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

1350 Bedford Avenue
Zoning Map & Text Amendment
BSA Special Permit

Brooklyn, NY

Prepared for:
Bedford Arms, LLC
c/o Essex Plaza Management
1060 Broad Street
Newark, NJ 07102

Prepared by:
AECOM
125 Broad Street
New York, NY 10004

AECOM Project No. 60342789

January, 2017

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 1350 Bedford Avenue Zoning Map and Text Amendment

1. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency)	BSA REFERENCE NUMBER (if applicable)
17DCP071K	2016-4333-BZ
ULURP REFERENCE NUMBER (if applicable)	OTHER REFERENCE NUMBER(S) (if applicable)
170070ZMK; 170071ZRK	(*e.g.*, legislative intro, CAPA)

2a. *Lead Agency Information*			**2b. *Applicant Information***		
NAME OF LEAD AGENCY			NAME OF APPLICANT		
New York City Department of City Planning			Bedford Arms, LLC		
NAME OF LEAD AGENCY CONTACT PERSON			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON		
Robert Dobruskin			Stuart Beckerman		
ADDRESS 120 Broadway			ADDRESS 40 Exchange Place, Suite 1502		
CITY New York	STATE NY	ZIP 10271	CITY New York	STATE NY	ZIP 10005
TELEPHONE (212) 720-3423	EMAIL rdobrus@planning.nyc.gov		TELEPHONE (212)391-8045	EMAIL sbeckerman@slaterbeckerman.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 Chapter 2, "Establishing the Analysis Framework" for guidance)

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

4. *Project Description*

The applicant seeks a zoning map amendment to rezone Brooklyn Block 1205, Lot 28 (the "proposed development site"), located at 1350 Bedford Avenue in the Crown Heights neighborhood of Brooklyn Community District 8, from an R6A District to an R7D District to facilitate the construction of an nine-story, approximately 88,664 gross square-foot (gsf) (80,088 zoning square feet [zsf]), 94-unit residential building. In addition, the applicant is requesting a zoning text amendment pursuant to New York City Zoning Resolution (ZR) Appendix F, Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing Areas, to map a mandatory inclusionary housing designated area over the proposed rezoning area. The proposed new building would be located at the northern portion of the proposed development site, which is currently improved with an existing six-story, 82,655 gsf (68,434 zsf) 78-unit (plus one superintendent unit) residential building. The existing building on the proposed development site contains 100% affordable housing units under the federal Section 8 program. The proposed new building would function as a separate building on the same zoning lot. In keeping with the Applicant's history of constructing affordable housing, 48 of the proposed new units would be available for residents earning below 80 percent of AMI, and 46 of the proposed new units would be available for residents earning below 130 percent of AMI (ZR §23-154 (d)(3)(ii) "Option 2"). In general, the developer expects that the project will be financed with bonds issued by the City's Housing Development Corporation and subsidies provided by both HDC and HPD through their M2 Program. Under the current program the units will be affordable to a range of low, moderate and middle income households with incomes ranging from 40 percent to 130 percent of the New York City AMI. All funding would be subject to the necessary regulatory agreements. The Department of City Planning will be conducting a coordinated environmental review with the NYC Department of Housing Preservation and Development (HPD). A total of 23 accessory surface parking spaces would be provided for the proposed residential development, in compliance with ZR §25-23. The proposed zoning map and text amendments would only affect Block 1205, Lot 28.
In addition to the proposed zoning map and text amendments, the applicant is seeking from the NYC Board of Standards and Appeals (BSA) a waiver of 35 off-street accessory parking spaces required for the 78 income-restricted housing units (plus one super's unit) located in the existing six-story building. which at the time of development in 1980 were required for the Existing Building per undelying zoning regulations. This waiver is being sought in accordance with ZR §73-433.

Under the With-Action scenario, the existing building, with a built FAR of 1.88, on Block 1205, Lot 28 would remain, along with its current tenants. Under the proposed actions, the maximum base FAR allowed would be 4.20. With the Mandatory Inclusionary Housing designation, the maximum FAR allowed would increase to 5.60. The proposed actions would only affect the proposed development site, as the rezoning area would not extend beyond the limits of its zoning lot. Thus, no additional development under the Future With-Action Scenario is projected to occur as a result of the proposed actions.

Project Location

BOROUGH Brooklyn	COMMUNITY DISTRICT(S) 8	STREET ADDRESS 1350 Bedford Avenue
TAX BLOCK(S) AND LOT(S) Block 1205, Lot 28		ZIP CODE 11216

DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS The block is bound by Pacific Street to the north, Franklin Avenue to the west, Dean Steet to the south and Bedford Avenue to the east.

EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY R6A | 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
- ☐ SPECIAL PERMIT (if appropriate, specify type: ☐ modification; ☐ renewal; ☐ other); EXPIRATION DATE:
- ☐ ZONING CERTIFICATION
- ☐ ZONING AUTHORIZATION
- ☐ ACQUISITION—REAL PROPERTY
- ☐ DISPOSITION—REAL PROPERTY
- ☐ OTHER, explain:
- ☐ CONCESSION
- ☐ UDAAP
- ☐ REVOCABLE CONSENT
- ☐ FRANCHISE

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

Board of Standards and Appeals: ☒ YES ☐ NO

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

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION 73-433

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

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: HPD/HDC M2 bonds
- ☐ 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
- ☒ PHOTOGRAPHS OF THE PROJECT SITE TAKEN WITHIN 6 MONTHS OF EAS SUBMISSION AND KEYED TO THE SITE LOCATION 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

Physical Setting (both developed and undeveloped areas)

Total directly affected area (sq. ft.): 36,433 | Waterbody area (sq. ft.) and type: N/A

Roads, buildings, and other paved surfaces (sq. ft.): 36,433 | Other, describe (sq. ft.): N/A

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

SIZE OF PROJECT TO BE DEVELOPED (gross square feet): 88,664

NUMBER OF BUILDINGS: 1 | GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): 88,664

HEIGHT OF EACH BUILDING (ft.): Approx. 85 feet NUMBER OF STORIES OF EACH BUILDING: 9

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: 36,433

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

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

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

AREA OF TEMPORARY DISTURBANCE: 13,171 sq. ft. (width x length) VOLUME OF DISTURBANCE: 131,710 cubic ft. (width x length x depth)

AREA OF PERMANENT DISTURBANCE: 13,171 sq. ft. (width x length)

8. *Analysis Year* CEQR Technical Manual Chapter 2

ANTICIPATED BUILD YEAR (date the project would be completed and operational): 2020

ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: 18

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

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE:

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

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

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 elevator	Multi-family elevator	Multi-family elevator	
No. of dwelling units	79	79	215	136
No. of low- to moderate-income units	78	78	214	136
Gross floor area (sq. ft.)	82,655	82,655	218,223	135,568
Commercial	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
Describe type (retail, office, other)				
Gross floor area (sq. ft.)				
Manufacturing/Industrial	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
Type of use				
Gross floor area (sq. ft.)				
Open storage area (sq. ft.)				
If any unenclosed activities, specify:				
Community Facility	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
Type				
Gross floor area (sq. ft.)				
Vacant Land	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," describe:				
Publicly Accessible Open Space	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify type (mapped City, State, or Federal parkland, wetland—mapped or otherwise known, other):				
Other Land Uses	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," describe:				
PARKING				
Garages	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
No. of public spaces				
No. of accessory spaces				
Operating hours				
Attended or non-attended				
Lots	☒ YES ☐ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify the following:				
No. of public spaces	0	0	0	0
No. of accessory spaces	35	35	23	(12)
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:	172	172	379	207
Briefly explain how the number of residents was calculated:	Numbers are based on Average occupancy per household in nearby census tracts.			

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
Businesses	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
No. and type				
No. and type of workers by business				
No. and type of non-residents who are not workers				
Briefly explain how the number of businesses was calculated:				
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	R6A	R6A	R7D	
Maximum amount of floor area that can be developed	3.0 Residential FAR; 3.0 Community Facility FAR	3.0 Residential FAR; 3.0 Community Facility FAR	4.2 Residential FAR (5.6 with MIH-designated area bonus, as proposed)	
Predominant land use and zoning classifications within land use study area(s) or a 400 ft. radius of proposed project	Residential, institutional, commercial; R6A, R6B, R7A, C2-4, M1-1	Residential, institutional, commercial; R6A, R6B, R7A, C2-4, M1-1	Residential, institutional, commercial; R6A, R6B, R7A, R7D, C2-4, M1-1	
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. Child Care Centers		
○ Would the project result in 20 or more eligible children under age 6, based on the number of low or low/moderate income residential units? (See Table 6-1 in Chapter 6)	☒	☐
○ If "yes," would the project result in a collective utilization rate of the group child care/Head Start centers 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. 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?	☐	☐
iii. 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 collective utilization rate of the elementary and/or intermediate schools in the study area that is equal to or greater than 100 percent?	☐	☒
○ If "yes," would the project increase this collective utilization rate by 5 percent or more from the No-Action scenario?	☐	☒
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) Is the project located within an under-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?	☒	☐
(c) If "yes," would the project generate more than 50 additional residents or 125 additional employees?	☒	☐
(d) Is the project located within a well-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?	☐	☒
(e) If "yes," would the project generate more than 350 additional residents or 750 additional employees?	☐	☐
(f) If the project is located in an area that is neither under-served nor well-served, would it generate more than 200 additional residents or 500 additional employees?	☐	☒
(g) If "yes" to questions (c), (e), or (f) above, attach supporting information to answer the following:		
○ If in an under-served area, would the project result in a decrease in the open space ratio by more than 1 percent?	☐	☒
○ If in an area that is not under-served, would the project result in a decrease in the open space ratio by more than 5	☐	☐

	YES	NO
percent?		
○ If "yes," are there qualitative considerations, such as the quality of open space, that need to be considered? Please specify:	☐	☒
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.		
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. 23rd Regiment Armory, Imperial Apartments, St. Bartholomew's Church, Crown Heights North Historic District		
7. *URBAN DESIGN AND VISUAL RESOURCES*: CEQR Technical Manual Chapter 10		
(a) Would the proposed project introduce a new building, a new building height, or result in any substantial physical alteration to the streetscape or public space in the vicinity of the proposed project that is not currently allowed by existing zoning?	☒	☐
(b) Would the proposed project result in obstruction of publicly accessible views to visual resources not currently allowed by existing zoning?	☐	☒
(c) If "yes" to either of the above, please provide the information requested in Chapter 10.		
8. *NATURAL RESOURCES*: CEQR Technical Manual Chapter 11		
(a) Does the proposed project site or a site adjacent to the project contain natural resources as defined in Section 100 of Chapter 11?	☐	☒
○ If "yes," list the resources and attach supporting information on whether the project would affect any of these resources.		
(b) Is any part of the directly affected area within the Jamaica Bay Watershed?	☐	☒
○ If "yes," complete the Jamaica Bay Watershed Form and submit according to its instructions.		
9. *HAZARDOUS MATERIALS*: CEQR Technical Manual Chapter 12		
(a) Would the proposed project allow commercial or residential uses in an area that is currently, or was historically, a manufacturing area that involved hazardous materials?	☐	☒
(b) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to hazardous materials that preclude the potential for significant adverse impacts?	☐	☒
(c) Would the project require soil disturbance in a manufacturing area or any development on or near a manufacturing area or existing/historic facilities listed in Appendix 1 (including nonconforming uses)?	☒	☐
(d) Would the project result in the development of a site where there is reason to suspect the presence of hazardous materials, contamination, illegal dumping or fill, or fill material of unknown origin?	☐	☒
(e) Would the project result in development on or near a site that has or had underground and/or aboveground storage tanks (*e.g.*, gas stations, oil storage facilities, heating oil storage)?	☐	☒
(f) Would the project result in renovation of interior existing space on a site with the potential for compromised air quality; vapor intrusion from either on-site or off-site sources; or the presence of asbestos, PCBs, mercury or lead-based paint?	☐	☒
(g) Would the project result in development on or near a site with potential hazardous materials issues such as government-listed voluntary cleanup/brownfield site, current or former power generation/transmission facilities, coal gasification or gas storage sites, railroad tracks or rights-of-way, or municipal incinerators?	☐	☒
(h) Has a Phase I Environmental Site Assessment been performed for the site?	☒	☐
○ If "yes," were Recognized Environmental Conditions (RECs) identified? Briefly identify: Off-Site REC's (see supplemental studies)	☒	☐
(i) Based on the Phase I Assessment, is a Phase II Investigation needed?	☒	☐
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	☐	☒

	YES	NO
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?	☐	☒
(g) Is the project proposing an industrial facility or activity that would contribute industrial discharges to a Wastewater Treatment Plant and/or contribute contaminated stormwater to a separate storm sewer system?	☐	☒
(h) Would the project involve construction of a new stormwater outfall that requires federal and/or state permits?	☐	☒
(i) If "yes" to any of the above, conduct the appropriate preliminary analyses and attach supporting documentation.		
11. *SOLID WASTE AND SANITATION SERVICES*: CEQR Technical Manual Chapter 14		
(a) Using Table 14-1 in Chapter 14, the project's projected operational solid waste generation is estimated to be (pounds per week): 3,854		
○ 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): 11,233,720,000		
(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 or bus trips per project peak hour?	☐	☐
If "yes," would the proposed project result, per project peak hour, in 50 or more bus trips on a single line (in one direction) or 200 subway/rail trips per station or line?	☐	☐
○ Would the proposed project result in more than 200 pedestrian trips per project peak hour?	☐	☐
If "yes," would the proposed project result in more than 200 pedestrian trips per project peak hour to any given pedestrian or transit element, crosswalk, subway stair, or bus stop?	☐	☐
14. *AIR QUALITY*: CEQR Technical Manual Chapter 17		
(a) *Mobile Sources*: Would the proposed project result in the conditions outlined in Section 210 in Chapter 17?	☐	☒
(b) *Stationary Sources*: Would the proposed project result in the conditions outlined in Section 220 in Chapter 17?	☒	☐
○ If "yes," would the proposed project exceed the thresholds in Figure 17-3, Stationary Source Screen Graph in Chapter 17? (Attach graph as needed)	☐	☒
(c) Does the proposed project involve multiple buildings on the project site?	☒	☐
(d) Does the proposed project require federal approvals, support, licensing, or permits subject to conformity requirements?	☐	☒
(e) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to air quality that preclude the potential for significant adverse impacts?	☐	☒
(f) If "yes" to any of the above, conduct the appropriate analyses and attach any supporting documentation.		
15. *GREENHOUSE GAS EMISSIONS*: CEQR Technical Manual Chapter 18		
(a) Is the proposed project a city capital project or a power generation plant?	☐	☒
(b) Would the proposed project fundamentally change the City's solid waste management system?	☐	☒
(c) Would the proposed project result in the development of 350,000 square feet or more?	☐	☒

	YES	NO
(d) If "yes" to any of the above, would the project require a GHG emissions assessment based on guidance in Chapter 18?	☐	☐
o 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 124 in Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed rail line with a direct line of site to that rail line?	☒	☐
(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.		
17. *PUBLIC HEALTH*: CEQR Technical Manual Chapter 20		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Air Quality; Hazardous Materials; Noise?	☐	☒
(b) If "yes," explain why an assessment of public health is or is not warranted based on the guidance in Chapter 20, "Public Health." Attach a preliminary analysis, if necessary.		
18. *NEIGHBORHOOD CHARACTER*: CEQR Technical Manual Chapter 21		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Land Use, Zoning, and Public Policy; Socioeconomic Conditions; Open Space; Historic and Cultural Resources; Urban Design and Visual Resources; Shadows; Transportation; Noise?	☒	☐
(b) If "yes," explain why an assessment of neighborhood character is or is not warranted based on the guidance in Chapter 21, "Neighborhood Character." Attach a preliminary analysis, if necessary.		
19. *CONSTRUCTION*: CEQR Technical Manual Chapter 22		
(a) Would the project's construction activities involve:		
o Construction activities lasting longer than two years?	☐	☒
o Construction activities within a Central Business District or along an arterial highway or major thoroughfare?	☐	☒
o Closing, narrowing, or otherwise impeding traffic, transit, or pedestrian elements (roadways, parking spaces, bicycle routes, sidewalks, crosswalks, corners, *etc.*)?	☐	☒
o Construction of multiple buildings where there is a potential for on-site receptors on buildings completed before the final build-out?	☐	☒
o The operation of several pieces of diesel equipment in a single location at peak construction?	☐	☒
o Closure of a community facility or disruption in its services?	☐	☒
o Activities within 400 feet of a historic or cultural resource?	☒	☐
o Disturbance of a site containing or adjacent to a site containing natural resources?	☐	☒
o 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.		

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
Donald E. Ehrenbeck, AICP, P.P./AECOM		1/13/17

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

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

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

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

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

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

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

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

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

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

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

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

TITLE	LEAD AGENCY
Director	New York City Department of City Planning
NAME	DATE
Robert Dobruskin, AICP	January 13, 2017

SIGNATURE

Robert Dobruskin

AECOM

Environment

Prepared for:
Bedford Arms, LLC
c/o Essex Plaza Management
1060 Broad Street
Newark, NJ 07102

Prepared by:
AECOM
125 Broad Street
New York, NY 10004

AECOM No. 60342789

1350 Bedford Avenue
Zoning Map & Text Amendment
BSA Special Permit

Supplemental Studies to the Environmental Assessment Statement

January 2017

Site:
1350 Bedford Avenue (Block 1205, Lot 28)
Brooklyn, NY

Prepared for:
Bedford Arms, LLC
C/o Essex Plaza Management
1060 Broad Street
Newark, NJ 07102

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1.0 PROPOSED ACTIONS

The Applicant, Bedford Arms LLC, seeks a zoning map amendment to rezone Brooklyn Block 1205, Lot 28 (the "proposed development site"), located at 1350 Bedford Avenue in the Crown Heights neighborhood of Brooklyn Community District 8, from an R6A District to an R7D District to facilitate the construction of an nine-story, approximately 88,664 gross square-foot (gsf) (80,088 zoning square feet [zsf]), 94-unit residential building. In addition, the applicant is requesting a zoning text amendment pursuant to New York City Zoning Resolution (ZR) Appendix F, Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing Areas, to map a mandatory inclusionary housing designated area over the proposed rezoning area. The proposed new building would be located at the northern portion of the proposed development site, which is currently improved with an existing six-story, 82,655 gsf (68,434 zsf) 78-unit (plus one superintendent unit) residential building. The existing building on the proposed development site contains 100% affordable housing units under the federal Section 8 program. The proposed new building would function as a separate building on the same zoning lot. In keeping with the Applicant's history of constructing affordable housing, 48 of the proposed new units would be available for residents earning below 80 percent of AMI, and 46 of the proposed new units would be available for residents earning below 130 percent of AMI (ZR §23-154 (d)(3)(ii) "MIH Option 2"). In general, the developer expects that the project will be financed with bonds issued by the City's Housing Development Corporation and subsidies provided by both HDC and HPD through their M2 Program. Under the current program the units will be affordable to a range of low, moderate and middle income households with incomes ranging from 40 percent to 130 percent of the New York City AMI. All funding would be subject to the necessary regulatory agreements. The Department of City Planning will be conducting a coordinated environmental review with the New York City Housing and Preservation Department.

A total of 23 accessory surface parking spaces would be provided for the proposed residential development plus for the 46 DU's between 80% and 130% AMI, in compliance with ZR §25-23. The proposed zoning map and text amendments would only affect Block 1205, Lot 28.

In conjunction with the proposed zoning map and text amendments, the applicant is seeking from the NYC Board of Standards and Appeals (BSA) a waiver of the off-street accessory parking requirements for the 78 income-restricted housing units (plus one super's unit) located in the existing six-story building. This waiver is being sought in accordance with ZR §73-433. As the BSA special permit will be sought simultaneously with the proposed zoning map and text amendments, a coordinated review will be conducted.

The projected development site has a lot area of 36,433 square feet and an existing built FAR of 1.88. The remainder of the project site is occupied with an underutilized surface accessory parking lot and an unimproved portion of land. The existing building's floor area would remain unchanged in the future with the proposed action. The proposed building's floor area of 80,088 zoning square feet, or 2.2 FAR, would increase the total floor area on the proposed development site to 148,522 zoning square feet, or 4.08 FAR.

1.1 Project Location

Area Description

The rezoning area is located within the Crown Heights neighborhood of Brooklyn, as shown in **Figures 1-1** and **1-2**. The applicant's site is located across Bedford Avenue from the boundary of the Crown Heights Historic District, which is a registered historic district (as designated by the New York City Landmarks Preservation Commission [NYCLPC] and listed on the State and National Registers). The projected residential development would occur on an unused portion of Block 1205, Lot 28, and would include frontages on Bedford Avenue and Pacific Street. A key to the photographs of the project sites and surrounding project study area are shown in **Figure 1-3**, with photographs of the site and surrounding study area displayed in **Figure 1-4**. The rezoning area is located within Brooklyn Community District (CD) 8.

This EAS studies the potential for individual and cumulative environmental impacts related to the proposed actions occurring in a study area of approximately 400 feet around the rezoning area. This study area is generally bound by the properties situated on the northern blockface of Bergen Street to the south, the midpoint between Bedford and Nostrand Avenues to the east, the properties 100 feet east of Franklin Avenue to the west, and Atlantic Avenue to the north.

Background- Site History

The Existing Building was designed in 1915 by Montrose W. Morris, the same architect who designed the landmarked Imperial Apartments directly across Bedford Avenue to the east. The building was initially occupied by the Hotel Chatelaine, a transient hotel, before it was sold to the Swedish Hospital in 1930. The Swedish Hospital operated the facility as a hospital until the Applicant purchased the property in 1978 and converted the building to **78** dwelling units and one super's unit under the Section 8 program in 1980.

Per underlying zoning laws when the building on the site was converted to residential use in 1980, 35 off-street accessory parking spaces were required for the Existing Building.

1.2 Required Approvals

The proposed zoning map and text amendments, as well as the accessory off-street parking requirement waiver, are discretionary public action which is subject to the City Environmental Quality Review (CEQR) as an Unlisted action. Through CEQR, agencies review discretionary actions for the purpose of identifying the effects those actions may have on the environment. The proposed zoning map and text amendments are also discretionary public actions which are subject to public comment under the Uniform Land Use Review Procedure (ULURP). The ULURP process was established to assure adequate opportunity for public review of proposed actions. ULURP dictates that every project be presented at four levels: the Community Board; the Borough President; the City Planning Commission; and, in some cases the City Council. The procedures mandate time limits for each stage to ensure a maximum review period of seven months.

1.3 Reasonable Worst Case Development Scenario

Build Year

Considering the time required for the environmental review and land use approval process, and assuming a construction period of approximately 18 months, the build year for the proposed development is 2020.

Purpose and Need for the Proposed Action

The proposed zoning map amendment would change the existing R6A district to an R7D over Block 1205, Lot 28. Additionally, a zoning text amendment is proposed for *ZR* Appendix F, Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing Areas, to map a mandatory inclusionary housing designated area over the proposed development site. Doing so would increase the maximum allowable FAR on the proposed development site from 3.0 under R6A to 5.6 in an R7D district mapped within a mandatory inclusionary housing designated area. Additionally, the proposed BSA parking waiver for the existing building, in accordance with ZR §73-433, would enable to applicant to construct the maximum number of affordable housing units in the most cost-effective manner. Absent the proposed action, the applicant would be unable to construct the proposed development under the existing floor area and lot coverage requirements of an R6A district.

Future No-Action Scenario

The proposed development site is located in the Crown Heights North neighborhood of Brooklyn, which is densely developed. No significant new construction or vacant lots were observed within 400 feet of the

proposed development site. Given the dense nature of development in the study area, no emerging development trends are apparent other than the rehabilitation of existing buildings within the 400' study area. However, directly outside the 400' study area there is development occurring, including a large development at the intersection of Franklin Avenue and Dean Street. Under the No-Action Scenario, the site would continue to contain 78 dwelling units (plus one super's unit) occupied by existing tenants in an 82,655 gross square-foot (68,434 zsf), six-story building.

The proposed development site has a lot area of 36,433 SF, with a built FAR of 1.88. While this is below the maximum allowable residential FAR of 3.0 in an R6A district, no additional residential floor is considered likely under the No-Action scenario, as the proposed development site is currently developed to 63 percent of its maximum allowable FAR. Because the Applicant is not expected to construct additional floor area on the proposed development site without the proposed actions, it is assumed that the No-Action Scenario would remain consistent with existing conditions. Therefore, if the mapping of the requested R7D district and inclusionary housing designated status is not granted, the existing conditions would continue in the No-Action Scenario.

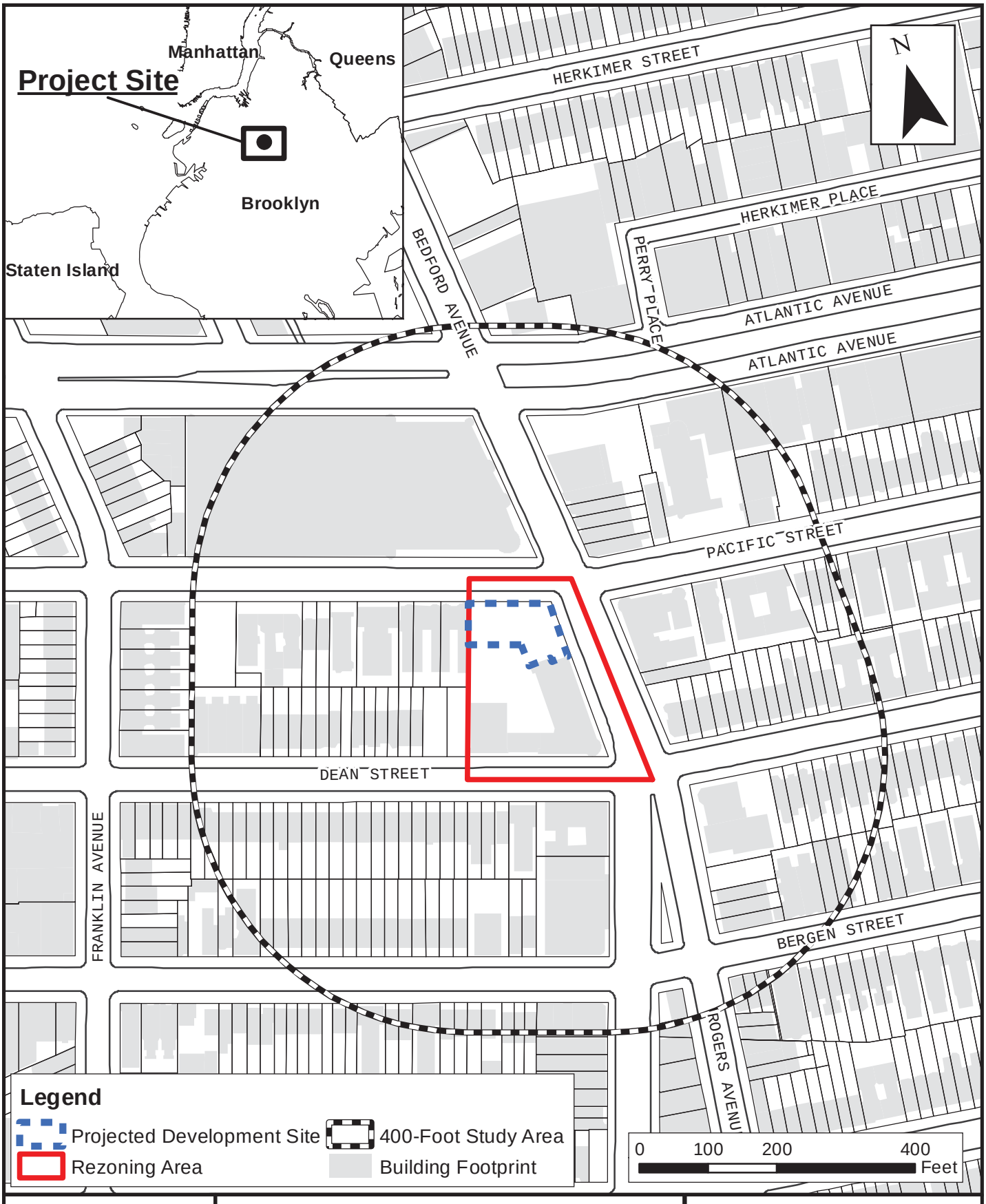
Future With-Action Scenario

Under the With-Action scenario, the existing building, with a built FAR of 1.88, on Block 1205, Lot 28 would remain, along with its current tenants. Under the proposed actions, the maximum base FAR allowed would be 4.20. With the Mandatory Inclusionary Housing designation, the maximum FAR allowed would increase to 5.60.

In order to present a conservative assessment, the With-Action scenario assumes that proposed development site would be constructed to the maximum floor area allowable under the proposed zoning district. Thus, under the With-Action Scenario, the projected development site is assumed to be built to the allowable FAR remaining on the lot, or 3.72 FAR. This would bring the combined built FAR on the project site to 5.6. The With-Action scenario assumes an approximately 135,568 zoning square-foot residential building with a total of 136 dwelling units. It is also assumed that all units in the proposed building would be affordable (below 80 percent AMI). It is assumed 23 accessory spaces would be provided on-site. Furthermore, it is assumed that the parking for the existing income-restricted residential housing units would be waived, in accordance with the proposed BSA parking waiver (ZR §73-433).

The Applicant is seeking to amend the boundaries listed in Appendix F, Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing Areas, under Zoning Map 17a, Brooklyn Community District 8, IHDA Map 1, to include the Proposed Project Area. The requested extension of the Inclusionary Housing Designated Area, to include the Proposed Development Site, would facilitate the development of affordable housing units in furtherance of the Mayor's Housing New York Plan to increase affordable housing production in New York City. The applicant has been in contact with representatives from Community Board 8, as well as the local City Council member's office to communicate their intentions to construct the proposed affordable housing units on this parcel, as discussed in this memorandum.

The proposed actions would only affect the proposed development site, as the rezoning area would not extend beyond the limits of its zoning lot. Thus, no additional development under the Future With-Action Scenario is projected to occur as a result of the proposed actions.



AECOM

Environmental Assessment Statement
1350 Bedford Avenue Rezoning
Prospect Heights, Brooklyn, NY

Project Site Location

Figure 1-1

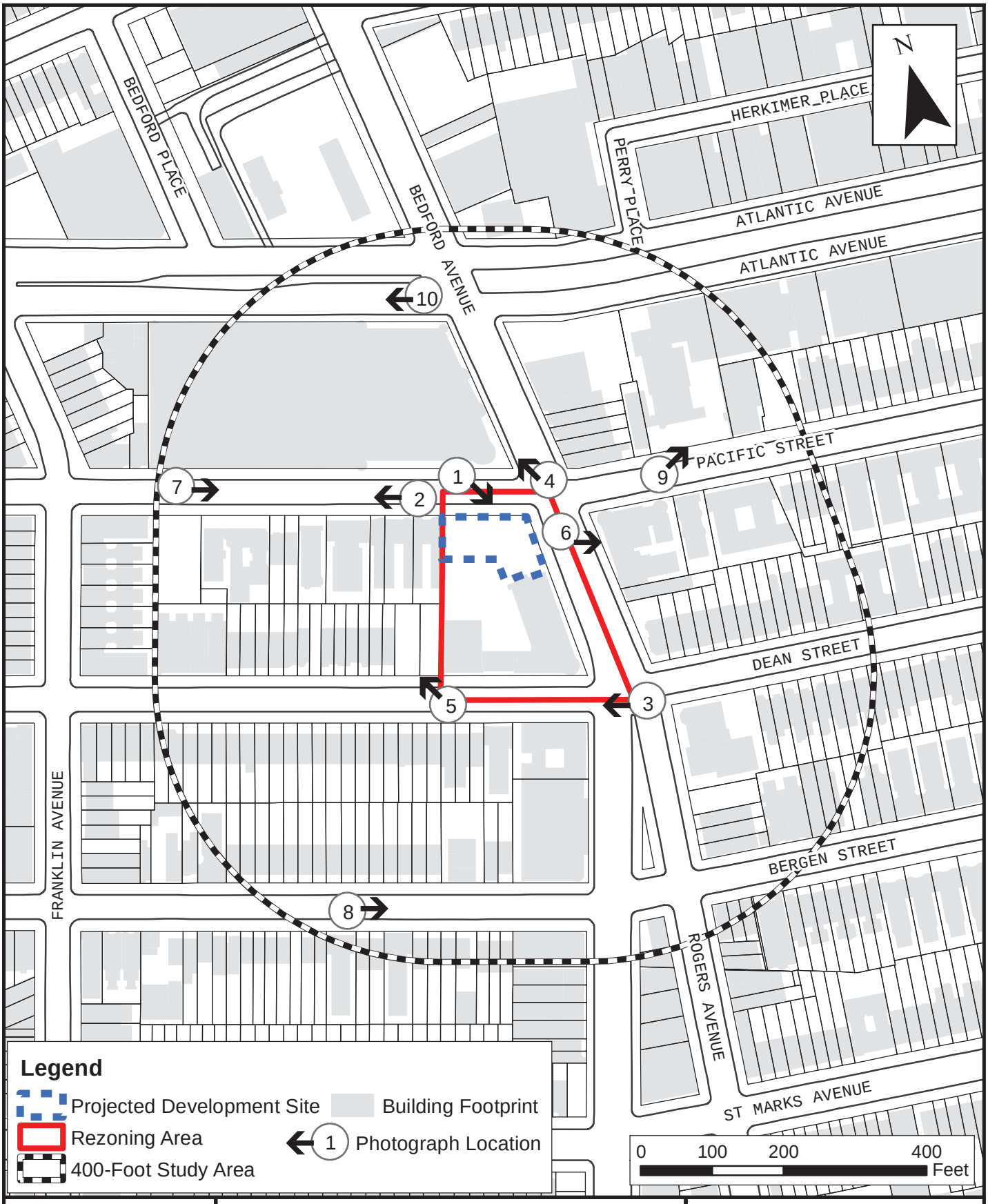


AECOM

Environmental Assessment Statement
1350 Bedford Avenue Rezoning
Prospect Heights, Brooklyn, NY

Tax Map

Figure 1-2



AECOM

Environmental Assessment Statement
1350 Bedford Avenue Rezoning
Prospect Heights, Brooklyn, NY

Key to Photographs

Figure 1-3

Figure 1-4 Photographs of the Site and Surrounding Area

Photograph 1



View of the projected development site at 1350 Bedford Street, looking southeast

Photograph 2



View of Pacific Street adjacent to the projected development site, looking west from Bedford Avenue

Photograph 3



View of adjoining six-story residential building located at 1350 Bedford Avenue

Photograph 4



View of the 23rd Regiment Armory, located across Pacific Street from the projected development, looking northwest

Photograph 5



View of Walt L. Shamel Community Garden adjacent to the projected development site's western boundary, looking northwest

Photograph 6



View of the Imperial Apartments, located across Bedford Avenue from the projected development site, looking southwest

Photograph 7



View of residential uses on Pacific Street, looking southeast

Photograph 8



View of residential uses on Bergen Street, looking east towards Bedford Avenue

Photograph 9

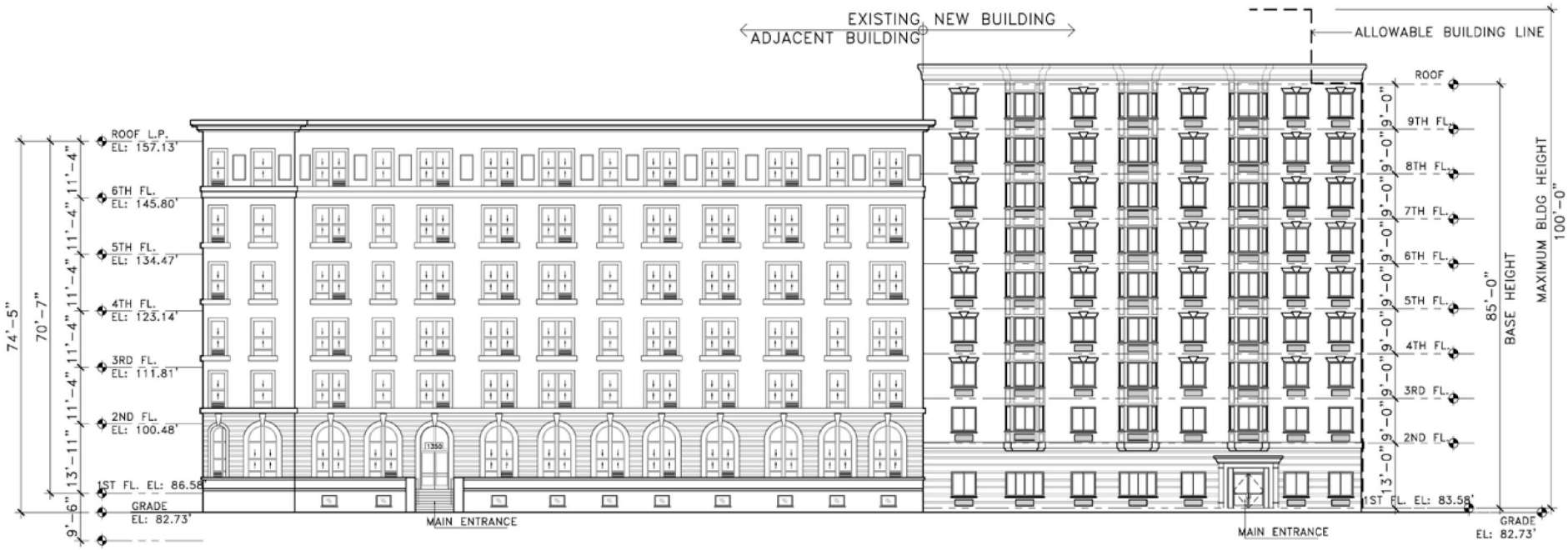


View of Saint Bartholomew's Episcopal Church, looking northeast

Photograph 10



View of Atlantic Avenue, looking west from Bedford Avenue



BEDFORD AVE ELEVATION

For Illustrative Purposes Only

AECOM	**Environmental Assessment Statement** **1350 Bedford Avenue Rezoning** **Prospect Heights, Brooklyn, NY**	***Proposed Development Plans*** ***Figure 1-5***

Existing/ No-Action

115 ‘
11 Floors

With-Action/ Reasonable Worst Case Development Scenario

AECOM	**Environmental Assessment Statement** **1350 Bedford Avenue Rezoning** **Brooklyn, NY**	**No-Action & With-Action** **Figure 1.6**

2.0 ENVIRONMENTAL REVIEW

The following technical sections are provided as supplemental assessments to the Environmental Assessment Statement ("EAS") Short Form. Part II: Technical Analyses of the EAS forms a series of technical thresholds for each analysis area in the respective chapter of the *CEQR Technical Manual*. If the proposed project was demonstrated not to meet or exceed the threshold, the 'NO' box in that section was checked; thus additional analyses were not needed. If the proposed project was expected to meet or exceed the threshold, or if this was not able to be determined, the 'YES' box was checked on the EAS Short Form, resulting in a preliminary analysis to determine whether further analyses were needed. For those technical sections, the relevant chapter of the *CEQR Technical Manual* was consulted for guidance on providing additional analyses (and supporting information, if needed) to determine whether detailed analysis was needed.

A 'YES' answer was provided in the following technical analyses areas on the EAS Short Form:

- Land Use, Zoning, and Public Policy
- Community Facilities and Services
- Open Space
- Shadows
- Historic and Cultural Resources
- Urban Design and Visual Resources
- Air Quality
- Noise
- Neighborhood Character
- Construction

In addition, although the proposed actions did not require a 'YES' answer on the EAS Short Form, a preliminary Transportation assessment is included to provide additional background information for the proposed action. In the following technical sections, where a preliminary or more detailed assessment was necessary, the discussion is divided into Existing Conditions, the Future No-Action Conditions (the Future Without the Proposed Action), and the Future With-Action Conditions (the Future With the Proposed Action).

2.1 LAND USE, ZONING AND PUBLIC POLICY

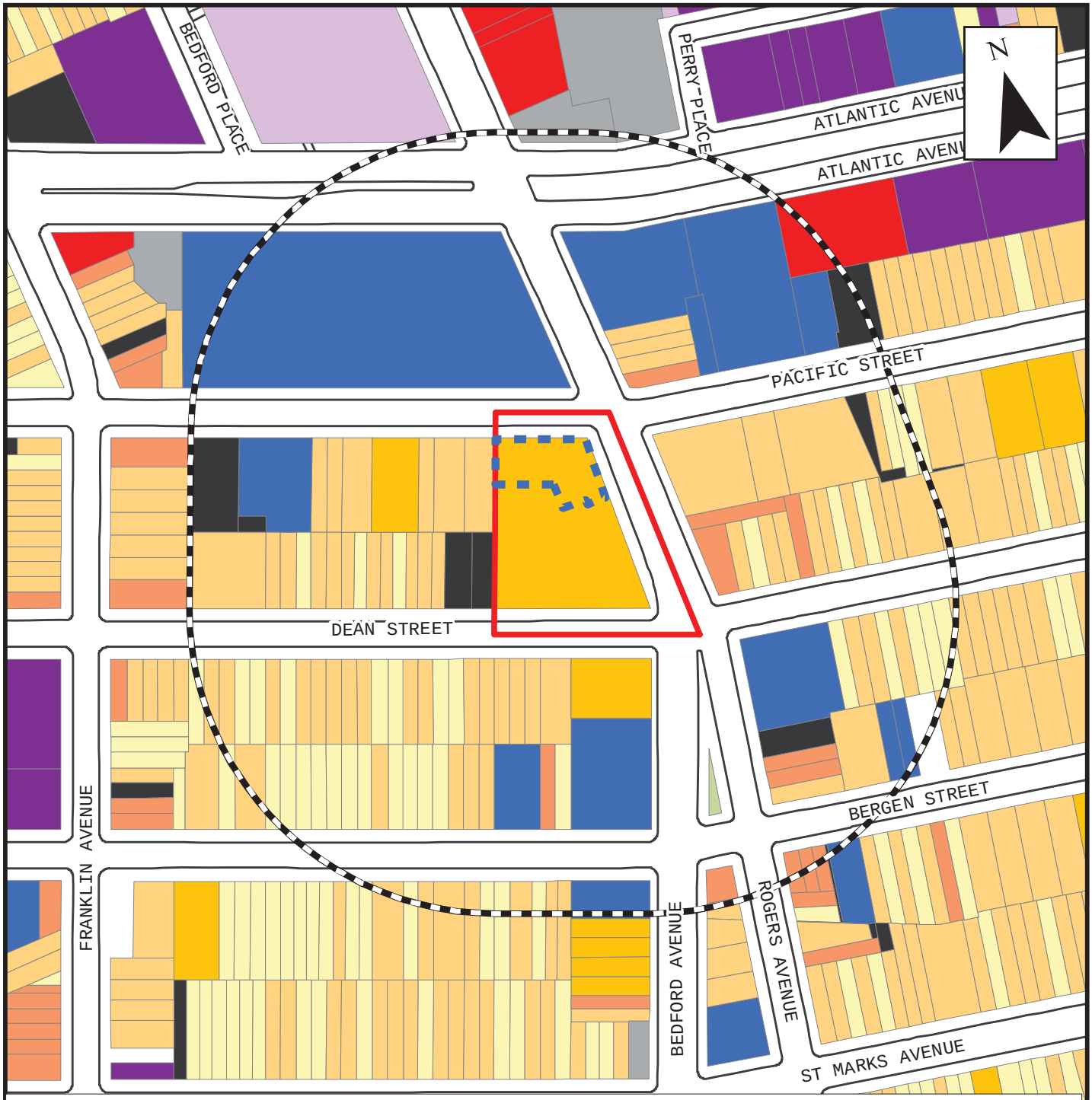
The *CEQR Technical Manual* recommends procedures for analysis of land use, zoning and public policy to ascertain the impacts of a project on the surrounding area. Land use, zoning and public policy are described in detail below.

2.1.1 Land Use

Existing Conditions

Existing land use patterns of city blocks within approximately 400 feet of the project sites are presented in **Figure 2.1.1**. The *CEQR Technical Manual* suggests that a land use, zoning and public policy study area should extend 400 feet from the site of the proposed action. This study area is generally bound by the properties situated on the northern blockface of Bergen Street to the south, the midpoint between Bedford and Nostrand Avenues to the east, the properties 100 feet east of Franklin Avenue to the west, and Atlantic Avenue to the north. The project site is located in the Crown Heights North neighborhood of Brooklyn.

A field survey was conducted to determine the existing land use patterns and neighborhood characteristics of each project site and study area. Land uses throughout the study area include single- and multi-family residences, and mixed residential and commercial uses, public facilities of various sizes along Atlantic Avenue and Bedford Avenue, and several vacant lots.



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Land Uses

Figure 2.1-1

The projected development site and proposed rezoning area are presently improved with a six-story building at 1350 Bedford Avenue (Block 1205, Lot 28) that covers approximately 36 percent of the lot area. The remainder of the project site is occupied with an underutilized surface accessory parking lot and an unimproved portion of land. The projected residential development would occur on the unused portion of Block 1205, Lot 28, and would include frontages on Bedford Avenue and Pacific Street. Directly north of the project site, across Pacific Street, is the 23rd Regiment Armory, which is in the State/National Historic Register. Directly west of the project site, on Dean Street, are multi-family walkup residences, four- to five- stories in height, and two vacant lots, which run as the Walt L. Shamel Community Garden. Directly east of the project site, across Bedford Avenue, are the Imperial Apartments, which are also in the State/National Historic Register, as well as the Crown Heights North Historic District boundary.

The northern portion of the study area can be defined as being north of Pacific Street and contains mostly public facility and institutions, except for the northeast corner of Pacific Street and Bedford Avenue, which contain residential and mixed-used buildings. Directly east of those is Saint Bartholomew's Episcopal Church, which is in the State/National Historic Register. The southern portion of the study area is mostly developed with residential buildings, ranging from one- & two- family residences mostly along both sides of Dean Street to multi-family walkup residences mostly along Bergen Street. Larger multi-family elevator residential buildings can be found on Pacific Street, west of the project site, and on the southwest corner of Bedford Avenue and Dean Street, south of the project site. There are also a few mixed-used residential and commercial buildings along both sides of Bedford Avenue, which serve the neighborhood with local retail stores (like delis and salons) on the ground floor. There are also several public institutions and vacant lots in the southern portion of the study area, including the Fort Greene Grant Square Senior Center on Rogers Avenue, the Washington Temple Church on Bedford Avenue, and another community garden on Bergen Street.

The general mix of land uses observed in the project study area generally reflects the distribution of land uses observed throughout Brooklyn Community District (CD) 8, which are summarized below in **Table 2.1-1.** The most prominent land use within Brooklyn CD 8 is multi-family residences, followed by one- and two-family residences and community facilities/institutional uses.

Table 2.1-1 Land Use Distribution for Brooklyn Community District 8 (2014)

LAND USES	PERCENT OF TOTAL
Residential Uses	
1-2 Family	19.3
Multi-Family	43.2
Mixed Residential/Commercial	8.1
Subtotal of Residential Uses	*70.6*
Non-Residential Uses	
Commercial / Office	2.7
Industrial	3.5
Transportation/Utility	2.4
Institutions	10.2
Open Space/Recreation	5.4
Parking Facilities	2.4
Vacant Land	2.5
Miscellaneous	0.4
Subtotal of Non-Residential Uses	*29.4*
TOTAL	**100.0**

Source: *Community District Profiles, New York City Department of City Planning.*
Note: Percentages may not add up to 100.0 percent due to rounding.

Future No-Action Conditions

In the future without the proposed action, no additional residential floor area is considered likely in the rezoning area, and changes or development at the project site are not expected to occur. The subject building would remain in its existing condition 78 dwelling units in an 82,655 square-foot, six-story building.

Future With-Action Conditions

In the future with the proposed action, the rezoning would amend the zoning map to change the existing R6A district to an R7D district, which would facilitate the projected development of an 11-story, approximately 135,568 square-foot, 136-unit residential building on an undeveloped portion of the proposed development site. The Applicant is also proposing an amendment to the zoning text to map an inclusionary housing designated area over the proposed development site. A combined total of 23 accessory parking spaces would be provided for residents of the existing and proposed buildings, and all 136 units would be classified as affordable.

The proposed zoning map and text amendments would only affect the proposed development site, as the rezoning area would not extend beyond the limits of its zoning lot. Thus, no additional development under the Future With-Action Scenario is projected to occur as a result of the proposed rezoning or text amendment. Therefore, the proposed actions are not expected to have any adverse impacts on surrounding land uses.

2.1.2 Zoning

The *New York City Zoning Resolution* dictates the use, density and bulk of developments within New York City. Additionally, the Zoning Resolution provides required and permitted accessory parking regulations. The City has three basic zoning district classifications – residential (R), commercial (C), and manufacturing (M). These classifications are further divided into low-, medium-, and high-density districts.

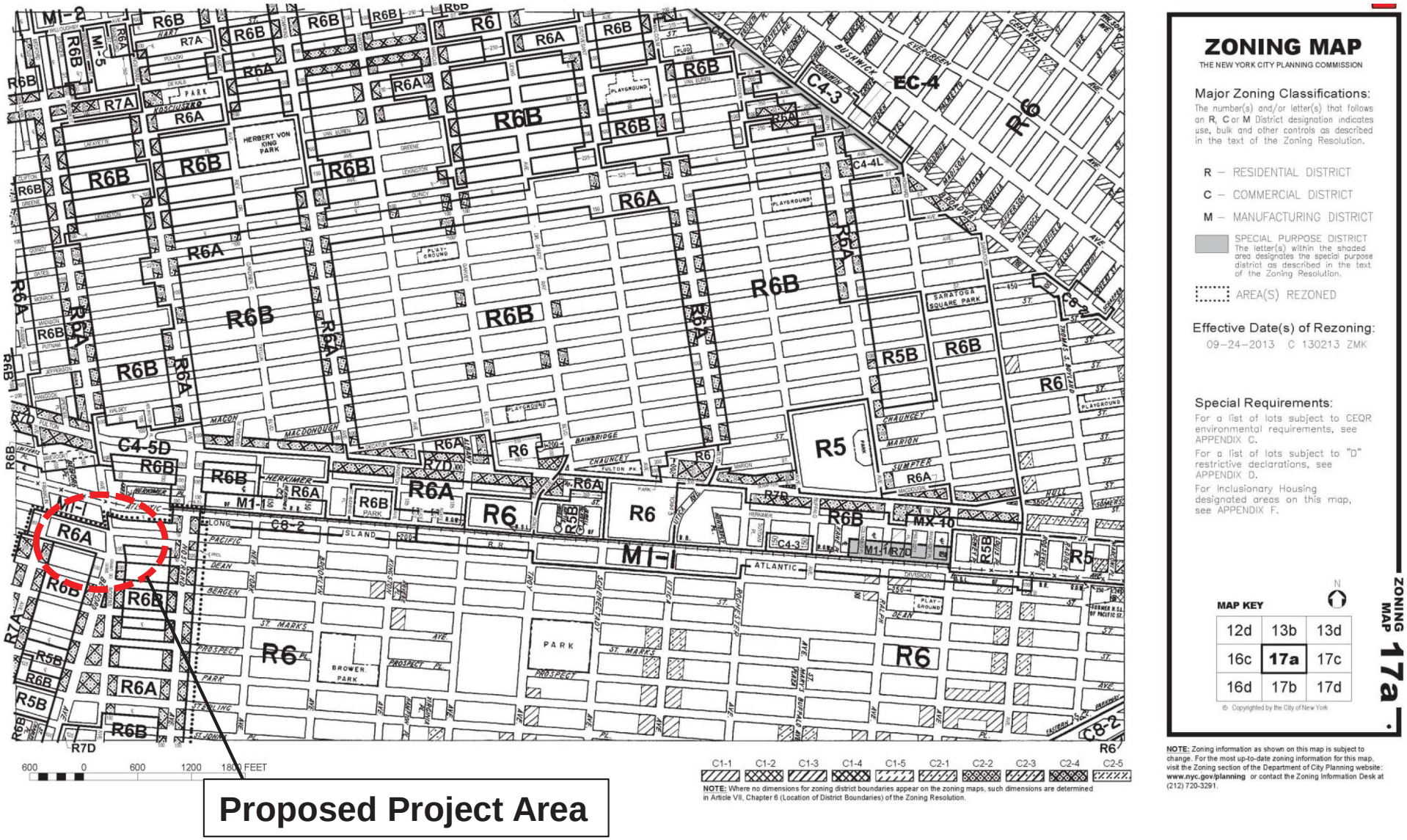
Existing Conditions

Zoning designations within and around the project study area are depicted in **Figure 2.1-2**, while **Table 2.1-2** summarizes use, floor area and parking requirements for the zoning districts in the study area.

The project site and central portion of the study area are located within an R6A zoning district. The R6A district is a medium-density contextual residential district that mandates the Quality Housing Program for new residential buildings. The Quality Housing Program establishes bulk regulations that set height limits and allow high lot coverage buildings that are set at or near the street line. Quality Housing buildings must also have amenities related to the planting of trees, landscaping and recreation space. R6A zoning districts permit a maximum Floor Area Ratio (FAR) of 3.0 for residences and community facilities. The base height of a building before a 10-foot setback is between 40 and 60 feet, with a maximum building height of 70 feet. All open areas between the street wall and front lot line must be planted.

The northern portion of the study area is zoned M1-1. The M1-1 district is a light-performance and low-density manufacturing zoning district in which Use Groups 4 to 14, 16 and 17 are allowed. Light industries typically found such zoning districts include woodworking shops, auto shops and wholesale service and storage facilities. Offices and most retail uses are also permitted, as are certain community facilities as-of-right or by special permit. M1-1 districts permit an FAR for manufacturing and commercial uses of up to 1.0, and an FAR for community facilities up to a 2.4.

To the southeast and southwest of the project site is an R6B zoning district, which often has traditional row-houses and attempts to preserve the scale and harmonious streetscape of neighborhoods. 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, with a maximum height of 50 feet. An area southwest of the project site is also mapped with an R7A zoning district. The contextual Quality Housing regulations, which are mandatory in R7A districts, typically produce high lot



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Zoning Map

Figure 2.1-2

Table 2.1-2 Summary of Zoning Regulations

Zoning District	Type and Use Group (UG)	Floor Area Ratio (FAR)	Parking (Required Spaces)
R6A	Residential UGs 1-4	3.0 FAR – Residential 3.0 FAR – Community Facility	50% (waived if 5 or fewer spaces required)
R6B	Residential UGs 1-4	2.0 – 2.2 FAR for Residential 2.0 FAR for Community Facility	50 percent of dwelling units (waived if 5 or fewer spaces required)
R7A	Residential UGs 1-4	4.0 – 4.6 for Residential 4.0 FAR for Community Facilities	50 percent of dwelling units (30 percent if 10,000 SF or less; waived if 15 or fewer spaces required)
C2-4	Commercial Overlay UGs 1-9 & 14	2.0 FAR – Commercial	Generally Not Required
M1-1	Light Manufacturing UGs 4-14, 16, 17	FAR 1.0 – Manufacturing FAR 1.0 – Commercial FAR 2.4 – Community Facility	Varies by Use

Source: Zoning Handbook, New York City Department of City Planning, January 2006

coverage, seven- and eight-story apartment buildings, blending with existing buildings in many established neighborhoods. The FAR in R7A districts is 4.0. Above a base height of 40 to 65 feet, the building must set back to a depth of 10 feet on a wide street and 15 feet on a narrow street before rising to a maximum height of 80 feet.

Portions of the study area along Bedford, Rogers and Franklin Avenues are overlaid with a C2-4 commercial district on both sides of avenue. The C2-4 overlay district allows a wide range of uses, including neighborhood grocery stores, restaurants, beauty parlors, funeral homes and local repair shops. The maximum commercial FAR is 2.0 when mapped within R6-R10 zoning districts.

Future No-Action Conditions

In the future without the proposed action, zoning changes are not expected to occur on the project site or within the surrounding study area. No authorizations, certifications or other approvals would be sought from the CPC relating to the project site. Because the Applicant may not construct significant new residential square footage on the project site without the proposed zoning map and text amendments, it is assumed that the No-Action Scenario would remain consistent with existing conditions. Therefore, if the mapping of the requested R7D zoning district, inclusionary housing designated area and parking waiver are not granted, the existing conditions would continue in the future no-action scenario.

No rezoning actions are presently being contemplated by the NYC Department of City Planning (DCP), nor have any BSA variance applications been identified for the study area by the project build year of 2020.

Future With-Action Conditions

The proposed zoning map amendment would change the existing R6A district to an R7D over Block 1205, Lot 28. Additionally, a zoning text amendment is proposed for *ZR* Appendix F, Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing Areas, to map an inclusionary housing designated area over the proposed development site. Doing so would increase the maximum allowable FAR on the proposed development site from 3.0 under R6A to 5.6 in an R7D district mapped within an inclusionary housing designated area. In addition to the proposed zoning map and text amendments, the applicant is seeking from the BSA a waiver of the off-street accessory parking requirements for the 78 income-restricted housing units located in the existing six-story building.

Absent the proposed actions, the applicant would be unable to construct the proposed development under the existing floor area and lot coverage requirements of an R6A district. The proposed actions would therefore not have a significant impact on the extent of conformity with the current zoning in the surrounding area, and it would not adversely affect the viability of conforming uses on nearby properties.

The R7D zoning is appropriate here because they promote new contextual development along transit corridors. It allows for greater residential development than R7A districts but less than R7X districts. The maximum building height of 115 permitted in an R7D district (with qualifying ground floor) is greater than the R6A maximum building height of 70 feet, but that height differential is not so dramatic that a building would necessarily seem out of place in terms of height. Therefore, significant adverse impacts to zoning are not anticipated and further zoning analysis is not warranted.

2.1.3 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), or the New York City Landmarks Law. The proposed actions are also not a large publically sponsored project, and as such, consistency with the City's PlaNYC 2030 for sustainability is not warranted. Additionally, the project site is located within Community District 8 in Brooklyn. While portions of Community District 8 are located within the Jamaica Bay Watershed, the project site itself is not located within the Jamaica Bay Watershed, and thus no analysis was performed.

Waterfront Revitalization Program

Actions that are located within the designated boundaries of New York City's Coastal Management Zone are subject to an assessment for consistency with the City's Local Waterfront Revitalization Program (LWRP). The LWRP includes policy objectives that prioritize the development of water-dependent and water-enhancing uses on Coastal Management Zone, properties mandate public access to the waterfront within certain zoning districts, offer construction guidelines for flood zones, and address the maintenance of water quality. Since the rezoning area is not located in the Coastal Management Zone, a consistency review is not warranted for the proposed action.

Consistency with the Mayor's Housing New York Plan

The proposed project would be consistent with and supports the goals of the administration's new housing plan, known as Housing New York. Development on the project site would provide new units of affordable housing, advancing the Mayor's goal of building and preserving 200,000 affordable units in New York City by 2024.

Mayor de Blasio has repeatedly stated that New York City is in an affordable housing crisis. While affordable housing is critical to New York City's success and provides financial stability for working families, economic inequality and housing costs are on the rise. In an effort to address this issue, the Mayor has proposed a five-borough, ten-year affordable housing plan, which will build and preserve approximately 200,000 affordable housing units in New York City. The Mayor's plan responds directly to the private marketplace's failure to produce sufficient affordable housing to accommodate the City's growth.

The ZQA text amendment: allows modest height increases in certain zoning districts, permits buildings to have desirable high-ceilinged ground floor retail space, allows for variety in building envelopes, and permits reduced parking requirements for affordable housing buildings.

For over 35 years, the Applicant (through other corporate entities) has developed numerous government-assisted buildings with affordable housing units. The project site is a single zoning lot with a unique history of development. In 1980, the Applicant converted a former hospital building into the existing six-story approximately 68,434 square foot Section 8 housing building which contains 78 affordable housing units and one super's unit. The proposed project is consistent with, and supports the Mayor's policy, by providing 94 income-restricted housing units in the proposed building.

2.2 COMMUNITY FACILITIES AND SERVICES

The *CEQR Technical Manual* defines community facilities as public or publicly-funded facilities, such as schools, hospitals, libraries, day care centers, and fire and police protection. An analysis of community facilities to examine the impact a proposed action would have on the provision of services provided by public or publicly-funded facilities is recommended to occur if an increase in local population is anticipated that would change community facility service delivery, or if the action physically alters or displaces a community facility.

2.2.1 Police and Fire Services

The preliminary screening threshold for a police and fire services assessment is met if the proposed action would lead to a direct effect on police and fire services, which is generally considered to be a project that affects the physical operation of, or access to and from, a police or fire facility. The proposed actions would result in the construction of a residential building on a vacant lot, and would not have a direct effect on local police and fire services in the area. The New York City Police Department routinely reviews staffing levels at each precinct to meet operational requirements and maintain adequate coverage. The rezoning area is situated in the 77th Police Precinct, which is headquartered approximately one mile east of the projected development site.

The Fire Department similarly evaluates the need for changes in personnel, equipment or locations of fire stations and makes those changes independent of particular proposed actions. The rezoning area is served by Battalion 57, Division 11, and Company 219E, with the firehouse of Engine 280, Ladder 132 located at 489 Saint John's Place, approximately one-half mile southwest of the rezoning area.

The proposed actions would not directly affect physical operations of any local police or fire facility. In addition, the development proposed by the applicant is subject to the requirements of the City's Fire and Building Codes. Therefore, significant adverse impacts are not expected, and no further analysis of police and fire services is warranted.

2.2.2 Health Care

The proposed actions would have no adverse impacts on the area's health care facilities. According to the *CEQR Technical Manual*, potential impacts on health care facilities may result from the direct effect on healthcare facilities or as a result of large increases in user/resident population. The proposed actions would not have a direct effect on any health care facility and would not result in a significantly large residential population that would affect health care facilities in the area. Therefore, significant adverse health care facility impacts are not expected.

2.2.3 Libraries

The proposed actions would have no significant adverse impacts on the area's libraries. According to the *CEQR Technical Manual*, potential impacts on libraries may result from the displacement or alteration of an existing library or a large increase in user/resident population. According to Table 6-1 of the *CEQR Technical Manual*, the threshold for further library impact analysis is a greater than five percent increase in the ratio of residential units to libraries borough-wide, or 734 residential units in the borough of Brooklyn. Since the proposed actions would generate fewer than 734 units, no further analysis is warranted. Therefore, significant adverse library impacts are not expected.

2.2.4 Educational Facilities

According to the *CEQR Technical Manual*, this kind of impact analysis is based on the number of school-age children generated by a residential development, which is derived from the number of residential units. The *CEQR Technical Manual* states that the thresholds for detailed analyses are if a project has the potential to introduce 50 or more elementary and middle school students, or 150 or more high school

students. The *CEQR Technical Manual* further states that the minimum number of residential units that trigger the need for possible detailed analyses, in Brooklyn, is 121 units for elementary and middle school students, and 1,068 units for high school students. As this analysis assumes a maximum of 136 new dwelling units, further assessments for potential elementary and middle school student impacts were performed.

Existing Conditions

The updated *CEQR Technical Manual* states that the primary study area for this analysis of elementary and intermediate schools is generally the community school district's "sub-district" (also known as "regions" or "school planning zones"), in which the project is located. For the selected schools, the *CEQR Technical Manual* states that the analysis should identify the following information for each school:

- School identification by number and address
- Grades Served
- Current enrollment
- Target capacity
- Target utilization rate
- Number of available seats

In addition to the study area for schools, CEQR states that the analysis should identify, for informational purposes, the "zoned" elementary and intermediate schools that would serve students generated by the proposed project.

The project site is located within "Community School District (CSD) 17", subdivision "Region 1". The project site is "zoned" for the Brooklyn Arts and Science Elementary School (K705), located at 443 St. Marks Avenue, approximately one-half of a mile southwest of the projected development site, serving students in pre-k, kindergarten, grades 1-5 and special education. The "zoned" middle/intermediate school for the project site is Ebbets Field Middle School (K352), located at 46 McKeever Place, approximately one mile south from the projected development site, serving students in grades 6-8 and special education.

Table 2.2-1 and **Table 2.2-2** show those elementary and middle/intermediate schools within the study area, consisting of those elementary and middle/intermediate schools within "Community School District 17 - Region 1". As of the 2014/2015 School Year, schools within the study area have an average utilization level of 62 percent for elementary level schools with 1,521 available seats, and an average utilization level of 64 percent for middle/intermediate level schools with 602 available intermediate seats. At the Brooklyn Arts and Science Elementary School (the zoned elementary school), there is a deficit of 35 available school seats with a utilization level of 111 percent. At Ebbets Field Middle School (the zoned school), there are 424 available seats with a utilization level of 35 percent. However, since Ebbets Field Middle School is not relevant in the sub-district, it is not included in the analysis tables.

Table 2.2-1 Elementary Schools in the Study Area

School (Org. ID)	Address	CSD	Grades Served	Current Org Enrollment	Target Capacity	Number of Available Seats/ Over Capacity	Target Utilization Rate
P.S 705 Brooklyn Arts & Science School (K705)	433 St Marks Ave	17	PK, 0K, 01, 02, 03, 04, 05, SE	340	305	-35	111%
PS 138 (K138)	760 Prospect Pl	17	01, 02, 03, 04, 05, 06, 07, 08, 0K, PK, SE	407	673	266	60%
PS 167 (K167)	1025 Eastern Pkwy	17	PK, 01, 02, 03, 04, 05, 06, SE	104	259	155	40%
PS 191 (K191)	1600 Park Pl	17	0K, 01, 02, 03, 04, 05, SE	206	486	280	42%
PS 289 (K289)	900 St Marks Ave	17	0K, 01, 02, 03, 04, 05, SE	396	772	376	51%
PS 316 (K316)	750 Classon Ave	17	0K, 01, 02, 03, 04, 05, 06, SE	360	486	126	74%
IS 394 (K394)	188 Rochester Avenue	17	01, 02, 03, 04, 05, 06, 07, 08, 0K, PK, SE	377	440	63	86%
			Total	**2,190**	**3,421**	**1,231**	**64%**

Source: Enrollment, Capacity and Utilization Report for the 2014-2015 School Year, issued by the NYC Department of Education; cross referenced with Community District Profiles, issued by the NYC Department of City Planning on the Department of City Planning website.

PK=Pre-Kindergarten; K=Kindergarten; SE=Special Education

Table 2.2-2 Intermediate Schools in the Study Area

School (Org. ID)	Address	CSD	Grades Served	Current Org Enrollment	Target Capacity	Number of Available Seats / Over Capacity	Target Utilization Rate
MS 334	1224 Park Pl	17	06, 07, 08, SE	129	391	262	33%
Elijah Stroud Middle School (K353)	750 Classon Ave	17	06, 07, 08, SE	253	310	57	82%
The School Of Integrated Learning (K354)	1224 Park Pl	17	06, 07, 08, SE	226	462	236	49%
IS 394 (K 394)	188 Rochester Avenue	17	01, 02, 03, 04, 05, 06, 07, 08, 0K, PK, SE	189	221	32	86%
PS 138 (K138)	760 Prospect Pl	17	01, 02, 03, 04, 05, 06, 07, 08, 0K, PK, SE	272	456	184	60%
			Total	**1069**	**1840**	**771**	**59%**

Source: Enrollment, Capacity and Utilization Report for the 2014-2015 School Year, issued by the NYC Department of Education.
SE=Special Education

Future No-Action Conditions

In the future without the proposed action, the Projected Development Site would remain vacant and would not be occupied with the proposed building. However, to determine changes in enrollment and capacity within CSD 17, data from the New York City School Construction Authority (SCA) was consulted. As indicated in **Table 2.2-3** below, elementary school enrollment is expected to decrease in the Future No-Action scenario, while intermediate school enrollment is expected to increase.

Table 2.2-3 Projected Elementary School Enrollment, Capacity and Utilization in 2020 without the Proposed Action

	Projected Enrollment 2020 [1]	Students Generated by New Development [2]	Total Projected Enrollment 2020	Capacity [3]	Seats Available	Utilization
CSD 17 Sub-district 1	1,988	160	2,148	3,691	1,543	58.2%

1 SCA Enrollment Projections 2015-2024. Enrollment projections for sub-district study areas were calculated based on SCA data
2 Based on DCP provided data on number of students.
3 Capacity numbers: NYC Department of Education, *Enrollment/Capacity/Utilization Report 2014-2015 School Year.* Capacity from DOE data provided

Table 2.2-4 Projected Intermediate School Enrollment, Capacity and Utilization in 2020 without the Proposed Action

	Projected Enrollment 2020	Students Generated by New Development	Total Projected Enrollment 2020	Capacity	Seats Available	Utilization
CSD 17 Sub-district 1	989	68	1,057	1,820	763	58.1%

1 SCA Enrollment Projections 2015-2024. Enrollment projections for sub-district study areas were calculated based on SCA data
2 Based on DCP provided data on number of students.
3 Capacity numbers: NYC Department of Education, *Enrollment/Capacity/Utilization Report 2014-2015 School Year.* Capacity from DOE data provided

Future With-Action Conditions

The proposed actions are expected to result in the construction of a residential building with up to 136 dwelling units with those units being 100% affordable at 80% AMI, which was assumed (For CEQR purposes, all "affordable" units are assumed at an average of 80% AMI). As the age breakdown of school age children living at the projected building is unknown, Table 6-1a of the *CEQR Technical Manual* was used to estimate public school student breakdown. For children in new residential units in Brooklyn, elementary level students are estimated to be 53 percent, intermediate/middle level students are estimated to be 22 percent and high school students are estimated to be 25 percent. As such, it is estimated that of the 75 school-aged children who would reside at the building, approximately 39 children would be elementary school aged students, approximately 16 children would be intermediate school-aged students, and approximately 19 children would be high school aged students, as shown in **Table 2.2-5**. As the number of high school students estimated to be generated by the proposed actions are below the 150 student threshold stated in the *CEQR Technical Manual*, no further assessment of potential impacts to high schools is warranted by the proposed actions. However, the combined elementary and intermediate students estimated to be generated by the proposed actions is above the 50 or more student threshold stated in the *CEQR Technical Manual* and further assessment of potential impacts of the proposed actions follows below.

Table 2.2-5 Future With-Action: Number of Public School Students Generated by the Proposed Action

	# of DUs Increment	PS Students	IS Students	Total PS/IS Students
CSD 17 Subdistrict 1	136	39	16	55

Source: CEQR Technical Manual, Table 6-1a

As shown in **Tables 2.2-6** and **2.2-7**, the addition of 39 elementary and 16 intermediate school students generated under the Future-With Action scenario by 2020 will only slightly increase school enrollment over the DOE's projected enrollment within the Sub-district study areas over the Future-No Action condition by 2020.

Table 2.2-6 Projected Elementary School Enrollment, Capacity and Utilization in 2020 With the Proposed Action

	Future No-Action Projected Enrollment 2020	Students Generated by Proposed Action	Total Projected Enrollment 2020	Capacity	Seats Available	Utilization
CSD 17 Sub-district 1	2,148	39	2,187	3,691	1,504	59.3%

Table 2.2-7 Projected Intermediate School Enrollment, Capacity and Utilization in 2020 With the Proposed Action

	Future No-Action Projected Enrollment 2020	Students Generated by Proposed Action	Total Projected Enrollment 2020	Capacity	Seats Available	Utilization
CSD 17 Sub-district 1	1,057	16	1,073	1,820	747	59.0%

As demonstrated above, there will be sufficient elementary and intermediate school capacity under the Future With-Action scenario, and the proposed actions are not expected to cause a significant adverse impact to the affected school sub-districts.

2.2.5 Child Care

The *CEQR Technical Manual* suggests a detailed analysis of publicly-funded group child care centers when a proposed action would generate 20 or more children (under the age of six) in subsidized housing that are eligible for public day care. The proposed actions would result in the creation of up to 136 new dwelling units, of which children eligible for publicly-funded child care and Head Start are believed to reside. Table 6-1b of the *CEQR Technical Manual* was used to estimate the number of children under the age of six who would be included in this analysis. For a new residential development of 136 dwelling units in Brooklyn, it is therefore estimated that up to 24 children under the age of six would be generated.

As there are no location requirements for enrollment in child care centers and some parents/guardians choose a child care center close to their employment or their child's school, rather than their residence, the service areas of these facilities can be rather large, thus making it difficult to identify a study area. Nevertheless, child care centers closest to the project area are more likely to be subject to increased demand. According to the *CEQR Technical Manual*, the study area for a child care center analysis should be 1.5 miles.

Existing Conditions

As indicated in **Table 2.2-3**, there are 19 publicly-funded child care centers within one and one half miles of the projected development site, which is defined by the *CEQR Technical Manual* as the appropriate child care study area. **Table 2.2-3** shows the current capacity and enrollment for each of these facilities. The projected development site is located in Brooklyn CD 8, which contains a total of seven publicly-funded child care/head start facilities. In total, the child care centers in the study area have a capacity for 301 children and a current enrollment of 1,298 children, for a collective utilization rate of approximately 81 percent.

Table 2.2-3 Publicly Funded Child Care Centers in the 1.5 Mile Study Area

CD	Program Name	Facility	Program Address	Capacity	Enrollment	Utilization	Vacancies
3	Episcopal Social Services Of New York, Inc.	Group Day Care - Public	494 Marcy Ave	49	44	90%	5
3	Our Children-The Leaders Of Tomorrow, Inc.	Group Day Care - Public	756 Myrtle Ave	85	76	89%	9

CD	Program Name	Facility	Program Address	Capacity	Enrollment	Utilization	Vacancies
3	Brooklyn Kindergarten Society	Group Day Care - Public	730 Park Ave	82	71	87%	11
3	The Salvation Army	Group Day Care - Public	110 Kosciuszko St	38	26	68%	12
3	Cornerstone Day Care Center, Inc.	Group Day Care - Public	289 Lewis Ave	69	49	71%	20
6	University Settlement Society Of New York	Group Day Care - Public	71 Lincoln Pl	74	57	77%	17
8	Friends Of Crown Heights Educational Centers, Inc.	Group Day Care - Public	1491 Bedford Ave	77	70	91%	7
8	The Friends Of Crown Heights Educational Centers,Inc.	Group Day Care - Public	671-675 Prospect Pl	142	125	88%	17
8	Friends Of Crown Heights Educational Centers, Inc.	Group Day Care - Public	1435 Prospect Pl	95	76	80%	19
8	Brooklyn Kindergarten Society	Group Day Care - Public	1185 Park Pl	75	48	64%	27
8	Friends Of Crown Heights Educational Centers, Inc.	Group Day Care - Public	963 Park Pl	80	53	66%	27
8	Friends Of Crown Heights Educational Centers, Inc.	Group Day Care - Public	813 Sterling Pl	165	132	80%	33
8	196 Albany Avenue Day Care Center, Inc.	Group Day Care - Public	196 Albany Ave	90	49	54%	41
9	All My Children Day Care And Nursery School	Group Day Care - Public	317 Rogers Ave	80	80	100%	0
9	B'above Worldwide Institute, Inc.	Group Day Care - Public	570 Crown St	119	117	98%	2
9	Hawthorne Corners Day Care Center Inc.	Group Day Care - Public	1950 Bedford Ave	49	44	90%	5
9	All My Children Day Care And Nursery School	Group Day Care - Public	771 Crown St	50	42	84%	8
9	The Friends Of Crown Heights Educational Centers, Inc.	Group Day Care - Public	995 Carroll St	77	68	88%	9

CD	Program Name	Facility	Program Address	Capacity	Enrollment	Utilization	Vacancies
9	All My Children Day Care And Nursery School	Group Day Care - Public	36 Ford St	103	71	69%	32
Total				1,599	1,298	81%	301

Source: June 2016 City Wide Child Care and Head Start Center Enrollment Reports by Community District (provided by NYC Department of City Planning); cross-referenced with Community District Profiles, NYC Department of City Planning.

Future No-Action Conditions

As stated in the *CEQR Technical Manual*, since enrollment projections for child care facilities are not available, CEQR analysis assumes that the existing enrollment and capacity would stay the same for the build year and be the baseline for the Future No-Action Condition. As such, for assessment purposes, conditions in the future without the proposed actions are expected to be similar to existing conditions.

Future With-Action Conditions

According to the *CEQR Technical Manual*, a significant adverse child care center impact could result if a proposed actions results in: (1) a collective utilization rate greater than 100 percent in the With-Action condition; and (2) the demand constitutes an increase of five percent or more in the collective capacity of child care centers serving the study area over the No-Action condition. The proposed actions could add up to 24 children potentially eligible for subsidized child care to the study area and would cause an approximately 1.9 percent increase in demand over the No-Action utilization rate of publicly funded group child care facilities in the study area. Therefore, in the Future With-Action scenario, collective public daycare utilization in the project study area would be approximately 83 percent. As the utilization rate in the Future With-Action scenario would be less than 100 percent, and an increase in less than five percent over the No-Action capacity would occur, significant adverse impacts to publicly-funded childcare services are not expected, and further assessment is not warranted.

2.3 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. According to the *CEQR Technical Manual*, an analysis of open space is conducted to determine whether or not a proposed project would have a direct impact resulting from the elimination or alteration of open space and/or indirect impacts resulting from overtaxing available open space. An open space analysis focuses on officially designated existing or planned public open space. An open space assessment may be necessary if a project potentially has a direct or indirect effect on open space.

For the majority of new projects in New York City located in areas that are neither “underserved” or “well-served” area for open space, an open space assessment is generally conducted if the proposed project would generate more than 200 residents or 500 employees. The project site is located in an “underserved” area for open space, which has listed thresholds of 50 additional residents or 125 additional employees for further study. The proposed project would potentially add up to approximately 306 residents in 136 units (based on an average of 2.25 persons per unit[1]), as well as approximately four employees[2] to the neighborhood that would work in the building. As the number of new residents anticipated as a result of the proposed actions is above the CEQR preliminary screening threshold level of 50 residents, a preliminary analysis of open space impacts due to new residents is warranted.

[1] Based on the average household size for Census Tracts 221 (2.13 persons/household), 247 (2.41 persons/household) and 315 (2.2 persons/household)

[2] Based on a standard average of 0.04 employees per dwelling unit of residential use (superintendents, doormen, handymen, porters, etc.).

2.3.1 Preliminary Open Space Assessment

The open space study area includes all U.S. Census Tracts that have 50 percent or more of the tract within a half-mile radius of the project site, as shown in **Figure 2.3-1.** These consist of the following Census Tracts, as shown in **Table 2.3-1**. The project site is located within Brooklyn Census Tract 221, and the half-mile study area lies within Brooklyn Community District 8.

Existing Conditions

According to 2010 U.S. Census population data that was compiled by the New York City Department of City Planning, there are a total of 49,115 residents in the study area, as shown in **Table 2.3-1**, per the 2010 U.S. Census. Assuming a standard background growth rate of 0.5 percent per year, the 2016 population is estimated to be approximately 50,607 residents. The study area contains a total of 12.27 acres of publicly accessible open space (both active and passive), with the size of existing open space resources within this study area identified in **Table 2.3-2** and shown in **Figure 2.3-2**.

In accordance, with CEQR methodology, the assessment of open space resources in the study area focuses on the calculated open space ratio (OSR), or the ratio of the acres of open space per 1,000 persons. The existing OSR in the study area is approximately 0.245 acres per 1,000 residents, below the City's target OSR of 1.50 acres per 1,000 residents.

Table 2.3-1 Census Tracts and Population in the Study Area

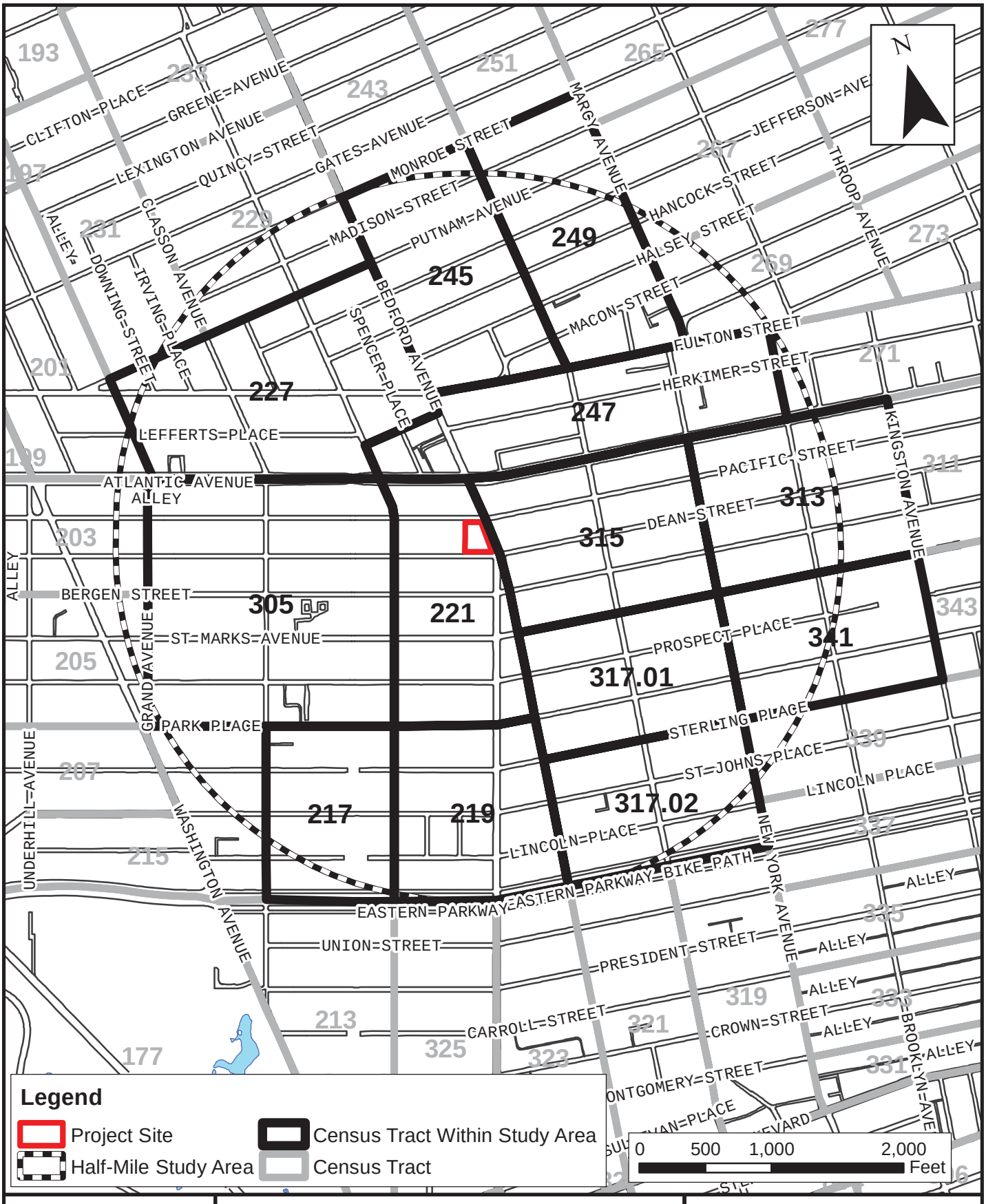
Census Tract Number	Population (2010 Census)	Population (2016 Projected)
217	3,597	3,688
219	3,595	3,686
221	3,609	3,700
227	3,454	3,541
245	3,946	4,046
247	2,316	2,374
249	3,823	3,920
305	5,549	5,689
313	4,648	4,765
315	5,175	5,306
317.01	3,433	3,520
317.02	3,363	3,448
341	2,607	2,673
Total	**49,115**	**50,355**

Source: New York City Department of City Planning.
Notes: Shaded row indicates census tract of the project site.

Table 2.3-2 Open Space Resources in the Study Area

Key #	Open Space Resource	Location	Size (acres)
1	Brower Park	St. Mark's Ave., Park Pl. between Brooklyn Ave. and Kingston Ave.	7.05
2	Crispus Attucks Playground	Classon Ave. between Fulton St. and Lefferts Pl.	0.93
3	Eastern Parkway Malls*	Eastern Pkwy. Bet. Grand Army Plaza and Ralph Ave	1.53
4	Grant Gore	Bedford Ave., Rodgers Ave., Bergen St.	0.02
5	Hancock Playground	Bedford Ave., Hancock St., Jefferson Ave.,	1.55
6	Stroud Playground	Sterling Pl. to Park Pl. between Classon Ave. and Washington Ave.	1.19
		TOTAL	**12.27**

Source: Community District Profiles, NYC Department of City Planning; American Fact Finder.
Note: *- Represents partial area of open space within selected study area.



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Open Space Study Area

Figure 2.3-1



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Open Space Resources

Figure 2.3-2

Future No-Action Conditions

In the future without the proposed action, the project site is not expected to undergo any changes or development. By 2020, it is expected that the population in the surrounding area would continue to grow by approximately 0.5 percent a year, representing a standard background growth rate. Thus the approximately 50,607 residents in the study area under 2016 conditions would grow to approximately 51,627 residents by 2020 under the Future No-Action Condition. Therefore, the existing OSR of 0.245 acres of open space per 1,000 residents calculated for the open space study area is expected to be reduced to approximately 0.241 acres of open space per 1,000 residents under the Future No-Action Condition, assuming that no additional open space resources are added to the area, as expected.

Future With-Action Conditions

Preliminary screening procedures from the *CEQR Technical Manual* indicate that impacts may occur if a project reduces the OSR by more than five percent. In areas that are lacking in open space resources, a reduction as small as one percent may be considered significant. Under the Future With-Action Condition, there would be an increase of up to 306 new residents, thereby increasing the study area population from approximately 51,627 residents under the Future No-Action Condition to 51,932 residents under the Future With-Action Condition. The resulting OSR would decrease from 0.241 acres per 1,000 residents under the Future No-Action Condition to 0.239 acres of open space per 1,000 persons under the Future With-Action Condition, a decrease of approximately 0.59 percent. The reduction in OSR related to the proposed actions would be less than one percent. Therefore, no significant adverse impacts to open space resources as a result of the proposed actions are expected and no further analysis is warranted.

2.4 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 project 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.

Shadows also vary according to 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 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. However, a project located adjacent to or across the street from a sunlight-sensitive open space resource (which is not a designated New York City Landmark or listed on the State/National Registers of Historic Places, or eligible for these programs) may not require a detailed shadow assessment if the project's height increase is ten feet or less.

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, contain no seating areas and no vegetation, no unusual or historic plantings, or contain 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*.

The proposed actions would result in the construction of a new residential building with up to a reasonable worst case height of 115 feet tall and 11 stories in height, as allowed in an R7D district. The projected development site is located adjacent to the eastern boundary of Walt L. Shamel Community Garden, and is located one block north of Grant Gore. Additional information on these two open space resources is found in **Section 2.3** above. In addition, there are several historic resources found in the immediate vicinity of the rezoning area, including the 23rd Regiment Armory (LP-00950) located across Pacific Street from the rezoning area, the Imperial Apartments (LP-01432) located across Bedford Avenue from the rezoning area, and Saint Bartholomew's Episcopal Church (LP-00820) located northeast of the rezoning area. Additional information on these historic resources is found in **Section 2.5**. Therefore, as the proposed actions could result in incremental shadows falling on nearby sun-sensitive resources; further shadow screening assessments were performed.

2.4.1 Preliminary 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 is generally warranted in order 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 noted in the *CEQR Technical Manual*, the screening assessment and sub-sequent shadow assessment (if necessary) was performed for the new structure to be built on the project site.

Tier 1 and 2 Screening Assessments

The first step in the preliminary shadow screening assessment is a Tier 1 Screening Assessment. 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(s) 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. To find the longest shadow length, the maximum height of the structure (including any rooftop mechanical equipment) is multiplied by the factor of 4.3.

A shadow radius of 4.3 times the maximum height of the proposed 11-story building (115 feet) was performed, resulting in shadow radius of approximately 494 feet. As shown in **Figure 2.4-1**, the results of the Tier 1 screening assessment show that two open space resources are situated within the Tier 1 maximum shadow analysis area, including the Walt L. Shamel Community Garden to the west of the rezoning area, and Grant Gore to the south. Additionally, three historic resources are located within the Tier 1 maximum shadow study area, including the 23rd Regiment Armory (LP-00950) located across Pacific Street from the rezoning area, the Imperial Apartments (LP-01432) located across Bedford Avenue from the rezoning area, and Saint Bartholomew's Episcopal Church (LP-00820) located northeast of the rezoning area. No other open space or cultural and historic resources are located within the potential shadow radius.

Of the five resources, the two open spaces would be considered sunlight-sensitive resources, as they both contain flowering plants and the Walt L. Shamel Community Garden contains seating areas. Of the three historic resources, the Saint Bartholomew's Episcopal Church would be considered sunlight-sensitive, as it contains stained glass windows on the southern and western façades. The 23rd Regiment

Armory and Imperial Apartments, although designated as historic listings, are not considered to be sunlight-sensitive, as they do not depend on direct sunlight to maintain architectural integrity. As such, according to the *CEQR Technical Manual*, these resources do not require further study for the shadow analyses. No other open space or cultural and historic resources are located within the potential shadow radius.

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 that 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 that cannot be shaded by the proposed project site, starting from the southernmost portion of the site covering the area between -108° degrees from true north and +108 degrees from true north, 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. The *CEQR Technical Manual* further notes that if a sunlight-sensitive feature on an architectural resource is located on a facade that faces directly away from a proposed project site (i.e. when an architectural resource is west of the proposed project site and the sun-sensitive feature is on the west facade of that structure), no further shadows assessment is needed for that particular resource, because no shadows from a proposed project could fall on that sunlight-sensitive face.

As also shown in **Figure 2.4-1**, the results of the Tier 2 screening assessment show that some portions of the Walt L. Shamel Community Garden and the Saint Bartholomew's Episcopal Church are situated within the Tier 2 area, and as such, would still have the potential to be covered by shadows from the proposed action. Grant Gore falls outside the Tier 2 screening area, and would not have the potential to experience new shadow coverage as a result of the projected development. Therefore, based on the results of the Tier 2 screening assessment, a Tier 3 screening assessment is warranted for the Walt L. Shamel Community Garden and the Saint Bartholomew's Episcopal Church.

Tier 3 Screening Assessment

A Tier 3 screening assessment is used to determine if shadows resulting from the proposed project can reach a sunlight-sensitive resource. In order to determine whether the sun-sensitive features of the nearby open space resources would potentially be affected by shadows cast from the proposed building, three- dimensional models were created surrounding the Tier 3 identified resources of concern.

The *CEQR Technical Manual* states that for the New York City area, the months of interest for an open space resource encompass the growing season (March through October) and one month between November and February (usually December) representing a cold-weather month.

Representative days for the growing season are generally the vernal equinox (or the autumnal equinox, which is approximately the same), the summer solstice, and a spring or summer day halfway between the summer solstice and equinoxes. For the cold-weather months, the winter solstice is usually included to demonstrate conditions during cold-weather when people who do use open spaces rely most heavily on available sunlight for warmth. As representative of the full range of possible shadows, these months and days are used for assessing shadows on historic or natural sunlight-sensitive resources.

Assessments of the incremental shadows cast during four representative dates were made in accordance with the *CEQR Technical Manual* to encompass the growing season and December, representing a cold-weather month (and the longest shadow of the year), with the following dates: March 21st; May 6th; June 21st; and December 21st. On these dates, shadows occurring within one and one-half hour of sunrise or sunset generally are not considered significant in accordance with the *CEQR Technical Manual*, and thus were not included in the screening assessment.

The results of the Tier 3 screening are shown in **Figures 2.4-2A** through **2.4-2D**. The results of the Tier 3 screening showed that, in the absence of intervening buildings, shadows have the potential to reach and

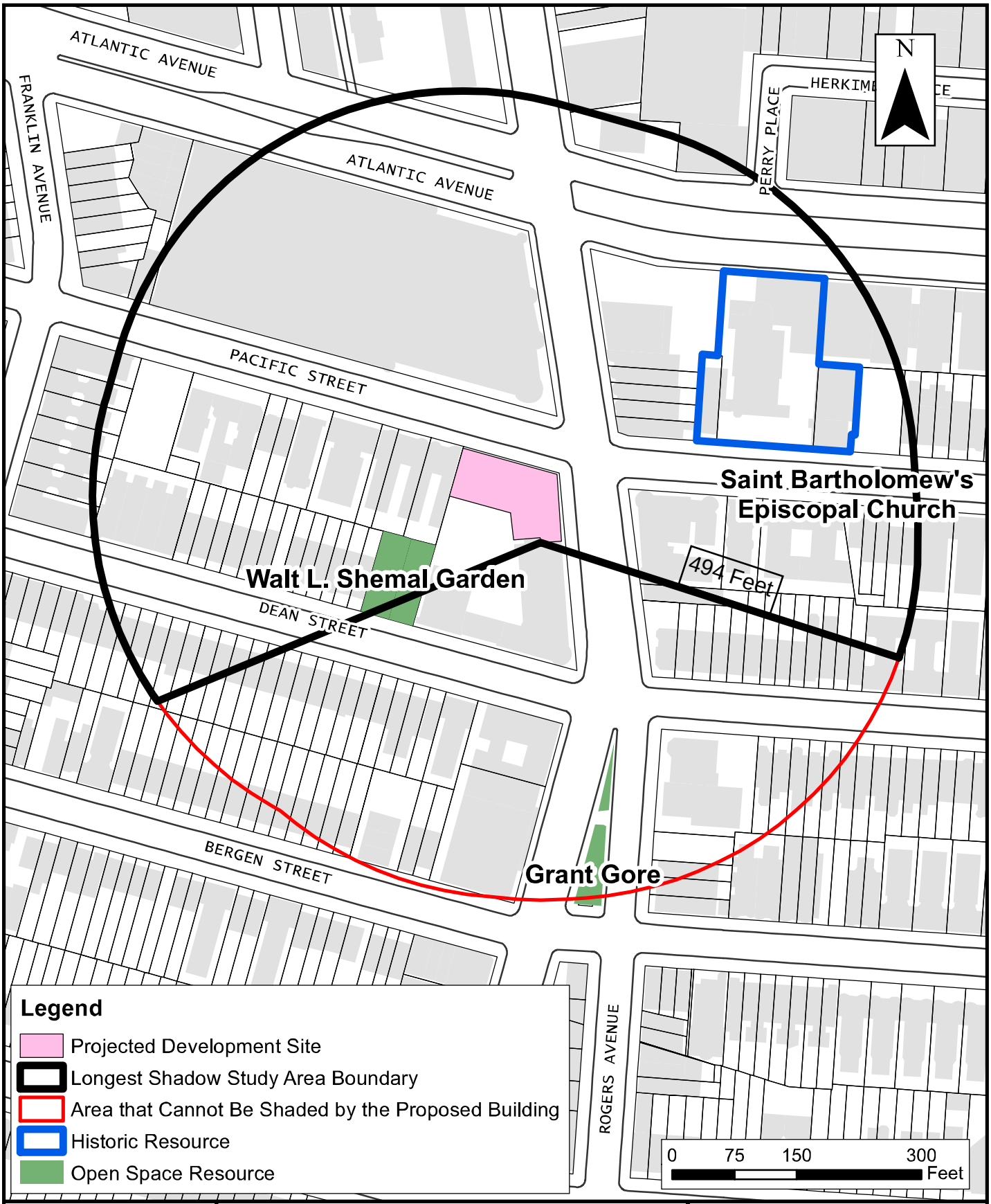
be cast into the Walt L. Shamel Community Garden on the May 6th and June 21st analysis dates, and onto Saint Bartholomew's Episcopal Church on the December 21st and March 21st analysis dates. Therefore, detailed shadow analyses are warranted for the May, June, December and March dates, and are provided below in sub-section 2.4.2.

It should be noted that the shadows shown being cast from the site in the Tier 3 figures, as well as within the following detailed shadow figures, represent the worst-case scenario of an 11-story building (115 feet tall) being constructed at full width and length of the projected development site. However, as discussed in **Section 1.0** and shown **Appendix B**, the applicant's development program consists of an 85-foot, nine-story building with 94 dwelling units. Therefore, net incremental shadows cast from this building will be somewhat reduced to reflect a lower actual building height.

2.4.2 Detailed Shadow Analyses

The *CEQR Technical Manual* states that a detailed shadow analysis is warranted when the screening analyses does not rule out the possibility that project-generated shadows would reach any sunlight-sensitive resources. The detailed shadow analysis establishes a baseline condition (the Future No-Action Condition) that is compared to the future condition resulting from the proposed project (the Future With-Action Condition), to illustrate the shadows cast by existing or future buildings and distinguish the additional (incremental) shadow cast by a project.

To evaluate the extent and duration of new shadow that would be added to a sunlight-sensitive resource as a result of the proposed action, shadows from the site that would exist under the Future No-Action Condition were defined. In the future without the proposed project, the existing building, vacant areas and surface parking lot would remain on the site and shadow conditions would not change, as no new structures would be built on the site. As such, existing shadow conditions would remain the same under the Future No-Action Condition.



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Tier 1 & 2 Shadow Diagram

Figure 2.4-1

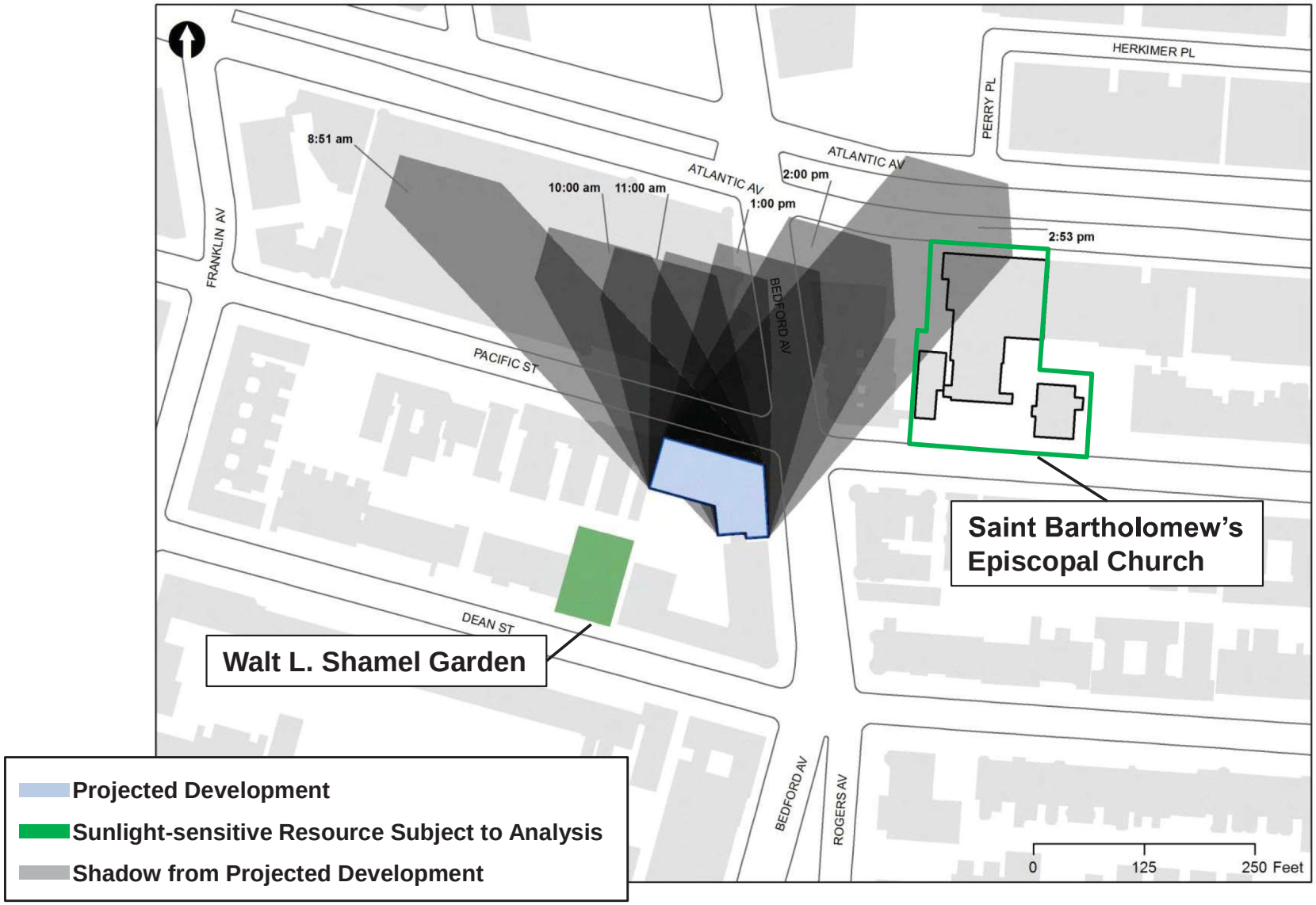
The results of the detailed shadow analyses on the identified resource of concern are noted in **Table 2.4-1** and illustrated in **Figures 2.4-3A** and **2.4-3H**, showing net incremental shadows durations and enter and exit times within the Walt L. Shamel Community Garden and Saint Bartholomew's Episcopal Church. For the identified resources, the table details the times when net new incremental shadows enter and exit the resources, as well as the duration of net new incremental shadows during each analysis date. Results are further described below.

On the December 21st study date, net new incremental shadows would reach into a small northern section of the Saint Bartholomew's Episcopal Church at 2:43 p.m., and would last 10 minutes until the end of the analysis period at 2:53 p.m. Due to the shadows cast by the intervening buildings at 1317 through 1325 Bedford Avenue, no new incremental shadows would be cast within the resource on the sunlight-sensitive windows along the building's western or southern façade. Additionally, the proposed building would not cast any new shadows on Walt L. Shamel Community Garden during this analysis date.

On the March 21st study date, while new incremental shadows would reach into the western side of the Saint Bartholomew's Episcopal Church boundary line at 3:18 p.m., net incremental shadows would not be cast onto the building's southern façade until 4:07 p.m.. The project-generated shadow would sweep across the southern façade of the building until 4:29 p.m., which represents the end of the analysis period. This coverage would last 22 minutes and would only affect a small portion of the resource. The proposed building would not cast any new shadows on Walt L. Shamel Community Garden during this analysis date.

On the May 6th study date, net new incremental shadows would enter the northern portion of the Walt L. Shamel Community Garden at 6:27 a.m. and exit this small section of the park at 7:42 a.m., lasting approximately 1 hour and 15 minutes. The incremental shadow on Walt L. Shamel Community Garden would be partially blocked by intervening shadows cast by the adjacent building at 1350 Grant Square. On May 6th, the maximum amount of coverage of the park would be approximately 1,400 square feet (less than 0.03 acres, or approximately 22 percent of the garden's total area). The proposed building would not cast any new shadows on Saint Bartholomew's Episcopal Church during this analysis date.

On the June 21st study date, net new incremental shadows would enter the northern portion of the Walt L. Shamel Community Garden at 5:57 a.m., which represents the beginning of the analysis date, and would exit the park at the end of the study period at 8:08 a.m., lasting for approximately 2 hours and 11 minutes. On June 21st, the maximum amount of coverage of the park would be approximately 3,000 square feet (approximately 0.07 acres, or approximately 47 percent of the garden's total area). The proposed building would not cast any new shadows on Saint Bartholomew's Episcopal Church during this analysis date.



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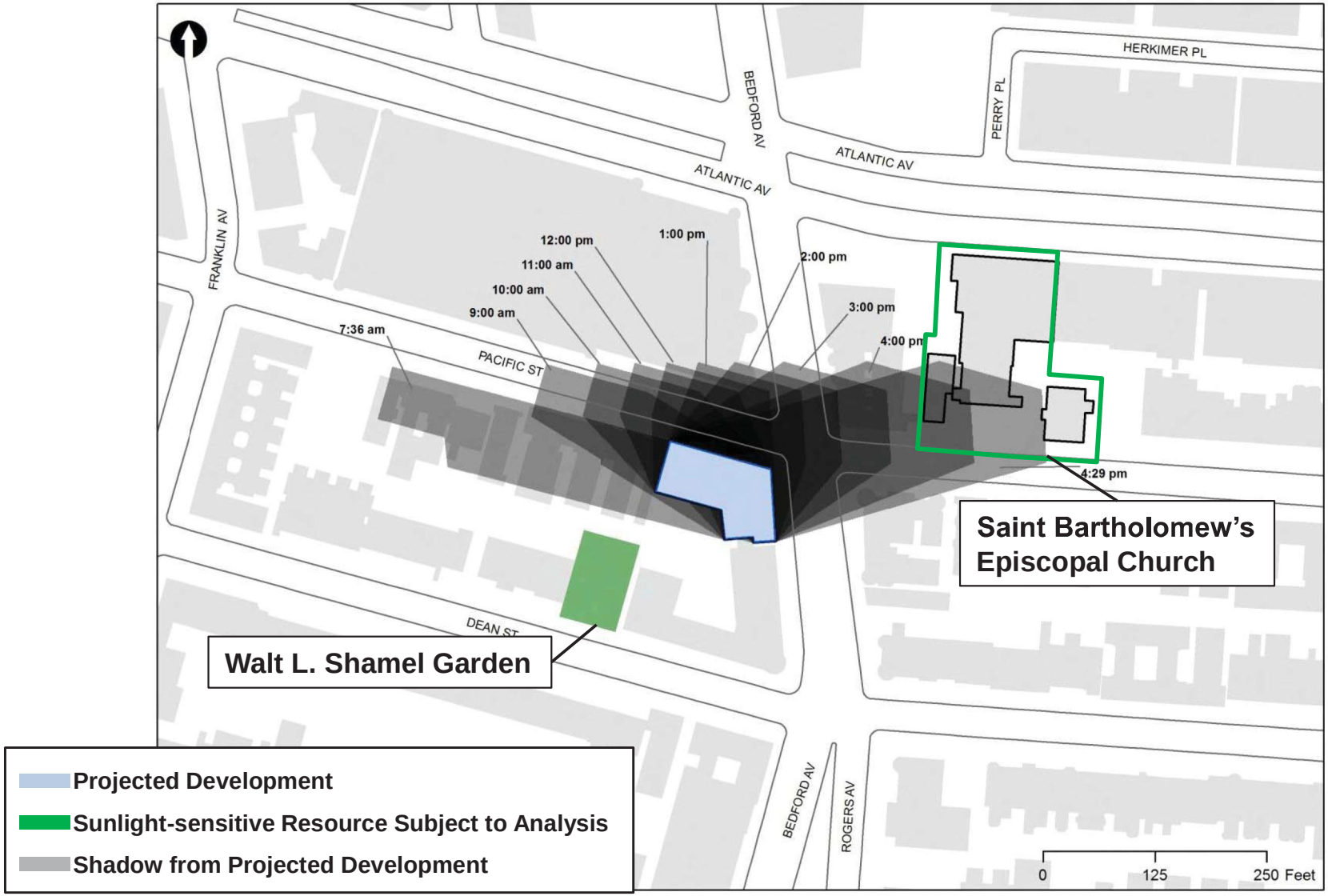
Tier 3 Shadow Analysis December 21st

Figure 2.4-2A



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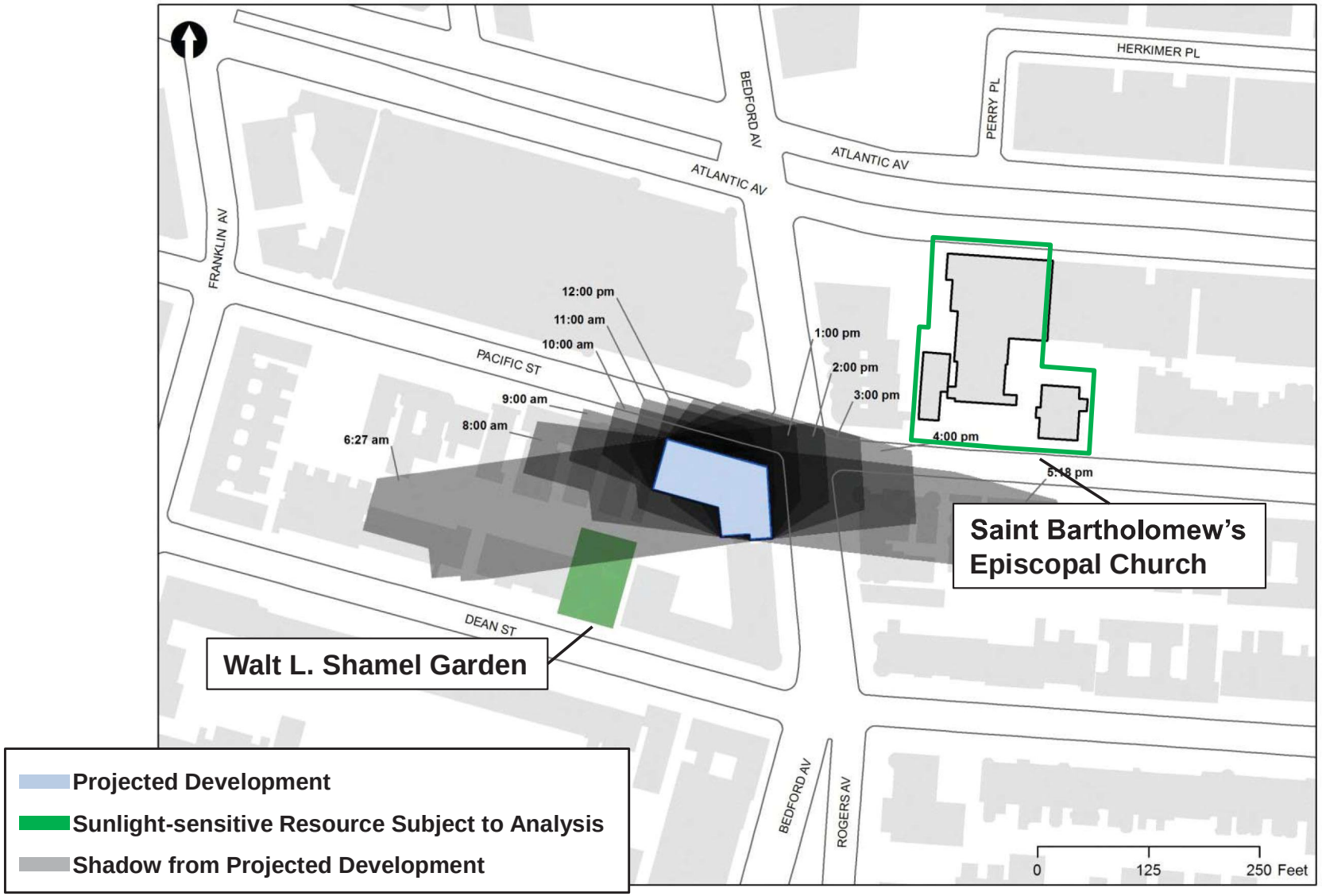
Tier 3 Shadow Analysis March 21st

Figure 2.4-2B



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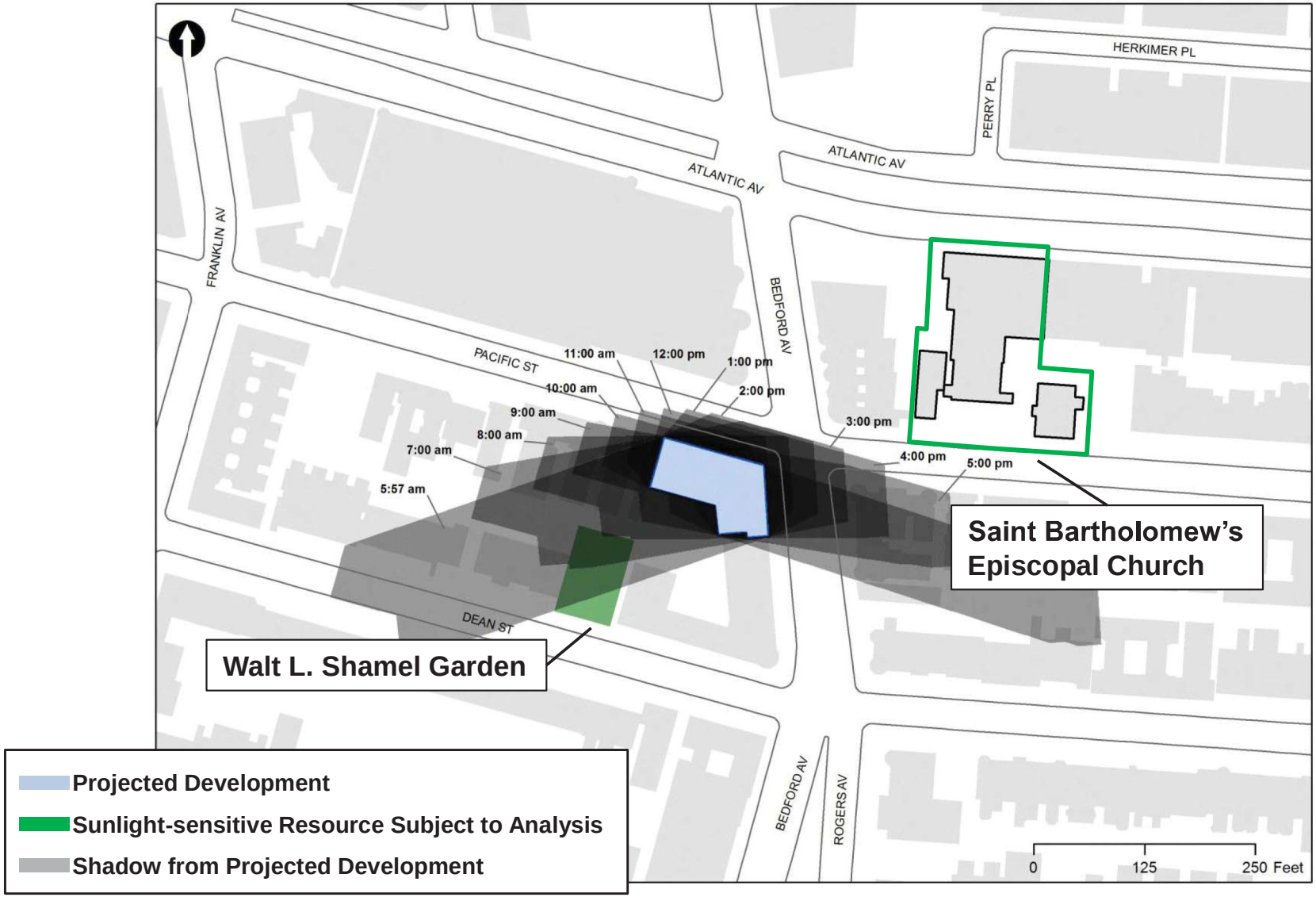
Tier 3 Shadow Analysis
May 6th

Figure 2.4-2C



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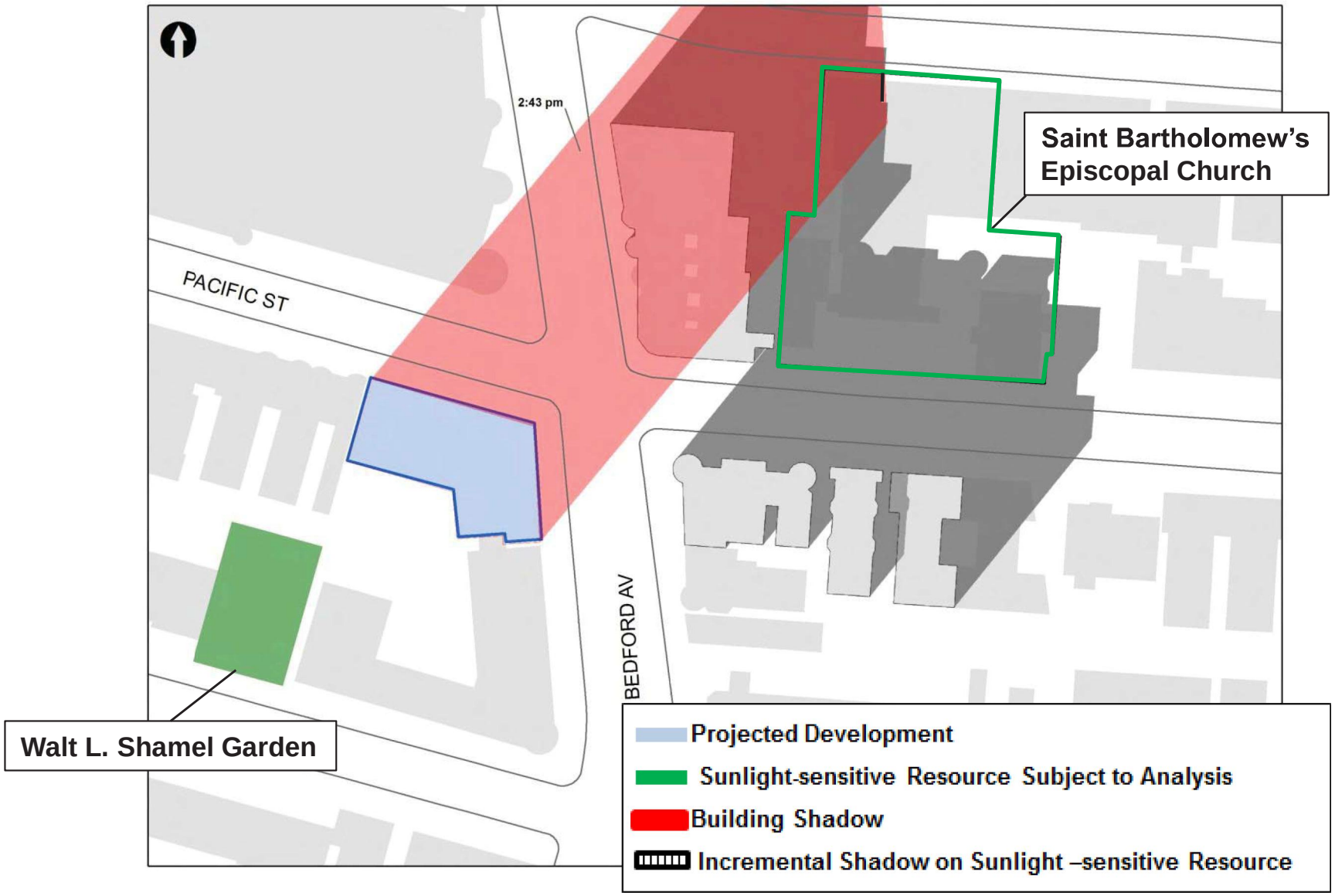
Tier 3 Shadow Analysis
June 21st

Figure 2.4-2D



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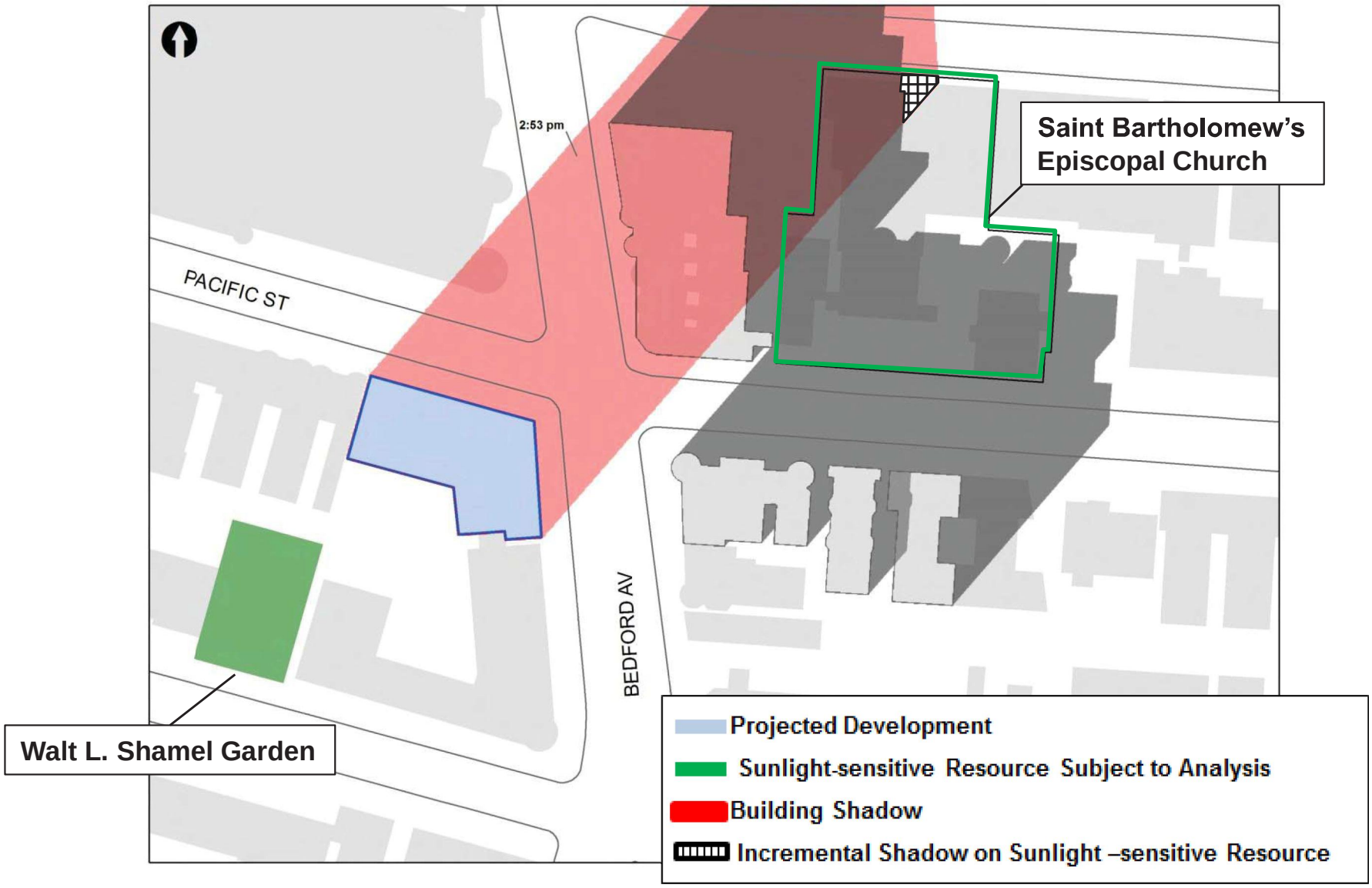
Detailed Shadow Analysis
December 21st, 2:43 P.M.
Figure 2.4-3A



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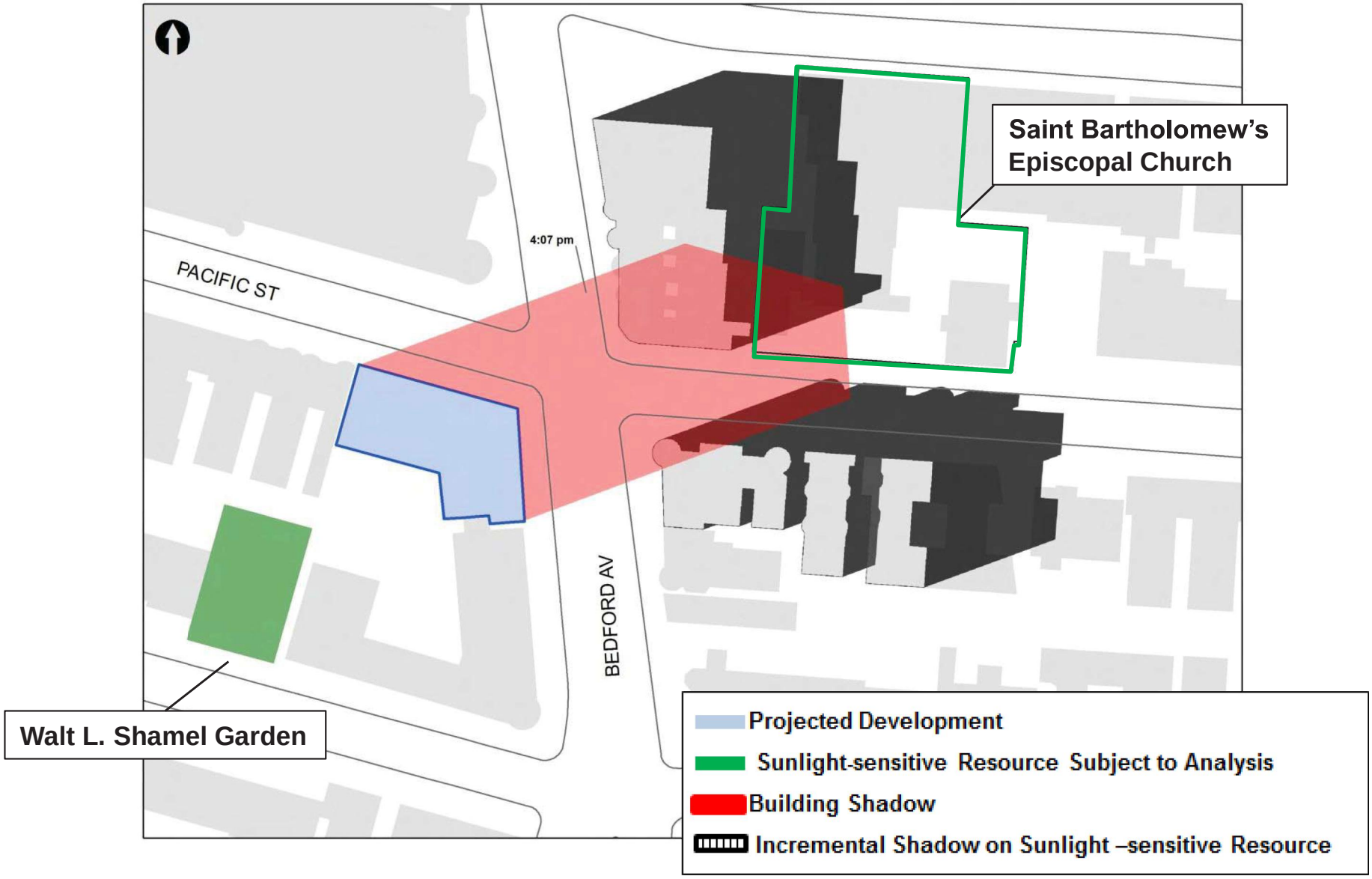
Detailed Shadow Analysis
December 21st, 2:53 P.M.
Figure 2.4-3B



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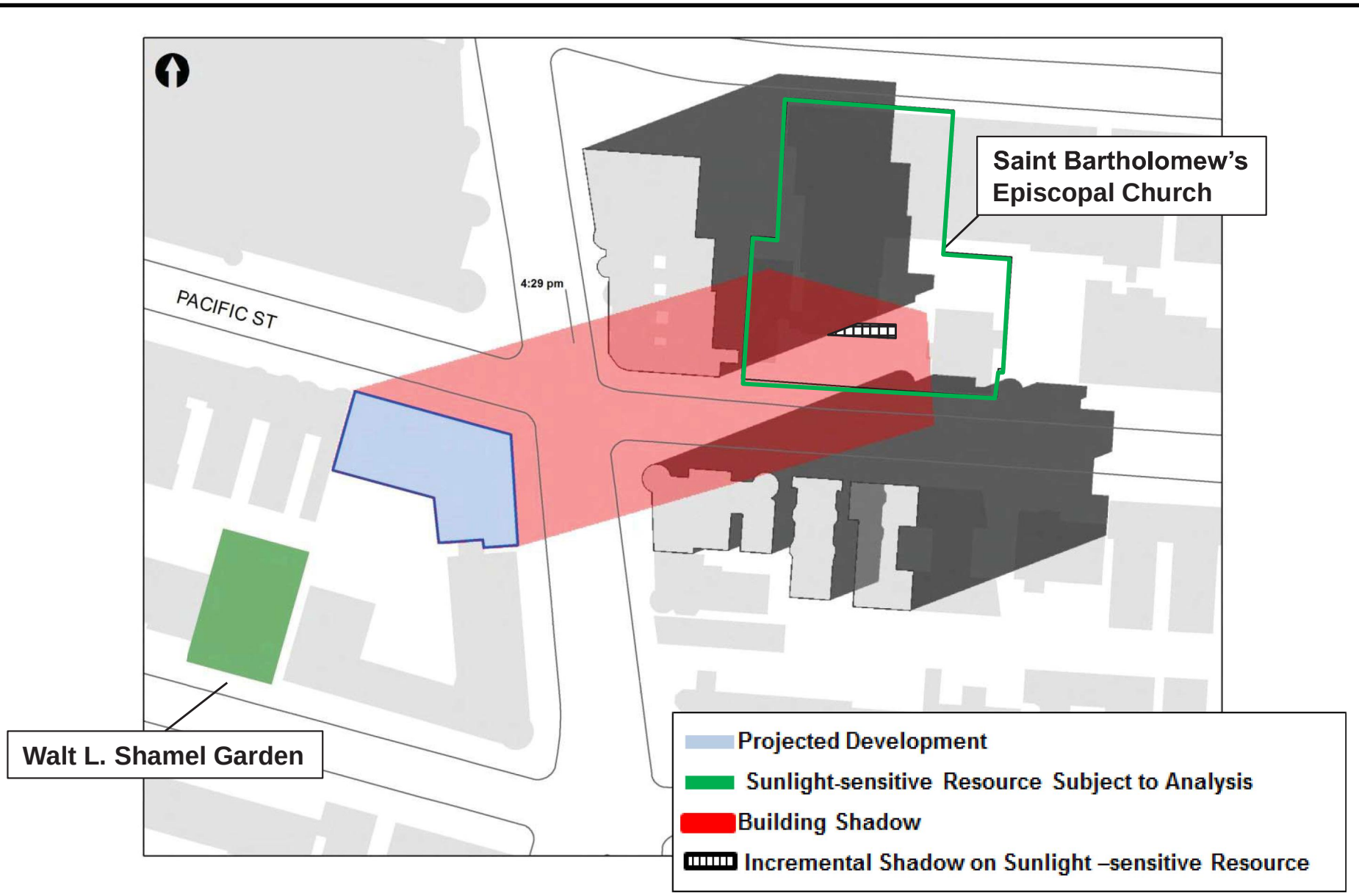
Detailed Shadow Analysis
March 21st, 4:07 P.M.
Figure 2.4-3C



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Environmental Assessment Statement
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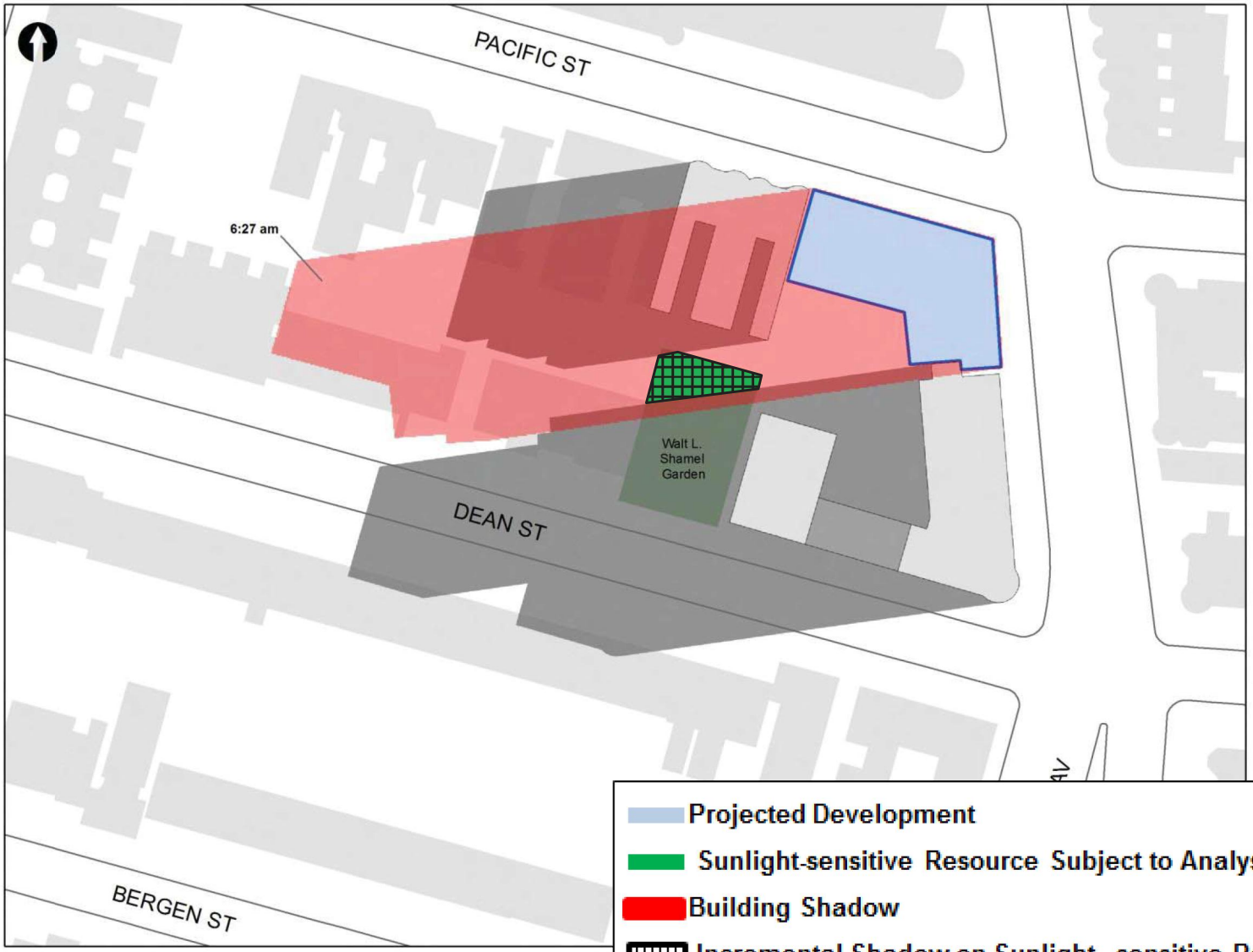
Detailed Shadow Analysis
March 21st, 4:29 P.M.

Figure 2.4-3D



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Environmental Assessment Statement
1350 Bedford Avenue Rezoning
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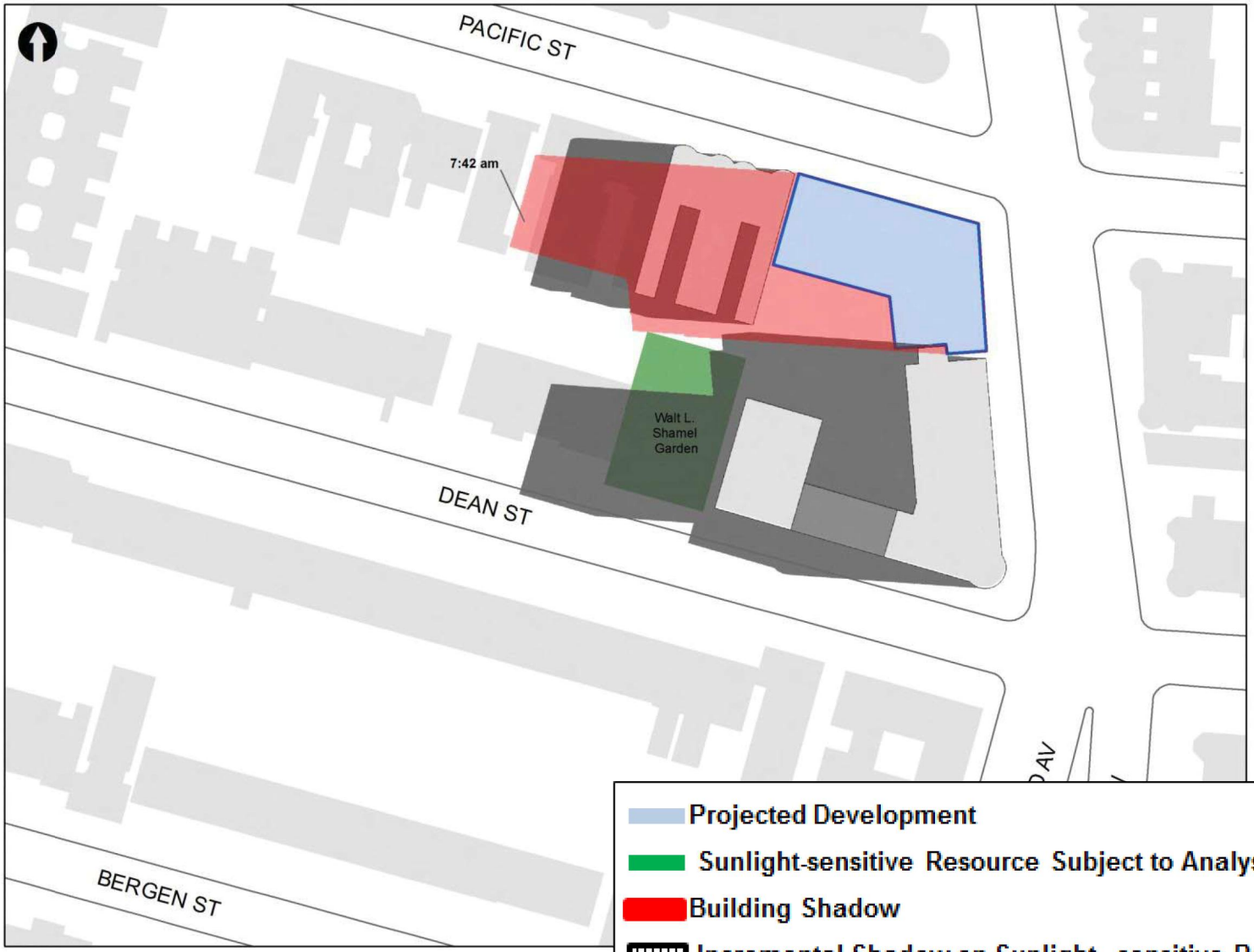
Detailed Shadow Analysis
May 6th, 6:27 A.M.

Figure 2.4-3E



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Environmental Assessment Statement
1350 Bedford Avenue Rezoning
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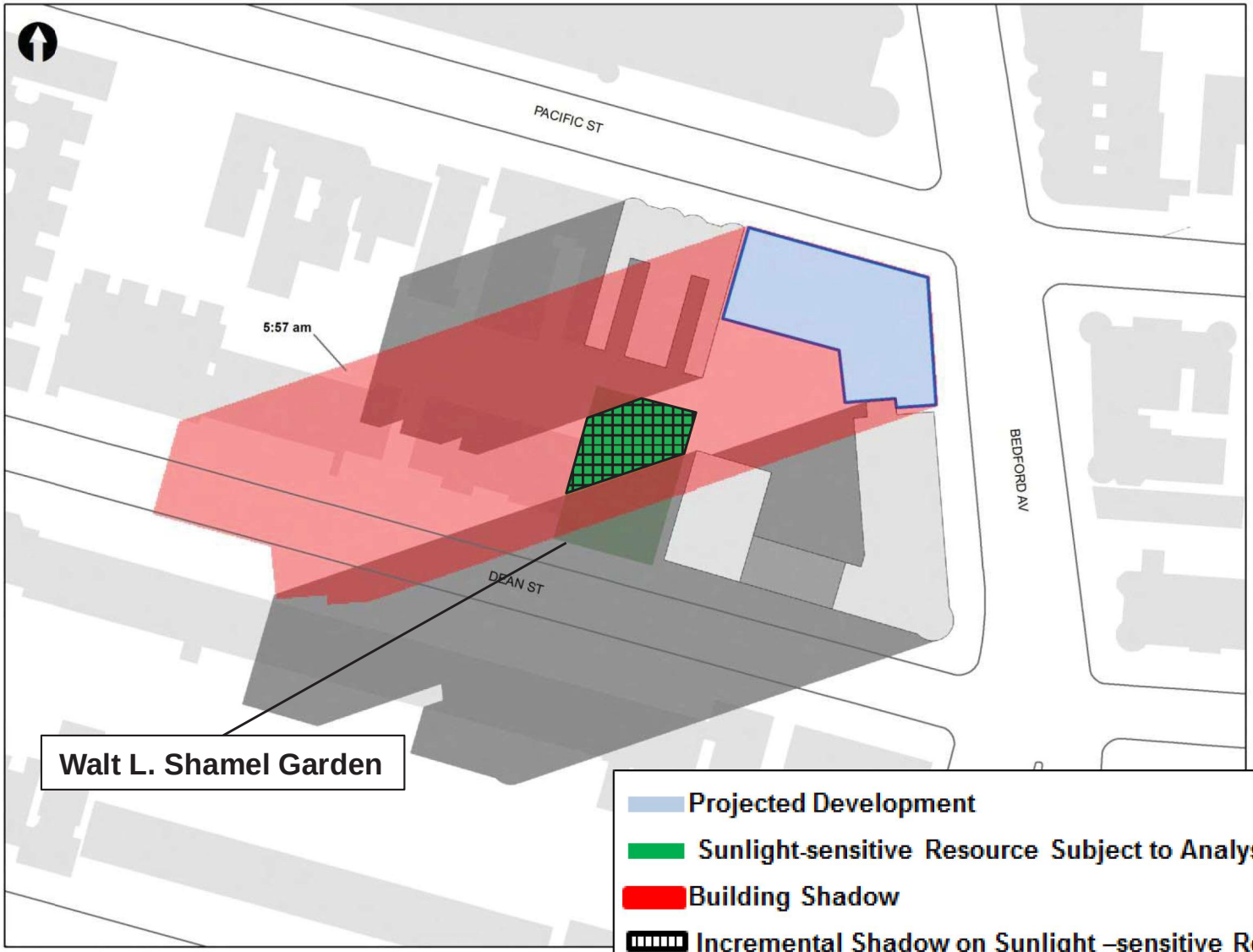
Detailed Shadow Analysis
May 6th, 7:42 A.M.

Figure 2.4-3F



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Environmental Assessment Statement
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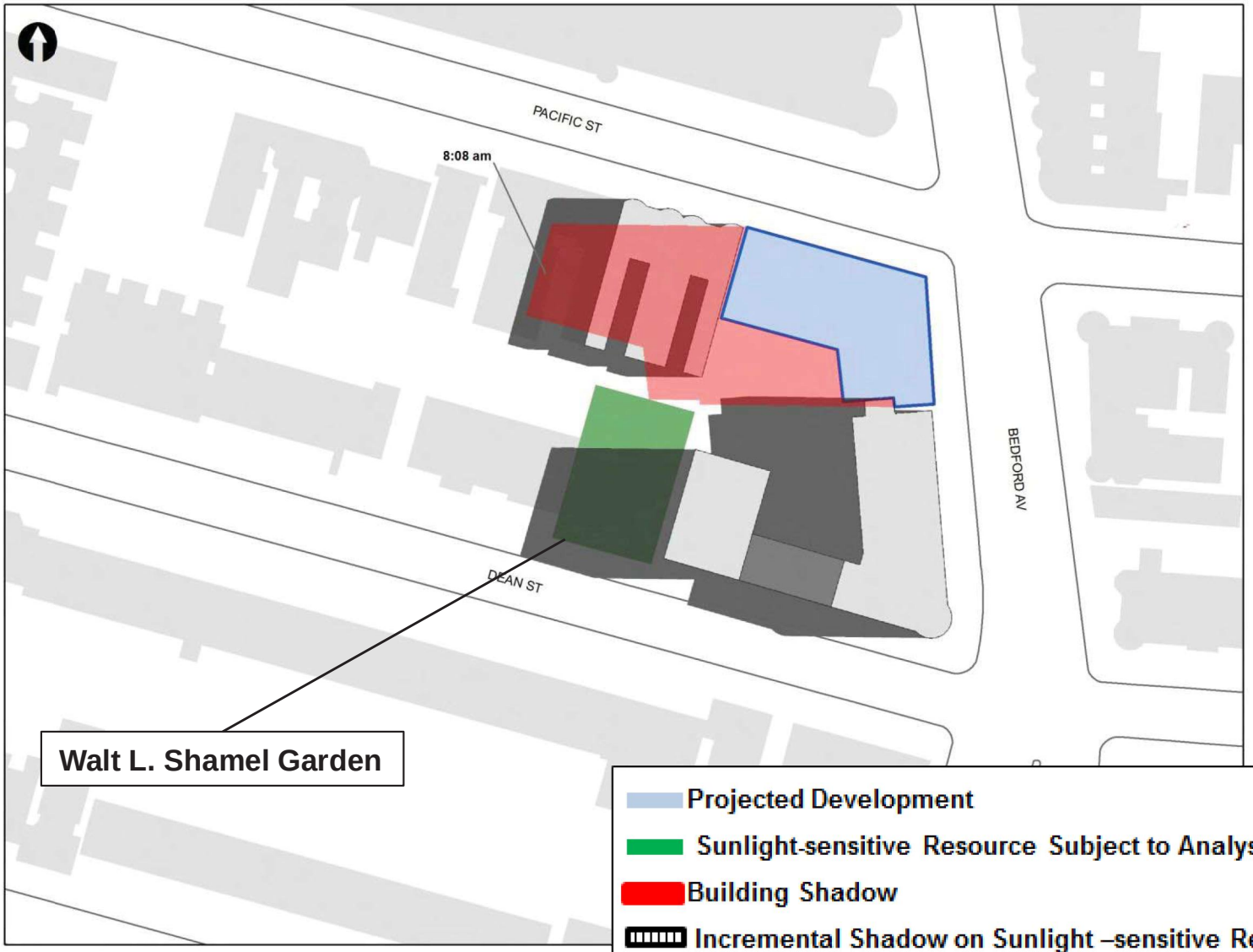
Detailed Shadow Analysis
June 21st, 5:57 A.M.

Figure 2.4-3G



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Detailed Shadow Analysis
June 21st, 8:08 A.M.

Figure 2.4-3H

Table 2.4-1 Detailed Shadow Analysis Table

Resource Time Frame Window	December 21 8:51 a.m. – 2:53 p.m.	March 21 / September 21 7:36 a.m. – 4:29 p.m.	May 6 / August 6 6:27a.m. – 5:18 p.m.	June 21 5:57 a.m. – 6:01 p.m.
Public Open Space				
Walt L. Shamel Community Garden				
Net Shadows Enter – Exit Times	No incremental shadow cast	No incremental shadow cast	6:27 a.m.-7:42 a.m.	5:57 a.m.-8:08 a.m.
Net Incremental Shadow Duration	-	-	1 hour, 15 minutes	2 hours, 11 minutes
Cultural Resource				
Saint Bartholomew's Episcopal Church				
Net Shadows Enter – Exit Times	2:43 p.m.-2:53 p.m.	4:07 p.m.- 4:29 p.m.	No incremental shadow cast	No incremental shadow cast
Net Incremental Shadow Duration	10 minutes	22 minutes	-	-

Note: Daylight Saving Time not used/not applied (per CEQR)

Conclusions

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. The goal of the assessment is to determine whether the effects of incremental shadows on a sunlight-sensitive resource are significant under CEQR. A shadow impact occurs when the incremental shadow from a proposed project falls on a sunlight-sensitive resource or feature and reduces its direct sunlight exposure. 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 of interest generally do not affect the growing season of outdoor vegetation; however, effects on other uses and activities should be assessed. This sensitivity is assessed for warm-weather-dependent features (such as wading pools and sand boxes) or 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. Vegetation requiring direct sunlight includes the tree canopy, flowering plants and plots in community gardens. Generally, four to six hours a day of sunlight, particularly in the growing season, is 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.

For historic resources, the shadow sensitivity of the sunlight-sensitive features of an historic structure depends on its design and setting. If any of the characteristics or elements that make the resource historically significant depend on sunlight, it is necessary under CEQR to inventory those features to

determine their sensitivity to a reduction in sunlight. As stated in the CEQR Technical Manual, the assessment should consider the specific context in which the incremental shadow occurs and provide an analysis of how other shadows from existing structures affect the sunlight-sensitive features of the historic resource throughout the day. The assessment of shadows on an historic resource focuses only on those features or portions of the historic resource that are sunlight-sensitive and can be enjoyed by the public. Only the incremental shadow duration on the sun-sensitive features of the historic resource is of concern.

As shown in **Table 2.4-1** and **Figures 2.4-3E and 2.4-3G**, the proposed actions would cast incremental shadows on a portion of the Walt L. Shamel Community Garden during the early morning periods on the May and June analysis dates, representing a maximum coverage of approximately 2 hours and 11 minutes of incremental shadow during the June analysis date. This portion of the park contains passive open space features, including paved walkways, planters and benches. The analysis shows that ample time will remain for sunlight during the growing season, with almost 10 hours of daylight during June 21st in which no net new shadows would be cast on the park. Incremental shadows would shift over the period covering the resource and shadow coverage generally decreases from maximum coverage points.

As discussed above and shown in **Table 2.4-1** and **Figures 2.4-3B** and **2.4-3D**, the proposed building would cast a small incremental shadow on the southern façade of Saint Bartholomew's Episcopal Church during the March and December analysis period. This shadow would exit the resource by 4:29 p.m., resulting in an incremental shadow over the stained-glass windows that would last 22 minutes. During the December analysis period, no incremental shadows would be cast over the sunlight-sensitive stained glass windows on the church's southern or eastern façade. During these analysis periods, a substantial reduction in sunlight would not occur in the future with the proposed action, and the enjoyment and appreciation of the church's sunlight-sensitive features would not be adversely affected. No new shadow would be cast on Saint Bartholomew's Episcopal Church during the May or June analysis dates.

As a result of the minimal duration of the incremental shadow coverage generated by the projected development, a substantial reduction in the usability of the Walt L. Shamel Community Garden would not occur in the future with the proposed action. These new shadows would not deprive vegetation of all sunlight that is needed to grow or result in a substantial reduction in sunlight available to users or natural resources less than the minimum time necessary for its survival. Similarly, incremental shadows to the Saint Bartholomew's Episcopal Church would be limited to 22 minutes in duration and would not significantly impact the resource's sunlight-sensitive stained-glass windows. Therefore, significant adverse impacts are not expected from net new incremental shadows as a result of the proposed action, and further shadow analyses are not warranted.

2.5 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.

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.

Architectural Resources

According to *CEQR Technical Manual* guidelines, impacts on historic resources are considered on those sites affected by the proposed actions 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 proposed actions area.

The projected development site is not a designated local or S/NR historic resource or property, nor is the site part of any designated historic district.

In order to determine whether the projected development has the potential to affect nearby off-site historic or architectural resources, the study area was screened for historic and architectural resources. Three structures within 400 feet of the rezoning area are designated as historic landmarks. These designated off-site historic and architectural resources are listed in **Table 2.5-1**.

The rezoning area is situated across Pacific Street from the 23rd Regiment Armory (S/NR No. 04701.002503, LPC No. LP-0950). Designated as an LPC Landmark in March 1977, the structure is designed to resemble a medieval fortress and is a vast and impressive example of late 19th-century military architecture in the Romanesque Revival style. It was constructed between 1891 and 1895. The Pacific Street elevation of the administration portion of the building, opposite the proposed rezoning area, contains a gabled section, seven bays wide, at the center which echoes the gabled form of the entrance facade. The corbelled turrets which flank the gable have the same rounded, foliate, terra-cotta terminations as those at the gable of the main facade. This gabled section is five stories in height with round-arched windows at the first, fourth, and fifth stories, while the flanking portions of the building are three stories in height with copper dormer windows set at the roof. Above the rusticated basement of this Pacific Street elevation of the administration portion of the building are a series of round-arched windows at the first story which, like all the others, have rusticated stone enframements. With its corner tower rising 136 feet in height, its great arched entrance and its enormous drill shed, this building is the most imposing of Brooklyn's 19th-century armories.

Across Bedford Avenue (Grant Square) from the proposed rezoning area are the Imperial Apartments (S/NR No. 04701.017409 and LPC No. LP-01432). This light-colored brick building, with its terra-cotta trim, metal bay windows, tall arcades and round corner tower is an important presence on Grant Square and one of the earliest prestigious apartment buildings in Brooklyn. The Imperial Apartments were constructed in 1892 and restored in 2006. Rising from a stone base for four stories with a picturesque slate mansard fifth story, the building's facade is designed in a striped pattern of continuous bands of terra cotta separated by courses of buff Roman brick. The main entrance facade which faces Pacific Street is brought forward, creating a central pavilion flanked by full-height round corner towers. The entrance consists of large Ionic columns supporting a foliate frieze which continues around the entire building above the first floor. The major architectural feature of the Grant Square façade (opposite the rezoning area) is a dignified arcade rising three stories between the second and fourth floors. This arcade consists of paired Corinthian columns carrying deep coffered arches. Within each arch are shallow three-sided bays at the second and third floors and tripartite round-arched windows at the fourth. The treatment is like that in the outer arches on the Pacific Street facade.

Located to the northeast of the rezoning area is the Saint Bartholomew's Episcopal Church (S/NR No. 04701.000167 and LPC No. LP-00820), which was constructed in 1890 and designated in 1974. George P. Chappel, one of Brooklyn's most creative late 19th-century architects, was responsible for this quirky English-inspired Queen Anne design. The asymmetrically massed church, with its richly textured stone and brick walls, tile cladding, and picturesque tower, is set behind a garden that creates the illusions of a rural church in an urban neighborhood.

In addition to individually listed or designated landmarks, the Crown Heights North Historic District, which is an S/NR (No. 13NR06488) and LPC (No. LP-02204) designated historic district is located across Bedford Avenue from the rezoning area. Situated south of Atlantic Avenue between Rogers and Kingston Avenues, the Crown Heights North Historic District contains some of Brooklyn's finest and most exquisitely detailed row houses, attached houses, freestanding residences, churches, flats buildings, and elevator apartment houses, dating from the mid-19th century to the 1930s. Until the Civil War, large portions of the district were cultivated as farmland. Sold by heirs to the Lefferts estate in 1854, the area developed slowly, first with freestanding houses, and later with speculative row houses centered along Dean Street and Brooklyn Avenue. Though some date from the 1870s and were designed in the neo-

Greco style, the great majority were built later in the Queen Anne or Romanesque Revival style. This later stage of development was fueled in part by the Kings County Elevated Railway, which began serving Fulton Street, to the north, in 1888. Many institutional structures are concentrated along Dean Street, including several impressive churches and the former Union League Club. The introduction of the automobile in the early 20th century and the opening of the IRT subway along Eastern Parkway in 1920 led to the construction of a group of semi-attached residences with garages, as well as Mediterranean

Table 2.5-1 Known Historic/Architectural Resources

RESOURCE/YEAR BUILT	ADDRESS/SITE PROXIMITY
23rd Regiment Armory (S/NR No. 04701.002503, LPC No. LP-00950) / 1895	1322 Bedford Avenue (across Pacific Street from the projected development site)
Imperial Apartments (S/NR No. 04701.017409, LPC# LP-01432) / 1892	1198 Pacific Street (across Bedford Avenue from the projected development site)
Saint Bartholomew's Episcopal Church (S/NR No. 04701.000167, LPC No. LP-00820) / 1890	1227 Pacific Street (approximately 200 feet northeast of the projected development site)
Crown Heights North Historic District (S/NR No. 13NR06488, LPC No. LP-02204) / various	District generally south of Atlantic Avenue between Rogers and Kingston Avenues (western boundary is located across Bedford Avenue from the rezoning area)

Source: Guide to New York City Landmarks, 4th edition; New York City Landmarks Preservation Commission, 2009

Revival and Art Deco-style apartment buildings. Little new construction has occurred in Crown Heights North since the 1930s.

The LPC was contacted for their initial review of the project's potential to impact nearby historic and cultural resources, and a response was received on December 2, 2016, indicating that the projected development site does not contain any architectural significance (see **Appendix B**).

Under the proposed action, construction activities at the projected development site would occur within 90 feet of the 23rd Regiment Armory and the Imperial Apartments. 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. However, there are two mechanisms to protect buildings in New York City from potential indirect damage caused by construction activities. All buildings are provided some protection from accidental damage through DOB controls that govern the protection of adjacent properties from construction activities under Building Code Section 27-166 (C26-112.4) For all construction work, this building code protects 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 designated NYCL and S/NR-listed historic buildings. For these structures, the DOB's Technical Policy and Procedure Notice (TPPN) No. 10/88 applies. *TPPN 10/88* supplements the standard building protections afforded by the Building Code C26-112.4 by requiring a monitoring program to reduce the likelihood of construction damage to adjacent LPC-designated or S/NR-listed resources within 90 feet of construction activity, and to detect at an early stage the beginnings of damage so that construction procedures can be changed. Therefore, it is concluded that construction effects related to the proposed actions would not lead to significant adverse impacts at these adjacent historic resources.

Cultural and 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.

A portion of the rezoning area has been disturbed and is presently improved with a six-story residential building, while a portion of the rezoning area that would be developed with the projected residential building contains a surface parking lot and vacant area. As noted, the LPC was contacted for their initial review of the project's potential to impact nearby historic and cultural resources, and a response was received on December 2, 2016 (see **Appendix B**). The LPC has indicated that no cultural resource, architectural or archaeological significance is associated with the projected development site at 1350 Bedford Avenue. Therefore, significant adverse impacts to archaeological resources are not expected as a result of the proposed action, and further analysis is not warranted.

Figure 2.5-1 showcases the historic resources within the project area on a map while **Figure 2.5-2** shows ground level photographs of the historic resources.

Architectural Resources Assessment

The following is an assessment to see if the proposed project would affect characteristics that make a resource eligible for listing on the State and/or National Register or for New York City designation. . Since the project site is across from the Crown Heights North Historic District, an assessment was undertaken. Possible impacts to architectural resources may include, but are not limited to the following:

· Physical destruction, demolition, damage, alteration, or neglect of all or part of an historic property. For example, alterations that would add a new wing to an historic building or replacement of the resource's entrance may result in adverse impacts, depending on the design.
· Changes to the architectural resource that causes it to become a different visual entity, such as a new location, design, materials, or architectural features. · Construction-related impacts, such as falling objects, vibration (particularly from blasting or pile-driving), dewatering, flooding, subsidence, or collapse. Such impacts may occur to an architectural resource adjacent to a construction site if adequate precautions are not taken.
· Introduction of significant new shadows, or significant lengthening of the duration of existing shadows, over an historic landscape or on an historic structure (if the features that make the resource significant depend on sunlight) to the extent that the architectural details that distinguish that resource as significant are obscured.

Architectural Resources

Direct

According to CEQR, direct impacts on architectural resources occur when a project results in new construction or significant physical alteration to any landmarked building, structure, or object. While the building is across the street the Crown Heights North Historic District, which is an S/NR (No. 13NR06488) and LPC (No. LP-02204) designated historic district, it does not actually lay within the district and LPC has determined that 1350 Bedford Avenue does not appear LPC or S/NR eligible, and therefore, there would be no direct impacts on architectural resources on the project site so no further analysis is warranted.

There are three designated LPC or S/NR landmarked structures within the 400-foot study area;
- Saint Bartholomew's Episcopal Church (S/NR No. 04701.000167 and LPC No. LP-00820)
- Imperial Apartments (S/NR No. 04701.017409, LPC# LP-01432)
- 23rd Regiment Armory (S/NR No. 04701.002503, LPC No. LP-00950)

The proposed project would not result in any physical alteration, new construction, or demolition to any of the above landmarks, and therefore the proposed action would not have any direct impact on any historic resource.

Indirect

According to CEQR, a project may result in adverse indirect impacts on historic resources when it affects its context or visual prominence. Indirect impacts can result from construction, With-Action shadows, and urban design.

Shadows

As discussed previously in Section 2.4 Shadows, With-Action shadows would be cast on a historic resource (Saint Bartholomew's Episcopal Church). However, incremental shadows to the Saint Bartholomew's Episcopal Church would be limited to 22 minutes in duration and would not significantly impact the resource's sunlight-sensitive stained-glass windows. Therefore, significant adverse impacts are not expected from net new incremental shadows as a result of the proposed action, and further shadow analyses are not warranted.

Construction

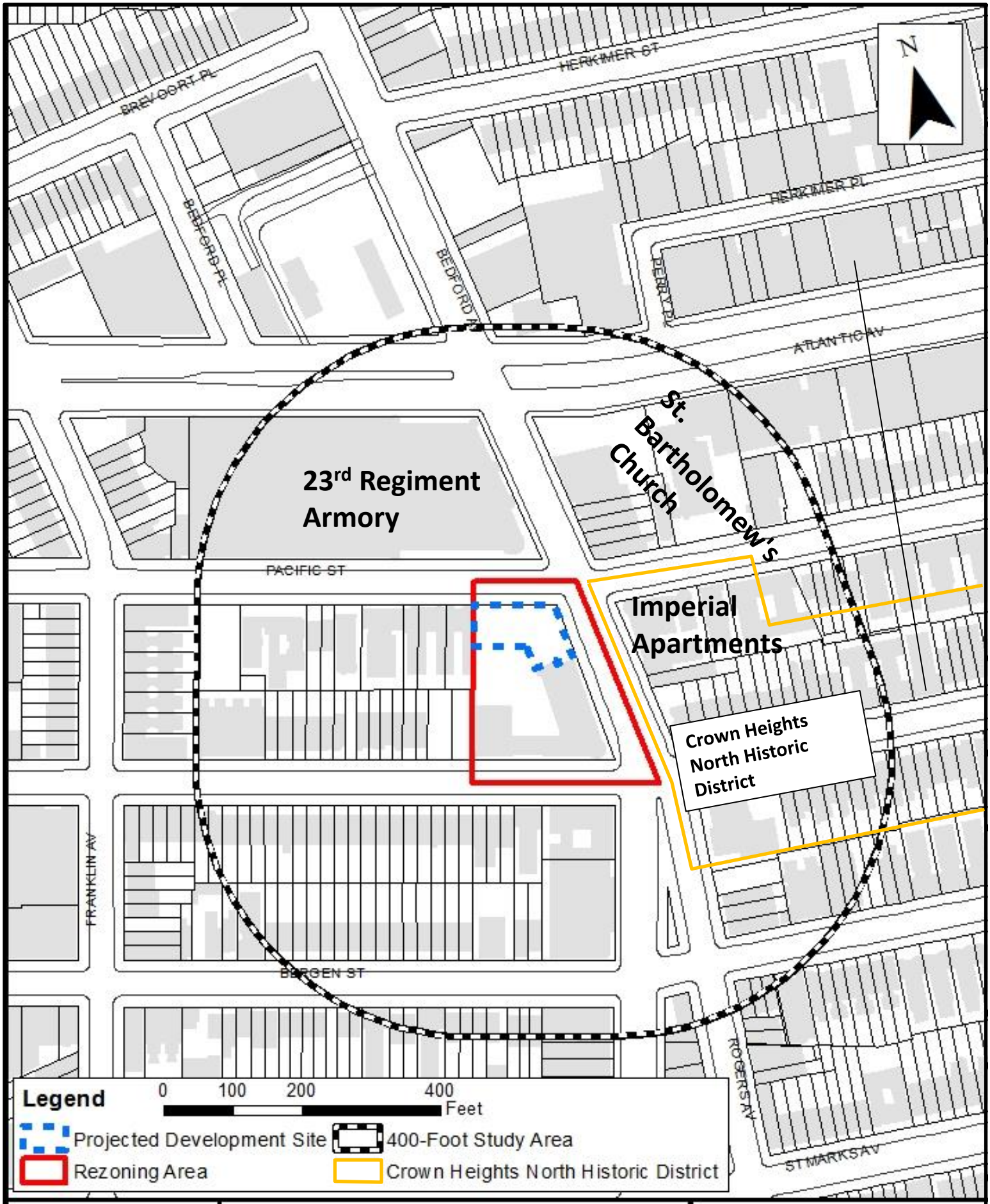
Under the proposed action, construction activities at the projected development site would occur within 90 feet of the 23rd Regiment Armory and the Imperial Apartments. The 90-foot buffer is recognized as being close enough to potentially experience adverse construction-related impacts from ground-borne construction-period vibrations, falling debris, and/or collapse. However, there are two mechanisms to protect buildings in New York City from potential indirect damage caused by construction activities. All buildings are provided some protection from accidental damage through DOB controls that govern the protection of adjacent properties from construction activities under Building Code Section 27-166 (C26-112.4) For all construction work, this building code protects 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 designated NYCL and S/NR-listed historic buildings. For these structures, the DOB's Technical Policy and Procedure Notice (TPPN) No. 10/88 applies. *TPPN 10/88* supplements the standard building protections afforded by the Building Code C26-112.4 by requiring a monitoring program to reduce the likelihood of construction damage to adjacent LPC-designated or S/NR-listed resources within 90 feet of construction activity, and to detect at an early stage the beginnings of damage so that construction procedures can be changed. Therefore, it is concluded that construction effects related to the proposed actions would not lead to significant adverse impacts at these adjacent historic resources.

Urban Design and Visual Resources

Although the With-Action Condition development would be larger in bulk than the surrounding buildings, from a pedestrian's perspective, the With-Action development would confirm to the existing shape and contour of the project site and the development would not obstruct any important view corridors or adversely affect the built features of the historic resources in the 400 –foot study area.

Conclusion

The project site does not contain any architecturally historic resources. The project site is not within a landmarked district and would not directly affect a landmarked building. The proposed project may result in minimal incremental shadows on St. Bartholomew's church, but these incremental shadows would not fall on any sunlight sensitive features, and were not determined to be a significant impact. Measures required by DOB to protect nearby historic structures during construction of the proposed project would be implemented. The building's form and design would be consistent with the surrounding neighborhood character. Therefore, the proposed project would not result in significant adverse impacts related to architectural resources.



AECOM

Environmental Assessment Statement
1350 Bedford Avenue Rezoning
Prospect Heights, Brooklyn, NY

Historic Resources in Project Area

Figure 2.5-1



View of Existing Building at 1350 Bedford Avenue with 23rd Regiment Armory in the backdrop



View of 23rd Regiment Armory at 1322 Bedford Avenue (Across Pacific Street from Project Site)



View of Imperial Apartments at 1198 Pacific Street (Across Bedford Avenue from Project Site



View of St. Bartholomew's' s Church at 1227 Pacific Street, approximately 200 feet northeast of Project Site

AECOM	**Environmental Assessment Statement** **1350 Bedford Avenue Rezoning** **Prospect Heights, Brooklyn, NY**	***Historic Resources Photos*** ***Figure 2.5-2***

2.6 URBAN DESIGN AND VISUAL RESOURCES

According to the *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.

The *CEQR Technical Manual* notes an urban design assessment considers whether and how a project may change the experience of a pedestrian in the project area. The assessment focuses on the components of a proposed project that may have the potential to alter the arrangement, appearance, and functionality of the built environment. In general, an assessment of urban design is needed when the project may have effects on one or more of the elements that contribute to the pedestrian experience (e.g., streets, buildings, visual resources, open space, natural features, wind, etc.). An urban design analysis is not warranted if a proposed project would be constructed within existing zoning envelopes, and would not result in physical changes beyond the bulk and form permitted "as-of-right" with the zoning district.

As the proposed actions would result in the construction a new building that is not allowed "as-of-right" per existing zoning, a preliminary analysis was conducted.

2.6.1 Preliminary Analysis

As stated in the *CEQR Technical Manual*, the study area for urban design is the area where the project may influence land use patterns and the built environment, and is generally consistent with the study area used for the land use analysis (i.e., 400 feet around the project sites). For visual resources, existing publicly accessible view corridors within the study area should be identified. The purpose of the preliminary assessment is to determine whether any physical changes proposed by a project may raise the potential to significantly and adversely affect elements of urban design, which would warrant the need for a detailed urban design and visual resources assessment.

Existing Conditions

The study area is located in the Crown Heights North neighborhood of Brooklyn. A ground level photograph map key is provided in the previously presented **Figure 1-3**, with ground-level photographs of the projected development site and the immediate surrounding area are provided in previously presented **Figure 1-4**.

The proposed development site is a trapezoid-shaped corner lot that is bordered by Bedford Avenue to the east, Pacific Street to the north and Dean Street to the south. Bedford Avenue in this location is a one-way northbound street comprised of two traffic lanes, a "Bus Only" lane and a designated bike lane that runs along the west side of the street, with parking on the western side the street. Dean Street is a one-way eastbound street with a bike lane and parking on both sides of the street, while Pacific Street is a one-way westbound street with parking on both sides of the street.

Occupying the northernmost portion of the study area, Atlantic Avenue serves as a barrier between the Crown Heights North neighborhood to the south and the Bedford Stuyvesant neighborhood further north. In this location, Atlantic Avenue is a heavily-trafficked, two-way transportation corridor with three lanes of traffic in each direction and one parking lane (on the eastbound side of roadway). West of Bedford Avenue, Atlantic Avenue is separated by a raised median; east of Bedford Avenue, the central portion of Atlantic Avenue further divided by the open cut formed by Long Island Rail Road corridor as it transitions from below grade (to the west) to an elevated structure (to the east).

The street hierarchy of the study area includes several different functional classifications. Bedford and Atlantic Avenues are classified as Principal Arterial Roadways under the Surface Transportation Program, while Dean and Bergen Streets are classified as Major Collector Roadways. To the west of the rezoning area, Franklin Avenue is classified as a Minor Arterial Roadway. All other roadways in the study area are classified as local.

Natural features located within the study area are generally limited to open spaces, including Grant Square, a small triangular-shaped traffic island (raised median) located just south of the proposed development site at the convergence of Bedford and Rogers Avenue. Grant Square, also known as Grant Gore, includes planted areas in addition to a large bronze equestrian statue by William Ordway Partridge (1861-1930) that depicts Civil War General and 18th U.S. President Ulysses S. Grant. The Walt L. Shamel Community Garden, which is located adjacent to the western boundary of the proposed development site on the north side of Dean Street, also provides open space and natural features. As exhibited by aerial photography **(Figure 2.6-5)**, additional open space and natural features can be found in the residential courtyards located along the interior portions of the residential blocks that comprise the study area.

As noted in **Chapter 2.1-1**, the area is characterized by a mix of uses, including residential apartment buildings, one and two-family homes, mixed residential and commercial uses, public institutions, and open space. Residences within the area are generally located within four- to six-story multi-family buildings. As exhibited in **Figure 2.6-4**, the majority of the study area is comprised of low-rise residential buildings that are five stories or less, with very few buildings over five-stories tall. Most buildings within the study area are arranged regular (parallel) with respect to their lot placement. Building street walls along side streets within the area are generally aligned along side streets within the study area, with the tendency for greater variance along key corridors of Bedford Avenue and Rogers Avenue. Residential and mixed-use buildings typically are attached to one another, as opposed to free-standing detached buildings.

Dean and Bergen Streets in the study area are predominantly traditional row house districts; where three- and four-story attached brownstone buildings, largely developed during the 19th century, tend to be set back from the street with stoops and small front yards in some instances. Residences along the south side of Pacific Street between Franklin and Bedford Avenues are relatively larger and typically closer to the street relative to Dean and Bergen Street residences. Most of the study area buildings east of east of Bedford Avenue are part of the Crown Heights North Historic District, which includes an ensemble of mansions, churches, row houses and freestanding residences, forming a unique streetscape unlike any other in the City. The buildings in the district were built from the 1860s to the 1930s and the styles include Romanesque Revival, Queen Anne, Georgian and Renaissance Revival.

There is one notable streetscape element within the study area. Grant Square, a median with trees and a statue of Presidential Ulysses S. Grant is lies just north of Bergen Street between Rogers and Bedford Avenues, approximately one block south of the project site. Several streets, including, Bergen Street, Bedford Avenue, and Dean Street, contain street trees, which are generally located at irregular intervals. However, no other notable streetscape elements (e.g. benches, plazas, etc.) are located outside public parks within the study area.

Visual resources in the study area are generally limited to historic structures, which include the 23rd Regiment Armory, located across Pacific Street from the proposed development site at 1322 Bedford Avenue; Imperial Apartments, at 198 Pacific Street across Bedford Avenue from the proposed development site; Saint Bartholomew's Episcopal Church, located approximately 200 feet northeast of the proposed development site at 1227 Pacific Street; and the Crown Heights North Historic District, which is situated across Bedford Avenue from the proposed development site and is generally located east of Bedford Avenue between Pacific and Bergen Streets.

Future No-Action Condition

Under the Future No-Action Condition, significant changes to the study area are not expected by the final analysis year of 2020. It is expected that while tenants within area office, retail and other buildings may change, the overall use of these buildings within the study area would remain the same, and any physical changes to buildings in the study area would comply with designated zoning regulations and other surrounding districts. 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

According to the *CEQR Technical Manual*, if a preliminary assessment determines that changes to the pedestrian environment are sufficiently significant to require greater explanation and further study, then a detailed urban design and visual resources analysis is appropriate. Detailed analyses are generally appropriate for all area-wide rezoning applications that include an increase in permitted floor area or changes in height and setback requirements, general large scale developments, or projects that would result in substantial changes to the built environment of a historic district, or components of an historic building that contribute to the resource's historic significance. Conditions that merit consideration for further analysis of visual resources include when the project partially or totally blocks a view corridor or a natural or built rare or defining visual resource. Further conditions that merit consideration are when the project changes urban design features so that the context of a natural or built visual resource is altered, such as if a project alters the street grid so that the approach to the resource changes, or if a project changes the scale of surrounding buildings so that the context changes.

The proposed development site is presently improved with a six-story, 82,655 gross square foot (69,808 zsf) building at 1350 Bedford Avenue (Block 1205, Lot 28) that covers approximately 36 percent of the lot area. This building is six stories in height and contains 78 dwelling units (plus one super's unit). The proposed development site has a lot area of 36,433 square feet and a built FAR of 1.88. The remainder of the project site is occupied with an underutilized surface accessory parking lot and vacant area.

Under the Future With-Action Condition, the existing six-story building at 1350 Bedford Avenue that covers approximately 36 percent of the lot area would remain in its current built state. The adjacent, unutilized vacant area on Block 1205, Lot 28, which is currently unimproved, would be developed with the proposed 9-story residential building. Lot coverage would decrease to approximately 26 percent. An aerial three-dimensional representation of the proposed building is provided in **Figure 2.6-1**. The representation shows the approximate outline of the Future-Action condition, Reasonable Worst Case Development Scenario building, which is 11 stories and 115 feet along Bedford Avenue and Pacific Street. **Figures 2.6-2 and 2.6-3** provide a three-dimensional representation from the street level, showing both the No-Action and With-Action conditions. **Figure 2.6-4** shows an urban design map with comparative heights of buildings while Figure 2.6-5 shows an aerial view. **Figure 2.6-6** highlights the urban design of the buildings in the area.

Streets

Under the Existing and No-Action Condition, the streets in the study area would remain unchanged. Since development is limited to one lot, and that lot is already partially developed, it is unlikely that the streets would undergo any changes absent the With-Action.

In the With-Action scenario, it is unlikely that any adverse significant impacts would occur with respect to the streets. The project site is limited to one lot, so changes to the try would be minimal at best. The pedestrian experience of the street may be slightly inconvenienced during the construction phase but this does not qualify as a lasting impact. The building height and style will blend in well with the surrounding built environment. Therefore, the proposed actions are not expected to result in any significant adverse effects with regards to the pedestrian experience on the street.

Visual Resources

Under the Existing and No-Action Condition, the visual resources in the study area would remain unchanged. Since development is limited to one lot, and that lot is already partially developed, it is unlikely that any visual resources in the study area would be affected or undergo any changes absent the With-Action.

In the With-Action scenario, it is unlikely that any significant adverse impacts to visual resources would occur. Pedestrians would still be able to experience these in the same ways as in the existing condition. Grant Square, a small triangular-shaped traffic island (raised median) located just south of the proposed development site at the convergence of Bedford and Rogers Avenue. Grant Square, also known as Grant

Gore, includes planted areas in addition to a large bronze equestrian statue by William Ordway Partridge (1861-1930) that depicts Civil War General and 18th U.S. President Ulysses S. Grant would not be affected by any impending development.

Generally speaking, visual resources in the study area are generally limited to historic structures, which include the 23rd Regiment Armory, located across Pacific Street from the proposed development site at 1322 Bedford Avenue; Imperial Apartments, at 198 Pacific Street across Bedford Avenue from the proposed development site; Saint Bartholomew's Episcopal Church, located approximately 200 feet northeast of the proposed development site at 1227 Pacific Street; and the Crown Heights North Historic District, which is situated across Bedford Avenue from the proposed development site and is generally located east of Bedford Avenue between Pacific and Bergen Streets. Section 2.5 indicated that the With-Action scenario would is not expected to result in any significant adverse impacts on these buildings.

Because the proposed actions are not expected to result in any significant adverse effects with regards to the pedestrians experiencing visual resources, no further analysis is required.

Open Space

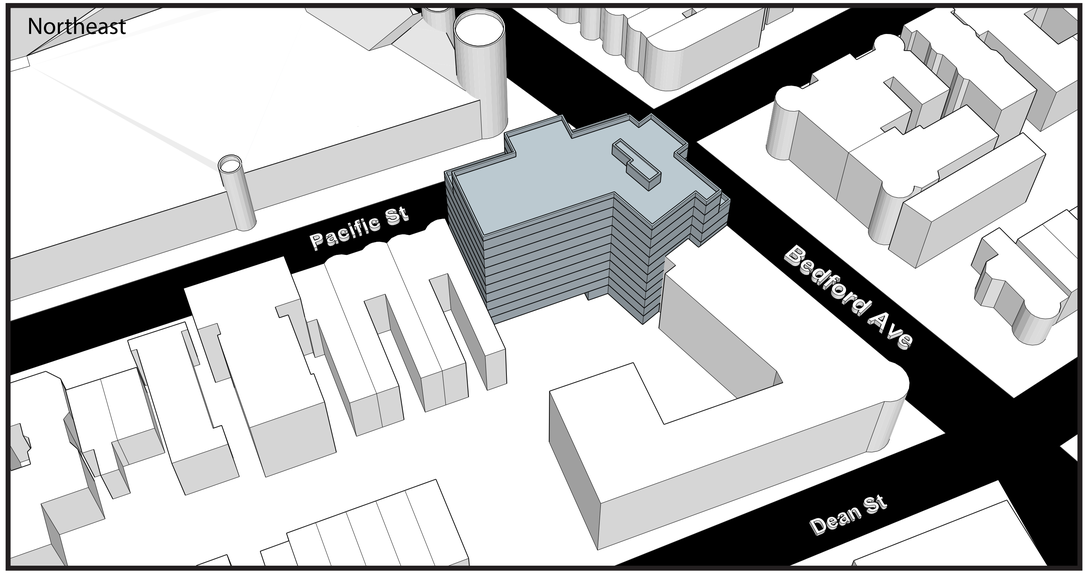
Under the Existing and No-Action Condition, the open space in the study area would remain unchanged. Since development is limited to one lot, and that lot is already partially developed, it is unlikely that the open space would experience any adverse impacts without the With-Action.

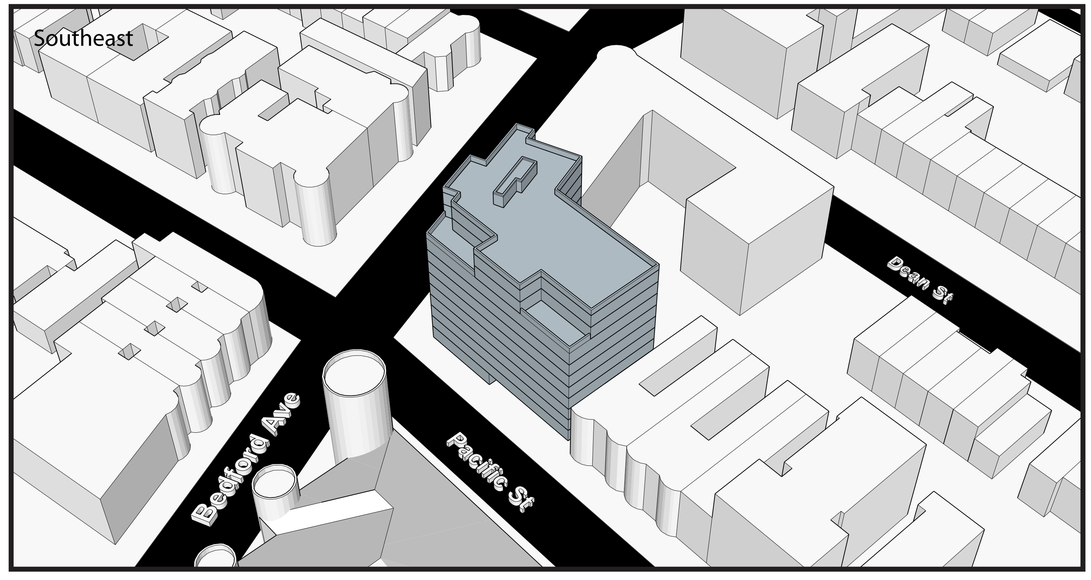
The Study area is not lush with open space. Grant Square, as previously indicated, as planted areas around the statue. Walt Shemal Garden on Dean Street would also not be impacted by the proposed project minus some insignificant incremental shadows cast from the proposed building. (See Shadows Section 2.4) Section 2.3 indicates that no impacts to Open Space are anticipated or associated with the proposed project.

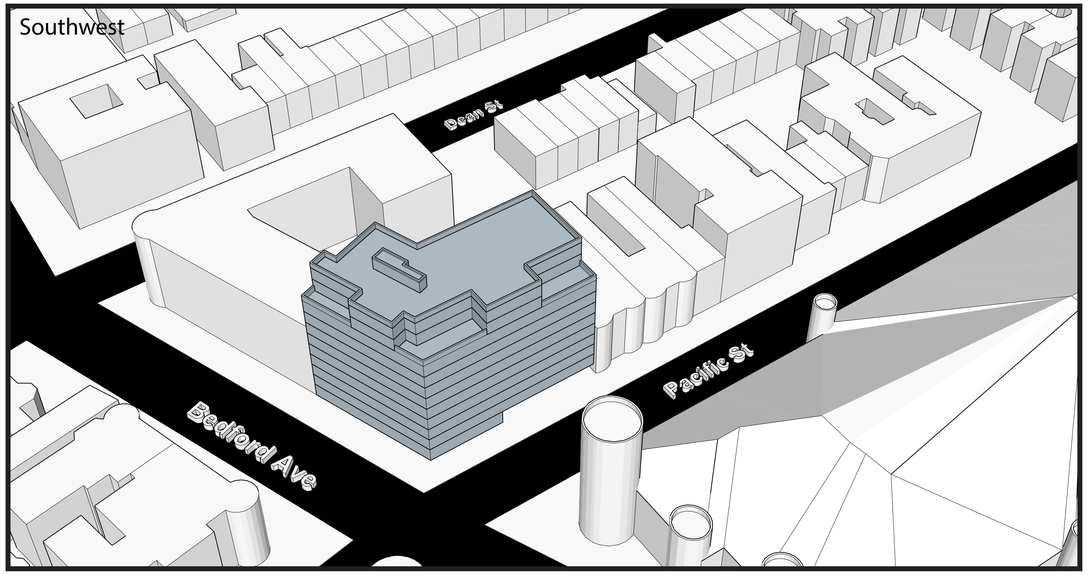
Natural Features and Wind

There are not any distinguished natural features of note in the study area and a pedestrian wind analysis is not warranted.

While the proposed building would change views to the site as witnessed from pedestrians on Bedford Avenue, Pacific Street and other roadways, significant adverse impacts to urban design and visual resources would not occur. Additionally, these views are not obstructing any unique features or elements of the surrounding neighborhood or built environment. The proposed actions would not result in any of the above conditions that would merit further detailed assessment of urban design and visual resources. While the proposed actions would result in the construction of a new building, the bulk of which is which is not permitted "as-of-right" per the R6A zoning district (see Chapter 2.1), the new building would not be out-of-context with the surrounding buildings within the study area. Several other mid- and high-rise buildings are found in the surrounding area, as it would rise to a height similar to the existing residential building to the immediate south. Therefore, the proposed actions are not expected to result in any significant adverse urban design or visual resource related impacts..







AECOM	**Environmental Assessment Statement** **1350 Bedford Avenue Rezoning** **Brooklyn, NY**	**Block: 1205 / Lot: 28**	Aerial Three-Dimensional Views *Illustrative Purposes Only Figure 2.6-1 With Action Scenario





AECOM

Environmental Assessment Statement
1350 Bedford Avenue Rezoning
Brooklyn, NY

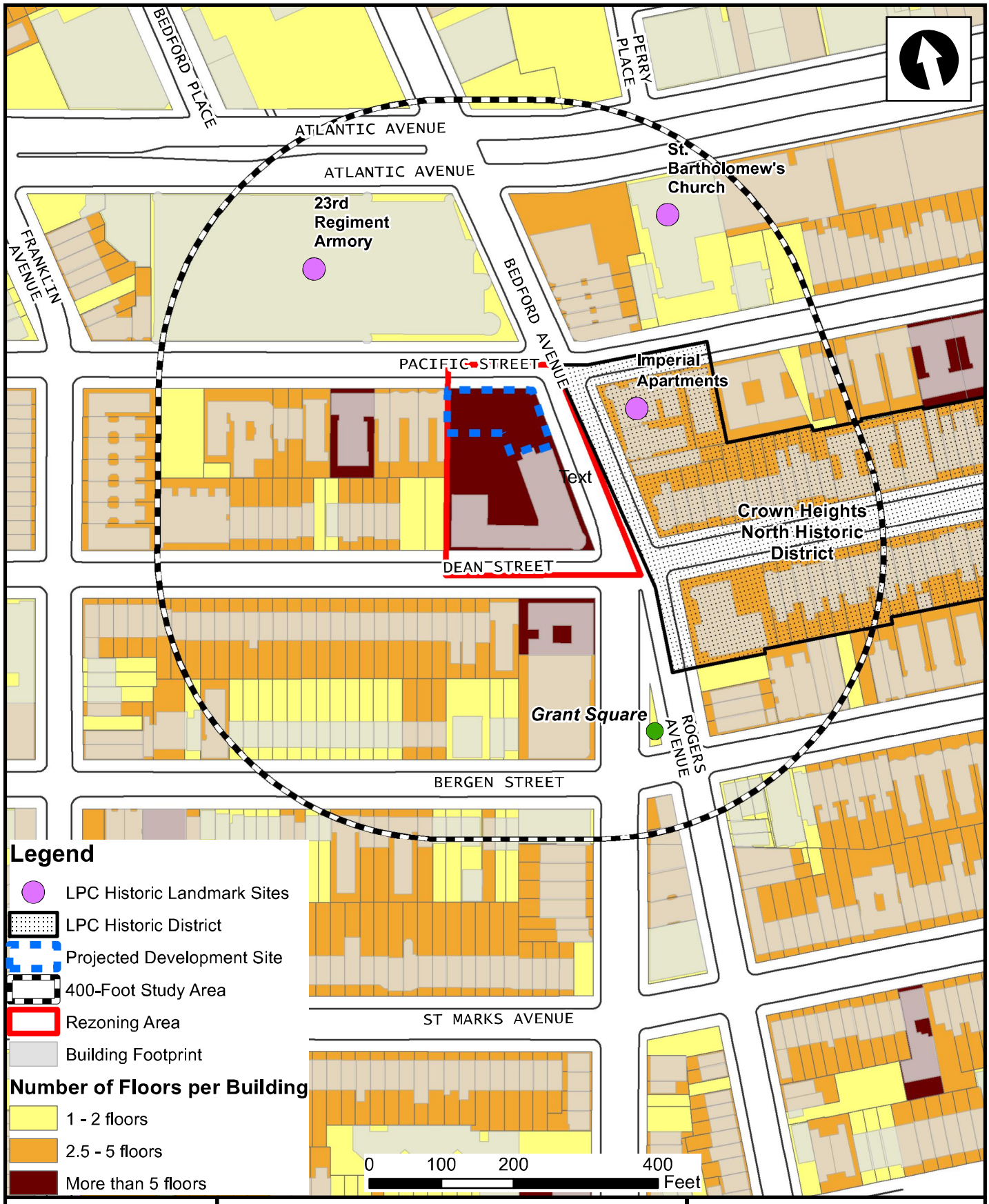
No-Action/ With Action looking West from Pacific towards Bedford

Figure 2.6-2





AECOM	**Environmental Assessment Statement** **1350 Bedford Avenue Rezoning** **Brooklyn, NY**	**No-Action/ With Action looking East from Pacific towards Bedford** **Figure 2.6-3**



AECOM

Environmental Assessment Statement
1350 Bedford Avenue Rezoning
Prospect Heights, Brooklyn, NY

Urban Design Area Map

Figure 2.6-4



AECOM

Environmental Assessment Statement
1350 Bedford Avenue Rezoning
Prospect Heights, Brooklyn, NY

Aerial Map

Figure 2.6-5



View of Existing Building at 1350 Bedford Avenue with 23rd Regiment Armory in the backdrop



View of 23rd Regiment Armory at 1322 Bedford Avenue (Across Pacific Street from Project Site)



View of Imperial Apartments at 1198 Pacific Street (Across Bedford Avenue from Project Site



View of St. Bartholomew's' s Church at 1227 Pacific Street, approximately 200 feet northeast of Project Site

AECOM	**Environmental Assessment Statement** **1350 Bedford Avenue Rezoning** **Prospect Heights, Brooklyn, NY**	***Urban Design Photos*** ***Figure 2.6-6***

2.7 HAZARDOUS MATERIALS

A hazardous material is any substance that poses a threat to human health or the environment. Sustances that can be of conern inslide, but are not limited to, heavy metals, volatile and semi-volatile organic compounds (VOCs and SVOCs), methane, polychlorinated biphenyls (PCBs), and hazardous wastes (defined as substances that are chemically reactive, ignitable, corrosive, or toxic). According to the CEQR Technical Manual, the potential for significant impacts from hazardous materials can occur when: a) hazardous materials exist on a site; and b) action would increase pathways to their exposure; or c) an action would introduce new activities or processes using hazardous materials.

A Phase I Environmental Site Assessment (ESA) was undertaken at the projected development site in November of 2016 because the proposed project would cause in ground disturbance (**Appendix C**).

2.7.1 Summary of Phase I ESA

The Phase I ESA concluded that there is one Recognized Environmental Condition (REC, as defined by ASTM Practice E-1527-13) associated with the site:

Due to the history of area including the potential for orphan USTs, migration of contamination from off-site sources, and urban fill, the possibility exists for subsurface contamination on and in immediate vicinity of subject parcel to be present.

Due to the conclusions of the Phase I ESA, the Applicant has agreed to preclude any potential impacts related to hazardous materials via an E designation (E-412) that would be placed on the project site once the proposed actions have been approved. The NYC Office of Environmental Remediation will oversee all future testing and any required remediation for the site.

The E designation related to Hazardous Materials is 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.

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

2.8 TRANSPORTATION

Screening

The projected development site is located in the Crown Heights North neighborhood of Brooklyn, on a parcel bounded by Pacific Street to the north, by the Walter L. Shemal Garden to the west, by Bedford Avenue to the east, and Dean Street to the south. The study area is generally bound by the properties situated on the northern blockface of Bergen Street to the south, the midpoint between Bedford and Nostrand Avenues to the east, the properties 100 feet east of Franklin Avenue to the west, and Atlantic Avenue to the north.

The roadway network of the project study area is laid out in a grid pattern. The streets in this area, including Atlantic Avenue, Pacific Street, Dean Street and Bergen Street, run east-west, while Bedford Avenue and Rogers Avenue run north-south, with Rogers Avenue merging into Bedford Avenue. Within the Study Area, Atlantic Avenue, Rogers Avenue, and Bedford Avenue have the functional classification of "Principal Arterial Other" roadway under the National Highway System (NHS). Dean Street and Bergen Street have the functional classification of "Major Collector" roadways under NHS. Additionally, Atlantic Avenue is designated as a "Through Truck Route" by the New York City Department of Transportation (DOT). All other roadways within the Study Area are classified as local roadways.

2.8.1 Traffic Screening

The *CEQR Technical Manual* indicates that when an action would generate fewer than 50 peak hour trips per intersection in this section of Brooklyn, a detailed traffic analysis is not warranted. The proposed actions are expected to result in the construction of a residential building with up to 136 dwelling units, approximately half of which would be available to families earning 80 percent AMI, with the other half of all units available for residents earning below 130 percent of AMI. In accordance with Table 16-1 of the *CEQR Technical Manual*, as the total number of dwelling units is below the minimum development density in a "Zone 3" area, a detailed traffic analysis is not warranted and no significant adverse traffic impacts are expected as a result of the project.

2.8.2 Parking Screening

As discussed in **Section 1.0** above, the applicant will seek a special permit from the BSA to waive the number of accessory off-street parking spaces for the existing six-story Section 8 housing building on the project site. The existing building contains approximately 68,434 square feet of zoning floor area, 78 income-restricted housing units (and one superintendent unit). However, while a parking waiver is sought for the existing building, a total of 23 accessory surface parking spaces would be provided for the proposed residential development, in compliance with ZR §25-23. These spaces would be accessory only to the existing and proposed residential buildings.

Parking demand for the affordable housing units in the existing and proposed residential buildings is expected to be adequately accommodated by the proposed on-site parking spaces. Parking demand for residential uses typically peaks overnight when most residents are at home, and decreases during the daytime hours when residents drive their vehicles to work, or otherwise depart their home for shopping, school, recreational, and other trip purposes. Peak (overnight) parking demand for residential projects is projected based on the total number of proposed residential units, as well as the auto-ownership rate, which is influenced by the site's proximity to transit services and other factors such as household income and the type of housing (market-rate vs. affordable).

The projected development site is located within Brooklyn Community District 8, which is included in the "Transit Zone" boundary as identified in Appendix I: Transit Zone of the NYC *Zoning Resolution*. As part of the Zoning for Quality and Affordability (ZQA) initiative, discretionary actions within the Transit Zone

may apply for the removal or reduction of required accessory parking to facilitate additional on-site development. Residents in the existing and proposed residential buildings are located within a reasonable walking distance to transit stops such as subway stations, bus stops, and railroad stations are typically less reliant on automobile usage for travel purposes and may choose not to own one. A "reasonable walking distance" is typically defined by the New York Department of Transportation as being within 1/2 mile (within an approximate 10-minute walk) from a transit stop. The projected development site is located well within this distance and proximate to subway, bus, and Long Island Railroad service. It is approximately 1/3 mile from the Franklin Avenue and Nostrand Avenue stations on the "A" and "C" subway lines, as well as the Park Place station on the "S" subway line. It is also located within approximately 1/3 mile from the Nostrand Avenue station on the Long Island Railroad, as well as several bus lines including the B25, B44, B45, B48, B49, and B65. Because the site is well-served by frequent transit services in close proximity, residents in the existing and proposed buildings have convenient access to alternative modes of travel and are less reliant on automobile ownership, which results in a reduced demand for on-site parking.

U.S. Census data obtained from the five-year period from 2010-2014 showed an average auto-ownership rate of approximately 0.36 vehicles per residential unit for all existing residences within the project's census tract, and the adjacent tracts, in Brooklyn. However, this rate does not distinguish between market-rate housing (which has higher auto-ownership rates) and affordable housing (which has lower auto-ownership rates). Because all of the project's residences will be affordable units, auto ownership is projected to be lower than the census data for this area would suggest. In the policy brief Searching for the Right Spot: Minimum Parking Requirements and Housing Affordability in New York City, NYU's Furman Center for Real Estate & Urban Policy states: "…less than a quarter of the city's households earning at or less than the city's median income own a car…" More specifically, the site's existing building (78 affordable units) generates on-site parking demand of four vehicles, which corresponds to an auto-ownership rate of 0.05 vehicles per unit. Based on a rate of this order-of-magnitude for affordable housing at this particular location, it is projected the project site's proposed on-site parking spaces would accommodate the projected incremental parking demand generated by the project, as well as the residents in the existing residential building. These parking spaces would be accessory to the existing and proposed buildings only, and would not be available for public parking or any other non-residents.

In addition, it is worth noting that PlaNYC 2030 is "…committed to promoting car-sharing, pilot technologies, and pricing-based mechanisms to reduce congestion and modify parking regulations to balance the needs of neighborhoods." The increasing prevalence of car-sharing services (such as ZipCar), as well as on-demand vehicle services (such as Uber and Lyft), help contribute to a reduction in the propensity for auto ownership in NYC in general, and at the projected development site specifically. Therefore, significant adverse parking impacts are not expected as a result of the proposed action**s**.

2.8.3 Transit and Pedestrian Screening

The proposed actions are expected to result in less than 200 peak hour transit or pedestrian trips. As indicated above, the projected development site is located within Zone 3 per Table 16-1 of the *CEQR Technical Manual*, which states that the general threshold for this section of Brooklyn is 200 or more new dwelling units. The maximum development that is projected to occur as a result of these actions would total no more than 139 incremental dwelling units, as indicated in **Section 1.3** above. No additional development is expected to occur on the project site, including commercial or community facility floor area. As such, the proposed actions are expected to result in less than 200 peak hour transit and pedestrian trips. Therefore, detailed transit or pedestrian studies are not warranted, and significant adverse impacts are not expected to occur.

2.9 AIR QUALITY

When assessing the potential for air quality significant impacts, the *CEQR Technical Manual* seeks to determine a proposed action's effect on ambient air quality, or the quality of the surrounding air. Ambient air can be affected by motor vehicles, referred to as "mobile sources," or by fixed facilities, referred to as "stationary sources." This can occur during operation and/or construction of a project being proposed. The pollutants of most concern are carbon monoxide, lead, nitrogen dioxide, ozone, relatively coarse inhalable particulates (PM_{10}), fine particulate matter ($PM_{2.5}$), and sulfur dioxide.

The *CEQR Technical Manual* generally recommends an assessment of the potential impact of mobile sources on air quality when an action increases traffic or causes a redistribution of traffic flows, creates any other mobile sources of pollutants (such as diesel train usage), or adds new uses near mobile sources (e.g., roadways, parking lots, garages). The *CEQR Technical Manual* generally recommends assessments when new stationary sources of pollutants are created, when a new use might be affected by existing stationary sources, or when stationary sources are added near existing sources and the combined dispersion of emissions would impact surrounding areas.

2.9.1 Mobile Sources

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

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

The proposed actions would not result in any of the above thresholds being crossed and would not require further mobile source assessment. The proposed actions would not result in the placement of new operable windows within 200 feet of any atypical vehicular source of pollutants, nor would it result in the creation of a fully or partially covered roadway, generate over 170 or more net new increment auto trips or notable heavy-duty diesel vehicle traffic, place new sensitive uses adjacent to a large parking facility, result in other mobile sources of pollution, or substantially increase vehicle miles traveled.

2.9.2 Stationary Sources

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

- New stationary sources of pollutants are created (e.g., emission stacks for industrial plants, hospitals, other large institutional uses).
- Certain new uses near existing (or planned future) emissions stacks are introduced that may affect the use.
- Structures near such stacks are introduced so that the structures may change the dispersion of emissions from the stacks so that surrounding uses are affected.
- Fossil fuels (fuel oil or natural gas) for heating/hot water, ventilation, and air conditioning systems are used.
- Large emission sources are created (e.g., solid waste or medical-waste incinerators, cogeneration facilities, asphalt/concrete plants, or power-generating plants, etc.).
- New sensitive uses are located near a large emission source.

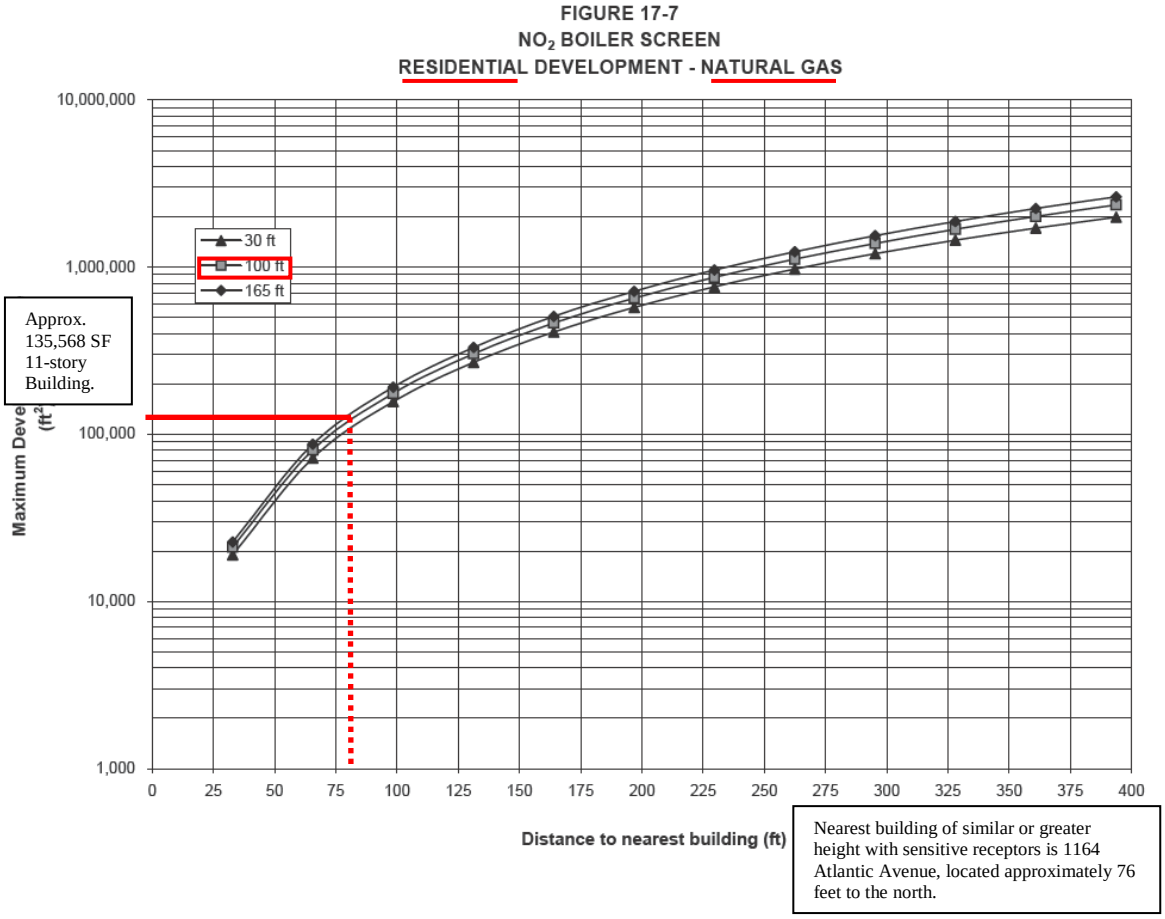
- Medical, chemical, or research labs are created or result in new uses being located near them.
- Operation of manufacturing or processing facilities is created.
- New sensitive uses created within 400 feet of manufacturing or processing facilities.
- New uses created within 400 feet of a stack associated with commercial, institutional, or residential developments (and the height of the new structures would be similar to or greater than the height of the emission stack).
- Potentially significant odors are created.
- New uses near an odor-producing facility are created.
- "Non-point" sources that could result in fugitive dust are created.
- New uses near non-point sources are created.
- A generic or programmatic action is introduced that would change or create a stationary source or that would expose new populations to such a stationary source.

The proposed actions would not result in any of the above thresholds being crossed and would not require further stationary source assessment on the residents generated at the projected development site.

HVAC Emissions

Impacts from boiler emissions at the project site are a function of fuel oil type, stack height, minimum distance from the source to the nearest building, and square footage of the development. According to the project sponsor, the projected development would likely utilize natural gas and would maintain a heating and hot water system separate from the existing building. The project site stack height and development size was plotted on the graph for residential developments provided in the air quality appendices in the *CEQR Technical Manual*, as shown in **Figure 2.9-1**. This graph indicates the minimum

Figure 2.9-1 Air Quality Graph



distance between the projected development and buildings of a similar or greater height in order to avoid a potential air quality impact. The approximately 135,568 gross square foot, 11-story building that represents the maximum allowable development within the rezoning area, would be located along the south side of Pacific Street and the west side of Bedford Avenue.

Stack height for the emissions vent were estimated as three feet higher than the proposed building height, utilizing the 100 foot curve. For a building of approximately this size, the emissions vents should be at least 76 feet away from the nearest building of equal or greater height. The nearest sensitive-receptor building of similar or greater height is the community facility building at 1164 Atlantic Avenue, which is located across Pacific Street from the projected development site. This facility is operated by the New York City Department of Homeless Services (DHS) and contains sleeping accommodations for building residents.

The southern building façade at 1164 Atlantic Avenue is located approximately 76 feet north of the property line at the projected development site. Furthermore, while this represents the minimum possible distance between the two building facades, the HVAC stack location on the projected development site would be further set back from the property line. To further preclude the potential for significant adverse air quality impacts on nearby buildings from HVAC emissions from the projected development site, an (E) designation (E-412) with respect to HVAC systems is proposed for Brooklyn Block 1205, Lot 28, as follows:

Any new development or enlargement on the above referenced property must use natural gas as the type of fuel for heating, ventilating, and air conditioning for the (HVAC) system and ensure that the HVAC stack is located at least 88 feet above grade to avoid any potential significant adverse air quality impacts.

Because there is an existing residential building located on the site, a project-on-project AERSCREEN analysis was also undertaken. The analysis concluded that the HVAC system of proposed development building would have no significant air quality impact on the building nearby and, similarly, the HVAC system of the existing residential building would have no significant air quality impact on the proposed development building. The results of the AERSCREEN analysis are contained in **Appendix D**.

Industrial Sources Screening

The projected development site is located in an R6A zoning district and is generally surrounded by residential uses. However, within 400 feet of the projected development site is an M1-1 district, which has the potential to contain light manufacturing uses. A field survey was performed to identify any manufacturing or industrial uses within 400 feet of the projected development site. Three parcels were identified as potentially containing industrial/manufacturing or transportation/utility uses, as shown in **Table 2.9-1** below.

Table 2.9-1 List of Industrial Uses within 400 Feet of the Projected Development Site

Address	Land Use	Owner	Block	Lot	Zip Code
1119 Atlantic Avenue	Transportation/ Utility	David Oil Corp.	2022	1	11216
1305 Bedford Avenue	Parking	Paco Bedford	1865	1	11216
1163 Atlantic Avenue	Parking	Malu Properties	1865	95	11216

The field survey showed that none of these properties appeared to contain either a “major” emissions-generating source, or a manufacturing/processing facility. In addition, a search was made on the DEP “CATS” database to determine if any nearby uses contain certificates to operate industrial or other air process equipment. While the fueling station at 1119 Atlantic Avenue is a registered facility (Application No. GA006598), no such certificates or permits to operate industrial equipment were identified at these three parcels, or any facility within 400 feet of the projected development site. Therefore, no significant adverse impacts to the projected development site are anticipated from any nearby industrial source emissions, and further stationary source analysis is not warranted.

2.10 NOISE

Noise is defined as any unwanted sound, and sound is defined as any air pressure variation that the human ear can detect. Human beings can detect a large range of sound pressures ranging 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.

In terms of hearing, humans are less sensitive to low frequencies (<250 Hz) than mid-frequencies (500-1,000 Hz). Humans are most sensitive to frequencies in the 1,000 to 5,000 Hz range. Since ambient noise contains many different frequencies all mixed together, measures of human response to noise assign more weight to frequencies in this range. This is known as the A-weighted sound level.

Noise is measured in sound pressure level (SPL), which is converted to a decibel scale. The decibel is a relative measure of the sound level pressure with respect to a standardized reference quantity. Decibels on the A-weighted scale are termed “dB(A).” The A-weighted scale is used for evaluating the effects of noise in the environment because it most closely approximates the response of the human ear. On this scale, the threshold of discomfort is 120 dB(A), and the threshold of pain is about 140 dB(A). **Table 2.9-1** shows the range of noise levels for a variety of indoor and outdoor noise levels.

Table 2.10-1 Sound Pressure Level & Loudness of Typical Noises in Indoor & Outdoor Environments

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

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

Because the scale is logarithmic, a relative increase of 10 decibels represents a sound pressure level that is 10 times higher. However, humans do not perceive a 10 dB(A) increase as 10 times louder; they perceive it as twice as loud. The following are typical human perceptions of dB(A) relative to changes in noise level:

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

The *CEQR Technical Manual* recommends an analysis of two principal types of noise sources: mobile sources; and stationary sources. Both types of noise sources are examined in the following sections.

2.10.1 Mobile Sources

Mobile noise sources are those which move in relation to receptors. The mobile source screening analysis addresses potential noise impacts associated with vehicular traffic generated by the proposed action.

According to the *CEQR Technical Manual*, if existing passenger car equivalent (PCE) values are increased by 100 percent or more due to a proposed action, a detailed analysis is generally performed. Vehicular traffic studies are not warranted, as the proposed actions are not expected to generate over 50 vehicle trips through any local intersection during peak periods. The surrounding roadway network also contains sufficient traffic currently on area roadways. Within the study area, Bedford and Atlantic Avenues have a functional classification as “Principal Arterial (other)” roadways under the National Highway System (NHS). South of the rezoning area, Dean Street has a functional classification as a “Major Collector” roadway, as does Bergen Street, further south of the projected development site. Within the study area, Bedford Avenue is also designated as a “Local Truck Route” by the NYCDOT, and Atlantic Avenue is a designated “Through Truck Route.” As such, the proposed actions would not result in a doubling of PCEs on area roadways or at any intersections, and no significant adverse mobile source noise impacts due to vehicular traffic are anticipated as a result of the proposed action.

As discussed in the *CEQR Technical Manual*, if the proposed project is located in areas with high ambient noise levels, which typically include those near heavily-traveled thoroughfares, airports, exposed rail, or other loud activities, further noise analysis may be warranted to determine the attenuation measures for the project. The projected development site is located at 1350 Bedford Avenue in the Crown Heights North neighborhood of Brooklyn. Although the project is unlikely to generate sufficient traffic volumes to warrant a mobile source analysis, ambient noise levels may be affected by the site’s adjacency to Bedford Avenue, which is a heavily trafficked roadway. Additionally, the projected development site is located approximately 1,000 feet east of the Franklin Avenue Shuttle, which is an elevated train operated by New York City Transit (NYCT). As such, ambient noise levels were measured to provide an assessment of the potential for traffic and train noise to have a significant adverse effect on future residents.

The *CEQR Technical Manual* provides noise exposure guidelines in terms of L_{eq} and L_{10} for the maximum amount of allowable noise under existing regulations. L_{eq} is the continuous equivalent sound level. The sound energy from the fluctuating sound pressure levels 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 greater effect on the L_{eq} than low noise levels. The L_{eq} has an advantage over other descriptors because L_{eq} values from different noise sources can be added and subtracted to determine cumulative noise levels. In comparison, L_{10} is the SPL exceeded 10 percent of the time. Similar descriptors include the L_{50}, L_{01}, and L_{90} values.

Primary noise measurements were conducted at the projected development site on June 3, 2015. Due to excessive pedestrian activity and chatter at the northern boundary of the rezoning area, the sound level meter was placed on the northern side of Pacific Street, at the intersection of Bedford Avenue. At this location, the meter was located an equal distance from vehicular traffic operations on Bedford Avenue and Pacific Street, as well as the high-volume roadway of Atlantic Avenue to the north and the elevated train tracks approximately 900 feet west of the rezoning area. Levels at the site were measured at 20-minute intervals during the weekday peak hours of 7:30 a.m. to 8:30 a.m. and 4:00 p.m. to 5:00 p.m. An off-peak measurement was also taken

between 10:30 a.m. and 11:30 a.m. Vehicular traffic on Bedford Avenue and Pacific Street, pedestrian chatter and airplane flyovers were the major contributors to the ambient noise profile, and are therefore included in this cumulative noise assessment.

A supplemental noise measurement was performed during the midday period of 12:00 to 1:00 PM on September 15, 2016. As the primary source of concern for this supplemental measurement was rail activity from the nearby Franklin Avenue Shuttle, which is located approximately 1,000 feet west of the rezoning area, the sound level meter was placed at the western boundary of the projected development site. Due to excessive pedestrian chatter at the boundary of the projected development site, the meter was placed across Pacific Street from the rezoning area. This location represents an equivalent distance to rail operations, and thus provides a measurement value consistent with the southern side of Pacific Street. The cumulative noise level was measured at this location for a one-hour interval, and consisted of rail operations noise, vehicular traffic noise and pedestrian chatter.

The noise measurement locations are referenced in **Figure 2.10-1**.

The results of the noise measurements taken at the projected development site are summarized in **Table 2.10-2**.

Table 2.10-2 Measured Noise Levels (dB(A))

Time Period	L_{eq}	L_{10}
AM (7:30 – 8:30 a.m.)	70.0	73.5
Off-peak (10:30 a.m. – 11:30 a.m.)	70.2	73.9
PM (4:00 – 5:00 p.m.)	69.8	72.4
Supplemental Midday (12:00 – 1:00 p.m.)	65.1	68.7

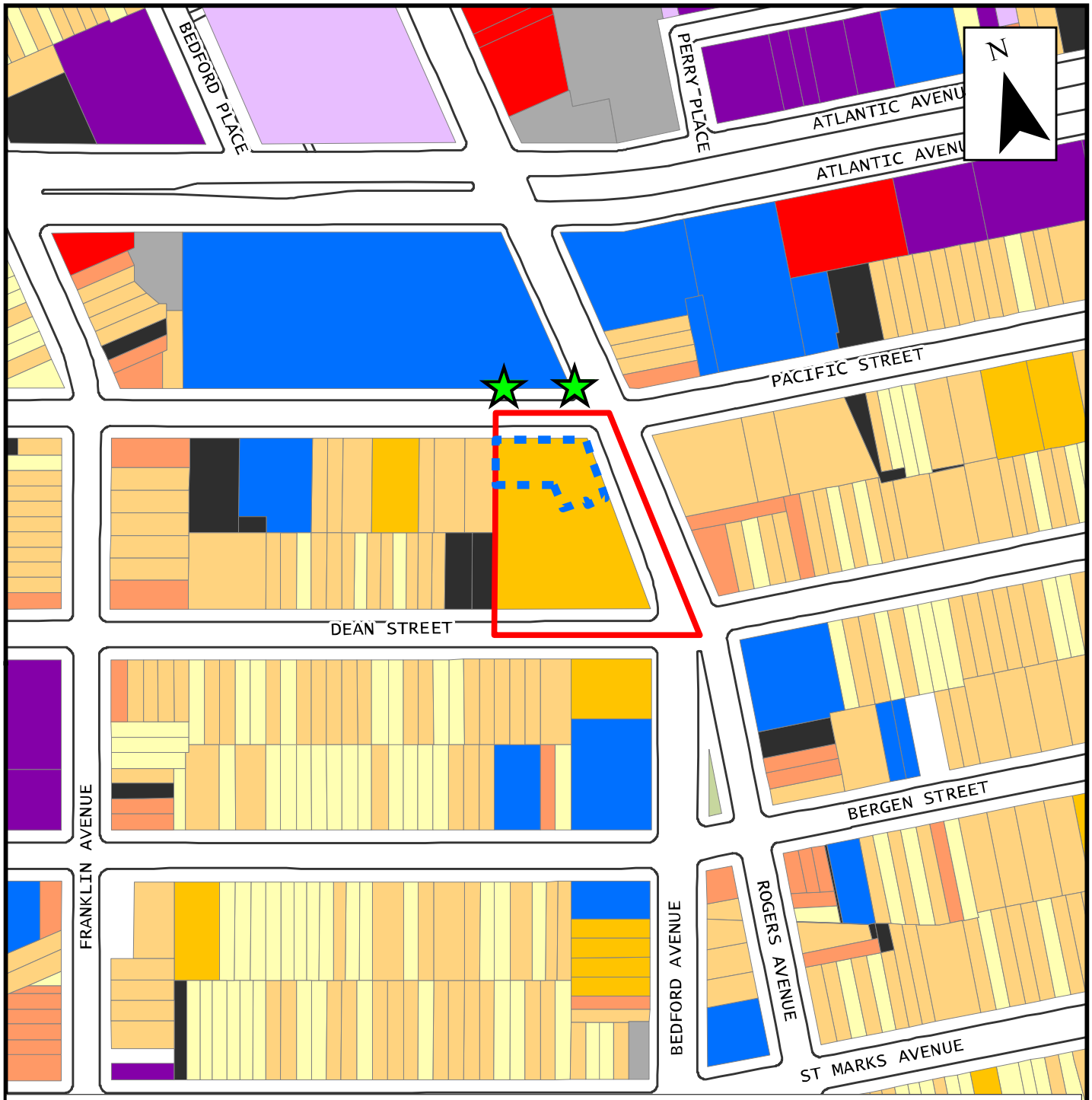
In 1983, the New York City Department of Environmental Protection (NYCDEP) adopted the City Environmental Protection Order-City Environmental Quality Review (CEPO-CEQR) noise standards at the exterior façade to achieve interior noise levels of 45 dB(A) or below. CEPO-CEQR Noise Standards classify noise exposure into four categories: Acceptable, Marginally Acceptable, Marginally Unacceptable and Clearly Unacceptable. As noted in the *CEQR Technical Manual*, these standards are the basis for classifying noise exposure into the following categories based on the L_{10} measured directly outside the projected development site:

Table 2.10-3 Attenuation Values to Achieve Acceptable Interior Noise Levels

	Marginally Unacceptable				Clearly Unacceptable
Noise Level with Proposed Project	$70 < L_{10} \leq 73$	$73 < L_{10} \leq 76$	$76 < L_{10} \leq 78$	$78 < L_{10} \leq 80$	$80 < L_{10}$
Attenuation[1]	(I) 28 dB(A)	(II) 31 dB(A)	(III) 33 dB(A)	(IV) 35 dB(A)	$36 + (L_{10} - 80)^2$ dB(A)

Source: *CEQR Technical Manual*

Notes:
[1] The above composite window-wall attenuation values are for residential dwellings. Commercial and office spaces/meeting rooms would be 5 dB(A) less in each category. All the above categories require a closed window situation and hence an alternate means of ventilation.
[2] Required attenuation values increase by 1 dB(A) increments for L_{10} values greater than 80 dBA.



AECOM

Environmental Assessment Statement
1350 Bedford Avenue Rezoning
Prospect Heights, Brooklyn, NY

Noise Measurement Locations

Figure 2.10-1

The measured ambient noise levels indicate that the project-induced sensitive receptors would be in an area that exceeds the acceptable levels as defined in the *Noise Exposure Guidelines* summarized in *CEQR* Table 19-2. Therefore a significant impact would occur unless the building design as proposed provides a composite building attenuation that would be sufficient to reduce these levels to an acceptable interior noise level. These values are shown in **Table 2.10-3**.

The maximum L_{10} measured at the project site was 73.9 dB(A) during the off-peak midday period. Therefore, the noise at the project site falls under "Marginally Unacceptable" conditions. In order to ensure an acceptable interior noise environment maintaining an interior noise level of 45 dB(A), future residential uses at the projected development site must provide a closed window condition with a minimum of 31 dBA window/wall attenuation on the façades facing Bedford Avenue, Pacific Street and Franklin Avenue. This level of attenuation could be achieved with a closed window situation and alternate means of ventilation, such as indoor air conditioning, heat pumps or split systems. To preclude the potential for significant adverse noise impacts, residential units on the north-facing, east-facing and west-facing facades of the building would have an (E) designation (E-412) for Brooklyn Block 1205, Lot 28, as follows:

> In order to ensure an acceptable interior noise environment, future residential/commercial uses on the above referenced property must provide a closed window condition with a minimum of 31 dBA window/wall attenuation on the north-facing, east-facing and west-facing façades in order to maintain an interior noise level of 45 dBA. In order to maintain a closed-window condition, an alternate means of ventilation must also be provided.

With the implementation of the (E) designation, no significant adverse impacts related to noise would occur. Therefore, the proposed actions would not result in any potentially significant adverse noise impacts, and further assessment is not warranted.

2.10.2 Stationary Sources

The *CEQR Technical Manual* states that based upon previous studies, unless existing ambient noise levels are very low and/or stationary source levels are very high (and there are no structures that provide shielding), it is unusual for stationary sources to have significant impacts at distances beyond 1,500 feet. A detailed analysis may be appropriate if the proposed project would: cause a substantial stationary source (i.e., unenclosed mechanical equipment for manufacturing or building ventilation purposes, playground, etc.) to be operating within 1,500 feet of a receptor, with a direct line of sight to that receptor; or introduce a receptor in an area with high ambient noise levels resulting from stationary sources, such as unenclosed manufacturing activities or other loud uses. Machinery, mechanical equipment, heating, ventilating and air-conditioning units, loudspeakers, new loading docks, and other noise associated with building structures may also be considered in a stationary source noise analysis. Impacts may occur when a stationary noise source is near a sensitive receptor, and is unenclosed.

However, the project site is located in a residential zoning district, and no unenclosed stationary noise sources of concern were observed during field inspection. As the project site is not subject to high ambient noise levels from any nearby stationary source, no stationary source noise impacts from surrounding uses are anticipated. Additionally, as the proposed project would not introduce a new stationary noise source, no significant adverse stationary source impacts are anticipated as a result of the proposed action, and no further analysis is warranted.

2.11 NEIGHBORHOOD CHARACTER

As defined by the *CEQR Technical Manual*, neighborhood character is considered to be an amalgam of the various elements that give a neighborhood its distinct personality. The elements, when applicable, typically include: land use, zoning and public policy; socioeconomic conditions; open space; historic and cultural resources; urban design and visual resources; shadows; transportation; and noise.

If a project has the potential to result in any significant adverse impacts on any of the above technical areas, a preliminary assessment of neighborhood character may be appropriate. In addition, depending on the project, a combination of moderate changes in several of these technical areas may potentially

have a significant effect on neighborhood character. As stated in the *CEQR Technical Manual*, a "moderate" effect is generally defined as an effect considered reasonably close to the significant adverse impact threshold for a particular technical analysis area. When considered together, there are elements that may have the potential to significantly affect neighborhood character. Moderate effects on several elements may affect defining features of a neighborhood and, in turn, a pedestrian's overall experience. If it is determined that two or more categories may have potential "moderate effects" on the environment, CEQR states that the following question should be answered: "Would the proposed project result in a combination of moderate effects to several elements that cumulatively may affect neighborhood character?"

The proposed actions would not exceed any of the thresholds in the technical areas listed above, which would typically warrant a detailed assessment of the potential for neighborhood character impacts, and thus significant adverse impacts are not expected. In addition, the proposed actions are not expected to result in any notable moderate changes in the noted technical areas, and as such, would not have a significant effect on neighborhood character. An assessment of the potential for moderate changes as a result of the proposed actions follows below. A key to the photographs of the site and surrounding project study area were previously shown in **Figure 3**, with photographs of the site and surrounding study area displayed previously in **Figure 4**.

Existing land use patterns of city blocks within approximately 400 feet of the project sites are presented previously in **Figure 2.1.1**. The *CEQR Technical Manual* suggests that a land use, zoning and public policy study area should extend 400 feet from the site of the proposed action. This study area is generally bound by the properties situated on the northern blockface of Bergen Street to the south, the midpoint between Bedford and Nostrand Avenues to the east, the properties 100 feet east of Franklin Avenue to the west, and Atlantic Avenue to the north. The project site is located in the Crown Heights North neighborhood of Brooklyn.

A field survey was conducted to determine the existing land use patterns and neighborhood characteristics of each project site and study area. Land uses throughout the study area include single- and multi-family residences, and mixed residential and commercial uses, public facilities of various sizes along Atlantic Avenue and Bedford Avenue, and several vacant lots.

The projected development site and proposed rezoning area are presently improved with a six-story building at 1350 Bedford Avenue (Block 1205, Lot 28) that covers approximately 36 percent of the lot area. The remainder of the project site is occupied with an underutilized surface accessory parking lot and an unimproved portion of land. The projected residential development would occur on the unused portion of Block 1205, Lot 28, and would include frontages on Bedford Avenue and Pacific Street. Directly north of the project site, across Pacific Street, is the 23rd Regiment Armory, which is in the State/National Historic Register. Directly west of the project site, on Dean Street, are multi-family walkup residences, four- to five- stories in height, and two vacant lots, which run as the Walt L. Shamel Community Garden. Directly east of the project site, across Bedford Avenue, are the Imperial Apartments, which are also in the State/National Historic Register.

The northern portion of the study area can be defined as being north of Pacific Street and contains mostly public facility and institutions, except for the northeast corner of Pacific Street and Bedford Avenue, which contain residential and mixed-used buildings. Directly east of those is Saint Bartholomew's Episcopal Church, which is in the State/National Historic Register. The southern portion of the study area is mostly developed with residential buildings, ranging from one- & two- family residences mostly along both sides of Dean Street to multi-family walkup residences mostly along Bergen Street. Larger multi-family elevator residential buildings can be found on Pacific Street, west of the project site, and on the southwest corner of Bedford Avenue and Dean Street, south of the project site. There are also a few mixed-used residential and commercial buildings along both sides of Bedford Avenue, which serve the neighborhood with local retail stores (like delis and salons) on the ground floor. There are also several public institutions and vacant lots in the southern portion of the study area, including the Fort Greene Grant Square Senior Center on Rogers Avenue, the Washington Temple Church on Bedford Avenue, and another community garden on Bergen Street.

The general mix of land uses observed in the project study area generally reflects the distribution of land uses observed throughout Brooklyn Community District (CD) 8, including, multi-family residences, one- and two-family residences and community facilities/institutional uses.

The architecture throughout the study area is eclectic, with no unity of form to tie the built form together visually. As noted in **Chapter 2.1-1**, the area is characterized by a mix of uses, including residential apartment buildings, one and two-family homes, mixed residential and commercial uses, institutions, and open space. Residences within the area are generally located within four- to six-story multi-family buildings. Most buildings within the study area are arranged regular (parallel) with respect to their lot placement. Buildings along both key corridors and side streets within the area are generally built out to their lot lines, and many of the residential and mixed-use are often attached to one another, as opposed to free-standing detached buildings.

There is one notable streetscape element within the study area. Grant Square, a median with trees and a statue of Presidential Ulysses S. Grant is lies just north of Bergen Street and is located between Rogers Avenue and Bedford Avenue until the streets merge at Dean Street. Several streets, including, Bergen Street, Bedford Avenue, and Dean Street, contain street trees, which are generally located at irregular intervals. However, no other notable streetscape elements (e.g. benches) are located outside public parks within the study area.

The Study Area is well served by public transportation. The MTA's Long Island Railroad's (LIRR) Nostrand Avenue stop is approximately one block east and two blocks north of the project site, with access to Atlantic Terminal on westbound service and various destinations in Queens and Long Island available on eastbound service. The MTA's New York City Transit (NYCT) "A" and "C" subway lines have a stop at Nostrand Avenue and Fulton Street approximately 0.3 miles north of the project site with service available to Manhattan and Brooklyn and Queens. Additionally, the MTA's "S" shuttle train has a stop at Franklin Avenue and Fulton Street, approximately 0.3 miles northwest of the project site, with service available going south to Prospect Park. Several local MTA NYCT buses run throughout the study area with service available to various destinations throughout Brooklyn, including the B49 and B65 buses available at the intersection of Bedford Avenue and Dean Street, adjacent to the project site.

The roadway network of the project study area is laid out in a grid pattern. The streets in this area, including Atlantic Avenue, Pacific Street, Dean Street and Bergen Street, run east-west, while Bedford Avenue and Rogers Avenue run north-south, with Rogers Avenue merging into Bedford Avenue. Within the Study Area, Atlantic Avenue, Rogers Avenue, and Bedford Avenue have the functional classification of "Principal Arterial Other" roadway under the National Highway System (NHS). Dean Street and Bergen Street have the functional classification of "Major Collector" roadways under NHS. Additionally, Atlantic Avenue is designated as a "Through Truck Route" by the New York City Department of Transportation (DOT). All other roadways within the Study Area are classified as local roadways.

2.12 CONSTRUCTION

Construction impacts, although temporary in duration, can have disruptive and noticeable effects on the area that surrounds a project site. The potential for construction impacts to become significant could occur when construction activity results in a significant adverse effect on such technical areas as transportation, air quality, noise, historic and cultural resources, hazardous materials, natural resources, open space, socioeconomic conditions, community facilities, land use and public policy, neighborhood character or infrastructure. The determination of significance and need for related mitigation is generally based on the duration and magnitude of the potential construction impacts.

The project site is not an LPC-designated or an S/NR-listed landmark. However, the surrounding neighborhood includes several individually-listed landmarks and one historic district (see **Chapter 2.4**). Therefore, assessments of the proposed action's potential for construction-related impacts associated with historic and cultural resources are warranted. As detailed below, the proposed actions are not expected to result in any significant adverse construction impacts.

Effects of Construction on Historic and Cultural Resources

The *CEQR Technical Manual* states that construction impacts may occur on historic and cultural resources if in-ground disturbances or vibrations associated with project construction could undermine the foundation or structural integrity of nearby resources. A construction assessment is not needed for historic and cultural resources unless the project involves construction activities within 400 feet of a historic resource. Resources within 400 feet of the rezoning area include the 23rd Regiment Armory (S/NR #04701.002503, LPC# LP-00950), the Imperial Apartments (S/NR #04701.017409, LPC# LP-01432), Saint Bartholomew's Episcopal Church (S/NR #04701.000167, LPC# LP-00820) and the Crown Heights North Historic District (S/NR #13NR06488, LPC# LP-02204).

The City has two procedures for avoidance of damage to historic structures from adjacent construction. 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.

As discussed in in **Chapter 2.5** above, the 23rd Regiment Armory, the Imperial Apartments and the Crown Heights North Historic District are within 90 feet of the projected development site, and would therefore be protected under the measures of TPPN 10/88. Provided these measures are followed, the proposed actions would not result in significant adverse construction-related impacts at these resources.

By following the protection measures under DOB Code Section 27-166 (C26-112.4) and DOB's TPPN No. 10/88 for those applicable resources, demolition and/or construction work on the projected development site would not cause any significant adverse construction-related impacts to nearby historic and cultural resources.

Effect of Construction on Air Quality

Possible impacts on local air quality during construction induced by the proposed actions include fugitive dust (particulate) emission from land clearing operation and demolition as well as mobile source emissions (hydrocarbons, nitrogen oxide, and carbon monoxide) generated by construction equipment and vehicles.

Fugitive dust emissions from land clearing operations can occur from excavation, hauling, dumping, spreading, grading, compaction, wind erosion, and traffic over unpaved areas. Actual quantities of emissions depend on the extent and nature of the clearing operations, the type of equipment employed, the physical characteristics of the underlying soil, the speed at which construction vehicles are operated, and the type of fugitive dust control methods employed. Much of the fugitive dust generated by construction activities should be of a short-term duration and relatively contained within a proposed site, not significantly impacting nearby buildings or residents. All appropriate fugitive dust control measures – including watering of exposed areas and dust covers for trucks – would be employed during construction of the projected development site. Therefore, the fugitive source emissions generated by the proposed actions would not be significant.

Mobile source emissions may result from the operation of construction equipment, trucks delivering materials and removing debris, workers' private vehicles, or occasional disruptions in traffic near the construction site. As the number of construction-related vehicle trips generated by the proposed actions would be relatively small and the emissions from such vehicles as well as construction equipment would occur over a relatively short construction period and be dispersed throughout the proposed rezoning area, the mobile source emissions generated by the proposed actions would not be significant. Overall, the proposed actions would not have the potential to result in significant adverse air quality impacts.

Effect of Construction on Noise

Noise and vibration from construction equipment operation and noise from construction workers' vehicles and delivery vehicles traveling to and from the construction site can affect community noise levels. The level of impact of these noise sources depends on the noise characteristics of the equipment and activities involved the construction schedule, and the location of potentially sensitive noise receptors.

Noise and vibration levels at a given location are dependent on the kind and number of pieces of construction equipment being operated, as well as the distance of the location from the construction site and the types of structures, if any, between the location and the noise source. Noise levels caused by construction activities can vary widely, depending on the phase of construction (e.g. demolition, land clearing and excavation, foundation, erection of structure, construction of exterior walls) and the specific task being undertaken.

Construction noise associated with the proposed actions is expected to be similar to noise generated by other residential construction projects in the city. Increased noise level caused by construction activities can be expected to be more significant during early excavation phases of construction and would be of relatively short duration. Increases in noise levels caused by delivery trucks and other construction vehicles would not be significant.

Construction noise is regulated by the New York City Noise Control Code and by Environmental Protection Agency noise emission standards for construction equipment. These local and federal requirements mandate that certain classifications of construction equipment and motor vehicles meet specified noise emissions standards; that, except under exceptional circumstances, construction activities be limited to weekdays between the hours of 7:00 AM and 6:00 PM; and that construction material be handled and transported in such a manner as not to create unnecessary noise. In addition, whenever possible, appropriate low noise emission level equipment and operational procedures can be utilized to minimize noise and its effect on adjacent uses.

APPENDICES

Appendix A: Site Plans

BSA NOTES:

PARKING – SELF PARKING

PLANS SHOULD SHOW STALLS THAT ARE A MINIMUM 8'–6" WIDE AND 18'–0" DEEP, WITH AISLE WIDTHS CORRESPONDING TO THE ANGLE OF PARKING STALLS AS REQUIRED BY RECOGNIZED NATIONAL STANDARDS FOR PARKING LOTS/GARAGES, (FOR EXAMPLE, THE STANDARD MINIMUM AISLE WIDTH FOR 90° PARKING STALLS IS 24'–0").

END STALLS PARALLEL TO WALLS OR FENCES SHALL BE A MINIMUM 10'–0" WIDE.

PARALLEL PARKING SHALL HAVE A MINIMUM AISLE WIDTH OF 10'–0" AND PARKING SPACE DIMENSIONS OF 8'–6" X 24'–0"

ALL EXITS SHALL BE APPROVED BY THE DOB

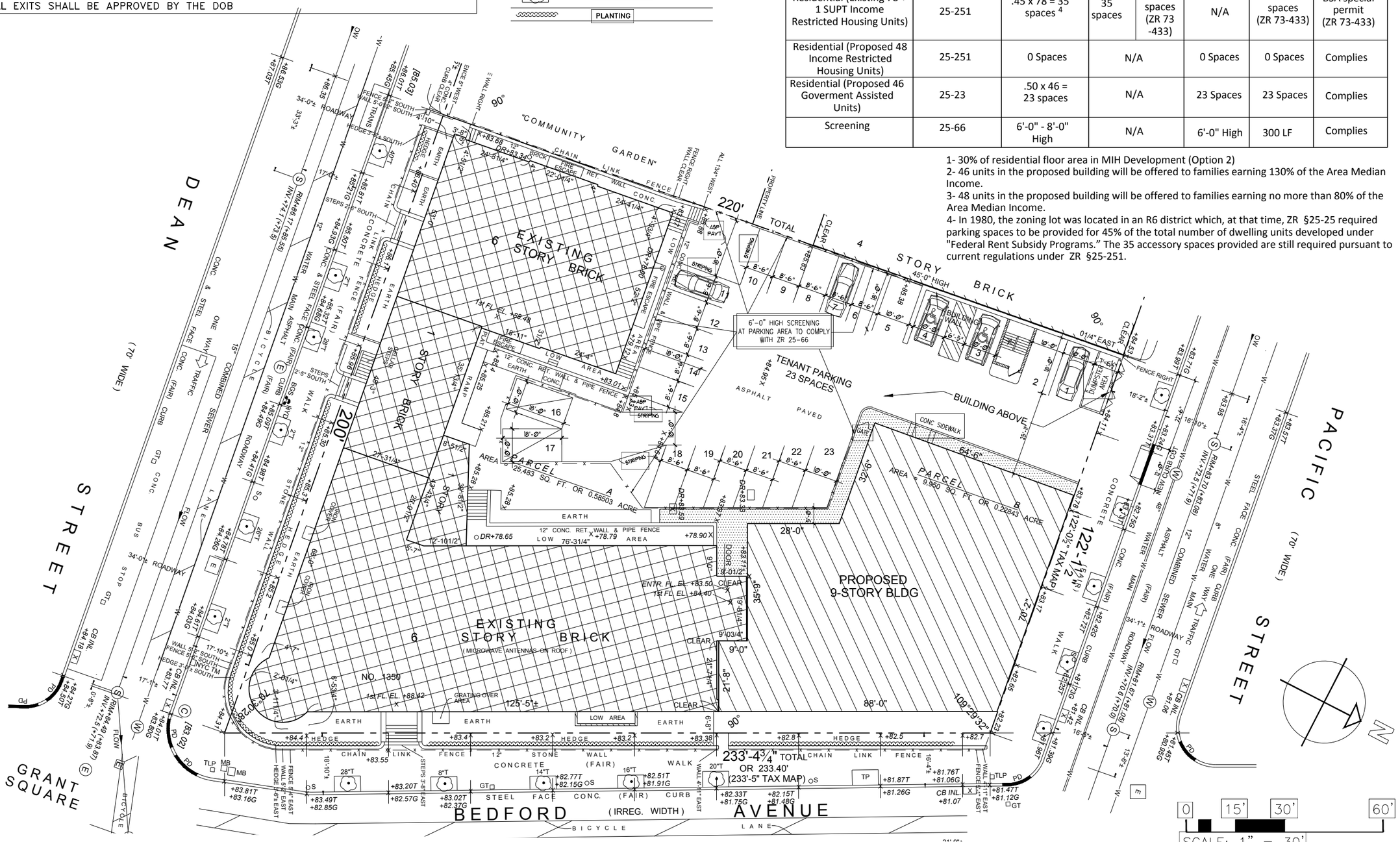
LEGEND

- PROPERTY LINE
- SCREENING ZR 25–66 (LESS THAN 50% OPAQUE)
- EXISTING BUILDING
- PROPOSED BUILDING
- CONCRETE SIDEWALK
- STREET TREES
- PLANTING

PROPOSED ZONING ANALYSIS

	ZR SECTION	REQUIRED/ MAXIMUM	EXISTING BUILDING		PROPOSED BUILDING	ZONING LOT	COMPLIANCE
Floor Area							
Floor Area (Qualifying Households)	23-154(d)(3)(ii)	.30 x 80,088 = 24,026.40 sf [1]	N/A		24,026.40 sf	24,026.40 sf	Complies
Dwelling Units							
Government Assisted Unit Under ZR 23-911 [2]	12-10	N/A	N/A		46 Units	46 Units	N/A
Income Restricted housing Units Under ZR 12-10 [3]	23-911	N/A	78 Units		48 Units	126 Units	N/A
Parking			Provided	Proposed			
Residential (Existing 78 + 1 SUPT Income Restricted Housing Units)	25-251	.45 x 78 = 35 spaces [4]	35 spaces	0 spaces (ZR 73 -433)	N/A	0 spaces (ZR 73-433)	BSA special permit (ZR 73-433)
Residential (Proposed 48 Income Restricted Housing Units)	25-251	0 Spaces	N/A		0 Spaces	0 Spaces	Complies
Residential (Proposed 46 Goverment Assisted Units)	25-23	.50 x 46 = 23 spaces	N/A		23 Spaces	23 Spaces	Complies
Screening	25-66	6'-0" - 8'-0" High	N/A		6'-0" High	300 LF	Complies

1- 30% of residential floor area in MIH Development (Option 2)
2- 46 units in the proposed building will be offered to families earning 130% of the Area Median Income.
3- 48 units in the proposed building will be offered to families earning no more than 80% of the Area Median Income.
4- In 1980, the zoning lot was located in an R6 district which, at that time, ZR §25-25 required parking spaces to be provided for 45% of the total number of dwelling units developed under "Federal Rent Subsidy Programs." The 35 accessory spaces provided are still required pursuant to current regulations under ZR §25-251.



BEDFORD ARMS, LLC
1350 BEDFORD AVE
N.E.C. OF DEAN STREET
BROOKLYN, NEW YORK
BLOCK: 1205 LOT: 28

BSA APPLICATION
CAL #

DATE:	REVISION
10-27-16	

JOHN SCHIMENTI PC
ARCHITECT, AIA
126 ATLANTIC AVE., SUITE # 3
LYNBROOK, NY 11563
516-825-3883
JOHN@JSCHIMENTI.COM

TITLE:
PROPOSED
SITE PLAN

DR. BY PZ
CH. BY JS

REGISTERED ARCHITECT
JOHN M. SCHIMENTI
STATE OF NEW YORK
18046

DWG. NO.
P-1

Appendix B: LPC Correspondence

Landmarks Preservation Commission

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

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

ENVIRONMENTAL REVIEW

Project number: DEPARTMENT OF CITY PLANNING / 17DCP071K
Project:
Address: 1350 GRANT SQUARE, **BBL:** 3012050028
Date Received: 1/12/2017

The LPC is in receipt of the revised EAS of 1/10/17. The text is acceptable for historic and cultural resources.

Gina Santucci 1/12/2017

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 30511_FSO_GS_01122017.doc

Landmarks Preservation Commission

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

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

ENVIRONMENTAL REVIEW

Project number: DEPARTMENT OF CITY PLANNING / 77DCP262K
Project:
Address: 1350 GRANT SQUARE, **BBL:** 3012050028
Date Received: 10/20/2016

The LPC is in receipt of the revised EAS of September, 2016. The Shadows analysis is acceptable.

Gina Santucci

10/27/2016

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 30511_FSO_GS_10272016.doc

Appendix C: Phase I ESA

AECOM Environment

Prepared for:
Bedford Arms LLC
c/o Essex Plaza Management
Newark, New Jersey

Prepared by:

AECOM
New York, New York
60337755
November 2016

Phase I Environmental Site Assessment 1350 Bedford Avenue Rezoning, Bedford Avenue & Pacific Street, Brooklyn, New York

Executive Summary

The legal firm of Slater & Beckerman contracted with AECOM to perform a Phase I Environmental Site Assessment (ESA) of a vacant parcel consisting of a driveway, a parking lot, and a landscaped area associated with a southerly adjacent apartment building located at 1350 Bedford Avenue (subject parcel). The subject parcel is located at the northeast corner of Bedford Avenue and Pacific Street, Brooklyn, Kings County, New York. This Phase I ESA was performed in general conformance with the scope and limitations of ASTM Standard Practice Designation E 1527-13 for ESAs. Exceptions to, or deletions from, this practice are described in this report.

The subject parcel consists of a 36,433-square foot lot with a driveway, a parking lot, and a landscaped area associated with the southerly adjacent apartment building located at 1350 Bedford Avenue. The landscaped area, consisting of several hedges is adjacent to areas of concrete and asphalt pavement. A roll off container and some temporary fencing was located within the landscaped area and is associated with ongoing construction activities at the adjacent apartment building. Trash dumpsters used by the apartment building were located in the parking area. The perimeter of the subject parcel along Bedford Avenue and Pacific Street contains a chain link fence with an automated security gate to enter the parking lot on Pacific Street. The remaining portions of the subject parcel are surrounded by residential dwelling, including the apartment building at 1350 Bedford Avenue.

During the site visit, no visual evidence of potable water wells, monitoring wells, dry wells, clarifiers, septic tanks, or leach fields was observed on the subject parcel. A storm water drain was located in the portion of subject parcel within the landscaped area. No visual evidence of discolored soil, water, or unusual vegetative conditions or odors was observed during the site visit.

The subject parcel is located within a predominately residential area. Properties to the east, south and west are either apartment complexes or residential dwellings. A storefront church is located to the northeast of the subject parcel. The property located to the north is the 23rd Regiment Armory for the National Guard. Gasoline service stations and dry cleaners were not observed in the immediate vicinity (approximately 500 feet) of the subject parcel. Other off-site sources of concern were not identified in the immediate vicinity.

Based upon a review of available records and online sources, the subject parcel was occupied by a domestic dwelling in 1888. This dwelling remained at the subject parcel until sometime prior to 1924. An aerial photo dated 1924 shows the subject parcel as vacant; though a 1932 Sanborn Map shows a small office building that was likely related to a nearby hospital. By 1951, the subject parcel has what appears to be a sidewalk leading towards the nearby hospital. By either 1954 or 1961, the subject parcel appears to have the parking lot and landscaped area that are currently present.

The subject parcel is not listed in the EDR database report. According to the environmental database report, 129 database listings for 77 sites were identified within 1/8 mile of the subject parcel. Based on AECOM's review of these database listings, none of these sites are expected to present a REC to the subject parcel based on their distance from the subject parcel, regulatory status (i.e. closed, no violations found), media impacted (i.e. soil only), and/or topographical position from the subject parcel (i.e. down-gradient or cross-gradient).

The following REC was identified during this assessment:

- Due to the history of area including the potential for orphan USTs, migration of contamination from off-site sources, and urban fill, the possibility exists for subsurface contamination on and in immediate vicinity of subject parcel to be present.

This assessment revealed no evidence of controlled RECs (CRECs), or historical RECs (HRECs) in connection with the subject parcel. .

Appendix D: Project -on- Project AERSCREEN Analysis

AECOM
125 Broad Street, New York, NY 10004
T 212377.8741 F 212.377.8410 www.aecom.com

Memorandum

Date: November 3, 2016

To: Donald E. Ehrenbeck, AICP, P.P.

From: Jason Huang

Subject: 1350 Bedford Ave Rezoning HVAC system Air Quality Assessment

cc: Fang Yang

1. INTRODUCTION

A HVAC system air quality impact assessment per the CEQR requirements was conducted for the proposed rezoning at Block 1205, Lot 28 (the "Proposed Development Site"), located at 1350 Bedford Avenue, Brooklyn. The applicant is seeking to rezone the proposed development site from an existing R6A District to an R7D District to facilitate the construction of a 94-unit nine-story residential building with approximately 88,664 gross square-foot (gsf) (80,088 zoning square feet [zsf]) in space. The proposed new building (the "proposed project site") would be located at the northern portion of the proposed development site, which is currently improved with an existing six-story, 82,655 gsf (68,434 zsf) 78-unit (plus one superintendent unit) residential building (See **Figure 1**).

In order to provide a reasonably conservative assessment, the Future With-Action scenario assumes that the proposed development site would be constructed to the maximum allowable floor area under the proposed zoning regulation. Thus the projected development site is assumed to be built to the allowable Floor Area Ratio (FAR) remaining on the lot, or 3.72 FAR. This would bring the combined built FAR on the proposed development site to 5.6, resulting in an approximate 135,568 zoning square-foot residential building with an overall height of 100 feet.

The air quality assessment was conducted to evaluate impacts:

1. From the proposed HVAC system of the proposed development building on the nearby buildings with heights similar to or greater than 100 feet;

2. From the existing building HVAC system within the same lot on the proposed development building.

2. METHODOLOGIES AND ASSUMPTIONS

Impacts from HVAC emissions are a function of fuel type, stack height, minimum distance from the source to the nearest receptor (building), and floor area (square footage) of development resulting from the project. Floor area is considered an indicator of fuel usage rate. The preliminary screening analysis for HVAC systems uses Figure 17-3 from the *CEQR Technical Manual*, which indicates the size of proposed development and distance to the nearest building of a height similar to or greater than the stack height of the proposed building(s). *CEQR Technical Manual* Figure 17-7 predicts the threshold of development size below which a project is unlikely to have a significant impact.

If the proposed development site fails in the screening analysis for HVAC systems, the USEPA's AERSCREEN model would be used to further determine any potential for significant adverse impacts.

The AERSCREEN model is a screening version of the AERMOD refined model and would be used for determining maximum concentrations from a single source using predefined meteorological conditions. The AERSCREEN analysis would be performed to identify potential impacts of SO_2, NO_2, PM_{10}, and $PM_{2.5}$ emissions.

An estimate of the emissions from the HVAC systems would be made based on the proposed development size, type of fuel used and type of construction with below fuel consumptions rates: for residential developments, 60.3 ft^3/ft^2-year would be used for natural gas.

Short-term factors would be determined by using peak hourly fuel consumption estimates for heating, hot water and cooling systems.

Emission factors for each fuel would be obtained from the EPA *Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume I: Stationary Point and Area Sources*.

The AERSCREEN model would be used to predict impacts over a 1-hour average using default meteorology. In order to predict pollutant concentrations over longer periods of time, EPA-referenced persistence factors would be used consisting of 0.6 and 0.1 for the 24-hour and annual average periods, respectively.

The modeling result will be compared to Not-to-Exceed criteria, which is the subtraction of background concentration (Queens College 2 station) from the NAAQS criteria. **Table 1** presents NAAQS (National Ambient Air Quality Standards) and background concentration of criteria air pollutants.

Table 1
NAAQS and Background Concentrations

Pollutant	Averaging Time	NAAQS	Background Concentration	unit	*De Minimis*	Not-to-Exceed (ug/m3)
NO_2	1 year	**53**	21.6	ppb		59.0
	1 hour	**100**	60.2	ppb		74.9
SO_2	1 hour	**75**	11.1	ppb		167.3
PM_{10}	24 hours	**150**	36.3	ug/m3		113.7
$PM_{2.5}$	1 year	**15**	8.1	ug/m3	**0.3**	0.3
	24 hours	**35**	22.5	ug/m3	**6.3**	6.3

Source: New York State Department of Environmental Conservation Ambient Air Monitoring Networks Region 2 Queens College 2 (http://www.dec.ny.gov/docs/air_pdf/2015airqualrpt.pdf)

3. SCREENING RESULTS

Existing Building HVAC Impact on Proposed Development Building

Figure 2 presents the rooftop plan of the existing residential building located on Block 1205, Lot 28. As marked by the architect, the stack of the existing building is located 100 feet away from the proposed development site.

According to **Figure 3**, the minimum allowable distance to the nearest building from the existing building would be 72 feet. Therefore, there would be no impact from the HVAC system of existing building within the same lot on the proposed development site.

Proposed Building HVAC Impact on Existing Building

Figure 4 shows that the minimum allowable distance to the nearest building from the proposed development site is 88 feet. Since the Armory Men's Shelter (see Figure 1), which is the closest building with similar or greater height as compared to the proposed development building, is located 76 feet away, AERSCREEN model was used to further analyze the impact.

Table 2 presents the AERSCREEN model predicted impacts at the distance of 76 feet. As shown in Table 2, no significant adverse air quality impacts from the HVAC system of the proposed development site would occur.

Table 2
AERSCREEN Modeling Criteria and Results

Pollutants	Averaging Time	Not-to-Exceed Criteria (ug/m^3)	Modeling Result (ug/m^3)
NOx	1 year	59.0	2.1
	1 hour	74.9	64.3
SO_2	1 hour	167.3	0.39
PM_{10}	24 hours	113.7	0.16
$PM_{2.5}$	1 year	0.3	0.16
	24 hours	6.3	2.9

4. CONCLUSION

This analysis found that by using natural gas as fuel:

1. The HVAC system of the existing residential building would have no significant air quality impact on the proposed development building;

2. The proposed HVAC system of proposed development building would have no significant air quality impact on the buildings nearby.

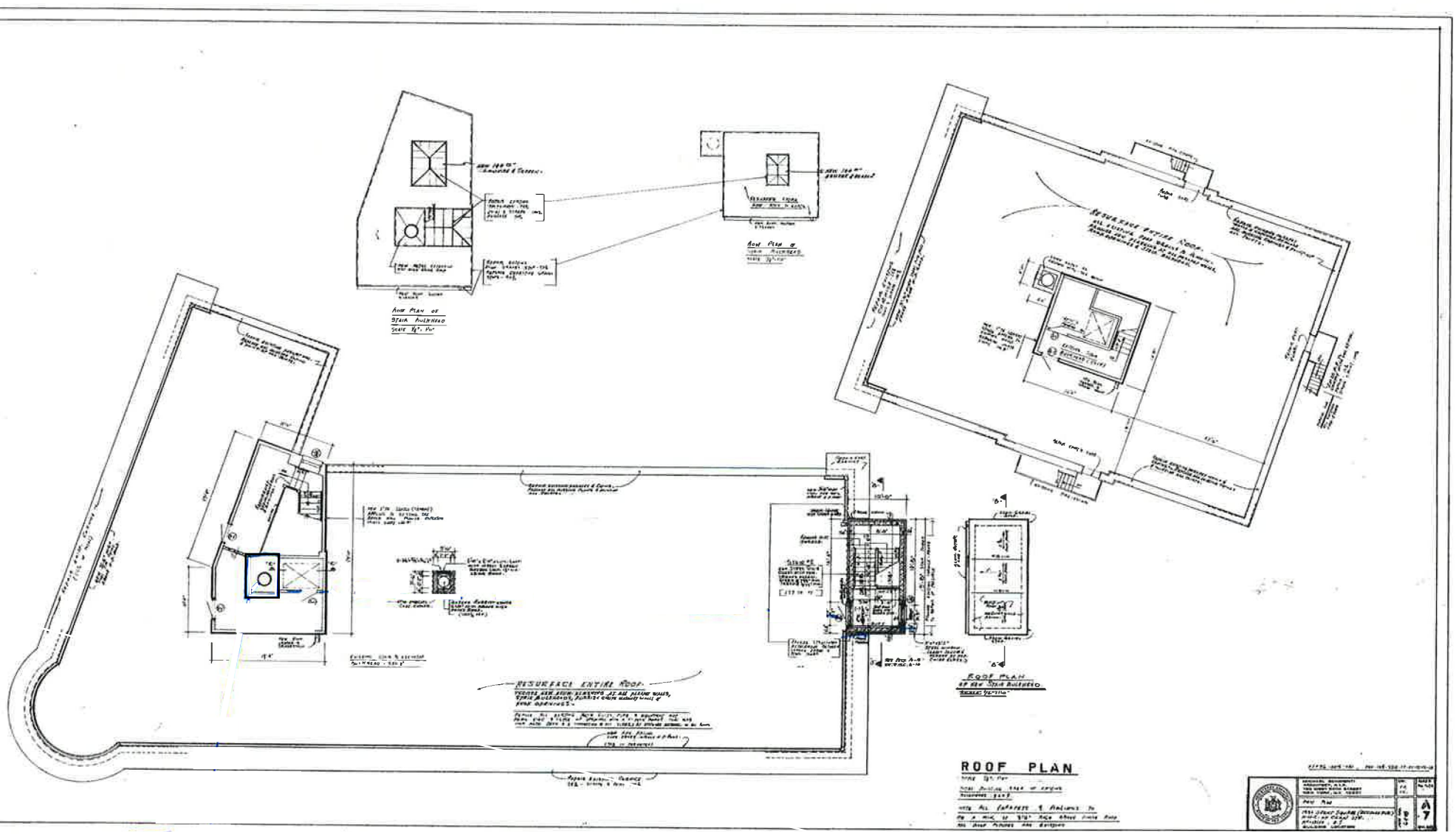
Therefore, no further analysis is warranted.

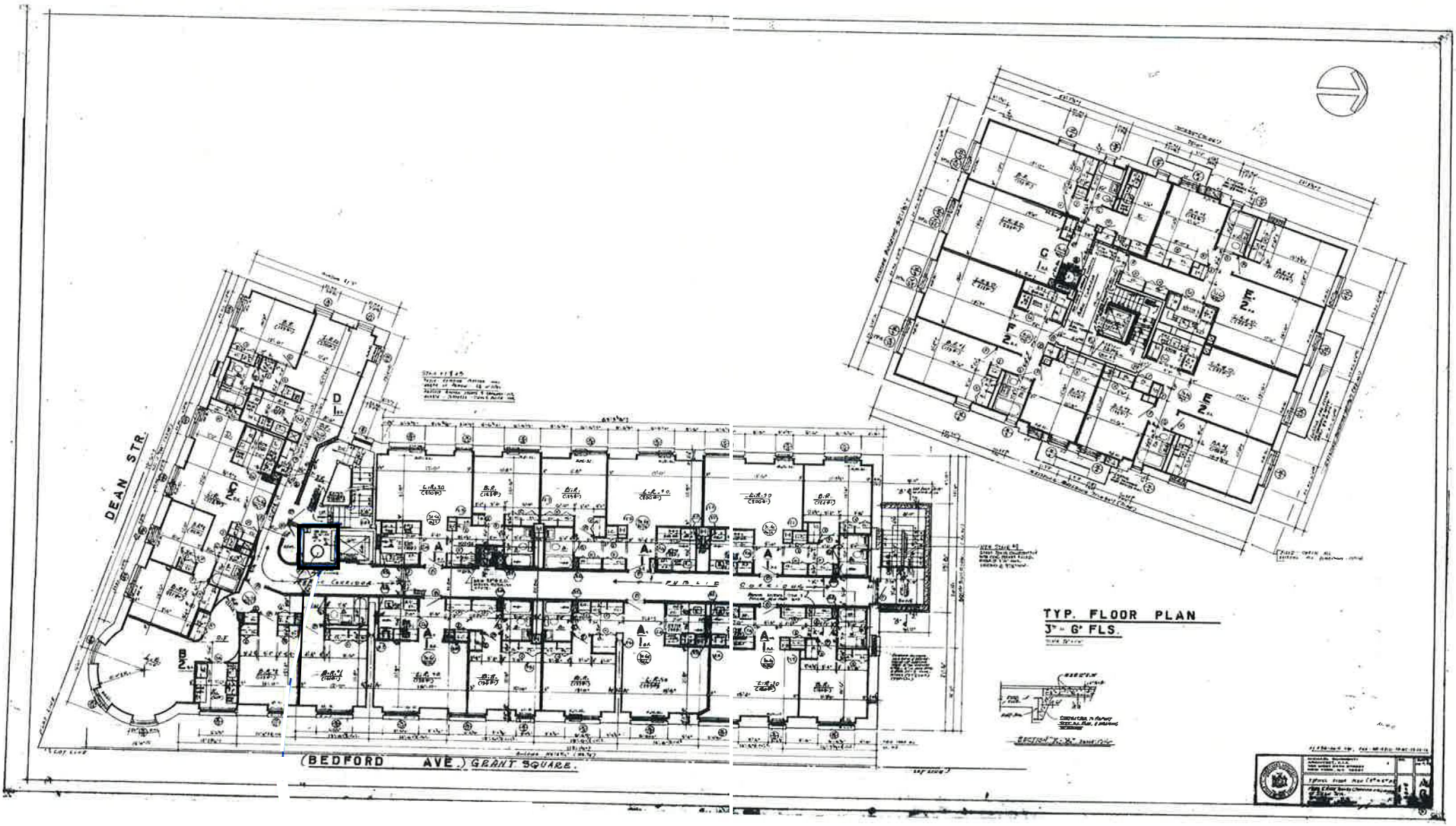


Proposed Development Building
On-site Existing Building
Armory Men's Shelter
Rezoning Area

0 50 100 Feet

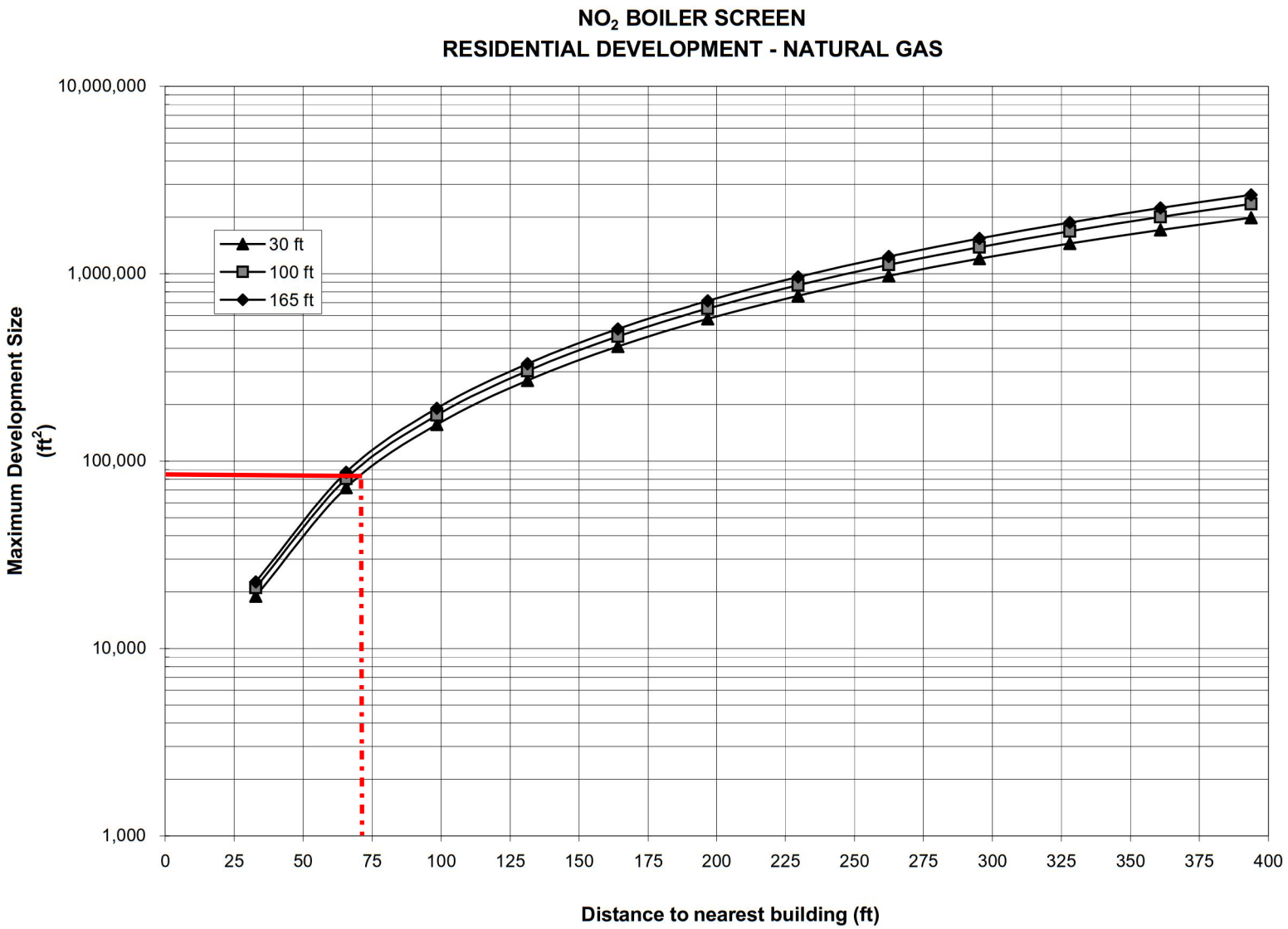
1350 Bedford Avenue Rezoning


RESURFACE ENTIRE ROOF.
ROOF PLAN
ROOF PLAN
ROOF PLAN


DEAN STR.
(BEDFORD AVE.) GRANT SQUARE.
TYP. FLOOR PLAN
J^D - G^D FLS.

HVAC Screening Analysis

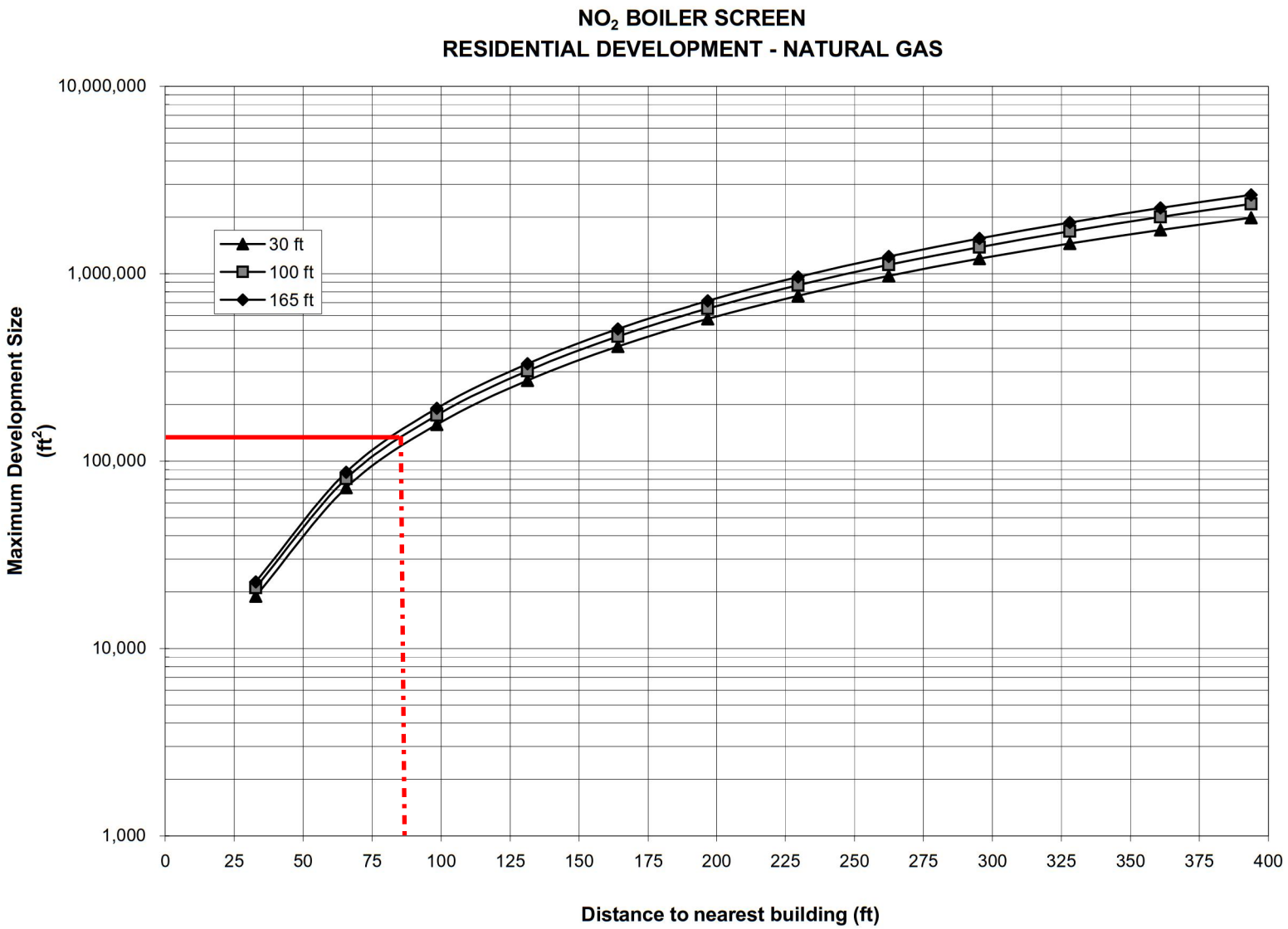
Site: 1350 Bedford Ave
Date: 10/24/2016
Pass/Fail: Pass



Stack Height: 74.5 ft
Distance to Nearest Building of Similar or Greater Height: 100 ft
Existing SQFA: 82,655 ft^2
Minimum Allowable Distance to Nearest Building: 72 ft

HVAC Screening Analysis

Site: 1350 Bedford Ave
Date: 10/24/2016
Pass/Fail: Fail



Stack Height: 103 ft
Distance to Nearest Building of Similar or Greater Height: 76 ft
Existing SQFA: 135,568 ft^2
Minimum Allowable Distance to Nearest Building: 88 ft

About AECOM
AECOM (NYSE: ACM) is a global provider of professional technical and management support services to a broad range of markets, including transportation, facilities, environmental and energy. With approximately 95,000 employees around the world, AECOM is a leader in all of the key markets that it serves. AECOM provides a blend of global reach, local knowledge, innovation, and technical excellence in delivering solutions that enhance and sustain the world's built, natural, and social environments.

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