadow that could be cast from the Projected Development building associated with the requested rezoning within the Affected Area. Therefore, the Projected Development may have adverse impact on the sunlight-sensitive resource, and a Tier 2 Assessment is required.

Figure 2.8-1: Tier 1 Shadow Assessment



Tier 2 Shadow Screening Assessment

The *CEQR Technical Manual* states that if any portion of a sunlight-sensitive resource lies within the longest shadow study area, a Tier 2 screening assessment should be performed. Because of the path the sun travels across the sky in the northern hemisphere, no shadow can be cast in a triangular area south of any given project site. In New York City, this area lies between -108 and +108 degrees from true north. For a Tier 2 screening assessment, sunlight-sensitive resources within the triangular area cannot be shaded by new development sites, and are screened out. The complementing portion to the north within the longest shadow study area is the area that can be shaded by the proposed project.

As shown in **Figure 2.8-2**, the Tier 2 screening assessment showed that the P.S. 093 Playground (Block 1868, Lot 7; Resource 1) is inside of the -108/+108 area, and therefore a Tier 3 screening would be required.

Figure 2.8-2: Tier 2 Shadow Assessment



Tier 3 Shadow Screening Assessment

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

The results of the Tier 3 shadow analyses on the identified resources of concern are summarized in **Table 2.8-1**. As shown in **Figures 2.8-3 to 2.8-6** below, shadows from the projected buildings would reach Private P.S. 093 Playground on all four analysis days. Accordingly, a detailed shadow analysis for Sunlight Sensitive Resource 1 is required.

Table 2.8-1: Tier 3 Shadows Analysis Table

Analysis Day	21-Dec	March 21 / September 21	May 6 / August 6	21-Jun
Timeframe Window	8:51 a.m. - 2:53 p.m.	7:36 a.m. - 4:29 p.m.	6:27 a.m. - 5:18 p.m.	5:57 a.m. - 6:01 p.m.
Sunlight Sensitive Resource 1	P.S. 093			
Shadow enter - exit times	12:53 pm - 2:53 pm	2:20 pm - 4:29 pm	3:55 pm - 5:18 pm	4:19 pm - 4:54 pm
Incremental Shadow Duration	2 Hours	2 Hours 9 Minutes	1 Hour 23 Minutes	35 Minutes
Note: Daylight savings time not used				

Figure 2.8-3: Tier 3 Screening December



Figure 2.8-4: Tier 3 Screening March/September



Figure 2.8-5: Tier 3 Screening May/August

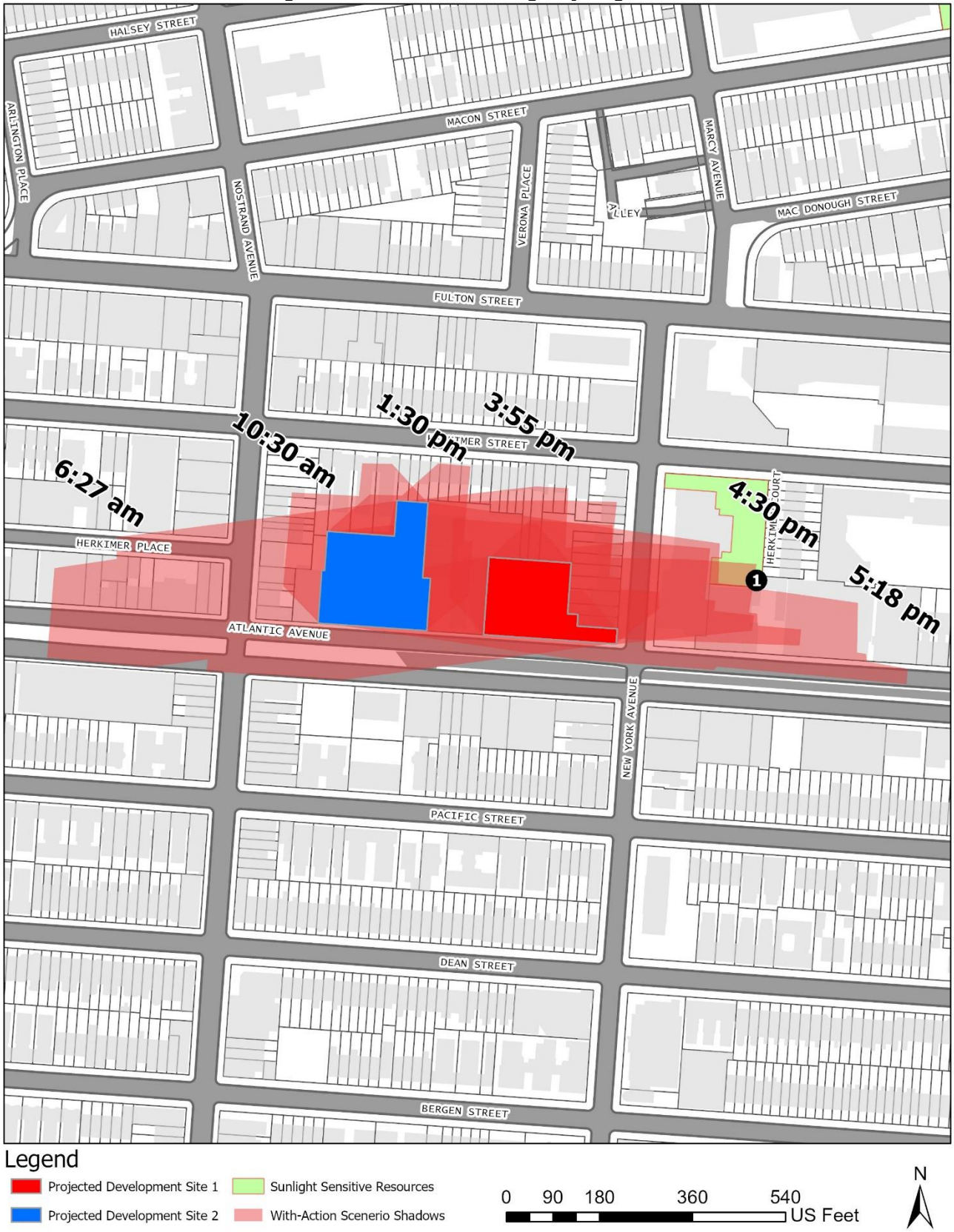


Figure 2.8-6: Tier 3 Screening June



Detailed Shadow Analysis

The *CEQR Technical Manual* states that a detailed shadow analysis is warranted when the screening analyses do not rule out the possibility that project-generated shadows would reach any sunlight-sensitive resources. The purpose of the detailed analysis is to determine the extent and duration of shadows that fall on a sunlight-sensitive resource as a result of the proposed project. The results of the detailed shadow analyses on the identified resources of concern are summarized in **Table 2.8-2**, and the shadows cast by the Projected Development Sites inclusive of intervening shadows from existing buildings are shown below in **Figures 2.8-7 through 2.8-14**.

Table 2.8-2: Detailed Shadows Analysis Table

Analysis Day	21-Dec	March 21 / September 21	May 6 / August 6	21-Jun
Timeframe Window	8:51 a.m. - 2:53 p.m.	7:36 a.m. - 4:29 p.m.	6:27 a.m. - 5:18 p.m.	5:57 a.m. - 6:01 p.m.
Sunlight Sensitive Resource 1	P.S. 093			
Shadow enter - exit times	12:53 pm - 2:53 pm	2:20 pm - 4:29 pm	3:55 pm - 5:18 pm	4:19 pm - 4:54 pm
Incremental Shadow Duration	2 Hours	2 Hours 9 Minutes	1 Hour 23 Minutes	25 Minutes
Note: Daylight savings time not used				

Figure 2.8-7: Detailed Shadows December 12:53 PM



Figure 2.8-8: Detailed Shadows December 1:53 PM



Figure 2.8-9: Detailed Shadows December 2:53 PM



Figure 2.8-10: Detailed Shadows March/September 3:20 PM



Figure 2.8-11: Detailed Shadows March/September 4:29 PM

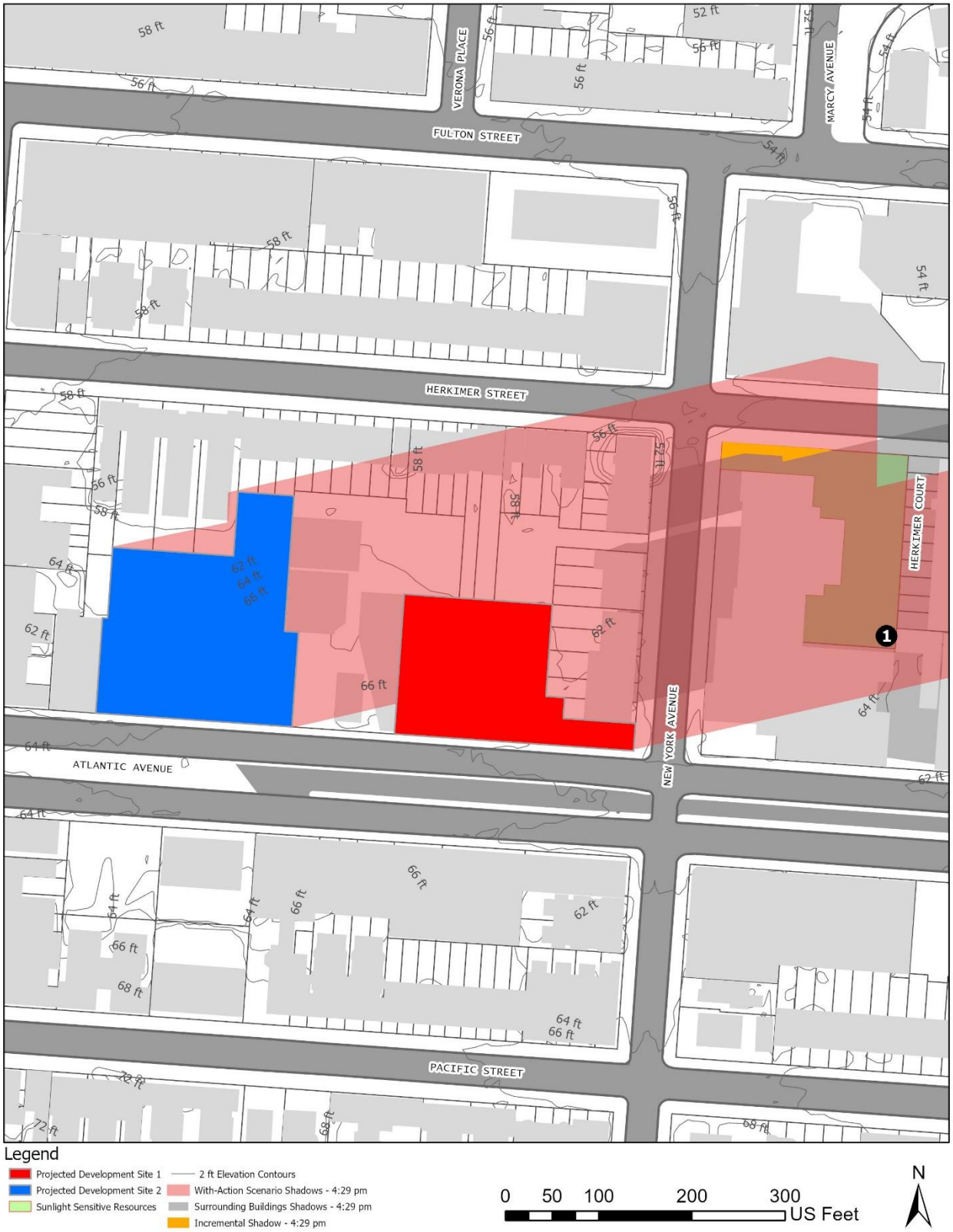


Figure 2.8-12: Detailed Shadows May/August 4:30 PM



Figure 2.8-13: Detailed Shadows May/August 5:18 PM



Figure 2.8-14: Detailed Shadows June 4:35 PM



P.S. 093 (Sunlight Sensitive Resource 1)





P.S. 93 - William H. Prescott is a public school located in Brooklyn, NY. It has 288 students in grades PK, K-5 with a student-teacher ratio of 14 to 1. This school shares the building with Satellite East Middle School. It has a paved outdoor playground for the students at its northeast corner.

Determination of Shadow Impact Significance

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

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

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

- *Vegetation* - A substantial reduction in sunlight available to a sunlight-sensitive feature of the resource to less than the minimum time necessary for its survival (when there was sufficient sunlight in the future without the project). Or, a reduction in direct sunlight exposure where the sunlight-sensitive feature of the resource is already subject to substandard sunlight (i.e., less than minimum time necessary for its survival).
- *Open Space Utilization* - A substantial reduction in the usability of open space as a result of increased shadow.
- *For Any Sunlight-Sensitive Feature of a Resource* - Complete elimination of all direct sunlight on the sunlight-sensitive feature of the resource, when the complete elimination results in substantial effects on the survival, enjoyment, or, in the case of open space or natural resources, the use of the resource.

Conclusion

Sunlight Sensitive Resource 1 (P.S. 093 Playground)
Sunlight Sensitive Resource 1, P.S. 093 Playground, is a .41 acre playground with .31 acres of active space and .10 acres of passive space. The playground features a running track, various paved playing zones, benches, and playground equipment.

Shadows cast from the Projected Buildings in December for a 2-hour period would leave approximately 4 hours of direct sunlight. The incremental shadows cast by the Projected Buildings would enter the playground at 12:53 PM at noon and exit the playground at 2:53 PM in the early afternoon. However, as shown above in **Figures 2.8-7 through 2.8-9**, incremental shadows would shade only a small portion of the playground

fronting Herkimer Street and New York Avenue, covering a portion of the paved playing zones. The paved playing zone is an active resource utilized in warm-weather months, and therefore the Open Space Utilization of this resource would not be significantly impacted for the December analysis period.

For the March 21st/September 21st analysis period of Sunlight Sensitive Resource 1, there would be 2 hours and 9 minutes of incremental shadows cast, leaving 6 hours and 44 minutes of sunlight. As shown above in **Figures 2.8-10 through 2.8-11**, incremental shadows cast from the Projected Buildings would shade the northwestern portion of the playground, which contains paved playing zones, and the southeastern portion of the playground covering a portion of the running track and paved playing zones. The movement of the shadows leaves every part of the playground with direct sunlight of more than 6 hours. Further, the duration of shadows cast on the playground is shown to be limited, and there would be no adverse impacts for the March 21st/September 21st analysis period on the Open Space Utilization.

On May 6th/August 6th analysis days, the shadows cast from the Projected Buildings would reach the playground for 1 hour and 23 minutes, entering at 3:55 PM and exiting at 5:18 PM. As shown above in **Figures 2.8-12 through 2.8-13**, incremental shadows cast from the Projected Buildings would shade a small area of the southeastern portion of the playground, which contains paved playing zones. The playground would receive direct sunlight for 9 hours and 28 minutes during morning and early afternoon. Therefore, there would be no adverse impacts for the May 6th/August 6th analysis period on the Open Space Utilization of the playground.

As for June 21st analysis day, the shadows would only affect the playground for 35 minutes from 4:19 PM to 4:54 PM, leaving it with direct sunlight for 11 hours and 29 minutes, which would not be adverse impacts on the Open Space Utilization of the playground.

On all four analysis days, the shadows cast from the Projected Buildings would affect the sunlight sensitive resource, P.S. 093 Playground, for a limited extent and duration. Accordingly, no adverse impact is expected on the Open Space Utilization of the playground and therefore no further analysis is warranted.

Chapter 9: Historic and Cultural Resources

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

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

Methodology

Archaeological and architectural resources usually need to be assessed for projects that would result in any in-ground disturbance. In-ground disturbance is any disturbance to an area not previously excavated, including new excavation that is deeper and/or wider than previous excavation on the same site.

For projects that may affect historic or cultural resources, the first step in evaluating a project's potential effects on historic resources is to consider what area the project might affect and then identify historic resources—whether officially recognized or eligible for such recognition—within that area. The area of subsurface work for the proposed project is considered the impact area for archaeological resources while the study area for architectural resources is the area in which any resources may be affected by the project, which is defined by the radius of 400 feet from the borders of the project site for most proposals.

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

Architectural Resources

Per *CEQR Technical Manual* guidelines, impacts on historic resources are considered on those sites affected by the proposed action and in the area surrounding identified development sites. The historic resources study area is therefore defined as the project site plus an approximately 400-foot radius around the Affected Area.

According to the *CEQR Technical Manual*, significant adverse impacts to historic and cultural resources could potentially result if a proposed action affects those characteristics that make a resource eligible for LPC designation or S/NR listing. This section assesses the potential for the proposed action to result in significant adverse impacts on identified historic and cultural resources. **Table 2.9-1** below provides information about possible direct, indirect and construction related impacts to historic and cultural resources. Generally, architectural resources should be surveyed and assessed if the proposed project would result in any of the following, whether or not any known historic resources are located near the site of the project:

Table 0-1: Possible Impacts to Historic and Cultural Resources

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

Direct Impacts

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

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

alteration or demolition occurs, regardless of whether the project is publicly or privately funded. Publicly owned resources are also subject to review and advisement by LPC before project implementation.

Construction Impacts

Historic resources may be subject to indirect construction impacts from activities taking place nearby. The 90-foot buffer is recognized as being close enough to potentially experience adverse construction-related impacts from ground-borne construction-period vibrations, falling debris, and/or collapse. There are two mechanisms to protect buildings in New York City from potential damage caused by adjacent construction. All buildings are provided some protection from accidental damage through DOB controls that govern the protection of any adjacent properties from construction activities, under Building Code Section 27-166 (C26-112.4). For all construction work, Building Code Section 27-166 (C26-112.4) serves to protect buildings by requiring that all lots, buildings, and service facilities adjacent to foundation and earthwork areas be protected and supported in accordance with the requirements of Building Construction Subchapter 7 and Building Code Subchapters 11 and 19. The second protective measure applies to NYCLs, properties within NYCHDs, and S/NR-listed properties. For these structures, *TPPN #10/8* applies. *TPPN #10/88* supplements the standard building protections afforded by Building Code C26-112.4 by requiring a monitoring program to reduce the likelihood of construction damage to adjacent NYCLs and NR-listed properties (within 90 feet) and to detect at an early stage the beginnings of damage so that construction procedures can be changed.

Indirect Impacts

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

Architectural Resources within the Study Area

The LPC was contacted for their initial review of the project's potential to impact nearby historic or architectural resources, and by letter dated March 2, 2020 the LPC indicated that the LPC designated/S/NR listed Crown Heights North Historic District is located within the study radius (see **Appendix A**). In addition, the LPC identified the following additional architectural resources within range:

- S/NR listed Kismet Temple located at 92 Herkimer Street
- S/NR eligible properties at 132, 136, 140, and 148 Herkimer Street (within 90 feet of Projected Site 2)
- S/NR eligible P.S. 93 located at 31 New York Avenue (within 90 feet of Projected Site 1)
- S/NR eligible property located at 75 New York Avenue

An analysis of the potential impacts of the Proposed Actions on the above-identified architectural resources is warranted. **Figure 0-1** shows the location of the identified historic resources within the 400-foot study area.

Figure 0-1: Historic Resources Within 400-Foot Study Area



Existing Condition

The Crown Heights North Historic District, located south of the Affected Area, covers a ribbon area roughly from Pacific Street to the north to Prospect Place to the south and Rogers Avenue to the East and Kingston Avenue to the south. It consists of approximately 1,109 largely residential contributing buildings built between the 1850s and 1940s, including examples of Greek Revival, Gothic Revival, Italianate, Second Empire, Queen Anne, Romanesque Revival, Renaissance Revival, Beaux-Arts and Colonial Revival style architecture. The district was listed on the National Register of Historic Places in 2014. In 2016 its boundaries were expanded to include 600 additional buildings. Currently, the historic district is featured with densely constructed rowhouses, townhouses, two-family houses, semi-attached houses, freestanding houses, flats, apartment buildings, and institutional and commercial buildings.

The Kismet Temple, located west of the Affected Area at 92 Herkimer Street (Block 1865 / Lot 49), is a historic meeting hall of the Ancient Order of the Mystic Shrine, commonly referred to as 'Shriners". It was constructed in 1909-1910. It is thought to be the oldest Shriners Mosque still intact. It was designed by R. Thomas Short in the Eclectic Moorish Revival style. Its front façade is constructed of yellow brick and limestone-like glazed terra cotta trim with elaborate Moorish decoration. It was sold to Friendship Baptist Church in 1966.

S/NR eligible 132, 136, 140, and 148 Herkimer Street (Block 1867 / Lots 21, 23, 25, 29) are located directly north of Projected Development Site 2. These properties consist of 4-story attached multi-family rowhouses constructed in 1905.

S/NR eligible P.S. 93, located east of Projected Development Site 2 at 31 New York Avenue (Block 1868 / Lot 7) is a school designed by Charles B.J Snyder and was constructed in 1907. Its architecture is of English collegiate Gothic style, reminiscent of the buildings of Oxford and Cambridge. Medieval scholars and an owl adorn the doors of the building. The school is currently named William H. Prescott, after a 19th century historian credited as the first American historian to bring scientific research and documentation to the historic narrative.

S/NR eligible 75 New York Avenue (Block 1202 / Lot 1), located southeast of the Affected Area, is a private home built in the 1870s. The mansion was originally the home of the Wood family. John R. Wood, the family patriarch, was a real estate and properties lawyer. The house originally had an Italianate wooden cornice running below the mustard roof. It also had a porch which ran across the front. In the 1940's the porch was enclosed with French doors and a balcony had been built above it. The porch no longer exists and the building is now four apartments. Some period detail remains such as the gas newel post light.

Future No-Action Condition

In the future without the Proposed Actions, the existing conditions of the S/NR listed and LPC designated Crown Heights North Historic District, the S/NR listed Kismet Temple, and the S/NR eligible 132, 136, 140, and 148 Herkimer Street, P.S. 93, and 75 New York Avenue would remain the same. Though the occupants in the buildings on the Projected Development Sites may change, no non-conforming uses or new development would happen within the Affected Area without the Proposed Actions.

Future With-Action Condition

In the future with the Proposed Actions, it is expected that the existing of the S/NR listed and LPC designated Crown Heights North Historic District, the S/NR listed Kismet Temple, and the S/NR eligible 132, 136, 140, and

148 Herkimer Street, P.S. 93, and 75 New York Avenue would be the same as the existing conditions. No alteration or demolition of the existing buildings within the Historic district would occur as a result of the Proposed Actions. As such, no direct impacts to architectural resources are anticipated.

Since the Crown Heights North Historic District, The Kismet Temple, and the property located at 75 New York Avenue are located greater than 90 feet from the Projected Development Site's no construction-related impact on these resources is anticipated. Construction within 90 feet of two S/NR eligible resources is anticipated. Projected Development Site 1 is located within 90 feet of S/NR eligible P.S. 93 located at 31 New York Avenue, and Projected Development Site 2 is located within 90 feet of S/NR eligible 132, 136, 140, and 148 Herkimer Street.

The City has two procedures for avoidance of damage to historic structures from adjacent construction, the second of which is not applicable because neither building is considered listed as a historic resource. All buildings are provided some protection from accidental damage through New York City Department of Buildings (DOB) controls that govern the protection of any adjacent properties from construction activities, under Building Code Section 27-166 (C26-112.4). For all construction work, Building Code section 27-166 (C26-112.4) serves to protect buildings by requiring that all lots, buildings, and service facilities adjacent to foundation and earthwork areas be protected and supported in accordance with the code requirements.

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

Projected Site 1 would begin demolition in August 2024 with interior finishes complete in February 2026 for a total of 19 months from demolition to interior finishes. Major construction activities post-demolition are expected to commence with excavation and SOE on or around October 2024 and conclude with interior core and shell work (substantial completion) in December 2025 for a period of approximately 14 months of major construction at Site 1. Demolition and clearance of Projected Site 2 is assumed to start in October of 2027 and conclude in December 2027. Major construction activities post demolition expected to commence with excavation and SOE on or around December 2027 and conclude with interior core and shell work (substantial completion) in May 2029 for a period of approximately 18 months of major construction at Site 2. As such, the construction activity happening on the Projected Development Sites may induce temporary changes to the block environment surrounding the architectural resources. However, construction is expected to be short-term at each Projected Development Site.

Intervening Atlantic Avenue thoroughfare would serve as a natural barrier between the construction and the historic neighborhood and all architectural resources identified above with the exception of the S/NR eligible Herkimer Street houses. Both P.S. 93 located at 31 New York Avenue and S/NR eligible 132, 136, 140, and 148 Herkimer Street would be protected by DOB Building Code Section 27-166 and may protected under the measures of TPPN 10/88 should they become listed historic resources. By following the protection measures under DOB Code Section 27-166 (C26-112.4) and DOB's TPPN #10/88 (if applicable at the time of

construction) for those applicable resources, demolition and/or construction work on the Projected Development Sites would not cause any significant adverse construction-related impacts to nearby historic and cultural resources.

The Proposed Actions would not result in any types of visual and contextual impacts to the known historic resources within the Study Area, as all the new buildings that could be developed under the Proposed Actions would be commercial, residential, or community facility structures of heights and bulk consistent with those urban design features of the area. The Proposed Actions would not introduce any incompatible visual, audible, or atmospheric elements to the settings of historic resources. As discussed in the Urban Design section below (See **Chapter 10, Urban Design and Visual Resources**), the proposed building would be designed to be visually compatible and consistent with existing developments, but would not be replicated so as to create a false historical appearance. Additionally, the significant views of the historic architectural resources identified above will not be adversely affected by the Proposed Actions.

The architectural resources in the project study area include including examples of Greek Revival, Gothic Revival, Italianate, Second Empire, Queen Anne, Romanesque Revival, Renaissance Revival, Beaux-Arts and Colonial Revival style architecture. The Proposed Actions aim to encourage the design of new development that is in character with the area, which is predominately residential, commercial, and mixed-use. Publicly accessible views of the resources would not be blocked, and maximum building height would be limited and capped according to the sky exposure plane. In addition, as described in the Shadows section (See **Chapter 8, Shadows**), there would be no significant adverse impacts to historic resources with sunlight dependent features. Therefore, significant adverse impacts to architectural resources are not expected because of the Proposed Actions, and further analysis is not warranted.

Conclusion

According to the *CEQR Technical Manual*, significant adverse impacts to historic and cultural resources could potentially result if a proposed action affects those characteristics that make a resource eligible for LPC designation or S/NR listing. The Future With-Action Scenario's potential for significant adverse impacts on historic resources were assessed in accordance with **Table 0-1** above to determine (a) whether there would be a physical change to any designated resource or its setting, and (b) if so, is the change likely to diminish the qualities of the resource that make it important (including non-physical changes such as context or visual prominence). The assessment determined that no potential significant adverse impacts to architectural resources are expected as a result of the Proposed Actions.

Archaeological Resources

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

The Proposed Actions would result in new in-ground construction on the Projected Development Sites. As noted, the LPC was contacted for their initial review of the project's potential to impact nearby cultural or

archaeological resources, and a response was received on March 2, 2020 (see **Appendix A**). The LPC has indicated that after a review of archaeological sensitivity models, reports, and historic maps, there is a potential for the recovery of remain from 19th century occupation on the following lots: Block 1867, Lots 53, 42, 41, 64, 61, 61, 59 ,58, 57, and 56.

Of the lots identified above, lot 64 (within Projected Development Site 1) is the only parcel that is anticipated to develop pursuant to the Proposed Actions. Projected Development Site 1 (Block 1867, Lots 62, 63, 64, 65, 66, 68) would be developed with a 174,039 GSF (162,516 ZSF; 6.00 FAR) mixed-use commercial, community facility, and residential building. There would be 21,040 GSF of ground floor commercial (local retail) uses, 17,404 GSF of second floor community facility (UG 4 ambulatory diagnostic) uses, and 135,594 GSF of residential uses on the upper floors. 64 residential accessory spaces would be required, and 64 spaces would be provided at cellar level. Accordingly, at the request of the LPC an archaeological documentary study has been performed for Lot 64 to clarify these initial findings and provide the threshold for the next level of review, if such review is necessary.

Phase IA Summary

A Phase IA Archaeological Documentary Study (see **Appendix G**) has been prepared by Historical Perspectives, Inc. (HPI) at the request of the LPC. The Archaeological Area of Potential Effect (APE) and the project site are identical and encompassed only Lot 64 on Block 1867. The February 2022 Phase IA has determined the following based on this study:

"Results: Historic maps indicated that the project site was undeveloped until approximately 1867. This portion of Brooklyn was supplied with a nearby communal water pump by 1858, and a sewer in Atlantic Avenue in 1868. It is likely that the structure on the lot was connected to the public sewer when it was built, however that is not definitively known because DEP records were not available to confirm this. Privies and cesspools would have been used at least until the building was connected to a sewer. It has been found that owners of buildings constructed before service availability often did not hook up their buildings, many of which were rental properties, to water and sewer lines until years, and sometimes decades after the services were available. This suggests a potentially longer use-life for yard shaft features. Further, residents may have relied on a cistern for supplemental water for some time. While specific residents could not be tied to the lot until 1874, research found that the neighborhood was solidly working class with a predominantly Irish immigrant population.

The project lot had an open yard area for most of its history. Privies were typically located furthest from the residences, often along the rear lot lines, while cisterns frequently (but not always) were located closer to the rear walls of street-fronting buildings or outbuildings. Privies and cisterns would be excavated up to 10-15 feet below grade. If undisturbed deposits of cultural material do still exist on the lot, they may have the potential to provide meaningful information regarding the lives of the people who lived there. There is the moderate possibility that these potential subsurface features could still be present given the lack of later disturbance to the project site.

Based on the conclusions outlined above, HPI recommended that a program of archaeological field testing be undertaken on portions of each historic lot. This testing, often referred to as Phase IB, would determine the presence or absence of nineteenth-century shaft features and possible yard deposits associated with the former residents and commercial endeavors on the property. Archaeological field testing would involve using a backhoe to remove the existing ground surface (some of which is now covered with paving) from test

trenches within the sensitive areas. Mechanical excavations, under the direction of an archaeologist, would continue to assist with removing modern fill or debris underlying the removed pavement in order to expose potential archaeological resources. All archaeological testing should be conducted according to OSHA regulations and applicable archaeological standards, which includes prior LPC approval of a field testing work plan (LPC 2018; CEQR 2020). Professional archaeologists, with an understanding of and experience in urban archaeological excavation techniques, would be required to be part of the archaeological team." (Page i, February 2022 Phase IA Archeological Documentary Study).

Conclusion

By letter dated June 1st, 2022, the LPC concurs with the documentary study's findings that Block 1867 Lot 64 may contain significant archaeological resources and that, therefore, the site should be archaeological tested (see **Appendix A**). A Restrictive Declaration will be placed on the site (Lot 64, Block 1867) to ensure that the required testing, and if necessary, the recovery of resources, be conducted. The Applicant commits to perform the prescribed archaeological work, pursuant to LPC concurrence of an approved Phase IB Work Plan in accordance with the CEQR Technical Manual and LPC guidelines for Archeological Work in New York City. In the event that the archaeological field testing uncovers significant archaeological resources, additional archaeology may be needed as per the Guidelines for Archaeological Work in New York City. By letter dated July 8th, 2022 (see **Appendix A**), the LPC concurs that with the Restrictive Declaration in place, there would be no potential for adverse impacts related to archeological resources.

Chapter 10: Urban Design and Visual Resources

According to the *2021 CEQR Technical Manual*, urban design is the totality of components that may affect a pedestrian's experience of public space. Elements that play an important role in the pedestrian's experience include streets, buildings, visual resources, open space, and natural features, as well as wind as it relates to channelization and downwash pressure from tall buildings. Pursuant to the *2021 CEQR Technical Manual*, an assessment of Urban Design may be warranted when a proposed action may affect one or more of the elements that contribute to the pedestrian experience of an area, specifically the arrangement, appearance, and functionality of the built environment.

The proposed rezoning of the Affected Area from M1-1 to R6B and C4-5X would alter permitted use, bulk, and height within the Affected Area. Therefore, further analysis is warranted. The differences between existing and proposed zoning, with regards to those aspects of zoning affecting urban design, are presented in the following **Table 2.10-1**.

Table 2.10-1: No-Action and With-Action Zoning

	No-Action	With-Action	
Zoning	M1-1	C4-5X	R6B
Permitted Uses	Manu., Com., CF	Com., Res., CF	Res., CF
Maximum FAR	Manu. and Com.: 1.00 CF: 2.40	Com: 4.00 Res.: 6.00 CF: 5.00	Res.: 2.20 CF: 2.00
Maximum Height	Sky Exposure Plane	Base Height: 60-105 feet	Base Height: 30-45 feet
		Building Height: 145 feet (w/QGF)	Building Height: 55 feet (w/QGF)
Lot Coverage (corner lot)	100%	100%	100%

Com. = Commercial; CF = Community Facility; Manu. = Manufacturing; Res. = Residential; QGF = Qualifying Ground Floor

Existing Conditions

The Affected Area consists of multiple lots in Block 1867 along Atlantic Avenue and New York Avenue in Bedford-Stuyvesant neighborhood, Brooklyn, which is described in detail in **Sections 1.4 and 2.4.**

The predominant land use in the 400-foot Surrounding Area is residential and is characterized by 3- and 4-story brownstones, townhouses and apartment buildings; however, mid- to high-rise residential, mixed use and commercial buildings are also in the vicinity. Located to the north of the Affected Area is a 10-story mixed commercial and residential building with 60 dwelling units located on Fulton Street between Nostrand and New York Avenues (1320 Fulton Street, Block 1861, Lot 119), and a 7-story mixed commercial and residential building with 65 dwelling units at the corner of New York Avenue and Fulton Street (1330 Fulton Street, Block 1861, Lot 20). Located to the southeast of the Affected Area is an 11-story apartment building with 103 dwelling units on New York Avenue between Pacific and Dean Streets (77 New York Avenue, Block 1208, Lot 1). To the west of the Affected Area is a 7-story commercial and office building, La Quinta hotel, on Atlantic Avenue between Herkimer Place and Nostrand Avenue (1225 Atlantic Avenue, Block 1866, Lot 23).

Small-scale retail commercial buildings are generally located along Nostrand Avenue north of Atlantic Avenue and ground floor commercial uses are located along Nostrand Avenue south of Atlantic Avenue. A 5-story hotel and one-story auto repair shops are located along Atlantic Avenue, opposite the Project Area in a C8-2 district. One and two-story contractors' establishment, hardware store and woodworking shop are located along the north side of Atlantic Avenue. The study area also includes several industrial uses along Atlantic Avenue to the south, such as a contractor, hardware store, and a woodworking shop.

Projected Development Site 1 consists of six separate lots along Atlantic Avenue. Lots 63, 64, 65, and 66 are all paved lots used for parking and vehicle storage and are interior lots between 995 SF and 4,473 SF. Lot 62 is a 2,236 SF corner lot improved with a 2,189 GSF commercial building constructed in 2010 operating as a building supply store. Lot 68 is a 11,927 SF interior lot improved with a 11,927 GSF commercial structure constructed around 1910 operating as a kitchen design center.

Other lots within the Affected Area include one- and two-story manufacturing buildings on lots 78 and 80 (.88 and 2.00 FAR); one-story commercial uses on lots 84 and 85 (1.00 FAR); vacant and unimproved lot 77; residential semi-detached multi-family homes along New York Avenue on lots 56, 57, 58, 59, 60, and 61 (between 1.20 and 2.07 FAR); and Lot 72, which is improved with three separate buildings containing residential and commercial uses (1.93 FAR).

The traffic grid is regular, and the Surrounding Area includes major commercial thoroughfares including Atlantic Avenue, Nostrand Avenue, and Fulton Street. The area is well-served by transit, and is within a Transit Zone. The Nostrand Avenue subway station is serviced by the MTA with stops for the A and C lines and is two blocks north of the Affected Area. The Nostrand Avenue Long Island Railroad station is immediately adjacent to the Affected Area, elevated above Atlantic Avenue, with trains providing service to various locations, including West Hempstead and Far Rockaway. The elevated Long Island Railroad structure is approximately 50 feet from the property line of the site, with two stairs on the northern side of Atlantic Avenue to connect the sidewalk with the elevated station. One stair is located at the intersection of Atlantic Avenue and New York Avenue while the other sits in the middle of Atlantic Avenue between New York Avenue and Nostrand Avenue, right in front of the bounding lot (Block 1867, Lot 72) to the west of the project site. Stops for the B25, B44, B44-SBS, and B49 buses are in the immediate area.

Sidewalks, ranging from 10 feet to 15 feet wide, are in good condition with paved surface, sufficient street trees, and regular street lights throughout the study area except that the sidewalks along Atlantic Avenue need improvements regarding the limited number of street trees. All the intersections are under good control with properly functioning traffic lights and clear crossing markings, securing the safety of the pedestrians when across the streets.

Analysis

Future No-Action Condition

In the future without the Proposed Actions, it is expected that while tenants within the residential, manufacturing, retail, and office buildings may change, the overall use of these buildings within the study area would remain the same. Any physical changes to buildings in the study area would comply with designated zoning regulations and other surrounding districts.

The pedestrian experience within the study area under Future No-Action Condition would not significantly change compared to that in the existing conditions. The sidewalks, ranging from 10 feet to 15 feet in the study area, would be expected to remain the good condition with regular street trees and lights. The Surrounding Area would be predominantly residential, with 3- and 4-story brownstones, townhouses, and apartment buildings while commercial and office buildings, the majority of which are low-rise buildings between 1 story to 3 stories, are located to the north along Fulton Street and to the west along Nostrand Avenue.

No significant changes to the area's urban character are anticipated. No changes to the area's views to the adjacent parks and open spaces are also expected.

Future With-Action Condition

Projected Development Site 1 (Block 1867, Lots 62, 63, 64, 65, 66, 68)

The Applicant-Owned lots would have a projected lot size of 27,086 SF, and would be developed with a 174,039 GSF (162,516 ZSF; 6.00 FAR) mixed-use commercial, community facility, and residential building of 14 stories (145 feet building height), which would set back a depth of 10 feet after rising up to the maximum allowed 105 feet base height given that Atlantic Avenue is a wide street with a width of more than 75 feet. Pursuant to Zoning Resolution Article II Chapter 3 Section 23-693[9], transition rule, which limits the height of buildings in higher-density districts when they adjoin certain lower-density districts, would apply along the C4-5X (R7X equivalent) and R6B zoning district boundary, limiting the height of the proposed building to 65 feet within 25 feet of the bounding R6B district.

There would be 21,040 GSF of ground floor commercial (local retail) uses, 17,404 GSF of second floor community facility (UG 4 ambulatory diagnostic) uses, and 135,594 GSF of residential uses on the upper floors. There would be 160 total dwelling units (1 unit per 850 GSF), 25%-30% (40-48 units) of which would be affordable pursuant to MIH at an average of 60-80% AMI depending on the Option selected. The Applicant intends to pursue Option 2, which would result in approximately 48 affordable housing units. 64 residential accessory spaces would be required, and 64 spaces would be provided at cellar level. No commercial or community facility accessory parking spaces are required within the C4-5X zoning district.

The ground-floor retail spaces would contain a coffee shop and a large retail store. The coffee shop would have one entrance and the retail store would have 4 entrances, all of which are along Atlantic Avenue. Meanwhile, the Proposed Development would provide a small publicly accessible open space at the corner of Atlantic Avenue and New York Avenue with built-in seating and tables, benches, and raised planters.

Since Projected Development Site 1 is a primary transit-adjacent site, as defined by the Zoning Resolution 66-11, the Metropolitan Transportation Authority (MTA) has determined that a transit volume is needed for Projected Development Site 1, which must be certified by the Chairperson of the City Planning Commission pursuant to Zoning Resolution Section 66-21. Accordingly, a clear path transit volume easement of 71 feet long (the existing stair length plus 30 feet) by 10 feet wide would be included in the site plan of Projected development Site 1.

[9] https://zr.planning.nyc.gov/article-ii/chapter-3#23-693

Projected Development Site 2 (Block 1867, Lots 77, 78, 80, 84, 85)

The lots would assemble and have a projected lot size of approximately 39,441 SF, and would be developed with a 254,473 GSF (236,646 ZSF; 6.00 FAR) mixed-use commercial and residential building of 14 stories (145 feet building height), which would set back a depth of 10 feet after rising up to the maximum allowed 105 feet base height given that Atlantic Avenue is a wide street with a width of more than 75 feet. Pursuant to transition rule mentioned above, which limits the height of buildings in higher-density districts when they adjoin certain lower-density districts, would apply along the C4-5X (R7X equivalent) and R6B zoning district boundary, limiting the height of the proposed building to 65 feet within 25 feet of the bounding R6B district to its north.

There would be 28,713 GSF of ground floor commercial (local retail) uses and 225,760 GSF of residential uses on the upper floors. 266 total dwelling units would be provided (1 per 850 GSF), 25%-30% (67-80 units) of which would be affordable pursuant to MIH at an average of 60-80% AMI depending on the Option selected. 106 residential accessory parking spaces would be required, and 106 spaces would be provided at cellar level. No commercial parking spaces are required within the C4-5X zoning district. The ground-floor retail spaces would contain local retail stores with entrances along Atlantic Avenue.

Under the Future With-Action Condition, the street condition would not change: the existing street lights, trees, and sidewalk width would remain. Though the Proposed Actions would introduce development that is larger in scale than surrounding buildings, the uses proposed in the development would be similar to the Surrounding Area and the massing of the 145-foot-tall buildings would mix into the area well with the transition rule applied. The two new 14-story developments with ground floor commercial uses, currently improved with unoccupied commercial buildings and parking facilities, would improve the pedestrian experience and provide locally serving retail uses.

Conclusion

The development facilitated by the Proposed Actions would not adversely impact any of the constituent urban design elements or impact the overall character of the neighborhood. It would not significantly change the pedestrian experience, nor would it disturb the vitality, walkability, or the visual character of the area. Instead, with the transition rule applied to limit the potential change in building height between two different zoning districts, the Proposed Development would not impact the pedestrian experience in the area. The development with ground floor commercial uses would improve walkability and the visual character of the area, and would also provide locally serving retail uses. Therefore, the Proposed Actions would not result in any significant adverse impact to the constituent elements of Urban Design, and a detailed analysis is not warranted.

Figure 2.10-1: Urban Design Study Area – Photomontage Locations

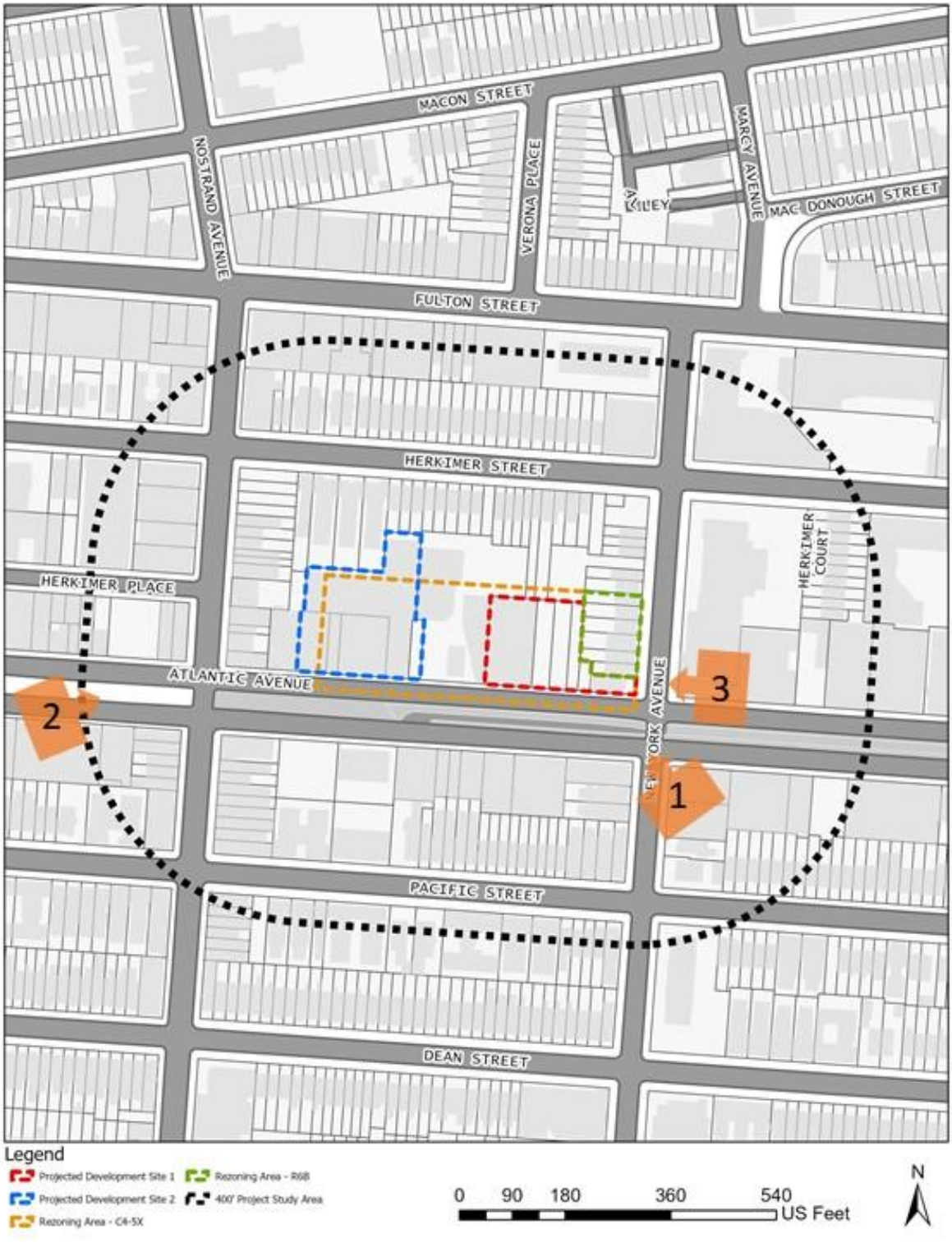


Figure 2.10-2: Existing Condition and No-Action Condition 1
Looking Northwest at Atlantic Avenue & New York Avenue



Figure 2.10-3: With-Action Condition 1
Looking Northwest at Atlantic Avenue & New York Avenue[10]



[10] A transit volume of 71 ft. long (the existing stair length plus 30') by 10 ft. wide easement is included in the rendering as Projected Development Site 1 is determined as a primary transit-adjacent site by MTA.

Figure 2.10-4: Existing Condition and No-Action Condition 2
Looking Northeast at Atlantic Avenue and Nostrand Avenue



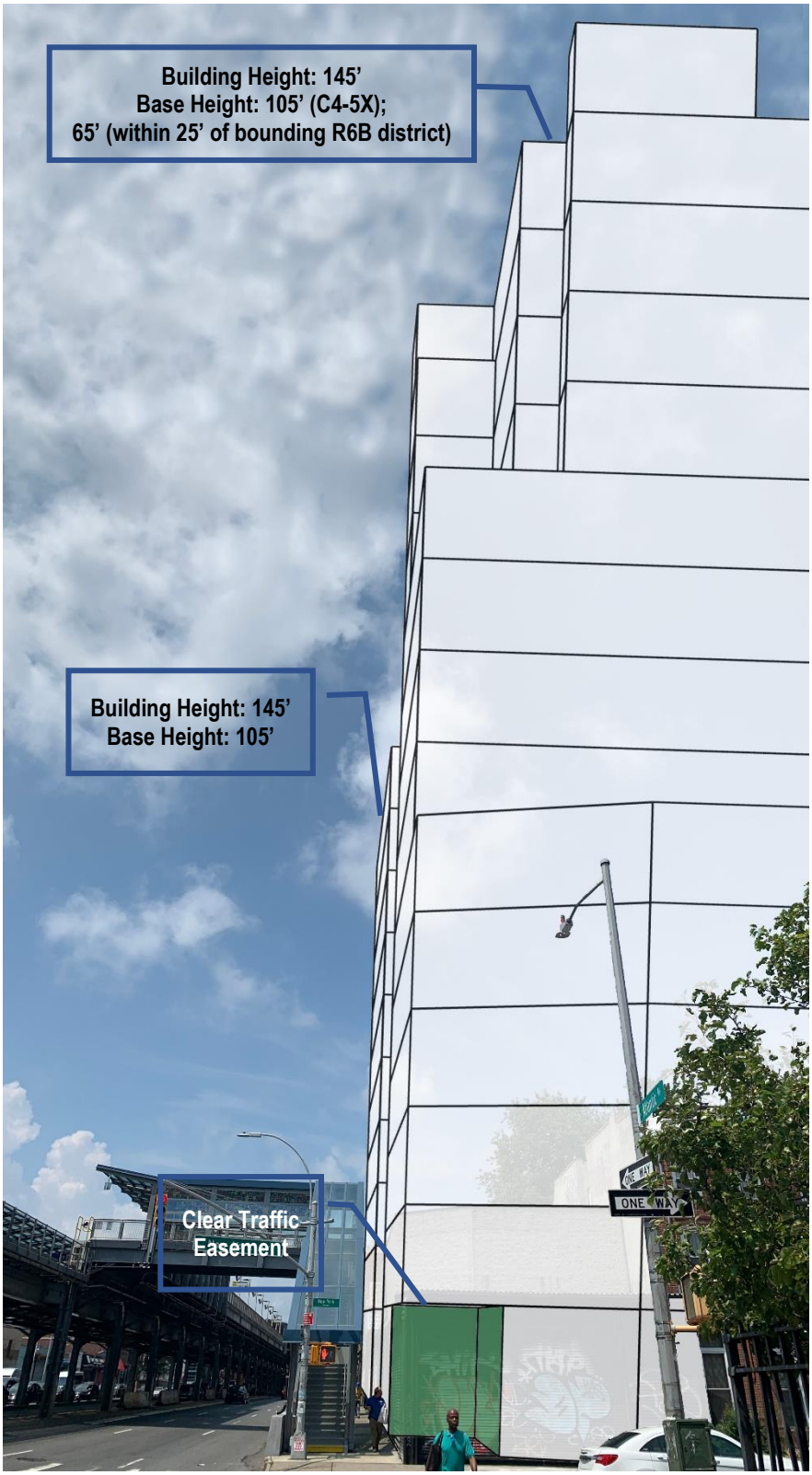
Figure 2.10-5: With-Action Condition 2
Looking Northeast at Atlantic Avenue and Nostrand Avenue



Figure 2.10-6: Existing Condition and No-Action Condition 3
Looking West at Atlantic Avenue and New York Avenue



Figure 2.10-7: With-Action Condition 3
Looking West at Atlantic Avenue and New York Avenue



Chapter 12: Hazardous Materials

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

Methodology

The hazardous materials assessment begins with a Phase 1 ESA, which is a qualitative evaluation of the environmental conditions present at a site, based on a review of available information, site observations, and interviews. The Phase 1 ESA includes research and field observations to determine whether the site may contain contamination from either past or present activities on the site or as a result of activities on adjacent or nearby properties. If a potential REC is identified during this assessment, then building any subsurface investigations are usually conducted as part of a Phase II ESA to confirm the presence and extent of the contamination.

Analysis

Projected Development Site 1, Block 1867 Lots 68, 66, 65, 64, 63, and 62, is owned by the Applicant. Lots 63, 64, 65, and 66 are all paved lots used for parking and vehicle storage and are interior lots between 995 SF and 4,473 SF. Lot 62 is a 2,236 SF corner lot improved with a 2,189 GSF commercial building constructed in 2010 operating as a building supply store. Lot 68 is a 11,927 SF interior lot improved with a 11,927 GSF commercial structure constructed around 1910 operating as a kitchen design center.

The proposed rezoning would allow for residential, commercial, and community facility uses to be built with a higher FAR in the proposed C4-5X and R6B districts. Accordingly, a Phase I Environmental Site Assessment (ESA) was conducted for Projected Development Site 1 by Equity Environmental Engineering (EEE) on November 15, 2019.

The purpose of a Phase I ESA is to determine whether any type of environmental hazard exists within or adjacent to the project site. Environmental hazards may include, but are not be limited to, hazardous/toxic wastes or raw chemicals stored, dumped, or spilled on the site, underground and above ground storage of petroleum or hazardous materials; asbestos within the building materials/structures; and identification of potential off-site sources of hazardous waste contamination, such as industrial facilities adjacent to Projected Development Site 1 (The Subject Property).

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

EEE has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-13. The following conditions were observed:

- RECs: There are two RECs associated with the Subject Property. The mold found inside the vacant kitchen appliance warehouse on lot 68 is considered a REC. The oil staining found in the asphalt lot is also considered a REC. The staining was within an area of cracked asphalt and has potential to leak into the soil at the Subject Property.
- HRECs: There are no HRECs associated with the Subject Property.
- CRECs: There are no CRECs associated with the Subject Property.
- VECs: The EDR Vapor Encroachment database identified numerous VECs (Vapor Encroachment Conditions) within 1/10 of a mile of the Subject Property that are related to four historical auto garages, two dry cleaners, and numerous reported spills related to hydraulic fluid, and overfilled heating oil tanks. Based on these findings, a possible vapor encroachment condition cannot be ruled out.

Conclusion

Based on the findings of the Phase 1 ESA, RECs and VECs were identified related to the Subject Property. Therefore, the development of the Projected Development Site under the Proposed Actions may have the potential for adverse impacts related to hazardous materials. As there are actively operating businesses located on the site, the site testing cannot be accommodated at this time. Therefore, an E-Designation will be mapped on the Projected Development Sites. The E-Designation language related to Hazardous Materials is as follows:

E-Designation (E-732)

Block 1867 Lots 62, 63, 64, 65, 66, and 68 (Projected Development Site 1 – Applicant Owned) and Block 1867 Lots 77, 78, 80, 84, and 85 (Projected Development Site 2 – Non-Applicant Owned)

An E-Designation should be placed on the Projected Development Sites to assure that testing and mitigation will be performed, as necessary, before any future development and/or soil disturbance. Further hazardous materials assessments should be coordinated through the Mayor's Office of Environmental Remediation (OER).

Task 1-Sampling Protocol

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

Task 2-Remediation Determination and Protocol

A written report with findings and a summary of the data must 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 applicant must complete such remediation as determined necessary by OER. The Applicant should then provide proper documentation that the work has been satisfactorily completed.

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

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

Chapter 13: Water and Sewer Infrastructure

This chapter assesses the potential impacts of the Proposed Developments on the City's water supply, wastewater treatment, and stormwater management infrastructure. This analysis is made in accordance with the guidance set forth in the *2021 CEQR Technical Manual*.

New York City's water and sewer network is fundamental to the operation, health, safety, and quality of life of the City and its surrounding environment, which must be sized to fit the users and surface conditions in order to function adequately. Ensuring these systems have adequate capacity to accommodate land use or density changes and new development is critical to avoid environmental and health problems, such as sewer back-ups, street flooding, or pressure reductions. To avoid these problems, areas of the City that lack sufficient water and sewer capacity need infrastructure improvements. In addition, many regulations have been imposed on the City since the system was designed, including multiple Consent Orders by the State regulating the discharge of pollutants to ensure compliance with the Federal Clean Water Act, which pose new challenges for meeting water quality and combined sewer overflow (CSO) standards, especially as the population being served by the sewers increases. Thus, the City has a mandate to provide sufficient service to the community and meet increasingly stringent State and Federal requirements for improved water quality standards.

Methodology

Section 200 of Chapter 13: *Water and Sewer Infrastructure* of the *2021 CEQR Technical Manual* identifies the types of projects that require at least a preliminary assessment of their impact on the City water supply and wastewater and stormwater conveyance and treatment systems.

Water Supply

A preliminary water supply infrastructure analysis is needed if the project:

- Would result in an exceptionally large demand for water (those that are projected to use more than one million gallons per day); or
- Is located in an area that experiences low water pressure (areas at the end of the water supply distribution system).

Wastewater and Stormwater Conveyance and Treatment Systems

A preliminary wastewater and stormwater conveyance and treatment infrastructure analysis is needed if the project:

- Is located in a combined sewer area and would exceed the following incremental development of residential units or commercial, public facility, and institution and/or community facility space above the No-Action scenario:
    - 1,000 residential units or 250,000 sq. ft. of commercial, public facility, and institution and/or community facility space or more in Manhattan; or,

    - 400 residential units or 150,000 sq. ft. of commercial, public facility, and institution and/or community facility space or more in the Bronx, Brooklyn, Staten Island, or Queens.
- Is located in a separately sewered area and would exceed the following incremental development of residential units or commercial, public facility, and institution and/or community facility space per site:
    - R1, R2, or R3: 25 residential units or 50,000 sf of commercial/public and institution/community facility use;
    - R4 and R5: 50 residential units or 100,000 sf of commercial/public and institution/community facility use;
    - All remaining zoning designations, including C, M, and Mixed-use districts: 100 residential units or 100,000 sf of commercial/public and institution/community facility use.
- Is located in an area that is partially sewered or currently unsewered.
- Involves development on a site five acres or larger where the amount of impervious surface would increase.
- Would involve development on a site one acre or larger where the amount of impervious surface would increase and one of the following would apply:
    - Located within the Jamaica Bay watershed; or
    - Located in certain specific drainage areas including: Bronx River, Coney Island Creek, Flushing Bay and Creek, Gowanus Canal, Hutchinson River, Newtown Creek, and Westchester Creek.
- Would involve construction of a new stormwater outfall that requires federal and/or state permits.

Preliminary Assessment

The anticipated development on the Projected Development Sites would connect to both the municipal water supply and combined wastewater and stormwater conveyance and treatment systems, where sanitary sewage flows and stormwater flows are mixed and conveyed to a wastewater treatment plant. Wastewater from the area is conveyed to the Red Hook Wastewater Treatment Plant (WWTP), which has a total capacity of approximately 60 million gallons per day (mgd).

Under the No-Action scenario, existing conditions of the Projected Development Sites are expected to remain. In total, there would be 21,048 GSF of commercial uses (UG 6 local retail) and 35,685 GSF of light manufacturing uses (wholesaler and automotive).

In contrast, the Proposed Developments effectuated by the Proposed Actions under the RWCDS would include a new mixed-use commercial, community facility, and residential building on Projected Development Site 1 (Block 1867, Lots 62, 63, 64, 65, 66, and 68) and a new mixed-use commercial and residential building on Projected Development Site 2 (Block 1867, Lots 77, 78, 80, 84, and 85), both of which would reach the maximum permitted FAR of 6.00 with a building height of 14 stories or 145 feet. The building on Projected Development Site 1 would include 21,040 GSF of commercial uses (UG 6 local retail), 17,404 GSF of community facility uses (UG 4 ambulatory diagnostic), and 135,594 GSF of residential uses (160 dwelling units). Meanwhile, the building on Projected Development Site 2 would include 28,713 GSF of commercial uses (UG 6 local retail) and 225,760 GSF of residential uses (265 dwelling units).

In total, the net incremental in the future with the Proposed Actions, compared to the future without the Proposed Actions, would be increase of 425 dwelling units, 28,705 GSF of commercial uses, and 17,404 GSF of community facility uses as well as decrease of 35,685 GSF of light manufacturing uses.

The incremental additional water demand from the Proposed Developments would represent less than 1% of the City's overall water supply and the Proposed Developments are located in central Brooklyn, which is not an area of low water pressure. As such, the water supply infrastructure analysis is not warranted for the Proposed Developments. However, the water supply analysis is still provided as the wastewater and stormwater conveyance and treatment analysis would need the information of the water supply amount as an input.

The Projected Development Sites are located within a combined sewered area and the Proposed Developments on the Projected Development Sites would introduce an increment of 425 residential units, 28,705 GSF of commercial uses, and 17,404 GSF of community facility uses. According to the *CEQR Technical Manual*, the increments of the Proposed Developments would exceed the residential unit threshold of 400 residential units in Brooklyn. Therefore, the analysis on wastewater and stormwater conveyance and treatment systems is warranted for the Proposed Developments.

Water Supply and Demand

According to the *CEQR Technical Manual*, a water supply infrastructure analysis is needed if a project would result in an exceptionally large demand for water (e.g., more than one mgd) or is in an area that experiences low water pressure (e.g., areas at the end of the water supply distribution system). Although the incremental additional water demand from the Proposed Developments would represent less than 1% of the City's overall water supply and the Proposed Developments are located in central Brooklyn, which is not an area of low water pressure, the water supply infrastructure analysis is still conducted to provide inputs for the warranted wastewater and stormwater conveyance and treatment systems analysis.

Existing Conditions

The City's water supply system is comprised of three watersheds – the Croton, Delaware, and Catskill – which extend as far north as the Catskill Mountains, and deliver on average approximately 1.1 billion gallons of water per day to customers in the five boroughs and Westchester County. From these watersheds, potable water is conveyed to the City via a system of reservoirs, aqueducts, and tunnels. Within the City, a grid of water pipes distributes water to customers. The Projected Development Sites would be serviced by existing DEP water mains located within Atlantic Avenue.

Water demand is a function of the land use on the Projected Development Sites. Currently, the existing conditions of Projected Development Site 1 and 2 are summarized as follows:

- Projected Development Site 1 (Block 1867, Lots 62, 63, 64, 65, 66, and 68) – Lots 63, 64, 65, and 66 are all paved lots used for parking and vehicle storage. Lot 62 is improved with a 2,189 GSF commercial building constructed in 2010 operating as a building supply store. Lot 68 is improved with a 11,927 GSF commercial structure constructed around 1910 operating as a kitchen design center.

- Projected Development Site 2 (Block 1867, Lots 77, 78, 80, 84, and 85) – Lot 77 is a vacant and unimproved lot. Lots 78 is improved with a one-story manufacturing building with 19,832 GSF, which is operating as an auto glass shop. Lot 80 is improved with a two-story manufacturing building with 15,853 GSF, which is operating as a tire shop. Lots 84 and 85 are improved with one-story commercial buildings of 1,980 GSF and 4,952 GSF respectively.

As a result, there is existing water demand on the two Projected Development Sites. Using the water usage generation rates from *2021 CEQR Technical Manual Table 13-2*, **Table 2.13-1** below indicates that the estimated water demand on the Projected Development Sites is approximately 18,265 gpd under the existing conditions.

Table 0-1: Existing Water Supply Demand

Land Use	Water Consumption Rates	Area/Units	Domestic Water/Wastewater Generation (gpd)	Air Conditioning (gpd)
Retail Stores	Domestic: 0.24 gpd/sf	21,048 sf	5,052	3,578
	A/C: 0.17 gpd/sf			
Light Manufacturing	Domestic: 0.10 gpd/sf	35,685 sf	3,569	6,066
	A/C: 0.17 gpd/sf			
Total Water Demand			18,265	

Notes: Water consumption rates obtained from the *2021 CEQR Technical Manual* Table 13-2, "Water Usage and Sewage Generation Rates for Use in Impact Assessment," unless otherwise noted.

Future No-Action Condition

Under the No-Action scenario, the existing conditions of the Projected Development Sites would remain. As shown in **Table 0-1** above, the amount of daily water demand generated by the commercial and light manufacturing uses on the Projected Development Sites is approximately 18,265 gpd under the No-Action Condition.

Future With-Action Condition

Under the With-Action Condition, the Proposed Developments effectuated by the Proposed Actions would include a new mixed-use commercial, community facility, and residential building on Projected Development Site 1 (Block 1867, Lots 62, 63, 64, 65, 66, and 68) and a new mixed-use commercial and residential building on Projected Development Site 2 (Block 1867, Lots 77, 78, 80, 84, and 85), both of which would reach the maximum permitted FAR of 6.00 with a building height of 14 stories or 145 feet. The building on Projected Development Site 1 would include 21,040 GSF of commercial uses (UG 6 local retail), 17,404 GSF of community facility uses (UG 4 ambulatory diagnostic), and 135,594 GSF of residential uses (160 dwelling units). Meanwhile, the building on Projected Development Site 2 would include 28,713 GSF of commercial uses (UG 6 local retail) and 225,760 GSF of residential uses (265 dwelling units).

In total, the net incremental in the future with the Proposed Actions, compared to the future without the Proposed Actions, would be increase of 425 dwelling units, 28,705 GSF of commercial uses, and 17,404 GSF of community facility uses as well as decrease of 35,685 GSF of light manufacturing uses. Utilizing the average household size of 2.56 persons per household within Brooklyn Community District 3 from the 2020 decennial ACS data, the Proposed Developments would add 1,088 persons into the area under the With-Action Condition.

As indicated in **Table 0-2** below, the two Projected Development Sites are expected to generate a water demand of approximately 125,268 gpd.

Table 0-2: Future With-Action Water Supply Demand

Land Use	Water Consumption Rates	Area/Units	Domestic Water/Wastewater Generation (gpd)	Air Conditioning (gpd)
Residential	Domestic: 100 gpd/person	425 DUs/ 1,088 persons	108,800	0
Retail Stores	Domestic: 0.24 gpd/sf A/C: 0.17 gpd/sf	28,705 sf	6,889	4,880
Community Facility	Domestic: 0.10 gpd/sf A/C: 0.17 gpd/sf	17,404 sf	1,740	2,959
		Total Water Demand	125,268	

Notes: Water consumption rates obtained from the *2021 CEQR Technical Manual* Table 13-2, "Water Usage and Sewage Generation Rates for Use in Impact Assessment," unless otherwise noted.

The Proposed Actions would not result in significant adverse impacts on the City's water supply system. As indicated in **Table 0-1** and **Table 0-2** above, the Proposed Actions are expected to generate a net incremental of water demand of 107,004 gpd, which is approximately 0.011 percent of the City's average daily water supply demand (981 mgd) in 2020.

Wastewater and Stormwater Conveyance and Treatment Systems

As indicated in the *CEQR Technical Manual*, an assessment of the impact of the Proposed Developments on wastewater conveyance and treatment infrastructure is needed if the Proposed Developments is located in a combined sewered area and would exceed certain incremental development (above the predicted No-Action condition) of DUs or commercial, public facility, and institution and/or community facility space per site.

As described above, the Projected Development Sites are located within a combined sewered area and the Proposed Developments on the Projected Development Sites would introduce an increment of 425 residential units, 28,705 GSF of commercial uses, and 17,404 GSF of community facility uses, which would exceed the residential unit threshold of 400 residential units in Brooklyn as set forth in the *CEQR Technical Manual*. As such, the analysis on wastewater and stormwater conveyance and treatment systems is warranted for the Proposed Actions.

Existing Conditions

The Affected Area is located in an area where both sanitary sewage flows and stormwater flows are mixed and conveyed to a wastewater treatment plant. The mix of wastewater and stormwater from the Affected Area is anticipated to be treated at the Red Hook WWTP, where the mix of wastewater and stormwater is fully treated by physical and biological processes before it is discharged as effluent into East River. The quality of effluent is regulated by a State Pollutant Discharge Elimination System (SPDES) permit issued by the New York State Department of Environmental Conservation, which establishes limits for effluent parameters (i.e., suspended solids, fecal coliform bacteria, and other pollutants). Since the volume of flow to a WWTP affects the level of treatment a plant can provide, the SPDES permit also establishes a maximum permitted capacity. For the Red Hook WWTP, the maximum permitted capacity is 60 mgd. As of April 2022, the running average monthly flow to the Red Hook WWTP over the past 12 months has been 27 mgd, which is approximately 45% of the permitted capacity.

Wastewater Sewage Flow

Currently, Projected Development Site 1 and 2 are developed with commercial or light manufacturing buildings. As a result, there is existing wastewater generated on the two Projected Development Sites. For analysis purposes, the amount of sanitary sewage is estimated as all water demand generated by the existing commercial and light manufacturing uses except for air conditioning, which typically is not discharged into the sewer system. As shown in **Table 0-1** above, the amount of daily sanitary sewage generated by the existing commercial and light manufacturing uses on the Projected Development Sites is approximately 8,620 gpd under the existing conditions, which is calculated by subtracting the 9,645 gpd water demand for air conditioning from the total 18,265 gpd water demand amount.

Stormwater Sewage Flow

Under the existing conditions, Projected Development Site 1 is comprised of 13,716 sf of roof and 13,372 sf of pavement and walkways. Meanwhile, Projected Development Site 2 is comprised of 35,199 sf of roof and 4,242 sf of pavement and walkways. In total, there are 48,915 sf of roof and 17,614 sf of pavement and walkways on the two Projected Development Sites, which results in a weighted runoff coefficient (the fraction of precipitation that becomes surface runoff for each surface type) of 0.96 as shown in Error! Not a valid bookmark self-reference..

Table 0-3: Surface Types on Projected Development Sites (Existing and No-Action Conditions)

Surface Type	Roof	Pavement & Walkways	Grass & Softscape	Total
Percentage of Total Area	74%	26%	0%	100%
Surface Area (sf)[1]	48,915	17,614	0	66,529
Runoff Coefficient[2]	1.00	0.85	0.20	**0.96**

Notes:
1) Values obtained from evaluation of aerial photography using Google Earth.
2) Runoff coefficients for each surface type from DEP.

Standard DEP runoff coefficients were used to calculate the amount of stormwater runoff during a range of storm events, with rainfall averaging from 0.0 to 2.5 inches over durations of 3.8 to 19.5 hours. **Table 0-4**

shows the existing stormwater runoff generation for the existing uses on the Projected Development Sites. As indicated in the table below, for storm events with up to 2.5 inches of rainfall, the Projected Development Sites could generate up to 0.10 million gallons of stormwater. Depending on rainfall intensity, during storm events with up to 2.5 inches of rainfall, the stormwater flows generated range from 0.00 to 0.10 million gallons.

Table 0-4: Stormwater Runoff on Projected Development Sites (Existing and No-Action Conditions)

Rainfall (inches)	Duration (hours)	Total Area (acres)	Weighted Runoff Coefficient	Stormwater Runoff (MG)
0.00	3.80	1.53	0.96	0.00
0.40	3.80			0.02
1.20	11.30			0.05
2.50	19.50			0.10

Notes:
1) Runoff Volumes have been calculated as follows:
Q_{VOL} = [R_{VOL} x A x RC x 7.48 GAL/1,000,000 MGD per GAL] - S_{VOL}; where
Q_{VOL} = Total rainfall volume for 24-hour storm event discharged offsite (either to river or into CSS), in MG;
R_{VOL} = Rainfall volume in inches, for the corresponding rainfall return period;
A = Site area in sf;
RC = Rainfall runoff coefficient for each of the applicable site areas.
2) Rainfall runoff coefficients used are composite rates as shown in Table 0-3.

Since the Proposed Developments are located within a combined sewer system area, the total flows under the wet weather from the two Projected Development Sites should be the sum of the sanitary flow and the stormwater flow. As such, the current total flow of the two sites is approximately 108,620 gallons per day under the wet weather, which is the sum of 8,620 gallons of sanitary flow and 100,000 gallons of stormwater runoff flow.

Future No-Action Condition

Wastewater Sewage Flow

In the future without the Proposed Actions, the existing conditions would remain. Therefore, the daily sanitary sewage flow amount from the Projected Development Sites would not change under the No-Action conditions, which would still be approximately 8,620 gpd.

Stormwater Sewage Flow

In the future without the Proposed Actions, the existing conditions would remain. Therefore, the stormwater flow amount from the Projected Development Sites would not change under the No-Action conditions, which would still be range from 0.00 to 0.10 million gallons depending on rainfall intensity.

The wastewater and stormwater from the Projected Development Sites would continue to be approximately 108,620 gallons per day, which would be treated by the Red Hook WWTP with a maximum permitted capacity of 60 mgd.

Future With-Action Condition

Wastewater Sewage Flow

As shown in **Table 0-2** above, the amount of daily sanitary sewage generated by the proposed uses on the Projected Development Sites is approximately 117,430 gpd under the With-Action Condition, which is calculated by subtracting the 7,838 gpd water demand for air conditioning from the total 125,268 gpd water demand amount. Compared with the amount of daily sanitary sewage under the No-Action Condition, the Proposed Actions would result in an increase in the amount of daily sanitary sewage of 108,810 gpd.

Stormwater Sewage Flow

Under the With-Action Condition, the Proposed Developments effectuated by the Proposed Actions would include a new mixed-use commercial, community facility, and residential building on Projected Development Site 1 (Block 1867, Lots 62, 63, 64, 65, 66, and 68) and a new mixed-use commercial and residential building on Projected Development Site 2 (Block 1867, Lots 77, 78, 80, 84, and 85).

In the future with the Proposed Actions, the amount of surface area comprised of roofs would be further increased over the No-Action condition as the Proposed Actions would permit a larger bulk on the Projected Development Sites. The roof area of the proposed mixed-use buildings on Projected Development Site 1 and 2 would be built with impervious materials. Projected Development Site 1 would be comprised of 23,588 sf of roof, 2,500 sf of softscape, and 1,000 sf of pavement and walkways. Meanwhile, Projected Development Site 2 would be comprised of 36,941 sf of roof and 2,500 sf of pavement and walkways. In total, there would be 60,529 sf of roof, 2,500 sf of softscape, and 3,500 sf of pavement and walkways on the two Projected Development Sites.

As indicated in **Table 0-5**, it is anticipated that roof area would comprise 91 percent of the Projected Development Sites' surface area, the grass and softscape would comprise 4 percent of the surface area, and the pavement and walkways would comprise 5 percent of the surface area. As a result of these anticipated surface area changes, the weighted runoff coefficient for Projected Development Sites is expected to be 0.96 under the With-Action Condition.

Table 0-5: Surface Types on Projected Development Sites (With-Action Condition)

Surface Type	Roof	Pavement & Walkways	Grass & Softscape	Total
Percentage of Total Area	91%	5%	4%	100%
Surface Area (sf)[1]	60,529	3,500	2,500	66,529
Runoff Coefficient[2]	1.00	0.85	0.20	**0.96**

Notes:
1) Values obtained from architectural drawings.
2) Runoff coefficients for each surface type from DEP.

As indicated in **Table 0-6**, compared to the existing stormwater volumes from the Affected Area, the total stormwater flow under the With-Action Condition would be the same as the No-Action Condition during storm events with up to 2.5 inches of rainfall, which are both estimated at 0.10 mgd.

Table 0-6: Stormwater Runoff on Projected Development Sites (With-Action Condition)

Rainfall (inches)	Duration (hours)	Total Area (acres)	Weighted Runoff Coefficient	Stormwater Runoff (MG)
0.00	3.80	1.53	0.96	0.00
0.40	3.80			0.02
1.20	11.30			0.05
2.50	19.50			0.10

Notes: Rainfall runoff coefficients used are composite rates as shown in Table 0-5.

Since the Proposed Developments are located within a combined sewer system area, the total flows under the wet weather from the two Projected Development Sites should be the sum of the sanitary flow and the stormwater flow. As such, in the future with the Proposed Actions, the total flow of the two sites would be approximately 217,430 gallons per day under the wet weather, which is the sum of 117,430 gallons of sanitary flow and 100,000 gallons of stormwater runoff flow.

In the future with the Proposed Actions, wastewater from the Projected Development Sites would continue to be treated by the Red Hook WWTP. The capacity of the plant would not change as a result of the Proposed Actions, and the facility would continue to operate within its State Pollution Discharge Elimination (SPDES) permitted capacity of 60 mgd.

Significance Level Analysis

As per the *2021 CEQR Technical Manual*, significant impacts on WWTPs, interceptors, regulators, and pumping stations may occur if the project would result in:

- Inconsistency with the provisions of a Consent Order or other applicable regulatory program.
- Significantly increased wastewater or combined flows that would affect sanitary or combined sewer pumping stations, regulators, or interceptors with limited or no existing capacity.
- Loadings that would exceed capacity per specific SPDES parameters and limits.
- Privately operated treatment plants that would result in lowered water quality in the receiving waterbody would have significant adverse impacts on that waterbody.

In the future with or without the Proposed Actions, the Proposed Developments would both be compliant with the provisions of a Consent Order or other applicable regulatory program. The increased wastewater would not affect sanitary sewer pumping stations, regulators, or interceptors with limited or no existing capacity. And there would not be any privately operated treatment plants that would result in lowered water quality in the receiving waterbody.

As indicated above, the Proposed Developments is within a combined sewered area where the mix of sanitary sewage and stormwater is sent to the wastewater treatment plants. Under the With-Action Condition, the Proposed Developments are expected to generate a total flow of approximately 217,430 gpd comprised of sanitary sewage and stormwater, which is 108,810 gpd more than the estimated 108,620 gpd of the total sanitary sewage and stormwater under the No-Action Condition.

With the existing average monthly flow to the Red Hook WWTP of 27 mgd and the additional 108,810 gpd, the plant would continue to have ample reserve capacity. Pursuant to *CEQR Technical Manual* guidelines, as the demand associated with the Proposed Developments induced by the Proposed Actions would be well within the capacity of the affected treatment plant, no significant adverse impacts to the City's wastewater and stormwater treatment services would occur as a result of the Proposed Actions.

Chapter 16: Transportation

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

Methodology

The *CEQR Technical Manual* states that a preliminary trip generation assessment should be prepared to determine whether a quantified analysis of any technical areas of the transportation system is necessary. Except in unusual circumstances, a further quantified analysis would typically not be needed for a technical area if the proposed development would result in fewer than the following increments:

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

The *CEQR Technical Manual* also states that if the threshold for traffic is surpassed, a parking assessment may also be warranted. This chapter assesses the potential for project-generated vehicle, transit, and pedestrian trips to affect the local transportation network, as well as an assessment of transportation safety in the study area.

Analysis

Future No-Action Condition

Block 1867 Lots 68, 66, 65, 64, 63, and 62, the Projected Development Site 1, as well as Block 1867 Lots 85, 84, 80, 78, 77, the Projected Development Site 2, would remain unchanged under the No-Action Condition with a combined 56,733 GSF, consisting of 21,048 GSF commercial use (local retail) and 35,685 GSF manufacturing use (light industry). It doesn't provide parking spaces on site as required in a M1-1 district.

Future With-Action Condition

Pursuant to the Proposed Actions, Projected Development Site 1 (Block 1867, Lots 68, 66, 65, 64, 63, and 62) would be developed under RWCDS with a 174,039 GSF (162,516 ZSF; 6.00 FAR) mixed-use commercial, community facility, and residential building. There would be 21,040 GSF of ground floor commercial (local retail) uses, 17,404 GSF of second floor community facility (UG 4 ambulatory diagnostic) uses, and 135,594 GSF of residential uses on the upper floors. There would be 160 total dwelling units (1 unit per 850 GSF), 25%-30% (40-48 units) of which would be affordable pursuant to MIH at an average of 60-80% AMI depending on the Option selected. The Applicant intends to pursue Option 2, which would result in approximately 48 affordable housing units. 64 residential accessory spaces would be required, and 64

spaces would be provided at cellar level. No commercial or community facility accessory parking spaces are required within the C4-5X zoning district.

Meanwhile, Projected Development Site 2 (Block 1867, Lots 85, 84, 80, 78, and 77) would assemble and have a projected lot size of approximately 39,441 SF, and would be developed with a 254,473 GSF (236,646 ZSF; 6.00 FAR) mixed-use commercial and residential building. There would be 28,713 GSF of ground floor commercial (local retail) uses and 225,760 GSF of residential uses on the upper floors. 266 total dwelling units would be provided (1 per 850 GSF), 25%-30% (67-80 units) of which would be affordable pursuant to MIH at an average of 60-80% AMI depending on the Option selected. 106 residential accessory parking spaces would be required, and 106 spaces would be provided at cellar level. No commercial parking spaces are required within the C4-5X zoning district.

As shown in **Table 2.16-1** below, in total, there would be an elimination of 35,685 GSF light industry space and an addition of 425 dwelling units, 28,705 GSF local retail space, and 17,404 GSF community facility space incremented as a result of the demolition of the existing buildings and the construction of the new buildings on the two development sites.

Table 2.16-1: Increment of Analysis

Use	Site	No-Action Condition	With-Action Condition	Increment
Manufacturing (gsf)	Site 1	0	0	0
	Site 2	35,685	0	-35,685
	Total	**35,685**	**0**	**-35,685**
Commercial (gsf)	Site 1	14,116	21,040	6,924
	Site 2	6,932	28,713	21,781
	Total	**21,048**	**49,753**	**28,705**
Community Facility (gsf)	Site 1	0	17,404	17,404
	Site 2	0	0	0
	Total	**0**	**17404**	**17,404**
Residential DU	Site 1	0	160	160
	Site 2	0	266	266
	Total	**0**	**425**	**425**

Preliminary Assessment

Based on the Affected Area's location, it is within Traffic Zone 2. According to Table 16-1 of the *2021 CEQR Technical Manual*, a residential development of fewer than 200 residential units, 15,000 square feet of local retail, or 25,000 square feet of community facility space, or a weighted average below 1.00 of any of the above, typically does not warrant further assessment of the potential for adverse effects on Transportation. Incremental development under the Proposed Actions, compared to No-Action conditions, would consist of 425 more residential dwelling units (2.13 weighted average) and an increase of 28,705 GSF of local retail space (1.91 weighted average) and 17,404 GSF of community facility space (0.7 weighted average), which results in a weighted average of 4.73 for the Proposed Actions. Therefore, a Tier 1 trip generation is required.

Tier 1 Trip Generation

For Tier 1 trip generation, data from the *2021 CEQR Technical Manual*, East New York FEIS, 840 Atlantic Avenue Rezoning EAS, American Community Survey 2015-2019 and 2012-2016, and data provided by and NYCDOT was integrated for the traffic generation model. As **Table 2.16-2** shows, the assumption of the travel factors is determined based on the listed data sources. **Table 2.16-3** and **Table 2.16-4** show the person trips, vehicular trips, and pedestrian trips generated from the trip factors in **Table 2.16-2**.

Table 2.16-2: Travel Factors

	Retail		Residential		Medical Office		Light Industry	
Trip Generation	(1)		(1)		(1)		(2)	
Weekday	329		8.18		66.626x + 141.77		14.7	
Saturday	358		9.08		37		2.2	
	per 1,000 sf		per DU		per 1,000 sf		per 1,000 sf	
Linked, Pass-by, and Diverted Trips	48% (AM)	19% (MD/PM/SAT)						
Temporal Distribution	(1)		(1)		(1)		(2)	
AM	4.80%		9.30%		11.00%		13.20%	
MD	8.00%		5.60%		12.60%		11.00%	
PM	10.90%		8.50%		8.50%		14.20%	
Sat MD	11.70%		8.40%		16.60%		10.70%	
Modal Splits	(1)		(3)		(1)		AM/PM/Sat (6)	MD (2)
Auto	11.00%		12.25%		22.00%		34.57%	2.00%
Taxi	0.00%		1.76%		4.00%		0.86%	3.00%
Bus	2.00%		5.30%		13.00%		16.45%	6.00%
Subway	3.00%		64.69%		13.00%		34.51%	6.00%
Walk/Other	84.00%		15.99%		48.00%		13.61%	83.00%
In/Out Splits	In (1)	Out (1)	In (1)	Out (1)	In (1)	Out (1)	In (2)	Out (2)
AM	52%	48%	22%	78%	62%	38%	88%	12%
MD	50%	50%	50%	50%	53%	47%	50%	50%
PM	50%	50%	62%	38%	39%	61%	12%	88%
Sat MD	50%	50%	55%	45%	54%	46%	47%	53%
Vehicle Occupancy	(4)		(3)(5)		Weekday (2)	Sat (2)	(2)(6)	
Auto	1.20		1.17		1.50	2.60	1.09	
Taxi	1.20		1.40		1.50	2.60	1.20	
Truck Trip Generation	(1)		(1)		(1)		(2)	
Weekday	0.35		0.06		0.35		0.67	
Saturday	0.04		0.02		0.04		0.67	
Temporal Distribution	(1)		(1)		(1)		(2)	
AM	8.00%		12.00%		8.00%		14.00%	
MD	11.00%		9.00%		11.00%		9.00%	
PM	2.00%		2.00%		2.00%		1.00%	
Saturday	11.00%		9.00%		11.00%		0.00%	
In/Out Splits	In (1)	Out (1)	In (1)	Out (1)	In (1)	Out (1)	In (1)	Out (1)
AM/MD/PM/Sat	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%

1 = 2021 CEQR TM
2 = East New York EIS
3 = ACS 5yr JTW (2015-2019) CT# 221, 227, 245, 247, 249, 269, 271, 305, 313, and 315
4 = NYCDOT Local Retail data for Brooklyn
5 = 840 Atlantic Ave Rezoning EAS
6 = ACS 5yr RJTW (2012-2016) CT# 221, 227, 245, 247, 249, 269, 271, 305, 313, and 315

Table 2.16-3: Estimated Incremental Person/Vehicular Trips

	Local Retail		Residential		Medical Office		Light Industrial		Total	
Size/Units	28,705 gsf		425 DU		17,404 gsf		-35,685 gsf			
Peak Hour Trips										
AM	238		323		143		-69		635	
MD	613		195		164		-58		914	
PM	835		296		111		-74		1,167	
Sat MD	976		324		107		-8		1,398	
Person Trips										
AM	In	Out	In	Out	In	Out	In	Out	In	Out
Auto	14	13	9	31	20	12	-21	-3	21	53
Taxi	0	0	1	4	4	2	-1	0	4	7
Bus	2	2	4	13	12	7	-10	-1	8	21
Subway	4	3	46	163	12	7	-21	-3	40	171
Walk/Other	104	96	11	40	43	26	-8	-1	149	161
Total	124	114	71	252	89	54	-61	-8	223	412
MD	In	Out	In	Out	In	Out	In	Out	In	Out
Auto	34	34	12	12	19	17	-1	-1	64	62
Taxi	0	0	2	2	3	3	-1	-1	4	4
Bus	6	6	5	5	11	10	-2	-2	21	20
Subway	9	9	63	63	11	10	-2	-2	82	80
Walk/Other	258	258	16	16	42	37	-24	-24	291	286
Total	307	307	97	97	87	77	-29	-29	462	452
PM	In	Out	In	Out	In	Out	In	Out	In	Out
Auto	46	46	22	14	9	15	-3	-23	75	52
Taxi	0	0	3	2	2	3	0	-1	5	4
Bus	8	8	10	6	6	9	-1	-11	22	12
Subway	13	13	119	73	6	9	-3	-23	134	71
Walk/Other	351	351	29	18	21	32	-1	-9	400	392
Total	418	418	183	112	43	67	-9	-66	635	532
Saturday	In	Out	In	Out	In	Out	In	Out	In	Out
Auto	54	54	22	18	13	11	-1	-2	87	81
Taxi	0	0	3	3	2	2	0	0	5	4
Bus	10	10	9	8	8	6	-1	-1	26	23
Subway	15	15	115	94	8	6	-1	-2	136	114
Walk/Other	410	410	29	23	28	24	-1	-1	466	456
Total	488	488	178	146	58	49	-4	-4	720	678
Vehicle Trips										
AM	In	Out	In	Out	In	Out	In	Out	In	Out
Auto	11	10	7	26	13	8	-19	-3	12	42
Taxi	0	0	1	3	2	1	0	0	3	5
Taxi Balanced	0	0	2	6	5	3	-1	0	6	9
Truck	0	0	2	2	0	0	-2	-2	1	1
Total	12	11	11	34	18	11	-22	-4	19	52
MD	In	Out	In	Out	In	Out	In	Out	In	Out
Auto	28	28	10	10	13	11	-1	-1	51	49
Taxi	0	0	1	1	2	2	-1	-1	3	3
Taxi Balanced	0	0	2	2	5	4	-1	-1	6	5
Truck	1	1	1	1	0	0	-1	-1	1	1
Total	29	29	14	14	18	16	-3	-3	57	55
PM	In	Out	In	Out	In	Out	In	Out	In	Out
Auto	38	38	19	12	6	10	-3	-21	61	39
Taxi	0	0	2	1	1	2	0	0	3	3
Taxi Balanced	0	0	5	3	2	4	0	-1	7	5
Truck	0	0	0	0	0	0	0	0	0	0
Total	38	38	24	15	9	14	-3	-22	68	45
Saturday	In	Out	In	Out	In	Out	In	Out	In	Out
Auto	45	45	19	15	5	4	-1	-1	67	63
Taxi	0	0	2	2	1	1	0	0	3	3
Taxi Balanced	0	0	4	4	2	2	0	0	6	5
Truck	0	0	0	0	0	0	0	0	0	0
Total	45	45	24	19	7	6	-1	-1	74	68

Table 2.16-4: Estimated Incremental Pedestrian Trips

	Local Retail		Residential		Medical Office		Light Industry		Total		
Pedestrian Trips											
AM	In	Out	In	Out	In	Out	In	Out	Total In	Total Out	Total In/Out
Bus	2	2	4	13	12	7	-10	-1	8	21	29
Subway	4	3	46	163	12	7	-21	-3	40	171	211
Walk/Other	104	96	11	40	43	26	-8	-1	149	161	311
Total	110	102	61	217	66	40	-39	-5	197	353	551
MD	In	Out	In	Out	In	Out	In	Out	Total In	Total Out	Total In/Out
Bus	6	6	5	5	11	10	-2	-2	21	20	40
Subway	9	9	63	63	11	10	-2	-2	82	80	162
Walk/Other	258	258	16	16	42	37	-24	-24	291	286	577
Total	273	273	84	84	64	57	-27	-27	393	386	780
PM	In	Out	In	Out	In	Out	In	Out	Total In	Total Out	Total In/Out
Bus	8	8	10	6	6	9	-1	-11	22	12	35
Subway	13	13	119	73	6	9	-3	-23	134	71	205
Walk/Other	351	351	29	18	21	32	-1	-9	400	392	792
Total	372	372	158	97	32	50	-6	-42	555	476	1031
Saturday	In	Out	In	Out	In	Out	In	Out	Total In	Total Out	Total In/Out
Bus	10	10	9	8	8	6	-1	-1	26	23	49
Subway	15	15	115	94	8	6	-1	-2	136	114	250
Walk/Other	410	410	29	23	28	24	-1	-1	466	456	922
Total	434	434	153	125	43	36	-3	-3	628	593	1221

The increments induced by the Proposed Development are calculated through the traffic generation model. As **Table 2.16-5** shows, the number of trips increased wouldn't exceed the threshold for MTA bus. However, the amount of subway trips induced by the proposed development would exceed the threshold of 200, reaching 211, 205, and 250 trips during the AM, PM and Saturday MD peak hours, respectively. Meanwhile, the number of pedestrian trips, including not only "walk" trips, but also trips of other modes that usually have a pedestrian component, is expected to be 551, 780, 1,031, and 1,221 during weekday AM, midday, and PM peak hour, and Saturday MD peak hours respectively, greater than the 200 pedestrian threshold for all peak hours. As for vehicular trips, greater than 50 vehicular trips are projected during all four project peak hours. Therefore, a Tier 2 trip assignment is warranted for the Proposed Development.

Table 2.16-5: Traffic Increments of Proposed Development Compared with CEQR Thresholds

Peak Hour	AM	Midday	PM	Saturday MD
Total Walk-Only Trip-Ends	**311**	**577**	**792**	**922**
Walk-Only Threshold	200	200	200	200
Total Subway Trip-Ends	**211**	162	**205**	**250**
Subway Threshold	200	200	200	200
Total MTA Bus Trip-Ends	29	40	35	49
MTA Bus Threshold	200	200	200	200
Total Pedestrian Trip-Ends	**551**	**780**	**1031**	**1221**
Pedestrian Threshold	200	200	200	200
Vehicular Trip-Ends	**70**	**112**	**113**	**142**
Vehicular Threshold	50	50	50	50

*Note: Areas highlighted **yellow** denote exceedances to the applicable pedestrian and vehicular **thresholds** per Chapter 16 Section 313 of the 2021 CEQR Technical Manual*

Tier 2 Trip Assignment

Pursuant to Section 320 of the *2021 CEQR Technical Manual*, when a proposed project exceeds 50 peak hour vehicular trips or 200 peak hour pedestrian trips as determined by the Level 1 Trip Generation Screening Assessment, a Level 2 Project Generated Trip Assignment should be prepared to determine whether a detailed assessment of any technical areas is warranted. Accordingly, based on the Level 1 Trip Generation Screening Assessment, project generated vehicular and pedestrian trips-ends were assigned to the traffic network for all peak hours in which exceedances to the above thresholds are projected.

Project Generated Trip Assignment Assumptions

The trip assignment assumptions are based on the population distribution based on the 2015-2019 5-year American Community Survey Data for the subject census tracts and all bounding census tracts shown in **Figure 2.16-1** and the transit access points identified in **Figure 2.16-2** below. It should be noted that though Atlantic Avenue is a two-way major road, it has an elevated railroad in the middle of the road, making it infeasible for the vehicles to turn around in the middle of the road to get to the site. Instead of treating Atlantic Avenue as a two-way road, it is more practical to treat it as two one-way roads running parallel to each other on each side.

Since the Proposed Developments on the two Projected Development Sites would only have accessory parking spaces for residential uses, trips generated by the non-residential uses on site, including commercial and community facility uses, would need to be accommodated by the available parking spots in the adjacent parking facilities. There are two parking garages located within 5-minute walk distance from the Projected Development Sites: F&R Parking Lot and SP+ Restoration Plaza Parking Garage. Located at 65 New York Avenue, F&R Parking Lot is a 90-spot parking garage sitting close to the intersection of Atlantic Avenue and New York Avenue with an entrance and an exit along New York Avenue. It provides valet parking service 24 hours a day, 7 days a week. SP+ Restoration Plaza Garage is located at 1360 Fulton Street, which is about 3-minute walking distance from the project site. It is a 149-spot garage which also provides 24/7 valet parking service. Additionally, the SP+ Restoration Plaza Garage allows oversize vehicle parking. The garage supplements the service with electric car charging and on-site attendants and cashiers.

Since there is no parking space for non-residential uses on the Projected Development Sites, 50% of the nonresidential trips generated by the Proposed Developments will be directed to the two adjacent parking garages (F&R Parking Lot and SP+ Restoration Plaza Garage) in the trip assignments. Given that the trips of local retail and medical office uses tend to have an average visit time of approximately 2 hours, the flexible parking time and relatively low parking price for short-time parking of SP+ Restoration Plaza Garage better meets the needs of the visitors and would attract more trips. Therefore, 80% of the 50% non-residential trips would be redirected to SP+ Restoration Plaza Garage and 20% of the 50% non-residential trips would be redirected to F&R Parking Lot.

The peak hour vehicular trip assignments are shown below in **Figure 2.16-3** through **Figure 2.16-6**. The pedestrian trip assignments detailing total inbound and outbound peak hour pedestrian trip ends are shown below in Figure **2.16-7** through Figure **2.16-10**. The pedestrian trip assignment maps showing the inbound, outbound and total inbound and outbound pedestrian trips by mode are provided in **Appendix D**.

Figure 2.16-1: Transportation Census Tract Study Area - Population Distribution



Figure 2.16-2: Transportation Study Area

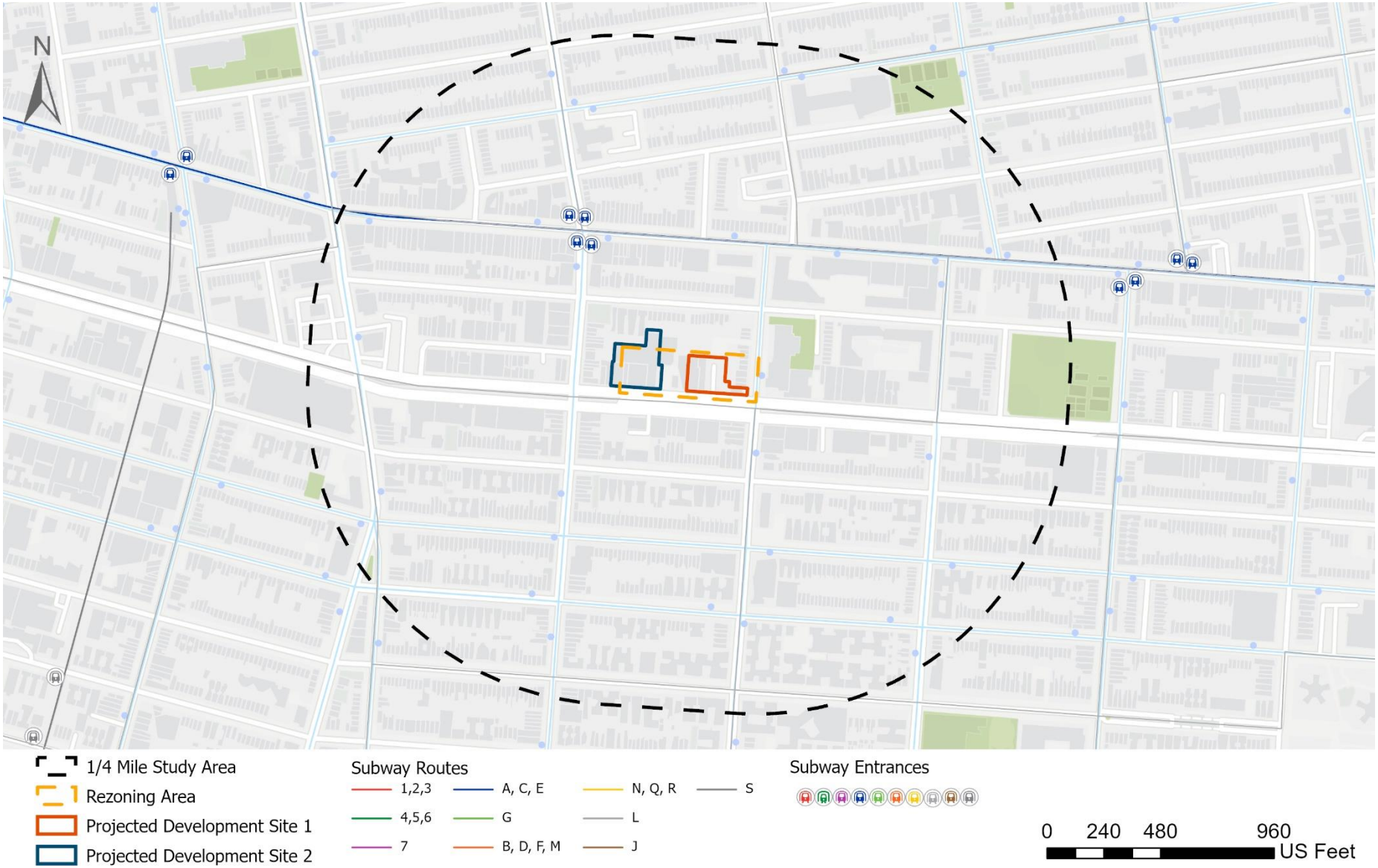


Figure 2.16-3: AM Peak Hour Vehicular Trip Assignment (1 of 4)

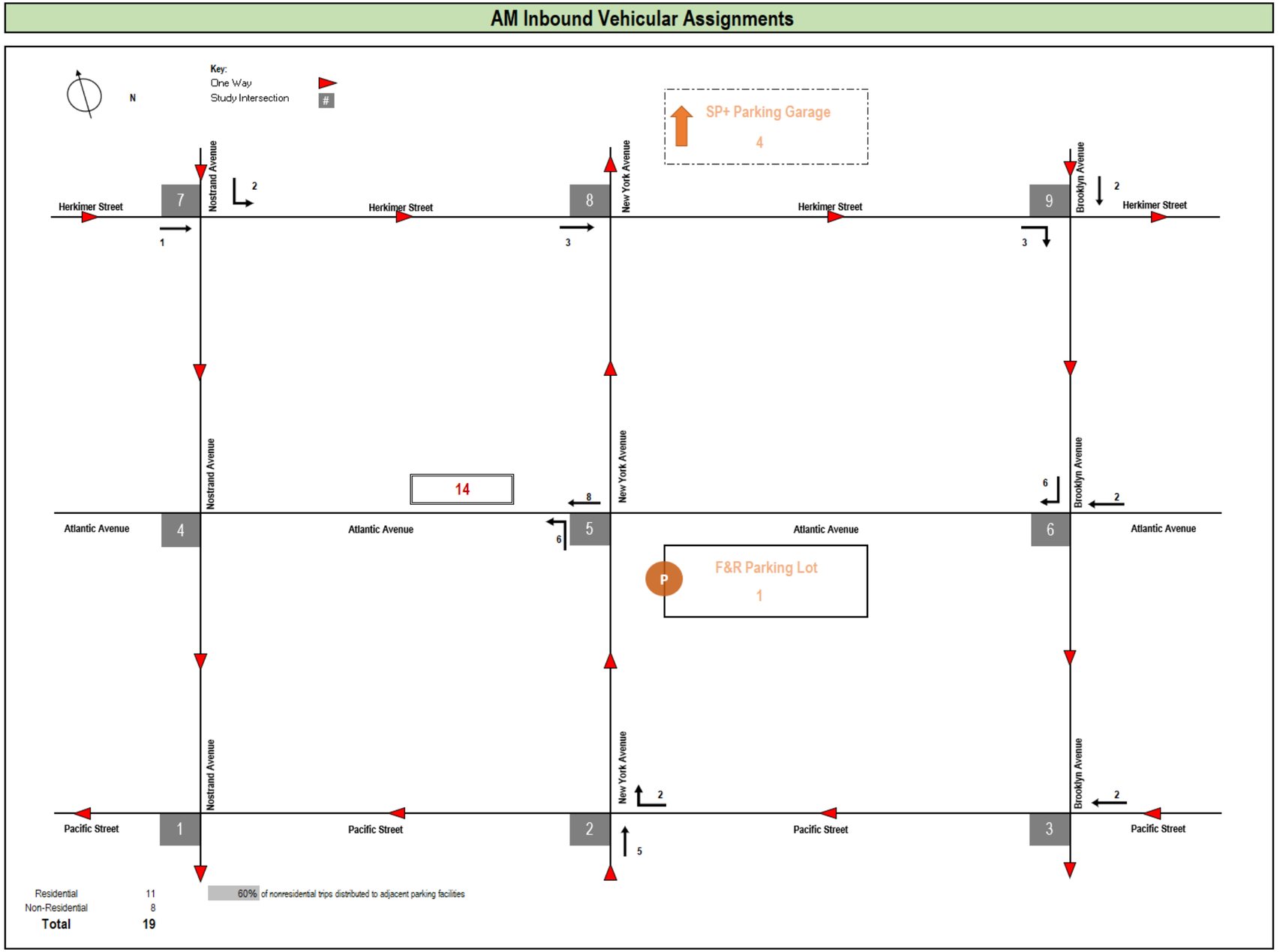


Figure 2.16-3: AM Peak Hour Vehicular Trip Assignment (2 of 4)

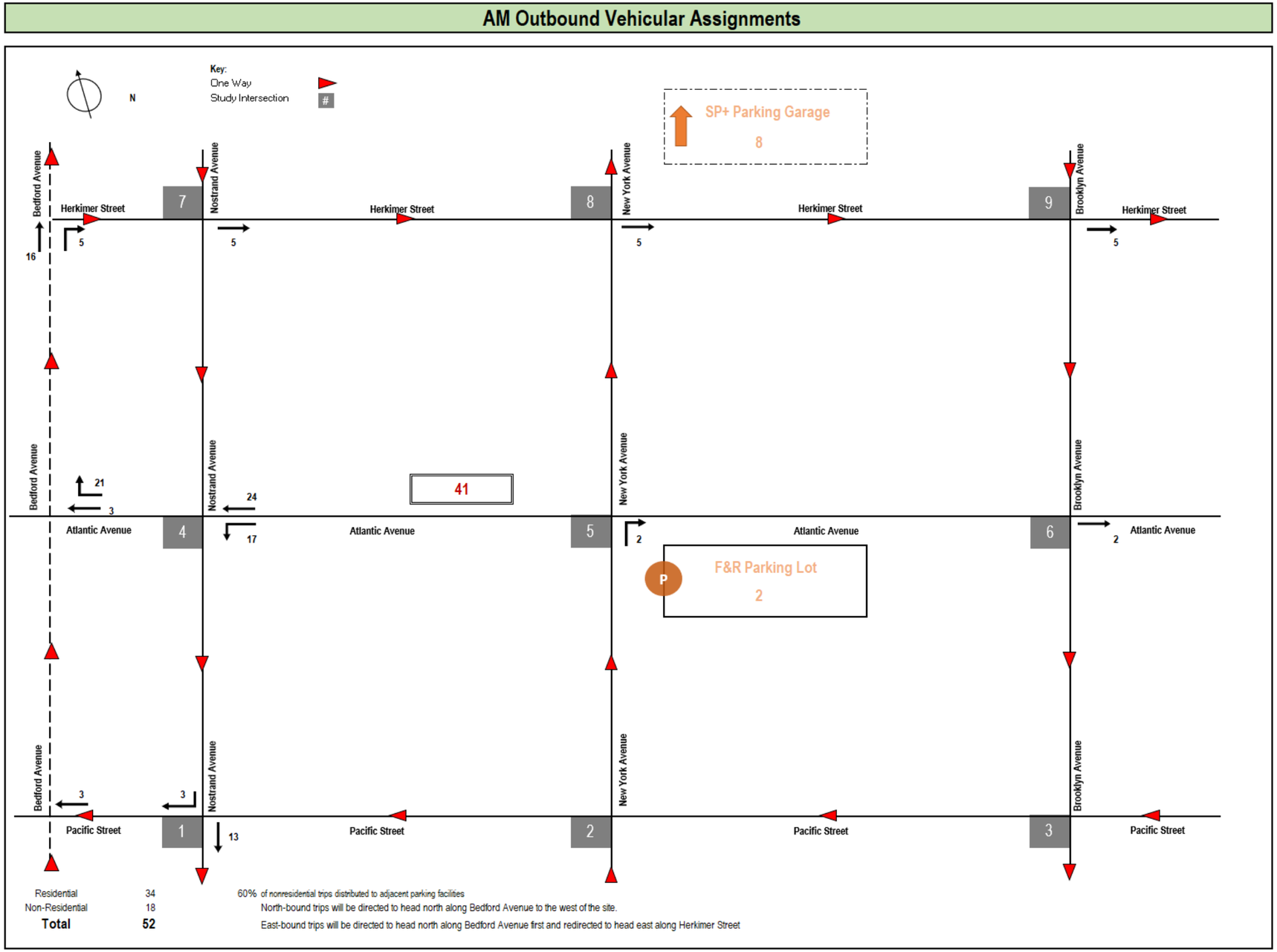


Figure 2.16-3: AM Peak Hour Vehicular Trip Assignment (3 of 4)

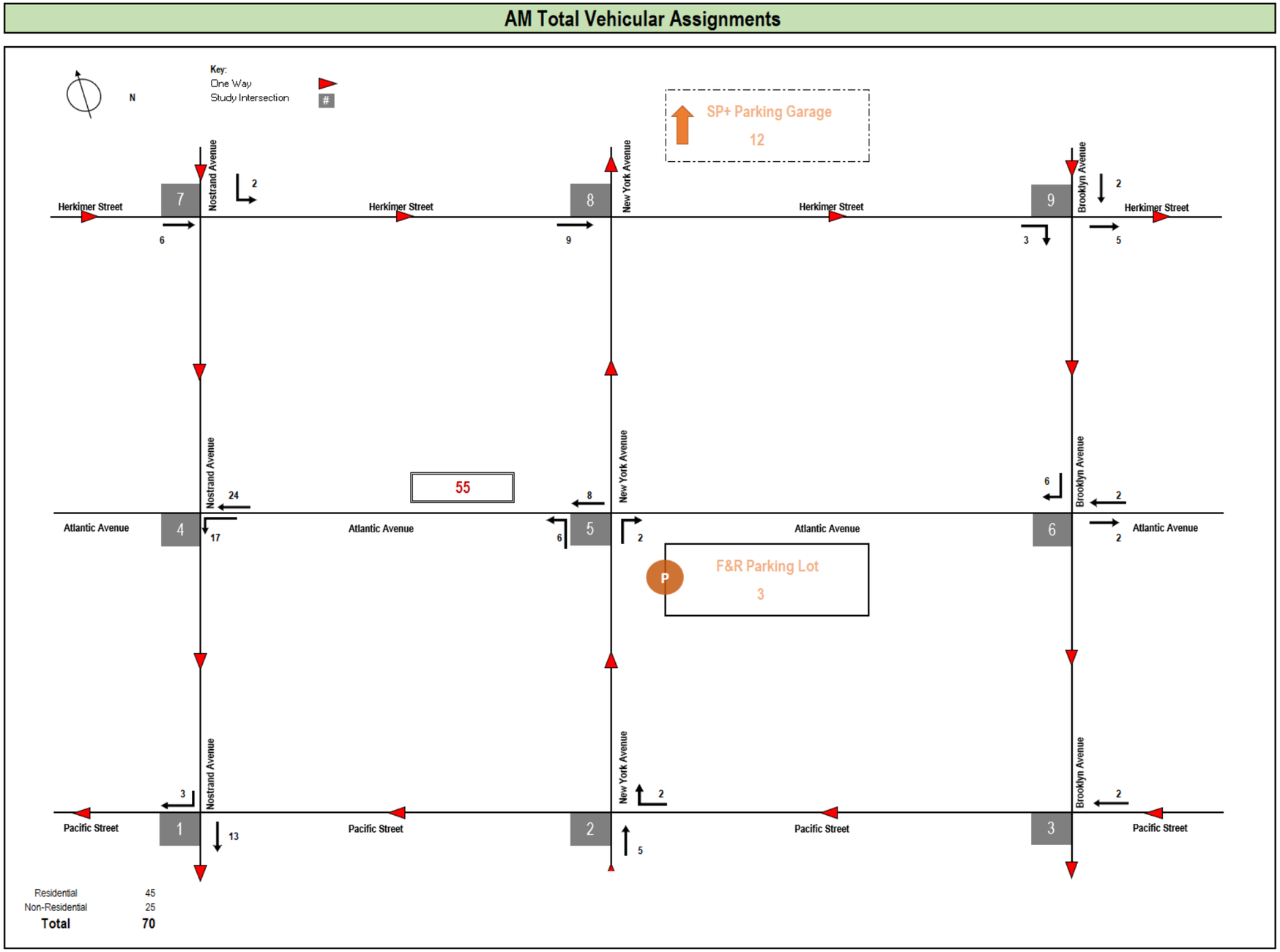


Figure 2.16-3: AM Peak Hour Vehicular Trip Assignment (4 of 4)

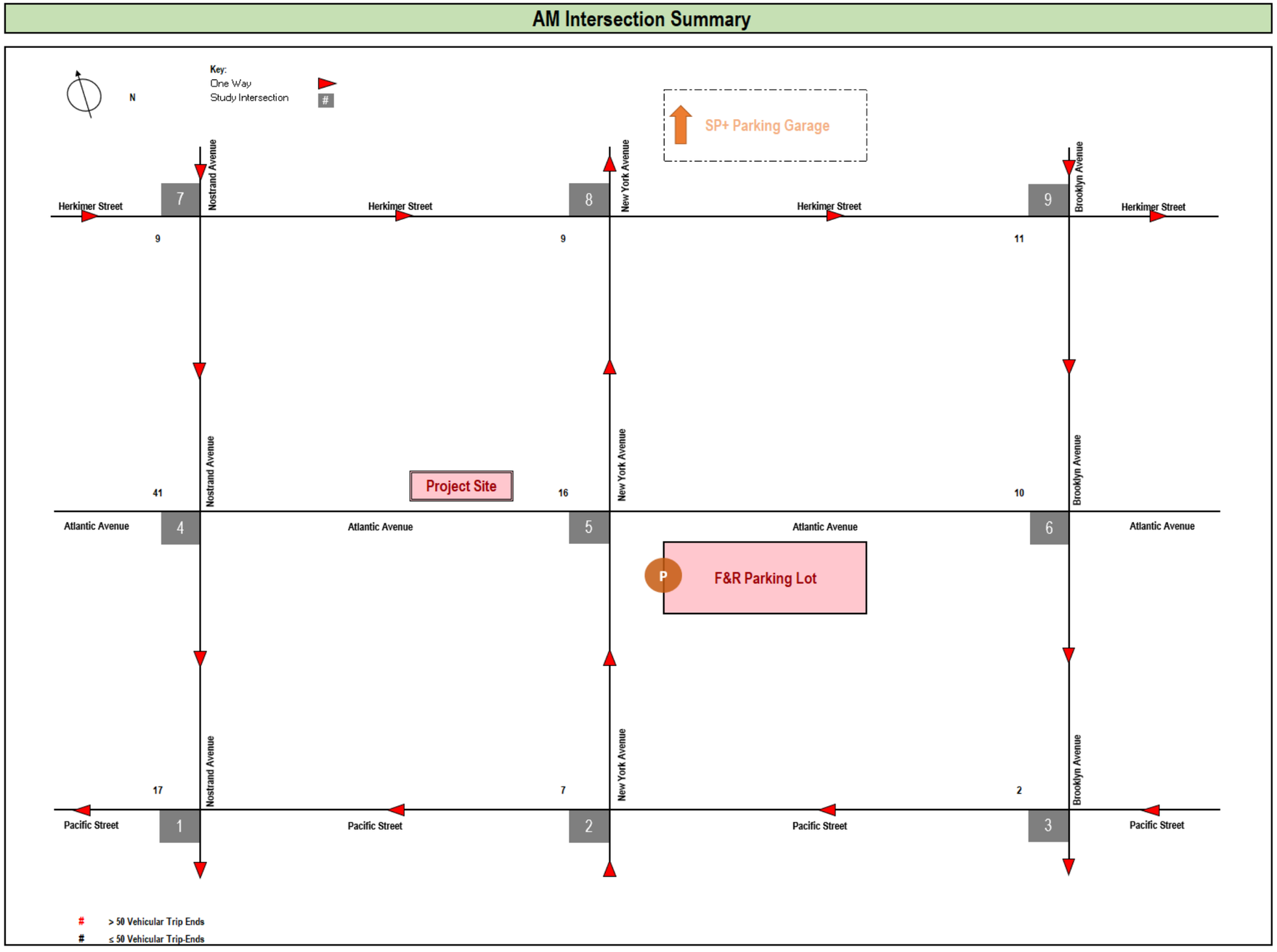


Figure 2.16-4: MD Peak Hour Vehicular Trip Assignment (1 of 4)

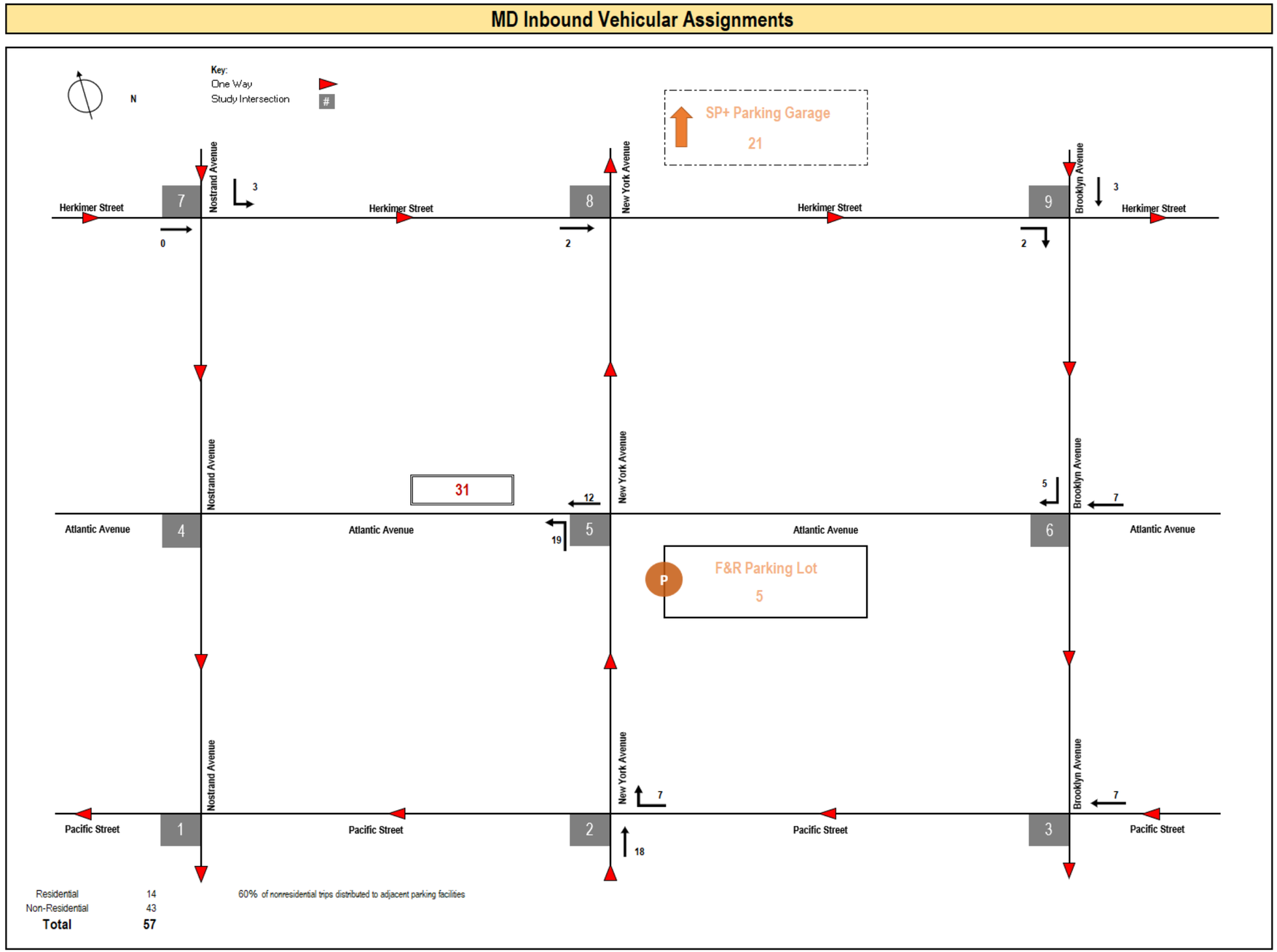


Figure 2.16-4: MD Peak Hour Vehicular Trip Assignment (2 of 4)

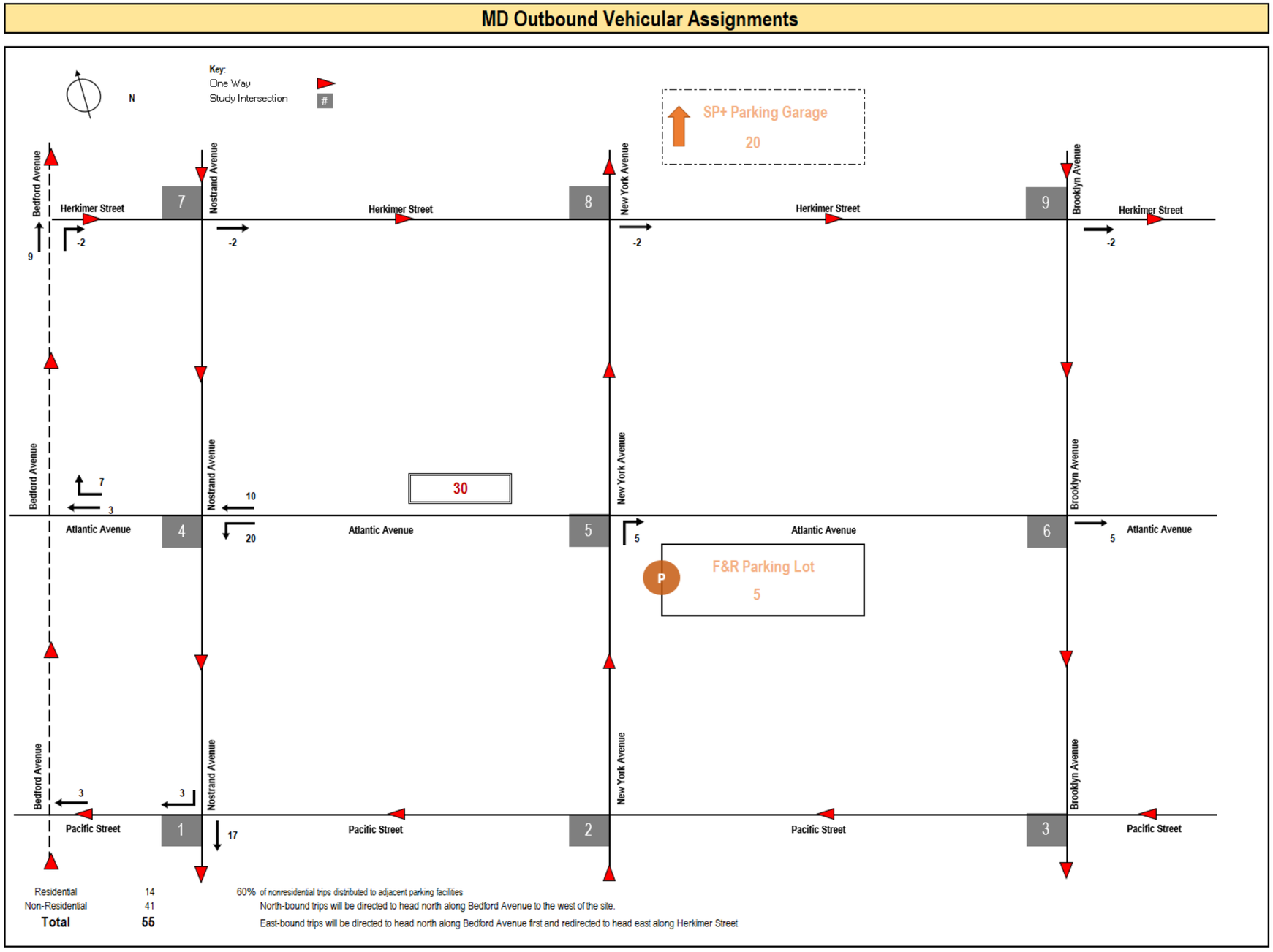


Figure 2.16-4: MD Peak Hour Vehicular Trip Assignment (3 of 4)

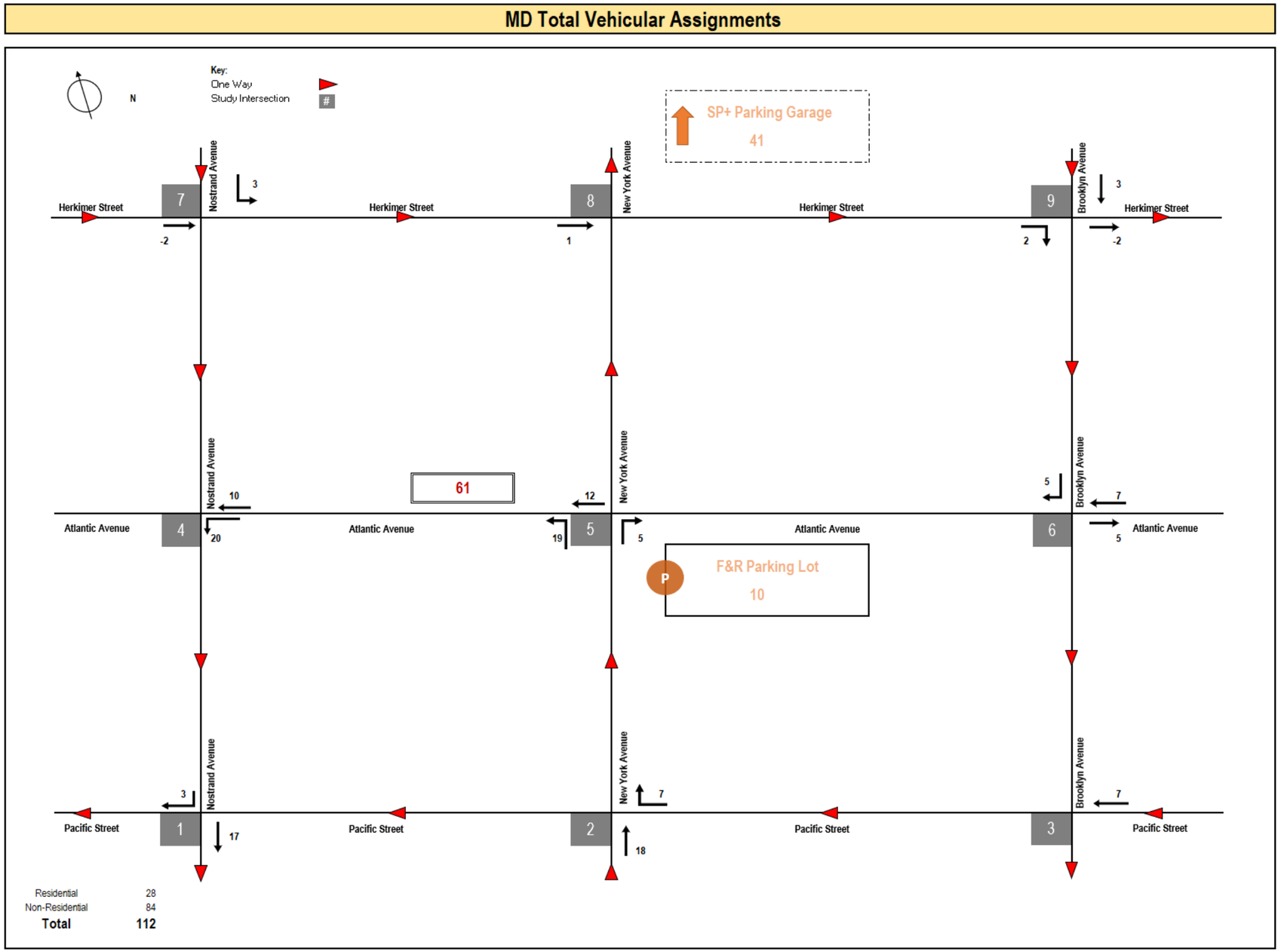


Figure 2.16-4: MD Peak Hour Vehicular Trip Assignment (4 of 4)

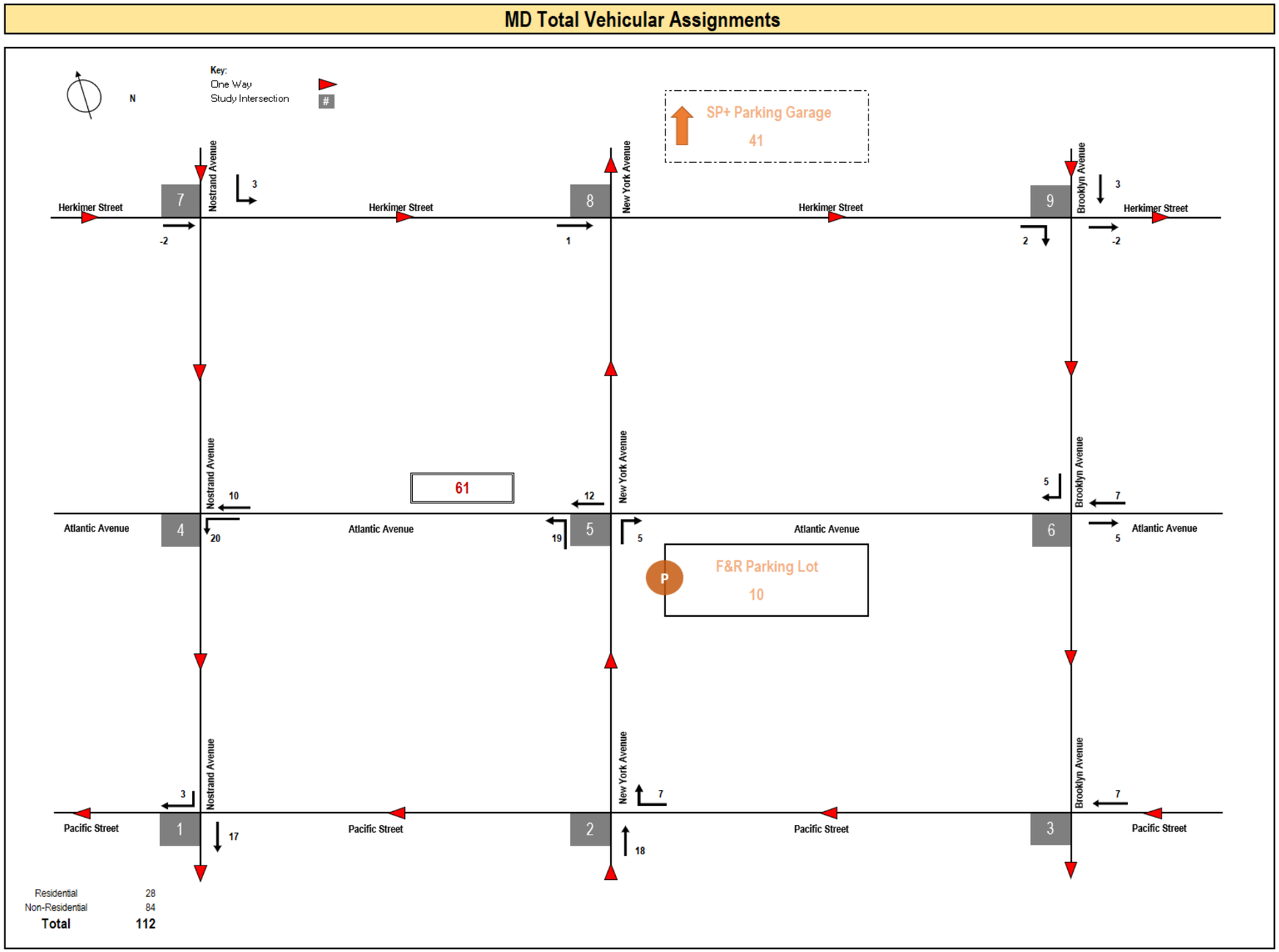


Figure 2.16-5: PM Peak Hour Vehicular Trip Assignment (1 of 4)

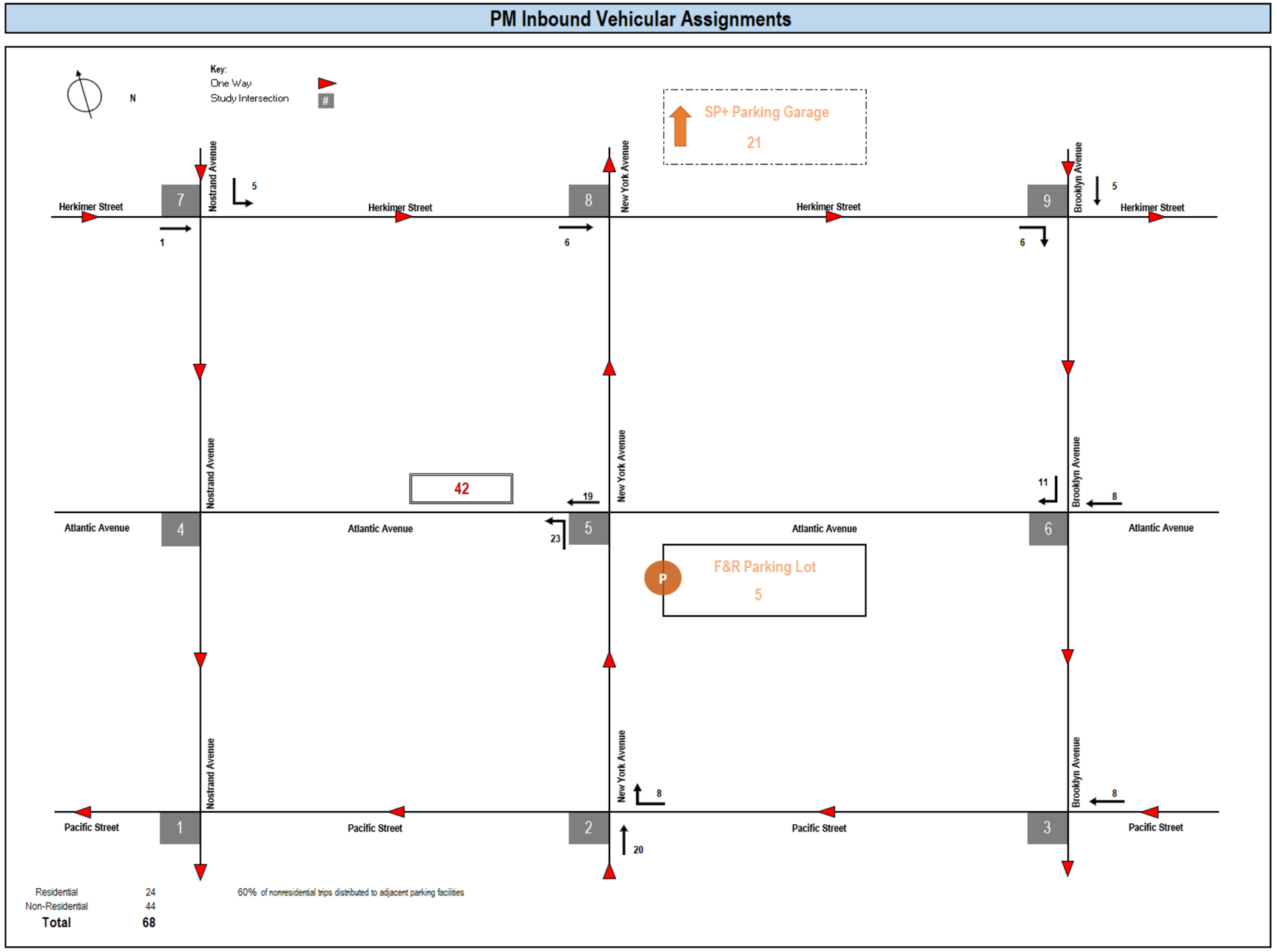


Figure 2.16-5: PM Peak Hour Vehicular Trip Assignment (2 of 4)

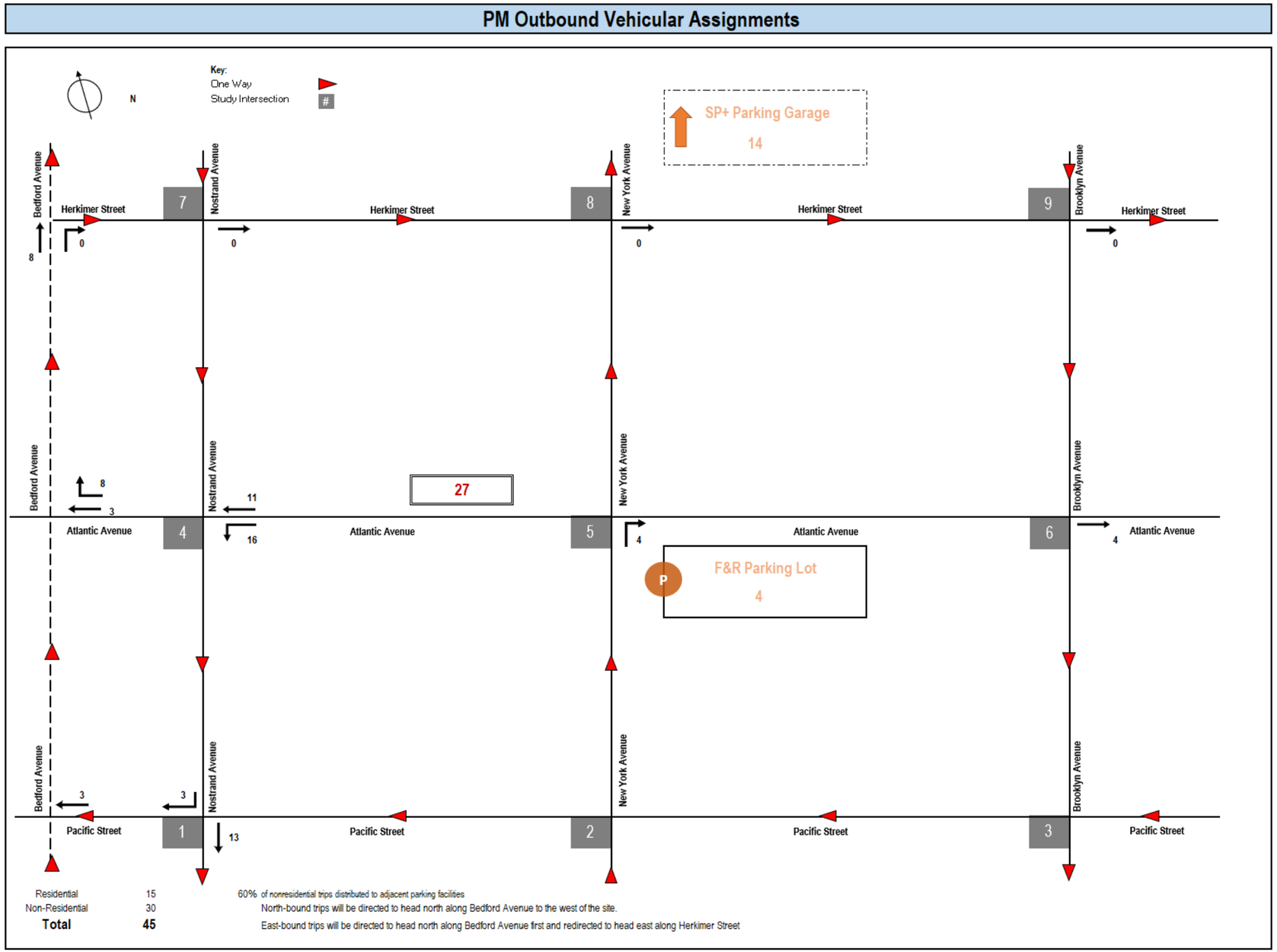


Figure 2.16-5: PM Peak Hour Vehicular Trip Assignment (3 of 4)

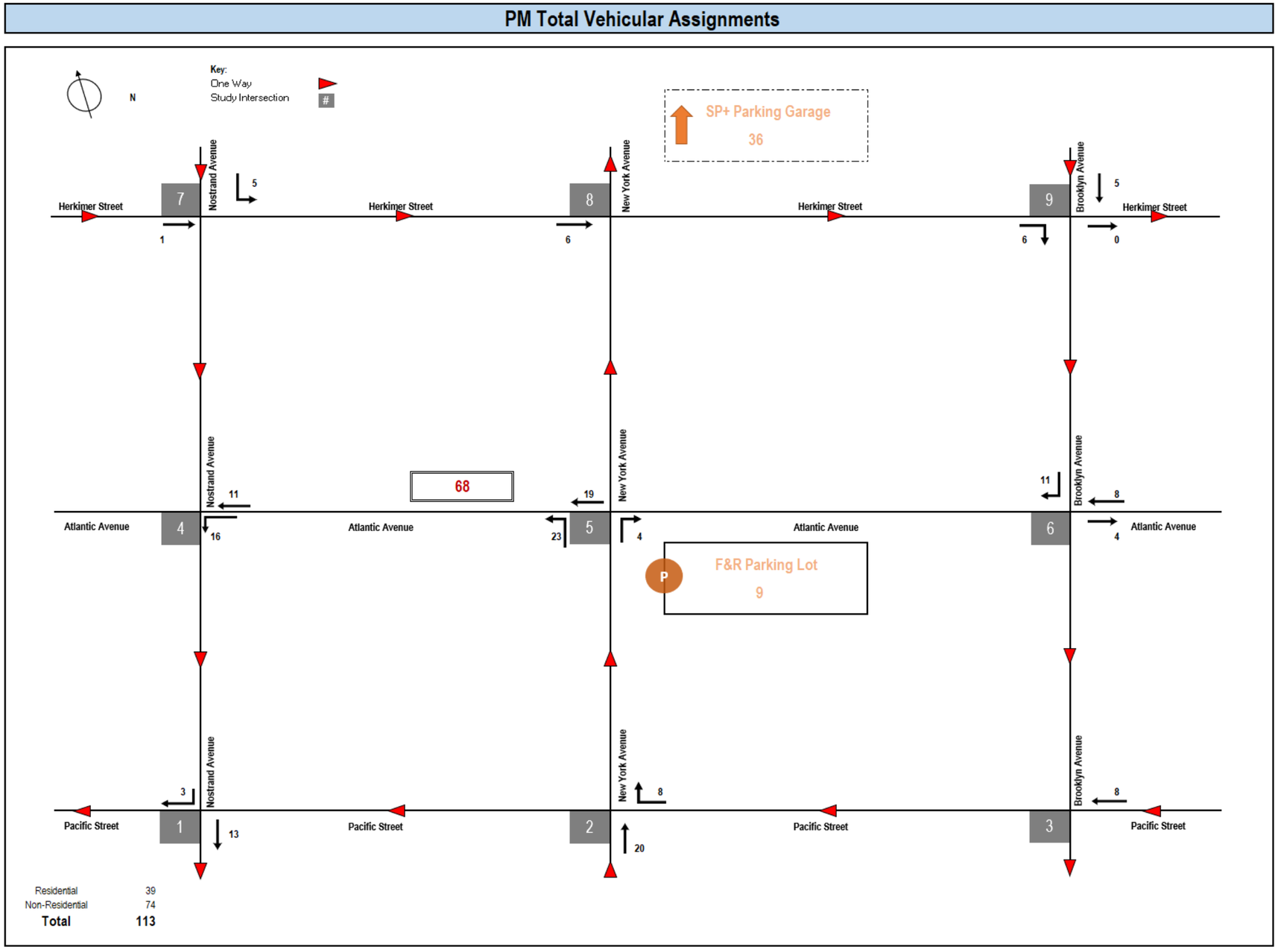


Figure 2.16-5: PM Peak Hour Vehicular Trip Assignment (4 of 4)

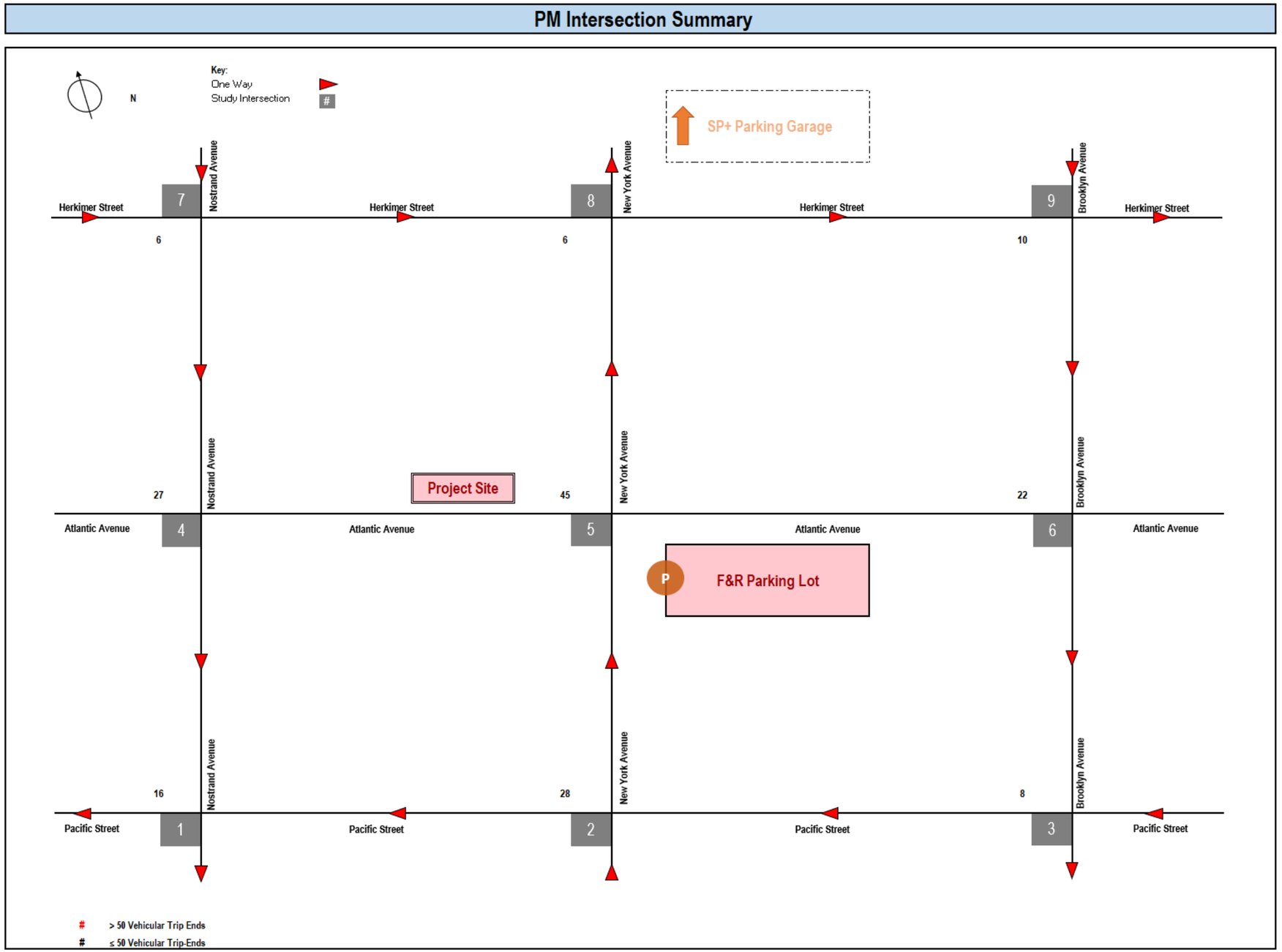


Figure 2.16-6: Saturday Peak Hour Vehicular Trip Assignment (1 of 4)

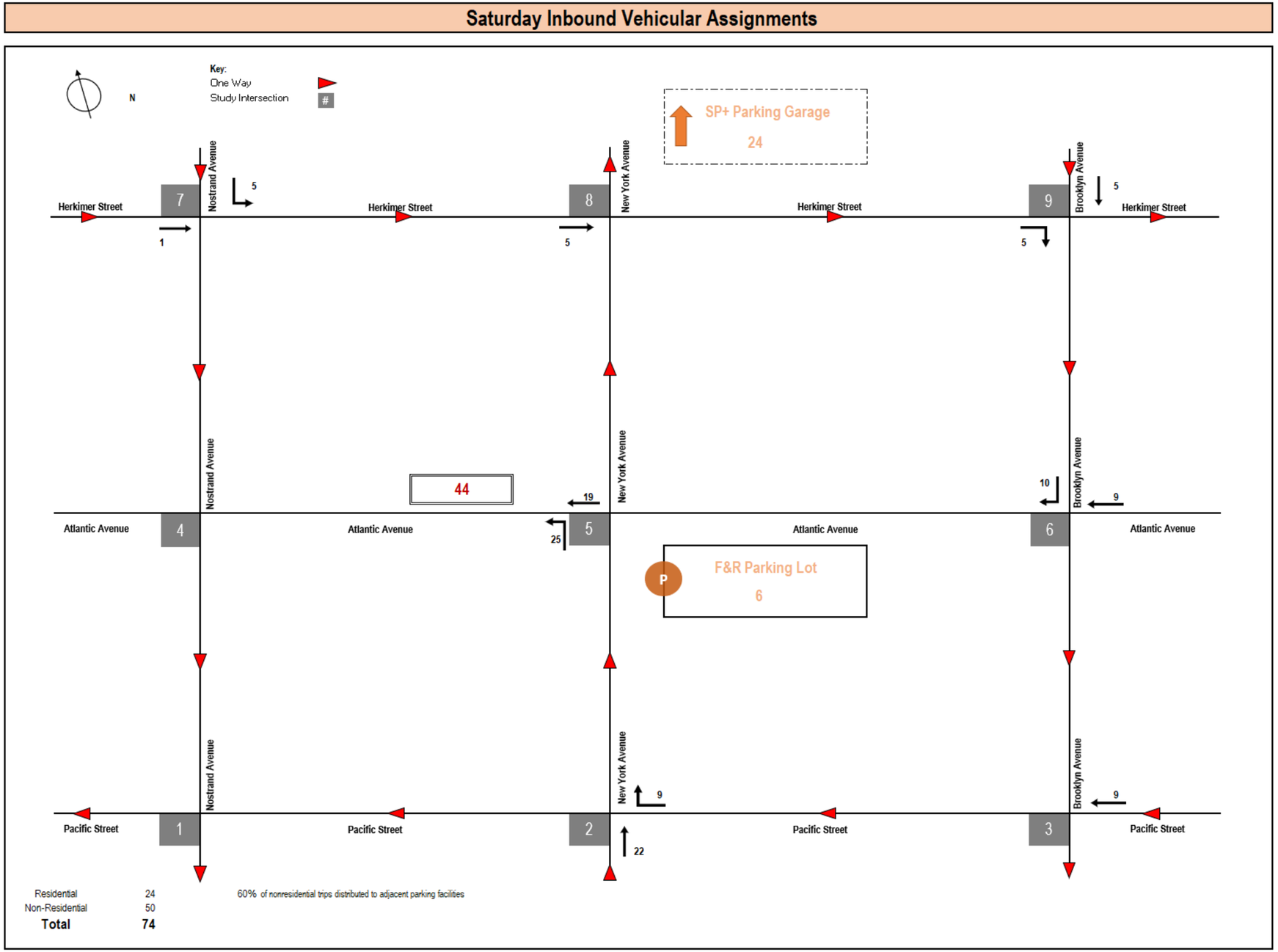


Figure 2.16-6: Saturday Peak Hour Vehicular Trip Assignment (2 of 4)

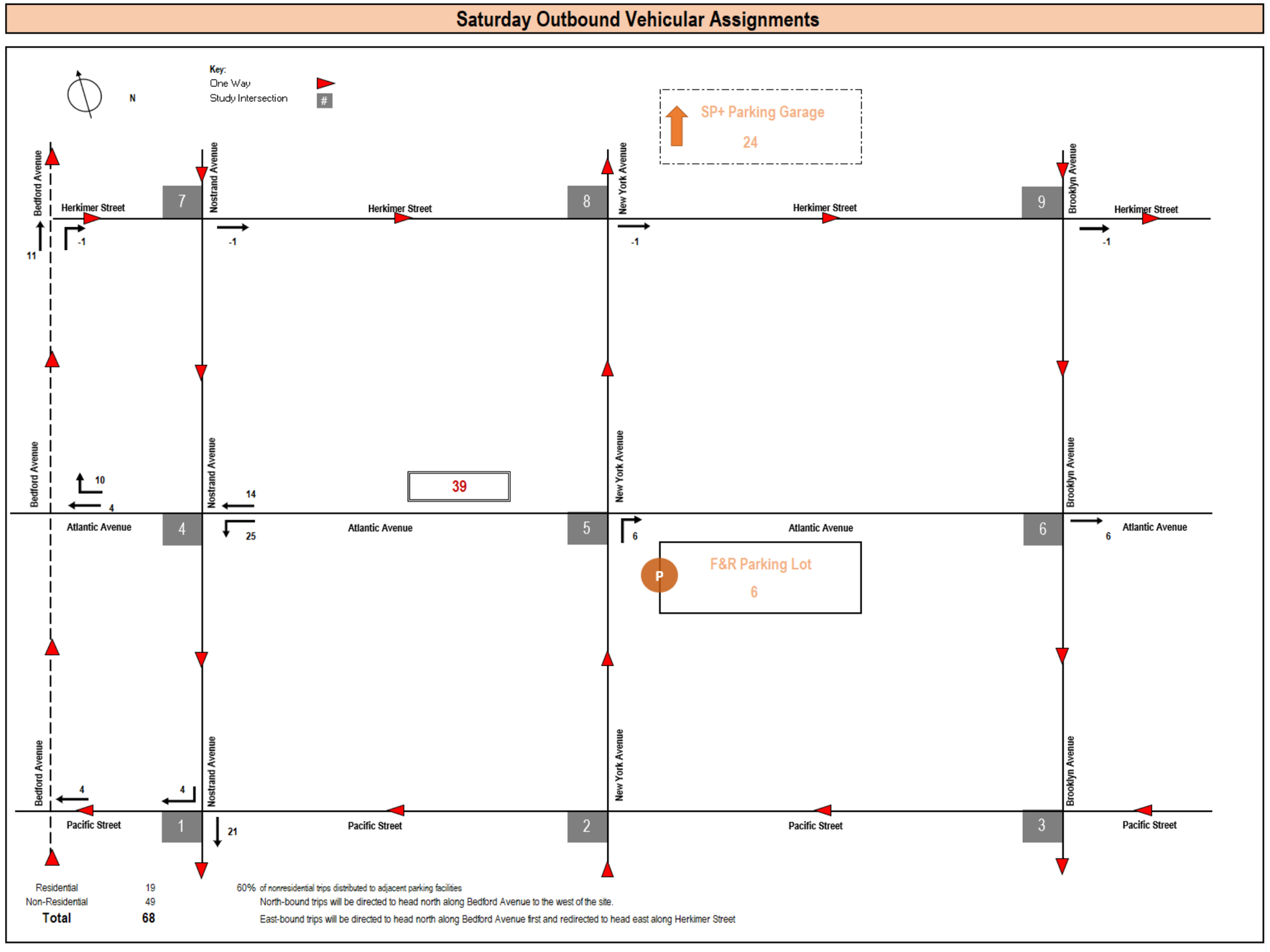


Figure 2.16-6: Saturday Peak Hour Vehicular Trip Assignment (3 of 4)

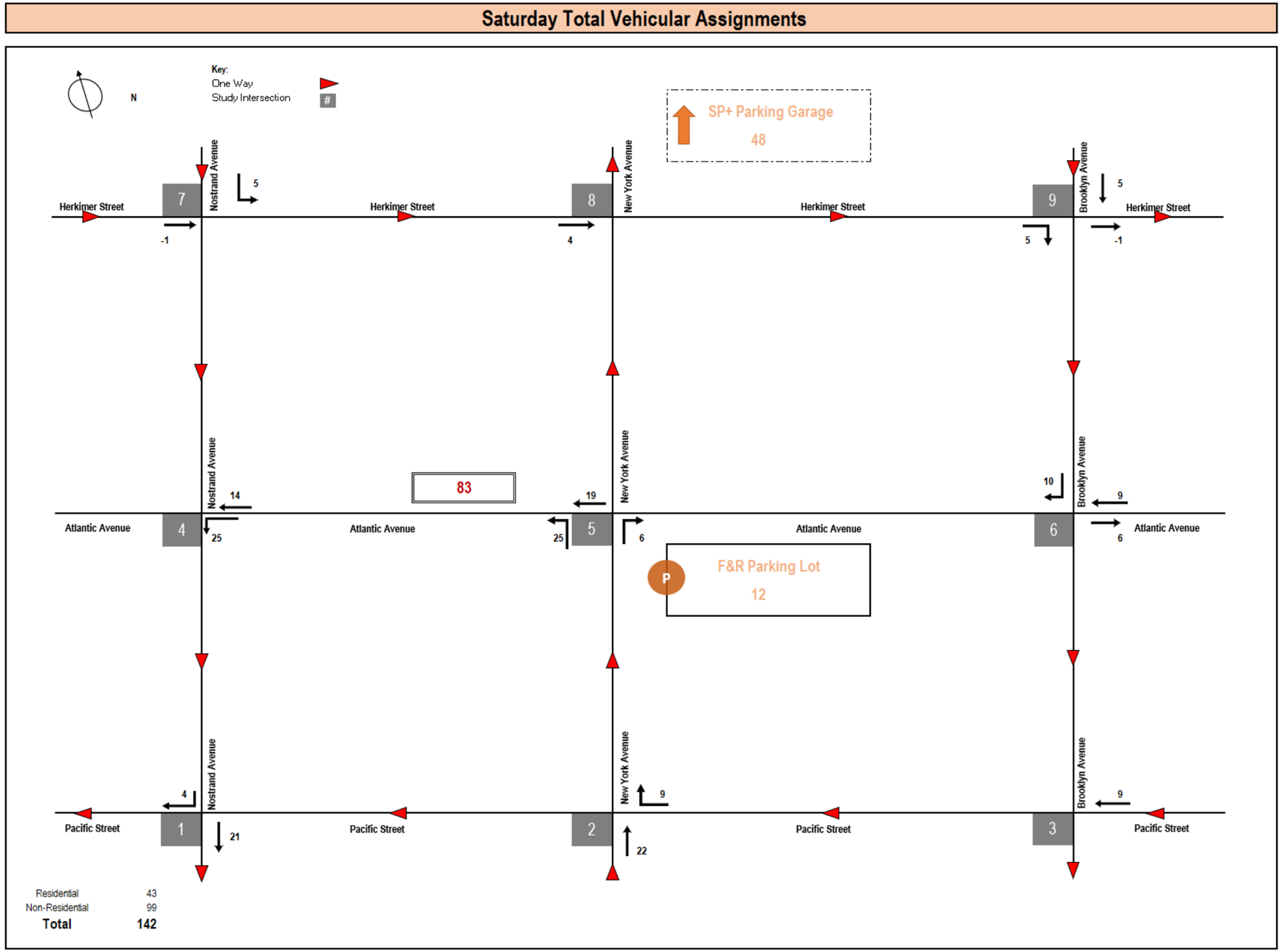


Figure 2.16-6: Saturday Peak Hour Vehicular Trip Assignment (4 of 4)

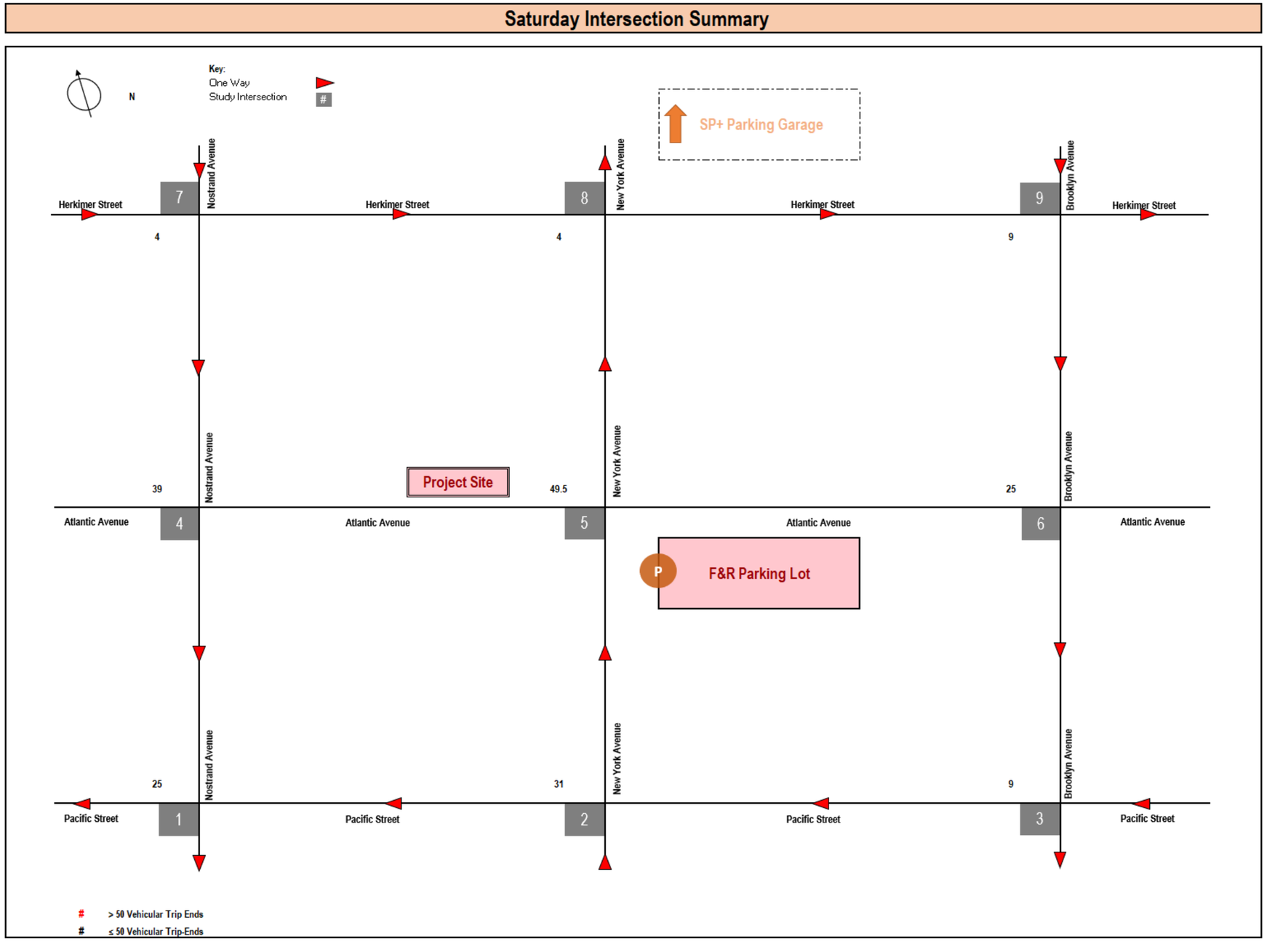


Figure 2.16-7: AM Peak Hour Pedestrian Trip Assignment (Total Pedestrian Trips)

Key

#	Intersection ID #
##	Movement Volume
	Total pedestrians at a corner
	Pedestrian trips > 200

AM Pedestrian Trip Summary

	69		67			75		75			14		14	
16	84	41	135	14	14	178	45	87	13	13	32	12	23	9
Herkimer Street	43	7	94	Herkimer Street		134	8	43	Herkimer Street		13	9	12	Herkimer Street
16	79	29	122	15	15	176	27	76	12	12	23	11	27	9
	30	Nostrand Avenue	107			179	New York Avenue	27			12	Brooklyn Avenue	11	
	30		107	Site 2	Site 1	179		27			12		11	
16	81	63	185	185	381	381	101	118	54	54	54	32	42	11
Atlantic Avenue	17	4	15	Atlantic Avenue		100	5	16	Atlantic Avenue		10	6	10	Atlantic Avenue
16	33	15	37	15	15	118	18	34	16	16	31	12	22	11
	17	Nostrand Avenue	14			68	New York Avenue	18			15	Brooklyn Avenue	10	
	17		14			68		15			11		10	
16	39	15	28	14	14	61	12	33	11	11	22	10	26	9
Pacific Street	16	1	13	Pacific Street		42	2	16	Pacific Street		12	3	11	Pacific Street
16	30	14	34	13	13	54	12	28	12	12	29	11	22	9
	14	Nostrand Avenue	13			16	New York Avenue	16			13	Brooklyn Avenue	13	

Figure 2.16-8: MD Peak Hour Pedestrian Trip Assignment (Total Pedestrian Trips)

Key

#	Intersection ID #
##	Movement Volume
	Total pedestrians at a corner
	Pedestrian trips > 200

MD Pedestrian Trip Summary

	69		66			89		89			26		26	
29	75	24	112	27	27	232	58	113	24	24	59	22	43	18
Herkimer Street	50	7	88	Herkimer Street		174	8	55	Herkimer Street		24	9	22	Herkimer Street
29	85	19	107	28	28	240	39	105	22	22	43	20	50	18
	41		99			245		39			22		20	
		Nostrand Avenue		Site 2	Site 1		New York Avenue					Brooklyn Avenue		
	41		99			245		39			22		20	
29	82	51	177	228	603	603	174	205	99	99	99	58	76	20
Atlantic Avenue	31	4	27	Atlantic Avenue		184	5	31	Atlantic Avenue		19	6	18	Atlantic Avenue
29	46	14	55	27	27	216	32	64	27	27	55	21	39	20
	30		26			124		37			26		19	
		Nostrand Avenue					New York Avenue					Brooklyn Avenue		
	30		26			124		27			20		19	
29	58	14	39	26	26	111	22	59	20	20	41	19	48	18
Pacific Street	29	1	25	Pacific Street		76	2	28	Pacific Street		22	3	20	Pacific Street
29	42	13	50	25	25	99	23	50	22	22	54	20	41	18
	26		23			28		28			23		23	
		Nostrand Avenue					New York Avenue					Brooklyn Avenue		

Figure 2.16-9: PM Peak Hour Pedestrian Trip Assignment (Total Pedestrian Trips)

Key

#	Intersection ID #
##	Movement Volume
	Total pedestrians at a corner
	Pedestrian trips > 200

PM Pedestrian Trip Summary

	84		82			102		102			31		31	
35	96	36	144	32	32	266	66	130	28	28	70	26	52	21
Herkimer Street	61	7	109	Herkimer Street		200	8	64	Herkimer Street		28	9	26	Herkimer Street
35	106	28	137	33	33	277	45	122	26	26	52	23	60	21
	49	Nostrand Avenue	122	Site 2	Site 1	282	New York Avenue	45			26	Brooklyn Avenue	23	
	49		122			282		45			26		23	
35	107	71	226	275	694	694	200	234	117	117	117	68	90	23
Atlantic Avenue	36	4	33	Atlantic Avenue		213	5	34	Atlantic Avenue		23	6	22	Atlantic Avenue
35	56	20	68	33	33	247	35	68	29	29	63	24	46	23
	35	Nostrand Avenue	31			145	New York Avenue	39			29	Brooklyn Avenue	23	
	35		31			145		30			24		23	
35	70	19	49	31	31	127	26	69	24	24	49	23	57	21
Pacific Street	33	1	30	Pacific Street		89	2	31	Pacific Street		26	3	24	Pacific Street
35	52	18	62	30	30	115	27	58	26	26	64	24	49	21
	30	Nostrand Avenue	28			32	New York Avenue	32			28	Brooklyn Avenue	28	

Figure 2.16-10: Saturday Peak Hour Pedestrian Trip Assignment (Total Pedestrian Trips)

Key

#	Intersection ID #
##	Movement Volume
	Total pedestrians at a corner
	Pedestrian trips > 200

Sat MD Pedestrian Trip Summary

	107		104			131		131			41		41	
47	118	39	176	43	43	345	86	169	38	38	93	35	69	28
Herkimer Street	78	7	137	Herkimer Street		260	8	83	Herkimer Street		38	9	35	Herkimer Street
47	133	31	168	44	44	362	59	159	35	35	69	31	80	28
	64	Nostrand Avenue	153	Site 2	Site 1	369	New York Avenue	59			35	Brooklyn Avenue	31	
	64		153			369		59			35		31	
47	130	81	279	357	923	923	268	314	157	157	157	92	121	31
Atlantic Avenue	49	4	44	Atlantic Avenue		287	5	46	Atlantic Avenue		31	6	29	Atlantic Avenue
47	72	23	88	44	44	334	47	93	40	40	86	32	61	31
	48	Nostrand Avenue	42			196	New York Avenue	52			39	Brooklyn Avenue	30	
	48		42			196		41			33		30	
47	91	22	62	42	42	175	34	93	33	33	65	30	77	28
Pacific Street	45	1	40	Pacific Street		119	2	42	Pacific Street		35	3	33	Pacific Street
47	66	21	80	40	40	155	36	78	35	35	86	33	65	28
	40	Nostrand Avenue	37			43	New York Avenue	43			37	Brooklyn Avenue	37	

Tier 2 Project Generated Trip Assignment Conclusion

The Tier 2 Trip Assignment evaluated the following Study Intersections (SI).

- Study Intersection 1: Pacific Street and Nostrand Avenue;
- Study Intersection 2: Pacific Street and New York Avenue;
- Study Intersection 3: Pacific Street and Brooklyn Avenue;
- Study Intersection 4: Atlantic Avenue and Nostrand Avenue;
- Study Intersection 5: Atlantic Avenue and New York Avenue;
- Study Intersection 6: Atlantic Avenue and Brooklyn Avenue;
- Study Intersection 7: Herkimer Street and Nostrand Avenue;
- Study Intersection 8: Herkimer Street and New York Avenue;
- Study Intersection 9: Herkimer Street and Brooklyn Avenue.

Based on the *Tier 2 Project Generated Trip Assignment,* this section identifies where exceedances to the applicable *Tier 2 CEQR thresholds* occur and concludes where further assessment or mitigation is warranted.

Tier 2 Vehicular Trip Assignment Findings

The preliminary screening thresholds in the *CEQR Technical Manual* suggest that any project which generates 50 or more peak hour incremental vehicle trip-ends through a single intersection in any given peak hour is likely to warrant a detailed traffic operations analysis. Conversely, projects that are anticipated to generate fewer than 50 peak hour incremental vehicle trip-ends through a single intersection generally do not warrant detailed traffic assessments, and potential traffic impacts are not expected.

As shown in **Figures 2.16-3** to **2.16-6** above, no study intersection would exceed 50 vehicular trips during any peak hours. No further analysis (Vehicular Levels of Service) of any study intersection is warranted for the applicable Peak Hours. Given that the accessory parking garage of the Proposed Developments would only provide parking spots for residential uses and it would not be sufficient for meeting the parking needs of the non-residential uses, a parking utilization study is warranted. The Parking Analysis is provided below.

Parking Study

For the Purpose of this analysis, the Transportation Study Area was identified as a ¼ mile radius surrounding the Project Site. A quarter mile represents a 5-7-minute walk, or a reasonable walking distance between a point of departure and a destination. This parking study analyzes whether the available parking supply present within walking distance to the project site can accommodate the parking demand projected from the proposed development.

This assessment uses the following methodological approach to assess the potential impact of the Proposed Project.

1) Identify and On and Off-street Public Parking Options Proximate to Project Site.

2) Determine Existing Parking Utilization and Supply

a. Identify observed on- and off-street parking supply and utilization in the quarter mile radius of 1289 Atlantic Avenue (Project Site) during a weekday from 9:00pm to 11:00pm and between 2:00pm and 3:00pm on the same day.

3) Identify Future Parking Demand with Proposed Development
   a. Determine the peak parking demand of the proposed project using an accumulation model and factors derived from the ITE Manual, Fifth Edition.
   b. Determine whether the available parking supply of will meet the project with-action parking demand.

4) Identify and Define Available Public Transportation Options Near Project Site.

Existing Conditions

On-Street Public Parking Availability

170 accessory spaces would be added as part of the Proposed Actions (64 on Projected Development Site 1, and 106 on Projected Development Site 2). Since the with-action scenario includes a mixture of residential, commercial, and community facility uses, it is anticipated that there would be peak parking overnight for residential uses and mid-afternoon for commercial and community facility uses, with reduced demand in the morning and weekend peak periods.

An inventory of existing parking regulations within a ¼-mile radius of the Development Site was compiled from field surveys and on-line sources. On-street public parking is generally governed by alternate-side-of-the-street regulations to facilitate street cleaning, with more restrictive regulations in place at locations where additional traffic flow capacity is needed, especially during the weekday AM and PM peak periods. Based on existing curbside parking regulations, and taking into account curb space obstructed by curb cuts, fire hydrants, and other impediments, as shown in **Figure 2.16-11**, there are a total of approximately 891 legal curbside parking spaces within ¼-mile of the Project Site.

Based on data collected during field surveys conducted in November 2020, existing on-street parking within the overall parking study area is approximately 76 percent utilized during mid-afternoon periods, and 87 percent in the evening periods.

As shown in **Table 2.16-6**, approximately 213 on-street parking spaces are currently available within the study area during mid-afternoon period, and 119 on-street parking spaces are available within the evening period. There are also two off-street public parking facilities within walking distance of the project site with available capacity discussed below.

Table 2.16-6: Existing Weekday Midday On-Street Parking Utilization in the Study Area

Parking Numbers @ 3:00PM			
On-Street Capacity	Utilized Spaces	Estimated Total Utilization	Available Capacity
891	678	76%	213
Parking Numbers @ 12:00AM			
On-Street Capacity	Utilized Spaces	Estimated Total Utilization	Available Capacity
891	772	87%	119

Figure 2.16-11: Parking Study Area



Off-Street Public Parking Availability

In addition to evaluating the availability of curbside parking and its capacity to meet potential demand generated from the Proposed Development, a survey of area off-street public parking facilities was identified**.** There is one existing parking lot that can be utilized to satisfy project-generated demand for short-term parking that is just outside of the quarter-mile study area, but is easily within a 7-minute walk of the Project Site, and could easily be utilized by project occupants. Field observations and brief interviews with the parking garage attendants during the aforementioned peak periods revealed that the 65th New York Avenue and Restoration Plaza parking garages are typically 95 percent occupied overnight.

Table 2.16-7: Existing Combined Off-Street and On-Street Parking Capacity & Availability

Peak Period	On-Street Spaces	Off-Street Spaces	Total Spaces	Demand	Estimated Total Utilization	Available Capacity
3:00 PM	891	239	1,130	702	62%	428
12:00 AM	891	239	1,130	999	88%	131

Future No-Action Condition

Parking demand in the parking study area will increase by the build year of 2029. Demand is likely to increase due to six new projects in the area that would add 213 new dwelling units and 34,457 GSF of local retail. The projects would also add 104 parking spaces.

Based on the development from the No-Action projects, the demand during the 3:00 PM peak hour would increase by 45 vehicles, and the overnight peak hour demand would increase by 34 vehicles. **Table 2.16-8** shows the No-Action parking capacity and availability with the addition of the no-build projects discussed above.

Table 2.16-8: No-Action Parking Capacity and Availability

Weekday Mid-Afternoon				
	On-Street Spaces	Demand	Estimated Total Utilization	Available Capacity
No-Action	1,234	723	59%	511
Weekday Evening				
No-Action	1,234	1,032	84%	202

Future With-Action Condition

A parking accumulation study was performed on the proposed development using the land use factors derived from the Fifth Edition of the ITE Manual. Based on the types of uses proposed, it was determined that midweek parking accumulation demand represents a worst-case condition compared to weekend. The peak hour parking demand resulting from the proposed development would be 26 spaces during the 2-3 PM period and 66 spaces for the overnight period. Additionally, 170 accessory spaces would be added as part of the Proposed Actions.

The existing demand, No-Action project parking demand, and the Proposed Project's parking demand is shown below in **Table 2.16-9**. The Proposed Actions would result in a parking utilization percentage decrease of six percent in the afternoon peak period and six percent during the overnight peak period. The parking capacity increases as a result of the Proposed Actions because of the provision of 170 accessory parking spaces and the low vehicular travel rates for the Surrounding Area and uses (i.e., local retail). No significant adverse impact would be expected as a result of the Proposed Actions.

Table 2.16-9: With-Action Weekday Peak Parking Utilization in the Study Area

Weekday Mid-Afternoon				
	Total Spaces*	Demand	Estimated Total Utilization	Available Capacity
Existing	891	678	76%	213
No-Action	1234	723	59%	511
With-Action	1404	749	53%	655
Weekday Evening				
	Total Spaces*	Demand	Estimated Total Utilization	Available Capacity
Existing	891	772	87%	119
No-Action	1234	1032	84%	202
With-Action	1404	1098	78%	306

*On-street plus off-street spaces

Available Public Transportation Options Near Project Site

The traffic grid is regular, and the Surrounding Area includes major commercial thoroughfares including Atlantic Avenue, Nostrand Avenue, and Fulton Street. The area is well-served by transit, and is within a Transit Zone. The Nostrand Avenue subway station is serviced by the MTA with stops for the A and C lines and is two blocks north of the Affected Area. The Nostrand Avenue Long Island Railroad station is immediately adjacent to the Affected Area, elevated above Atlantic Avenue, with trains providing service to various locations, including West Hempstead and Far Rockaway. Stops for the B25, B44, B44-SBS, and B49 buses are in the immediate area.

Parking Study Conclusion

Based on the findings of the parking analysis, the proposed project generates a parking demand of 26 spaces in the midday peak hour and 66 parking spaces in the evening peak hour. The utilization demand for the midday peak hour would decrease from 59 percent to 53 percent, and the evening peak hour would decrease from 84 percent to 78 percent. The midday peak hour would have an available capacity of 655 spaces, while the evening peak hour would have an available capacity of 306 spaces. Per the *CEQR Technical Manual*, this impact is not considered significant due to the increase in parking capacity provided by the Proposed Actions in addition to the availability of public transportation in the Surrounding Area, including MTA stops for the A and C trains, Long Island Railroad stops immediately adjacent to the project, and various bus stops along Atlantic Avenue.

Tier 2 Pedestrian Trip Assignment Findings

The *CEQR Technical Manual* indicates that a detailed pedestrian analysis be performed for projects that are likely to generate 200 or more incremental pedestrian trips during any peak hour on any singular pedestrian element (i.e., a crosswalk, street corner, or sidewalk).

As shown in the Pedestrian Trip Assignments (**Figures 2.16-8 – 2.16-11)** above, a Pedestrian Level of Service (LOS) was performed at the following pedestrian study locations, as detailed in **Table 2.16-10**:

Table 2.16-10: Pedestrian Levels of Service Study Locations

Intersection	Corner	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
Atlantic Avenue and Nostrand Avenue	NE	185	177	226	279
Atlantic Avenue and New York Avenue	NW	381	603	694	923
	SW	118	216	247	334
	NE	118	205	234	314
Herkimer Street and New York Avenue	NW	178	232	266	345
	SW	176	240	277	362

Intersection	Crosswalk	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
Atlantic Avenue and New York Avenue	N	101	174	200	268
	W	100	184	213	287
Herkimer Street and New York Avenue	W	134	174	200	260

Sidewalk	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
North side of Atlantic Avenue between Site and Nostrand Avenue	185	228	275	357
North side of Atlantic Avenue between Site and New York Avenue	381	603	694	923
West side of New York Avenue between Atlantic Avenue and Herkimer Street	179	245	282	369

*Areas highlighted in pink represent pedestrian elements warranting detailed pedestrian levels of service assessment

Based on the Tier 2 Pedestrian Trip Assignment findings, quantified pedestrian analyses were prepared at various elements identified above during the weekday AM, midday, PM, and Saturday peak hours.

Tier 2 Transit Trip Assignment Findings

As discussed above, If the proposed project is projected to result in greater than 50 bus riders assigned to a single bus line (in one direction) or greater than 200 subway riders to a single subway line (in one direction), further transit analyses is typically required.

As shown in the pedestrian assignments by mode (subway, bus, and walk only) provided in **Appendix D**, these thresholds are not anticipated to be surpassed pursuant to the Proposed Actions. Accordingly, no further analysis is required.

Detailed Pedestrian Levels of Service

Pedestrian Operations

The adequacy of the study area's sidewalk, crosswalk, and corner capacities in relation to the demand imposed on them is evaluated based on the methodologies presented in the 2010 *Highway Capacity Manual (HCM)*, pursuant to procedures detailed in the *2021 CEQR Technical Manual*.

The primary performance measure for sidewalks and walkways is pedestrian space, expressed as square feet per pedestrian (SFP), which is an indicator of the quality of pedestrian movement and comfort. The calculation of the sidewalk SFP is based on the pedestrian volumes by direction, the effective sidewalk or walkway width, and average walking speed. The SFP forms the basis for a sidewalk Level of Service (LOS) analysis.

Crosswalks and street corners are not easily measured in terms of free pedestrian flow, as they are influenced by the effects of traffic signals. Street corners must be able to provide sufficient space for a mix of standing pedestrians (queued to cross a street) and circulating pedestrians (crossing the street or moving around the corner). The *HCM* methodologies apply a measure of time and space availability based on the area of the corner, the timing of the intersection signal, and the estimated space used by circulating pedestrians.

The total "time-space" available for these activities, expressed in square feet-second, is calculated by multiplying the net area of the corner (in square feet) by the signal's cycle length. The analysis then determines the total circulation time for all pedestrian movements at the corner per signal cycle (expressed as pedestrians per second). The ratio of net time-space divided by the total pedestrian circulation volume per signal cycle provides the LOS measurement of available SFP.

Crosswalk LOS is also a function of time and space. Similar to the street corner analysis, crosswalk conditions are first expressed as a measurement of the available area (the crosswalk width multiplied by the width of the street) and the permitted crossing time. This measure is expressed in square feet-second. The average time required for a pedestrian to cross the street is calculated based on the width of the street and an assumed walking speed. The ratio of time-space available in the crosswalk to the total crosswalk pedestrian occupancy time is the LOS measurement of available square feet per pedestrian. The LOS analysis also accounts for vehicular turning movements that traverse the crosswalk.

The LOS standards for sidewalks, crosswalks, and corner reservoirs are summarized in **Table 2.16-11**. The *CEQR Technical Manual* specifies acceptable mid-LOS D or better (minimum of 31.5 SFP for sidewalks; minimum of 19.5 SFP for crosswalks and corners) in Central Business District (CBD) settings, which include the project study area.

Table 2.16-11: Level of Service Criteria for Pedestrian Elements

LOS	Sidewalks	Corner Reservoirs and Crosswalks
A	≥ 530.1 SFP	≥ 60.1 SFP
B	90.1 - 530.0 SFP	40.1 - 60.0 SFP
C	40.1 – 90.0 SFP	24.1 - 40.0 SFP
D	23.1 – 40.0 SFP	15.1 - 24.0 SFP
E	11.1 – 23.0 SFP	8.1 - 15.0 SFP
F	≤ 11.0 SFP	≤ 8.0 SFP

Notes:
SFP = square feet per pedestrian.
Source:
New York City Mayor's Office of Environmental Coordination, *CEQR Technical Manual*.

Significant Impact Criteria

The determination of significant pedestrian impacts considers the level of predicted decrease in pedestrian space between the No Action and With Action conditions. For different pedestrian elements and area types, the CEQR procedure for impact determination corresponds with various sliding-scale formulas, as further detailed below.

Sidewalks
The determination of significant sidewalk impacts is based on the sliding scale using the following formula: $Y \geq X/9.5 - 0.321$, where Y is the decrease in pedestrian space in SFP and X is the No Action pedestrian space in SFP. Since a decrease in pedestrian space within acceptable levels would not constitute a significant impact, these formulas would apply only if the With Action pedestrian space falls short of LOS C in non-CBD areas or mid-LOS D in CBD areas. **Table 2.16-12** summarizes the sliding scale guidance provided by the *CEQR Technical Manual* for determining potential significant sidewalk impacts.

Corner Reservoirs and Crosswalks
The determination of significant corner and crosswalk impacts is also based on a sliding scale using the following formula: $Y \geq X/9.0 - 0.31$, where Y is the decrease in pedestrian space in SFP and X is the No Action pedestrian space in SFP. Since a decrease in pedestrian space within acceptable levels would not constitute a significant impact, this formula would apply only if the With Action pedestrian space falls short of LOS C in non-CBD areas or mid-LOS D in CBD areas. **Table 2.16-13** summarizes the sliding scale guidance provided by the *CEQR Technical Manual* for determining potential significant corner and crosswalk impacts.

Table 2.16-12: Significant Impact Guidance for Sidewalks

Sliding Scale Formula:	$Y \geq X/9.5 - 0.321$		
Non-CBD Areas		CBD Areas	
No Action Ped. Space (X, SFP)	With Action Ped. Space Reduc. (Y, SFP)	No Action Ped. Space (X, SFP)	With Action Ped. Space Reduc. (Y, SFP)
43.5 to 44.3	≥ 4.3	–	–
42.5 to 43.4	≥ 4.2	–	–
41.6 to 42.4	≥ 4.1	–	–
40.6 to 41.5	≥ 4.0	–	–
39.7 to 40.5	≥ 3.9	–	–
38.7 to 39.6	≥ 3.8	–	–
37.8 to 38.6	≥ 3.7	–	–
36.8 to 37.7	≥ 3.6	–	–
35.9 to 36.7	≥ 3.5	–	–
34.9 to 35.8	≥ 3.4	–	–
34.0 to 34.8	≥ 3.3	34.0 to 34.6	≥ 3.3
33.0 to 33.9	≥ 3.2	33.0 to 33.9	≥ 3.2
32.1 to 32.9	≥ 3.1	32.1 to 32.9	≥ 3.1
31.1 to 32.0	≥ 3.0	31.1 to 32.0	≥ 3.0
30.2 to 31.0	≥ 2.9	30.2 to 31.0	≥ 2.9
29.2 to 30.1	≥ 2.8	29.2 to 30.1	≥ 2.8
28.3 to 29.1	≥ 2.7	28.3 to 29.1	≥ 2.7
27.3 to 28.2	≥ 2.6	27.3 to 28.2	≥ 2.6
26.4 to 27.2	≥ 2.5	26.4 to 27.2	≥ 2.5
25.4 to 26.3	≥ 2.4	25.4 to 26.3	≥ 2.4
24.5 to 25.3	≥ 2.3	24.5 to 25.3	≥ 2.3
23.5 to 24.4	≥ 2.2	23.5 to 24.4	≥ 2.2
22.6 to 23.4	≥ 2.1	22.6 to 23.4	≥ 2.1
21.6 to 22.5	≥ 2.0	21.6 to 22.5	≥ 2.0
20.7 to 21.5	≥ 1.9	20.7 to 21.5	≥ 1.9
19.7 to 20.6	≥ 1.8	19.7 to 20.6	≥ 1.8
18.8 to 19.6	≥ 1.7	18.8 to 19.6	≥ 1.7
17.8 to 18.7	≥ 1.6	17.8 to 18.7	≥ 1.6
16.9 to 17.7	≥ 1.5	16.9 to 17.7	≥ 1.5
15.9 to 16.8	≥ 1.4	15.9 to 16.8	≥ 1.4
15.0 to 15.8	≥ 1.3	15.0 to 15.8	≥ 1.3
14.0 to 14.9	≥ 1.2	14.0 to 14.9	≥ 1.2
13.1 to 13.9	≥ 1.1	13.1 to 13.9	≥ 1.1
12.1 to 13.0	≥ 1.0	12.1 to 13.0	≥ 1.0
11.2 to 12.0	≥ 0.9	11.2 to 12.0	≥ 0.9
10.2 to 11.1	≥ 0.8	10.2 to 11.1	≥ 0.8
9.3 to 10.1	≥ 0.7	9.3 to 10.1	≥ 0.7
8.3 to 9.2	≥ 0.6	8.3 to 9.2	≥ 0.6
7.4 to 8.2	≥ 0.5	7.4 to 8.2	≥ 0.5
6.4 to 7.3	≥ 0.4	6.4 to 7.3	≥ 0.4
≤ 6.3	≥ 0.3	≤ 6.3	≥ 0.3

Notes:
SFP = square feet per pedestrian; Y = decrease in pedestrian space in SFP; X = No Action pedestrian space in SFP.
Sources:
New York City Mayor's Office of Environmental Coordination, *CEQR Technical Manual*.

Table 2.16-13: Significant Impact Guidance for Corners and Crosswalks

2.Sliding Scale Formula: *Y ≥ X/9.0 – 0.31*			
Non-CBD Areas		CBD Areas	
No Action Pedestrian Space (X, SFP)	With Action Pedestrian Space Reduction (Y, SFP)	No Action Pedestrian Space (X, SFP)	With Action Pedestrian Space Reduction (Y, SFP)
25.8 to 26.5	≥ 2.6	–	–
24.9 to 25.7	≥ 2.5	–	–
24.0 to 24.8	≥ 2.4	–	–
23.1 to 23.9	≥ 2.3	–	–
22.2 to 23.0	≥ 2.2	–	–
21.3 to 22.1	≥ 2.1	21.3 to 21.4	≥ 2.1
20.4 to 21.2	≥ 2.0	20.4 to 21.2	≥ 2.0
19.5 to 20.3	≥ 1.9	19.5 to 20.3	≥ 1.9
18.6 to 19.4	≥ 1.8	18.6 to 19.4	≥ 1.8
17.7 to 18.5	≥ 1.7	17.7 to 18.5	≥ 1.7
16.8 to 17.6	≥ 1.6	16.8 to 17.6	≥ 1.6
15.9 to 16.7	≥ 1.5	15.9 to 16.7	≥ 1.5
15.0 to 15.8	≥ 1.4	15.0 to 15.8	≥ 1.4
14.1 to 14.9	≥ 1.3	14.1 to 14.9	≥ 1.3
13.2 to 14.0	≥ 1.2	13.2 to 14.0	≥ 1.2
12.3 to 13.1	≥ 1.1	12.3 to 13.1	≥ 1.1
11.4 to 12.2	≥ 1.0	11.4 to 12.2	≥ 1.0
10.5 to 11.3	≥ 0.9	10.5 to 11.3	≥ 0.9
9.6 to 10.4	≥ 0.8	9.6 to 10.4	≥ 0.8
8.7 to 9.5	≥ 0.7	8.7 to 9.5	≥ 0.7
7.8 to 8.6	≥ 0.6	7.8 to 8.6	≥ 0.6
6.9 to 7.7	≥ 0.5	6.9 to 7.7	≥ 0.5
6.0 to 6.8	≥ 0.4	6.0 to 6.8	≥ 0.4
5.1 to 5.9	≥ 0.3	5.1 to 5.9	≥ 0.3
≤ 5.0	≥ 0.2	≤ 5.0	≥ 0.2

Notes:
SFP = square feet per pedestrian; Y = decrease in pedestrian space in SFP; X = No Action pedestrian space in SFP.
Sources:
New York City Mayor's Office of Environmental Coordination, *CEQR Technical Manual*.

Detailed Pedestrian Analysis

Various pedestrian elements among the three intersections of Atlantic Avenue and New York Avenue, Atlantic Avenue and Nostrand Avenue, and Herkimer Street and New York Avenue have been selected for analysis in the weekday AM, midday, PM, and Saturday peak hours.

2020 Existing Conditions

Pedestrian data were collected in October 2020 in accordance with procedures outlined in the *CEQR Technical Manual* during the weekday hours of 7:30 AM to 9:30 AM, 11:30 AM to 1:30 PM, 4:30 PM to 6:30 PM, and the Saturday hours of 12:00 PM to 2:00 PM. For analysis, the highest peak hour pedestrian volumes (from 7:30 AM to 8:30 AM, 11:45 AM to 12:45 PM, 4:30 PM to 5:30 PM, and 12:00 PM to 1:00 PM) during the weekday AM, midday, PM, and Saturday peak periods based on the collected data were used. Due to current COVID-19 pandemic conditions and based on the data collection guidance issued by DOT in October 2020, the collected pedestrian data were compared and calibrated against historical data to arrive at appropriate baseline volumes for analysis.

The 2018 historical count data from the DOT TIMS database were summarized and compared to the October 2020 data to determine the growth adjustments needed to arrive at representative pre-COVID volume levels for use in the analysis. The following steps were taken to adjust the pedestrian volumes:

- The 2018 historical data were grown to 2020 levels by applying the CEQR background growth rate of 0.50 percent per year for years 2019 and 2020.

- The cumulative intersection crosswalk volumes across all locations with data in common were calculated for the October 2020 data and grown 2020 historical data by peak period. These data sets were compared and the growth adjustments needed to arrive at representative pre-COVID volume levels were calculated.
- The calculated growth adjustments for each peak period were applied uniformly across all pedestrian elements to determine the representative pre-COVID volumes for use in the analysis.

The existing peak hour pedestrian volumes are shown in **Figures 2.16-12 through 2.16-15** for the weekday AM, midday, PM, and Saturday peak hours, respectively. As shown in **Tables 2.16-14 through 2.16-16**, the analysis locations currently operate at favorable LOS B or better.

Table 2.16-14: 2020 Existing Conditions - Sidewalk Analysis

Location	Sidewalk	Effective Width (ft)	Two-way Peak Hour Volume	PHF	SFP	LOS
Weekday AM Peak Hour						
Atlantic Avenue between New York Avenue and site entrance	North	3.0	70	0.56	383.1	B
Weekday Midday Peak Hour						
New York Avenue between Atlantic Avenue and Herkimer Street	West	4.4	168	0.66	272.1	B
Atlantic Avenue between New York Avenue and site entrance	North	3.0	56	0.58	494.9	B
Atlantic Avenue between Nostrand Avenue and site entrance	North	3.0	56	0.58	494.9	B
Weekday PM Peak Hour						
New York Avenue between Atlantic Avenue and Herkimer Street	West	4.4	195	0.77	276.4	B
Atlantic Avenue between New York Avenue and site entrance	North	3.0	49	0.77	742.4	A
Atlantic Avenue between Nostrand Avenue and site entrance	North	3.0	49	0.77	742.4	A
Saturday Peak Hour						
New York Avenue between Atlantic Avenue and Herkimer Street	West	4.4	224	0.72	223.1	B
Atlantic Avenue between New York Avenue and site entrance	North	3.0	42	0.48	539.9	A
Atlantic Avenue between Nostrand Avenue and site entrance	North	3.0	42	0.48	539.9	A

Note: SFP = square feet per pedestrian.

Table 2.16-15: 2020 Existing Conditions - Corner Analysis

Location	Corner	Weekday AM Peak Hour		Weekday Midday Peak Hour		Weekday PM Peak Hour		Saturday Peak Hour	
		SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS
Atlantic Avenue and New York Avenue	Northwest	473.0	A	586.3	A	518.9	A	500.9	A
	Northeast			598.2	A	597.2	A	462.9	A
	Southwest			225.3	A	205.9	A	152.7	A
Atlantic Avenue and Nostrand Avenue	Northeast					109.4	A	82.4	A
Herkimer Street and New York Avenue	Northwest			113.0	A	118.4	A	85.5	A
	Southwest			800.0	A	793.4	A	590.9	A

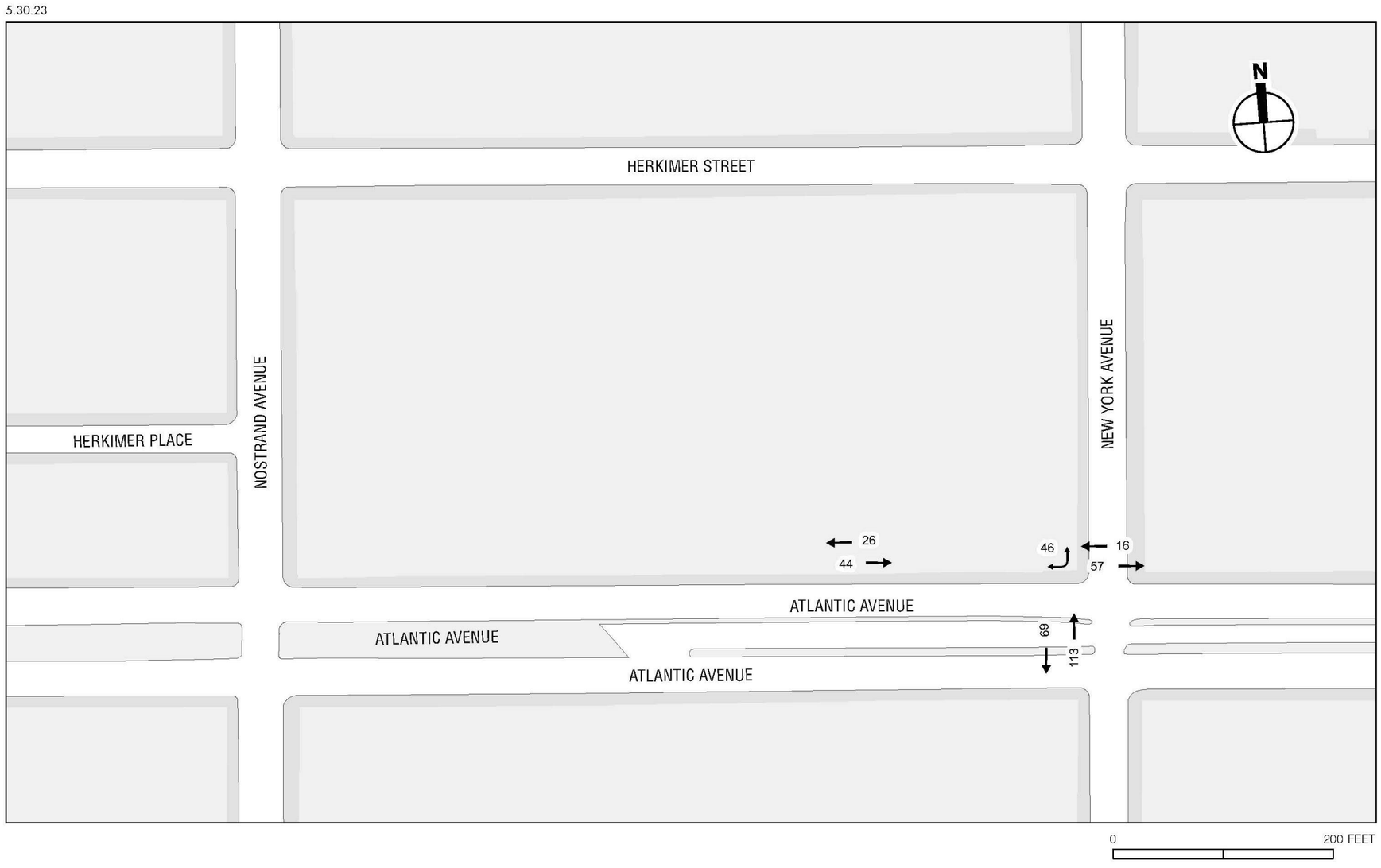
Note: SFP = square foot per pedestrian

Table 2.16-16: 2020 Existing Conditions - Crosswalk Analysis

Location	Crosswalk	Crosswalk Length (ft)	Crosswalk Width (ft)	Two-way Peak Hour Volume	SFP	LOS
Weekday PM Peak Hour						
Atlantic Avenue and New York Avenue	North	34.0	14.0	68	562.9	A
	West	94.5	13.0	187	117.1	A
Herkimer Street and New York Avenue	West	32.0	12.5	158	310.2	A
Saturday Peak Hour						
Atlantic Avenue and New York Avenue	North	34.0	14.0	42	872.8	A
	West	94.5	13.0	218	120.4	A
Herkimer Street and New York Avenue	West	32.0	12.5	228	191.1	A

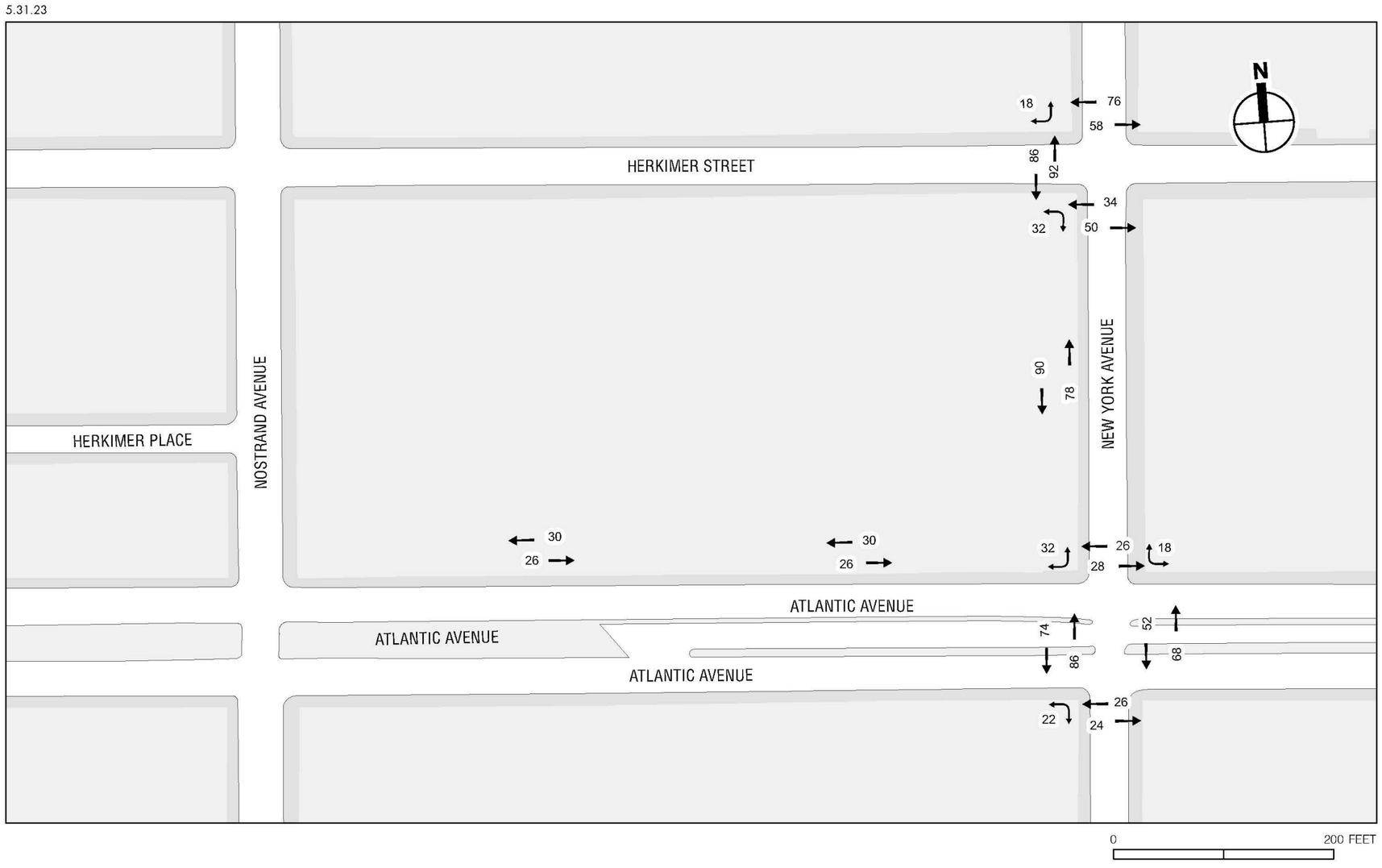
Note: SFP = square feet per pedestrian.

Figure 2.16-12: Existing Weekday AM Pedestrian Volumes



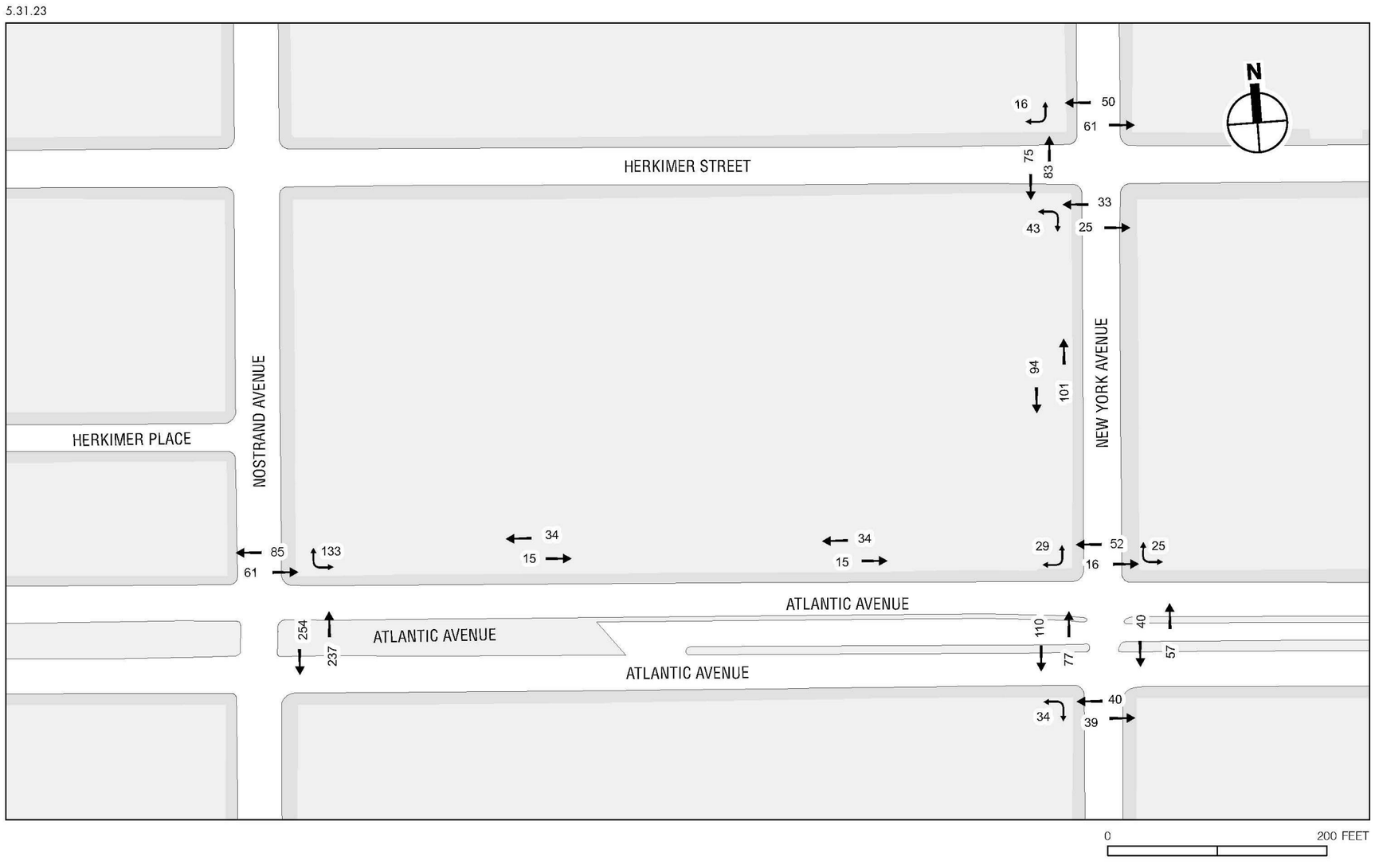
2020 Existing Condition Pedestrian Volumes
Weekday AM Peak Hour

Figure 2.16-13: Existing Weekday MD Pedestrian Volumes



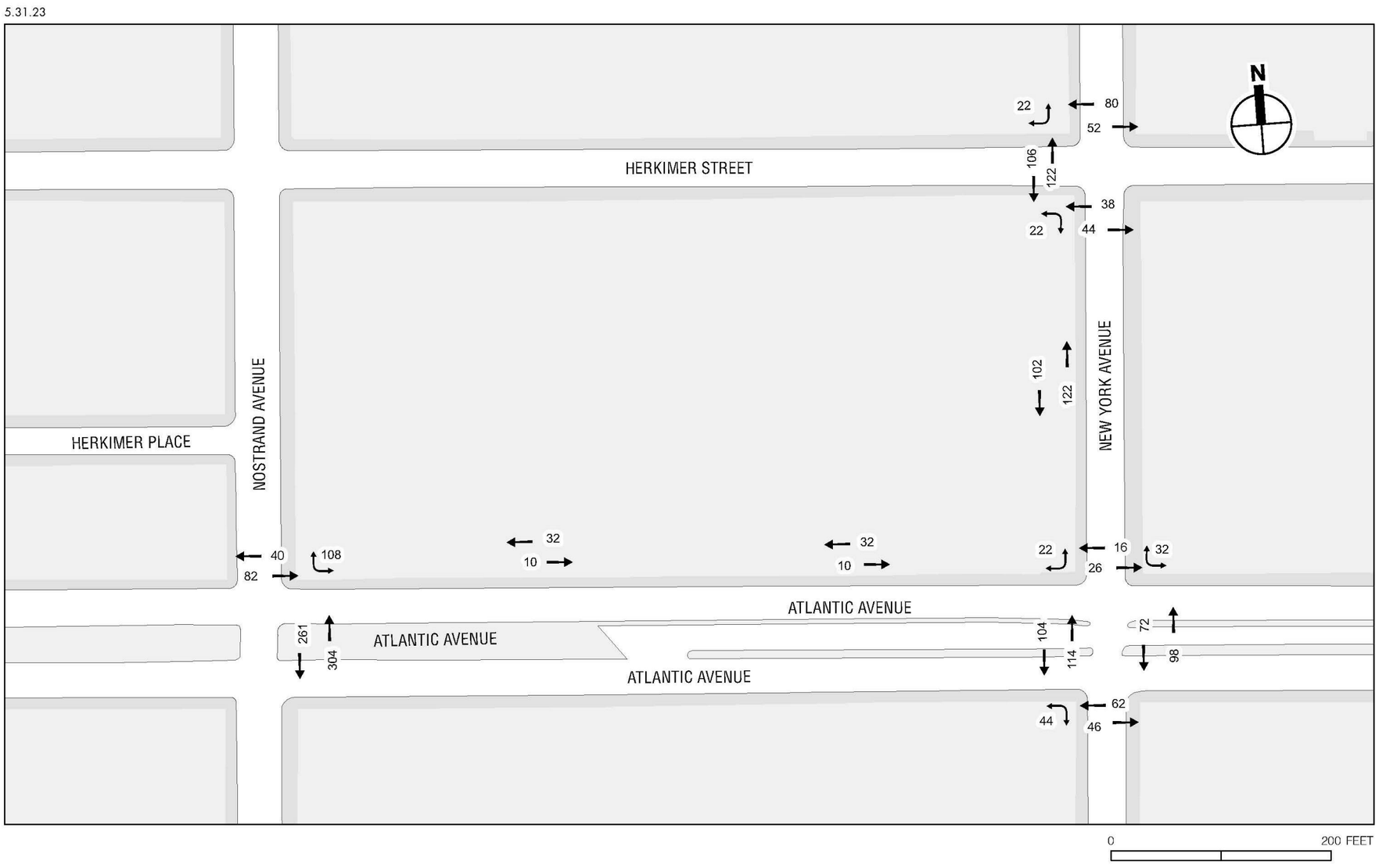
2020 Existing Condition Pedestrian Volumes
Weekday Midday Peak Hour

Figure 2.16-14: Existing Weekday PM Pedestrian Volumes



2020 Existing Condition Pedestrian Volumes
Weekday PM Peak Hour

Figure 2.16-15: Existing Saturday MD Pedestrian Volumes



2020 Existing Condition Pedestrian Volumes
Saturday Peak Hour

Future No-Action Conditions

No Action condition pedestrian volumes were estimated by increasing existing pedestrian levels to reflect expected growth in overall travel through and within the study area. As per CEQR guidelines, an annual background growth rate of 0.50 percent was assumed for the first five years (2021 to 2025) and an annual background growth rate of 0.25 percent was assumed for the remaining four years (2026 and 2029). A total of 18 development projects expected to occur in the No Action condition (no build projects) were identified as being planned within ¼-mile of the proposed project. Seven of the 18 development projects are modest in size and would be included as part of the background growth. Trips from the remaining 11 discrete no build projects were developed and included in the No Action pedestrian volumes. The No Action condition pedestrian volumes shown in **Figure 2.16-16** through **Figure 2.16-19** were projected by layering the background growth and trips generated by the discrete no build projects on top of the existing volumes.

Street Level Pedestrian Operations

As shown in **Table 2.16-17** through **Table 2.16-19**, in the No Action condition, all analysis locations will continue to operate at favorable LOS B or better.

Table 2.16-17: 2029 No Action Conditions - Sidewalk Analysis

Location	Sidewalk	Effective Width (ft)	Two-way Peak Hour Volume	PHF	SFP	LOS
Weekday AM Peak Hour						
Atlantic Avenue between New York Avenue and site entrance	North	3.0	100	0.56	268.1	B
Weekday Midday Peak Hour						
New York Avenue between Atlantic Avenue and Herkimer Street	West	4.4	234	0.66	195.2	B
Atlantic Avenue between New York Avenue and site entrance	North	3.0	133	0.58	208.2	B
Atlantic Avenue between Nostrand Avenue and site entrance	North	3.0	133	0.58	208.2	B
Weekday PM Peak Hour						
New York Avenue between Atlantic Avenue and Herkimer Street	West	4.4	243	0.77	221.7	B
Atlantic Avenue between New York Avenue and site entrance	North	3.0	104	0.77	349.7	B
Atlantic Avenue between Nostrand Avenue and site entrance	North	3.0	104	0.77	349.7	B
Saturday Peak Hour						
New York Avenue between Atlantic Avenue and Herkimer Street	West	4.4	270	0.72	185.0	B
Atlantic Avenue between New York Avenue and site entrance	North	3.0	91	0.48	249.0	B
Atlantic Avenue between Nostrand Avenue and site entrance	North	3.0	91	0.48	249.0	B
Note: SFP = square feet per pedestrian.						

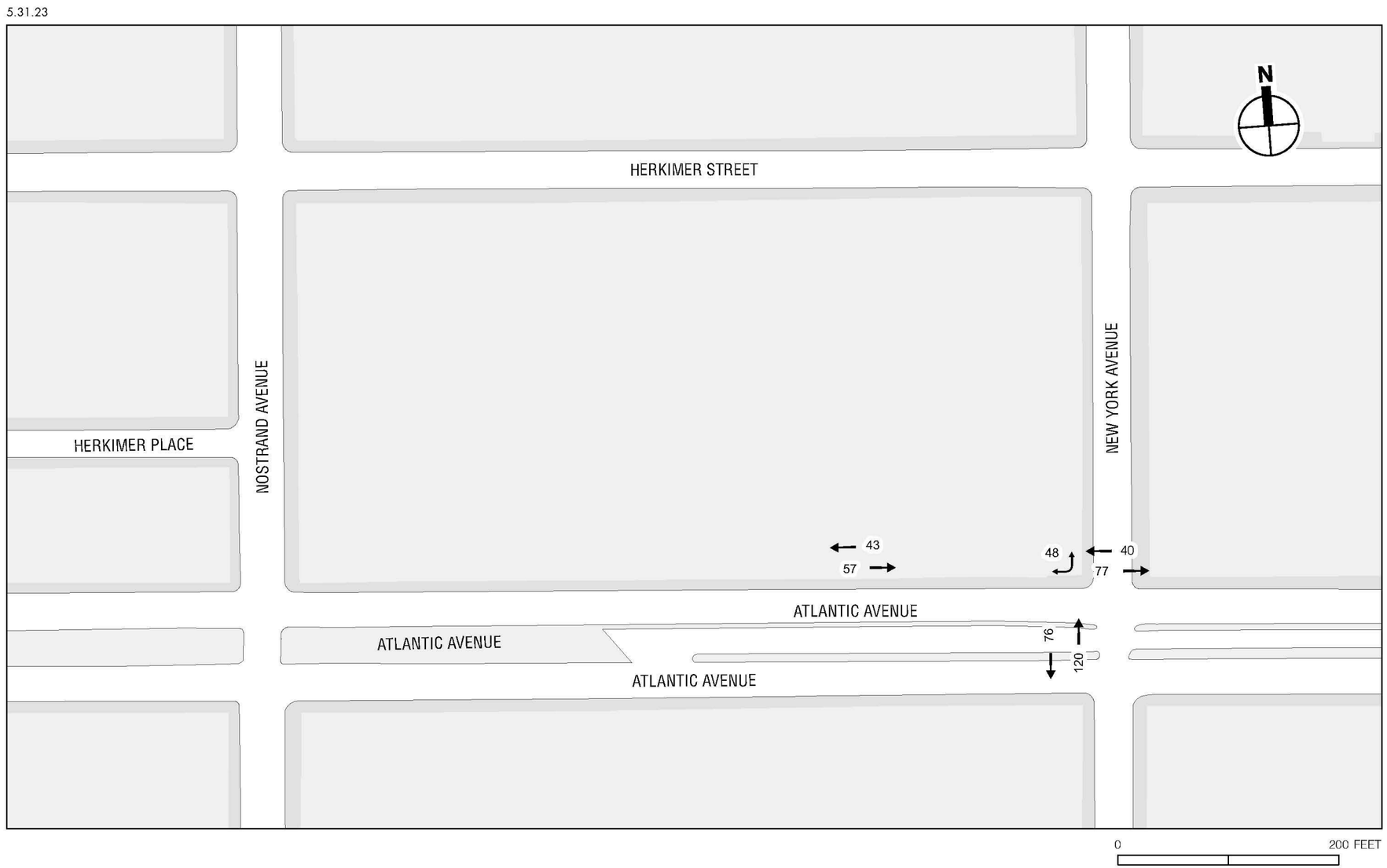
Table 2.16-18: 2029 No Action Conditions – Corner Analysis

Location	Corner	Weekday AM Peak Hour		Weekday Midday Peak Hour		Weekday PM Peak Hour		Saturday Peak Hour	
		SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS
Atlantic Avenue and New York Avenue	Northwest	388.4	A	341.5	A	361.8	A	345.4	A
	Northeast			295.6	A	347.0	A	295.8	A
	Southwest			145.6	A	165.5	A	125.3	A
Atlantic Avenue and Nostrand Avenue	Northeast					93.9	A	70.7	A
Herkimer Street and New York Avenue	Northwest			71.2	A	81.0	A	64.5	A
	Southwest			545.3	A	576.6	A	461.4	A
Note: SFP = square foot per pedestrian									

Table 2.16-19: 2029 No Action Conditions – Crosswalk Analysis

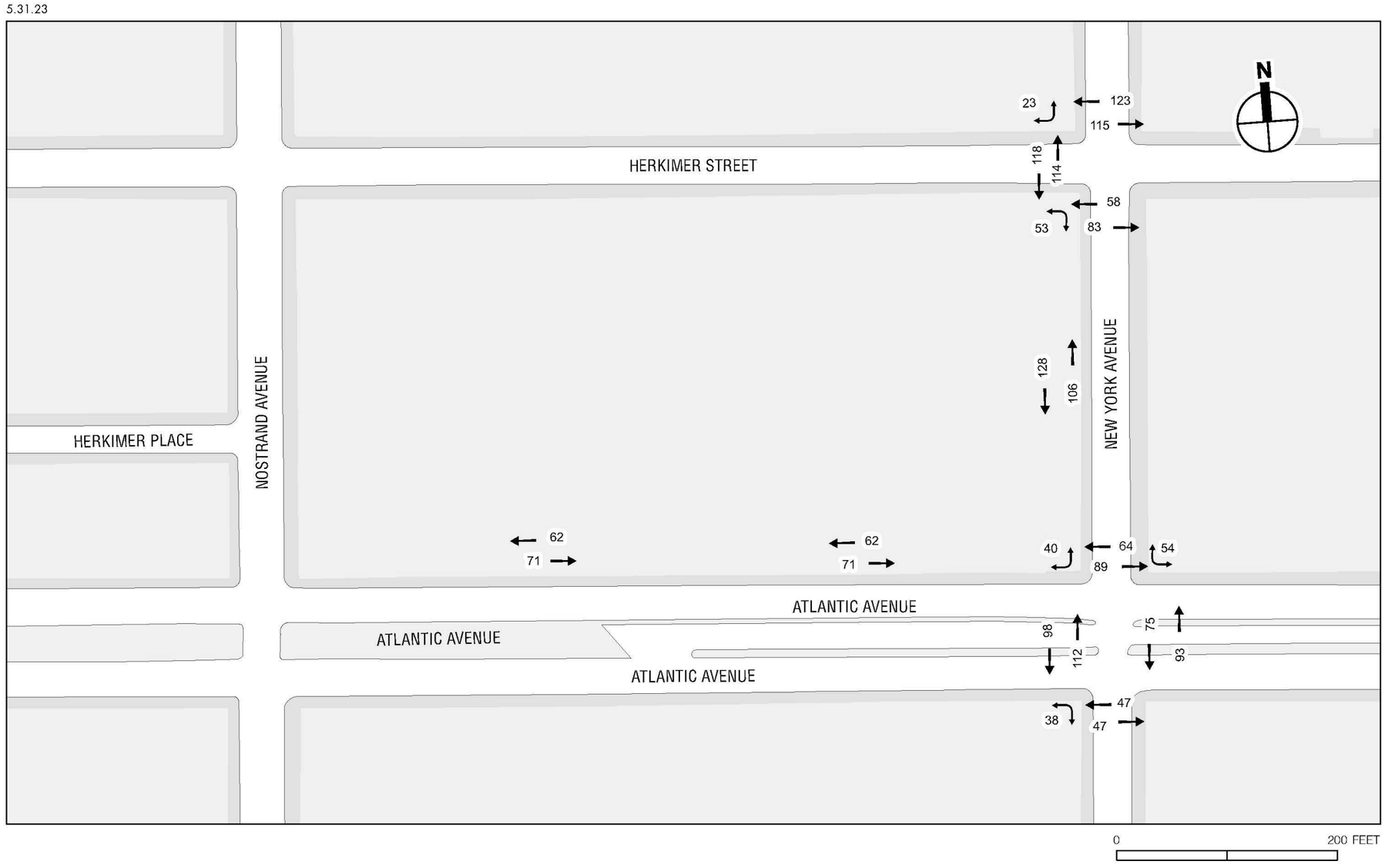
Location	Crosswalk	Crosswalk Length (ft)	Crosswalk Width (ft)	Two-way Peak Hour Volume	SFP	LOS
Weekday PM Peak Hour						
Atlantic Avenue and New York Avenue	North	34.0	14.0	146	250.6	A
	West	94.5	13.0	217	100.3	A
Herkimer Street and New York Avenue	West	32.0	12.5	199	246.3	A
Saturday Peak Hour						
Atlantic Avenue and New York Avenue	North	34.0	14.0	105	342.3	A
	West	94.5	13.0	253	103.4	A
Herkimer Street and New York Avenue	West	32.0	12.5	266	163.1	A
Note: SFP = square feet per pedestrian.						

Figure 2.16-16: No Action Weekday AM Pedestrian Volumes



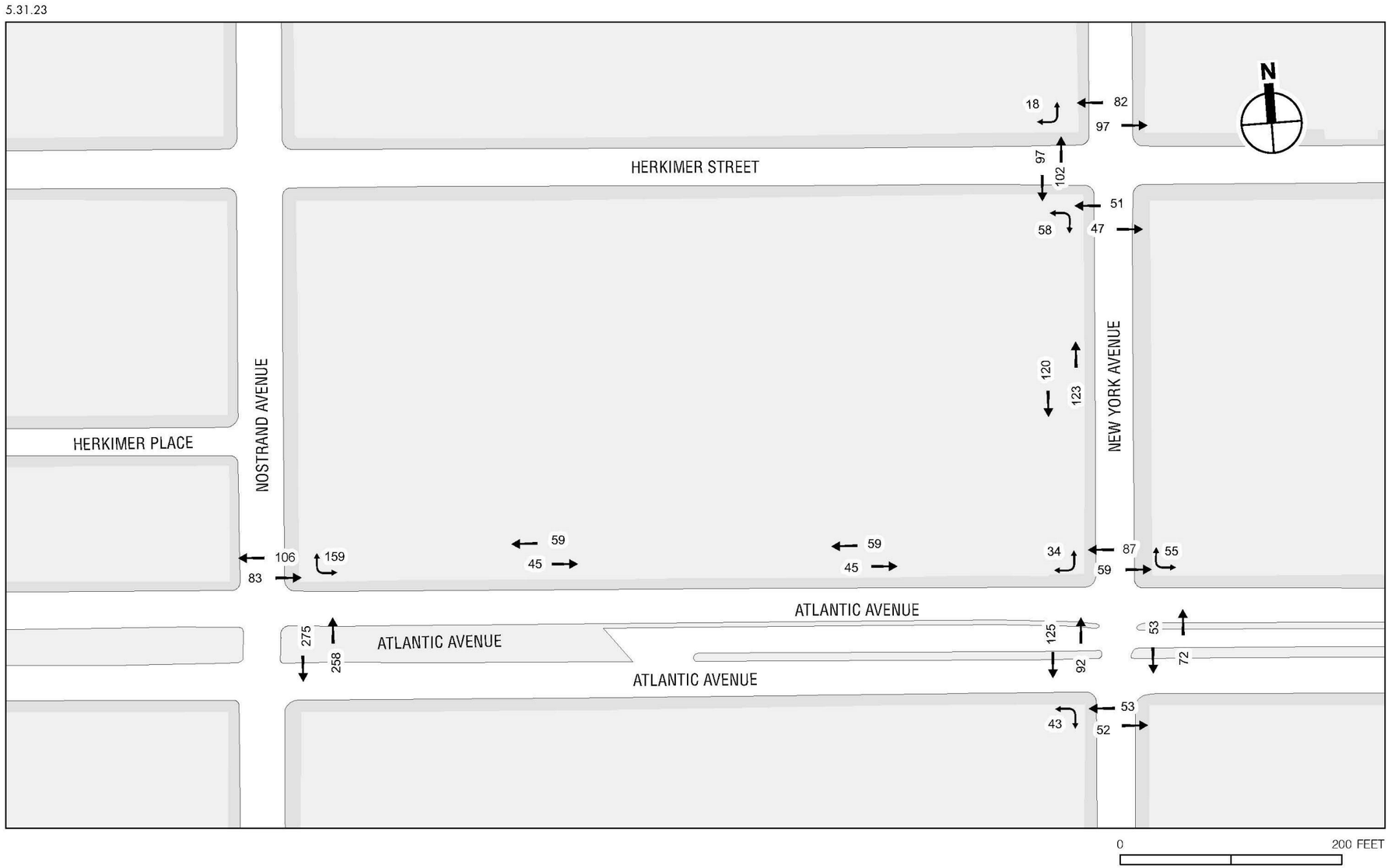
2027 No Action Condition Pedestrian Volumes
Weekday AM Peak Hour

Figure 2.16-17: No Action Weekday MD Pedestrian Volumes



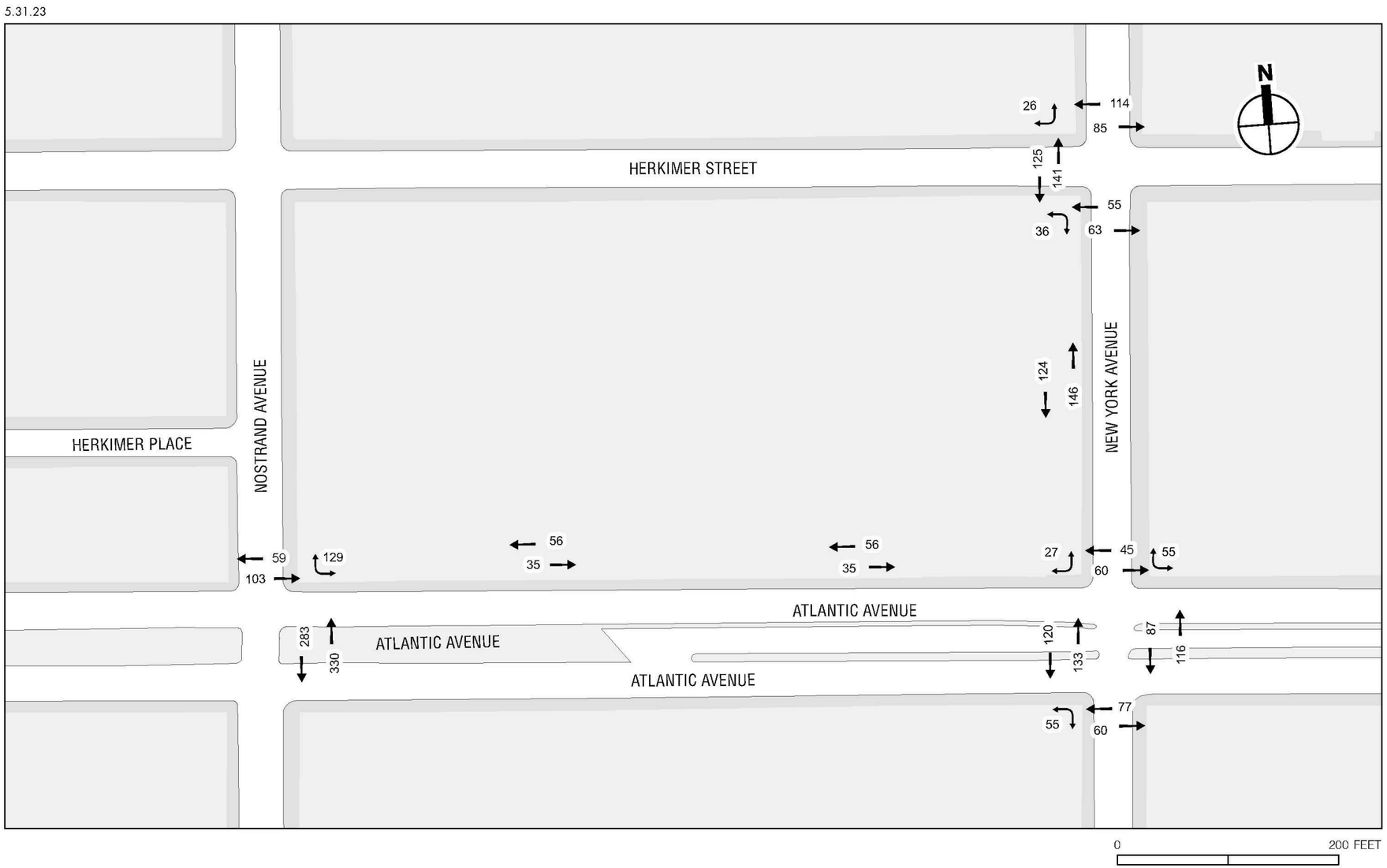
2027 No Action Condition Pedestrian Volumes
Weekday Midday Peak Hour

Figure 2.16-18: No Action Weekday PM Pedestrian Volumes



2027 No Action Condition Pedestrian Volumes
Weekday PM Peak Hour

Figure 2.16-19: No Action Saturday MD Pedestrian Volumes



2027 No Action Condition Pedestrian Volumes
Saturday Peak Hour

Future With Action Conditions

The With Action condition pedestrian volumes are shown in **Figure 2.16-20** through **Figure 2.16-23** for the weekday AM, midday, PM, and Saturday peak hour hours, respectively. The With Action pedestrian volumes were developed by adding the project-generated incremental pedestrian trips to the No Action pedestrian volumes.

Street Level Pedestrian Operations

As shown in **Table 2.16-20** through **Table 2.16-22**, all study area pedestrian elements would operate at mid-LOS D or better. Based on the CEQR Technical Manual sliding scale impact thresholds, the proposed project would not result in any significant adverse pedestrian impacts.

Table 2.16-20: 2029 With Action Conditions – Sidewalk Analysis

Location	Sidewalk	Effective Width (ft)	Two-way Peak Hour Volume	PHF	SFP	LOS
Weekday AM Peak Hour						
Atlantic Avenue between New York Avenue and site entrance	North	3.0	480	0.74	72.1	C
Weekday Midday Peak Hour						
New York Avenue between Atlantic Avenue and Herkimer Street	West	4.4	479	0.72	104.6	B
Atlantic Avenue between New York Avenue and site entrance	North	3.0	736	0.75	47.3	C
Atlantic Avenue between Nostrand Avenue and site entrance	North	3.0	361	0.70	92.0	B
Weekday PM Peak Hour						
New York Avenue between Atlantic Avenue and Herkimer Street	West	4.4	525	0.79	104.0	B
Atlantic Avenue between New York Avenue and site entrance	North	3.0	798	0.80	46.2	C
Atlantic Avenue between Nostrand Avenue and site entrance	North	3.0	379	0.79	98.5	B
Saturday Peak Hour						
New York Avenue between Atlantic Avenue and Herkimer Street	West	4.4	639	0.76	82.6	C
Atlantic Avenue between New York Avenue and site entrance	North	3.0	1,014	0.75	33.8	D
Atlantic Avenue between Nostrand Avenue and site entrance	North	3.0	448	0.70	73.9	C

Note: SFP = square feet per pedestrian.

Table 2.16-21: 2029 With Action Conditions – Corner Analysis

Location	Corner	Weekday AM Peak Hour		Weekday Midday Peak Hour		Weekday PM Peak Hour		Saturday Peak Hour	
		SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS
Atlantic Avenue and New York Avenue	Northwest	195.3	A	141.9	A	134.0	A	110.5	A
	Northeast			196.7	A	207.6	A	169.7	A
	Southwest			87.6	A	87.7	A	69.1	A
Atlantic Avenue and Nostrand Avenue	Northeast					73.6	A	55.2	B
Herkimer Street and New York Avenue	Northwest			46.5	B	48.4	B	36.4	C
	Southwest			353.2	A	349.6	A	266.4	A

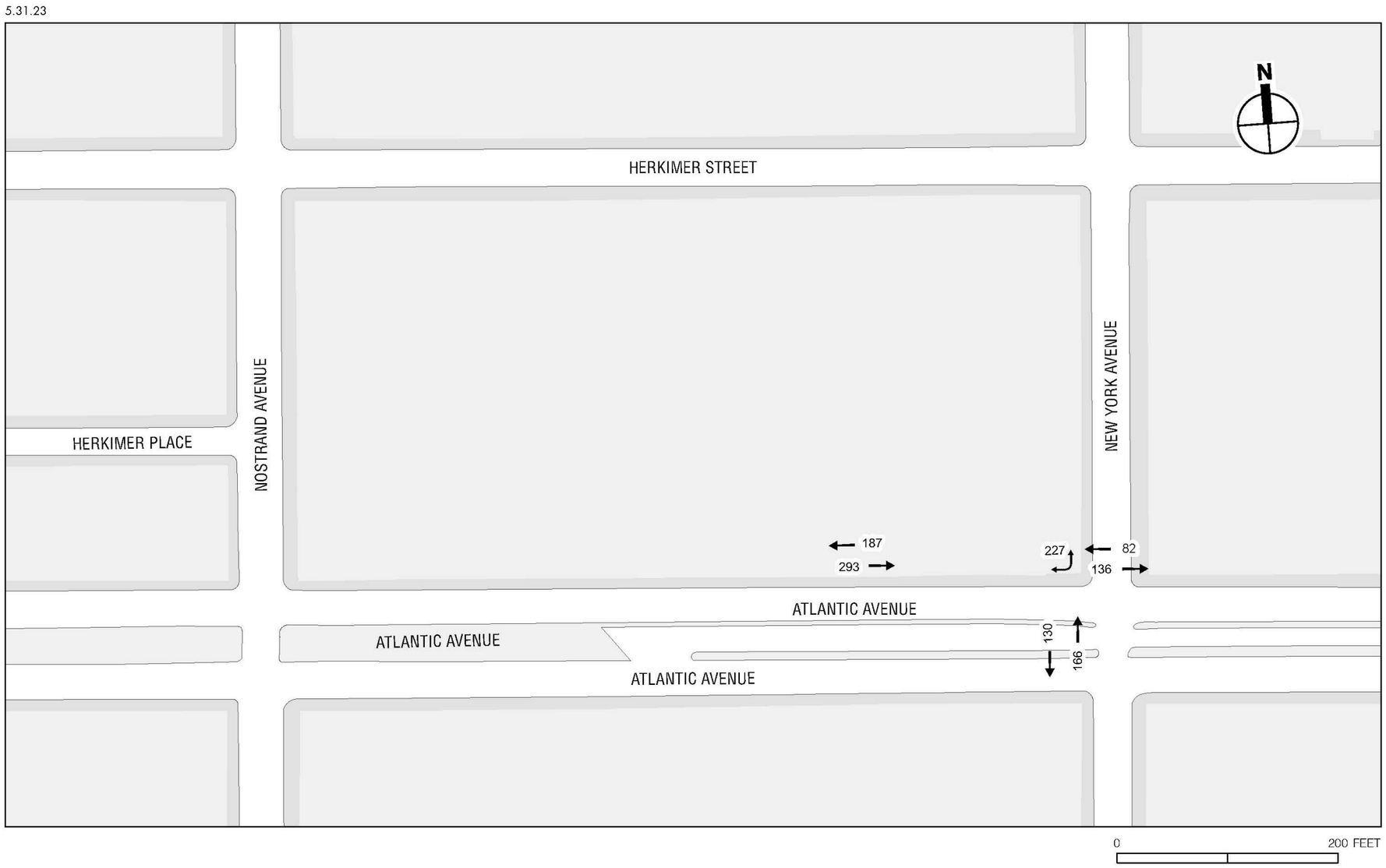
Note: SFP = square foot per pedestrian

Table 2.16-22: 2029 With Action Conditions - Crosswalk Analysis

Location	Crosswalk	Crosswalk Length (ft)	Crosswalk Width (ft)	Two-way Peak Hour Volume	SFP	LOS
Weekday PM Peak Hour						
Atlantic Avenue and New York Avenue	North	34.0	14.0	346	108.4	A
	West	94.5	13.0	429	48.4	B
Herkimer Street and New York Avenue	West	32.0	12.5	399	128.1	A
Saturday Peak Hour						
Atlantic Avenue and New York Avenue	North	34.0	14.0	373	125.3	A
	West	94.5	13.0	540	48.8	B
Herkimer Street and New York Avenue	West	32.0	12.5	526	86.0	A

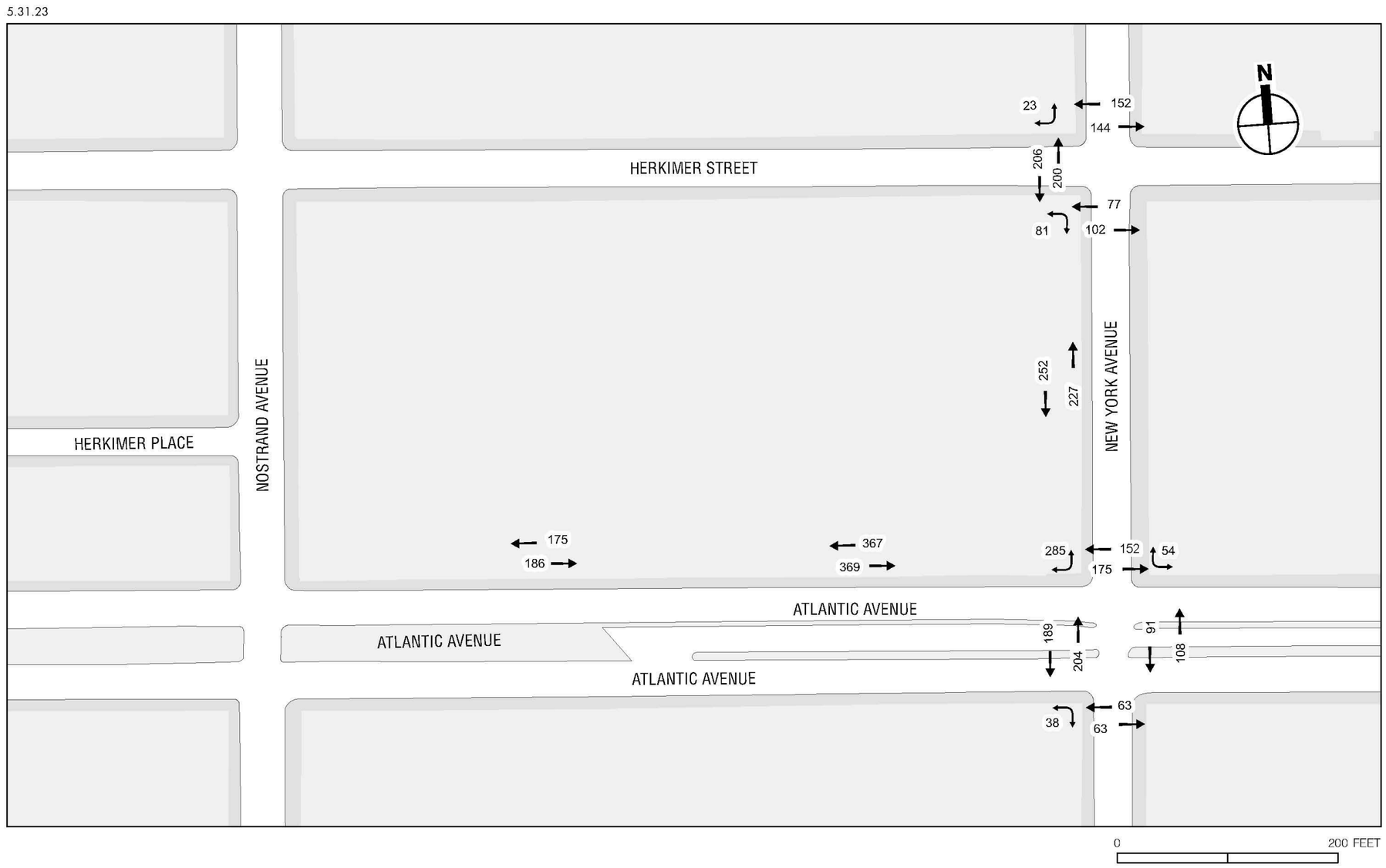
Note: SFP = square feet per pedestrian.

Figure 2.16-20: With Action Weekday AM Pedestrian Volumes



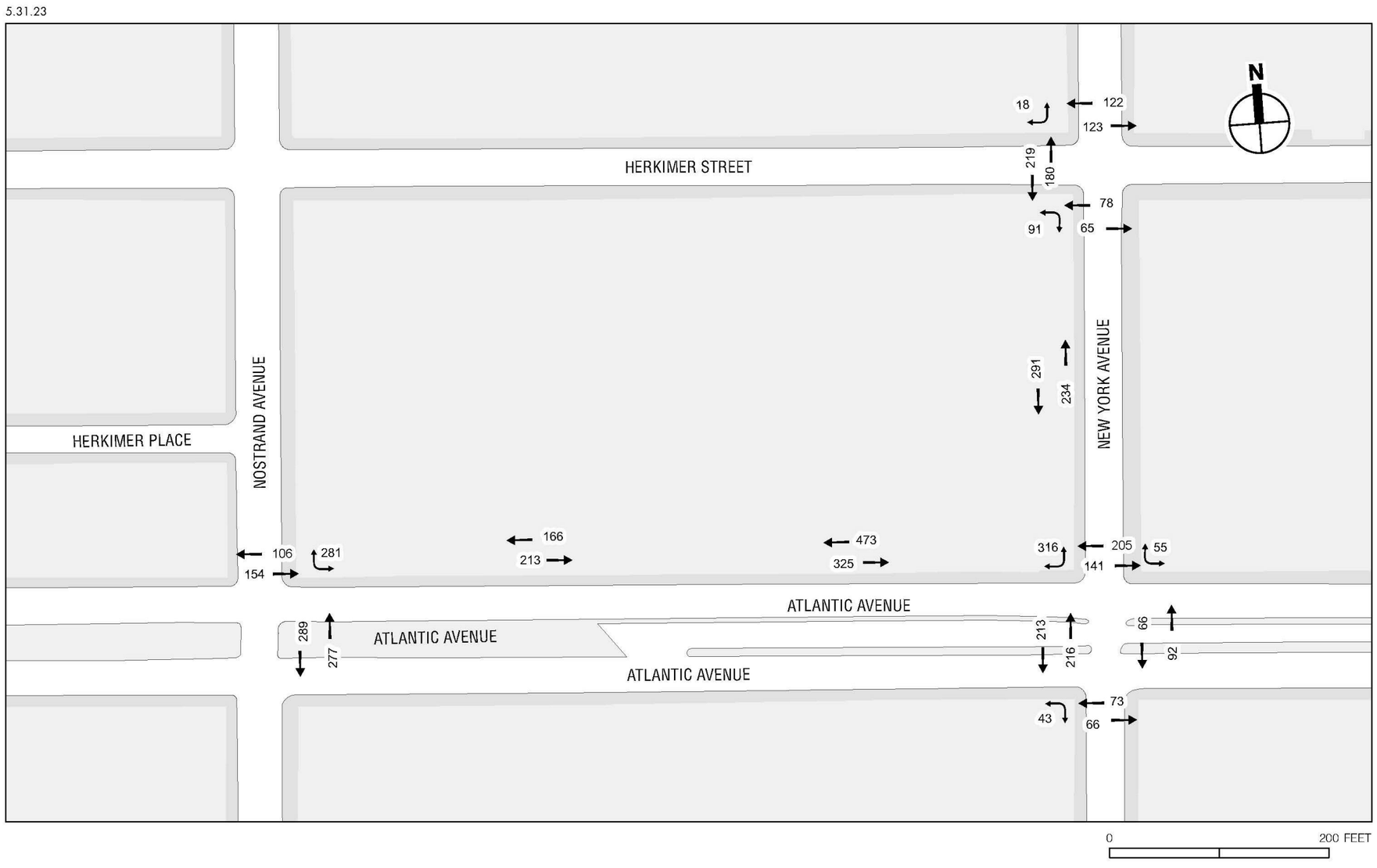
2027 With Action Condition Pedestrian Volumes
Weekday AM Peak Hour

Figure 2.16-21: With Action Weekday MD Pedestrian Volumes



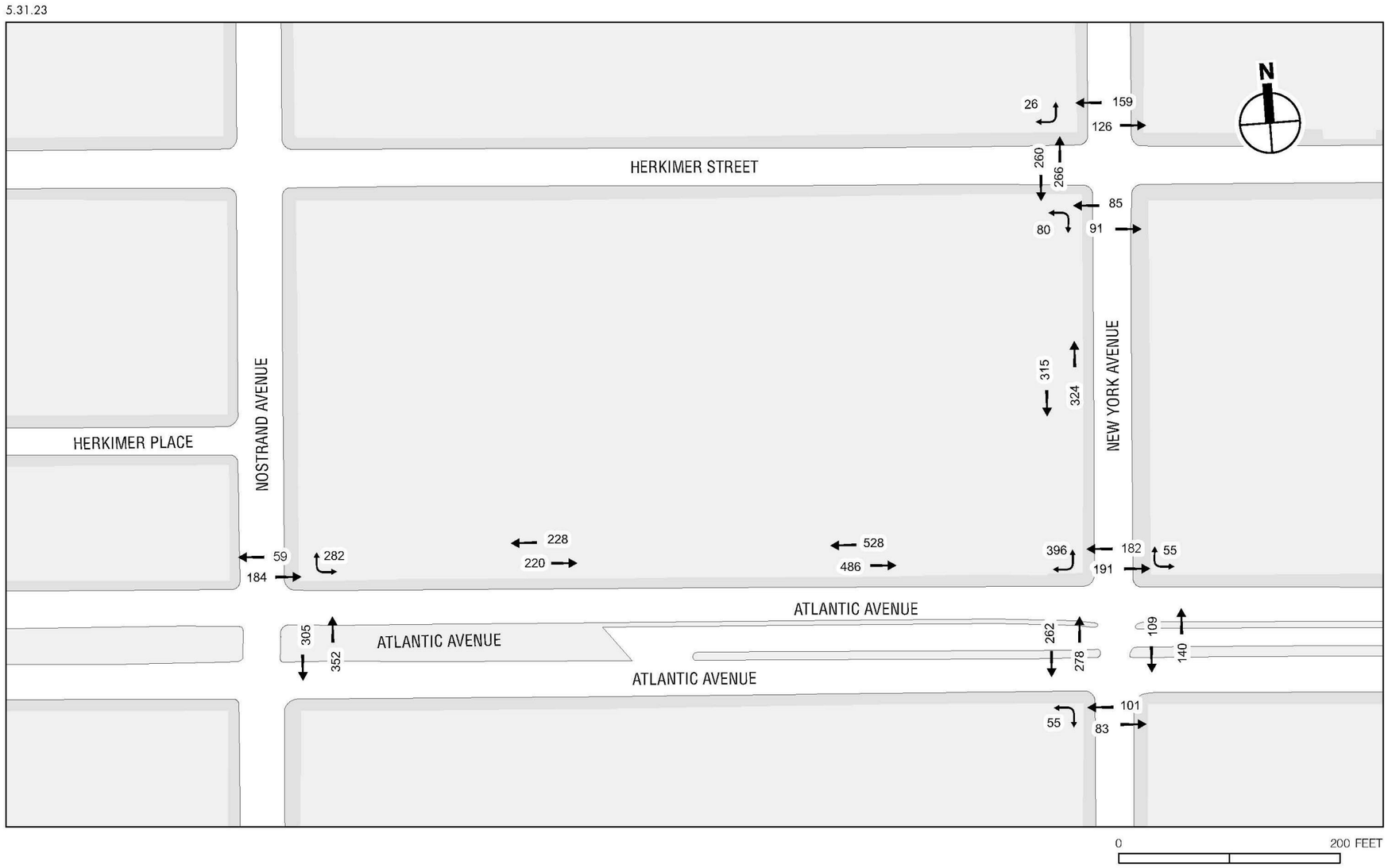
2027 With Action Condition Pedestrian Volumes
Weekday Midday Peak Hour

Figure 2.16-22: With Action Weekday PM Pedestrian Volumes



2027 With Action Condition Pedestrian Volumes
Weekday PM Peak Hour

Figure 2.16-23: With Action Saturday MD Pedestrian Volumes



2027 With Action Condition Pedestrian Volumes
Saturday Peak Hour

Street User Safety Assessment

In conjunction with a Detailed Traffic and/or Pedestrian Analysis, an assessment of street user safety may be appropriate. The key issue to be resolved in safety assessments is whether the street users, with particular focus on bicyclists and pedestrians, will be at increased risk for involvements in crashes due to the Proposed Actions.

Crash data for the nine study area intersections were obtained from NYC DOT for the period between January 1, 2017 to December 31, 2019. The data obtained quantifies 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 the yearly breakdown of vehicular crashes with pedestrians and bicycles at each location.

According to the *2021 CEQR Technical Manual*, a high crash location is defined as any location along a Vision Zero priority corridor[11] with three or more pedestrian/bicyclist injury crashes in any consecutive 12 months of the most recent 3-year period for which data is available. If any high crash locations are identified, practicable measures to enhance pedestrian/bicycle safety at these locations will be described.

Table 2.16-23 depicts the total crash characteristics by intersection during the study period, as well as a breakdown of pedestrian and bicycle crashes by year and location. **Figure 2.16-24** shows any Vision Zero, Senior Pedestrian Focus Areas (SPFAs), or Truck Priority Safety Corridors in the Study Area.

A rolling yearly total of crash data identifies one study intersection (Study Intersection 4) as potential high crash locations. A review of the dates of the incidents at the intersection indicates that the number of pedestrian/ bicyclist injury crashes at Study Intersection 4 (Atlantic Avenue and Nostrand Avenue) exceeded the thresholds for high crash locations, with five or more pedestrian/ cyclist injuries in three consecutive 12-month periods during 2017-2019. Accordingly, Study Intersection 4 (Atlantic Avenue and Nostrand Avenue) is categorized as the study area's sole high-crash location.

Study Intersection 4 (Atlantic Avenue and Nostrand Avenue)

Table 2.16-24 shows a detailed description of pedestrian/bicyclist-related crashes at the intersection of Atlantic Avenue and Nostrand Avenue during the study period of 2017 to 2019. This intersection is signalized and equipped with pedestrian countdown timers on all crosswalks. Generally, safety could be affected by the overhead LIRR structure and supporting columns that constrain visibility at the intersection. Based on a review of the crash history data, the most prominent cause of pedestrian/bicyclist crashes were caused by vehicles making left or right turns and failing to yield to the pedestrian right-of-way with little attention.

In the With-Action Condition, this intersection would experience approximately 41, 30, 27, and 39 project-generated vehicle trips and approximately 111, 124, 160, and 197 project-generated pedestrian trips (combined for all crosswalks) during the weekday AM, midday, PM and Saturday midday peak hours, respectively.

[11] Vision Zero seeks to eliminate all deaths from traffic crashes regardless of whether on foot, bicycle, or inside of a motor vehicle, whereas Vision Zero corridors & intersections are identified as locations that disproportionately account for pedestrian fatalities and severe injuries thus prioritizing them for safety interventions.

As per the Vision Zero database, Study Intersection 4 between Atlantic Avenue and Nostrand Avenue is a priority intersection with leading pedestrian interval signals that show a pedestrian walk sign before showing a green light to vehicle traffic in the same direction. In addition, Atlantic Avenue and Nostrand Avenue in this area are priority corridors where the signal progression has been changed to match the 25-mph speed limit. With a combination of speed limits, signal timing changes, distinctive signs, and increased enforcement, this section of Atlantic Avenue is also within an arterial slow zone to ensure the security of the pedestrians and bicyclists.

As described above, the majority of the pedestrian and cyclist related crashes at the high-crash Study Intersection 4 were cause by drivers' inattention to yield to the pedestrian right-of-way and the Proposed Actions would not create more than 200 pedestrian trips combined for all crosswalks at this intersection. In addition, the high-crash Study Intersection 4 has leading pedestrian interval signals with signal progression that matches the 25-mph speed limit. Therefore, the Proposed Actions are not expected to result in potentially significant vehicular and pedestrian safety concerns in the study area.

Table 2.16-23: Crash Data Review

Study Intersection 1: Pacific Street and Nostrand Avenue					
YEAR	NUMBER OF CRASHES	NUMBER OF PEDESTRIAN/CYCLIST INJURED	NUMBER OF PEDESTRIAN/CYCLIST SEVERELY INJURED	NUMBER OF MOTORISTS INJURED	NUMBER OF MOTORISTS SEVERELY INJURED
2017	1	1	0	0	0
2018	4	0	0	5	0
2019	5	1	0	3	0
Total	**10**	**2**	**0**	**8**	**0**
Study Intersection 2: Pacific Street and New York Avenue					
YEAR	NUMBER OF CRASHES	NUMBER OF PEDESTRIAN/CYCLIST INJURED	NUMBER OF PEDESTRIAN/CYCLIST SEVERELY INJURED	NUMBER OF MOTORISTS INJURED	NUMBER OF MOTORISTS SEVERELY INJURED
2017	1	1	0	0	0
2018	2	0	0	1	0
2019	4	1	0	0	0
Total	**7**	**2**	**0**	**1**	**0**
Study Intersection 3: Pacific Street and Brooklyn Avenue					
YEAR	NUMBER OF CRASHES	NUMBER OF PEDESTRIAN/CYCLIST INJURED	NUMBER OF PEDESTRIAN/CYCLIST SEVERELY INJURED	NUMBER OF MOTORISTS INJURED	NUMBER OF MOTORISTS SEVERELY INJURED
2017	1	0	0	0	0
2018	3	0	0	1	0
2019	5	2	0	3	0
Total	**9**	**2**	**0**	**4**	**0**
Study Intersection 4: Atlantic Avenue and Nostrand Avenue					
YEAR	NUMBER OF CRASHES	NUMBER OF PEDESTRIAN/CYCLIST INJURED	NUMBER OF PEDESTRIAN/CYCLIST SEVERELY INJURED	NUMBER OF MOTORISTS INJURED	NUMBER OF MOTORISTS SEVERELY INJURED
2017	21	10	1	26	0
2018	24	5	0	14	0
2019	26	9	1	11	0
Total	**71**	**24**	**2**	**51**	**0**
Study Intersection 5: Atlantic Avenue and New York Avenue					
YEAR	NUMBER OF CRASHES	NUMBER OF PEDESTRIAN/CYCLIST INJURED	NUMBER OF PEDESTRIAN/CYCLIST SEVERELY INJURED	NUMBER OF MOTORISTS INJURED	NUMBER OF MOTORISTS SEVERELY INJURED
2017	13	3	0	9	0
2018	17	1	0	13	0
2019	17	1	0	5	0
Total	**47**	**5**	**0**	**27**	**0**
Study Intersection 6: Atlantic Avenue and Brooklyn Avenue					
YEAR	NUMBER OF CRASHES	NUMBER OF PEDESTRIAN/CYCLIST INJURED	NUMBER OF PEDESTRIAN/CYCLIST SEVERELY INJURED	NUMBER OF MOTORISTS INJURED	NUMBER OF MOTORISTS SEVERELY INJURED
2017	12	1	0	11	0
2018	15	1	0	3	0
2019	15	1	0	9	1
Total	**42**	**3**	**0**	**23**	**1**
Study Intersection 7: Herkimer Street and Nostrand Avenue					
YEAR	NUMBER OF CRASHES	NUMBER OF PEDESTRIAN/CYCLIST INJURED	NUMBER OF PEDESTRIAN/CYCLIST SEVERELY INJURED	NUMBER OF MOTORISTS INJURED	NUMBER OF MOTORISTS SEVERELY INJURED
2017	4	1	0	4	0
2018	10	2	0	9	0
2019	5	0	0	1	0
Total	**19**	**3**	**0**	**14**	**0**
Study Intersection 8: Herkimer Street and New York Avenue					
YEAR	NUMBER OF CRASHES	NUMBER OF PEDESTRIAN/CYCLIST INJURED	NUMBER OF PEDESTRIAN/CYCLIST SEVERELY INJURED	NUMBER OF MOTORISTS INJURED	NUMBER OF MOTORISTS SEVERELY INJURED
2017	4	0	0	3	0
2018	3	0	0	1	0
2019	6	1	0	0	0
Total	**13**	**1**	**0**	**4**	**0**
Study Intersection 9: Herkimer Street and Brooklyn Avenue					
YEAR	NUMBER OF CRASHES	NUMBER OF PEDESTRIAN/CYCLIST INJURED	NUMBER OF PEDESTRIAN/CYCLIST SEVERELY INJURED	NUMBER OF MOTORISTS INJURED	NUMBER OF MOTORISTS SEVERELY INJURED
2017	0	0	0	0	0
2018	3	0	0	1	0
2019	6	0	0	2	0
Total	**9**	**0**	**0**	**3**	**0**

Data source: NYSDOT/DMV (2018-2020)
There is one fatal (pedestrian) at the intersection of Atlantic Ave and Nostrand Ave on 10/23/2021 (2018-Present)
Fatal data source: NYCDOT/NYPD (2018-present)
Data updated as on June 20,2022

Table 2.16-24: Vehicle and Pedestrian/Cyclist Crash Details – Atlantic Avenue and Nostrand Avenue

Intersection Name	Date	Crash Class			Action of Vehicle	Action of Pedestrian/Cyclist	Cause of Crashes
		Type	Injury	Fatality			
Atlantic Avenue & Nostrand Avenue	1/18/2017	Collision w/ Pedestrian	x		Making Left Turn	Crossing With Signal	Driver Inattention
	3/5/2017	Collision w/ Bicyclist	x		Making Left Turn	Unknown	Failure To Yield Right Of Way
	4/6/2017	Collision w/ Pedestrian	x		Going Straight Ahead	Crossing With Signal	Unknown
	6/11/2017	Collision w/ Bicyclist	x		Going Straight Ahead	Unknown	Driver Inattention / Pedestrian Error & Confusion
	6/23/2017	Collision w/ Pedestrian	x		Making Right Turn	Crossing With Signal	Failure To Yield Right Of Way
	10/5/2017	Collision w/ Pedestrian	x		Making Left Turn	Crossing With Signal	Failure To Yield Right Of Way
	11/7/2017	Collision w/ Pedestrian	x		Making Left Turn	Crossing With Signal	Unknown
	11/25/2017	Collision w/ Pedestrian	x		Going Straight Ahead	Crossing With Signal	Failure To Yield Right Of Way
	12/12/2017	Collision w/ Pedestrian	x		Making Left Turn	Crossing With Signal	Driver Inattention
	3/20/2018	Collision w/ Pedestrian	x		Making Left Turn	Crossing With Signal	Driver Inattention
	4/5/2018	Collision w/ Pedestrian	x		Making Left Turn	Crossing With Signal	Failure To Yield Right Of Way
	11/12/2018	Collision w/ Pedestrian	x		Making Left Turn	Crossing With Signal	Driver Inattention
	12/12/2018	Collision w/ Bicyclist	x		Going Straight Ahead	Unknown	Driver Inattention
	2/5/2019	Collision w/ Pedestrian	x		Making Left Turn	Crossing With Signal	Failure To Yield Right Of Way
	2/15/2019	Collision w/ Pedestrian	x		Making Right Turn	Crossing With Signal	Failure To Yield Right Of Way
	3/3/2019	Collision w/ Pedestrian	x		Making Right Turn	Crossing With Signal	Not Entered
	5/11/2019	Collision w/ Pedestrian	x		Going Straight Ahead	Crossing Against Signal	Unknown
	6/4/2019	Collision w/ Pedestrian	x		Making Left Turn	Crossing With Signal	Failure To Yield Right Of Way
	7/12/2019	Collision w/ Pedestrian	x		Making Left Turn	Crossing With Signal	Driver Inattention
	9/14/2019	Collision w/ Bicyclist	x		Going Straight Ahead	Unknown	Driver Inattention
	11/14/2019	Collision w/ Pedestrian	x		Going Straight Ahead	Other Actions In Roadway	Traffic Control Devices
	12/10/2019	Collision w/ Pedestrian	x		Making Left Turn	Crossing With Signal	Failure To Yield Right Of Way

Figure 2.16-24: Vision Zero, Senior Pedestrian Focus Areas (SPFAs), or Truck Priority Safety Corridors in the Study Area



Conclusion

The Proposed Actions would facilitate new mixed-use developments that would generate more than 50 vehicular trips and 200 pedestrian trips during AM, MD, PM, and Saturday peak hours. The Tier 2 Trip Assignment did not identify vehicular or transit exceedances pursuant to CEQR Technical Manual thresholds. As discussed above, a Pedestrian Levels of Service analysis was performed for the pedestrian elements identified above, and determined that the proposed project would not result in any significant adverse pedestrian impacts. Lastly, a Parking Study was performed and no significant adverse impact related to parking was identified as a result of the Proposed Actions.

Chapter 17: Air Quality

Ambient air quality, or the quality of the surrounding air, may be affected by air pollutants produced by motor vehicles, referred to as "mobile sources"; by fixed facilities, usually referenced as "stationary sources"; or by a combination of both. Under CEQR, an air quality assessment determines both a proposed project's effects on ambient air quality as well as the effects of ambient air quality on the project. The analysis followed the *New York City Environmental Quality Review 2020 Technical Manual*.

Air Pollutants and Applicable Standards and Guidelines

Criteria Pollutants - National Air Quality Standards

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

The New York State Department of Environmental Conservation (NYSDEC) measures air pollutants at more than 50 sites across the state using continuous and/or manual instrumentation. These sites are a mix of federally-mandated and supplemental monitoring networks. The primary NAAQS and background concentrations of the pollutants that a detailed analysis was required for are presented in **Table 2.17-1**.

Table 2.17-1: NAAQS and Background Concentration Published in the NYSDEC 2019 Report

Pollutant	Averaging Period	National and State Standards	Background Concentration	Monitoring Station
$PM_{2.5}$	24-Hour	35 µg/m^3	17.8 µg/m^3	JHS 126
	Annual	12 µg/m^3	7.6 µg/m^3	
PM_{10}	24-Hour	150 µg/m^3	43 µg/m^3	Division Street
NO_2	1-Hour	188 µg/m^3	103.6 µg/m^3	Queens College
	Annual	100 µg/m^3	26.8 µg/m^3	
CO	1-Hour	35 ppm	1.51 ppm	
	8-Hour	9 ppm	1.10 ppm	
SO_2	1-Hour	196 µg/m^3	13.5 µg/m^3	
	Annual	80 µg/m^3	1.0 µg/m^3	

Note:
1. Background concentrations NYSDEC Ambient Air Quality Report for 2019
2. 6 CRR-NY 257-2.3 for annual SO_2 standard: “During any 12 consecutive months, the annual average of the 24-hour average concentrations shall not exceed 0.03 ppm.

NYC Guidelines

The city's de minimis criteria are used to determine the significance of the incremental increase in CO and $PM_{2.5}$ concentrations that would result as a consequence of the proposed project. The CO criteria set the

minimum change in 8-hour average CO concentration that constitutes a significant environmental impact. Significant increase of CO concentrations in New York City are:

- 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 8 ppm or between 8 ppm and 9 ppm; or
- An increase of more than half the difference between baseline (i.e., No-Action) concentrations and the 8-hour standard, when No-Action concentrations are below 8 ppm.

The following criteria are used for determination of significant adverse $PM_{2.5}$ incremental impacts for projects subject to CEQR:

- Predicted 24-hour maximum $PM_{2.5}$ concentration increase of more than half the difference between the 24-hour background concentration and the 24-hour standard; or
- Predicted annual average $PM_{2.5}$ concentration increments greater than 0.1 $\mu g/m^3$ at ground level on a neighborhood scale (i.e., the annual increase in concentration representing the average over an area of approximately 1 square kilometer, centered on the location where the maximum ground-level impact is predicted for stationary sources; or for mobile sources, at a distance from a roadway corridor similar to the minimum distance defined for locating neighborhood scale monitoring stations); or
- Predicted annual average $PM_{2.5}$ concentration increments greater than 0.3 $\mu g/m^3$ at any receptor location for stationary sources.

Noncriteria Pollutants

The NYSDEC Department of Air Resources established short-term (one-hour) and annual concentrations standards for certain noncriteria pollutants. The standards are acceptable ambient levels for these pollutants, which are based on human exposure. The New York State standards for noncriteria pollutants are published in the DAR-1 guidance document (latest version dated February 12, 2021). DAR-1 presents Annual and Short-Term Guideline Concentrations (AGCs and SGCs, respectively) for contaminants that range in toxicity from high to low. The AGCs and SGCs are annual and 1-hour guideline concentrations, respectively, for potentially toxic or carcinogenic air contaminants. In addition, NYSDEC also regulates pollutants that produce discomfort due to odors, where significant discomfort is evaluated on quantity, characteristic, or duration.

Mobile Sources

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

Screening Assessment

Project-Generated Traffic

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

According to the transportation analysis for this project, the proposed project would generate a total of 78, 104, 102 and 130 net incremental vehicle trip ends (inbound and outbound combined) during the weekday AM, Midday, PM, and Saturday Midday peak hours, respectively. This total project-generated traffic would include 1, 2, 1 and 1 trucks (rounded to the nearest whole) during the AM, MD, PM, and Saturday MD peak hours, respectively. The peak-hour project generated traffic would not exceed the threshold of 170 vehicular trips (condition outlined in Sections 210 of Chapter 17 of *the CEQR Technical Manual*). Therefore, no CO detailed analysis is required.

The $PM_{2.5}$ equivalent truck calculation in vehicular emission screen ranges from 12 to 23 HDDVs depending on the type of road. Peak-hour traffic on eight selected Study Area street segments, obtained from the transportation analysis for this project, were screened in the $PM_{2.5}$ equivalent truck calculation. All autos were assumed to be LDGT1 class vehicles, based on guidance from the Department of City Planning (DCP) on similar projects. All project-generated trucks were assumed to travel on all roadways. The worst-case HDDVs or its equivalent in vehicular emissions would result in a maximum of 5.1 equivalent trucks. **Table 2.17-2** shows the project-generated traffic (inbound and outbound combined) and the results of the *CEQR Technical Manual* Equivalent Truck Calculation at each street segment for each peak-hour period.

Table 2.17-2: *CEQR Technical Manual* Equivalent Truck Calculations

Street Segment ID	Street Segment	Roadway Classification (Threshold HDDVs screen) [1]	Peak-Hour Period	Truck Per Hour	Auto Per Hour	Equivalent Truck	Pass / Fail
1	Pacific St btwn New York Ave and Brooklyn Ave	Paved (12)	AM	1	1	1.4	Pass
			MD	2	5	4.0	Pass
			PM	1	7	4.1	Pass
			Sat MD	1	8	4.6	Pass
2	Atlantic Ave btwn Nostrand Ave and New York Ave	Arterial (23)	AM	1	40	2.5	Pass
			MD	2	29	2.6	Pass
			PM	1	41	2.2	Pass
			Sat MD	1	43	2.6	Pass
3	Atlantic Ave btwn New York Ave and Brooklyn Ave	Arterial (23)	AM	1	9	1.1	Pass
			MD	2	15	2.0	Pass
			PM	1	22	1.4	Pass
			Sat MD	1	24	1.7	Pass
4	Herkimer Street btwn Nostrand Ave and New York Ave	Paved (12)	**AM**	1	8	4.5	Pass
			MD	2	-1	1.0	Pass
			PM	1	5	2.9	Pass
			Sat MD	1	3	2.3	Pass
5	Herkimer Street btwn New York Ave and Brooklyn Ave	Paved (12)	**AM**	1	8	4.5	Pass
			MD	2	-1	1.0	Pass
			PM	1	5	2.9	Pass
			Sat MD	1	3	2.3	Pass
6	Nostrand Ave btwn Atlantic Ave and Pacific St	Arterial (23)	AM	1	16	1.4	Pass
			MD	2	18	2.2	Pass
			PM	1	16	1.1	Pass
			Sat MD	1	24	1.7	Pass
7	New York Ave btwn Atlantic Ave and Pacific St	Arterial (23)	AM	1	7	1.0	Pass
			MD	2	22	2.3	Pass
			PM	1	26	1.6	Pass
			Sat MD	1	30	2.0	Pass
8	Brooklyn Ave btwn Herkimer St and Atlantic Ave	Arterial (23)	AM	1	5	0.9	Pass
			MD	2	3	1.5	Pass
			PM	1	10	0.9	Pass
			Sat MD	1	9	1.1	Pass

Note:
1. Roadway classification obtained from the New York State Department of Transportation (NYSDOT) map application (Jan. 2020). https://gis3.dot.ny.gov/html5viewer/?viewer=FC.

As seen in **Table 2.17-2**, the Proposed Actions $PM_{2.5}$ equivalent truck calculation in vehicular emission does not exceed the HDDVs screening threshold criteria. Therefore, no detailed analysis is required.

Parking Garage

Based on CEQR guidelines, the incremental capacity of parking facilities are evaluated with a threshold capacity to determine whether a detailed analysis is required. The threshold increment is an increment of 85 off-street parking spaces, based on the DCP guidance on similar projects. A detailed analysis is required if the threshold is met or exceeded. Projected Development Site 1 would include 64 accessory parking spaces. Projected Development Site 2 would include 106 residential accessory parking spaces. The Projected Development Site 2 new parking spaces exceeds the threshold screen. Therefore, a detailed air quality analysis was conducted for Projected Development Site 2.

Existing Mobile Source of Pollutants

According to the *CEQR Technical Manual*, projects that would result in new sensitive uses within 200 feet of an atypical roadway or near other major mobile source of pollutant may result in significant adverse mobile source air quality impacts. The proposed project is not located near a highway or a very large parking facility. Therefore, no detailed analysis is required.

Parking Facility Detailed Analysis

Mobile source impacts are a function of vehicular related emissions and pollutants' dispersion. The emissions of vehicular combustion/mechanical components were calculated with the EPA's Mobile Vehicle Emission Simulator (MOVES)[12] version 2014b, and emission of dust generated by vehicles travelling on paved roadways were added to estimate total particulate matter emissions (where applicable). Dispersion analysis for the parking garage vent were calculated using the spreadsheet referenced in the *CEQR Technical Manual Appendices*. The pollutants' concentrations at the sidewalk across the street from the parking garage resulting from the on-street traffic were modeled with the EPA's CAL3QHCR[13] Gaussian dispersion model.

The Projected Development Site 2 would include a 106 spaces parking garage. The parking accumulation (ingress and egress) was provided by the transportation analysis for this project. Impact concentrations were analyzed based on the worst-case outbound vehicles and corresponding inbound vehicles. Accordingly, the parking garage worst-case traffic would be 62 incoming and 54 outgoing vehicles during the Midday peak-hour period of 12:00-1:00. The on-street Midday traffic, temporally corresponding to worst-case garage emissions, was analyzed for the short-term analyses' periods. On-street existing traffic was obtained from the New York State Department of Transportation (NYSDOT) online database. No-Action on-street traffic was projected to the build year using the *CEQR Technical Manual* annual background growth rate.

The parking garage was assumed to be located on the cellar level, accessed via a 100-foot-long ramp. The sum of Projected Development Site 2's lots' square feet and length of 210 feet (the maximum length possible) were used to calculated the mean travel distance of vehicles in the garage. Incoming/outgoing vehicles were assumed to travel half the width and two-third the length of the garage and cars were assumed to idle for 1-minute prior to traveling out of the parking facility, based on the *CEQR Technical Manual*.

Emissions

[12] EPA MOVES Model, Version MOVES2014a. Users Guide, EPA-420-B-15-095. November 2015. MOVES 2014b grace period is applicable, based on guidance from the New York State Department of Environmental Conservation (Jan. 2021 telephone call).
[13] EPA, User's Guide to CAL3QHCR. Addendum to the User's Guide to CAL3QHC Version 2.0. Office of Air Quality Planning, and Standards. Research Triangle Park, NC. https://www3.epa.gov/ttn/scram/userg/regmod/cal3qhcrug.pdf

The EPA's MOVES2014b emission factor algorithm was used to compile the CO and $PM_{2.5}$ emission rates. MOVES can be used to calculate emission rates of criteria air pollutants, greenhouse gas emissions, and some hazardous air pollutants for both on-road motor vehicles and non-road equipment. MOVES models calculate emissions at the national, county, and project level by use of databases and by specifying the characteristics (Run Specification) of the scenario that is modeled. For microscale (project level) analyses, MOVES require the use of traffic and roadways characteristics for each link (roadway segment) that is modeled and county data. County database for the MOVES model was obtained from the NYSDEC. The data included inspection and maintenance[14], vehicle type distribution, fuel data (fuel properties, distribution, and engine technology), age distribution, and meteorology data. Vehicles emissions inside the parking garage were modeled with an ambient temperature of 45-degree Fahrenheit, based on the *CEQR Technical Manual*.

$PM_{2.5}$ emissions of dust generated by vehicles traveling on paved roadways were added to estimate total particulate matter emission for the short-term analysis (per DEP, annual fugitive dust emission is negligible). Fugitive dust emissions were calculated with the formula in the EPA's AP-42 manual[15]. A silt loading factor of 0.1 g/m^2 (for arterial roadways) was applied, based on value from the *CEQR Technical Manual*. In addition, the conservative assumptions of "dry" road condition was used for the short-term calculation (precipitation reduced silt loading).

Dispersion Analysis

Dispersion analysis of the on-street traffic emissions was conducted using the EPA's CAL3QHCR dispersion model version 13196. One-hour CO concentration was predicted with the emulate CAL3QHC meteorology data, specifying 10-deg incremental wind vector direction, 1-meter per second wind speed, natural stability, and 285.5 Kelvin, and 1,000-meter mixing height. All models specified settling and deposition velocities of 0-meter per second, 60-minute averaging time, and urban surface roughness of 370-centimeter corresponding to city residential apartment land-use. A persistence factors of 0.7 was used to evaluate the 8-hour CO concentration. On-street 24-hour and annual $PM_{2.5}$ concentrations were predicted with 5-year meteorology data at LaGuardia Airport, obtained from the DCP.

The *CEQR Technical Manual Appendices* worksheet calculation was used to calculate dispersion of a pollutant emitted at a rate of 1 gram per second. The garage vent was located 10-foot above grade (adjoining grade) and vent at the minimum ventilation rate. A wind speed of 1-meter per second, based on CAL3QHC input, was conservatively assumed. Receptors were located on the adjacent and opposite sidewalks at a height of 6 feet above grade, and 5-foot directly above the vent simulating an operable window. The concentrations corresponding to the 1 gram per second emission rate were multiplied by the emissions in the parking garage to predict the concentrations.

Results

As previously mentioned, 24-hour $PM_{2.5}$ concentrations were predicted with the worst-case traffic in the garage and temporally corresponding on-street traffic. One-hour CO increment concentration was added to

[14] The inspection and maintenance programs require inspections of automobiles and light trucks to determine if pollutant emissions from each vehicle's exhaust system are lower than emission standards.

[15] EPA. *Compilation of Air Pollutant Emission Factors AP-42 Fifth Edition, Vol. 1: Paved Roads Chapter 13*: *Miscellaneous Sources* https://www3.epa.gov/ttn/chief/ap42. January 2011.

the background concentration and results evaluated with the NAAQS. Other pollutants concentrations were evaluated with the *de minimis*. **Table 2.17-3** shows the results of the parking facility dispersion analysis.

Table 2.17-3: Parking Facility Concentrations

Pollutant	Concentration			Threshold Standard		Concentration Unit
	Adjacent	Across the Street (3)	Window Above	Concentration	Standard	
1-Hour CO	1.66	1.69	1.63	35	NAAQS	ppm
8-Hour CO (1)	0.10	0.13	0.09	3.95	*de minimis*	ppm
24-Hour $PM_{2.5}$ (2)	0.32	3.17	0.26	8.6	*de minimis*	$\mu g/m^3$
Annual $PM_{2.5}$ (4)	0.05	0.04	0.04	0.3	*de minimis*	$\mu g/m^3$

Note:

1. 8-Hour CO background concentration of 1.10 ppm was used to calculate the de minimis design value.
2. 24-Hour $PM_{2.5}$ background concentration of 17.8 $\mu g/m^3$ was used to calculate the de minimis design value.
3. Concentration increments accounted for on-street traffic emissions.
4. Across the street increment concentration accounted for the difference between the With-Action and No-Action traffic.

As seen in **Table 2.17-3**, the 8-hour CO and $PM_{2.5}$ concentrations do not exceed the *de minims* design values and 1-hour CO is within the NAAQS. Therefore, no impact is predicted from the traffic emissions associated with the parking facility.

Project HVAC Systems Analysis

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

Screening Analysis

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

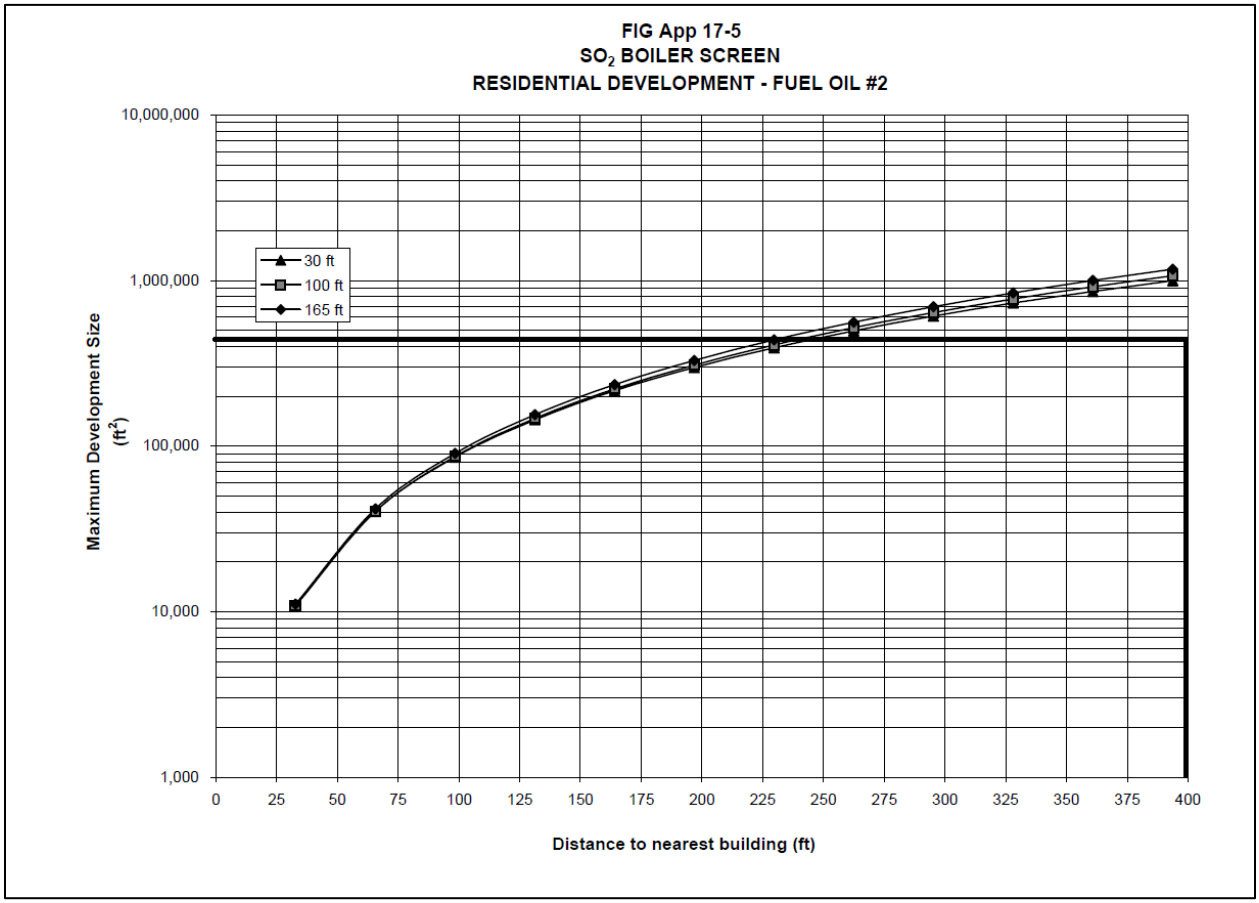
As screening analysis is only applicable to a single smokestack, for the purposes of a cumulative screening analysis, emissions from multiple stacks were combined in a single stack situated as close as possible to the receiving building. In addition, according to 15 RCNY 2-15, no new boiler or burner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

Project-on-Existing

The Projected Development Site 1 would facilitate a predominantly residential, 145-foot tall, 174,039 gross square feet (gsf) building. The Projected Development Site 2 would facilitate a predominantly residential, 145-foot tall, 254,473 gsf building. The following project-on-existing screening analysis was conducted:

The proposed project on existing land uses: A hypothetical HVAC system serving a 428,512 gsf of residential floor area building (the combined floor area of the Projected Development Sites 1 and 2). Fuel oil No. 2 would be the type of fuel used in the system and the stack would be located above the RWCDS height of 145-foot. A distance of 400 feet was applied as no other building in the area is equal or greater in height (145-foot high). **Figure 2.17-1** (using Figure 17-5 of the *CEQR Technical Manual Appendices*) shows the screening analysis.

Figure 2.17-1: The Projected Development Sites 1 and 2 Screening Analysis on Existing Land Uses

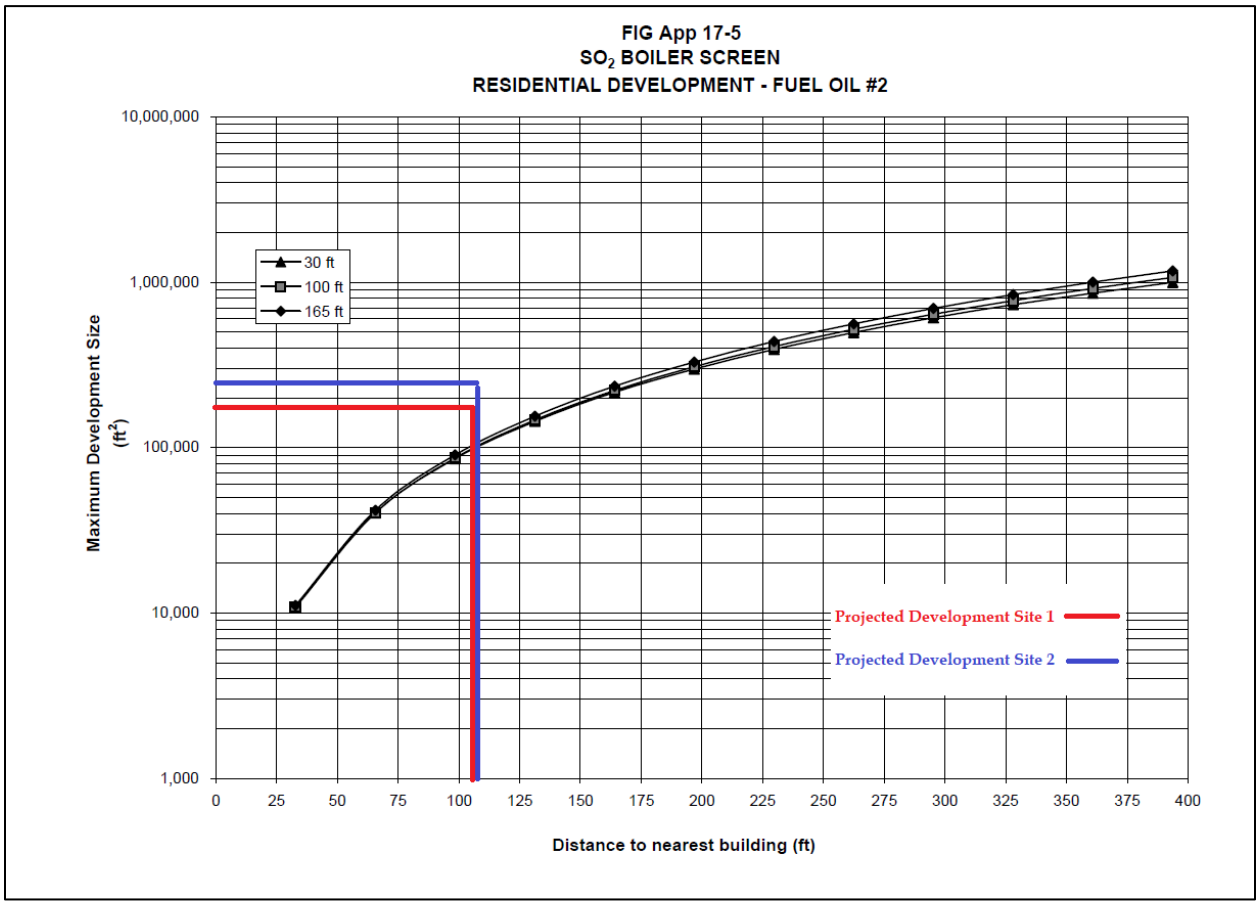


As seen in the screening analysis **Figure 2.17-1** (using Figure 17-5 of the *CEQR Technical Manual Appendices*), the line is below the curve. As such, the Proposed Actions passes the HVAC screening analysis on existing land uses.

Project-on-Project

Both Projected Development Site 1 and 2 are 145-foot tall. Therefore, screening analyses were conducted for both sites. The distance between the Projected Development Sites 1 and 2 is 110 feet, and both sites were assumed to use fuel oil No. 2 as the type of fuel in their HVAC systems. **Figure 2.17-2** (using Figure 17-5 of the *CEQR Technical Manual Appendices*) shows the screening analysis.

Figure 2.17-2: The Projected Development Site 1 on 2 and Vice Versa Screening Analyses



As seen in the screening analysis **Figure 2.17-2** (using Figure 17-5 of the *CEQR Technical Manual Appendices*), the lines are above the curve. Therefore, the screening analyses failed, and a detailed analysis is required for the project-on-project scenario.

Detailed Analysis

A stationary source modeling was conducted to evaluate the potential impacts associated with the boilers stacks emissions. Lakes Environmental MPI executable was used in the analysis. The MPI executable take advantage of computers with multiple processors, reducing run-time significantly. Lakes Environmental has adjusted the US EPA AERMOD source code and recompiled the model to parallelize the processing of receptors. The latest MPI executable (used in the analysis) modified the EPA's AERMOD latest executable model version 19191. The AERMOD model incorporates air dispersion based on planetary boundary layer

turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain. The analysis was conducted assuming stack tip downwash and elimination of calms. The Building Profile Input Program (BPIP) was run with the downwash effect enabled. All analyses were conducted using the latest five consecutive years of meteorological data (2015-2019), obtained from the NYSDEC, Division of Air Resources, BAQAR, Impact Assessment and Meteorology Section. Surface data used in the analysis is from LaGuardia Airport, upper air data is from Brookhaven station, New York. The meteorological data was processed using the latest versions of AERMINUTE, AERSURFACE and AERMET. The meteorological data provided hour-by-hour wind speeds and directions, stability states, and temperature inversion elevations over the 5-year period. The population in Brooklyn county, obtained from the U.S. Census Bureau 2019, was specified to account for the effects of increased surface heating from an urban area on pollutant dispersion under stable atmospheric conditions.

The pollutants of concern of No. 2 fueled boilers are NO_2, $PM_{2.5}$, and SO_2. The boilers' energy intensities were calculated based on energy consumption rate, obtained from the *CEQR Technical Manual Appendices*, corresponding to residential use in the buildings. Emissions were calculated based on emission factors obtained from the EPA's AP-42 manual for external combustion sources[16]. All fuel was assumed to be consumed during the 100-day (or 2,400 hour) heating season, based on the *CEQR Technical Manual*. **Table 2.17-4** shows the boilers' energy intensities and pollutants emission rates.

Table 2.17-4: RWCDS HVAC Systems Short-term and Annual Emission Rates

Site ID	Development Site RWCDS Floor Area (gsf)	Boiler's Energy Intensity (MMBtu); Fuel Used	Pollutant	Short-term Emission Rate (g/s)	Annual Emission Rate (g/s)
Projected Development Site 1	174,039	4.4; Oil No. 2	NO_2	7.89E-02	2.16E-02
			$PM_{2.5}$	8.41E-03	2.30E-03
			SO_2	8.41E-04	2.30E-04
Projected Development Site 2	254,473	6.4; Oil No. 2	NO_2	1.15E-01	3.16E-02
			$PM_{2.5}$	1.23E-02	3.37E-03
			SO_2	1.23E-03	3.37E-04

The boilers stacks' diameters and stacks exit temperatures were estimated based on values obtained from the DEP "CA Permit" database for the corresponding boiler sizes (i.e., rated heat input or million Btu per hour).[17] The stacks exit velocities were calculated based on the fuel dry volume of combustion components per unit of heat content. The boilers stacks were placed 3 feet above the roofline and as close as possible to the receiving building, and a stack(s) set back distance(s) was specified if impact was predicted.

The Development Sites were modeled as buildings that cover their entire lot(s) area(s) (the wall façade located on the outer lot lines) and rise to their RWCDS heights. Buildings in the Surrounding Area were accounted for in the downwash effect on plums dispersions (BPIP). Receptors on the receiving building(s) were placed on all wall façade and on all floor levels. The US Geological Service (USGS) National Elevation Dataset (NED) 1/3 arc-second resolution (GeoTIFF dataset), the terrain data set recommended by the US

[16] EPA. *Compilation of Air Pollutant Emission Factors AP-42 Fifth Edition, Vol. 1:* Chapter 1: External Combustion Sources, https://www3.epa.gov/ttn/chief/ap42/ch01/final/c01s04.pdf. July 1998.
[17] DEP "CA Permit" database obtained from the New York City Department of City Planning, February 2020.

EPA for use in the United States for regulatory purposes, was used to process buildings base elevations. The base elevations of receptors and stacks were set to their buildings base elevations. Roof heights of buildings in the area were obtained from the NYC Building Footprint database.[18]

One-hour NO_2 were evaluated with a Tier 2 (ARM 2) approach, where the national default minimum and maximum NO_2/NOx ratios were applied. Nitrogen oxide (NOx) emissions from combustion consist predominantly of nitric oxide (NO) at the source. NO is then gradually converted to NO_2. For determining compliance with the 1-hour NO_2 standard, the EPA has developed a three-tiered modeling approach. Tier 1 approach assumes a full conversion of NOx to NO_2, which is the most conservative approach. Tier 2 is the Ambient Ratio Method 2 (ARM 2) which assumes ambient equilibrium between NO and NO_2. ARM 2 adjusts the modeled NOx concentrations based on an empirical relationship between ambient NOx and ambient NO_2 concentrations. Tier 3, which is the most precise approach, accounts for the chemical transformation of NO emitted from the stack to NO_2 within the source plume using hourly ozone background concentrations. Generic emission rate of 1 gram per second and 1st highest output concentrations were used to predicted the annual NO_2, $PM_{2.5}$, and SO_2 concentrations.

Each pollutant averaging time was modeled twice; with building wake effect enabled/disabled. The predicted concentrations are the highest concentration of these. NO_2 and SO_2 modeled concentrations were added to the background concentrations. $PM_{2.5}$ modeled concentrations were evaluated with the *de minimis* design values for stationary sources. The HVAC dispersions analysis results are shown in **Table 2.17-5**.

Table 2.17-5: HVAC Dispersion Analysis Results

Pollutant and Averaging Time	Modeled Concentration (µg/m³) (2)	Background Concentration (µg/m³)	Evaluated Concentration (µg/m³)	Threshold Concentration (µg/m³)	Threshold Standard
Concentration at Projected Development Site 1					
1-hour NO_2	82.94	103.6	187	**188**	NAAQS
Annual NO_2	1.01	26.8	28	**100**	NAAQS
24-hour $PM_{2.5}$	5.43	17.8	5.4	**8.6**	*de minimis*
Annual $PM_{2.5}$	0.11	7.6	0.1	**0.3**	*de minimis*
1-hour SO_2	1.1	13.5	15	**196**	NAAQS
Annual SO_2	0.01	1.0	1	**80**	NAAQS
Concentration at Projected Development Site 2					
1-hour NO_2	79.60	103.59	183	**188**	NAAQS
Annual NO_2	0.79	26.8	28	**100**	NAAQS
24-hour $PM_{2.5}$	5.21	17.8	5.2	**8.6**	*de minimis*
Annual $PM_{2.5}$	0.08	7.6	0.1	**0.3**	*de minimis*
1-hour SO_2	0.8	13.5	14	**196**	NAAQS
Annual SO_2	0.008	1.0	1	**80**	NAAQS

The concentrations shown in **Table 2.17-5** were predicted with certain restrictions to ensure that no significant adverse air quality impact(s) would occur. The restrictions for the Proposed Actions are specified in the Air

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

Quality E-Designations that would be placed on the Development Site(s). The E-Designation language related to the heating and hot water systems is as follows:

(E) Designation E-732

Block 1867, Lots 62, 63, 64, 65, 66, and 68 (Projected Development Site 1): Any new residential, commercial, or community facility development on the above-referenced property must ensure that the heating, ventilation, air conditioning (HVAC) and hot water system(s) stack is located at the building's highest level or at least 148 feet above grade and that the stack is located at least 40 feet from the western lot line of lot 68 facing Nostrand Avenue to avoid any potential significant adverse air quality impacts.

Block 1867, Lots 77, 78, 80, 84, and 85 (Projected Development Site 2): Any new residential or commercial development on the above-referenced property must ensure that the heating, ventilation, air conditioning (HVAC) and hot water system(s) stack is located at the building's highest level or at least 148 feet above grade and that the stack is located at least 160 feet from the eastern lot line of lot 77 facing New York Avenue to avoid any potential significant adverse air quality impacts.

Existing Stationary Sources

Industrial Emission Source

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

Existing manufacturing uses with exhaust stacks, vents, or other emission sources that may have the potential to adversely affect the uses introduced by the project were identified by reviewing the DEP online Clean Air Tracking System (CATS) database, the NYSDEC online database[19], and through field observation / site investigation. The field observation took place on September 21st, 2020.

The study area encompasses all or part of Blocks 1200, 1201, 1202, 1207, 1860, 1861, 1862, 1865, 1866, 1867, and 1868. The project area is characterized by a mixture of uses, including low- to medium-density residential uses, and low- to medium-density commercial/retail uses including retail stores, warehousing and distribution, auto repair garages, and others. Several light-industrial/manufacturing uses were also identified in the study area including woodworking businesses and an iron works. There is a public school and playground located in the northeast part of the study area. No heavy industrial uses were identified in the study area. The results of the land uses survey are presented here:

Armstrong Ref., Inc. at 1289 Atlantic Avenue (Block 1867, Lot 68): Armstrong Ref., Inc. no longer operates at this location. 1289 Atlantic Avenue is part of the project site and contains a 1-story building which was vacant at the time of the field survey.

[19] NYSDEC, DECInfo Locator, https://gisservices.dec.ny.gov/gis/dil/, Sep. 2020.

Par Metal Products at 1260 Atlantic Avenue (Block 1200, Lot 27): Par Metal Products no longer operates at 1260 Atlantic Avenue. At the time of the field survey the building at 1260 Atlantic Avenue was vacant and undergoing a gut renovation and conversion to a self-storage facility.

Fulton Street So. Development, LLC at 1328 Fulton Street (Block 1861, Lot 7501): This facility contains a current permit PR028717 for a stationary generator. A Freedom of Information Law (FOIL) request for permit PR028717 was filed with the DEP. PR028717 is for a small combustion source (134 hp generator), and therefore, air toxics analysis is not required.

Dutch Cleaners, located at 571 Nostrand (Block 1201, Lot 75): This facility is an active retail dry cleaner with an expired DEP operational permit PB015700. The permit expiration date is 5/31/19. The facility has an expired NYSDEC Air Facility Registration Certificate (Registration ID 2-6104-00384/00002). The registration expiration date is 12/21/2020 and the certificate indicates that the dry-cleaning machine should be removed from service by 12/21/2020. Retail dry cleaners are regulated, and no analysis of this facility is required.

A9's Auto Body, located at 1332 Atlantic Avenue (Block 1201, Lot 17): This facility is an active auto body repair shop with one emission point. The facility has a current NYSDEC Air Facility Registration Certificate (Registration ID 2-6104-01453/00001). The registration expiration date is 12/09/2028. The analysis of this facility follows below.

Ironworks facility located at 48-50 Herkimer Place (Block 1866, Lot 20): This ironworks facility is located approximately 400 feet from the development site. There were not any stacks, odors, or emissions observed from this facility during the field survey. However, predicted emissions from the facility were included in the detailed analysis.

Small woodworking shop (New York Woodworking) located at 1259 Atlantic Avenue (Block 1867, Lot 84): This facility is part of the development site and will not be in operation following the reconstruction of the property. Therefore, no analysis of this facility is required.

Auto repair garage located at 1380 Atlantic Avenue (Block 1208, Lot 8): This facility is a general auto repair shop which do not perform auto body repair or spray-painting operations. No stacks, emissions or odors were observed at this location.

Auto repair garage located at 1261 Atlantic Avenue (Block 1867, Lot 80): This facility is a general auto repair shop which do not perform auto body repair or spray-painting operations. No stacks, emissions or odors were observed at this location.

Vacant building located at 1352 Atlantic Avenue (Block 1201, Lot 27): This formally auto repair garage was vacant during the fieldwork observation study.

No other facilities that are likely to emit toxic air emissions were identified within the 400 feet study area.

Detailed Analysis

A9's Auto Body: The A9's Auto Body facility is located on the south side of Atlantic Avenue and approximately 115 feet from the development site. The facility has a current NYSDEC Air Facility Registration Certificate (Registration ID 2-6104-01453/00001). According to certificate 2-6104-01453/00001 list of

regulations in application, the facility is required to use a particulate filter with at 98 percent control efficiency (40 CFR Part 63, Subpart HHHHHH). However, the analysis assumed a particulate filter with only 80 percent control measure, based on DEP permits of similar facilities. A generic consumption rate, pollutants emission rates, and activity rates were obtained from the DCP. The generic short-term activity rate is spraying of 0.125 gallon of paint per hour during a maximum of 4 hours per day, resulting in 0.5 gallon per day sprayed. The generic annual activity rate is 250 days per year. The auto body facility's predicted PM emissions are 0.30 pounds per day and 75 pounds per year, and VOC emissions are 5.0 pounds per day and 1250 pounds per year.

The contaminants associated with auto body spray booths are solids (particulates) and solvents. Solvents are the VOC which evaporate during the spraying activity and while the coating substance dries. The mixture of different compounds, identified collectively as VOC, have no guideline values in the NYSDEC DAR-1 database. The mixture comprises of compounds of varying toxicities. Each VOC concentration is evaluated with the NYSDEC Short-term Guidance Concentration and Annual Guidance Concentration (SGC/AGC) design values. The solids that bind to the sprayed item dries to a hard surface, while the overspray (the remaining amount) is emitted into the atmosphere or captured by a filter. A representative composition of the VOC by percent weight was obtained from the DCP. The ingredients that make up the representative paint, along with their Chemical Abstract Service (CAS) number, by percent weight, and the hourly and annual emission rates are presented in **Table 2.17-6**.

Table 2.17-6: A9's Auto Body Facility VOC Short-term and Annual Emission Rates

Contaminant name	CAS No.	Percent Weight (1)	1-Hour		Annual	
			lb/hr	g/s	lb/yr	g/s
Acetone	67-64-1	43%	5.38E-01	6.77E-02	537.5	7.73E-03
Aromatic Petroleum Distillate	64742-94-5	10%	1.25E-01	1.58E-02	125.0	1.80E-03
Butane	106-97-8	11%	1.38E-01	1.73E-02	137.5	1.98E-03
Ethanol	64-17-5	2%	2.50E-02	3.15E-03	25.0	3.60E-04
Ethyl 3-Ethoxypropionate	763-69-9	9%	1.13E-01	1.42E-02	112.5	1.62E-03
Ethylbenzene	100-41-4	5%	6.25E-02	7.88E-03	62.5	8.99E-04
Methyl Ethyl Ketone	78-93-3	8%	1.00E-01	1.26E-02	100.0	1.44E-03
N-Butyl Acetate	123-86-4	5%	6.25E-02	7.88E-03	62.5	8.99E-04
Propane	74-98-6	11%	1.38E-01	1.73E-02	137.5	1.98E-03
Stoddard Solvent	8052-41-3	10%	1.25E-01	1.58E-02	125.0	1.80E-03
Toluene	108-88-3	10%	1.25E-01	1.58E-02	125.0	1.80E-03
Xylene	1330-20-7	10%	1.25E-01	1.58E-02	125.0	1.80E-03

Particulates are fluid or solids particles grouped together, which include PM_{10} and $PM_{2.5}$ pollutants. Particulates concentrations are collectively evaluated with the NAAQS and *de minimis*. The particle size distribution ($PM_{10}/PM_{2.5}$) was obtained from the EPA AP-42 *Appendix B1*. **Table 2.17-7** shows the A9's Auto Body facility PM_{10} and $PM_{2.5}$ emission rates.

Table 2.17-7: A9's Auto Body Facility $PM_{10}/PM_{2.5}$ Emission Rates

Contaminant	Solids Emission Rate		Fraction of Particle Size	Emission Rate			
				Short-term		Annual	
	lb/day	lb/yr	Percent	lb/day	g/s	lb/yr	g/s
$PM_{2.5}$	0.30	75	28.6	8.58E-02	4.50E-04	21.5	3.09E-04
PM_{10}			46.7	1.40E-01	7.36E-04	35.0	5.04E-04

Ironworks facility: The ironworks facility located at 48-50 Herkimer Place (Block 1866, Lot 20) is situated approximately 320 feet west of the development sites. Representative emission profile for the ironworks facility were obtained from the DEP permit PB39705. The DEP permit PB039705 is for the fabrication and welding of metal. Emissions are produced at 4 stations of welding and metal fabrication. The facility activity rate is 8 hours per day, 250 day per year. The contaminant associated with the operation is total particulate, with a New York State identification number NY149-00-0, which is particulate matter. According to the EPA AP-42 manual, most of the particulate matter produced by welding is submicron in size and, as such, is considered to be all $PM_{2.5.}$ The emission rates are 0.002 pounds per hour and 4 pounds per year.

The EPA's AERMOD modeling system version 19191 was used to predict pollutants' concentrations. The AERMOD model its executable and the meteorology data used are discussed in the HVAC dispersion analysis section. The *CEQR Technical Manual* default stack parameters (stack height of 3 feet above the roof, stack diameter of 0-meter, exit velocity 0.001 meter per second, and exit temperature of 293 Kelvin) were used to model all the facilities. Receptors at the development sites were placed on all wall façade and on all floor levels. The methodology used in the HVAC analysis to process the buildings, sources, and receptors base elevations was used in the industrial source AERMOD model.

Pollutants concentrations were modeled with generic emission rates of 1 gram per second and 1st highest output concentrations. Pollutants concentrations from the facilities were cumulatively added to predict the cumulative concentrations. Each pollutant was modeled twice; with building wake effect enabled/disabled. The predicted concentrations are the highest concentration of these scenarios.

The criteria pollutants concentrations were added to the background concentrations and total concentrations evaluated with the NAAQS. The $PM_{2.5}$ modeled concentrations (24-hour and annual) were also evaluated with the NYC *de minimis* design value for stationary sources. The criteria pollutants dispersions analysis results are presented in **Table 2.17-8**.

Table 2.17-8: Criteria pollutants - Industrial Source Dispersion Analysis Results

Pollutant and Averaging Time	Increment (Modeled) Concentration	Background Concentration	Evaluated Concentration	NAAQS	*de minimis*
Cumulative					
24-hour PM_{10} ($\mu g/m^3$)	**0.9**	**43**	**44**	**150**	
24-hour $PM_{2.5}$ ($\mu g/m^3$)	**0.55**	**N.A.**	**0.55**	**N.A.**	**8.6**
Annual $PM_{2.5}$ ($\mu g/m^3$)	**0.07**	**N.A.**	**0.07**	**N.A.**	**0.3**
A9's Auto Body					
24-hour PM_{10} ($\mu g/m^3$)	0.85				
24-hour $PM_{2.5}$ ($\mu g/m^3$)	0.52				
Annual $PM_{2.5}$ ($\mu g/m^3$)	0.068				
Ironworks Facility 48-50 Herkimer Place					
24-hour $PM_{2.5}$ ($\mu g/m^3$)	0.027				
Annual $PM_{2.5}$ ($\mu g/m^3$)	0.002				

As seen in **Table 2.17-8**, PM_{10} concentration is within the NAAQS (increment plus background concentrations) and $PM_{2.5}$ concentrations increments do not exceed the NYC *de minimis* design values.

The predicted concentrations of the VOCs (all VOC are emitted by A9's Auto Body facility) were evaluated with the NYSDEC SGC/AGC guidelines. The results of the noncriteria pollutants air dispersion analysis is displayed in **Table 2.17-9**.

Table 2.17-9: Noncriteria Pollutants - Industrial Source Dispersion Analysis Results

Contaminant Name	CAS No.	1-Hour ($\mu g/m^3$)	SGC ($\mu g/m^3$)	Annual ($\mu g/m^3$)	AGC ($\mu g/m^3$)
Acetone	67-64-1	184.2	180000	1.7	30000.0
Aromatic Petroleum Distillate	64742-94-5	42.8	---	0.4	100.0
Butane	106-97-8	47.1	---	0.4	---
Ethanol	64-17-5	8.6	---	0.1	45000.0
Ethyl 3-Ethoxypropionate	763-69-9	38.6	140.0	0.4	64.0
Ethylbenzene	100-41-4	21.4	---	0.2	1000.0
Methyl Ethyl Ketone	78-93-3	34.3	13000.0	0.3	5000.0
N-Butyl Acetate	123-86-4	21.4	71300.0	0.2	565.0
Propane	74-98-6	47.1	---	0.4	---
Stoddard Solvent	8052-41-3	42.8	---	0.4	900.0
Toluene	108-88-3	42.8	37000.0	0.4	5000.0
Xylene	1330-20-7	42.8	22000.0	0.4	100.0

As seen in **Table 2.17-9**, the noncriteria pollutants concentrations are within the SGC/AGC standard. In addition, the inhalation risk for the HAPs is 0.01 (less than 1), and the hazardous quotient is 0.005 (less than 1) for the non-carcinogenic pollutants. Therefore, no adverse air quality impact is predicted at the project Developments from existing industrial source emissions in the study area.

Major and Large Source

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

No existing large combustion source(s), such as power plants, cogeneration facilities, etc., located within 1,000 feet of the proposed project, was identified in the database[20]. The nearest major/large source is the Clinton Hill Apartments Owners Corp Air State Facility, which is located 1.3-mile of the proposed project. In addition, no odor producing facility was identified in the 1,000 feet study area. As such, no analysis was warranted, and no significant adverse air quality impacts are predicted from these types of facilities.

Conclusion

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

In addition, no additional or different impacts would occur based on *2021 CEQR Technical Manual* update. The industrial source, mobile source, and HVAC detailed analyses would not require any change. The mobile source screen would not require any change and no major/large source analysis would be required. The only difference would be the project-on-existing HVAC nomograph, which would screen out.

[20] New York City Department of City Planning, "Air Quality: Light Industrial, NYS DEC Large, and Major Source," https://www.ceqr.app/data/air-quality, August 2020; and DECInfo Locator, https://gisservices.dec.ny.gov/gis/dil/, January 2021.

Chapter 19: Noise

Introduction

The Proposed Actions would create noise-sensitive residential development. Therefore, an assessment of the potential for adverse effects on project occupants from ambient noise is warranted. The projected development would not create a significant stationary noise generator. Additionally, project-generated traffic would not double vehicular traffic on nearby roadways, and therefore would not result in a perceptible increase in vehicular noise. Therefore, this noise assessment is limited to an assessment of ambient noise that could adversely affect occupants of the development. The predominant noise source at the Affected Area is vehicular traffic on surrounding streets and rail movements.

Framework of Noise Analysis

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

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

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

Table 2.19-1: Noise Levels of Common Sources

Sound Source	SPL (dB(A))
Air Raid Siren at 50 feet	120
Maximum Levels at Rock Concerts (Rear Seats)	110
On Platform by Passing Subway Train	100
On Sidewalk by Passing Heavy Truck or Bus	90
On Sidewalk by Typical Highway	80
On Sidewalk by Passing Automobiles with Mufflers	70
Typical Urban Area	60-70
Typical Suburban Area	50-60
Quiet Suburban Area at Night	40-50
Typical Rural Area at Night	30-40
Isolated Broadcast Studio	20
Audiometric (Hearing Testing) Booth	10
Threshold of Hearing	0
Notes: A change in 3dB(A) is a just noticeable change in SPL. A change in 10 dB(A)Is perceived as a doubling or halving in SPL.	
Source: 2021 CEQR Technical Manual	

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

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

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

- L_{eq} is the continuous equivalent sound level. The sound energy from the fluctuating SPLs is averaged over time to create a single number to describe the mean energy, or intensity, level. High noise levels during a measurement period will have a greater effect on the L_{eq} than low noise levels. L_{eq} has an advantage over other descriptors because L_{eq} values from various noise sources can be added and subtracted to determine cumulative noise levels.
- L_{max} is the highest SPL measured during a given period of time. It is useful in evaluating L_{eq}s for time periods that have an especially wide range of noise levels.
- $L_{eq(24)}$ is the continuous equivalent sound level over a 24-hour time period.

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

The decrease in sound level caused by the distance from any single noise source normally follows the inverse square law (i.e., the SPL changes in inverse proportion to the square of the distance from the sound source). In a large open area with no obstructive or reflective surfaces, it is a general rule that at distances greater than 50 feet, the SPL from a point source of noise drops off at a rate of 6 dB with each doubling of distance

away from the source. For "line" sources, such as vehicles on a street, the SPL drops off at a rate of 3 dBA with each doubling of the distance from the source. Sound energy is absorbed in the air as a function of temperature, humidity, and the frequency of the sound. This attenuation can be up to 2 dB over 1,000 feet. The drop-off rate also will vary with both terrain conditions and the presence of obstructions in the sound propagation path.

Noise Standards and Guidelines

In 1983, the New York City Department of Environmental Protection (NYCDEP) adopted the City Environmental Quality Review (CEQR) noise exposure guidelines for exterior noise levels. As shown in **Table 2.19-2** below, noise standards classify noise exposure into four categories based on noise level limits and land use, for vehicular traffic, rail, and aircraft noise sources: Acceptable, Marginally Acceptable, Marginally Unacceptable, and Clearly Unacceptable, **Table 2.19-3** of the *2021 CEQR Technical Manual* defines attenuation requirements for buildings based on exterior noise exposure levels. Recommended noise attenuation values for buildings are designed to maintain interior noise levels of 45 dBA (L_{10} *or Ldn, depending on the source*) or below.

Table 2.19-2: Noise Exposure Guidelines for Use in City Environmental Impact Review

Receptor Type	Time Period	Acceptable General External Exposure	Airport[3] Exposure	Marginally Acceptable General External Exposure	Airport[3] Exposure	Marginally Unacceptable General External Exposure	Airport[3] Exposure	Clearly Unacceptable General External Exposure	Airport[3] Exposure
1. Outdoor area requiring serenity and quiet[2]		$L_{10} \leq 55$ dBA	----------DNL ≤ 60 dBA----------		----------60 < DNL ≤ 65 dBA----------		(I) 65 < DNL ≤ 75 dBA		---------- 75 dBA < DNL ----------
2. Hospital, nursing home		$L_{10} \leq 55$ dBA		$55 < L_{10} \leq 65$ 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	

Notes:

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

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

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

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

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

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

Table 2.19-3: Attenuation Values to Achieve Acceptable Interior Noise Levels

	Marginally Unacceptable				Clearly Unacceptable
Vehicular Traffic	70 < L10 ≤ 73	73 < L10 ≤ 76	76 < L10 ≤ 78	78 < L10 ≤ 80	80 < L10
Aircraft[A]	65 < DNL ≤ 68	68 < DNL ≤ 71	71 < DNL ≤ 73	73 < DNL ≤ 75	75 < DNL
Train	65 < Ldn ≤ 68	68 < Ldn ≤ 71	71 < Ldn ≤ 73	73 < Ldn ≤ 75	75 < Ldn
Attenuation[B]	(i) 28 dB(A)	(ii) 31 dB(A)	(iii) 33 dB(A)	(iv) 35 dB(A)	See Note c

Note:

A. DNL descriptor based on average values of Ldn over a year period.
B. The above composite window-wall attenuation values are for residential dwellings and community facility development. Commercial office spaces and meeting rooms would be 5 dB(A) less in each category. All of the above categories require a closed window situation and hence an alternate means of ventilation.
C. The required attenuation value is the difference between Lbuild and Linterior, using the appropriate noise descriptor Where:
Lbuild is the projected noise level under the build condition rounded up to the whole number
Linterior is the designed interior noise level (45 dB(A) for vehicular noise, 40 dB(A) for aircraft and train noise)

Measurement Location and Equipment

Because the predominant noise sources in the area of the proposed project consist of vehicular traffic and rail noise, noise monitoring was conducted during peak weekday vehicular travel periods (AM, Midday, PM) on a typical midweek day. Pursuant to *2021 CEQR Technical Manual* Methodology, three (3) measurements were collected for 1-hour periods: Location One (1) was at the frontage of the Project Site along Atlantic Avenue, where both ground and elevated noise data were collected; Location Two (2) was at the frontage of the Project Site along New York Avenue.

Additionally, pursuant to the *2021 CEQR Technical Manual*, because the Affected Area is located adjacent to the Long Island Railroad and requires 24-hour readings to determine Ldn noise levels, 24-hour readings collected from an E-Designation Modification Study of the 31st Street and Hoyt Avenue Rezoning (CEQR# 21DCP117Q) were used in place of in-field readings. Location (3)[21] was monitored for a 24-hour period and was elevated to a height of approximately 15', near the height of the elevated rail line along 31st Avenue.

The noise monitoring Locations 1 and 2 are shown in **Figure 2.19-1** and **Photo 2.19-1 through 2.19-3** below, and Location 3 is shown in **Figure 2.19-2**, and **Photo 2.19-4** below.

Noise monitoring was conducted using Type 1 Casella CEL-633 and Larson Davis SoundTrack Lx sound level meters with wind screens. The monitors were placed on a tripod at a height of approximately four feet above the ground or surface, away from any other noise-reflective surfaces. The monitors were calibrated prior to and following each monitoring session. Periods of peak vehicular traffic around the Project Area constitute a worst-case condition for noise. Noise meter calibration certification and back up data are provided in **Appendix C**.

[21] Known as Location (2) in the E-Designation Modification Study

Figure 2.19-1: Noise Monitoring Locations 1-2

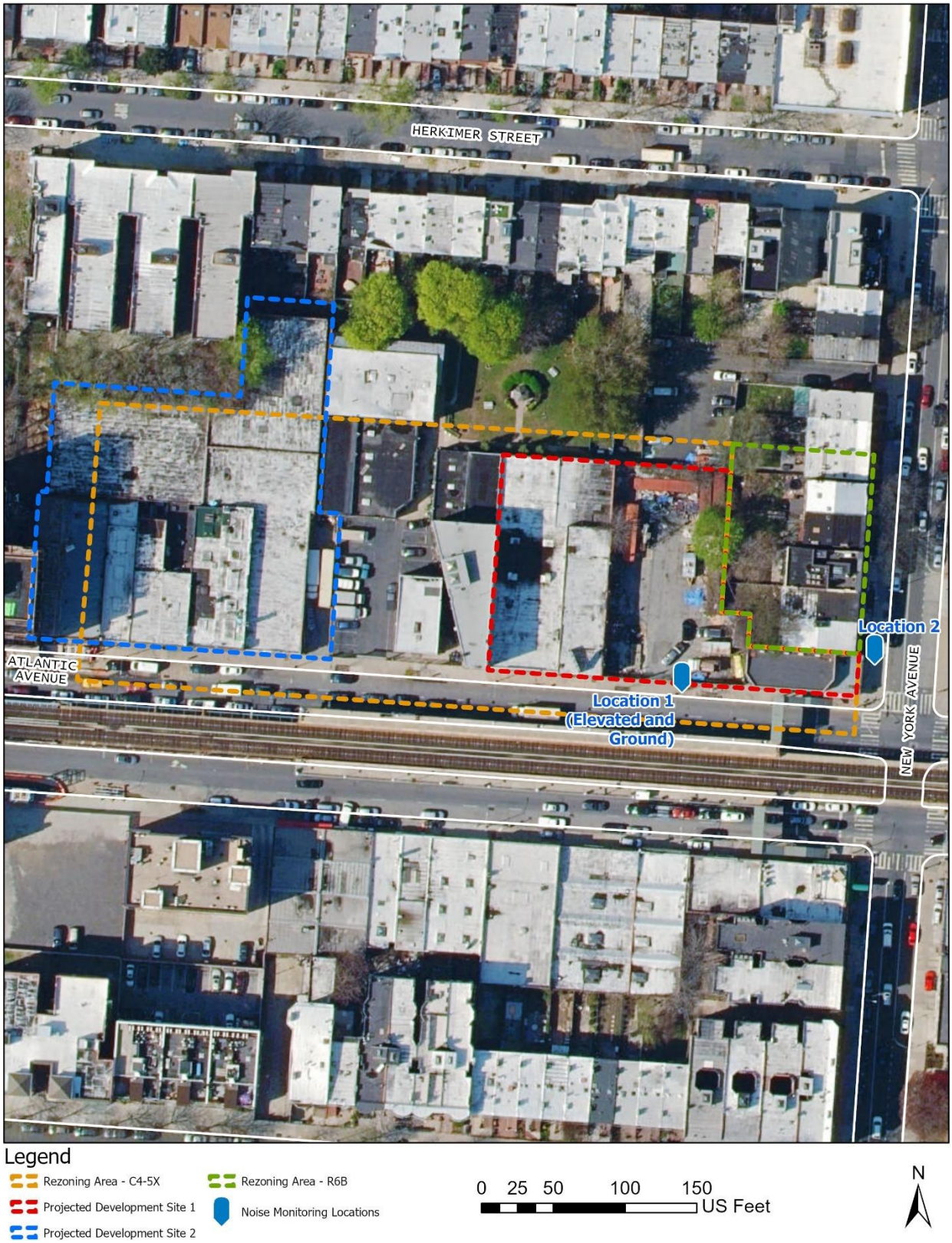


Figure 2.19-2: Noise Monitoring Location 3

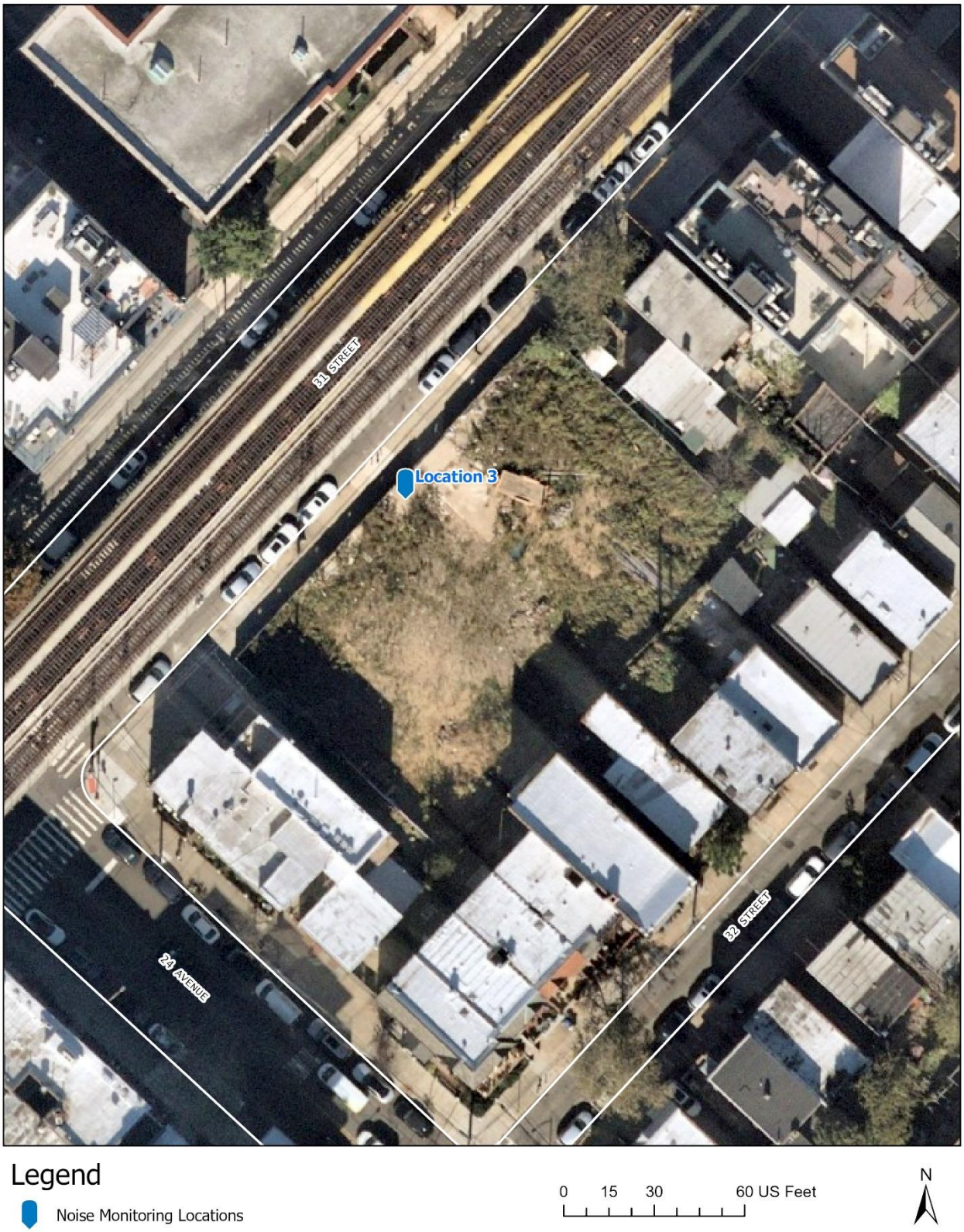


Photo 2.19-1: Noise Monitoring Location One (1)
Atlantic Avenue Ground



Photo 2.19-2: Noise Monitoring Location One (1)
Atlantic Avenue Elevated



Photo 2.19-3: Noise Monitoring Location Two (2)
New York Avenue

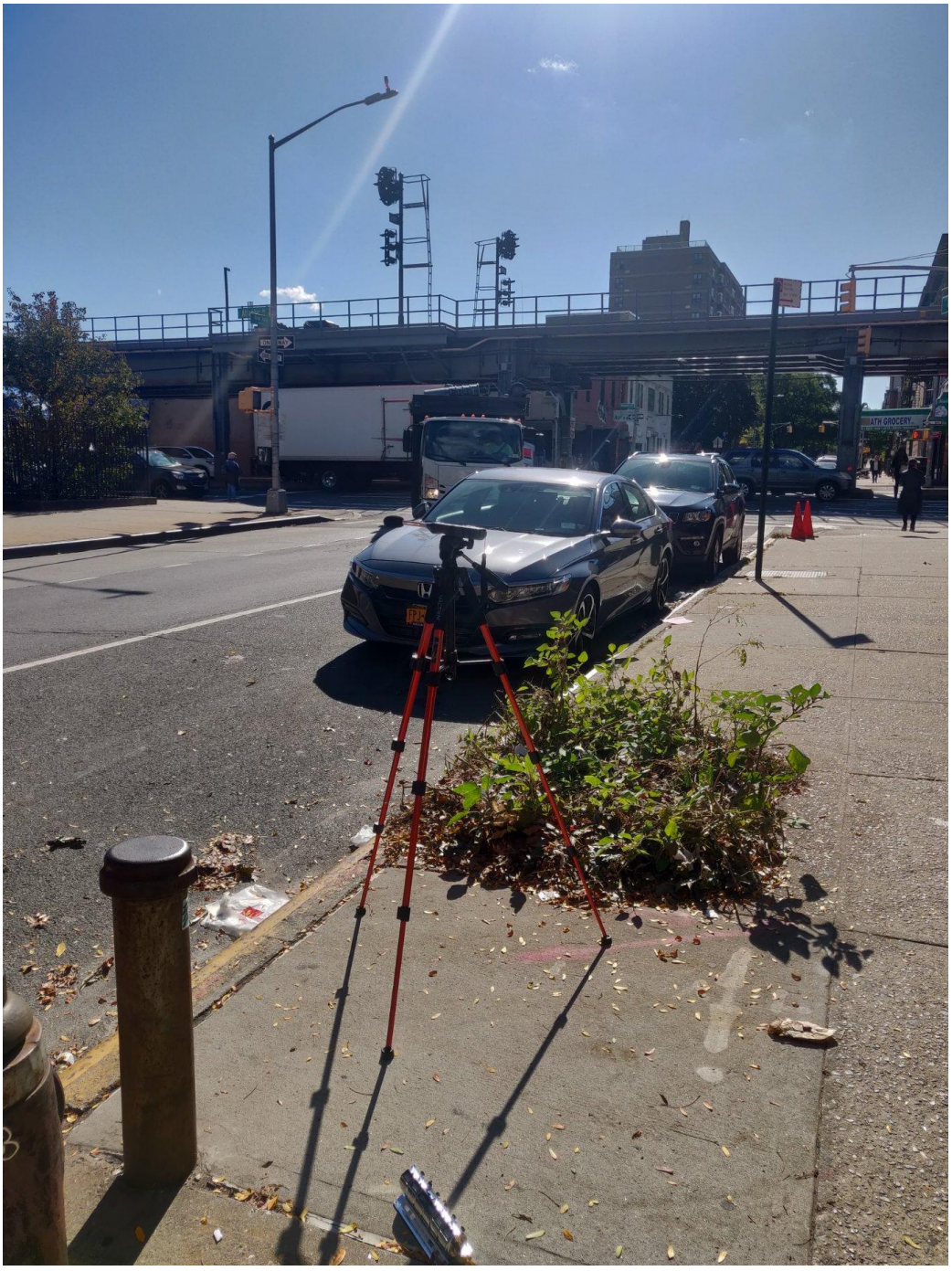


Photo 2.19-4: Noise Monitoring Location Three (3)
31st Street Elevated



Measurement Conditions

Monitoring was conducted at Locations 1 and 2 on Wednesday, October 23, 2019, and at Location 3 on Wednesday, April 26 through 27, 2022 during typical midweek conditions. The weather was dry and wind speeds were moderate during all monitoring periods. The sound meters were calibrated before and after each monitoring session.

Existing Conditions

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

Table 2.19-4 through 2.19-7 *below contains the results for the measurements taken at the noise monitoring locations:*

Table 2.19-4
Noise Levels (dB) at Location 1, Ground

Wednesday, October 23rd, 2019			
Time	**7:37 am – 8:37 am**	**12:03 pm – 1:03 pm**	**4:33 pm – 5:34 pm**
L_{max}	100.7	95.8	95.8
L_{10}	**81.1**	**76.3**	**79.1**
L_{eq}	78.4	76.3	77.0
L_{50}	72.7	67.2	68.8
L_{90}	65.6	60.0	59.4
L_{min}	58.8	52.1	51.2

Note: **Bold** denotes L_{10} or L_{eq} noise level exceedances, according to the *2021 CEQR Technical Manual*

Table 2.19-5
Noise Levels (dB) at Location 1, Elevated

Wednesday, October 23rd, 2019			
Time	**7:31 am – 8:31 am**	**12:03 pm – 1:03 pm**	**4:32 pm – 5:35 pm**
L_{max}	97.2	97.1	94.3
L_{10}	**80.0**	**74.5**	**78.5**
L_{eq}	77.5	76.6	76.6
L_{50}	72.0	66.5	70.0
L_{90}	65.5	61.0	60.5
L_{min}	56.4	54.1	51.7

Note: **Bold** denotes L_{10} or L_{eq} noise level exceedances, according to the *2021 CEQR Technical Manual*

Table 2.19-6 *Noise Levels (dB) at Location 2*			
Wednesday, October 23rd, 2019			
Time	**7:32 am – 8:32 am**	**12:35 pm – 1:35 pm**	**4:34 pm – 5:34 pm**
L_{max}	93.3	109.2	97.8
L_{10}	**75.5**	**74.0**	**76.0**
L_{eq}	72.7	77.7	75.0
L_{50}	66.0	66.0	67.5
L_{90}	61.0	59.5	62.0
L_{min}	53.8	51.2	54.2

Note: **Bold** denotes L_{10} or L_{eq} noise level exceedances, according to the *2021 CEQR Technical Manual*

Table 2.19-7
Noise Levels dB at Location 3

Start Date & Time	Laeq	LAS 10%	LAS 50%	LAS 90%	LASmin	LASmax
4/26/2022 7:08	73.0 dB	77.5 dB	61.0 dB	54.5 dB	50.2 dB	89.6 dB
4/26/2022 8:08	73.8 dB	79.0 dB	63.0 dB	57.0 dB	53.0 dB	87.9 dB
4/26/2022 9:08	74.2 dB	79.0 dB	62.0 dB	54.5 dB	49.8 dB	90.6 dB
4/26/2022 10:08	73.9 dB	78.5 dB	62.0 dB	53.5 dB	49.3 dB	89.8 dB
4/26/2022 11:08	73.4 dB	78.0 dB	63.0 dB	55.0 dB	50.0 dB	91.1 dB
4/26/2022 12:08	72.1 dB	77.0 dB	62.0 dB	55.0 dB	49.8 dB	87.0 dB
4/26/2022 13:08	74.5 dB	78.5 dB	62.5 dB	55.0 dB	49.6 dB	91.3 dB
4/26/2022 14:08	73.6 dB	78.0 dB	62.0 dB	56.0 dB	47.9 dB	90.8 dB
4/26/2022 15:08	72.8 dB	77.5 dB	61.0 dB	52.5 dB	46.4 dB	87.6 dB
4/26/2022 16:08	**74.6 dB**	**79.5 dB**	61.5 dB	54.0 dB	49.2 dB	90.5 dB
4/26/2022 17:08	**74.6 dB**	**79.5 dB**	62.0 dB	54.0 dB	48.2 dB	91.1 dB
4/26/2022 18:08	73.5 dB	78.5 dB	61.5 dB	52.0 dB	46.9 dB	90.0 dB
4/26/2022 19:08	72.6 dB	77.0 dB	63.0 dB	53.5 dB	45.6 dB	90.1 dB
4/26/2022 20:08	72.5 dB	76.0 dB	61.0 dB	52.0 dB	45.6 dB	90.4 dB
4/26/2022 21:08	71.8 dB	76.5 dB	60.5 dB	50.5 dB	45.7 dB	85.8 dB
4/26/2022 22:08	72.0 dB	75.5 dB	60.0 dB	50.5 dB	44.7 dB	90.7 dB
4/26/2022 23:08	67.3 dB	66.5 dB	54.5 dB	49.0 dB	45.2 dB	86.2 dB
4/27/2022 0:08	67.3 dB	66.0 dB	53.0 dB	49.0 dB	47.0 dB	93.6 dB
4/27/2022 1:08	68.0 dB	64.5 dB	51.5 dB	48.0 dB	45.1 dB	87.7 dB
4/27/2022 2:08	68.8 dB	65.0 dB	51.0 dB	47.5 dB	44.8 dB	89.7 dB
4/27/2022 3:08	70.3 dB	63.5 dB	49.0 dB	46.5 dB	44.6 dB	98.7 dB
4/27/2022 4:08	65.3 dB	65.5 dB	52.0 dB	48.5 dB	46.5 dB	85.4 dB
4/27/2022 5:08	69.6 dB	67.5 dB	56.5 dB	52.5 dB	49.3 dB	86.8 dB
4/27/2022 6:08	73.2 dB	76.0 dB	60.5 dB	55.0 dB	51.8 dB	98.5 dB
L_{dn}	**76.9**					

Note: **Bold** denotes L_{10} or L_{eq} noise level exceedances, according to the *2021 CEQR Technical Manual*

Table 2.19-8 through 2.19-9 *below contains the traffic counts and vehicle classifications at Location 1 and Location 2 during each monitoring period for 1 hour:*

Table 2.19-8 ***Location 1:*** *Traffic volumes*			
	7:37 am – 8:37 am	**12:03 pm – 1:03 pm**	**4:33 pm – 5:34 pm**
Traffic Volumes*	3,048	1,769	1,690

** Data Retrieved from NYSDOT AADT Roadway Traffic Count Hourly Report*

Table 2.19-9 ***Location 2:*** *Traffic volumes and vehicle classifications*			
	7:32 am – 8:32 am	**12:35 pm – 1:35 pm**	**4:34 pm – 5:34 pm**
Car/ Taxi	179	225	183
Van/Light Truck/SUV	237	213	210
Medium Truck	3	15	9
Heavy Truck	3	12	3
Bus	18	9	6
Train	13	10	11

Determination of Impacts/Building Attenuation Requirements

The *2021 CEQR Technical Manual* contains noise exposure guidelines. For a residential use such as would occur under a proposed action, an L_{10} of between 65 and 70 dB(A) is identified as marginally acceptable general external exposure from vehicular noise. An L_{10} of between 70 and 80 dB(A) is identified as marginally unacceptable general external exposure from vehicular noise. An L_{dn} of between 65 and 75 dB(A) is identified as marginally unacceptable for general exposure from train noise. An L_{dn} above 75 dB(A) is considered clearly unacceptable for general exposure from train noise.

The highest recorded L_{10} at Location One (1) at ground level and elevated level of the subject property were 81.1 dB(A) and 80.0 dB(A), respectively during the morning monitoring period. The highest recorded L_{10} at Location Two (2) of the subject property was 76.0 dB(A) during the evening monitoring period. The L_{dn} at Location Three (3) was 76.9 dB(A).

Based on the results of the noise monitoring, a window-wall attenuation of 38 dB(A) for the façade facing Atlantic Avenue from the street level up to the train track's height, the façades facing New York Avenue and Nostrand Avenue within 50 feet from Atlantic Avenue from the street level up to the train track's height, and 37 dB(A) window/wall attenuation for the façade facing Atlantic Avenue above the train track's height, the façades facing New York Avenue and Nostrand Avenue within 50 feet from Atlantic Avenue above the train track's height, and 31 dB(A) window/wall attenuation for all other façades is required in order to maintain an interior noise level not greater than 45 dB(A) for the future residential/community facility uses or not greater than 50 dB(A) for future commercial office uses. With this level of attenuation, there would be no potential for adverse impacts related to ambient noise.

It is assumed that the building mechanical systems (i.e., HVAC systems) would be designed to meet all applicable noise regulations (i.e., Subchapter 5, §24-227 of the New York City Noise Control Code, the New York City Department of Buildings Code) and to avoid producing levels that would result in any significant

increase in ambient noise levels. Therefore, the Proposed Actions would not result in any significant adverse noise impacts related to building mechanical equipment.

To ensure no significant adverse impacts related to noise occur pursuant to the Proposed Actions, an E-Designation would be placed on the Projected Development Sites. The E-Designation is as follows:

E-732

Block 1867 Lots 62, 63, 64, 65, 66, and 68 (Projected Development Site 1 – Applicant Owned) and Block 1867 Lots 77, 78, 80, 84, and 85 (Projected Development Site 2 – Non-Applicant Owned)

In order to ensure an acceptable interior noise environment, future residential/commercial office/community facility uses must provide a closed-window condition with a minimum of 38 dB(A) window/wall attenuation for the façade facing Atlantic Avenue from the street level up to the train track's height, the façades facing New York Avenue and Nostrand Avenue within 50 feet from Atlantic Avenue from the street level up to the train track's height, and 37 dB(A) window/wall attenuation for the façade facing Atlantic Avenue above the train track's height, the façades facing New York Avenue and Nostrand Avenue within 50 feet from Atlantic Avenue above the train track's height, and 31 dB(A) window/wall attenuation for all other façades in order to maintain an interior noise level not greater than 45 dB(A) for the future residential and community facility uses or not greater than 50 dB(A) for future commercial office uses. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Chapter 22: Construction

According to the *2021 CEQR Technical Manual*, construction impacts may be analyzed for any project that involves construction or could induce construction. For construction activities not related to in-ground disturbance, short-term construction generally does not warrant a detailed construction analysis. For example, the use of a property for construction staging activities is likely to only warrant analysis if this activity continues for a period of several years. Consideration of several factors, including the location and setting of the project in relation to other uses and intensity of construction activities are used to determine if a project's construction activities warrant analysis in one or more of the following technical areas:

- Transportation
- Air Quality or Noise
- Historic and Cultural Resources
- Hazardous Materials
- Natural Resources
- Open Space
- Socioeconomic Conditions
- Community Facilities
- Land Use and Public Policy
- Neighborhood Character
- Infrastructure

A preliminary construction analysis may be required because the proposed development would result in the following:

- Construction activities are considered long-term (Last longer than two years); or
- Short term construction activities would directly affect a technical area, such as impeding the operation of a community facility.
- Result in the closing, narrowing, impeding of traffic, transit, or obstruction of pedestrian or vehicular routes in proximity to critical land uses.
- 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.
- Disturbance of a site containing or adjacent to a site containing natural or historic 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.

Analysis

Future No-Action Scenario

In the Future No-Action Scenario existing conditions would be expected to remain. No redevelopment or construction-related activities would be expected to occur.

Future With-Action Scenario

Projected Development Site 1 (Block 1867, Lots 62, 63, 64, 65, 66, 68)
The Applicant-Owned lots would have a projected lot size of 27,086 SF, and would be developed with a 174,039 GSF (162,516 ZSF; 6.00 FAR) mixed-use commercial, community facility, and residential building. There would be 21,040 GSF of ground floor commercial (local retail) uses, 17,404 GSF of second floor community facility (UG 4 ambulatory diagnostic) uses, and 135,594 GSF of residential uses on the upper floors. There would be 160 total dwelling units (1 unit per 850 GSF), 25%-30% (40-48 units) of which would be affordable pursuant to MIH at an average of 60-80% AMI depending on the Option selected. The Applicant intends to pursue Option 2, which would result in approximately 48 affordable housing units. 64 residential accessory spaces would be required, and 64 spaces would be provided at cellar level. No commercial or community facility accessory parking spaces are required within the C4-5X zoning district.

Projected Development Site 2 (Block 1867, Lots 77, 78, 80, 84, 85)
The lots would assemble and have a projected lot size of approximately 39,441 SF, and would be developed with a 254,473 GSF (236,646 ZSF; 6.00 FAR) mixed-use commercial and residential building. There would be 28,713 GSF of ground floor commercial (local retail) uses and 225,760 GSF of residential uses on the upper floors. 266 total dwelling units would be provided (1 per 850 GSF), 25%-30% (67-80 units) of which would be affordable pursuant to MIH at an average of 60-80% AMI depending on the Option selected. 106 residential accessory parking spaces would be required, and 106 spaces would be provided at cellar level. No commercial parking spaces are required within the C4-5X zoning district.

Build Year/Construction Schedules

The analysis year for the Proposed Actions is 2029 assuming ULURP completion by Summer of 2024.

Projected Site 1 would begin demolition in August 2024 with interior finishes complete in February 2026 for a total of 19 months from demolition to interior finishes. Demolition and clearance for Projected Site 1 is assumed to start in August 2024 and conclude in September 2024. Major Construction Activities post-demolition are expected to commence with excavation and SOE on or around October 2024 and conclude with interior core and shell work (substantial completion) in December 2025 for a period of approximately 14 months of major construction activity. Interior finishes are assumed to complete approximately 2 months later, in February of 2026.

Projected Site 2 consists of 5 separate lots not under common ownership. Therefore, assemblage, financing and design, and permitting would need to be completed prior to development. It is assumed that Projected Site 2 would begin demolition in October of 2027 with interior finishes complete in August of 2029 for a total of 22 months from demolition to interior finishes.

Demolition and clearance of Projected Site 2 is assumed to start in October of 2027 and conclude in December 2027. Major Construction Activities post demolition are expected to commence with excavation and SOE on or around December 2027 and conclude with interior core and shell work (substantial completion) in May 2029 for a period of approximately 18 months of major construction activity. Interior finishes are assumed to complete approximately 3 months later in August of 2029.

The analysis which follows compares the difference between the future without the Proposed Actions (No-Action condition) and the future with the Proposed Actions (With-Action condition) for the 2029 analysis year.

The proposed construction schedules for each site can be found in **Appendix E**.

Because the construction activities would last for fewer than 24 months at each site, and are not anticipated to overlap, the Proposed Actions are not expected to result in significant impacts to the adjacent community.

Transportation

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

- Whether the project's construction would be located in a Central Business District (CBD) or along an arterial or major thoroughfare;
- Whether the project's construction activities would require closing, narrowing, or otherwise impeding moving lanes, roadways, key pedestrian facilities, parking lanes and/or parking spaces, bicycle routes and facilities, bus lanes or routes, or access points to transit; and
- Whether the project would involve construction on multiple development sites in the same geographic area, such that there is the potential for several construction timelines to overlap, and last for more than two years overall.

Projected Site 1 and Projected Site 2 each have frontages along Atlantic Avenue (major thoroughfare). The sidewalks adjacent to the sites are likely to be reconstructed, which may temporarily impact pedestrian flow and the availability of parking spaces along these streets. However, changes to moving traffic lanes are not likely.

Located within a 400-foot radius of the Projected Development Sites, an important community facility in the area includes P.S. 93 located at 31 New York Avenue. However, the affected facility would not be particularly sensitive to such a closure as the sidewalks and roadways affected by the proposed construction would not be considered to be near capacity. Any potential closure of the sidewalks adjacent to the Projected Development Sites would be considered a routine closure that would be addressed by a permit and pedestrian access plan issued by NYC DOT Office of Construction Mitigation and Coordination at the time of closure.

Construction at Projected Development Site 1 and 2 would not overlap, and would be considered short term, with fewer than 24 months of construction at each site. Accordingly, construction of the development sites would not be expected to result in significant adverse impacts on transportation.

Air Quality and Noise

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

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

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

Demolition, excavation, and foundation activities, which often generate the highest levels of air emissions, would be temporary and limited in duration and would take approximately 6 months for Projected Site 1 and 7 months for Projected Site 2 (non-simultaneous and non-continuous). In addition, any heavy equipment associated with the construction of the buildings (such as a crane) would operate from at least three different locations during construction.

Air Quality

The project would make use of the Best Available Technology to minimize impacts to the residential buildings, public school in the vicinity of the Projected Development Sites as further discussed below.

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

- *Diesel Equipment Reduction:* Construction of the proposed project would minimize the use of diesel engines and use electric engines, to the extent practicable. This would reduce the need for on-site generators, and require the use of electric engines in lieu of diesel where practicable.
- *Clean Fuel:* To the extent practicable, ultra-low sulfur diesel (ULSD) would be used for diesel engines on the development sites.
- *Best Available Tailpipe Reduction Technologies:* To the extent practicable, non-road diesel engines with a power rating of 50 horsepower (hp) or greater would utilize the best available tailpipe (BAT) technology for reducing diesel particulate matter (DPM) emissions. Diesel particle filters (DPF) have

been identified as being the tailpipe technology currently proven to have the highest PM reduction capability.

- To the extent practicable, construction contracts would specify that all diesel non-road engines rated at 50 hp or greater would utilize DPFs, either installed on the engine by the original equipment manufacturer (OEM) or retrofit with a DPF verified by EPA or the California Air Resources Board, and may include active DPFs if necessary; or other technology proven to reduce DPM by at least 90 percent.
- *Utilization of Newer Equipment:* To the extent practicable, all non-road construction equipment rated less than 50 hp in the project would meet at least the Tier 2 emissions standard, and construction equipment with a power rating of 50 hp or greater would meet at least the Tier 3 retrofitted with DPF and/or Tier 4 emissions standards where conforming equipment is widely available, and the use of such equipment is practicable.
- *Dust Control:* Fugitive dust control plans will be implemented as part of the construction process. For example, stabilized truck exit areas would be established for washing off the wheels of all trucks that exit the construction sites. Truck routes within the sites would be watered as needed to avoid the re-suspension of dust. All trucks hauling loose material will be equipped with tight fitting tailgates and their loads securely covered prior to leaving the sites. In addition to regular cleaning by the City, streets adjacent to the site would be cleaned as frequently as needed by the construction contractor. Water sprays will be used for all transfer of soils to ensure that materials are dampened as necessary to avoid the suspension of dust into the air.
- *Restrictions on Vehicle Idling:* In addition to adhering to local laws restricting unnecessary idling on roadways, on-site vehicle idle time will also be restricted to three minutes, to the extent practicable, for all equipment and vehicles that are not using their engines to operate a loading, unloading, or a processing device (e.g., concrete mixing trucks) or otherwise required for the proper operation of the engine.

Overall, these air emission controls would significantly reduce DPM emissions to a level otherwise achieved by applying the currently defined best available control technologies under NYC Local Law 77. In addition, as stated in the CEQR Technical Manual, all the necessary measures would be implemented to ensure compliance with the NYC Air Pollution Control Code regulating construction-related dust emissions. Based on the project size and the construction work involved, construction activities effectuated by the Proposed Actions would not be considered out of the ordinary or exceptional in terms of intensity and would be of a relatively short duration (less than 2 years).

The total construction duration for Site 1 is approximately 18 months (August 2024-February 2026) and the total construction duration for Site 2 is approximately 22 months (Oct 2027-Aug 2029). There is an approximately 19-month gap between the completion of Site 1 and the start of demolition of Site 2. Therefore, based on the above and with the implementation of emissions control measures that are required by local law, the construction of the development sites would not result in any significant adverse impacts on air quality.

Noise

The total construction duration of each site is less than 24 months which is considered short-term, and there is a 19-months gap between the completion of Site 1 and the start of demolition of Site 2. As such, the construction of the proposed project is not expected to result in a significant adverse construction noise impact. In addition, demolition, excavation, and foundation activities, and superstructure activities, which are the noisiest construction activities, would be temporary and limited in duration. These activities would be spread out over two separate locations on the block, and would not occur simultaneously simultaneous.

Construction noise is regulated by the NYC Noise Control Code and by EPA's noise emission standards for construction equipment. These local and federal requirements mandate that certain classifications of construction equipment and motor vehicles meet specified noise emission standards; that construction activities be limited to weekdays between the hours of 7AM and 6PM; and that construction materials be handled and transported in such a manner as not to create unnecessary noise. If weekend or after hour work is necessary, permits would be required to be obtained, as specified in the NYC Noise Control Code. Therefore, no significant noise impacts are expected to occur as a result of the project construction.

Historic and Cultural Resources

As discussed in Chapter 9 Historic and Cultural Resources, the Landmarks Preservation Commission has determined that the Affected Area is within the 400-foot radius of the following properties:

- S/NR listed and LPC designated Crown Heights North Historic District
- S/NR listed Kismet Temple located at 92 Herkimer Street
- S/NR eligible properties at 132, 136, 140, and 148 Herkimer Street (within 90 feet of Projected Site 2)
- S/NR eligible P.S. 93 located at 31 New York Avenue (within 90 feet of Projected Site 1)
- S/NR eligible property located at 75 New York Avenue

The City has two procedures for avoidance of damage to historic structures from adjacent construction, the second of which is not applicable because neither building is considered listed as a historic resource. All buildings are provided some protection from accidental damage through New York City Department of Buildings (DOB) controls that govern the protection of any adjacent properties from construction activities, under Building Code Section 27-166 (C26-112.4). For all construction work, Building Code section 27-166 (C26-112.4) serves to protect buildings by requiring that all lots, buildings, and service facilities adjacent to foundation and earthwork areas be protected and supported in accordance with the code requirements.

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

Since the Crown Heights North Historic District, The Kismet Temple, and the property located at 75 New York Avenue are located greater than 90 feet from the Projected Development Site's no construction-related impact on these resources is anticipated. Construction within 90 feet of two S/NR eligible resources is anticipated. Projected Development Site 1 is located within 90 feet of S/NR eligible P.S. 93 located at 31 New York Avenue, and Projected Development Site 2 is located within 90 feet of S/NR eligible 132, 136, 140, and 148 Herkimer Street.

Both P.S. 93 located at 31 New York Avenue and S/NR eligible 132, 136, 140, and 148 Herkimer Street would be protected by DOB Building Code Section 27-166 and may be protected under the measures of TPPN 10/88 should they become listed historic resources. By following the protection measures under DOB Code Section 27-166 (C26-112.4) and DOB's TPPN #10/88 (if applicable at the time of construction) for those applicable resources, demolition and/or construction work on the Projected Development Sites would not cause any significant adverse construction-related impacts to nearby historic and cultural resources.

Conclusion

Construction activities at the development sites would be completed within 18 months at Projected Development Site 1 (August 2024 with interior finishes complete in February 2026) and 22 months at Projected Development Site 2 (October 2027 with interior finishes complete in August 2029). Construction would be performed subject to relevant EPA, DEP, DOT and DOB codes and regulations to ensure minimal construction impacts. With the construction control and protective measures identified above, no impacts to transportation, air quality, noise, or historic buildings would occur. On the basis of the above analysis, the Proposed Actions would not have any significant adverse construction impacts, and further analysis is not required.

APPENDIX A

AGENCY CORRESPONDENCE

APPENDIX B

ARCHITECTURAL PLANS

APPENDIX C

NOISE BACKUP

APPENDIX D

TRAFFIC BACKUP

APPENDIX E

CONSTRUCTION SCHEDULE

Activity ID	Activity Name	Total Float	Original Duration	Remaining Duration	Start	Finish
.-3	1289 Atlantic Avenue	-1	2135	1581	02-Aug-21 A	05-Oct-29
.-3.3	Milestones	-1	1350	1350	05-Aug-24	05-Oct-29
10	Site 1: Demolition Start	1014	0	0	05-Aug-24	
70	Site 1: Excavation Start	959	0	0	21-Oct-24	
50	Site 1: Substantial Completion	984	0	0		26-Dec-25
20	Site 1: Final Completion	919	0	0		27-Mar-26
30	Site 2: Demolition Start	69	0	0	25-Oct-27	
80	Site 2: Excavation Start	39	0	0	06-Dec-27	
60	Site 2: Substantial Completion	99	0	0		18-May-29
40	Site 2: Final Completion	-1	0	0		05-Oct-29
.-3.0	Pre-Construction	944	895	341	02-Aug-21 A	03-Jan-25
.-3.0.1	Design	804	810	256	02-Aug-21 A	06-Sep-24
0-100	Programming & ULURP Drawings	-1	800	206	02-Aug-21 A	28-Jun-24
0-120	Demolition Drawings - Bid Set	-1	60	60	08-Apr-24	28-Jun-24
0-110	Design Development	774	40	40	06-May-24	28-Jun-24
0-130	Foundation Drawings - Bid Set	814	40	40	01-Jul-24	23-Aug-24
0-140	Construction Drawings - Bid Set	774	50	50	01-Jul-24	06-Sep-24
.-3.0.2	DOB Approvals	944	145	145	17-Jun-24	03-Jan-25
0-160	DOB Review & Approvals - Demolition	-1	30	30	17-Jun-24	26-Jul-24
0-170	DOB Review & Approvals - Foundations	944	90	90	01-Jul-24	01-Nov-24
0-180	Issue DOB Work Permit - Demolition	-1	0	0		26-Jul-24
0-190	Issue DOB Work Permit - Foundations	949	0	0		01-Nov-24
0-150	DOB Review & Approvals - Full Building	944	45	45	04-Nov-24	03-Jan-25
0-200	Issue DOB Work Permit - Full Building	944	0	0		03-Jan-25
.-3.1	Demolition & Site Clearing	-1	895	895	01-Jul-24	03-Dec-27
0-210	Demolition Bid & Award	-1	20	20	01-Jul-24	26-Jul-24
.-3.1.1	Site 1 - Block 1867, Lots 62, 63, 64, 65, 66, and 68	799	35	35	29-Jul-24	13-Sep-24
1-100	Mobilization / ProtectAdjacent Buildings / Temp Facilities	-1	5	5	29-Jul-24	02-Aug-24
1-110	Demolition & Site Clearing	799	30	30	05-Aug-24	13-Sep-24
.-3.1.3	Site 2 - Block 1867, Lots 77, 78, 80, 84, and 85	-1	35	35	18-Oct-27	03-Dec-27
2-400	Mobilization / ProtectAdjacent Buildings / Temp Facilities	-1	5	5	18-Oct-27	22-Oct-27
2-410	Demolition & Site Clearing	-1	30	30	25-Oct-27	03-Dec-27
.-3.2	Construction	-1	1335	1335	26-Aug-24	05-Oct-29
1-10	Construction Bidding & Award	774	40	40	26-Aug-24	18-Oct-24
1-20	Submittals and Approvals	929	60	60	21-Oct-24	10-Jan-25



© Oracle Corporation

Activity ID	Activity Name	Total Float	Original Duration	Remaining Duration	Start	Finish
1-30	Fabrication & Delivery of Long Lead Items	929	100	100	02-Dec-24	18-Apr-25
.-3.2.1	**Site 1 - Block 1867, Lots 62, 63, 64, 65, 66, and 68**	919	375	375	21-Oct-24	27-Mar-26
1-120	Excavation and SOE	774	40	40	21-Oct-24	13-Dec-24
1-130	Foundation & Undergroung Parking	919	40	40	16-Dec-24	07-Feb-25
1-140	Concrete Superstructure	919	80	80	10-Feb-25	30-May-25
1-150	Facade Enclosure	919	80	80	05-May-25	22-Aug-25
1-160	Roofing and Waterproofing	929	50	50	02-Jun-25	08-Aug-25
1-190	Interior Core and Shell	919	110	110	28-Jul-25	26-Dec-25
1-180	Elevator Work	964	100	100	11-Aug-25	26-Dec-25
1-170	Building Watertight	919	0	0		22-Aug-25
1-210	Interior Finishes	919	120	120	15-Sep-25	27-Feb-26
1-200	Special Inspection	964	60	60	06-Oct-25	26-Dec-25
1-250	Final Inspection & Sign-Offs	919	40	40	05-Jan-26	27-Feb-26
1-220	Obtain TCO	919	0	0		27-Feb-26
1-230	Punch list & Final Cleaning	919	20	20	02-Mar-26	27-Mar-26
1-240	Obtain CO	919	0	0		27-Mar-26
.-3.2.4	**Site 2 - Block 1867, Lots 77, 78, 80, 84, and 85**	-1	480	480	06-Dec-27	05-Oct-29
2-260	Excavation and SOE	-1	40	40	06-Dec-27	28-Jan-28
2-270	Foundation & Undergroung Parking	-1	80	80	31-Jan-28	19-May-28
2-280	Concrete Superstructure	-1	100	100	22-May-28	06-Oct-28
2-290	Facade Enclosure	-1	90	90	11-Sep-28	12-Jan-29
2-300	Roofing and Waterproofing	19	50	50	09-Oct-28	15-Dec-28
2-330	Interior Core and Shell	-1	120	120	04-Dec-28	18-May-29
2-320	Elevator Work	79	100	100	18-Dec-28	04-May-29
2-310	Building Watertight	-1	0	0		12-Jan-29
2-350	Interior Finishes	-1	150	150	29-Jan-29	24-Aug-29
2-340	Special Inspection	69	60	60	26-Feb-29	18-May-29
2-390	Final Inspection & Sign-Offs	-1	40	40	02-Jul-29	24-Aug-29
2-360	Obtain TCO	-1	0	0		24-Aug-29
2-370	Punch list & Final Cleaning	-1	30	30	27-Aug-29	05-Oct-29
2-380	Obtain CO	-1	0	0		05-Oct-29



Actual Work
Remaining Work
Critical Remaining Work
Milestone

Proposed Construction Schedule - For discussion only
1289 Atlantic Avenue Development

TASK filter: All Activities

© Oracle Corporation

APPENDIX F

AIR QUALITY BACKUP

APPENDIX G

PHASE IA ARCHEOLOGICAL DOCUMENTARY STUDY