Franklin Avenue Rezoning

Revised Environmental Assessment Statement*

CEQR #
17DCP067K

ULURP #
180347ZMK and N180348ZRK

Prepared for:
Cornell Realty Management LLC

Prepared by:
Philip Habib & Associates

Revised
June 8, 2018

*This Revised EAS supersedes the EAS issued on January 27, 2017 for the 1451 Franklin Avenue proposal (CEQR No. 17DCP067K). The Applicant withdrew the related land use application (ULURP Nos. C170147ZMK and N170148ZRK) on April 19, 2017. A new land use application was filed by the Applicant on April 18, 2018 (ULURP Nos. 180347ZMK and N180348ZRK). Changes to the application include: the elimination of the portion of Block 1189 from the proposed zoning text amendment; and the change in project name to Franklin Avenue Rezoning. This Revised EAS reflects the new land use application, and includes editorial changes throughout. The following attachments have been revised: A, "Project Description;" C, "Land Use, Zoning and Public Policy;" D, "Socioeconomic Conditions;" E, "Community Facilities;" G, "Shadows;" I, "Hazardous Materials;" and J, "Transportation." These changes are explained herein.

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Environmental Assessment Statement

(EAS) Form

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

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

Part I: GENERAL INFORMATION

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

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

2. *Project Name* Franklin Avenue Rezoning Revised EAS

3. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency) 17DCP067K	BSA REFERENCE NUMBER (if applicable)
ULURP REFERENCE NUMBER (if applicable) 180347ZMK and N180348ZRK	OTHER REFERENCE NUMBER(S) (if applicable) (*e.g.*, legislative intro, CAPA)

4a. *Lead Agency Information*			**4b. *Applicant Information***		
NAME OF LEAD AGENCY New York City Department of City Planning			NAME OF APPLICANT Cornell Realty Management LLC		
NAME OF LEAD AGENCY CONTACT PERSON Robert Dobruskin, AICP, Director, EARD			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON Raymond Levin, Slater & Beckerman, PC		
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 rlevin@ slaterbeckerman.com	

5. *Project Description*

Cornell Realty Management LLC (Cornell Realty) (the "Applicant") is seeking two discretionary actions in order to facilitate the redevelopment of two sites in the Crown Heights neighborhood of Brooklyn Community District 9. The discretionary actions include: (i) A zoning map amendment to rezone portions of Blocks 1188, 1189, and 1190 from R6A and R6A with a C1-3 overlay to an R8X zoning district and an R8X district with a C2-4 overlay, and rezoning the existing R8A zoning district to an R8X district; and (ii) A zoning text amendment to designate the northern blockfront and southern blockfront (as defined herein) of the Project Area as a Mandatory Inclusionary Housing Area (excluding the middle blockfront portion of the rezoning area that includes the Tivoli Towers and NYPD property). Collectively, the zoning map amendment and zoning text amendment are the "Proposed Actions."

The Project Area is approximately 300 feet wide and two and a half blocks long, located on the western side of Franklin Avenue (Block 1188: p/o Lot 35, p/o Lot 44 and Lots 53, 54, 55, 56, and 58; Block 1189: Lots 31 and p/o Lot 60; and Block 1190: p/o Lot 26 and Lots 28, 29, 45, 46, 48 and 50), totaling approximately 186,425 sf. The Applicant-Proposed Development (Projected Development Sites 1 and 2, located at 931 Carroll Street and 40 Crown Street) would result in a combined total of approximately 518 DUs (140 affordable), approximately 16,284 gsf of local retail, and approximately 151 accessory parking spaces. Additionally, a projected development site has been identified within the rezoning area at 882-886 Franklin Avenue (Block 1188, Lots 53, 54 and 55) that may be developed as a result of the Proposed Action. Projected development Site 3 would consist of approximately 54,000 sf with 47 dwelling units, approximately 7,500 gsf of local retail and up to 14-spaces of accessory parking (though parking would likely be waived). The total development across the three development sites would be 565 DUs, 23,784 gsf of local retail and up to 165 accessory parking spaces. See Attachment A, "Project Description" for details.

Project Location

BOROUGH Brooklyn	COMMUNITY DISTRICT(S) 9	STREET ADDRESS N.A.
TAX BLOCK(S) AND LOT(S) Block 1188, Lots 35, 44, 53-56, 58; Block 1189, Lots 31, 60; Block 1190, Lots 26, 28, 29, 45, 46, 48, 50		ZIP CODE 11225

DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS The northern boundary of the proposed rezoning area is a point approximately 131 feet north of, and parallel to, Carroll Street, the eastern boundary is Franklin Avenue, the southern boundary is Montgomery Street, and the western limit of the rezoning area extends approximately 300 feet west of Franklin Avenue.

EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY R8A, R6A and R6A with a C1-3 commercial overlay

ZONING SECTIONAL MAP NUMBER 16d

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

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

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

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

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

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

☐ VARIANCE (use)

☐ VARIANCE (bulk)

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

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

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

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

☐ LEGISLATION	☒ FUNDING OF CONSTRUCTION, specify: HDC and/or HPD financing may be requested
☐ RULEMAKING	☐ POLICY OR PLAN, specify:
☐ CONSTRUCTION OF PUBLIC FACILITIES	☐ FUNDING OF PROGRAMS, specify:
☐ 384(b)(4) APPROVAL	☐ PERMITS, specify:
☐ OTHER, explain:	

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

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

***State or Federal Actions/Approvals/Funding*:** ☒ YES ☐ NO If "yes," specify: HDC and/or HPD financing may be requested

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

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

☒ SITE LOCATION MAP	☒ ZONING MAP	☒ SANBORN OR OTHER LAND USE MAP
☒ TAX MAP	☐ FOR LARGE AREAS OR MULTIPLE SITES, A GIS SHAPE FILE THAT DEFINES THE PROJECT SITE(S)	

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

Physical Setting (both developed and undeveloped areas)

Total directly affected area (sq. ft.): +/-186,425 sf

Waterbody area (sq. ft) and type: 0

Roads, buildings, and other paved surfaces (sq. ft.): +/-186,425 sf

Other, describe (sq. ft.): 0

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

SIZE OF PROJECT TO BE DEVELOPED (gross square feet): 615,976

NUMBER OF BUILDINGS: 3

GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): 134,342 gsf; 427,634 gsf; 54,000 gsf

HEIGHT OF EACH BUILDING (ft.): 175; 175; 175

NUMBER OF STORIES OF EACH BUILDING: 16; 16; 16

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: 73,617 sf
The total square feet not owned or controlled by the applicant: 112,808 sf

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

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

AREA OF TEMPORARY DISTURBANCE: Projected Site 3= The site is fully developed-no incremental change in area of disturbance; Applicant-owned sites=No incremental disturbance as compared to the as of right projects sq. ft. (width x length)

VOLUME OF DISTURBANCE: Projected Site 3= The site is fully developed with cellar-no incremental change in volume of disturbance; Applicant-owned sites=No incremental disturbance as compared to the as of right projects cubic ft. (width x length x depth)

AREA OF PERMANENT DISTURBANCE: Projected Site 3= No incremental change; Applicant-owned sites=No incremental disturbance as compared to the as of right projects sq. ft. (width x length)

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

	Residential	***Commercial***	***Community Facility***	***Industrial/Manufacturing***
Size (in gross sq. ft.)	592,192 gsf	23,784 gsf	N.A.	N.A.
Type (*e.g.,* retail, office, school)	565 units	Local Retail		

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

If "yes," please specify: NUMBER OF ADDITIONAL RESIDENTS: 1,480 NUMBER OF ADDITIONAL WORKERS: +/-71

Provide a brief explanation of how these numbers were determined:
2.62 persons per household based on 2010 Census data for BK CD 9; 3 employees per 1,000 sf of retail

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

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

If "yes," see Chapter 2, "Establishing the Analysis Framework" and describe briefly: See Attachment A, "Project Description" for details.

9. *Analysis Year* CEQR Technical Manual Chapter 2

ANTICIPATED BUILD YEAR (date the project would be completed and operational): 2021 for the Applicant-owned sites; 2023 for Projected Development Site 3

ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: 18-24

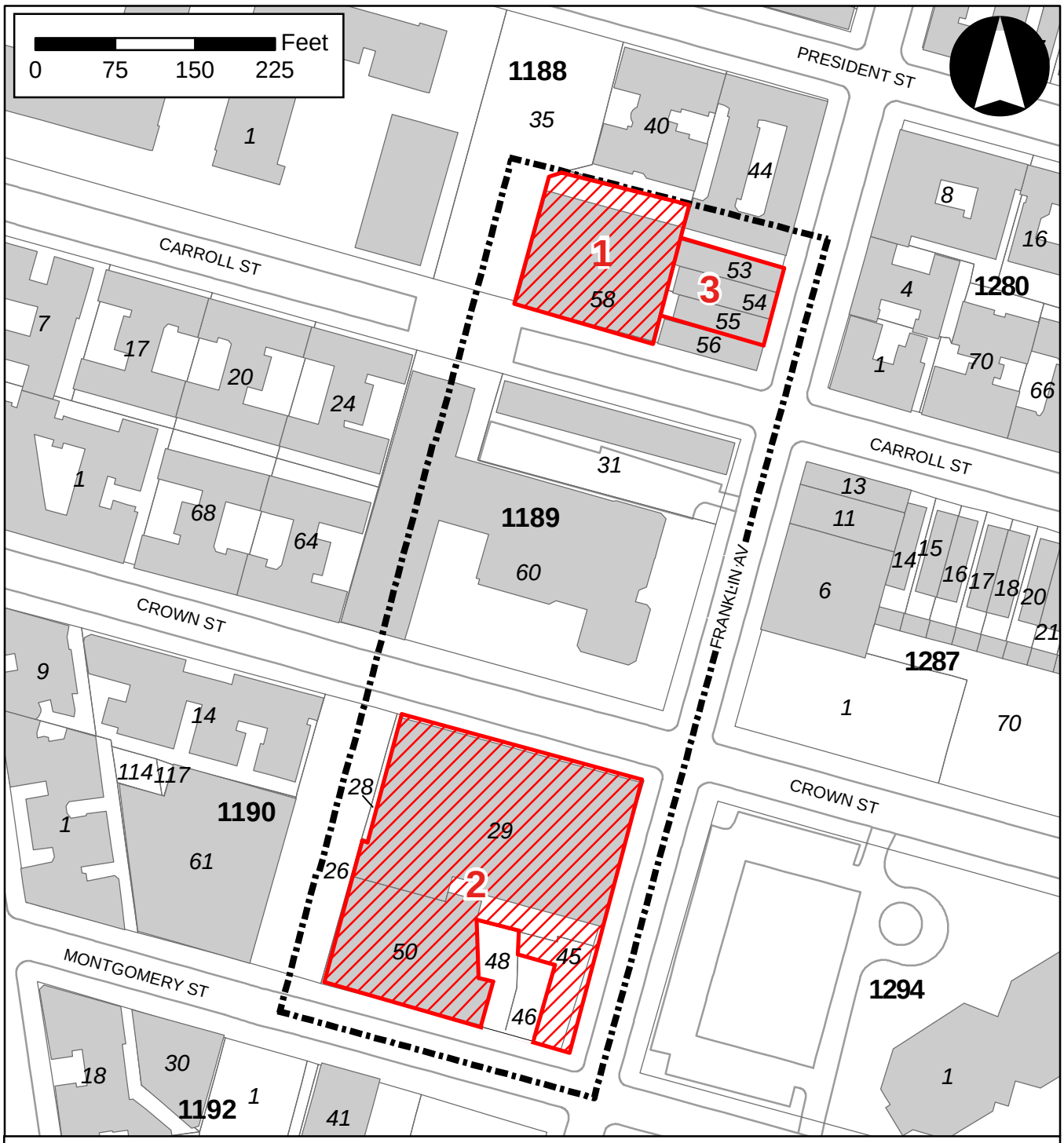
WOULD THE PROJECT BE IMPLEMENTED IN A SINGLE PHASE? ☒ YES ☐ NO IF MULTIPLE PHASES, HOW MANY?

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE: Construction of the Applicant-sponsored buildings would occur at the same time.

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

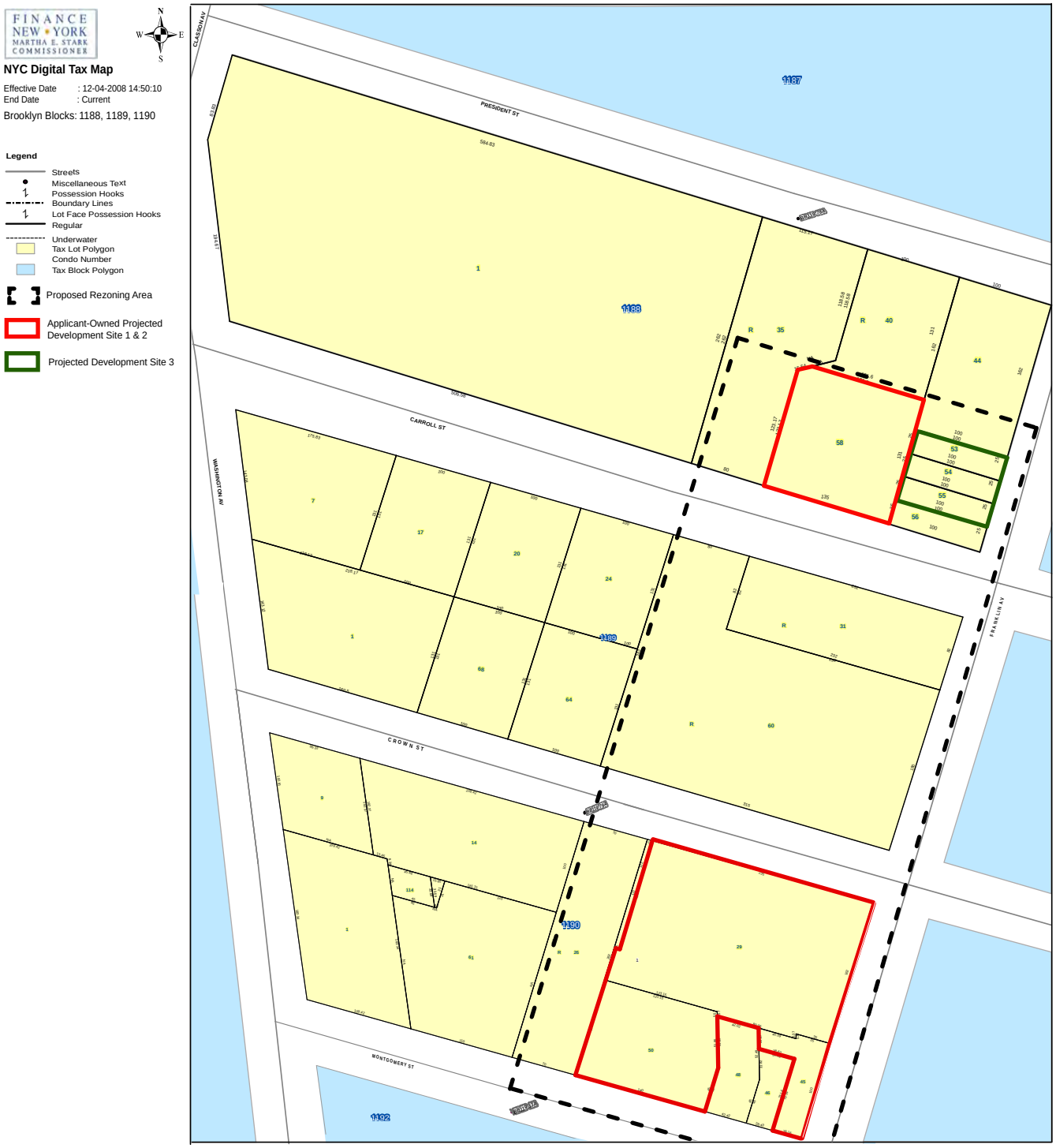
☒ RESIDENTIAL ☐ MANUFACTURING ☒ COMMERCIAL ☐ PARK/FOREST/OPEN SPACE ☒ OTHER, specify: MTA subway right-of-way

Project Location Map



Legend

- Projected Development Sites
- Applicant-Owned Development Sites
- Proposed Rezoning Area
- Existing Building Footprints
- **1234** Block Number
- *56* Lot Number


FINANCE
NEW YORK
MARTHA E. STARK
COMMISSIONER
NYC Digital Tax Map
Effective Date : 12-04-2008 14:50:10
End Date : Current
Brooklyn Blocks: 1188, 1189, 1190
Legend
Streets
Miscellaneous Text
Possession Hooks
Boundary Lines
Lot Face Possession Hooks
Regular
Underwater
Tax Lot Polygon
Condo Number
Tax Block Polygon
Proposed Rezoning Area
Applicant-Owned Projected Development Site 1 & 2
Projected Development Site 3
N
W
E
S
CLASSON AV
PRESIDENT ST
CARROLL ST
WASHINGTON AV
CROWN ST
MONTGOMERY ST
FRANKLIN AV
1187
1188
1189
1190
1192

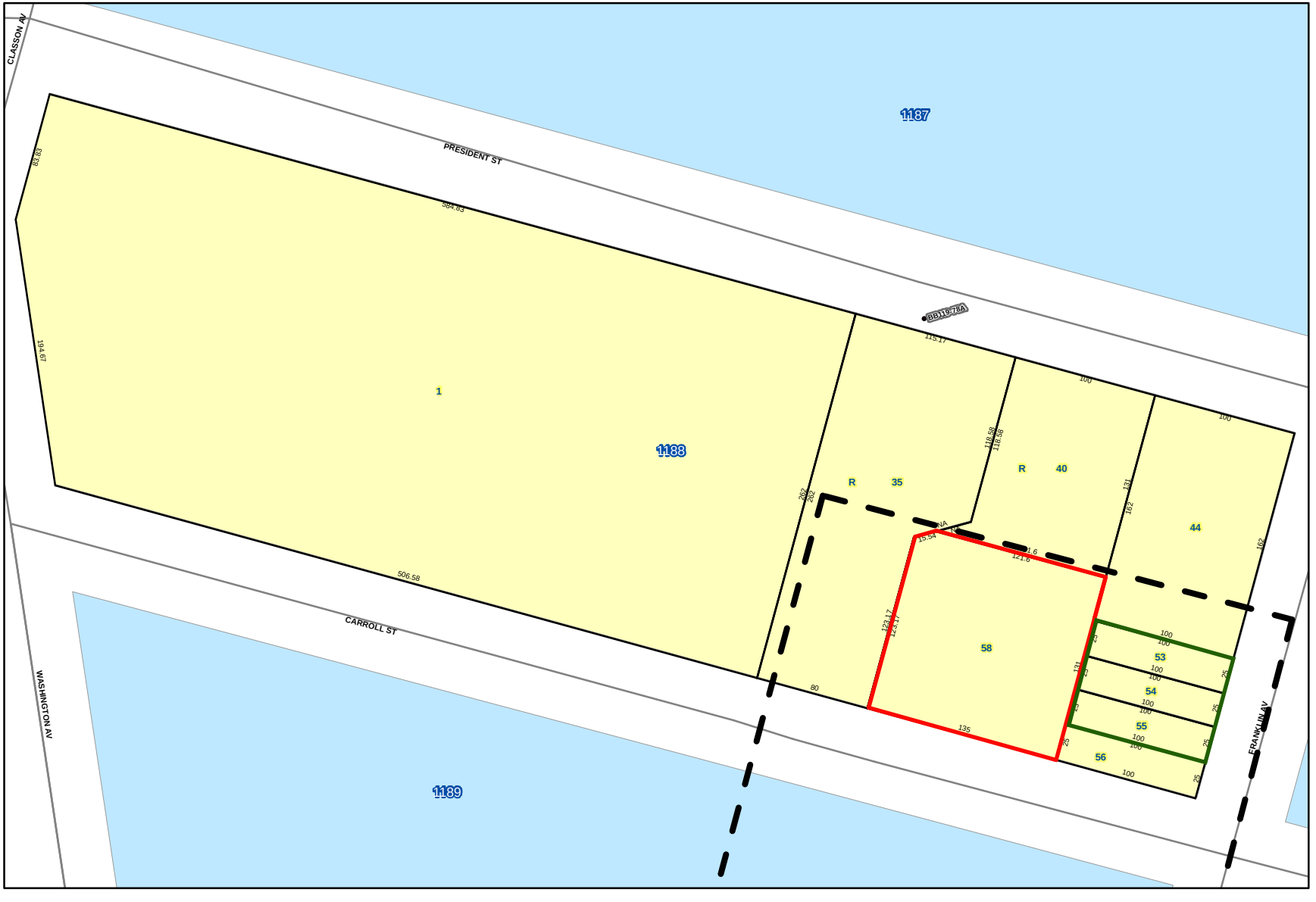
Tax Map

FINANCE NEW YORK MARTHA E. STARK COMMISSIONER

NYC Digital Tax Map

Effective Date : 12-04-2008 14:50:10
End Date : Current

Brooklyn Block: 1188



Legend

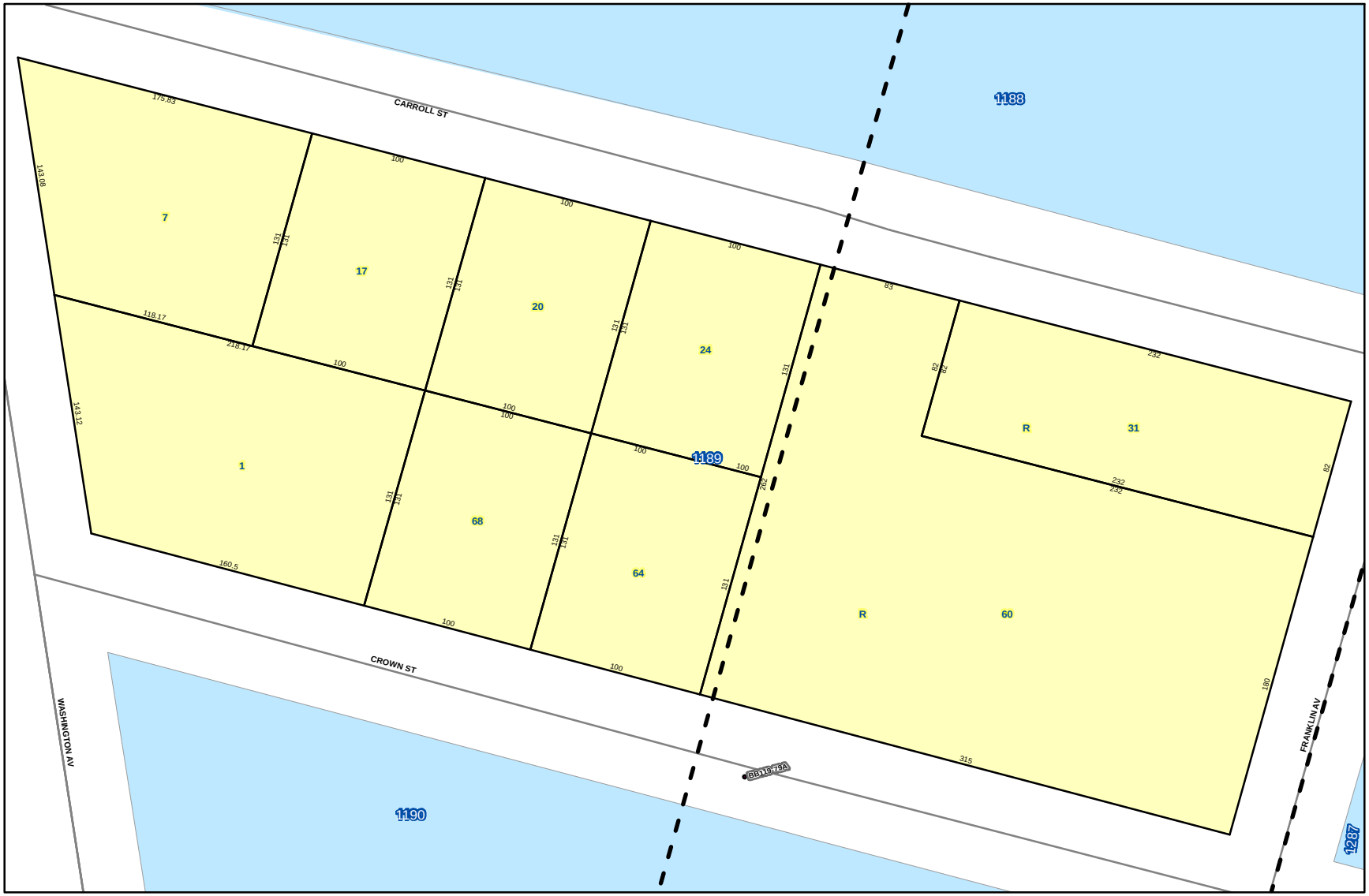
- Streets
- Miscellaneous Text
- Possession Hooks
- Boundary Lines
- Lot Face Possession Hooks
- Regular
- Underwater
- Tax Lot Polygon
- Condo Number
- Tax Block Polygon
- Proposed Rezoning Area
- Applicant-Owned Projected Development Site 1
- Projected Development Site 3

FINANCE NEW • YORK
MARTHA E. STARK
COMMISSIONER

NYC Digital Tax Map

Effective Date : 12-04-2008 14:50:23
End Date : Current

Brooklyn Block: 1189



Legend

- Streets
- Miscellaneous Text
- Possession Hooks
- Boundary Lines
- Lot Face Possession Hooks
- Regular
- Underwater
- Tax Lot Polygon
- Condo Number
- Tax Block Polygon
- Proposed Rezoning Area

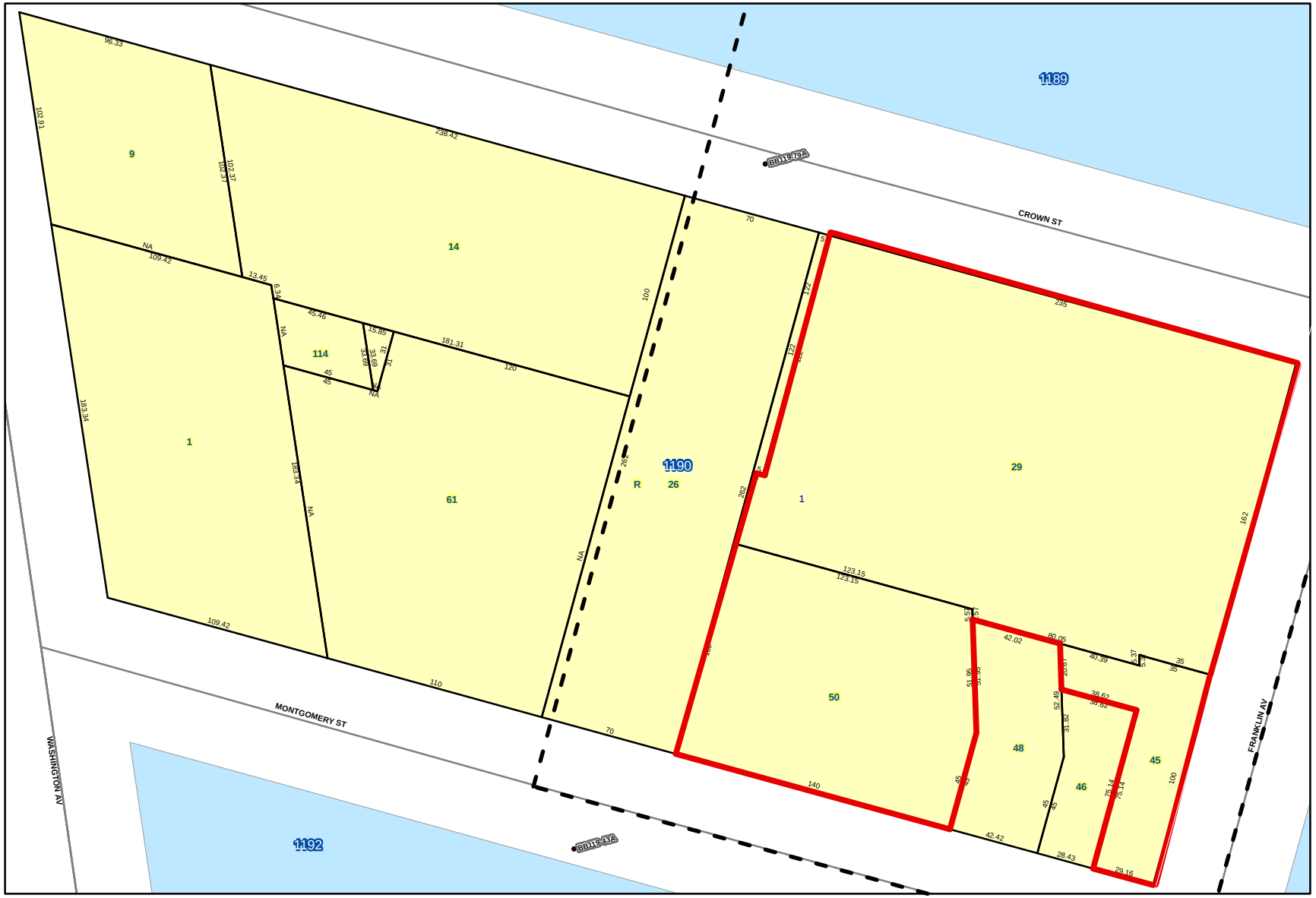
Figure 2c
Tax Map

FINANCE NEW • YORK
MARTHA E. STARK
COMMISSIONER

NYC Digital Tax Map

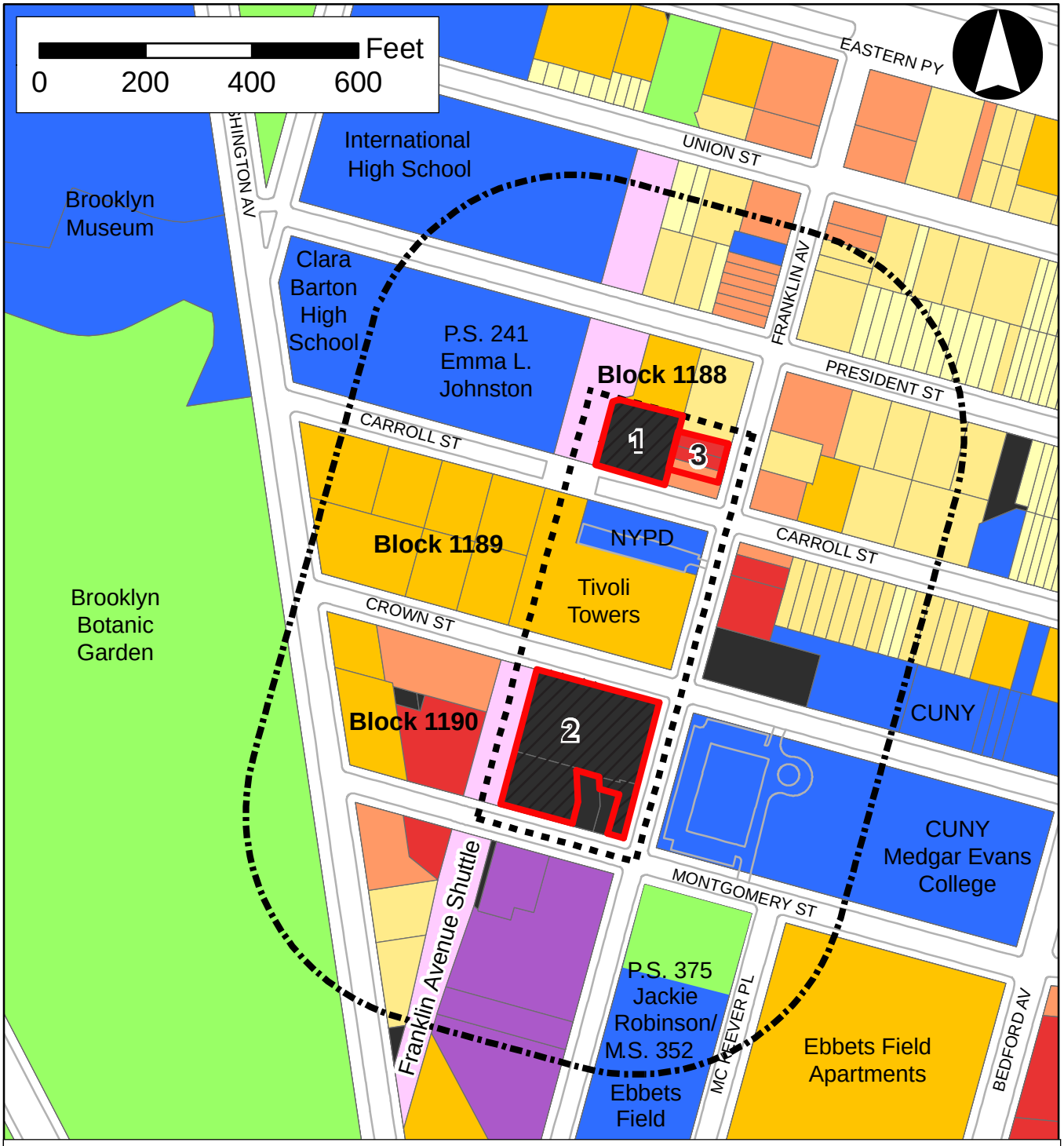
Effective Date : 12-04-2008 14:50:36
End Date : Current

Brooklyn Block: 1190



Legend

- Streets
- Miscellaneous Text
- Possession Hooks
- Boundary Lines
- Lot Face Possession Hooks
- Regular
- Underwater
- Tax Lot Polygon
- Condo Number
- Tax Block Polygon
- Proposed Rezoning Area
- Applicant-Owned Projected Development Site 2



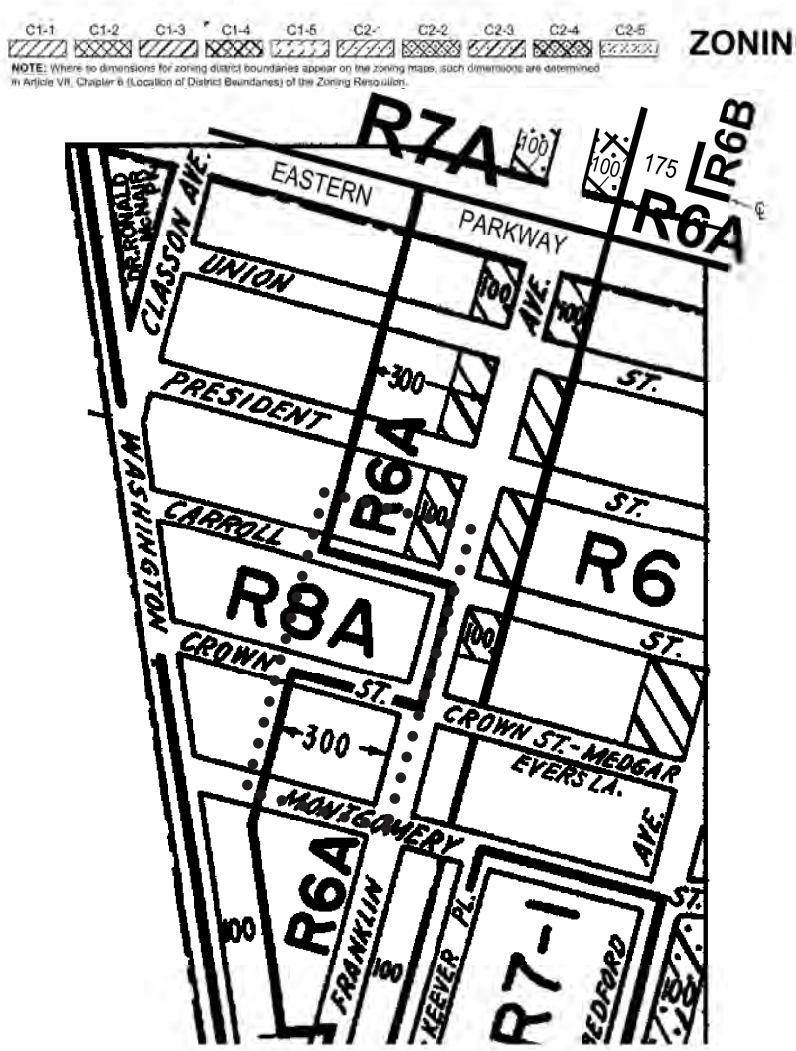
Legend

- 1 Projected Development Sites
- Applicant-Owned Sites
- Proposed Rezoning Area
- 400-Foot Radius

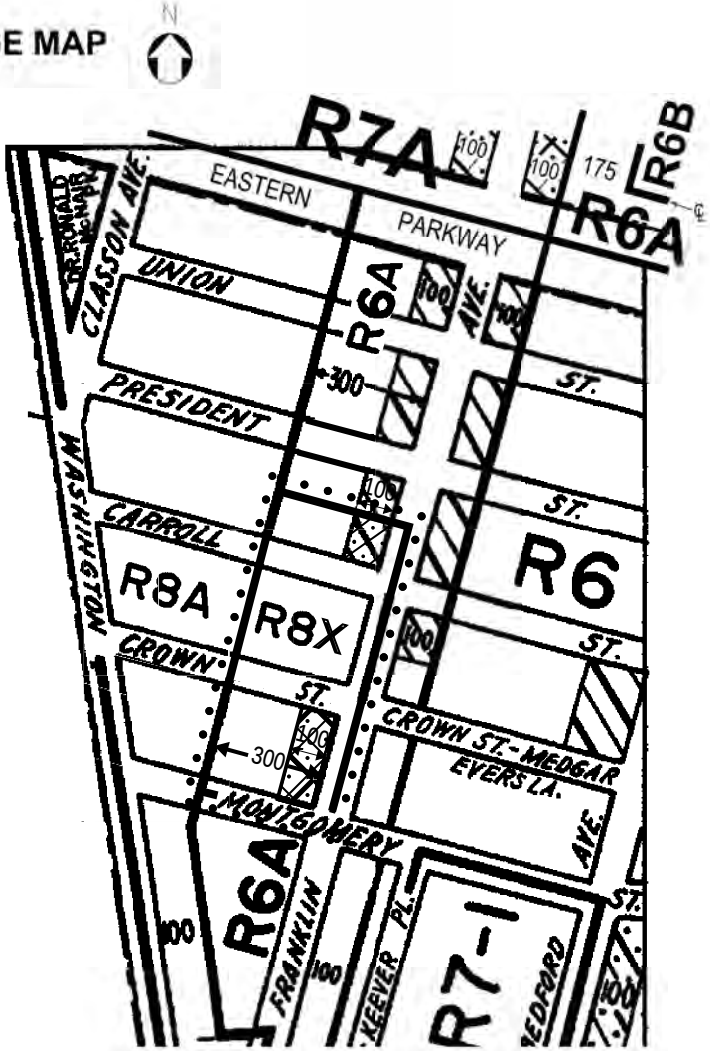
Land Uses

- One & Two Family Buildings
- Multi-Family Walkup Buildings
- Multi-Family Elevator Buildings
- Mixed Commercial/Residential Buildings
- Commercial/Office Buildings
- Industrial/Manufacturing Buildings
- Transportation/Utility
- Public Facilites & Institutions
- Open Space
- Parking Facilities
- Vacant Land
- All Others or No Data

Existing & Proposed Zoning



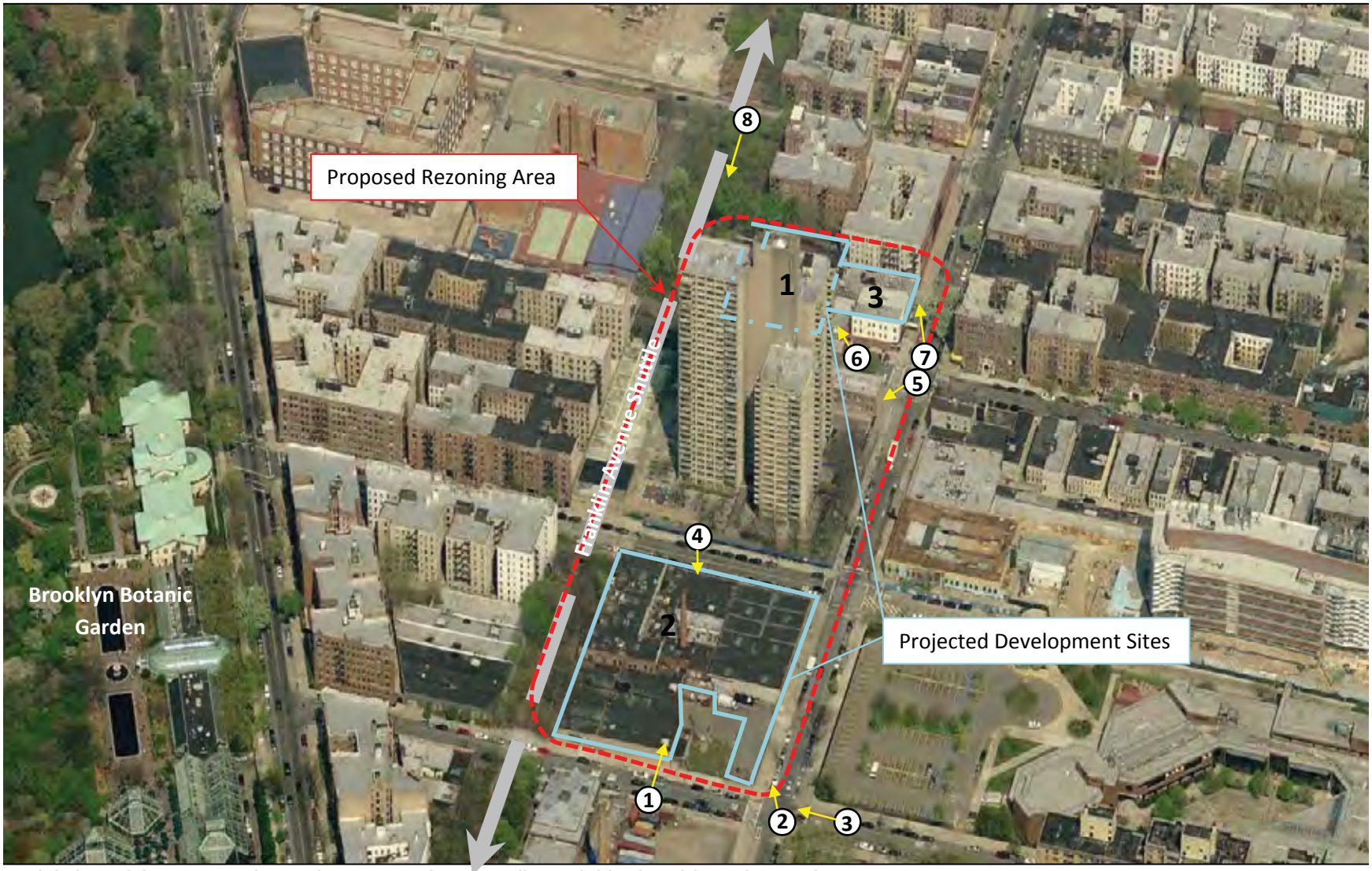
CURRENT ZONING MAP - 16d Brooklyn



PROPOSED ZONING MAP- Area being rezoned is outlined with dotted lines

Changing R6A, R6A/C1-3 and R8A districts to R8X and R8X/C2-4 districts

Proposed Rezoning Area



Aerial view of the proposed rezoning area and surrounding neighborhood from the south.

① → Photo Location



Photo 1: View north across Montgomery Street at the southern limit of the rezoning area.



Photo 2: View northwest from the intersection of Franklin Avenue and Montgomery Street.



Photo 3: View west along Montgomery Street from Franklin Avenue.



Photo 4: View south across Crown Street with Projected Development Site 2 in the foreground and the Ebbets Field Apartments in the background.



Photo 5: View southwest from the intersection of Franklin Avenue and Carroll Street.



Photo 6: View northwest across Carroll Street at Projected Development Site 1.



Photo 7: View northwest from the intersection of Franklin Avenue and Carroll Street.



Photo 8: View south of the Franklin Avenue Shuttle tracks from President Street.

Part II: TECHNICAL ANALYSIS

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

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

	YES	NO
1. *LAND USE, ZONING, AND PUBLIC POLICY*: CEQR Technical Manual Chapter 4		
(a) Would the proposed project result in a change in land use different from surrounding land uses?	☐	☒
(b) Would the proposed project result in a change in zoning different from surrounding zoning?	☒	☐
(c) Is there the potential to affect an applicable public policy?	☐	☒
(d) If "yes," to (a), (b), and/or (c), complete a preliminary assessment and attach.		
(e) Is the project a large, publicly sponsored project?	☐	☒
o 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?	☐	☒
o If "yes," complete the Consistency Assessment Form.		
2. *SOCIOECONOMIC CONDITIONS*: CEQR Technical Manual Chapter 5		
(a) Would the proposed project:		
o Generate a net increase of 200 or more residential units?	☒	☐
o Generate a net increase of 200,000 or more square feet of commercial space?	☐	☒
o Directly displace more than 500 residents?	☐	☒
o Directly displace more than 100 employees?	☐	☒
o Affect conditions in a specific industry?	☐	☒
3. *COMMUNITY FACILITIES*: CEQR Technical Manual Chapter 6		
(a) Direct Effects		
o Would the project directly eliminate, displace, or alter public or publicly funded community facilities such as educational facilities, libraries, hospitals and other health care facilities, day care centers, police stations, or fire stations?	☐	☒
(b) Indirect Effects		
o **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)	☒	☐
o **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)	☐	☒
o **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)	☒	☐
o **Health Care Facilities and Fire/Police Protection:** Would the project result in the introduction of a sizeable new neighborhood?	☐	☒
4. *OPEN SPACE*: CEQR Technical Manual Chapter 7		
(a) Would the proposed project change or eliminate existing open space?	☐	☒
(b) Is the project located within an under-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?	☐	☒
o If "yes," would the proposed project generate more than 50 additional residents or 125 additional employees?	☐	☐
(c) Is the project located within a well-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?	☐	☒
o If "yes," would the proposed project generate more than 350 additional residents or 750 additional employees?	☐	☐
(d) If the project in located an area that is neither under-served nor well-served, would it generate more than 200 additional residents or 500 additional employees?	☒	☐
5. *SHADOWS*: CEQR Technical Manual Chapter 8		

	YES	NO
(a) Would the proposed project result in a net height increase of any structure of 50 feet or more?	☒	☐
(b) Would the proposed project result in any increase in structure height and be located adjacent to or across the street from a sunlight-sensitive resource?	☐	☒
6. *HISTORIC AND CULTURAL RESOURCES*: CEQR Technical Manual Chapter 9		
(a) Does the proposed project site or an adjacent site contain any architectural and/or archaeological resource that is eligible for or has been designated (or is calendared for consideration) as a New York City Landmark, Interior Landmark or Scenic Landmark; that is listed or eligible for listing on the New York State or National Register of Historic Places; or that is within a designated or eligible New York City, New York State or National Register Historic District? (See the GIS System for Archaeology and National Register to confirm)	☐	☒
(b) Would the proposed project involve construction resulting in in-ground disturbance to an area not previously excavated?	☐	☒
(c) If "yes" to either of the above, list any identified architectural and/or archaeological resources and attach supporting information on whether the proposed project would potentially affect any architectural or archeological resources. LPC has determined that no portion of the rezoning area contains any architectural or archaeological resources.		
7. *URBAN DESIGN AND VISUAL RESOURCES*: CEQR Technical Manual Chapter 10		
(a) Would the proposed project introduce a new building, a new building height, or result in any substantial physical alteration to the streetscape or public space in the vicinity of the proposed project that is not currently allowed by existing zoning?	☒	☐
(b) Would the proposed project result in obstruction of publicly accessible views to visual resources not currently allowed by existing zoning?	☐	☒
8. *NATURAL RESOURCES*: CEQR Technical Manual Chapter 11		
(a) Does the proposed project site or a site adjacent to the project contain natural resources as defined in Section 100 of Chapter 11?	☐	☒
o If "yes," list the resources and attach supporting information on whether the proposed project would affect any of these resources.		
(b) Is any part of the directly affected area within the Jamaica Bay Watershed?	☒	☐
o If "yes," complete the Jamaica Bay Watershed Form, and submit according to its instructions. See Appendix.		
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?	☒	☐
o If "yes," were Recognized Environmental Conditions (RECs) identified? Briefly identify: See Attachment H. Demolition of the existing buildings was completed on the Applicant-owned sites.	☒	☐
10. *WATER AND SEWER INFRASTRUCTURE*: CEQR Technical Manual Chapter 13		
(a) Would the project result in water demand of more than one million gallons per day?	☐	☒
(b) If the proposed project located in a combined sewer area, would it result in at least 1,000 residential units or 250,000 square feet or more of commercial space in Manhattan, or at least 400 residential units or 150,000 square feet or more of commercial space in the Bronx, Brooklyn, Staten Island, or Queens?	☐	☒
(c) If the proposed project located in a separately sewered area, would it result in the same or greater development than the amounts listed in Table 13-1 in Chapter 13?	☐	☒
(d) Would the proposed project involve development on a site that is 5 acres or larger where the amount of impervious surface would increase?	☐	☒

	YES	NO
(e) If the project is located within the Jamaica Bay Watershed or in certain specific drainage areas, including Bronx River, Coney Island Creek, Flushing Bay and Creek, Gowanus Canal, Hutchinson River, Newtown Creek, or Westchester Creek, would it involve development on a site that is 1 acre or larger where the amount of impervious surface would increase?	☐	☒
(f) Would the proposed project be located in an area that is partially sewered or currently unsewered?	☐	☒
(g) Is the project proposing an industrial facility or activity that would contribute industrial discharges to a Wastewater Treatment Plant and/or generate contaminated stormwater in a separate storm sewer system?	☐	☒
(h) Would the project involve construction of a new stormwater outfall that requires federal and/or state permits?	☐	☒
11. *SOLID WASTE AND SANITATION SERVICES*: CEQR Technical Manual Chapter 14		
(a) Using Table 14-1 in Chapter 14, the project's projected operational solid waste generation is estimated to be (pounds per week): 29,036		
o Would the proposed project have the potential to generate 100,000 pounds (50 tons) or more of solid waste per week?	☐	☒
(b) Would the proposed project involve a reduction in capacity at a solid waste management facility used for refuse or recyclables generated within the City?	☐	☒
12. *ENERGY*: CEQR Technical Manual Chapter 15		
(a) Using energy modeling or Table 15-1 in Chapter 15, the project's projected energy use is estimated to be (annual BTUs): 80,175,206		
(b) Would the proposed project affect the transmission or generation of energy?	☐	☒
13. *TRANSPORTATION*: CEQR Technical Manual Chapter 16		
(a) Would the proposed project exceed any threshold identified in Table 16-1 in Chapter 16?	☒	☐
(b) If "yes," conduct the screening analyses, attach appropriate back up data as needed for each stage and answer the following questions:		
o 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.*	☐	☒
o Would the proposed project result in more than 200 subway/rail or bus trips per project peak hour?	☒	☐
If "yes," would the proposed project result, per project peak hour, in 50 or more bus trips on a single line (in one direction) or 200 subway trips per station or line?	☐	☒
o 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?	☒	☐
o If "yes," would the proposed project exceed the thresholds in Figure 17-3, Stationary Source Screen Graph in Chapter 17? (Attach graph as needed) See Attachment K	☒	☐
(c) Does the proposed project involve multiple buildings on the project site?	☒	☐
(d) Does the proposed project require federal approvals, support, licensing, or permits subject to conformity requirements?	☐	☒
(e) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to air quality that preclude the potential for significant adverse impacts?	☐	☒
15. *GREENHOUSE GAS EMISSIONS*: CEQR Technical Manual Chapter 18		
(a) Is the proposed project a city capital project or a power generation plant?	☐	☒
(b) Would the proposed project fundamentally change the City's solid waste management system?	☐	☒
(c) If "yes" to any of the above, would the project require a GHG emissions assessment based on the guidance in Chapter 18?	☐	☒
16. *NOISE*: CEQR Technical Manual Chapter 19		
(a) Would the proposed project generate or reroute vehicular traffic?	☒	☐
(b) Would the proposed project introduce new or additional receptors (see Section 124 in Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed rail line with a direct line of site to that rail line?	☒	☐
(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?	☐	☒

	YES	NO
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. As discussed in detail in the EAS, the Proposed Actions are not anitcpated to result in any significant adverse impacts to air quality, noise, or hazardous materials. As such, a detailed assessment of public health is not warranted.		
18. *NEIGHBORHOOD CHARACTER:* CEQR Technical Manual Chapter 21		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Land Use, Zoning, and Public Policy; Socioeconomic Conditions; Open Space; Historic and Cultural Resources; Urban Design and Visual Resources; Shadows; Transportation; Noise?	☒	☐
(b) If "yes," explain why an assessment of neighborhood character is or is not warranted based on the guidance in Chapter 21, "Neighborhood Character." Attach a preliminary analysis, if necessary. The Proposed Action requires detailed analyses of land use, zoning, and public policy, urban design and visual resources, open space, shadows and noise. As discussed in detail in the EAS, the Proposed Actions would not result in significant adverse impacts to these technical areas and therefore, a neighborhood character assessment is not warranted.		
19. *CONSTRUCTION:* CEQR Technical Manual Chapter 22		
(a) Would the project's construction activities involve:		
○ Construction activities lasting longer than two years?	☐	☒
○ Construction activities within a Central Business District or along an arterial highway or major thoroughfare?	☐	☒
○ Closing, narrowing, or otherwise impeding traffic, transit, or pedestrian elements (roadways, parking spaces, bicycle routes, sidewalks, crosswalks, corners, *etc.*)?	☒	☐
○ Construction of multiple buildings where there is a potential for on-site receptors on buildings completed before the final build-out?	☐	☒
○ The operation of several pieces of diesel equipment in a single location at peak construction?	☒	☐
○ Closure of a community facility or disruption in its services?	☐	☒
○ Activities within 400 feet of a historic or cultural resource?	☐	☒
○ Disturbance of a site containing or adjacent to a site containing natural resources?	☐	☒
○ Construction on multiple development sites in the same geographic area, such that there is the potential for several construction timelines to overlap or last for more than two years overall?	☒	☐
(b) If any boxes are checked "yes," explain why a preliminary construction assessment is or is not warranted based on the guidance in Chapter 22, "Construction." It should be noted that the nature and extent of any commitment to use the Best Available Technology for construction equipment or Best Management Practices for construction activities should be considered when making this determination. Construction on the development sites may result in temporary disruptions including noise, dust and traffic associated with the delivery of materials and arrival of workers to the site. These effects, however, would be temporary (lasting approximately 18-24 months) and are therefore not considered significant.		

20. *APPLICANT'S CERTIFICATION*

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

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

APPLICANT/REPRESENTATIVE NAME	DATE
Raymond Levin, Esq.	June 8, 2018

SIGNATURE

Raymond Levin

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, Environmental Assessment & Review Division	Department of City Planning
NAME	DATE
Robert Dobruskin, AICP	06/08/2018

SIGNATURE

Robert Dobruskin

Attachment A

Project Description

I. INTRODUCTION

Cornell Realty Management LLC (Cornell Realty) (the "Applicant") is seeking two discretionary actions in order to facilitate the redevelopment of two sites in the Crown Heights neighborhood of Brooklyn Community District 9 (refer to **Figure A-1**, **"Project Location Map"**). The discretionary actions include:

(i) A zoning map amendment to Section 16d of the Zoning Map to rezone portions of blocks 1188, 1189, and 1190, including two Applicant-owned projected development sites, from R6A, R6A with a C1-3 overlay and R8A zoning districts to an R8X district and R8X with a C2-4 overlay;

(ii) A zoning text amendment to Appendix F of the Zoning Resolution (ZR) to designate the northern and southern block ends of the Project Area (portions of blocks 1188 and 1190) as a Mandatory Inclusionary Housing (MIH) area. The middle blockfront portion of the block bound by Carroll Street, Franklin Avenue and Crown Street would not be designated as an MIH area.

Collectively, the zoning map amendment and the zoning text amendment comprise the "Proposed Action" for the purposes of the environmental analysis.

The proposed rezoning area is approximately 300 feet wide and two and a half blocks long, located on the western side of Franklin Avenue. Specifically, it consists of:

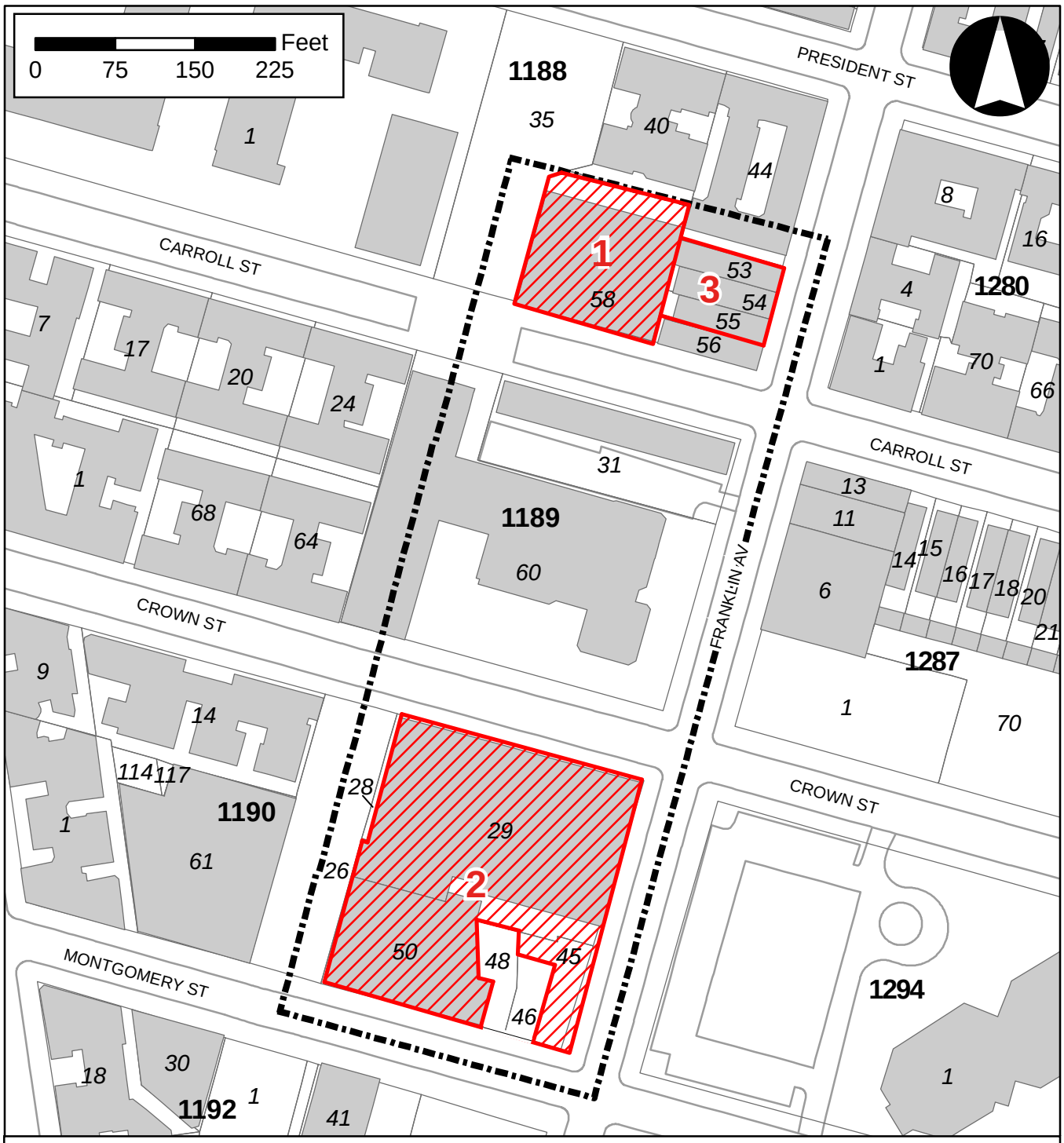
- Within block 1188: a portion of lot 35, a portion of lot 44, and lots 53, 54, 55, 56, and 58 (the "Northern Blockfront");
- Within block 1189: lots 31 and a portion of 60 (the "Middle Blockfront"); and,
- Within block 1190: a portion of lot 26, and lots 28, 29, 45, 46, 48 and 50 (the "Southern Blockfront").

Collectively, the Northern Blockfront, the Middle Blockfront, and the Southern Blockfront are referred to herein as the "proposed rezoning area." The proposed rezoning area is generally bounded by Franklin Avenue to the east, Montgomery Street to the south, a point approximately 300 feet west of Franklin Avenue to the west and on the north by a line 131 feet north of, and parallel to, Carroll Street.

The two Applicant-owned projected development sites consist of lot 58 on block 1188 (931 Carroll Street, Projected Development Site 1) and lots 29, 45, and 50 on block 1190 (40 Crown Street, Projected Development Site 2). The sites were previously occupied by vacant industrial/manufacturing buildings and vacant land (refer to **Figure A-2**, **"Land Use Map"**); however, all existing buildings have been demolished in conjunction with as-of-right developments that would be constructed by the Applicant on the project sites under future No-Action conditions pursuant to plans that have been approved by the New York City Department of Buildings (NYC DOB). The as-of-right plans for 931 Carroll Street (lot 58) are filed under NYC DOB Job No. 321080833. The as-of-right plans for 40 Crown Street (lots 29, 45, and 50) are filed under NYC DOB Job No. 321042304. Each site was excavated to a depth of minus 16 feet from first floor elevation and a single footing was installed on each site at that elevation. Both sites remain vacant.

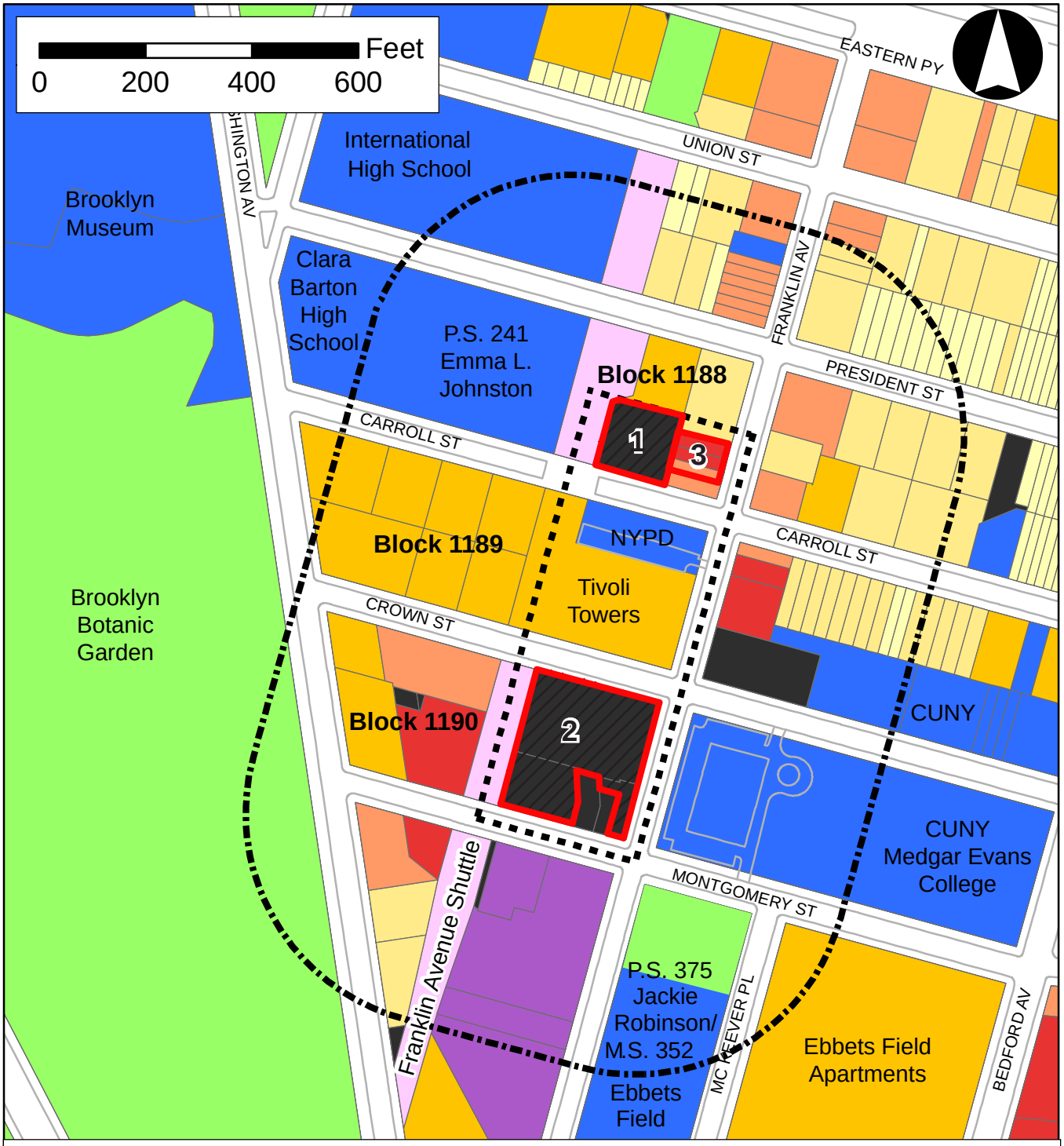
The two proposed With-Action developments on the Applicant-owned sites would be predominantly residential with approximately 518 total dwelling units (140 affordable pursuant to the MIH program). Projected Development Site 1 (931 Carroll Street) would consist of 134,342 gsf of residential uses, with approximate 128 total dwelling units, of which 34 would be affordable and 94 would be market-rate.

Project Location Map



Legend

- Projected Development Sites
- Applicant-Owned Development Sites
- Proposed Rezoning Area
- Existing Building Footprints
- **1234** Block Number
- *56* Lot Number



Legend

- 1 Projected Development Sites
- Applicant-Owned Sites
- Proposed Rezoning Area
- 400-Foot Radius

Land Uses

- One & Two Family Buildings
- Multi-Family Walkup Buildings
- Multi-Family Elevator Buildings
- Mixed Commercial/Residential Buildings
- Commercial/Office Buildings
- Industrial/Manufacturing Buildings
- Transportation/Utility
- Public Facilites & Institutions
- Open Space
- Parking Facilities
- Vacant Land
- All Others or No Data

Projected Development Site 2 (40 Crown Street) would consist of a 427,634 gsf mixed-use development with approximately 411,350 gsf of residential space (390 dwelling units, of which 106 would be affordable and 284 would be market-rate). Projected Development Site 2 would also include approximately 16,284 gross square feet (gsf) of local retail. Across the two Applicant-owned projected development sites, 151 accessory parking spaces are also proposed to accommodate on-site parking demand which correlates to a rate of 40 percent of the market rate dwelling units, with 114 accessory parking spaces at 40 Crown Street and 37 accessory parking spaces on the 931 Carroll Street site. The accessory parking garages are required under the proposed zoning to meet anticipated on-site residential demand. The maximum building heights proposed at Projected Development Sites 1 and 2 is 175 feet in 16 stories. The development program described above represents the RWCDS for the Applicant-owned development sites.

Additionally, as described in detail below, one projected development site has been identified within the rezoning area that could be developed under future conditions with the Proposed Action. Projected Development Site 3 is comprised of block 1188, lots 53, 54, and 55 (882-886 Franklin Avenue). It is anticipated that the 7,500 sf site would be developed with the full 7.2 FAR, resulting in approximately 46,500 gsf, including 47 new dwelling units, of which there would be 12 affordable units, and approximately 7,500 sf of local retail. The maximum building height anticipated at Projected Development Site 3 is 175 feet in 16 stories. Pursuant to the proposed zoning, the required parking could be waived if a zoning lot is 10,000 sf or less, or if fewer than 15 spaces are required. As the parking requirement for the site would be for 14 spaces, it is anticipated that the developer would elect not to provide on-site parking. Therefore, it is assumed that no parking would be provided on-site.

Within the rezoning area, on the southern portion of block 1188, there are two one-story commercial buildings at 882 and 884 Franklin Avenue (lots 53 and 54). 882 Franklin Avenue is currently vacant, while 884 Franklin Avenue accommodates the Crown Star Laundromat. To the south, there are two three-story, mixed-use residential and commercial buildings at 886 and 888 Franklin Avenue (Lots 55 and 56). 886 Franklin Avenue accommodates the Franklin and Carroll Pharmacy on the first floor, while 888 Franklin Avenue accommodates the Carroll Street Discount Corp. on the first floor. The portion of block 1189 in the proposed rezoning area accommodates the two-story New York Police Department's (NYPD's) Transit District 32 facility at 960 Carroll Street (lot 31) and Tivoli Towers at 49 Crown Street (lot 60). Tivoli Towers, a Mitchell-Lama residential complex built in the 1970s, is one of the tallest buildings in the surrounding area, consisting of 33 stories (297 feet high) and approximately 321 dwelling units. On block 1190, the vacant AAFE property consists of lots 46 and 48 and has frontage on Montgomery Street. As indicated above, future development of this site is limited to a total of up to eight units under No-Action and With-Action conditions due to an existing deed restriction. In addition, it should be noted that the Franklin Avenue Shuttle, which runs parallel to Franklin Avenue in the western portion of the proposed rezoning area, runs in an open cut along the western edge of blocks 1188 and 1190 in the rezoning area and runs beneath the Tivoli Towers' accessory parking lot on block 1189.

No other sites in the rezoning area are considered projected or potential development sites, as they either accommodate buildings with more than 50 percent of the proposed 7.2 FAR under R8X and R8X/C2-4 zoning districts, they accommodate the MTA's Franklin Avenue shuttle right-of-way, they accommodate rent-stabilized housing, or they would require additional discretionary approvals in order to be redeveloped. As such, the three identified projected development sites represent the RWCDS for analysis purposes.

It is expected that the Applicant-owned developments would be constructed over an approximately 18-to-24-month period, with completion and occupancy expected to occur in 2021.

In addition to the Applicant-owned developments, one projected development site has been identified within the rezoning area that is likely to be developed as a result of the Proposed Action; however, as

described below, projected development Site 3 is comprised of three tax lots that are not under common ownership and no formal redevelopment plans exist for the site. Nonetheless, the site meets the City Environmental Quality Review (CEQR) soft site criteria and, as such, it is anticipated that the sites would be redeveloped by 2023. This build year reflects a reasonable estimate of the time needed for a developer to acquire the parcels, demolish the existing structures, design the project, obtain design approval and construct the project. Accordingly, the EAS will use 2023 as the Build year for analysis of future conditions consistent with New York *City Environmental Quality Review ("CEQR") Technical Manual* guidance.[1]

Additionally, as described in detail below, the Asian Americans for Equality (AAFE) property located on block 1190, lots 46 and 48 (141-145 Montgomery Street) is expected to be developed by AAFE at some point in the future. However, the AAFE site carries certain restrictions limiting development to buildings with one to four units of affordable housing, making the timeline for development of this property difficult to predict. As described below, the AAFE site is assessed qualitatively in a conceptual analysis (see **Attachment M**) to evaluate the unlikely possibility that AAFE seeks to eliminate the deed restriction and initiate development prior to the project's 2023 analysis year.

II. ACTIONS NECESSARY TO FACILITATE THE PROPOSAL

The Applicant is seeking two New York City Planning Commission (CPC) zoning changes: a zoning map amendment and a zoning text amendment. Both are discretionary actions; the zoning map amendment and zoning text amendment are subject to the Uniform Land Use Review Procedure (ULURP). The Proposed Action is also subject to environmental review under CEQR.

Zoning Map Amendment

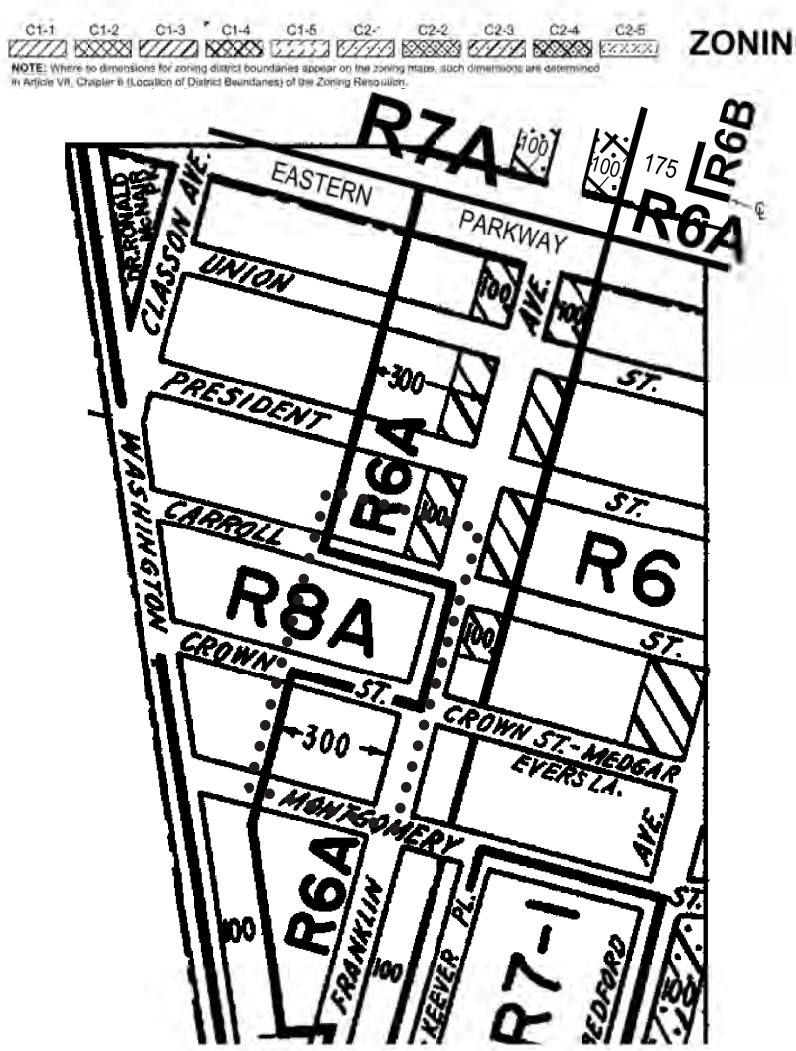
The proposed zoning map amendment would rezone portions of Brooklyn blocks 1188, 1189, and 1190 within approximately 300 feet of Franklin Avenue from R6A, R6A/C1-3, and R8A zoning districts to R8X and R8X/C2-4 zoning districts (refer to **Figure A-3, "Existing and Proposed Zoning Maps"**). The proposed rezoning area includes 16 lots on portions of three blocks (refer to **Table A-1** below), totaling approximately 186,425 sf. As shown below, although the area is currently mapped in R6A, R6A/C1-3, and R8A zoning districts, the area contains a variety of land uses. In addition to large residential apartment buildings, mixed-use residential buildings with commercial space on the ground floor, and low-rise commercial/office buildings, the proposed rezoning area contains public facilities/institutions, transportation uses, and vacant land that will be redeveloped by the Applicant on an as-of-right basis under future No-Action conditions.

Existing zoning on the portion of block 1188 within the proposed rezoning area consists of an R6A district and includes a 100-foot deep C1-3 commercial overlay along Franklin Avenue. The segment of block 1189 that is located within the proposed rezoning area is mapped with an R8A zoning district. Existing zoning on the portion of block 1190 within the proposed rezoning area consists of an R6A district. At present, no commercial overlays are mapped on block 1189 or 1190.

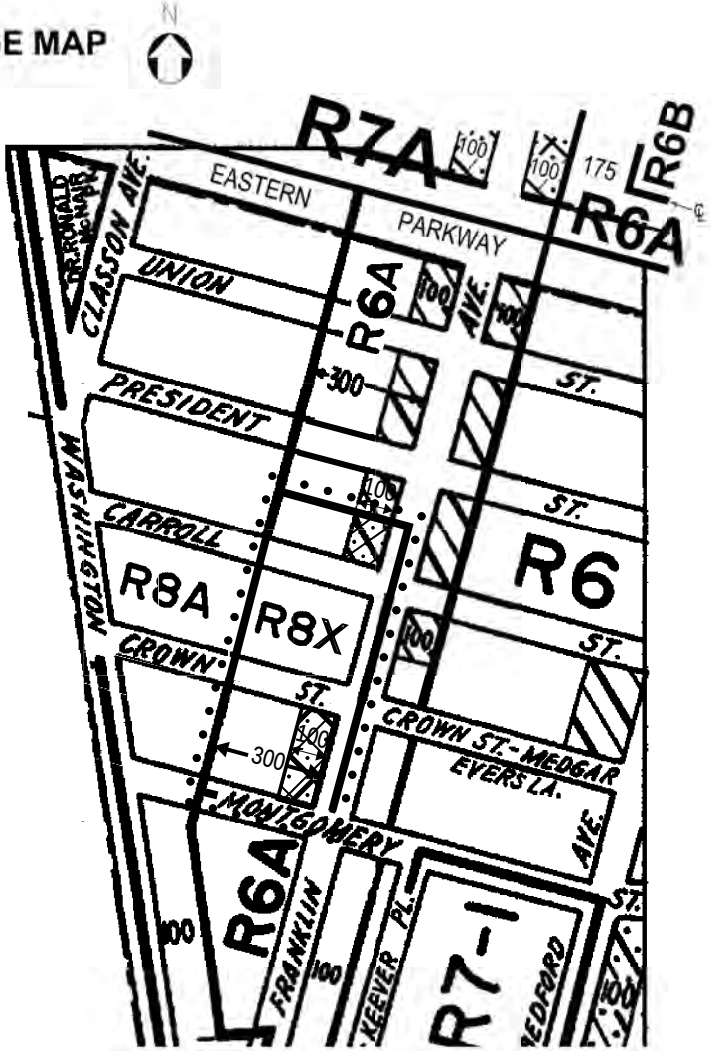
The proposed zoning map amendment would change the underlying zoning of the proposed rezoning area from R6A, R6A/C1-3, and R8A zoning districts to an R8X zoning district. The existing 100-foot-deep C1-3 commercial overlay on block 1188 along Franklin Avenue would be rezoned to C2-4 as a result of the Proposed Action; while identical 100-foot-deep C2-4 commercial overlays would be mapped on block

[1] The City of New York, Mayor's Office of Environmental Coordination, *City Environmental Quality Review Technical Manual*. 2014.

Existing & Proposed Zoning



CURRENT ZONING MAP - 16d Brooklyn



PROPOSED ZONING MAP- Area being rezoned is outlined with dotted lines

Changing R6A, R6A/C1-3 and R8A districts to R8X and R8X/C2-4 districts

Proposed Rezoning Area

1190 along Franklin Avenue (refer to **Figure A-3, "Existing and Proposed Zoning Maps"**). R8X districts allow a maximum residential FAR of 6.02, the same as the existing R8A district on block 1189 and more than twice the existing R6A districts' allowance of 3.0 on blocks 1188 and 1190. With the MIH area, the R8X zoning district allows a maximum residential FAR of 7.2. R8X districts mapped as MIH areas permit a maximum building height of 170 feet, or 175 feet if qualifying ground floors are provided.

Table A-1:
Proposed Rezoning Area – Existing Conditions

Block	Lot	Lot Area (sf)	Projected Development Sites[1]	Primary Zoning[2]	Comm. Overlay	Existing Land Uses[3]	Owner
1188	35[4]	25,865	-	R6A	-	Transportation (Franklin Ave. Shuttle)	NYC Transit Authority
	44[4]	16,200	-		-	Multi-Family Residential Walkup	Franklin President Associates LP
	53	2,500	Projected Development Site 3		C1-3	Commercial/Office	Sonia Gallimore
	54	2,500				Commercial/Office	884 Realty Corp.
	55	2,500				Mixed Residential/Commercial	886 Frank Ave, LLC
	56	2,500	-			Rent Stabilized Residential/Commercial	Empire Holdings LP
	58	17,703	Projected Development Site 1		-	Vacant-Under Construction	Cornell Realty Management LLC (the Applicant)
1189	31	19,024	-	R8A	-	Public Facility/Institution (NYPD Transit District 32)	NYC Transit Authority
	60	63,506	-		-	Multi-Family Residential w/ Elevator	Tivoli BI, LLP
1190	26	18,340	-	R6A	-	Transportation (Franklin Ave. Shuttle)	NYC Transit Authority
	28	610	-		-	Vacant	NYC DCAS
	46	2,289	-		-	Vacant	AAFE
	48	4,016	-		-	Vacant	
	29	38,701	Projected Development Site 2		-	Vacant-Under Construction	Cornell Realty Management LLC (the Applicant)
	45	3,765			-	Vacant-Under Construction	
	50	13,496			-	Vacant-Under Construction	

Notes: The Applicant-owned projected development sites are highlighted.
[1]Refer to **Figure A-1**, "Project Location Map."
[2]Refer to **Figure A-3**, "Existing and Proposed Zoning Maps."
[3]Refer to **Figure A-2**, "Land Use Map."
[4]The proposed rezoning area would only include the southern portion of the Block (the area within approximately 131 feet of Carroll Street).

The proposed C2-4 commercial overlay would provide for a continuation of retail uses that are currently permitted on Franklin Avenue in the surrounding area. C2-4 districts are commercial overlays mapped within residence districts. Mapped along streets that serve local retail needs, they are found extensively throughout the city's lower- and medium-density areas and occasionally in higher-density districts. Typical retail uses include neighborhood grocery stores, restaurants and beauty parlors. In mixed buildings, commercial uses are limited to the first floor and must always be located below the residential use. The maximum commercial FAR is 2.0.

Zoning Text Amendment

The Applicant is proposing to map the Northern Blockfront and the Southern Blockfront portions of the proposed rezoning area as a Mandatory Inclusionary Housing (MIH) area by creating a new Map 1 for Brooklyn Community District 9 in Appendix F of the New York City Zoning Resolution. The MIH area

would not be mapped on the Middle Blockfront because it will not have increased residential development potential which triggers MIH mapping as the maximum FAR under both the existing R8A and proposed R8X zoning districts is 6.02. The maximum FAR for the Mandatory Inclusionary Housing area is set at 7.2. With both the designation of the Northern Blockfront and the Southern Blockfront portions of the rezoning area as an MIH area and its rezoning to an R8X residential zoning district, the base permitted residential FAR for the Northern Blockfront and Southern Blockfront would be 7.2. The Middle Blockfront would have an FAR of 6.02. The Applicant proposes to utilize MIH Option 1 by providing affordable housing equivalent to 25 percent of the residential floor area, at 60 percent Area Median Income (AMI), with 10 percent of the residential floor area at 40 percent AMI. Therefore, extension of the MIH area over the Northern Blockfront and the Southern Blockfront portions of the rezoning area would facilitate development of approximately 140 affordable housing units on the Applicant-owned development sites.

III. EXISTING CONDITIONS

Rezoning Area

1991 Contextual Rezoning

In 1991, the Project Area was rezoned in conjunction with a Department of City Planning rezoning of a 13-block area bounded by Eastern Parkway, Washington Avenue, Sullivan Place, and a line 100 feet east of Franklin Avenue, pursuant to ULURP No. C910293 ZMK. The application rezoned R6 and R8 districts and a 150-foot-deep C1-3 commercial overlay to contextual R6A and R8A districts, and lessened the C1-3 overlay to a 100-foot depth. The rezoning was intended to encourage mid-rise, high coverage buildings, and to prevent incursion of commercial uses in the residential midblocks.

ZQA and MIH

On September 21, 2015, the CPC certified into ULURP (i) the Zoning for Quality and Affordability text amendment ("ZQA") under ULURP No. N160049ZRY, and (ii) the Mandatory Inclusionary Housing text amendment ("MIH") under ULURP No. N160051ZRY. The ZQA text amendment allows modest five, ten or fifteen foot height increases in certain zoning districts to allow for buildings with desirable high-ceilinged ground floor retail space, to allow for variety in building envelopes, to reduce parking requirements for buildings providing affordable housing under the Inclusionary Housing program in certain transit-rich areas, and to accommodate all permitted floor area in the permitted bulk envelope, particularly in buildings providing affordable housing under the Inclusionary Housing program. In the Project Area, ZQA increases the permitted height of buildings in R8A and R8X districts (the proposed new zoning districts) by 5 feet, or by 25 feet for buildings containing affordable housing under the Inclusionary Housing program. The MIH text amendment makes the Inclusionary Housing program mandatory in certain districts to facilitate the production of affordable housing. On February 2, 2016, the New York City Planning Commission approved the text amendments with modifications. On March 22, 2016, the City Council approved the text amendments.

Site Location and Characteristics

The approximately 186,425 sf proposed rezoning area comprises the eastern portions of blocks 1188, 1189 and 1190 (the portions of the blocks that extend 300 feet west from Franklin Avenue between a point 131 feet north of Carroll Street on the north and Montgomery Street to the south), encompassing the two Applicant-owned projected development sites (refer to **Figure A-1, "Project Location Map"**).

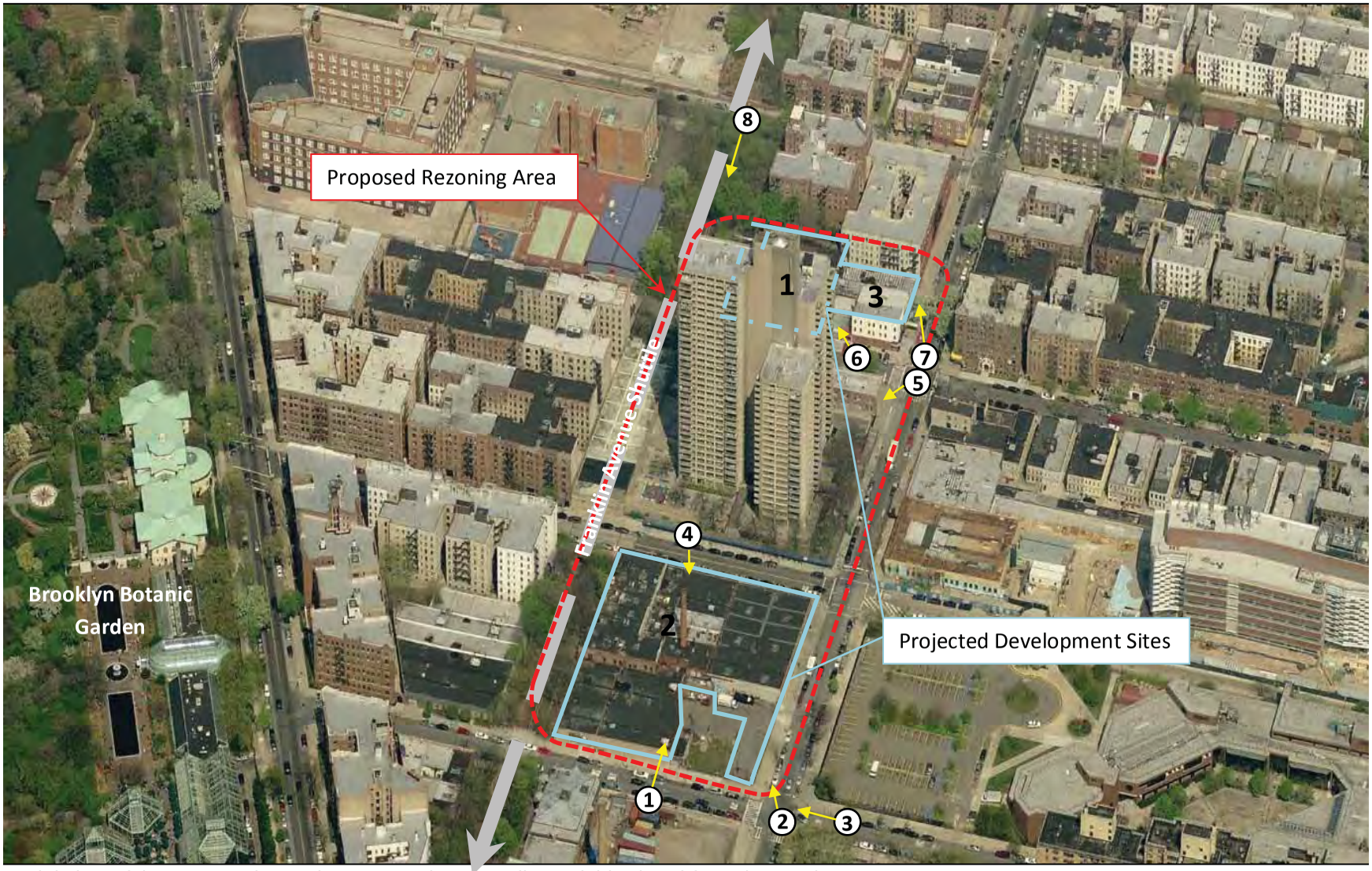
The portion of block 1188 in the proposed rezoning area is currently occupied by a mix of residential, commercial, and transportation uses. As described above, the northern portion of the block is comprised of two apartment buildings, 990 President Street (lot 40) and 1000 President Street (lot 44). While lot 40 is located immediately outside of the proposed rezoning area's northern boundary, 3,100 sf of lot 44 would be located within the proposed zoning boundary. The building on lot 44 contains 57 dwelling units (four stories). Within the proposed rezoning area, on the southern portion of the block, there are two one-story commercial buildings at 882 and 884 Franklin Avenue (lots 53 and 54). 882 Franklin Avenue is currently vacant, while 884 Franklin Avenue, also vacant, was most recently occupied by the Crown Star Laundromat. To the south, there are two three-story, mixed-use residential and commercial buildings at 886 and 888 Franklin Avenue (lots 55 and 56). 886 Franklin Avenue accommodates the Franklin and Carroll Pharmacy on the first floor, while 888 Franklin Avenue accommodates the Carroll Street Discount Corp. on the first floor (refer to Photo 7 in **Figure A-4, "Existing Conditions Photos"**). Additionally, an open subway cut for the Metropolitan Transportation Authority (MTA) Franklin Avenue Shuttle right-of-way is located on lot 35 (refer to Photo 8 in **Figure A-4**). The construction site at 931 Carroll Street (lot 58) on projected development site 1 (discussed above), is also located on block 1188 (refer to Photo 6 in **Figure A-4**). A one-story industrial/manufacturing building was demolished to accommodate construction of the Applicant's planned No-Action development.

The portion of block 1189 in the proposed rezoning area accommodates the two-story New York Police Department's (NYPD's) Transit District 32 facility at 960 Carroll Street (lot 31) and Tivoli Towers at 49 Crown Street (lot 60). Tivoli Towers, a Mitchell-Lama residential complex built in the 1970s, is one of the tallest buildings in the surrounding area, consisting of 33 stories (297 feet high) and approximately 321 dwelling units (refer to Photo 5 in **Figure A-4**). In addition, it should be noted that the right-of-way for the Franklin Avenue Shuttle, which runs parallel to Franklin Avenue in the western portion of the proposed rezoning area, runs beneath the Tivoli Towers' accessory parking lot as it passes through block 1189.

The portion of block 1190 in the proposed rezoning area includes projected development Site 2 (discussed above), which encompasses three lots that are vacant/under construction along Montgomery Street, Franklin Avenue, and Crown Street (refer to Photos 1-4 of **Figure A-4**). These lots previously contained industrial/manufacturing buildings and former parking lots. The vacant AAFE property, which consists of lots 46 and 48 and has frontage on Montgomery Street, is also located on the portion of block 1190 within the proposed rezoning area. As indicated below, future development of this site is assessed in **Attachment M, "Conceptual Analysis."** Additionally, the MTA Franklin Avenue Shuttle right-of-way (lot 26), an open subway cut in this area, is located immediately to the west of projected development Site 2. Finally, lot 28, which consists of 610 square feet, is a sliver of vacant city-owned land located immediately to the west of lot 29 (refer to **Figure A-2, "Land Use Map"**).

The AAFE property located on block 1190, lots 46 and 48 (141-145 Montgomery Street) is expected to be developed by AAFE at some point in the future. However, as described below, the AAFE site carries certain restrictions limiting development to buildings with one to four units of affordable housing, making the timeline for development of this property difficult to predict. In 1998, the City sold block 1190, lots 46 and 48 to the Neighborhood Partnership Housing Development Fund Company, Inc. ("NPHDFC"), and designated it as an urban development action area plan ("UDAAP") through an "accelerated" designation pursuant to Section 695(6)(d) of the General Municipal Law, as part of a residential rehabilitation project that was developed through the New York City Department of Housing and Development's ("HPD's") Neighborhood Entrepreneurs Program (NEP). Under the "accelerated" designation, the City Council and Mayor approved the UDAAP designation.

The approved project in 1998 included the rehabilitation of two four-unit buildings on the AAFE site. In connection with the sale, NPHDFC entered into Land Disposition Agreement ("LDA") with HPD dated June 23, 1998 and recorded in the City Register under Reel 4342, Page 58. The LDA obligates NPHDFC



Aerial view of the proposed rezoning area and surrounding neighborhood from the south.

① → Photo Location



Photo 1: View north across Montgomery Street at the southern limit of the rezoning area.



Photo 2: View northwest from the intersection of Franklin Avenue and Montgomery Street.

Figure A-4
Existing Conditions Photos



Photo 3: View west along Montgomery Street from Franklin Avenue.



Photo 4: View south across Crown Street with Projected Development Site 2 in the foreground and the Ebbets Field Apartments in the background.



Photo 5: View southwest from the intersection of Franklin Avenue and Carroll Street.



Photo 6: View north across Carroll Street at Projected Development Site 1.



Photo 7: View northwest from the intersection of Franklin Avenue and Carroll Street.



Photo 8: View south of the Franklin Avenue Shuttle tracks from President Street.

and successors-in-interest to rehabilitate the buildings on the AAFE site for affordable housing. The buildings were subsequently deemed to be unsalvageable and were demolished in 2001, rendering rehabilitation moot. The accelerated UDAAP designation pursuant to Section 695(6)(d) of the General Municipal Law restricts development on the AAFE site to no more than four units of housing per building.

In 2014, NPHDFC sold the AAFE site to AAFE, and AAFE executed a Restrictive Covenant dated May 13, 2014 and recorded in the Office of the City Register of the City of New York ("City Register") under CRFN 2014000176712. The Restrictive Covenant obligates AAFE to develop Lots 46 and 48 as an affordable housing project, although the limitation of the accelerated UDAAP restricts development to no more than four units of housing per building. To eliminate or modify the restrictions, AAFE would have to complete its own ULURP application and any modifications to the site's development would be subject to review under CEQR.

Redevelopment of the property with a development in excess of the eight permitted units is considered unlikely because, even if a ULURP action to eliminate the development restrictions were pursued, the preparation of such application would take a reasonable amount of time to initiate and complete. The development team would have to generate plans and arrange for project financing. Additionally, the ability to build out the site to the maximum R8X floor area on this small irregular site is unknown because there is no project proposed to remove the current deed restriction. Finally, HPD may elect to apply new restrictions on the redevelopment of the property which could limit the site's development potential. Given the above, the AAFE site is assessed qualitatively in a conceptual analysis (see Attachment M) to evaluate the unlikely possibility that AAFE seeks to eliminate the deed restriction and initiate development prior to the project's 2023 analysis year.

If the restrictions on the AAFE property were to be removed through its own discretionary action, the site could be developed pursuant to the proposed R8X/C2-4 mandatory inclusionary housing zoning. Under the proposed rezoning, it is possible that AAFE could build up to 7.2 FAR, resulting in up to 45,406 sf on the 6,306 sf property with up to approximately 45 DUs. However, given the irregular shape of the AAFE property, the 30-foot rear yard that would be required under the multiple dwelling law, and the proposed bulk of Applicant-owned development Site 2 in relation to the AAFE site, it is unlikely that the AAFE property would be able to accommodate the full 7.2 FAR that would be available under the proposed zoning with mandatory inclusionary housing. Nonetheless, the conceptual analysis provided in the EAS would evaluate a building that maximizes the available FAR. A conceptual analysis is provided in Attachment M of the EAS to describe the potential for the AAFE property to result in significant adverse environmental impacts to any technical area under future conditions with the Proposed Action.

As indicated above, the AAFE property is located within the boundaries of the proposed rezoning area which extends approximately 300 feet wide and two and a half blocks long, located on the western side of Franklin Avenue. The portion of the site within 100 feet of Franklin Avenue would also be mapped with a C2-4 overlay. Overall, the AAFE property would be located within the boundaries of a cohesive R8X zoning district with rational district boundaries. Excluding the AAFE property from the proposed rezoning area would result in abnormal district boundaries. As such, modification of the proposed rezoning area boundaries would not be feasible.

The topography of the proposed rezoning area is generally flat. Site elevations in the area generally range from approximately +99 feet to +110 feet North American Vertical Datum of 1988 (NAVD 88) in the area of the southern-most site to approximately +116 feet to +125 feet NAVD 88 in the vicinity of the northern-most site.[2] The proposed rezoning area is located above the 500-year floodplain on the Federal Emergency Management Agency (FEMA) 2013 Preliminary Flood Insurance Rate Map (FIRM),

[2] Per topographical surveys provided by the Applicant.

indicating that it is considered an area of minimum flood hazard. Additionally, the proposed zoning area is not located within the NYC Coastal Zone Boundary.

Neighborhood Context

Land Use and Zoning

The proposed rezoning area is located in the Crown Heights neighborhood of Brooklyn. Nearby neighborhoods include Prospect-Lefferts Gardens and Prospect Heights, and the proposed rezoning area is also located just east of Prospect Park and the Brooklyn Botanic Garden. During the past several years, the neighborhood has experienced considerable residential growth. The secondary study area, located within a radius of approximately 400 feet of the proposed rezoning area, is primarily residential and institutional, but also accommodates some commercial/office space, industrial/manufacturing uses, transportation uses, open space resources, and vacant land.

Institutions in the 400-foot study area include the International High School at Prospect Heights (883 Classon Avenue), Clara Barton High School (901 Classon Avenue), and P.S. 241 Emma L. Johnston (976 President Street), located immediately to the north and west of the proposed rezoning area (refer to **Figure A-2**, **"Land Use Map"**). P.S. 375 Jackie Robinson School (46 McKeever Place) and the City University of New York's (CUNY's) Medgar Evers College campus (1637 Bedford Avenue) are located immediately to the south and east of the proposed rezoning area. Additionally, the Brooklyn Botanic Garden's Science Center (109 Montgomery Street) is located to the southwest of the proposed rezoning area.

There is an approximately 67,000 sf industrial/manufacturing building to the south of the proposed rezoning area at 960 Franklin Avenue, which accommodates Morris J. Golombeck, Inc., a spice importing and exporting company (refer to **Figure A-2, "Land Use Map"**). Immediately to the west is an open subway cut for the MTA Franklin Avenue Shuttle right-of-way, which extends northward through the entire study area, including portions of the proposed rezoning area, as discussed above.

The remainder of the surrounding 400-foot area contains predominately residential buildings, with mixed-use and commercial buildings interspersed. The residential buildings in the area surrounding the proposed rezoning area vary greatly, ranging in height and density from two-story, semi-detached houses, to six-story apartment buildings, to the seven 25-story Ebbets Field Houses apartment buildings at 1720 Bedford Avenue in the southeast corner of the study area.

As indicated above, the eastern portions of Brooklyn blocks 1188, 1189, and 1190 are currently located within R6A, R6A/C1-3, and R8A zoning districts. This zoning permits residential development. The R6A and R6A/C1-3 zoning districts on the portions of blocks 1188 and 1190 in the proposed rezoning area would permit a built residential FAR of 3.0 (and a commercial FAR of 2.0 for lots located in the C1-3 commercial overlay), while the R8A zoning on block 1189 permits a residential FAR of 6.02. Other nearby zoning districts include R6, R6A, R7-1, and R8A. C1-3 commercial overlays are also mapped in the area along Franklin Avenue. More information on land use and zoning is provided in **Attachment C, "Land Use, Zoning, and Public Policy."**

Historic Resources

The proposed rezoning area is not listed on the New York State or National Registers ("S/NR") of Historic Places nor is it a designated New York City Landmark. The Laboratory Administration Building, Brooklyn Botanic Garden (LP-02214) is located directly west of Block 1190, within 400 feet of the proposed rezoning area. The Laboratory Administrative Building is a State and National Register listed resource and New York City Landmark. Built between 1912 and 1917, and constructed of concrete and brick with a stucco finish and terra-cotta detailing, the Tuscan Revival–style building is capped by a

cupola with slender rounded-arch windows. The building, designed by McKim, Mead & White, was modeled after small churches in Italy's Lombardy Region. It is considered a significant example of the firm's late work. There are no other designated or listed historic resources within 400 feet of the proposed rezoning area.

Transportation/Access

The proposed rezoning area is served by the Botanic Garden stop of the Franklin Avenue subway shuttle and is also accessible via the 2, 3, 4 and 5 subway lines at Franklin Avenue. The B48 bus line, which runs southbound along Franklin Avenue in the vicinity of the proposed rezoning area, is the sole New York City Transit bus route that directly serves the proposed rezoning area and provides transfers with the nearby subway station. The northbound B48 runs along Washington Avenue. The B48 operates along Lorimer Street/Franklin and Classon Avenues between Meeker Avenue/Gardner Avenue and Flatbush Avenue/Lincoln Road.

The streets bounding the proposed rezoning area include President Street on the north (about a half block to the north of the rezoning area's northern boundary), Franklin Avenue on the east and Montgomery Street on the south, while the Franklin Avenue subway line comprises the western limits of the proposed rezoning area. Cross streets in the Project Area include Carroll Street and Crown Street. Above the northern limits of the proposed rezoning area, President Street is 32 feet wide and operates with one-way westbound traffic in the vicinity of the proposed rezoning area. Franklin Avenue is 34 feet wide and operates with one-way southbound traffic. Carroll Street is 32 feet wide and operates with one-way traffic east of Franklin Avenue and with two-way traffic west of Franklin Avenue. Crown Street is 35 feet wide and operates with two-way traffic west of Franklin Avenue and one-way westbound traffic east of Franklin Avenue. At the southern limits of the proposed rezoning area, Montgomery Street is 34 feet wide and operates with one-way eastbound traffic on the west side of Franklin Avenue and two-way traffic east of Franklin Avenue. Sidewalks along Franklin Avenue, Carroll Street and Montgomery Street are approximately 18 feet wide, while sidewalks along Crown Street are approximately 17 feet wide. Additional information is provided in **Attachment J, "Transportation."**

IV. FUTURE WITHOUT THE PROPOSED ACTION (NO-ACTION CONDITION)

In the future without the Proposed Action (the No-Action scenario), no zoning changes are anticipated in the proposed rezoning area. As such, the portions of block 1188 and 1190 in the proposed rezoning area would retain their existing R6A and R6A/C1-3 zoning designations, while the portion of block 1189 in the proposed rezoning area would remain in an R8A zoning district.

Under No-Action conditions, some redevelopment is anticipated on blocks 1188 and 1190 in accordance with the existing R6A zoning. The R6A and R6A/C1-3 zoning districts on the portions of blocks 1188 and 1190 in the proposed rezoning area would permit a built residential FAR of 3.0 (and a commercial FAR of 2.0 for lots located in the C1-3 commercial overlay).

Block 1188

As shown in **Table A-2** and **Figure A-1**, one development has been identified on block 1188 which would be redeveloped in the future without the Proposed Action. Applicant-owned Projected Development Site 1 includes lot 58 (931 Carroll Street). This site would be redeveloped on an as-of-right basis pursuant to existing zoning with the maximum 3.0 FAR of market-rate residential space in the future without the Proposed Action. Per a NYC Department of Buildings (DOB) filing in June 2015 (DOB filing #3029709), the No-Action development would consist of approximately 69,524 gsf with approximately 69 DUs and

35 accessory parking spaces. The parking would be provided in an attended parking facility on the first floor (three spaces) and in the rear yard (32 spaces). The parking area would be accessed via a new curb cut that would be located near the eastern property line. Demolition of the existing on-site buildings has been completed and a single footing has been installed on the site. Excavation was done to a depth of minus 16 from first floor elevation to construct the footing. It is unlikely that any affordable housing units would be provided under No-Action conditions.

Table A-2:
No-Action Scenario

Block	Lot	Projected Dev. Sites	Existing Zoning	Existing Land Use	Existing Built FAR	No-Action FAR	No-Action Res. GSF and Parking	No-Action Comm. GSF
1188	53	Projected Dev. Site 3[1]	R6A/C1-3	Commercial/Office	1.0	1.0	0	2,500
	54		R6A/C1-3	Commercial/Office	1.0	1.0	0	2,400
	55		R6A/C1-3	Mixed Commercial/Residential	2.0	2.0	2,575 (4 DUs)	2,500
	58	Projected Dev. Site 1	R6A	Vacant	1.0	3.0	69,524 (69 DUs) 35 Parking Spaces	0
1190	29	Projected Dev. Site 2	R6A	Vacant	1.1	3.0	225,821 (208 DUs) 120 Parking Spaces	0
	45		R6A	Vacant	0			
	50		R6A	Vacant	1.0			

Notes: The Applicant-owned projected development sites are highlighted. No-Action buildings on the Applicant-owned sites are based on as-of-right plans filed with the New York City Department of Buildings (DOB) for block 1188, lot 58 and block 1190, lots 29, 45, and 50.
[1]The existing buildings on block 1188, lots 53, 54 and 55 are anticipated to remain unchanged in the future No-Action Scenario, as the existing FAR (3.0) does not provide an incentive for new development.

Projected Development Site 3 includes lots 53, 54, and 55 on block 1188. Under the No-Action scenario, none of these lots are anticipated to be redeveloped. Lot 55 is not anticipated to be redeveloped, as it currently accommodates a 5,075 sf building with an FAR of 2.0, more than half of the allowable 3.0 FAR under No-Action conditions and includes four dwelling units. Lots 53 and 54 accommodate commercial/office buildings with FARs of 1.0, and as such, it is possible that these two properties could be redeveloped with up to 3.0 FAR of residential space (or 2.0 FAR of commercial space) under No-Action conditions. However, lots 53 and 54 are not under common ownership, so it is assumed the existing commercial buildings on lots 53 and 54 would remain under the No-Action conditions.

The remaining lots on block 1188 within the rezoning area are unlikely to be developed in the future without the Proposed Action. None of the lots on block 1188 have common owners which could result in combined lot developments. Lot 56 currently has a built FAR of 2.3, which is over 50 percent of the maximum 3.0 residential FAR permitted on the lot. Additionally, lot 56 accommodates rent-stabilized housing, making it unlikely that it would be redeveloped in the future without the Proposed Action. Lot 44, the southern portion of which is located within the proposed rezoning area, currently has a built FAR of 3.7, which exceeds the FAR permitted in R6A and R6A/C1-3 zoning districts. As such, it is unlikely that this building would be redeveloped under the existing R6A and R6A/C1-3 zoning, as the surplus floor area would be lost. It is also unlikely that the portion of lot 35 that is located within the proposed rezoning area would be redeveloped, as it contains the MTA Franklin Avenue Shuttle right-of-way and would therefore require discretionary approvals for redevelopment.

Block 1189

It is anticipated that neither lot in the proposed rezoning area on block 1189 would be redeveloped in the future without the Proposed Action. Tivoli Towers (lot 60) currently has a built FAR of 5.04, which is more than 50 percent of the allowable residential FAR of 6.02 under R8A zoning (when excluding the lot area located over the Franklin Avenue Shuttle right-of-way, Tivoli Towers has a built FAR of 7.66). Additionally, it is unlikely that the NYPD Transit District 32 facility (lot 31) would be redeveloped, as it would require additional discretionary approvals, such as a disposition of city-owned property or site selection, which would be subject to CEQR. As such, it is anticipated that these lots would remain unchanged in the future No-Action conditions.

Block 1190

As shown in **Table A-2**, there is a DOB-approved as-of-right No-Action development on block 1190 that would be constructed in the future without the Proposed Action. Projected Development Site 2, which includes lots 29, 45, and 50, is entirely Applicant-owned. All three of the lots on projected development Site 2 are vacant with demolition of the buildings completed in summer 2016. A single footing has been installed on the site. Excavation was done to a depth of minus 16 from first floor elevation to construct the footing. Under No-Action conditions, lots 29, 45, and 50 would be redeveloped with the maximum 3.0 residential FAR, resulting in approximately 225,821 gsf of residential building space with approximately 208 market-rate DUs and a 120-space attended accessory parking garage. The parking area would be accessed via a new curb cut on Montgomery Street.

As indicated above, the AAFE Site (lots 46 and 48) is expected to be developed at some point in the future. However, as described above, the AAFE site carries certain restrictions limiting development to buildings with one to four units of affordable housing. Therefore, the No-Action condition is assumed to be the same as the existing condition for this property, with both lots remaining vacant.

Lot 26 on block 1190 currently accommodates the MTA Franklin Avenue Shuttle right-of-way. It is not likely that this site would be redeveloped as additional discretionary approvals would be required. There is also a 610 sf City-owned vacant lot (lot 28) located on block 1190, which is not anticipated to be redeveloped due to its limited size and linear configuration.

No-Action Conditions within 400 Feet of the Proposed Rezoning Area

There are three known projects anticipated to be completed within 400 feet of the proposed rezoning area in the future without the Proposed Action. A four story building with two dwelling units and ground-floor commercial office space is anticipated to be constructed at 995 Washington Avenue (block 1192, lot 5) between Montgomery Street and Sullivan Place, to the southwest of the proposed rezoning area. Building permits were approved in April 2018 for a 12-story residential building with 172 residential units across 168,000 square feet and 76 parking spaces to be constructed at 111 Montgomery Street (block 1190, lot 61), which is located between Washington Avenue and Franklin Avenue. The other No-Action project involves changes to street configuration in the study area. CUNY Medgar Evers College's Crown Plaza involves the conversion of the parking lanes along Crown Street between Franklin Avenue and Bedford Avenue (immediately to the north of block 1294, lot 1), to the east of the proposed rezoning area, into green space for the adjacent campus buildings, including additional trees, landscaping, pedestrian paths, and classroom seating areas. There are no anticipated changes to zoning within 400 feet of the proposed rezoning area under No-Action conditions.

Additionally, it should be noted that the larger neighborhood of Crown Heights is expected to experience considerable amounts of residential growth under No-Action conditions, in response to increased demand

for housing in the area. As described in **Attachment C**, there are 48 new residential and mixed-use developments currently under construction or planned for development within an approximate mile of the proposed rezoning area, which are expected to introduce nearly 2,400 new DUs into the neighborhood.

V. FUTURE WITH THE PROPOSED ACTION (WITH-ACTION)

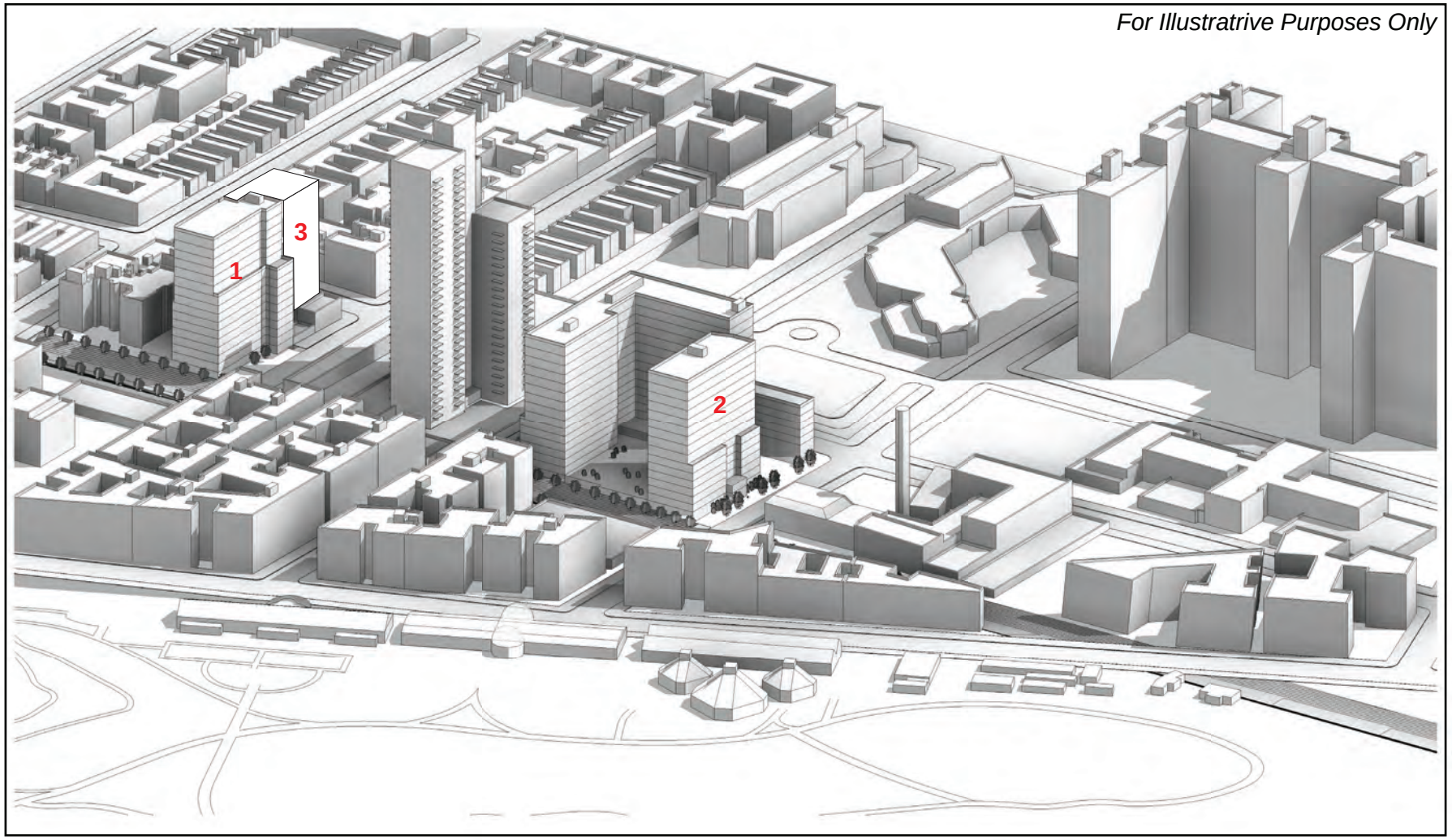
In the future with the Proposed Action (the With-Action Scenario), the proposed zoning map amendment and zoning text amendment would be implemented in the proposed rezoning area. As such, the proposed rezoning area would be remapped as an R8X zoning district with a 100-foot-deep C2-4 commercial overlay mapped westward from Franklin Avenue on the portions of block 1188 and 1190 that are located within the proposed rezoning area, and the Northern Blockfront and the Southern Blockfront portions of the proposed rezoning area would be designated as a Mandatory Inclusionary Housing area. The Middle Blockfront, the portion of the block bound by Carroll Street, Franklin Avenue and Crown Street, would not be designated as a Mandatory Inclusionary Housing area and would have an FAR of 6.02. As such, the maximum allowable FAR in the portions of the proposed rezoning area to be designated as a Mandatory Inclusionary Housing Area would be 7.2.

Block 1188

As shown in **Table A-3**, in the future with the Proposed Action, there are two sites on block 1188 which are anticipated to be redeveloped as a result of the proposed rezoning to an R8X zoning district, C2-4 commercial overlay, and Mandatory Inclusionary Housing area. Lot 58 is owned by the Applicant, and is discussed above as Projected Development Site 1. In the future with the Proposed Action, the Applicant would redevelop lot 58 with a 175-foot tall, 16-story, approximately 134,342 gsf residential building with a 37-space attended parking garage (refer to **Figure A-5, "Conceptual Development Renderings"**), an increment of 64,818 gsf over No-Action conditions. As shown in **Table A-3**, the proposed building would include 128 DUs (34 affordable), an increment of 59 DUs (34 affordable) over No-Action conditions. The parking garage would be located on the first level of the building. It would be accessible via a new curb cut that would be located near the western edge of the property.

Projected Development Site 3 is also located on block 1188, and is comprised of lots 53, 54, and 55. All three of these lots have built FARs of less than 50 percent of the maximum FAR of 7.2 permitted under With-Action conditions, making it likely that they would be developed in the future with the Proposed Action. As discussed above, none of the three lots are expected to be redeveloped in the No-Action scenario. Therefore, for analysis purposes, the maximum building increment of lots 53, 54, and 55 is based on the difference between the maximum allowable With-Action building and the existing building on each lot. As such, in the future with the Proposed Action, the RWCDS for Projected Development Site 3 is anticipated to consist of an approximately 54,000 gsf building, including 47 DUs (12 affordable), and 7,500 gsf of local retail. It should be noted that, while up to 14 parking spaces could be provided on-site, it is anticipated that the on-site parking would be waived since it is below the threshold of 15 spaces specified in the zoning resolution. This RWCDS represents an incremental increase of 44,025 sf of building space, including 43,925 gsf of new residential space, 43 DUs (31 market-rate and 12 affordable units), and 100 gsf of local retail space over No-Action conditions.

The remaining lots on the portion of block 1188 in the proposed rezoning area are not considered projected development sites in the With-Action Scenario. As discussed above, lot 35 contains the MTA Franklin Avenue Shuttle right-of-way, and it would therefore require additional discretionary approvals prior to redevelopment. Lot 44 has a built FAR of 3.7, which exceed 50 percent of the proposed maximum FAR of 7.2; therefore, this lot is not expected to be redeveloped as a result of the Proposed Action. Lot 56 currently has a built FAR of 2.3, which is less than 50 percent of the maximum With-Action residential

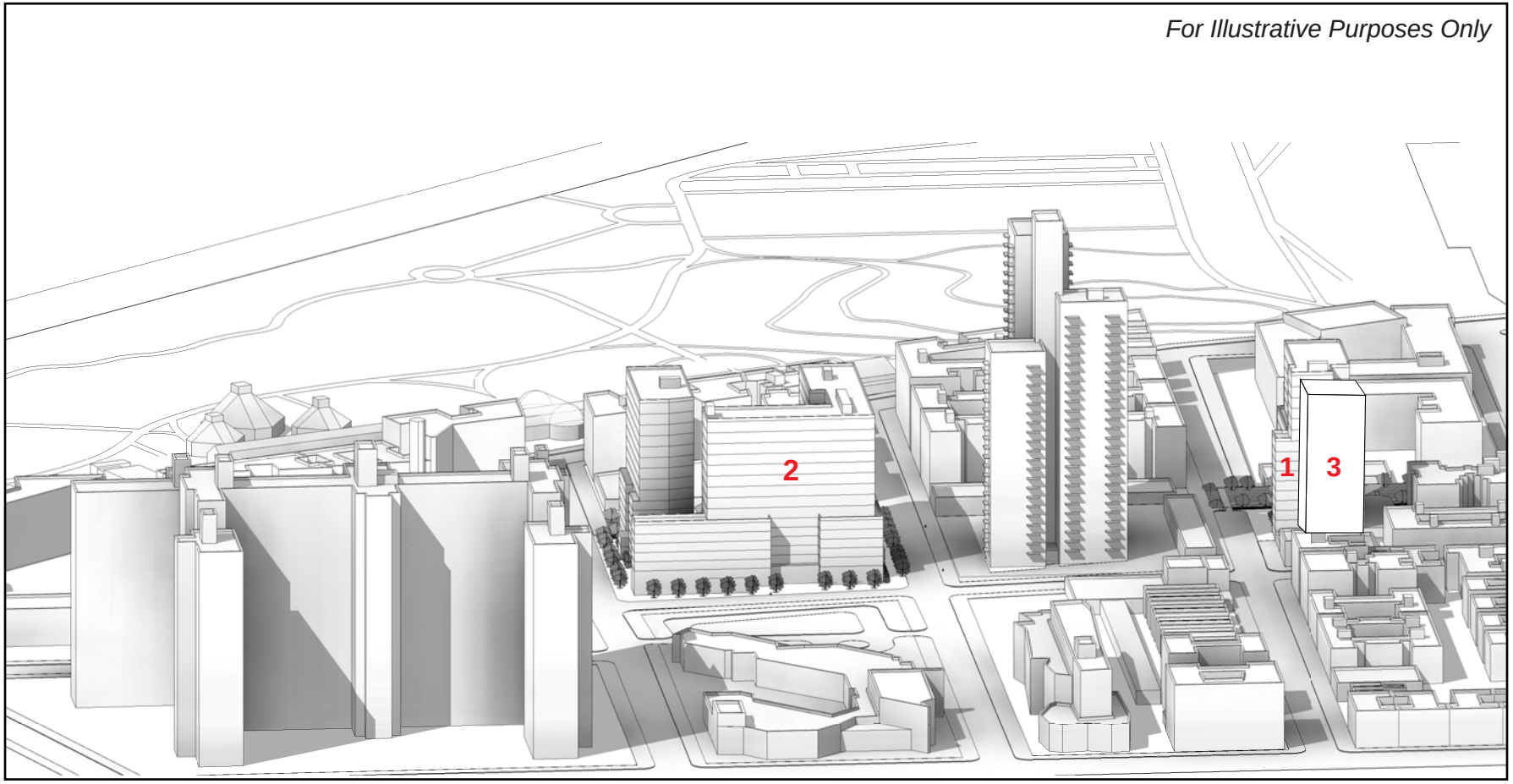


1 Projected Development Site

Franklin Avenue Rezoning EAS

Figure A-5a

Conceptual With-Action Renderings



1 Projected Development Site

FAR of 7.2 permitted on the lot; however, as described above, lot 56 accommodates rent-stabilized housing units, making it unlikely to be redeveloped.

Table A-3:
With-Action Scenario

Block	Lot	Projected Dev. Sites	Existing Built FAR	Max. No-Action FAR	No-Action Res. GSF and Parking	No-Action Comm. GSF	W/ Action FAR[1]	W/Action Res. GSF and Parking	W/Action Comm. GSF	Res. GSF Increment[2] and Parking	Comm. GSF Increment[2]
1188	53	Projected Dev. Site 3	1.0	3.0	2,575 (4 DUs), 0 Parking Spaces	7,400	7.2	46,500 (47 DUs), 0 Parking Spaces	7,500	+43,925 (+43 DUs), 0 Parking Spaces	+100
	54		1.0								
	55		2.0								
	58	Projected Dev. Site 1	1.0	3.0	69,524 (69 DUs), 35 Parking Spaces	0	7.2	134,342 (128 DUs), 37 Parking Spaces	0	+64,818 (+59 DUs) +2 Parking Spaces	0
1190	29	Projected Dev. Site 2	1.1	3.0	225,821 (208 DUs), 120 Parking Spaces	0	7.2	411,350 (390 DUs), 114 Parking Spaces	16,284	+185,529 (+182 DUs) -6 Parking Spaces	+16,284
	45		0								
	50		1.0								
TOTAL WITH-ACTION INCREMENT:										**+294,272 (284 DUs)**	

Notes: The Applicant-owned projected development sites are highlighted.
[1]The maximum allowable With-Action FAR in the Project Area increases to 7.2 FAR when utilizing the proposed Inclusionary Housing Bonus.
[2]The maximum building increment is the difference between the maximum allowable With-Action square footage and the maximum allowable No-Action square footage.

Block 1189

It is anticipated that neither lot on block 1189 would be redeveloped in the future with the Proposed Action. As discussed above, the sale and/or redevelopment of the NYPD Transit District 32 facility (lot 31) would require additional discretionary approvals, and is therefore unlikely. Tivoli Towers (lot 60) currently has a built FAR of 5.04, which is more than 50 percent of the allowable residential FAR of 6.02 under R8A zoning, and as such, would likely remain unchanged under future With-Action conditions. Additionally, the portion of this block located within the proposed rezoning area would not be designated as a Mandatory Inclusionary Housing area.

Block 1190

As also shown in **Table A-3**, in the future with the Proposed Action, Projected Development Site 2 on block 1190 is anticipated to be redeveloped in accordance with the proposed R8X and R8X/C2-4 zoning districts and Mandatory Inclusionary Housing area. The three lots that comprise Projected Development Site 2 are owned by the Applicant as discussed above. In the future with the Proposed Action, Projected Development Site 2 would have a maximum allowable FAR of 7.2. Under the RWCDS, the Applicant would redevelop the lots into a 175-foot tall, 16-story, 427,634 gsf mixed-use residential/commercial building with approximately 411,350 gsf of residential space (390 DUs, of which 106 would be affordable) and 16,284 gsf of commercial retail uses, an increment of approximately 185,529 gsf over No-Action conditions (refer to **Figure A-5, "Conceptual Development Renderings"**). As discussed above, this increment would include an additional 182 dwelling units (140 affordable) and 114 attended

accessory parking spaces, 15 fewer parking spaces than the No-Action development proposed on projected development Site 2, as well as an increase of approximately 16,284 sf of local retail on the site (see **Table A-4**). The parking would be provided on the ground floor and would be accessible via a proposed curb cut that would be on Montgomery Street near the western limits of the site.

Table A-4: Comparison of Existing, No-Action, and With-Action Conditions on the Projected Development Sites (Block 1188, Lots 53, 54, 55, and 58 & Block 1190, Lots 29, 45, 46, 48, and 50)

	Existing Conditions		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 structure	Multi-Family Residential		Multi-Family Residential		Residential and mixed-use buildings		
No. of dwelling units	4		281		565		+284
No. of low- to moderate-income units	0		0		152		+152
Gross floor area (sf)	2,575		297,920		592,192		+294,272
Commercial	☒YES	☐NO	☒YES	☐NO	☒ YES	☐ NO	
If "yes," specify the following:							
Type of use	Ground-Floor Retail		Ground-Floor Retail		Ground-Floor Retail		+Retail
Gross floor area (sf)	7,400		7,400		23,784		+16,384
Manufacturing/Industrial	☐ YES	☒ NO	☐ YES	☒ NO	☐ YES	☒ NO	
If "yes," specify the following:							
Type of use	-		-		-		-
Gross floor area (sf)	-		-		-		-
Open storage area (sf)	-		-		-		-
If any unenclosed activities, specify:	-		-		-		-
Community Facility	☐ YES	☒ NO	☐ YES	☒ NO	☐ YES	☒ NO	-
If "yes," specify the following:							
Type	-		-		-		-
Gross floor area (sf)	-		-		-		-
Vacant Land	☐ YES	☒ NO	☐ YES	☒NO	☐ YES	☒ NO	
If "yes," describe:	-		-		-		-
Other Land Uses	☒ YES	☐ NO	☐ YES	☒ NO	☐ YES	☒ NO	
If "yes," describe:	73,665 construction		-		-		-73,665 construction
PARKING							
Garages	☐ YES	☒ NO	☒ YES	☐ NO	☒ YES	☐ NO	
If "yes," specify the following:							
No. of public spaces	-		-		-		-
No. of accessory spaces	-		155		151		-4
Lots	☐ YES	☒ NO	☐ YES	☒ NO	☐ YES	☒ NO	
If "yes," specify the following:							
No. of public spaces	-		-		-		-
No. of accessory spaces	-		-		-		-
ZONING							
Zoning classification	R6A & R6A/C1-3		R6A & R6A/C1-3		R8X/C2-4 + Inclusionary Housing		
Maximum amount of floor area that can be developed	272,730 zsf		272,730 zsf		597,095 zsf		+324,365 zsf
Predominant land use and zoning classifications within the land use study area(s) or a 400 ft. radius of proposed project	Residential, Commercial, Mixed-Use, Institutional/ Public Facilities, Transportation/ Utility, Industrial/ Manufacturing, Open Space, and Vacant Land		Residential, Commercial, Mixed-Use, Institutional/ Public Facilities, Transportation/ Utility, Industrial/ Manufacturing, Open Space, and Vacant Land		Residential, Commercial, Mixed-Use, Institutional/ Public Facilities, Transportation/ Utility, Industrial/ Manufacturing, Open Space, and Vacant Land		

As indicated above, the AAFE Site (lots 46 and 48) is expected to be developed at some point in the future. However, as described above, the AAFE site carries certain restrictions limiting development to buildings with one to four units of affordable housing, making the timeline for development of this property difficult to predict. If the restrictions on the AAFE property were to be removed through its own discretionary action, the site could be developed pursuant to the proposed R8X/C2-4 mandatory inclusionary housing zoning. Under the proposed rezoning, it is possible that AAFE could build up to 7.2 FAR, resulting in up to 45,406 sf on the 6,306 sf property with up to approximately 45 DUs. However, given the irregular shape of the AAFE property, the 30-foot rear yard that would be required under the multiple dwelling law, and the proposed bulk of Applicant-owned development Site 2 in relation to the AAFE site, it is unlikely that the AAFE property would be able to accommodate the full 7.2 FAR that would be available under the proposed zoning with mandatory inclusionary housing. Nonetheless, the conceptual analysis provided in the EAS would evaluate a building that maximizes the available FAR. A conceptual analysis is provided **Attachment M** of the EAS to describe the potential for the AAFE property to result in significant adverse environmental impacts to any technical area under future conditions with the Proposed Action.

The remaining lots on the portion of block 1190 in the proposed rezoning area (lots 26 and 28) are not considered projected development sites under With-Action conditions. As discussed above, lot 26 accommodates the MTA Franklin Avenue Shuttle right-of-way and therefore would require discretionary approvals for redevelopment, and lot 28, which is currently a 610 sf City-owned vacant lot, is not anticipated to be redeveloped due to its limited size.

VI. PURPOSE AND NEED OF THE PROPOSED ACTION

The proposed zoning map amendment, which would rezone the area from R6A, R6A/C1-3, and R8A to R8X and R8X/C2-4, combined with the MIH text amendment, would increase the permitted FAR in the proposed rezoning area, allowing for the development of more residential and commercial space. The proposed zoning text amendment, which would designate the Northern Blockfront and Southern Blockfront portions of the proposed rezoning area as an MIH area, would require the construction of 140 affordable DUs on the Applicant-owned projected development sites (Option 1 of MIH).

The Proposed Action would create new affordable housing, helping to address affordable housing goals set forth by the City in *Housing New York: A Five-Borough, Ten-Year Plan*. The proposed developments on block 1188 and 1190 would be constructed on vacant sites in close proximity to public transportation, extending the commercial corridor and pedestrian activity of the surrounding Crown Heights neighborhood into the proposed rezoning area.

VII. REQUIRED APPROVALS AND REVIEW PROCEDURES

The Applicant is seeking two CPC zoning changes: a zoning map amendment and a zoning text amendment. Both are discretionary actions; the zoning map amendment and zoning text amendment are subject to ULURP. These actions are both subject to environmental review under CEQR.

Attachment B

Supplemental Screening

I. INTRODUCTION

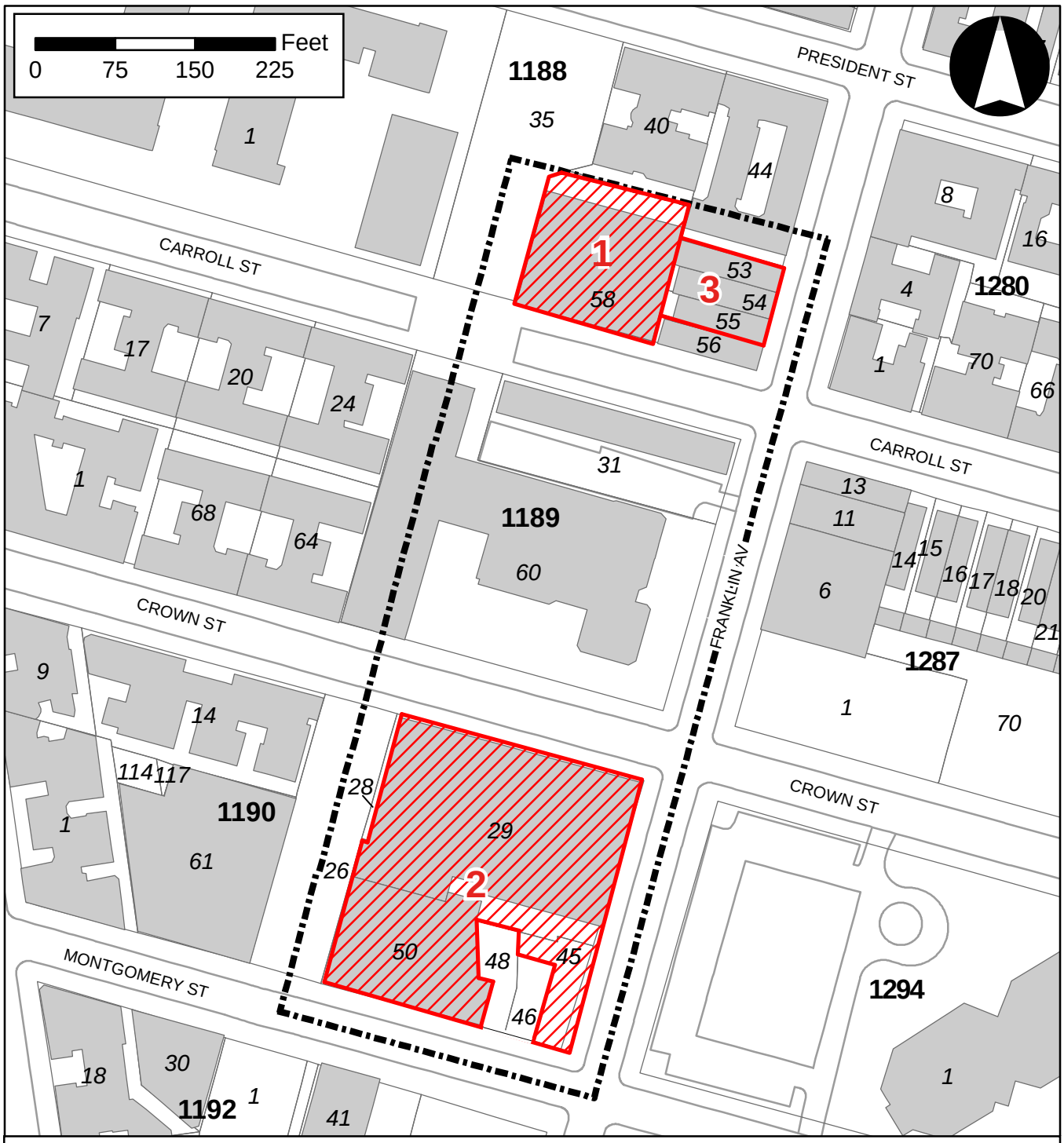
This EAS has been prepared in accordance with the guidance and methodologies presented in the 2014 *CEQR Technical Manual*. For each technical area, thresholds are defined, which if met or exceeded, require that a detailed technical analysis be undertaken. Using this guidance, preliminary screening assessments were conducted for the Proposed Action to determine whether detailed analysis of any technical area may be appropriate. Part II of the EAS Form identifies those technical areas that warrant additional assessment. For those technical areas that warranted a "Yes" answer in Part II of the EAS Form, including Land Use, Zoning, and Public Policy; Socioeconomic Conditions; Community Facilities; Open Space; Shadows; Urban Design and Visual Resources; Hazardous Materials; Transportation; Air Quality; Noise, Public Health, Neighborhood Character and Construction supplemental screening assessments are provided in this attachment. Detailed analyses, as required, are provided in Attachments C through M. Additionally, **Attachment M, "Conceptual Analysis"** assesses the possible future development of one site within the rezoning area. The remaining technical areas detailed in the *CEQR Technical Manual* were not deemed to require supplemental screening because they do not trigger initial CEQR thresholds and/or are unlikely to result in significant adverse impacts. These areas screened out from any further assessment include: Historic and Cultural Resources; Natural Resources; Solid Waste and Sanitation Services; Water and Sewer Infrastructure; Energy; Greenhouse Gas Emissions; Public Health, and Neighborhood Character. **Table B-1** presents a summary of analysis screening information for the Proposed Action.

As described in **Attachment A, "Project Description,"** the required approvals that collectively are called the "Proposed Action" include a zoning map amendment and a zoning text amendment for portions of blocks 1188, 1189, and 1190 in the Crown Heights neighborhood of Brooklyn (refer to **Figure B-1**). The purpose of the Proposed Action is to facilitate new, predominately residential buildings, including new affordable housing, on the two Applicant-owned projected development sites (refer to **Figure B-1**). Additionally, a third projected development site has been identified within the Project Area, as described below.

The reasonable worst case development scenario (RWCDS) With-Action condition for the three projected development sites consists of a total of approximately 565 dwelling units (DUs), of which 152 would be affordable; approximately 23,784 gsf of commercial space; and approximately 151 accessory parking spaces, with the construction of the Applicant-owned sites anticipated to be complete by 2021 and projected development Site 3 assumed to be completed by 2023.

The RWCDS No-Action condition represents the baseline against which the consequences of the Proposed Action will be compared. The effect of the Proposed Action, therefore, represents the incremental effects on conditions that would result from the net change in development between No-Action and With-Action conditions (the "project increment"). Under RWCDS No-Action conditions, it is assumed that only the Applicant-owned sites (two of the three projected

Project Location Map



Legend

- Projected Development Sites
- Applicant-Owned Development Sites
- Proposed Rezoning Area
- Existing Building Footprints
- **1234** Block Number
- *56* Lot Number

development sites) would be redeveloped in accordance with the existing R6A, R6A/C1-3, and R8A zoning regulations. The RWCDS No-Action Scenario assumes the construction of approximately 281 DUs; approximately 7,400 sf of commercial space; and approximately 155 parking spaces.

Table B-1:
Summary of CEQR Technical Area Screening

CEQR TECHNICAL AREA	SCREENED OUT PER EAS FORM	SCREENED OUT PER SUPPLEMENTAL SCREENING	DETAILED ANALYSIS REQUIRED
Land Use, Zoning, & Public Policy			X
Socioeconomic Conditions			X
Community Facilities and Services			X
Open Space			X
Shadows			X
Historic & Cultural Resources	X		
Urban Design & Visual Resources			X
Natural Resources	X		
Hazardous Materials		X	
Water and Sewer Infrastructure	X		
Solid Waste & Sanitation Services	X		
Energy	X		
Transportation			X
Air Quality			X
Greenhouse Gas Emissions	X		
Noise			X
Public Health		X	
Neighborhood Character		X	
Construction		X	

As such, the anticipated RWCDS net project increment includes an incremental increase of approximately 284 DUs (152 affordable) in approximately 294,272 gsf; 16,384 gsf of commercial space; and a reduction of four accessory parking spaces in the future with the Proposed Action.

As described in **Attachment A,** the Asian Americans for Equality (AAFE) property located on block 1190, lots 46 and 48 (141-145 Montgomery Street) is expected to be developed by AAFE at some point in the future. Given the conditions described in Attachment A above, the AAFE site is assessed qualitatively in a conceptual analysis (see **Attachment M**) to evaluate the unlikely possibility that AAFE seeks to eliminate the deed restriction and initiate development prior to the project's 2023 analysis year.

Overall, the AAFE property would be located within the boundaries of a cohesive R8X zoning district with rational district boundaries. Excluding the AAFE property from the proposed rezoning area would result in abnormal district boundaries. As such, modification of the proposed rezoning area boundaries would not be feasible.

The application of screening thresholds and, where warranted, detailed analyses, is based on this

net incremental development, which represents the RWCDS for the Proposed Action.

II. SUPPLEMENTAL SCREENING AND SUMMARY OF DETAILED ANALYSES

Land Use, Zoning, and Public Policy

According to the 2014 *CEQR Technical Manual*, a detailed assessment of land use, zoning and public policy is appropriate if an action would result in a significant change in land use or would substantially affect regulations or policies governing land use. Zoning and public policy analyses are typically performed in conjunction with a land use analysis when an action would change the zoning on the site or result in the loss of a particular use. Land use analyses are required when an action would substantially affect land use regulation.

The Proposed Action includes a zoning map amendment and a zoning text amendment. The proposed zoning map amendment would change the underlying zoning of the Project Area from R6A, R6A/C1-3, and R8A to R8X and R8X/C2-4. The proposed zoning text amendment would create a new Mandatory Inclusionary Housing Area (MIHA) on the Northern Blockfront and the Southern Blockfront portions of the Project Area, with a maximum Inclusionary Housing Bonus FAR based on the provision of at least 20 percent of the floor area allocated to affordable housing units. The Mandatory Inclusionary Housing area would not be mapped on the Middle Blockfront and an FAR of 6.02 would apply to this portion of the rezoning area.

A detailed land use, zoning, and public policy assessment is provided in **Attachment C, "Land Use, Zoning, and Public Policy."** As discussed therein, no significant adverse land use, zoning, or public policy impacts are expected in the future with the Proposed Action.

Socioeconomic Conditions

The 2014 *CEQR Technical Manual* states that a socioeconomic assessment should be conducted if an action may be reasonably expected to create socioeconomic changes within the area affected by the project that would not be expected to occur without the project. In accordance with CEQR guidance, a socioeconomic analysis considers five specific elements that can result in significant adverse socioeconomic impacts: (1) direct displacement of residential populations on a project site; (2) direct displacement of existing businesses or institutions on a project site; (3) indirect displacement of residential populations in a study area; (4) indirect displacement of businesses or institutions in a study area; and (5) adverse effects on specific industries.

As indicated on the EAS Form, the Proposed Action can be screened out from any consideration of direct displacement of existing residential populations, businesses, or institutions. Only one building in the Project Area would be displaced as a result of the Proposed Action: the existing mixed-use building at 886 Franklin Avenue (block 1188, lot 55), which currently accommodates the Franklin and Carroll Pharmacy and four DUs. There are no other existing residential or commercial spaces in the Project Area that would be displaced as a result of the Proposed Action. As such, the Proposed Action would directly displace a total of approximately 10 residents and two workers, well below CEQR thresholds for analysis.

The Proposed Action can also be screened out from any consideration of indirect business displacement or adverse effects on specific industries, per the EAS Form. The Proposed Action would introduce a net increase of approximately 16,384 gsf of ground-floor retail space in the Project Area, well below the 200,000 sf CEQR threshold warranting assessment of indirect business displacement due to market saturation. Additionally, the Proposed Action would not result in any effects on any specific industries, such as introducing a new concentration of a specific industry, affecting an area where a specific industry is concentrated, or indirectly substantially reduce employment in or impair the economic viability of a specific industry. Therefore, no assessment is warranted.

The Proposed Action would introduce a net residential increment of 284 DUs (152 affordable), which exceeds the CEQR threshold of 200 units. A preliminary analysis of indirect residential displacement is provided in **Attachment D, "Socioeconomic Conditions."** As discussed therein, the Proposed Action would not result in significant adverse socioeconomic impacts.

Community Facilities

The 2014 *CEQR Technical Manual* defines community facilities as public or publicly funded facilities, including schools, health care, day care, libraries, and fire and police protection services. A community facilities analysis is needed if there would be potential direct or indirect effects on a subject facility. As there are no direct effects to existing community facilities resulting from the Proposed Action, this analysis concentrates on the potential for indirect effects. The *CEQR Technical Manual* provides guidance or thresholds that can be used to make an initial determination of whether a detailed study is necessary to determine potential impacts.

The projected RWCDS increment under the Proposed Action exceeds the CEQR screening thresholds for public elementary and intermediate schools and publicly funded child care facilities. As such, detailed analyses of these services are provided in **Attachment E, "Community Facilities."** These analyses identify current utilization and projected future utilization of these facilities, and compare the anticipated utilization levels to the impact thresholds. The impact thresholds for both schools and day care is an increase in the collective utilization rate of five percent or more between No-Action and With-Action conditions, and a collective utilization rate at or greater than 100 percent in the With-Action condition. As detailed in **Attachment E**, the Proposed Action would not exceed these impact thresholds, and therefore would not result in any significant adverse impacts to community facilities.

Open Space

Per the 2014 *CEQR Technical Manual*, open space is defined as publicly- or privately-owned land that is publicly accessible and has been designed for leisure, play or sport, or conservation land set aside for protection and/or enhancement of the natural environment. An open space assessment may be necessary if an action could potentially have a direct or indirect effect on open space resources in the Project Area. A direct impact would affect the facilities within an open space resource so that the open space no longer serves the same user population, or limit public access to an open space. Other direct affects include the imposition of noise, air pollutant emissions, odors, or shadows on public open spaces that may alter usability. Because the RWCDS associated

with the Proposed Action would not directly affect any existing public open space or recreational resources, no analysis is warranted.

An indirect effect may occur when a population generated by an action would be sufficient to noticeably diminish the ability of an area's open space to serve the existing or future populations. According to the guidance established in the *CEQR Technical Manual*, actions that would add fewer than 200 residents or 500 employees in area of the city that are identified as being neither underserved or well-served by open space are typically not considered to have indirect effects on open space resources. The Proposed Action would generate approximately 71 employees and approximately 1,480 residents into the Project Area, an increment of 284 new residential units, 744 residents and 49 employees over No-Action conditions. As such, an analysis of open space is provided in **Attachment F, "Open Space."** As detailed in the attachment, the Proposed Action would not result in significant adverse impacts to open space resources.

Shadows

A shadows assessment considers actions that result in new shadows long enough to reach a publicly accessible open space or historic resource (except within an hour and a half of sunrise or sunset). For actions resulting in structures less than 50 feet high, a shadow assessment is generally not necessary unless the site is adjacent to a park, historic resource, or important natural feature (if the features that make the structure significant depend on sunlight). According to the 2014 *CEQR Technical Manual*, some open spaces contain facilities that are not sunlight-sensitive, and do not require a shadow analysis including paved areas (such as handball or basketball courts) and areas without vegetation.

The Proposed Action would result in new buildings of up to 175 feet in height (plus an additional 15-foot allowance for mechanical bulkheads), and sunlight-sensitive open space resources are located within the vicinity of the Project Area. The Laboratory Administrative Building, a State and National Register listed resource and New York City Landmark, does not possess any sunlight-sensitive features and does not warrant further analysis. Therefore, a shadows assessment was conducted to determine whether the RWCDS would result in new shadows long enough to reach sunlight-sensitive resources as compared to No-Action conditions. As detailed in **Attachment G, "Shadows,"** while the developments facilitated by the Proposed Action would cast new shadows, the Proposed Action would not result in significant adverse shadows impacts on sunlight-sensitive resources or features in the surrounding area.

Urban Design

An area's urban components and visual resources together define the look and character of the neighborhood. The urban design characteristics of a neighborhood encompass the various components of buildings and streets in the area. These include building bulk, use and type; building arrangement; block form and street pattern; streetscape elements; street hierarchy; and natural features. An area's visual resources are its unique or important public view corridors, vistas, or natural or built features. For CEQR analysis purposes, this includes only views from public and publicly accessible locations and does not include private residences or places of business.

An analysis of urban design and visual resources is appropriate if an action would (a) result in buildings that have substantially different height, bulk, form, setbacks, size, scale, use or arrangement than exists in an area; (b) change block form, de-map an active street or map a new street, or affect the street hierarchy, street wall, curb cuts, pedestrian activity or streetscape elements; or (c) result in above-ground development in an area that includes significant visual resources.

As the Proposed Action would result in new predominately residential buildings with heights and bulks exceeding the current as-of-right zoning envelope, a detailed urban design and visual resources analysis is warranted and is provided in **Attachment H, "Urban Design and Visual Resources."** As detailed in **Attachment H**, there would be no significant adverse impacts to urban design or visual resources as a result of the Proposed Action.

Hazardous Materials

As detailed in the 2014 *CEQR Technical Manual*, the goal of a hazardous materials assessment is to determine whether an action may increase the exposure of people or the environment to hazardous materials, and if so, whether this increased exposure would result in potential significant public health or environmental impacts. A hazardous material is any substance that poses a threat to human health or the environment. Substances that can be of concern include, but are not limited to, heavy metals, volatile and semi-volatile organic compounds, methane, polychlorinated biphenyls 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; (b) an action would increase pathways to their exposure; or (c) an action would introduce new activities or processes using hazardous materials. **Attachment I** provides a discussion of the findings related to Hazardous Materials. As described in Attachment I, an (E)-designation (E-405) would be required for the three projected development sites to determine if remedial measures are required.

Transportation

The 2014 *CEQR Technical Manual* identifies minimum development densities that have the potential to result in significant adverse impacts to transportation and therefore require a detailed transportation analysis. As shown in Table 16-1 of the *CEQR Technical Manual*, actions which may result in fewer than 50 peak hour vehicle trips are generally unlikely to cause significant adverse impacts. For projects in Zone 2 (which includes areas within a quarter-mile of a subway station in Brooklyn), the development thresholds requiring trip generation analysis are 200 DUs and 15,000 gsf of local retail space.

As the RWCDS net increment for the Proposed Action would result in the introduction of 284 DUs and approximately 16,384 gsf of local retail space to the proposed rezoning area, an assessment of the Proposed Action's effect on the City's transportation system is required and has been provided in **Attachment J, "Transportation."** Per CEQR guidance, a screening assessment was completed to determine if the Proposed Action warranted detailed analyses of traffic, parking, transit, or pedestrians. The screening assessment consisted of a Level 1 Project Trip Generation and a Level 2 Project-Generated Trip Assignment, presented in **Attachment J**.

As detailed in **Attachment J**, the Proposed Action does not warrant detailed analyses of traffic, parking, or transit. No intersections in the vicinity of the proposed rezoning area would exceed the 50-vehicle CEQR threshold for a detailed traffic analysis. Additionally, the anticipated development facilitated by the Proposed Action would provide sufficient parking capacity to accommodate demand on-site in addition to adequate existing off-site public parking capacity. It is also not anticipated that any subway or bus lines in the vicinity of the proposed rezoning area would experience an increase of more than 200 peak hour rail or 50 peak hour bus transit riders, the CEQR thresholds for a detailed transit analysis. As such, no significant adverse impacts to traffic, parking, or transit would be expected in the future with the Proposed Action.

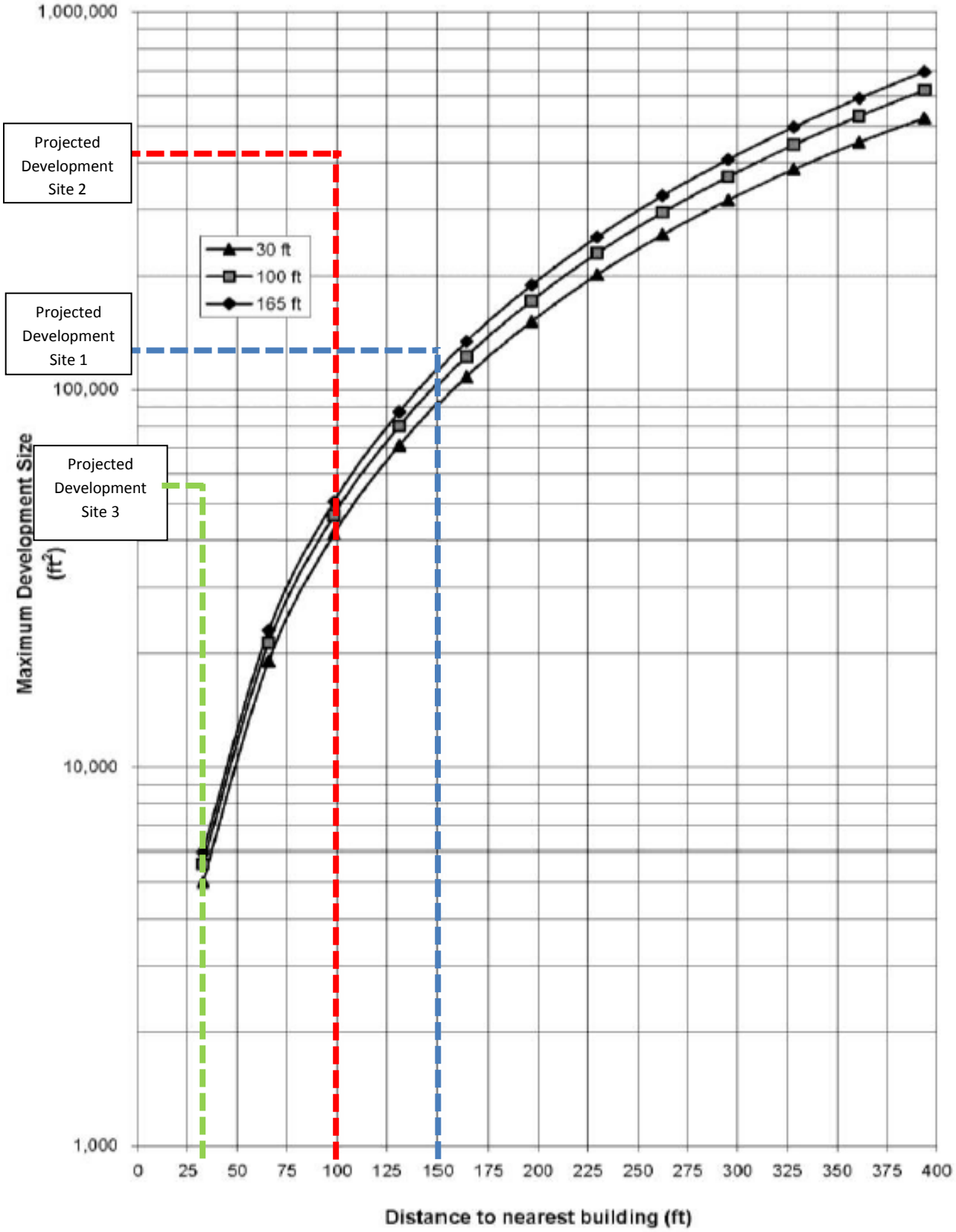
According to the 2014 *CEQR Technical Manual* criteria, projected pedestrian volume increases of less than 200 pedestrians per hour at any pedestrian element would not typically be considered a significant impact, as the level of increase would not generally be noticeable and therefore would not require further analysis. The Proposed Action would exceed this threshold during one or more peak hours. As detailed in **Attachment J**, the analyzed location would operate at level of service (LOS) B under future With-Action conditions during all three peak periods (the AM and midday would remain at LOS B and the PM peak period would go from a LOS A under No-Action conditions to a LOS B under With-Action conditions.

Air Quality

According to the guidance provided in the 2014 *CEQR Technical Manual*, air quality analyses are conducted in order to assess the effect of an action on ambient air quality, or effects on the projected because of ambient air quality. Air quality can be affected by "mobile sources," pollutants produced by motor vehicles, and "stationary sources," pollutants produced by fixed facilities. A stationary source screen was conducted with Figure 17-3 of the 2014 *CEQR Technical Manual* to determine if the Proposed Action has the potential to result in stationary source impacts. As shown in **Figure B-2**, the two developments proposed by the Applicant would fail this initial screen, and as such, a more detailed analysis is provided in **Attachment K, "Air Quality." Attachment K** provides the following conclusions:

1. No significant adverse air quality impacts from the HVAC emissions of Projected Development Site 1 on Projected Development Site 3 or Projected Development Site 3 on Projected Development Site 1 (Project-on-Project) will occur with the required stack setback distances specified in the E-designations;
2. No significant adverse air quality impacts from the HVAC emissions of Projected Development Site 1 or Projected Development Site 2, or Projected Development Site 3 on existing land uses (Project-on-Existing) will occur with the required stack setback distances specified in the E-designations;
3. No significant adverse air quality impact from existing large or major emissions source on proposed developments is predicted; and
4. No significant adverse air quality impacts from the emissions of the vehicles using the proposed garages will occur.

Figure 17-3:
Stationary Source Screen



Noise

The purpose of a noise analysis is to determine both a proposed action's potential effects on sensitive noise receptors and the potential effects of ambient noise levels on new sensitive uses introduced by an action. The principal types of noise sources affecting the New York City environment are mobile sources (primarily motor vehicles), stationary sources (typically machinery or mechanical equipment associated with manufacturing operations or building HVAC systems), and construction noise (e.g. trucks, bulldozers, power tools, etc.).

The Proposed Action would introduce new sensitive uses (i.e. residential uses) to development sites located adjacent to an open, below-grade subway cut right-of-way (the Franklin Avenue Shuttle) and near heavily trafficked roadways (Eastern Parkway). Therefore, a detailed noise assessment is required to determine if ambient noise levels have the potential to adversely affect future project occupants, and has been provided in **Attachment L, "Noise."** As discussed in the attachment, noise monitoring was conducted at the three street frontages of the proposed development sites (along Montgomery Street, Franklin Avenue, and Crown Street), and at the western corner of the proposed development, immediately adjacent to the shuttle tracks. These measurements were used as a baseline for determining total noise levels with the Proposed Action, which would add noise due to project-generated traffic.

As detailed in the attachment, future 2023 peak period L_{10} values at the monitored sites will range from a minimum of 58.9 dBA to a maximum of 69.5 dBA, and the greatest increases in noise levels from No-Action conditions to With-Action conditions will be 2.5 dBA. As the relative increases in noise under With-Action conditions are below 3.0 dBA when compared to the No-Action conditions, no significant adverse impacts due to project-generated traffic would occur.

Attenuation of Proposed Building Frontages Facing the Street

With-Action L_{10} noise levels at receptor locations 1, 2 and 3, along the street frontages of the Applicant-owned projected development Site 2, as well as With-Action L_{10} noise levels at receptor location 5, along the Franklin Avenue Shuttle subway tracks, would fall under the "Marginally Acceptable" and "Acceptable" noise exposure categories and would not exceed the 2014 *CEQR Technical Manual* threshold of 70 dBA as an absolute noise level. With-Action L_{10} noise levels at receptor location 4, along the southern street frontage of Applicant-owned projected development Site 1, as well as With-Action L_{10} noise levels at receptor location 5, along the Franklin Avenue Shuttle subway tracks, would both fall under the "Acceptable" noise exposure category, and would not exceed any CEQR thresholds. Therefore, the Applicant-proposed buildings would not be required to provide special window-wall attenuation measures above the minimum window-wall attenuation of 25 dBA in order to achieve a 45 dBA interior noise level for residential uses, and an attenuation of 20 dBA for retail uses. These attenuation values are based on the anticipated L_{10} noise levels under With-Action conditions. This attenuation can be achieved through standard design and construction measures.

Projected Development Site 3

In the event that projected development Site 3 is developed in the future, its eastern frontage would be located on Franklin Avenue. Any future development at this site would also be required to

provide a window-wall attenuation of 25 dBA/20 dBA in order to maintain interior noise levels of 45 dBA/50 dBA or lower should that development include any residential or commercial uses, respectively.

Attenuation of Proposed Building Frontage Facing the Shuttle Tracks

With-Action L_{10} noise levels at receptor location 5 would fall under the "Acceptable" noise exposure category, and would not exceed any CEQR thresholds. Thus, no specific attenuation would be required above the standard 25 dBA/20 dBA in order to maintain interior noise levels of 45 dBA/50 dBA or lower for residential or commercial uses, at these locations, respectively. Standard construction measures would provide sufficient attenuation to satisfy CEQR and requirements and preclude the potential for any significant adverse noise impacts.

Public Health

Public health involves the activities that society undertakes to create and maintain conditions in which people can be healthy. Many public health concerns are closely related to air quality, water quality, hazardous materials, and noise.

According to the guidance of the 2014 *CEQR Technical Manual*, a public health assessment may be warranted if a project results in (a) increased vehicular traffic or emissions from stationary sources resulting in significant adverse air quality impacts; (b) increased exposure to heavy metals and other contaminants in soil/dust resulting in significant adverse impacts, or the presence of contamination from historic spills or releases of substances that might have affected or might affect groundwater to be used as a source of drinking water; (c) solid waste management practices that could attract vermin and result in an increase in pest populations; (d) potential significant adverse impacts to sensitive receptors from noise and odors; (e) vapor infiltration from contaminants within a building or underlying soil that may result in significant adverse hazardous materials or air quality impacts; (f) exceedances of accepted federal, state, or local standards; or (g) other actions that might not exceed the preceding thresholds but might, nonetheless, result in significant health concerns.

As detailed in the analyses provided in this EAS, the Proposed Action would not result in significant adverse impacts in the areas of air quality, water quality, hazardous materials, or noise. Therefore, the Proposed Action does not have the potential to result in significant adverse public health impacts, and a further assessment is not warranted.

Neighborhood Character

According to the 2014 *CEQR Technical Manual*, an assessment of neighborhood character may be appropriate if a proposed project has the potential to result in significant adverse impacts on land use, zoning, public policy, socioeconomic conditions, open space, historic and cultural resources, urban design and visual resources, shadows, transportation, or noise, or when a project may have moderate effects on several of the elements that define a neighborhood's character.

The Proposed Action would not adversely affect any component of the surrounding area's neighborhood character. The Proposed Action would not conflict with the surrounding activities, nor would it significantly impact land use patterns. As described above, the developments that would be facilitated by the Proposed Action would bring occupancy and activity to two Applicant-owned sites and may also spur development at one projected development site. The development on the Applicant-owned sites would bring new residential and mixed-use developments on sites that have historically been occupied by manufacturing uses. The proposed residential and local retail uses would add affordable housing and convenient amenities to the neighborhood, and would further enhance the mixed-use character of the area.

As discussed in the urban design and shadows sections, the Proposed Action would facilitate the development of new residential and mixed use buildings of similar bulk, form, height and scale to the existing and planned developments in the surrounding area. In addition, there would be no significant adverse shadows impacts on adjacent open spaces or historic resources.

The Proposed Action would not result in any significant transportation impacts, or significant changes in traffic patterns within the study area. Nor would there be any significant adverse impacts on any of the other technical areas related to neighborhood character. Therefore, the Proposed Action would not have any significant adverse impacts on neighborhood character, and further analysis is not warranted.

Construction

Although temporary, construction impacts can include noticeable and disruptive effects from an action that is associated with construction or could induce construction. Determination of the significance of construction impacts and need for mitigation is generally based on the duration and magnitude of the impacts. Based on *CEQR Technical Manual* guidance, when the duration of construction is expected to be short-term (less than two years), any impacts resulting from construction generally do not require detailed assessment. Construction impacts are usually important when construction activity could affect traffic conditions, archaeological resources, the integrity of historic resources, community noise patterns, and air quality conditions.

The Proposed Action would result in temporary disruptions including construction related traffic, dust, noise, or mobile source emissions. However, these effects would be temporary, as the duration of construction activities for the proposed development are not expected to exceed 24 months and construction activity would be limited to the hours of 7:00 AM to 5:00 PM on weekdays. Construction on the two Applicant-owned sites would be completed prior to the end of 2021, whereas the construction of projected development Site 3 is not expected to commence until 2021, with anticipated completion of that project in 2023.[1] It should be noted that demolition of the previously existing buildings on the two Applicant-owned sites has already been completed in conjunction with DOB-approved plans for as-of-right buildings on these two sites and excavation of the sites would be completed before the end of 2019. Therefore, the construction schedules for

[1] Site 3 is expected to take additional time to get underway as the lots have separate ownership, there is no proposed building design at present, and the site would need to obtain design approvals prior to the commencement of construction.

the two developments on block 1188 (bounded by Carroll Street on the south, Franklin Avenue on the east, and President Street on the north) would not overlap.

It is anticipated that construction staging would primarily occur on the proposed development sites. Construction activities are not expected to adversely affect surrounding land uses. As required by City regulations, sidewalk protection bridges and full height plywood barriers would be installed to protect the public right of way. Periodic lane and sidewalk closures likely would be required to facilitate material delivery, construction debris removal, and related activities. Standard practices would be followed to ensure safe pedestrian and vehicular access to nearby buildings and along affected streets and sidewalks. During construction, access to all adjacent buildings, residences, and other uses would be maintained according to the regulations established by the NYC Department of Buildings (DOB). While the proposed development would result in temporary disruptions, these effects are not considered as significant or adverse. Therefore, no further analysis is warranted.

Attachment C

Land Use, Zoning and Public Policy

I. INTRODUCTION

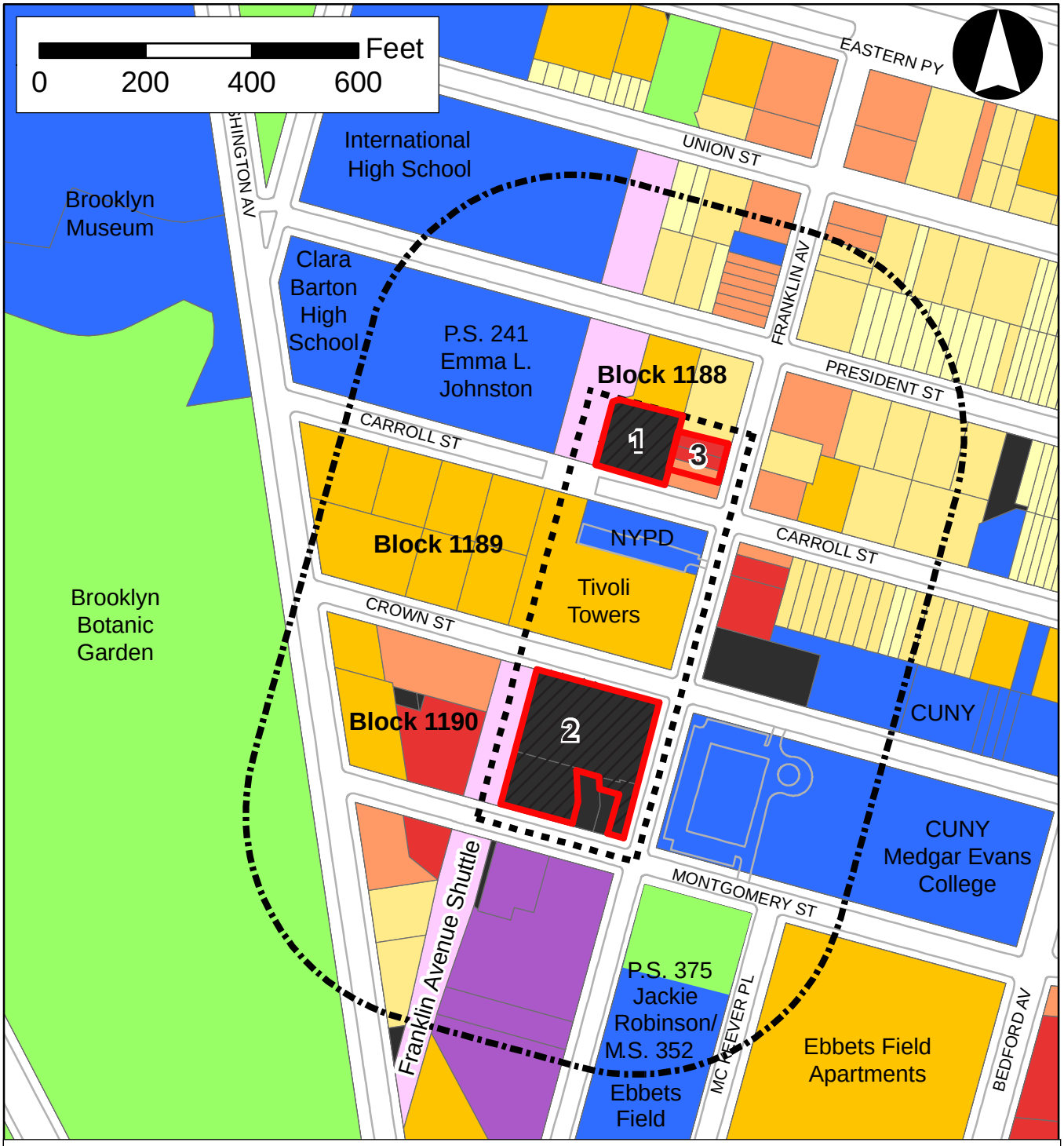
This attachment examines the Proposed Action's compatibility and consistency with land use patterns in the surrounding area, ongoing development trends, land use and zoning policies, as well as other public policies. This analysis has defined a study area within which the Proposed Action would have the potential to affect land use or land use trends. Following guidance provided in the 2014 *CEQR Technical Manual*, this study area encompasses a quarter-mile radius surrounding the proposed rezoning area, but for analysis purposes, it has been modified and expanded as appropriate to include entire blocks. The land use study area boundary generally extends from lots fronting Lincoln Place to the north, Rogers Avenue to the east, Sterling Street to the south, and Prospect Park/Brooklyn Botanic Garden to the west (refer to **Figure C-1**).

As described in **Attachment A, "Project Description,"** the Proposed Action would consist of a zoning map amendment and a zoning text amendment. The proposed zoning map amendment would change the underlying zoning of the proposed rezoning area from R6A, R6A/C1-3, and R8A to R8X and R8X/C2-4. The proposed zoning text amendment would create a new Mandatory Inclusionary Housing area within the Northern Blockfront and the Southern Blockfront portions of the proposed rezoning area, with a maximum Inclusionary Housing FAR. The Mandatory Inclusionary Housing (MIH) area would not be mapped on the Middle Blockfront. The Applicant proposes to utilize Option 1 by providing affordable housing equivalent to 25 percent of the residential floor area, at 60 percent AMI, with 10 percent of the residential floor area at 40 percent AMI. The purpose of the Proposed Action is to facilitate the development of mixed-use commercial/residential buildings on the two Applicant-owned projected development sites (refer to **Figure C-1**). Additionally, a third projected development site has been identified within the proposed rezoning area, as described below.

The reasonable worst case development scenario (RWCDS) With-Action condition for the two Applicant-owned projected development sites consists of a total of approximately 518 dwelling units (DUs), of which 140 would be affordable; approximately 16,284 gsf of local retail; and approximately 151 accessory parking spaces. The RWCDS development for Projected Development Site 3 is comprised of 47 dwelling units (of which 12 would be affordable), 7,500 gsf of local retail, and no accessory parking spaces.[1] The combined total for the three projected development sites under the RWCDS is 565 dwelling units (including 152 affordable units), 23,784 gsf of local retail space, and up to 151 accessory parking spaces.

The RWCDS No-Action condition represents the baseline against which the consequences of the Proposed Action will be compared. The effect of the Proposed Action, therefore, represents the incremental effects on conditions that would result from the net change in development between No-Action and With-Action conditions (the "project increment"). Under RWCDS No-Action conditions, it is assumed that the two Applicant-owned projected development sites would be redeveloped on an as-of-right basis pursuant to DOB-approved plans in accordance with the existing R6A, R6A/C1-3, and R8A zoning regulations. The RWCDS No-Action Scenario assumes the construction of approximately 281 market-rate DUs, 7,400 gsf of retail, and approximately 155 parking spaces. As described in **Attachment A**, Projected Development Site 3 is expected to remain unchanged from existing conditions to No-Action conditions.

[1] Although projected development site 3 could contain 14 accessory parking spaces, under the proposed zoning the required parking could be waived if a zoning lot is 10,000 sf or less, or if fewer than 15 spaces are required.



Legend

- 1 Projected Development Sites
- Applicant-Owned Sites
- Proposed Rezoning Area
- 400-Foot Radius

Land Uses

- One & Two Family Buildings
- Multi-Family Walkup Buildings
- Multi-Family Elevator Buildings
- Mixed Commercial/Residential Buildings
- Commercial/Office Buildings
- Industrial/Manufacturing Buildings
- Transportation/Utility
- Public Facilites & Institutions
- Open Space
- Parking Facilities
- Vacant Land
- All Others or No Data

As such, the anticipated RWCDS net project increment includes an incremental increase of approximately 284 DUs, 16,384 gsf of local retail, and a decrease of 4 accessory parking spaces in the future with the Proposed Action.

The assessment provided in this attachment concludes that the Proposed Action would be compatible with and support land use, zoning, and public policies in the area. As shown in the analysis presented below, the Proposed Action would not result in significant adverse impacts related to land use, zoning, or public policy.

II. EXISTING CONDITIONS

Land Use

Proposed Rezoning Area

The proposed rezoning area encompasses approximately 186,425 sf of lot area on the eastern portions of blocks 1188, 1189, and 1190 (the portions of the blocks that extend approximately 300 feet west of Franklin Avenue from a point 131 feet south of President Street on the north and Montgomery Street to the south) in the Crown Heights neighborhood of Brooklyn (refer to **Figure C-1**).

The portion of block 1188 in the proposed rezoning area is currently occupied by a mix of residential, commercial, and transportation uses. The northern portion of the block is comprised of two apartment buildings, 990 President Street (lot 40) and 1000 President Street (lot 44). While lot 40 is located immediately outside of the proposed rezoning area's northern boundary, 3,100 sf of lot 44 would be within the proposed zoning boundary. The building on lot 44 contains 57 dwelling units (four stories). Within the rezoning area, on the southern portion of the block, there are two one-story commercial buildings at 882 and 884 Franklin Avenue (lots 53 and 54). 882 Franklin Avenue is currently vacant, while 884 Franklin Avenue accommodates the Crown Star Laundromat. To the south, there are two three-story, mixed-use residential and commercial buildings at 886 and 888 Franklin Avenue (Lots 55 and 56). 886 Franklin Avenue accommodates the Franklin and Carroll Pharmacy on the first floor, while 888 Franklin Avenue accommodates the Carroll Street Discount Corp. on the first floor. The Applicant-owned property at 931 Carroll Street (lot 58) on projected development Site 1 is also located on block 1188 (refer to **Figure C-1**). While the site is currently under construction, it formerly contained a vacant, one-story industrial/manufacturing building. Additionally, the open subway cut for the Metropolitan Transportation Authority (MTA) Franklin Avenue Shuttle right-of-way, located on lot 35, would be bisected by the proposed zoning boundary.

The portion of block 1189 in the proposed rezoning area accommodates the two-story New York Police Department's (NYPD's) Transit District 32 facility at 960 Carroll Street (lot 31) and the eastern portion of Tivoli Towers at 49 Crown Street (lot 60) (refer to **Figure C-1**). Tivoli Towers, a Mitchell-Lama residential complex built in the 1970s, is one of the tallest buildings in the surrounding area, having 33 stories (297 feet high) and approximately 321 dwelling units. In addition, it should be noted that the Franklin Avenue Shuttle, which runs parallel to Franklin Avenue in the western portion of the proposed rezoning area, runs beneath the Tivoli Towers' accessory parking lot on block 1189.

The portion of block 1190 in the proposed rezoning area includes projected development Site 2, which encompasses three lots (lots 29, 45 and 50). The site is enclosed in construction fencing and is being excavated in conjunction with the planned as-of-right development. The vacant industrial/manufacturing buildings and former parking lots along Montgomery Street, Franklin Avenue, and Crown Street (refer to **Figure C-1**) were demolished over the summer of 2016. As described in **Attachment A**, lots 46 and 48 are

vacant parcels that are owned by AAFE. Additionally, the MTA Franklin Avenue Shuttle right-of-way (lot 26), an open subway cut, is located to the west of projected development sites on block 1190.

Secondary Study Area

As detailed above, the secondary study area for land use is generally bounded by lots fronting Lincoln Place to the north, Rogers Avenue to the east, Sterling Street to the south, and Prospect Park/the Brooklyn Botanic Garden to the west (refer to **Figure C-1**). As shown in **Table C-1** below, the secondary study area is comprised of predominately residential buildings (58.2 percent of buildings in the secondary study area) with several institutions/public facilities (20.8 percent of buildings) and open space resources (26.6 percent of lot area in the secondary study area). Additionally, mixed-use residential and commercial buildings comprise approximately 14.2 percent of the buildings in the secondary study area, predominately along Franklin Avenue. As shown in **Table C-1**, the approximate quarter-mile radius around the proposed rezoning area also accommodates smaller amounts of commercial/office space (2.7 percent of buildings), industrial/manufacturing space (2.2 percent of buildings), transportation/utility space (4.6 percent of lot area), parking facilities (0.7 percent of lot area), and vacant land (0.8 percent of lot area).

Table C-1:
Existing Land Uses within the Secondary Study Area

Use	Lot Area (sf)	% of Total Land Area	Built Area (gsf)	% of Total Built Area
Residential One & Two Family	639,724	9.7%	723,443	7.1%
Residential Multi-Family Walk-Up	690,830	9.7%	1,711,787	16.8%
Residential Multi-Family Elevator	773,728	10.9%	3,508,136	34.3%
Residential Total:	*2,158,282*	*30.3%*	*5,943,366*	*58.2%*
Mixed Residential & Commercial	420,890	5.9%	1,453,547	14.2%
Commercial & Office	331,166	4.6%	276,428	2.7%
Industrial & Manufacturing	215,441	3.0%	223,556	2.2%
Transportation & Utility	326,347	4.6%	83,095	0.8%
Public Facilities & Institutions	1,669,347	23.5%	2,122,829	20.8%
Open Space	1,892,203	26.6%	102,114	1.0%
Parking Facilities	50,407	0.7%	5,122	0.1%
Vacant Land	55,182	0.8%	0	0.0%
Totals:	***7,119,365***	***100.0%***	***10,210,057***	***100.0%***

Notes: Refer to **Figure C-1**.

As detailed in **Table C-1**, the predominately residential secondary study area includes detached and semi-detached one and two family buildings on narrow lots (7.1 percent of buildings in the secondary study area); low-rise multi-family walk-up buildings (16.8 percent of buildings); and mid- and high-rise multi-family elevator buildings on larger lots (34.3 percent of buildings), including Tivoli Towers and the seven 25-story Ebbets Field Houses apartment buildings (1720 Bedford Avenue) to the southeast of the proposed rezoning area (refer to **Figure C-1**).

As shown in **Table C-1** above, the secondary study area includes a significant amount of public facilities and institutions (approximately 23.5 percent of lot area and 20.8 percent of buildings in the secondary study area). Schools within an approximate quarter-mile radius of the proposed rezoning area include Clara Barton High School (901 Classon Avenue), P.S. 241 Emma L. Johnston (976 President Street), the International High School at Prospect Heights (883 Classon Avenue), and St. Francis de Sales School for the Deaf (260 Eastern Parkway), all of which are located immediately to the north and west of the proposed

rezoning area (refer to **Figure C-1**). W.E.B. Dubois High School (402 Eastern Parkway) is located in the northeast section of the secondary study area, while P.S. 375 Jackie Robinson School/M.S. 352 Ebbets Field (46 McKeever Place) and the City University of New York's (CUNY's) Medgar Evers College campus (1637 Bedford Avenue) are located immediately to the south and east of the proposed rezoning area.

There are several religious institutions located within an approximate quarter-mile radius of the proposed rezoning area. The Solid Rock Pentecostal Church (817 Classon Avenue) is located in the northern section of the secondary study area, while the Full Gospel Assembly Pentecostal Church (836 Franklin Avenue) is immediately north of the proposed rezoning area (refer to **Figure C-1**). The Ebenezer Haitian Baptist Church (1594 Bedford Avenue), the Miller Evangelical Church (1110 President Street), and the Kingdom Hall of Jehovah's Witnesses (1032 Carroll Street) are all located in the eastern section of the secondary study area. To the south of the proposed rezoning area are the Full Gospel Assembly of God (131 Sullivan Place) and the Gospel Truth Church of God (1055 Washington Avenue).

Additional institutions in the secondary study area include the Brooklyn Museum (200 Eastern Parkway) to the northwest of the proposed rezoning area, the Five Block Day Care Center (955 Carroll Street) to the east of the proposed rezoning area, and the Bedford-Union Armory (1555 Bedford Avenue) to the northeast of the proposed rezoning area (refer to **Figure C-1**).

There are also several large open space resources within the secondary study area. A portion of Prospect Park, including the Prospect Park Zoo (450 Flatbush Avenue), is located in the southwestern section of the secondary study area. A majority of the Brooklyn Botanic Garden, including the Science Center (109 Montgomery Street), is also located in the secondary study area, to the west and south of the proposed rezoning area. To the northwest of the proposed rezoning area is the 1.36-acre Dr. Ronald McNair Park, bounded by Eastern Parkway, Classon Avenue, and Washington Avenue (refer to **Figure C-1**).

As shown in **Figure C-1**, open subway cuts for the MTA Franklin Avenue Shuttle right-of-way extend north-south through the secondary study area and proposed rezoning area. Additionally, Eastern Parkway is a major thoroughfare which traverses east-west through the northern portion of the secondary study area. Although not included in the **Table C-1** land use calculations above, Eastern Parkway is a tree-lined boulevard with walkways and benches, providing additional open space resources in the secondary study area.

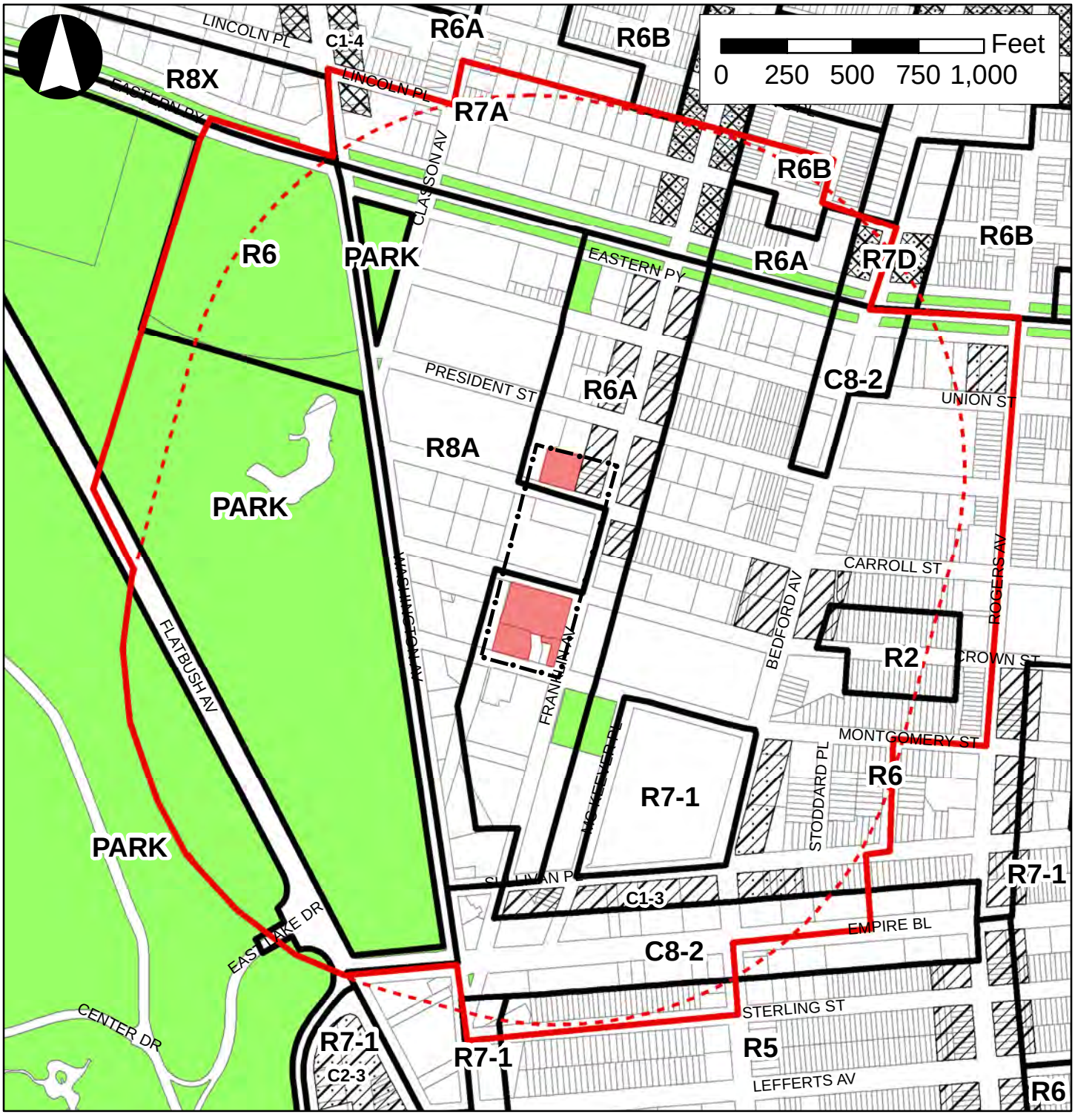
Zoning

Proposed Rezoning Area

Existing zoning on the portion of block 1188 within the proposed rezoning area consists of an R6A district and includes a 100-foot-deep C1-3 commercial overlay along Franklin Avenue. The segment of block 1189 that is located within the proposed rezoning area is mapped with an R8A zoning district. Existing zoning on the portion of block 1190 within the proposed rezoning area consists of an R6A district (refer to **Figure C-2**).

R6A
R6A zoning districts are medium-density contextual districts where Quality Housing bulk regulations are mandatory. R6A districts permit a maximum FAR of 3.0 with a minimum base height of 40 feet, a maximum base height of 60 feet, and a maximum building height of 70 feet. Parking is required for 50 percent of DUs in R6A zoning districts.

Existing Zoning - Secondary Study Area



Legend

- Applicant-Owned Sites
- Proposed Rezoning Area
- Quarter-Mile Radius
- Land Use Study Area
- Zoning District

Commercial Overlays

- C1-2
- C1-3
- C1-4
- C2-3
- C2-4

Source: NYCDCP, DoITT

R8A
R8A zoning districts are high-density contextual districts where Quality Housing bulk regulations are mandatory. R8A districts permit a maximum FAR of 6.02 with a minimum base height of 60 feet, a maximum base height of 85 feet, and a maximum building height of 120 feet. Parking is required for 40 percent of DUs in R8A zoning districts.

C1-3 Commercial Overlay
A C1-3 commercial overlay is mapped along Franklin Avenue on block 1188. Commercial overlays are mapped within residential districts along streets that serve local retail needs. In the underlying R6A zoning district, a C1-3 commercial overlay permits a maximum commercial FAR of 2.0. Typical retail uses include neighborhood grocery stores, restaurants, and beauty parlors. In mixed-use buildings, commercial uses are limited to one or two floors, and must always be located below the residential uses. Overlay districts differ from other commercial districts in that residential bulk is governed by the residence district within which the overlay is mapped.

Secondary Study Area

As shown in **Figure C-2**, the secondary study area includes a variety of residential zoning districts, as well as several commercial overlays, a single commercial district (C8-2), and Mandatory Inclusionary Housing and FRESH designated areas. Each zoning regulation is summarized in **Table C-2** and detailed below.

Table C-2:
Existing Zoning within the Secondary Study Area

Zoning District	Building Type	Permitted Use Groups	Maximum FAR
R2	Single-Family Detached Houses	1, 3-4	R: 0.5 CF: 1.0
R5	Medium-Density Residential	1-4	R: 1.25 CF: 2.0
R6	Medium-Density Residential	1-4	R: 2.43 CF: 4.8
R6A*	Contextual Medium-Density Residential	1-4	R: 3.0 CF: 3.0
R6B	Traditional Row House Districts	1-4	R: 2.0 CF: 2.0
R7A	Contextual High-Density Residential	1-4	R: 4.0 CF: 4.0
R7D	Contextual Residential Along Transit Corridors	1-4	R: 4.2 CF: 4.2
R7-1	Medium-Density Apartment House	1-4	R: 3.44 CF: 4.8
R8A*	Contextual High-Density Residential	1-4	R: 6.02 CF: 6.5
C8-2	General Service Commercial	4-14, 16	C: 2.0 CF: 4.8
C1-3 Overlay*	Local Retail Commercial Overlay	1-6	C: 2.0
C1-4 Overlay	Local Retail Commercial Overlay	1-6	C: 2.0
C2-3 Overlay	Local Service Commercial Overlay	1-9, 14	C: 2.0
C2-4 Overlay	Local Service Commercial Overlay	1-9, 14	C: 2.0

Notes: Refer to **Figure C-2**.
* Located in the proposed rezoning area, as discussed above.

R2
An R2 zoning district is mapped midblock on Crown Street between Bedford Avenue and Rogers Avenue in the secondary study area. R2 zoning districts limit development to single-family detached houses with a maximum lot width of 40 feet. R2 zoning districts have a maximum FAR of 0.5 with a maximum building height governed by a sky exposure plane, which begins 25 feet above the street line. One parking space is required per DU in an R2 zoning district.

R5
The lots along Sterling Street in the southern portion of the secondary study area are located within an R5 zoning district. R5 zoning districts are medium-density residential districts which typically produce three- and four-story attached houses and small apartment buildings. R5 districts have a maximum FAR of 1.25 with a maximum building height of 40 feet. Parking is required for 85 percent of DUs in R5 zoning districts.

R6
The Brooklyn Museum, as well as much of the area to the east of Franklin Avenue, is in an R6 zoning district. R6 zoning districts are medium-density residential districts ranging from large-scale "tower in the park" developments to neighborhoods with a diverse mix of building types. R6 districts have a maximum FAR of 2.43 with a maximum building height governed by a sky exposure plane, which begins 60 feet above the street line. Parking is required for 70 percent of DUs in R6 zoning districts.

R6A
An R6A zoning district is mapped along Franklin Avenue between Eastern Parkway and Sullivan Place, including portions of the proposed rezoning area on blocks 1188 and 1190, as well as a portion of the block bounded by Lincoln Place, Bedford Avenue, Eastern Parkway, and Franklin Avenue in the northeast portion of the secondary study area. As detailed above, R6A zoning districts are medium-density contextual districts with a maximum FAR of 3.0.

R6B
Lots fronting Lincoln Place between Franklin Avenue and Bedford Avenue in the northern portion of the study area are in an R6B zoning district. R6B zoning districts are medium-density, row house districts with required Quality Housing regulations, which preserve the scale and harmonious streetscape of traditional neighborhoods of four-story attached buildings developed during the 19th century. R6B districts have a maximum FAR of 2.0 with a minimum base height of 30 feet, a maximum base height of 40 feet, and a maximum building height of 50 feet. Parking is required for 50 percent of DUs in R6B zoning districts.

R7A
The area north of Eastern Parkway and west of Bedford Avenue in the secondary study area is zoned R7A. R7A zoning districts are high-density contextual districts where Quality Housing regulations are mandatory, typically resulting in seven- and eight-story apartment buildings with high lot coverage. R7A districts permit a maximum FAR of 4.0 with a minimum base height of 40 feet, a maximum base height of 65 feet, and a maximum building height of 80 feet. Parking is required for 50 percent of DUs in R7A zoning districts.

R7D
The blocks immediately north of Eastern Parkway along Bedford Avenue are zoned R7D. R7D zoning districts are established to promote new contextual development along transit corridors. R7D districts permit a maximum FAR of 4.2 within a minimum base height of 60 feet, a maximum base height of 85 feet, and a maximum building height of 100 feet. Parking is required for 50 percent of DUs in R7D zoning districts.

R7-1
The Ebbets Field Houses apartment buildings (1720 Bedford Avenue) on block 1302 are mapped in an R7-1 zoning district. R7-1 districts are medium-density apartment house districts with height factor requirements, which result in lower apartment buildings on smaller zoning lots and taller apartment buildings with less lot coverage on larger lots. R7-1 districts permit a maximum FAR of 3.44 and heights are governed by the sky exposure plane, which begins 60 feet above the street line. Parking is required for 60 percent of DUs in R7-1 zoning districts.

R8A
The area roughly bounded by Eastern Parkway, Washington Avenue, Sullivan Place, and generally mid-block between Washington/Classon Avenues and Franklin Avenue, including the portion of the proposed rezoning area on block 1189, is zoned R8A. As detailed above, R8A zoning districts are high-density contextual districts with a maximum FAR of 6.02.

C8-2
Empire Boulevard, in the southern portion of the secondary study area, is zoned C8-2. C8-2 zoning districts are general service commercial districts which typically bridge commercial and manufacturing uses along major traffic arteries. C8-2 districts provide for automotive and other heavy commercial services that often require large amounts of land. Typical uses include automobile showrooms and repair shops, warehouses, gas stations, and car washes. Performance standards are imposed for certain semi-industrial uses in C8-2 districts. Housing is not permitted in C8-2 districts, and some commercial and community facility uses are not permitted (refer to **Table C-2** above). C8-2 zoning districts permit a maximum FAR of 2.0, and building heights are governed by the sky exposure plane, which begins 30 feet above the street line. Parking requirements vary with land uses on a site.

Commercial Overlays
Commercial overlays are mapped within residential districts along streets that serve local retail needs. As shown in **Figure C-2**, commercial overlays (C1-3, C1-4, C2-3, and C2-4) are mapped in the secondary study area on Washington Avenue, Franklin Avenue, Bedford Avenue, and Sullivan Place. Commercial overlays are mapped within residence districts along streets that serve local retail needs. In residential areas R6 through R10, commercial overlays provide a maximum commercial FAR of 2.0. Overlay districts differ from other commercial districts in that residential bulk is governed by the residence district within which the overlay is mapped. In mixed buildings, commercial uses are limited to one or two floors, and must always be located below the residential uses. Typical commercial uses in overlays include neighborhood grocery stores, restaurants, and beauty parlors. C2-3 and C2-4 commercial overlays permit a slightly wider range of uses, such as funeral homes and repair services.

Inclusionary Housing

The lots fronting Bedford Avenue between Eastern Parkway and Lincoln Place in the northeast portion of the secondary study area fall within an Inclusionary Housing Designated Area. The City's Inclusionary Housing Program promotes economic integration in areas of the City undergoing substantial new residential development by offering an optional floor area bonus in exchange for the creation or preservation of affordable housing. In order to obtain the bonus, the program allows for the provision of a certain number of new or rehabilitated affordable units either on-site or off-site, in exchange for an increase of up to 20 percent of residential floor area.

Public Policy

According to CEQR guidance, a project that would be located within areas governed by public policies controlling land use, or that has the potential to substantially affect land use regulation or policy controlling

land use, requires an analysis of public policy. A preliminary assessment of public policy should identify and describe any public policies, including formal plans or published reports, which pertain to the study area. If proposed actions could potentially alter or conflict with identified policies, a detailed assessment should be conducted; otherwise, no further analysis of public policy is warranted. As described below, the Proposed Action does not warrant a detailed assessment of public policies.

The proposed rezoning area and the secondary study area are not controlled by or located in any urban renewal areas, 197-a Plans, designated in-place industrial parks, or within the coastal zone boundary. In addition, the Proposed Action does not involve the siting of any public facilities (Fair Share). The secondary study area is under the jurisdiction of PlaNYC 2030, as discussed below.

One New York: The Plan for a Strong and Just City ("OneNYC")

Released in 2007, PlaNYC was undertaken by Mayor Bloomberg and the Mayor's Office of Long Term Planning and Sustainability to prepare the City for one million more residents, strengthen its economy, combat climate change, and enhance the quality of life for all New Yorkers. An update to PlaNYC in April 2011 built upon the objectives set forth in 2007 and provided new goals and strategies. PlaNYC represents a comprehensive and integrated approach to planning for New York City's future. It includes policies to address three key challenges that the City faces over the next twenty years: population growth; aging infrastructure; and global climate change. In the 2011 update, elements of the plan were organized into 10 categories—housing and neighborhoods, parks and public space, brownfields, waterways, water supply, transportation, energy, air quality, solid waste, and climate change—with corresponding goals and initiatives for each category.

On April 22, 2015, the Mayor's Office of Sustainability released OneNYC, a comprehensive plan for a sustainable and resilient City for all New Yorkers, addressing social, economic, and environmental challenges ahead. OneNYC builds upon the goals and objectives set forth in PlaNYC, and expands on the critical targets established under the previous plan. Growth, sustainability, and resiliency remain at the core of OneNYC, with equity added as a guiding principle throughout the plan. Specific targets and initiatives included in OneNYC relevant to the Proposed Actions include making New York City home to 4.9 million jobs by 2040, enabling the average New Yorker to reach 25 percent more jobs (1.8 million jobs) within 45 minutes by public transit, lifting 800,000 New Yorkers out of poverty or near-poverty by 2025, and reducing annual economic losses from climate-related events.

Housing New York

On May 5, 2014, the City released Housing New York, a five-borough, ten-year strategy to build and preserve affordable housing throughout New York City in coordination with strategic infrastructure improvements to foster a more equitable and livable New York City through an extensive community engagement process. The plan outlines more than 50 initiatives to support the administration's goal of building or preserving 200,000 units of high-quality affordable housing to meet the needs of more than 500,000 people. The plan intends to do this through five guiding policies and principles: fostering diverse, livable neighborhoods; preserving the affordability and quality of the existing housing stock; building new affordable housing for all New Yorkers; promoting homeless, senior, supportive, and accessible housing; and refining City financing tools and expanding funding sources for affordable housing. Housing New York further calls for fifteen neighborhood studies to be undertaken in communities across the five boroughs that offer opportunities for affordable housing.

III. FUTURE WITHOUT THE PROPOSED ACTION (NO-ACTION CONDITION)

Land Use

Proposed Rezoning Area

Under No-Action conditions, some portions of blocks 1188 and 1190 could be redeveloped in accordance with the existing zoning. The R6A and R6A/C1-3 zoning districts on the portions of blocks 1188 and 1190 in the proposed rezoning area would permit a built residential FAR of 3.0 (and a commercial FAR of 2.0 for lots located in the C1-3 commercial overlay).

Table C-3:
No-Action Scenario

Block	Lot	Projected Dev. Sites	Existing Zoning	Existing Land Use	Existing Built FAR	Max. No-Action FAR	Max. No-Action Res. GSF	Max. No-Action Comm. GSF
1188	53	Projected Dev. Site 3[1]	R6A/C1-3	Commercial/Office	1.0	3.0	2,575 (4 DUs)	7,400
	54		R6A/C1-3	Commercial/Office	1.0			
	55		R6A/C1-3	Mixed Commercial/Residential	2.0			
	58	Projected Dev. Site 1	R6A	Vacant-Under Construction	1.0	3.0	69,524 (69 DUs)	0
1190	29	Projected Dev. Site 2	R6A	Vacant-Under Construction	1.1	3.0	225,821 (208 DUs)	0
	45		R6A	Vacant-Under Construction	0			
	50		R6A	Vacant-Under Construction	1.0			

Notes: The Applicant-owned projected development sites are highlighted. No-Action buildings on the Applicant-owned sites are based on as-of-right plans filed with the New York City Department of Buildings (DOB) for Block 1188, Lot 58 and Block 1190, Lots 29, 45, and 50.
[1]The existing buildings on block 1188, lots 53, 54 and 55 are anticipated to remain unchanged in the future No-Action Scenario, as the existing FAR (3.0) does not provide an incentive for new development.

Block 1188

As shown in **Table C-3**, there is one projected development site on block 1188 which has the potential to be redeveloped in the future without the Proposed Action. Applicant-owned projected development Site 1 includes lot 58. This site would be redeveloped with the maximum 3.0 FAR of market-rate residential space in the future without the Proposed Action (approximately 69,524 gsf with approximately 69 dwelling units).

Projected development Site 3 includes lots 53, 54, and 55 on block 1188. Under the No-Action scenario, none of these lots are anticipated to be redeveloped. Lot 55 is not anticipated to be redeveloped, as it currently accommodates a 5,075 sf building with an FAR of 2.0, more than half of the allowable 3.0 FAR under No-Action conditions and includes four dwelling units. Lots 53 and 54 accommodate commercial/office buildings with FARs of 1.0, and as such, it is possible that these two properties could be redeveloped with up to 3.0 FAR of residential space (or 2.0 FAR of commercial space) under No-Action conditions. However, lots 53 and 54 are not under common ownership, so it is assumed the existing commercial buildings on lots 53 and 54 would remain under the No-Action conditions.

The remaining lots on block 1188 within the rezoning area are unlikely to be developed in the future without the Proposed Action. None of the lots on block 1188 have common owners which could result in combined lot developments. Lot 56 currently has a built FAR of 2.3, which is over 50 percent of the maximum 3.0

residential FAR permitted on the lot. Additionally, lot 56 accommodates rent-stabilized housing, making it unlikely that it would be redeveloped in the future without the Proposed Action. Lot 44, the southern portion of which is located within the proposed rezoning area, currently has a built FAR of 3.7, which exceeds the FAR permitted in R6A and R6A/C1-3 zoning districts. As such, it is unlikely that this building would be redeveloped under the existing R6A and R6A/C1-3 zoning, as the surplus floor area would be lost. It is also unlikely that the portion of lot 35 that is located within the proposed rezoning area would be redeveloped, as it contains the MTA Franklin Avenue Shuttle right-of-way and would therefore require discretionary approvals to facilitate sale and/or redevelopment.

Block 1189

It is anticipated that neither lot in the proposed rezoning area on block 1189 would be redeveloped in the future without the Proposed Action. Tivoli Towers (lot 60) currently has a built FAR of 5.04, which is more than 50 percent of the allowable residential FAR of 6.02 under R8A zoning. Additionally, it is not anticipated that the NYPD Transit District 32 facility (lot 31) would be sold and/or redeveloped, as it would require additional discretionary approvals. As such, it is anticipated that these lots would remain unchanged in the future No-Action conditions.

Block 1190

As shown in **Table C-3**, there is a DOB-approved as-of-right No-Action development on block 1190 that would be constructed in the future without the Proposed Action. Projected development Site 2, which includes lots 29, 45, and 50, is entirely Applicant-owned. All of the lots on projected development are vacant/under construction with demolition of the buildings completed in summer 2016. Under No-Action conditions, the site would be redeveloped with the maximum 3.0 residential FAR, resulting in approximately 225,821 gsf of residential building space with approximately 208 market-rate dwelling units and a 120-space accessory parking garage.

As indicated in **Attachment A**, if the AAFE Land (lots 46 and 48) were to be developed, it carries deed restrictions limiting development to buildings with up to four units of affordable housing. Redevelopment of the property with a development in excess of the eight permitted units is considered unlikely because, even if a ULURP action to eliminate the development restrictions were pursued, the preparation of such application would take a reasonable amount of time to initiate and complete. The development team would have to generate plans and arrange for project financing. Additionally, the ability to build out the site to the maximum R8X floor area on this small irregular site is unknown because there is no project proposed to remove the current deed restriction. Finally, HPD may elect to apply new restrictions on the redevelopment of the property which could limit the site's development potential. Given the above, the AAFE site will be assessed qualitatively in a conceptual analysis to evaluate the unlikely possibility that AAFE seeks to eliminate the deed restriction and initiate development prior to 2021, when the developments on the Applicant-owned sites would be completed, or by the 2023 analysis year that has been selected to account for the development of projected development Site 3. However, for analysis purposes, it is assumed the AAFE site will not be developed and will remain vacant under future No-Action conditions.

Lot 26 on block 1190 currently accommodates the MTA Franklin Avenue Shuttle right-of-way. It is not likely that this site would be redeveloped as additional discretionary approvals would be required. There is also a 610 sf City-owned vacant lot (lot 28) located on block 1190, which is not anticipated to be redeveloped due to its limited size and linear configuration.

Secondary Study Area

Within the approximate quarter-mile secondary study area, there are eight known projects anticipated to be

completed in the future without the Proposed Action (refer to **Table C-4**). CUNY Medgar Evers College's Crown Plaza project (#1) involves the conversion of the parking lanes along Crown Street between Franklin Avenue and Bedford Avenue, to the east of the proposed rezoning area, into green space for the adjacent campus buildings, including additional trees, landscaping, pedestrian paths, and classroom seating areas (refer to **Figure C-3**). There are four No-Action projects to the south of the proposed rezoning area, including an 8-story development at 1 Sullivan Place (#3), which is anticipated to include 16 dwelling units and 530 sf of community facility space; a 4-story, 32,000 gsf self-storage commercial development at 155 Empire Boulevard (#8); a 28-unit, 6-story building at 90 Sullivan Place (#4); and, a 4-story, 2-unit building at 995 Washington Avenue (#2). Additionally, a planned conversion of the Bedford-Union Armory on Bedford Avenue between Union Street and President Street would result in approximately 415 dwelling units and approximately 45,000 sf of community facility space (#6). Immediately west of the rezoning area is the 12-story residential development that is under construction at 109-111 Montgomery Street (#7). Finally, north of the rezoning area is the 172-unit, 8-story building being constructed at 564 St. John's Place (#5).

For the purposes of other CEQR analyses that warrant a larger study area than the defined secondary study area, future No-Action developments beyond a quarter-mile radius of the proposed rezoning area were identified. There are 39 additional developments anticipated to be completed by the analysis year of 2023 within an approximate mile of the proposed rezoning area (refer to **Figure C-3**). As shown in **Table C-4**, these No-Action development sites are expected to accommodate predominately residential buildings, introducing approximately 2,462 new dwelling units into the area in the future without the Proposed Action.

Zoning

Proposed Rezoning Area

In the future without the Proposed Action, no zoning changes are anticipated in the proposed rezoning area. As such, the portions of blocks 1188 and 1190 in the proposed rezoning area would retain their existing R6A and R6A/C1-3 zoning designations, while the portion of block 1189 in the proposed rezoning area would remain in an R8A zoning district. The proposed Mandatory Inclusionary Housing designated area would not be mapped in the proposed rezoning area.

Public Policy

There are no expected changes to public policy in the secondary study area in the 2023 future without the Proposed Action.

Secondary Study Area

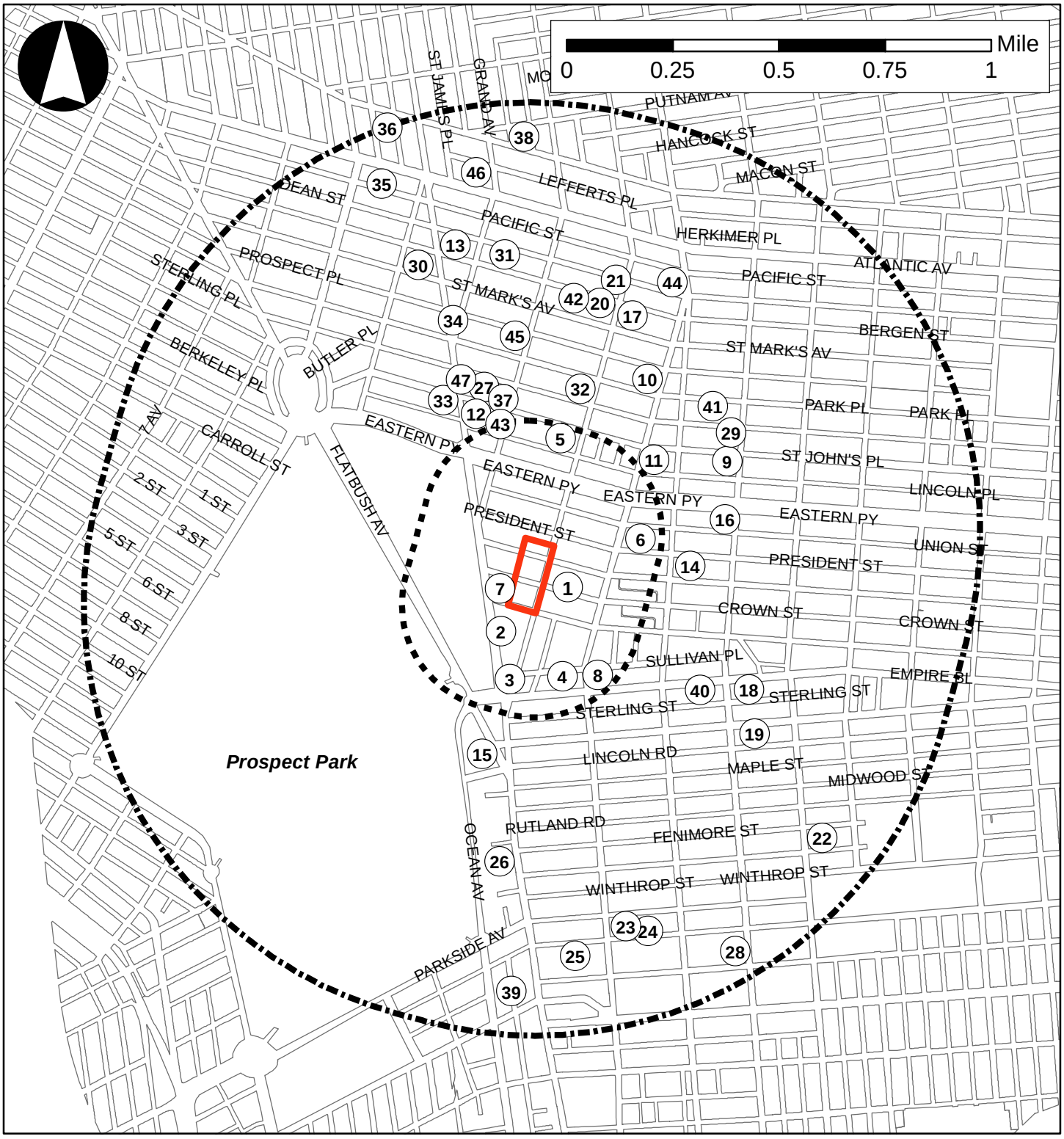
In the future without the Proposed Action, no changes to zoning are anticipated in the secondary study area.

Table C-4:
No-Action Developments

Map No.[1]	Project	Residential (DUs)	Commercial (sf)	Community Facility (sf)	# of Floors	Build Year
Within a Quarter-Mile Radius						
1	Medgar Evers College Crown Plaza	0	-	-	0	2017
2	995 Washington Avenue	2	-	950	4	2017
3	1 Sullivan Place	16	-	530	8	2017
4	90 Sullivan Place	28	6,000	6,000	6	2017
5	564 Saint John's Place	172	-	-	8	2017
6	Bedford-Union Armory	415	-	45,000	13	2019
7	109-111 Montgomery Street	162	-	-	12	2019
8	155 Empire Boulevard	0	32,000	-	4	2018
Subtotal		**795**	**38,000**	**52,480**		
Within a Mile Radius						
9	820-822 Saint John's Place	16	-	-	5	2017
10	1444 Bedford Avenue	8	-	-	4	2017
11	1515 Bedford Avenue	114	-	8,520	10	2017
12	807 Washington Avenue	7	-	-	7	2017
13	757 Bergen Street	6	-	-	3	2017
14	267 Rogers Avenue	165	-	-	5	2017
15	31-33 Lincoln Road	90	11,684	957	9	2018
16	834 Nostrand Avenue	19	11,000	5,500	7	2017
17	655 Franklin Avenue	8	-	-	4	2017
18	329 Sterling Street	29	-	-	6	2017
19	371 Lincoln Road	5	-	-	6	2019
20	912 Bergen Street	12	-	-	6	2017
21	1036 Dean Street/608 Franklin Avenue	119	-	-	8	2017
22	651 New York Avenue	40	-	-	5	2017
23	111 Clarkson Avenue	50	-	-	7	2017
24	149 Clarkson Avenue	10	-	-	5	2017
25	50-54 Clarkson Avenue	96	-	-	8	2017
26	626 Flatbush Avenue	254	4,750	3,580	23	2017
27	609 Saint John's Place	13	-	-	4	2017
28	271 Lenox Road	56	-	-	15	2017
29	834 Sterling Place	54	-	-	7	2017
30	313 Saint Mark's Avenue	75	-	-	4	2017
31	956 Dean Street	11	-	-	6	2019
32	730 Franklin Avenue	10	1,676	-	6	2017
33	816 Washington Avenue	8	3,135	-	5	2019
34	701 Washington Avenue	22	1,500	-	7	2019
35	873 Pacific Street	8	-	-	4	2019
36	840 Fulton Street	39	1,400	-	7	2018
37	792 Classon Avenue	8	-	-	6	2018
38	1045 Fulton Street	39	-	-	8	2018
39	56 East 21st Street	17	-	-	7	2018
40	264 Sullivan Place	27	-	700	7	2019
41	786 Park Place	6	-	-	6	2019
42	906 Bergen Street	21	-	-	8	2020
43	495 St. John's Place	26	-	-	7	2020
44	1350 Bedford Avenue	94	-	-	9	2020
45	496 Prospect Place	6	-	-	6	2019
46	925 Atlantic Avenue	25	-	-	7	2019
47	801 Washington Avenue	54	-	-	8	2020
Subtotal		**1,667**	**35,145**	**19,257**		
TOTAL		**2,462**	**73,145**	**71,737**		

Notes: [1]Refer to **Figure C-3**.
Sources: NYC DOB New Building Permits; Articles from *Curbed NY, Brownstoner, NY Daily News, DNA Info, YIMBY, and WNYC.*

No-Action Development Sites



Legend

- Proposed Rezoning Area
- One-Mile Radius
- Quarter-Mile Radius
- (1) No-Action Development Sites (refer to Table C-4)

IV. FUTURE WITH THE PROPOSED ACTION (WITH-ACTION CONDITION)

As discussed in detail below, the Proposed Action would consist of a zoning map amendment and a zoning text amendment which would facilitate a proposal by the Applicant to redevelop two sites in the proposed rezoning area with residential and mixed-use buildings. As discussed in **Attachment A, "Project Description,"** the Applicant's proposed development program does not represent the RWCDS for the Proposed Action. The RWCDS With-Action condition for the Proposed Action would result in the development of three sites in the proposed rezoning area: the two Applicant-owned sites as well as an additional projected development site along Franklin Avenue (refer to **Figure C-4**). All three of the developments are projected to allocate 25 percent of the floor area (excluding ground floor non-residential space) to affordable housing units under the Mandatory Inclusionary Housing program. In the future with the Proposed Action, it is anticipated that the three projected development sites would be redeveloped with a total of 565 DUs (152 affordable), 23,784 gsf of local retail space, and up to 151 parking spaces. The RWCDS With-Action condition therefore assumes a net incremental increase of approximately 284 DUs (152 affordable), 16,384 gsf of local retail space, and a reduction of four accessory parking spaces on the three projected development sites in the 2023 future with the Proposed Action (refer to **Table C-5**).

Additionally, the AAFE property located on block 1190, lots 46 and 48 (141-145 Montgomery Street) is expected to be developed by AAFE at some point in the future. However, the AAFE site carries certain restrictions limiting development to buildings with one to four units of affordable housing, making the timeline for development of this property difficult to predict. As described in **Attachment A, "Project Description,"** the AAFE site will be assessed qualitatively in a conceptual analysis (see **Attachment M**) to evaluate the unlikely possibility that AAFE seeks to eliminate the deed restriction and initiate development prior to the project's 2023 analysis year.

Land Use

As shown in **Table C-5**, Applicant-owned projected development Site 1 would accommodate a new residential building in both the RWCDS No-Action and With-Action conditions. In the future with the Proposed Action, the residential building on projected development Site 1 would accommodate a net increment of approximately 64,818 gsf of residential space with 59 dwelling units, approximately 34 of which would be affordable units that would not be built under No-Action conditions.

Under No-Action conditions, Applicant-owned projected development Site 2 would accommodate a new residential building, whereas under With-Action conditions it would accommodate a predominately residential building with ground-floor retail space (refer to **Table C-5**). The proposed building would introduce a net increment of approximately 185,529 gsf of residential space with 182 DUs (106 affordable) over No-Action conditions. Additionally, projected development Site 2 would include approximately 16,284 gsf of ground-floor retail space in the future with the Proposed Action.

As shown in **Table C-5**, projected development Site 3, which is not owned by the Applicant, is anticipated to accommodate a new mixed-use building under With-Action conditions. In the future with the Proposed Action, the mixed-use building on projected development Site 3 would accommodate a net increment of approximately 46,500 gsf of residential space with 47 dwelling units, approximately 12 of which would be affordable units that would not be built under No-Action conditions. Additionally, approximately 7,500 gsf of local retail is anticipated on Site 3.

Table C-5:
RWCDS With-Action Conditions

Block	Lot	Projected Dev. Sites	Existing Built FAR	Max. No-Action FAR	No-Action Res. GSF and Parking	No-Action Comm. GSF	Max. W/ Action FAR[1]	W/Action Res. GSF and Parking	W/Action Comm. GSF	Res. GSF Increment[2] and Parking	Comm. GSF Increment[2]
1188	53	Projected Dev. Site 3	1.0	3.0	2,575 (4 DUs), 0 Parking Spaces	7,400	7.2	46,500 (47 DUs), 0 Parking Spaces	7,500	+43,925 (+43 DUs), 0 Parking Spaces	+100
	54		1.0								
	55		2.0								
	58	Projected Dev. Site 1	1.0	3.0	69,524 (69 DUs), 35 Parking Spaces	0	7.2	134,342 (128 DUs), 37 Parking Spaces	0	+64,818 (+59 DUs), +2 Parking Spaces	0
1190	29	Projected Dev. Site 2	1.1	3.0	225,821 (208 DUs), 120 Parking Spaces	0	7.2	411,350 (390 DUs), 114 Parking Spaces	16,284	+185,529 (+182 DUs), -6 Parking Spaces	+16,284
	45		0								
	50		1.0								
TOTAL WITH-ACTION INCREMENT:										**+294,272 (284 DUs)**	

Notes: The Applicant-owned projected development sites are highlighted.
[1]The maximum allowable With-Action FAR in the Project Area increases to 7.2 FAR when utilizing the proposed Inclusionary Housing Bonus.
[2]The maximum building increment is the difference between the maximum allowable With-Action square footage and the maximum allowable No-Action square footage.
[3]Lots 53, 54, and 55 on Block 1188 are not anticipated to be redeveloped in the No-Action condition, as discussed above. Therefore, for conservative analysis purposes, the maximum building increment for projected development Site 3 includes the difference between the maximum allowable With-Action building and the existing buildings on Lots 53, 54, and 55.

Assessment

The Proposed Action would not result in significant adverse impacts to land use in the proposed rezoning area. The Proposed Action would allow new residential and mixed-use development in an increasingly residential urban neighborhood where there is a strong demand for housing. Additionally, the Proposed Action would result in the development of approximately 152 affordable housing units which would not be developed under No-Action conditions. The Proposed Action would also result in the development of ground-floor retail on block 1190, extending the commercial corridor and pedestrian activity of Franklin Avenue south into the proposed rezoning area. The projected new developments would be built at a density and bulk compatible with study area properties, including new housing recently constructed and No-Action development sites discussed above, as well as older housing developments including the 33-story Tivoli Towers on block 1189 in the proposed rezoning area. The Proposed Action would create a cohesive land use pattern through the development of these underutilized sites. As such, the Proposed Action would result in development that would complement the land use character of the secondary study area as a whole.

Zoning

Zoning Map Amendment

The proposed zoning map amendment would change the underlying zoning of the proposed rezoning area to an R8X district. The portion of the existing 100-foot deep C1-3 commercial overlay on block 1188 along

Franklin Avenue in the proposed rezoning area would be removed and replaced by a 100-foot deep C2-4 commercial overlay. A 100-foot deep C2-4 commercial overlay would also be mapped on block 1190 along Franklin Avenue in the proposed rezoning area (refer to **Figure C-4**). R8X districts allow a maximum residential FAR of 6.02, the same as the existing R8A district on block 1189 and more than twice the existing R6A districts' allowance of 3.0 on blocks 1188 and 1190. (As discussed below, the Mandatory Inclusionary Housing designated area would further modify the permitted FAR.) Additionally, R8X districts permit a maximum building height of 150 feet (in contrast to a height of 70 feet allowed in R6A districts and a height of 120 feet allowed in R8A districts). The proposed C2-4 commercial overlay would provide for a continuation of retail uses that are currently permitted on Franklin Avenue in the surrounding area. This rezoning would facilitate the redevelopment of the three projected development sites with additional residential space which is in high demand in the area, as discussed above.

Zoning Text Amendment

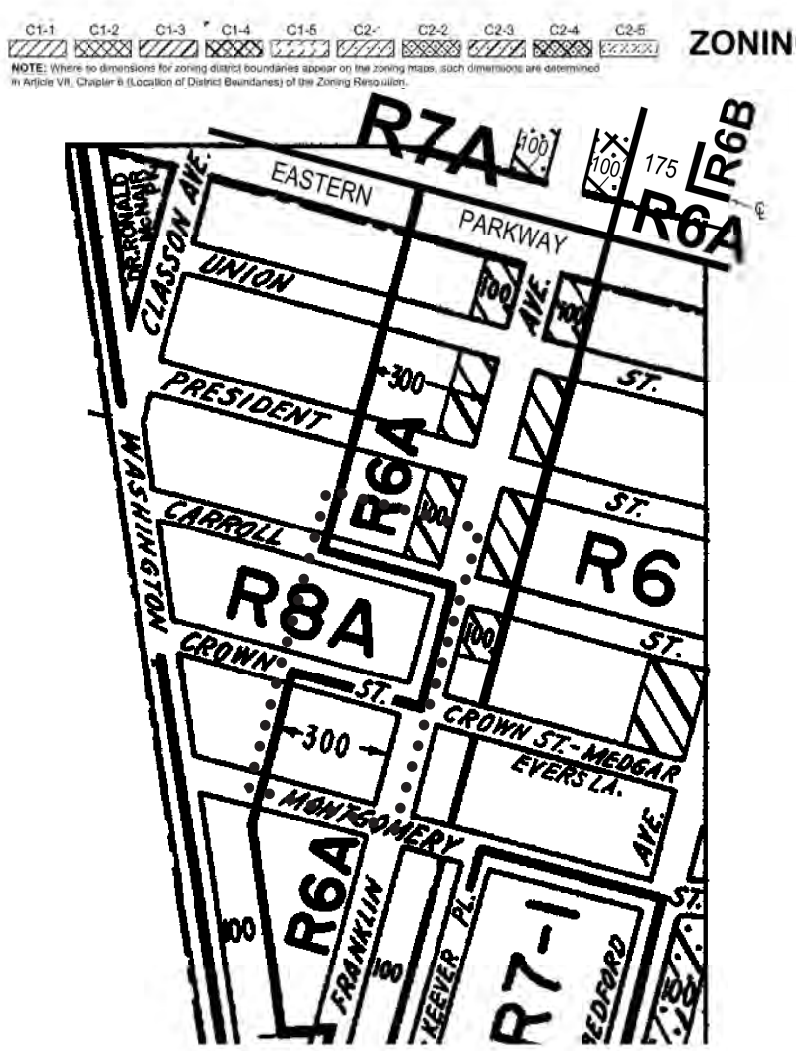
The Applicants are proposing to map the Northern Blockfront and the Southern Blockfront portions of the proposed rezoning area as a Mandatory Inclusionary Housing designated area by creating a new Map 1 for Brooklyn Community District 9 in Appendix F of the Zoning Resolution. The Mandatory Inclusionary Housing area would not be mapped on the Middle Blockfront and this area would have an FAR of 6.02. A Mandatory Inclusionary Housing designation sets maximum permitted residential FAR, applicable to new developments that provide affordable housing pursuant to the Inclusionary Housing Program. With both the designation of the Northern Blockfront and the Southern Blockfront portions of the proposed rezoning area as a Mandatory Inclusionary Housing designated area and its rezoning to an R8X residential zoning district, the base permitted residential FAR for the proposed rezoning area would be 5.4 and the maximum permitted FAR would be 7.2 with Inclusionary Housing. Extension of the Mandatory Inclusionary Housing designated area over the Northern Blockfront and the Southern Blockfront portions of the rezoning area will facilitate development of the proposed affordable housing units.

Assessment

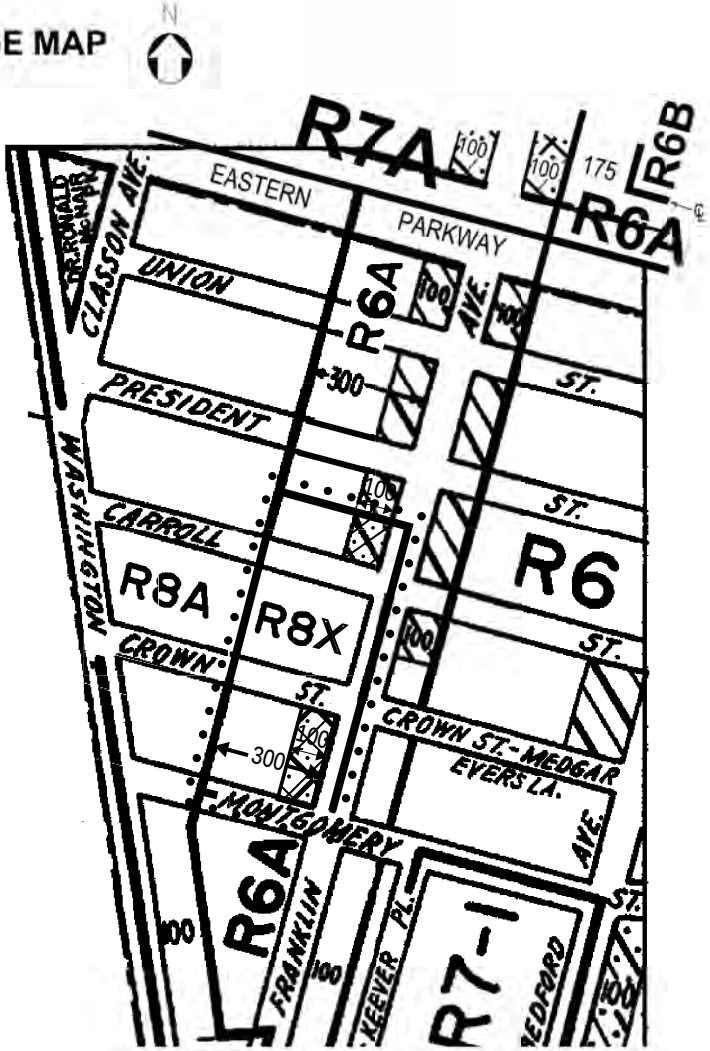
The Proposed Action would not result in significant adverse impacts to zoning as the proposed zoning map amendment and zoning text amendment would result in densities and building bulks that would be within the range of what is currently allowed in the secondary study area. In the future with the Proposed Action, the proposed rezoning area would continue to be a contextual residential zoning district governed by Quality Housing bulk regulations like the existing R6A and R8A districts. As such, the proposed underlying R8X zoning district is expected to result in development which is compatible with the existing built form in the area. In conjunction with the proposed Mandatory Inclusionary Housing designated area which would be mapped on the Northern Blockfront and the Southern Blockfront portions of the rezoning area, the proposed R8X district would allow for increased residential development in the proposed rezoning area, including approximately 152 affordable dwelling units (equivalent to 25 percent of the residential floor area, at 60 percent AMI, with 10 percent of the residential floor area at 40 percent AMI), in an increasingly residential urban neighborhood where there is a strong demand for housing and, in particular, affordable dwelling units.

The proposed C2-4 commercial overlay on blocks 1188 and 1190 would permit an extension of the commercial corridor along Franklin Avenue, allowing for the development of ground-floor retail on projected development Site 2. Commercial development resulting from this commercial overlay extension would be consistent with the existing mixed-use character of Franklin Avenue south of Eastern Parkway. The proposed C2-4 commercial overlay would extend the commercial corridor and pedestrian activity of Franklin Avenue south into the proposed rezoning area.

Existing & Proposed Zoning



CURRENT ZONING MAP - 16d Brooklyn



PROPOSED ZONING MAP- Area being rezoned is outlined with dotted lines

Changing R6A, R6A/C1-3 and R8A districts to R8X and R8X/C2-4 districts

Proposed Rezoning Area

The proposed zoning changes would provide a framework for development that, as noted above, would be consistent with current land use trends and market conditions in the study area. The Proposed Action would result in development that would use zoning floor area increases as a means to spur the creation of residential space to meet demand for market-rate units and maximize the number of affordable housing units. As such, the Proposed Action is not expected to result in significant adverse zoning impacts.

Public Policy

There are no anticipated changes to public policy in the future with the Proposed Action.

Assessment

As discussed above, the OneNYC initiative was released on April 22, 2015. OneNYC sets a goal of creating 240,000 new housing units—both market rate and affordable—within the next decade. Another goal of the plan focused on providing New Yorkers with transit access from their homes to good jobs. Through transit investments, job creation in diverse locations, and transit-accessible housing construction, OneNYC has set a goal to ensure that by 2040, the average New Yorker will be able to reach 1.8 million jobs by transit within 45 minutes. The Proposed Action would be consistent with these two goals by providing a mix of affordable and market-rate housing in an area supported by many transit options. Thus, the Proposed Action would support several of PlaNYC's and OneNYC's sustainability initiatives, as well as help support the City's gradual transition to a more sustainable city.

Attachment D

Socioeconomic Conditions

I. INTRODUCTION

This attachment assesses whether the Proposed Action and resultant reasonable worst-case development scenario (RWCDS) would result in significant adverse impacts to the socioeconomic character of the area within and surrounding the Project Area. As described in the 2014 *CEQR Technical Manual*, the socioeconomic character of an area includes its population, housing, and economic activities. Socioeconomic changes may occur when a project directly or indirectly affects any of these elements. Although some socioeconomic changes may not result in environmental impacts under CEQR, they are disclosed if they would affect land use patterns, low-income populations, the availability of goods and services, or economic investment in a way that changes the socioeconomic character of the area.

As described in **Attachment A, "Project Description,"** under RWCDS With-Action conditions, the Proposed Action would facilitate a net increment of approximately 284 dwelling units (DUs), of which 151 would be affordable units; approximately 16,384 gross square feet (gsf) of retail space; and a reduction of four parking spaces compared to the No-Action condition. In accordance with 2014 *CEQR Technical Manual* guidelines, this analysis considers whether development of these uses could result in significant adverse socioeconomic impacts as a result of: (1) direct displacement of residential population from the Project Area; (2) indirect displacement of residential population in a quarter-mile study area; (3) direct displacement of existing businesses from the Project Area; (4) indirect displacement of businesses in a quarter-mile study area; and (5) adverse effects on specific industries.

II. METHODOLOGY

Under CEQR, the socioeconomic character of an area is defined by its population, housing, and economic activities. The assessment of socioeconomic conditions usually distinguishes between the socioeconomic conditions of an area's residents and businesses. However, proposed actions affect either or both of these segments in the same ways: they may directly displace residents or businesses or they may alter one or more of the underlying forces that shape socioeconomic conditions in an area and thus may cause indirect displacement of residents and businesses. The objective of the CEQR analysis is to disclose whether any changes created by the Proposed Action and associated RWCDS would have a significant impact compared with what would happen in the future without the Proposed Action (i.e., the No-Action conditions).

Direct displacement is defined as the involuntary displacement of residents, businesses, or institutions from the actual site of (or sites directly affected by) the Proposed Action. Examples include proposed redevelopment of a currently occupied site for new uses or structures, or a proposed easement or right-of-way that would take a portion of a parcel and thus render it unfit for its current use. Since the occupants of a particular site are usually known, the disclosure of direct displacement focuses on specific businesses and employment and an identifiable number of residents and workers.

Indirect or secondary displacement is defined as the involuntary displacement of residents, businesses, or employees in an area adjacent to, or close to, a project site that results from changes in socioeconomic conditions created by a proposed project. Examples include rising rents in an area that result from a new concentration of higher-income housing introduced by a project, which ultimately could make existing housing unaffordable to lower income residents; a similar turnover of industrial to higher-rent commercial

tenancies induced by the introduction of a successful office project in an area; or the flight from a neighborhood that can occur if a proposed project creates conditions that break down a community (such as a highway dividing an area). Unlike direct displacement, the exact occupants to be indirectly displaced are not known. Therefore, an assessment of indirect displacement usually identifies the size and type of groups of residents, businesses, or employees potentially affected.

Even if projects do not directly or indirectly displace businesses, they may affect the operation and viability of a major industry or commercial operation in the City. An example would be new regulations that prohibit or restrict the use of certain processes that are critical to certain industries. In these cases, the CEQR review process may involve the assessment of the economic impacts of the project on the specific industry in question.

Determining Whether a Socioeconomic Assessment is Appropriate

According to the 2014 *CEQR Technical Manual*, a socioeconomic assessment should be conducted if a project may be reasonably expected to create socioeconomic changes in the area affected by the project that would not be expected to occur in the absence of the project. The following screening assessment considers threshold circumstances identified in the *CEQR Technical Manual* and enumerated below that can lead to socioeconomic changes warranting further assessment.

1. ***Direct Residential Displacement: Would the project directly displace residential populations to the extent that the socioeconomic character of the neighborhood would be substantially altered? Displacement of fewer than 500 residents would not typically be expected to alter the socioeconomic character of a neighborhood.***

The 2014 *CEQR Technical Manual* defines direct residential displacement as the involuntary displacement of residents from the site of (or a site directly affected by) a proposed action. There is one building with residential space located in the Project Area which is anticipated to be redeveloped as a result of the Proposed Action. The existing three-story, mixed-use residential and commercial building at 886 Franklin Avenue (block 1188, lot 55) currently accommodates the Franklin and Carroll Pharmacy on the first floor, and 4 DUs on the two upper floors. Under RWCDS No-Action conditions, it is not anticipated that this site would be redeveloped as it has an FAR of 2.0, which is more than half of the allowable 3.0 FAR on the site (refer to **Attachment A, "Project Description"**). However, under RWCDS With-Action conditions it is anticipated that this site would be redeveloped, along with neighboring lots 54 and 53, as part of projected development Site 3. It is anticipated that a new mixed-use residential and commercial building accommodating approximately 47 DUs (12 affordable) would be constructed on the site.

There are no other existing residential spaces in the Project Area that would be displaced as a result of the Proposed Action. The remainder of projected development Site 3 is comprised of commercial buildings and projected development Sites 1 and 2 are vacant. As such, the Proposed Action could potentially directly displace four residential units housing an estimated 12 residents[1] in the Project Area, which is well below the CEQR threshold of 500 residents requiring an analysis of direct residential displacement. Therefore, the Proposed Action would not result in significant adverse impacts due to direct residential displacement and an assessment of direct residential displacement is not warranted.

2. ***Direct Business Displacement: Would the project directly displace more than 100 employees, or directly displace a business whose products or services are uniquely dependent on its location, are the subject of policies or plans aimed at its preservation, or serve a population uniquely dependent***

[1] Estimated residents based on 2010 Census average household size of 2.62 persons in Brooklyn Community District 9.

on its services in its present location? If so, assessments of direct business displacement and indirect business displacement are appropriate.

The 2014 *CEQR Technical Manual* defines direct business displacement as the involuntary displacement of businesses or institutional uses from the site of (or a site directly affected by) a proposed action. There is one building with commercial space located in the Project Area which is anticipated to be redeveloped under RWCDS With-Action conditions that would not be redeveloped under No-Action conditions. The existing three-story, mixed-use residential and commercial building at 886 Franklin Avenue (block 1188, lot 55) currently accommodates the Franklin and Carroll Pharmacy on the first floor, and residential space on the upper floors. The pharmacy currently employs two workers.[2] Under RWCDS No-Action conditions, it is not anticipated that this lot would be redeveloped as it has an FAR of 2.0 which is more than half of the allowable 3.0 FAR on the site (refer to **Attachment A, "Project Description"**). However, under RWCDS With-Action conditions, it is anticipated that this site would be redeveloped, along with neighboring lots 53 and 54, as part of projected development Site 3. It is anticipated that a new mixed-use residential and commercial building accommodating approximately 7,500 sf of commercial space would be constructed on the site.

There are no other commercial spaces in the Project Area that would be directly displaced as a result of the Proposed Action. The remainder of projected development Site 3 is comprised of two one-story, vacant commercial buildings at 882 and 844 Franklin Avenue (lots 53 and 54). Projected development Sites 1 and 2, which currently vacant, are also anticipated to be redeveloped under both RWCDS No-Action and With-Action conditions.

As such, the Proposed Action could potentially directly displace a total of two retail workers in the Project Area, which is well below the CEQR threshold of 100 employees requiring an analysis of direct business displacement. Therefore, the Proposed Action would not result in significant adverse impacts due to direct business displacement and an assessment of direct residential displacement is not warranted.

3. Indirect Displacement due to Increased Rents: Would the project result in substantial new development that is markedly different from existing uses, development, and activities within the neighborhood? Residential development of 200 units or less or commercial development of 200,000 sf or less would typically not result in significant socioeconomic impacts. For projects exceeding these thresholds, assessments of indirect residential displacement and indirect business displacement are appropriate.

The Proposed Action would introduce a net residential increment of 284 DUs (151 affordable), which exceeds the CEQR threshold of 200 units. Therefore, an assessment of potential indirect residential displacement is warranted and is presented below.

The Proposed Action would introduce a net increment of approximately 16,384 gsf of ground-floor retail space in the Project Area, which would not exceed the CEQR threshold of 200,000 sf of new commercial space. The net increment of retail space under RWCDS With-Action conditions would equate to less than a two percent increase in retail space in the study area. Therefore, an assessment of potential indirect business displacement is not warranted.

4. Indirect Business Displacement due to Retail Market Saturation: Would the project result in a total of 200,000 sf or more of retail on a single development site or 200,000 sf or more of region-serving retail across multiple sites? This type of development may have the potential to draw a substantial

[2] Worker estimates based on site surveys by PHA staff in December of 2014.

amount of sales from existing businesses within the study area, resulting in indirect business displacement due to market saturation.

The Proposed Action would introduce a net increase of approximately 16,384 gsf of ground-floor retail space in the Project Area, which is well below the 200,000 sf CEQR threshold warranting assessment of indirect business displacement due to market saturation. In addition, the new residential population introduced by the Proposed Action is expected to increase demand for retail and services generally, both for the new retail as well as for existing businesses. As such, an analysis of indirect business displacement is not warranted for the Proposed Action.

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

As discussed above, the only existing business in the Project Area which could be potentially directly displaced by the Proposed Action is the Franklin and Carroll Pharmacy on the ground-floor of 886 Franklin Avenue. The pharmacy does not provide products or services that are uniquely dependent on its current location, and it does not serve a population uniquely dependent on its services in its present location. The pharmacy currently employs two retail workers, well below the CEQR threshold of 100 employees requiring an assessment of direct and indirect business displacement. The pharmacy is not subject to policies or plans aimed at its preservation. Additionally, the Proposed Action does not include any citywide regulatory changes that would adversely affect the economic and operation conditions of certain types of businesses or processes. Therefore, the Proposed Action would not result in significant adverse effects on specific industries, and no further assessment is warranted.

Based on the screening assessment presented above, the Proposed Action and subsequent RWCDS conditions warrant an analysis of indirect residential displacement.

Analysis Format

Based on *CEQR Technical Manual* guidelines, the analysis of indirect residential displacement begins with a preliminary assessment. The objective of the preliminary assessment is to learn enough about the potential effects of the Proposed Action and resultant RWCDS to either rule out the possibility of significant adverse impacts or determine that a more detailed analysis is required to fully determine the extent of the impacts. A detailed analysis, when required, is framed in the context of existing conditions and evaluates the changes to those conditions in the With-Action condition as compared with the changes that would be expected in the No-Action condition. In conjunction with the land use task, specific development projects expected to occur by the project's analysis year are identified. These projects are described in terms of the possible changes to socioeconomic conditions that they would cause, including potential population increases, changes in income characteristics of the affected area, changes to the rents or sale prices of residential units, new commercial or industrial uses, or changes to employment or retail sales. Those conditions are then compared with the future with the Proposed Action to determine the potential for significant adverse impacts.

A preliminary assessment was sufficient to conclude that the Proposed Action and resultant RWCDS would not result in any significant adverse socioeconomic impacts due to indirect residential displacement.

Study Area Definition

According to the 2014 *CEQR Technical Manual*, the socioeconomic conditions study area typically reflects the land use study area and should reflect the scale of the project relative to the area's population. The *CEQR Technical Manual* explains that for actions that would increase the residential population by more than five percent as compared to the population expected to reside in the quarter-mile study area in future No-Action conditions, a half-mile study area is appropriate.

The Proposed Action and associated RWCDS would add an estimated 744 new residents[3] to the Project Area over the No-Action condition. This population increase represents an approximate 4.3 percent increase in population compared to the expected No-Action population of 17,435 residents in a quarter-mile radius from the proposed rezoning area (refer to **Table D-3**). Therefore, pursuant to *CEQR Technical Manual* guidelines, an approximate quarter-mile radius from the proposed rezoning area is the appropriate study area for the socioeconomic assessment (see **Figure D-1**), As shown in **Figure D-1**, the socioeconomic study area includes the census tracts that most closely describe (i.e., are at least 50 percent within) the quarter-mile perimeter around the Project Area, including: census tracts 213, 323, and 325.

Data Sources

Data related to residential conditions, including population, housing, and income data, were obtained from the U.S. Department of Commerce Bureau of the Census 2000 and 2010 Decennial Censuses and the 2012-2016 Five-Year American Community Survey (ACS), as well as field visits by PHA staff in December of 2014 and real estate data sources such as REBNY and MNS Brooklyn Rental Market Reports, *Curbed NY*, and *The New York Times*. In addition, land use and parcel data were collected from the Department of City Planning (DCP)'s Primary Land Use Tax Lot Output (PLUTO) data files and online Geographic Information Systems (GIS) databases including the New York City Open Accessible Space Information System (OASIS) and NYCityMap.

III. PRELIMINARY ASSESSMENT

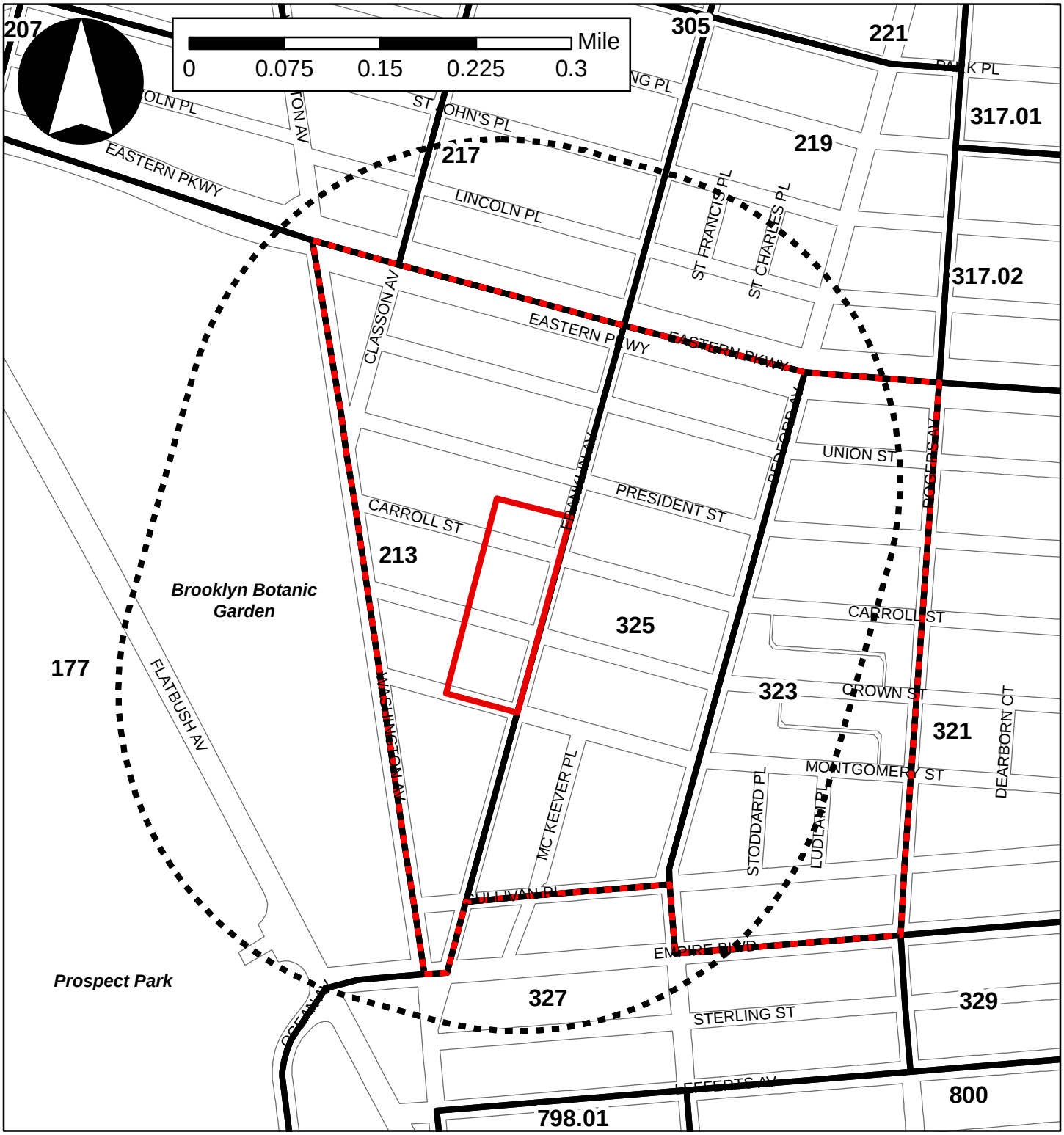
Indirect Residential Displacement

Indirect residential displacement usually results from substantial new development that is markedly different from existing uses and activity in an area, which causes increased property values in the area. Increased property values can lead to increased rents, which can make it difficult for some existing residents to afford their homes. The indirect residential displacement assessment aims to determine whether the Proposed Action and subsequent development would either introduce a trend or accelerate an existing trend of changing real estate market conditions that may have the potential to displace a vulnerable residential population and substantially change the socioeconomic character of the neighborhood. This preliminary assessment follows the step-by-step preliminary assessment guidelines described in Section 322.1 of the 2014 *CEQR Technical Manual*.

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

[3] Residential increment is based on an average of 2.62 persons per household per the 2010 Census average household size in Brooklyn Community District 9.

Socioeconomic Study Area



Legend

- Proposed Rezoning Area
- Socioeconomic Study Area
- Quarter-Mile Radius
- 213 2010 Census Tracts

The study area comprises a portion of the Crown Heights neighborhood in Brooklyn Community District 9. The Prospect-Lefferts Gardens neighborhood in Brooklyn Community District 8 lies just to the south of the study area, with Empire Boulevard serving as the divide between the two neighborhoods. Both neighborhoods are located immediately to the east of Prospect Park and the Brooklyn Botanic Garden, significant open spaces resources in the City. Both neighborhoods are also predominately residential, and the portion of Crown Heights located within the study area also contains a number of public facilities and institutions.

Crown Heights and Prospect-Lefferts Gardens have undergone varying degrees of transformation in recent years. As stated in a 2012 *New York Times* article, Franklin Avenue is "the epicenter of a Renaissance" in Crown Heights, with the revitalization of ground-floor retail and restaurant spaces along the avenue. These new amenities have been increasing housing demand in the neighborhood and attracting real estate investments, resulting in increased property values in the area. In a 2014 article, the *New York Post* estimated that land prices in Crown Heights had roughly doubled in the previous few years. MNS Real Estate reported that the neighborhood of Crown Heights had the highest year-over-year increase in monthly average rent in Brooklyn, with an increase of 10.5 percent from September 2013 to September 2014.[4] Average monthly rents have continued to increase in Crown Heights. According to MNS Real Estate, the average rental rate of studio apartments increased by approximately 31 percent between June 2015 and June 2016, one-bedrooms by nearly 11 percent, and two bedrooms by nearly 13 percent. The latest available Brooklyn Rental Market Report by MNS Real Estate in September 2017 indicates that studio apartments in Crown Heights had an average rental rate of roughly $1,850, one-bedroom apartments a rate of approximately $2,100, and two-bedroom apartments at nearly $2,500 between September 2016 and September 2017.[5]

Increased housing demand in Crown Heights over the past decade resulted in the adoption of the community-lead Crown Heights West Rezoning in 2013. The Crown Heights West Rezoning established contextual zoning with height limits in the area north of Eastern Parkway, to ensure that future development would match the existing character of the neighborhood. Additionally, new Inclusionary Housing Designated Areas were created in the neighborhood to incentivize the development of affordable housing in the area.

While Prospect-Lefferts Gardens has not experienced an influx of real estate investments as dramatic as Crown Heights over the past decade, a 2014 article in *Curbed NY* predicted that "change is coming hard and fast to the quickly evolving neighborhood of Prospect-Lefferts Gardens." In 2014, the *New York Times* reported that the neighborhood saw fewer than 200 residential units developed in the 20 years from 1993 to 2013, but is now anticipating an influx of more than 1,000 units of housing. However, this new residential development has not yet transformed the neighborhood. According to MNS Real Estate, Prospect-Lefferts Gardens saw a 2.0 percent increase in monthly average rent from September 2013 to September 2014, well below the 10.5 percent increase of neighboring Crown Heights.[6] However, within the last year, the average rental rates have increased considerably. According to MNS Real Estate, the average rental rate of studio apartments increased by nearly 12 percent between June 2015 and June 2016, one-bedrooms by nearly 17 percent, and two bedrooms by nearly 16 percent. The latest available Brooklyn Rental Market Report by MNS Real Estate in September 2017 indicates that apartments in Prospect-Lefferts Gardens continue to be more affordable than Crown Heights. Studio apartments in Prospect-Lefferts Gardens had an average rental

[4] Bonislawski, Adam. "Brooklyn Neighborhood With a Bad Rap Finally Makes Good." *New York Post* (2 April 2014).
Robbins, Liz. "Unease Lingers Amid a Rebirth in Crown Heights." *New York Times* (31 January 2012).
MNS Real Estate. "Brooklyn Rental Market Report." (September 2014).
[5] MNS Real Estate. "Brooklyn Rental Market Report." (September 2017).
[6] Gregor, Alison. "Prospect-Lefferts Gardens Is 'On the Map.'" *New York Times* (13 March 2014).
Rosenburg, Zoe. "Detailing 7 New Projects Coming to Prospect-Lefferts Gardens." *Curbed NY* (14 March 2014).
MNS Real Estate. "Brooklyn Rental Market Report." (September 2014).

rate of roughly $1,720, one-bedroom apartments a rate of approximately $1,950, and two-bedroom apartments at nearly $2,360 between September 2016 and September 2017.[7]

According to PLUTO data files, since 1980, approximately 344 new residential units have been added to the three census tracts within the socioeconomic study area. Nearly 35 percent of this residential development (approximately 117 DUs) has been constructed since 2000. Much of this new residential development consists of a range of buildings, from low-rise three- and four-story apartment buildings containing 2 to 10 DUs, to mid-rise four- to seven-story residential apartment buildings and mixed-use buildings with ground-floor retail, containing anywhere from 13 to 98 total DUs. Examples of the larger developments within roughly a half-mile of the Project Area include: The Plex, a seven-story building at Nostrand Avenue and Sullivan Place with 98 rental units (2009); a 5-story building at 792 Sterling Place with 82 rental units (2007); and 341 EPW, an 8-story building at Eastern Parkway and Franklin Avenue with 65 rental units and ground-floor retail space (2009). The increased rates of residential development in the study area are anticipated to continue in the future without the Proposed Action. As discussed in detail in **Attachment C, "Land Use, Zoning, and Public Policy,"** approximately 795 new DUs, including roughly 250 affordable units, are anticipated to be added to the quarter-mile study area by 2023, more than the 344 total units added to the study area between 1980 and 2018.

As shown in **Table D-1**, according to 2012-2016 ACS data, the median household income for the study area was approximately $48,868. The median incomes for Brooklyn and New York City were approximately $51,631 and $56,271, respectively. Although median household income values in Brooklyn increased by nearly six percent from 1999 to 2012-2016, the median household income in New York City decreased by roughly three percent.

Table D-1:
Median Household Income in the Study Area, Borough of Brooklyn, and New York City (1999 and 2012-2016)

	Median Household Income[2]		
	1999	**2012-2016**	**Percent Change**
Study Area[1]	$43,750	$48,868	N.A.[3]
Brooklyn	$48,751	$51,631	5.9%
New York City	$58,093	$56,271	-3.1%

Notes: [1] Median household income for the study area was estimated using linear interpolation for the census tracts in the quarter-mile study area (refer to **Figure D-1**).
[2] The ACS collects data throughout the period on an on-going, monthly basis and asks for a respondent's income over the "past 12 months." The 2012-2016 ACS data reflects incomes over 2012-2016. Census 2000 reflects income data over the prior calendar year (1999). The median household income is presented in 2017 dollars, per the consumer price index for the New York Metropolitan Area.
Sources: U.S. Department of Commerce, Bureau of the Census: 2000 Census, Summary File 3; and 2012-2016 ACS Five-Year Estimates.
[3] The sample size of the data is too small to disclose the percent change.

As detailed in **Attachment C, "Land Use, Zoning, and Public Policy,"** 1,074 housing units, including 250 affordable units, would be added to the quarter-mile socioeconomic study area in the 2023 future without the Proposed Action. The majority of these housing units would be market-rate.

The total residential development expected to occur under the With-Action condition would consist of approximately 565 DUs, including 151 affordable DUs (approximately 27 percent), which would be affordable housing units developed as part of the Mandatory Inclusionary Housing (MIH) Program. In the future with the Proposed Action, the proposed rezoning area would be designated as an MIH Area, which

[7] MNS Real Estate. "Brooklyn Rental Market Report." (September 2017).

would set mandatory affordable housing requirements pursuant to the MIH program, and would require a share of new housing be permanently affordable. The production of affordable housing would be a condition of any residential development in the proposed rezoning area. There would be no expiration to the affordability requirement of housing units created through MIH, making these units a permanent reservoir of affordable housing in the area, a key policy to meet the *Housing New York* goal of fostering diverse livable communities.

As described in **Attachment A, "Project Description,"** the projected incremental (net) change between the No-Action and With-Action conditions that would result from the Proposed Action would be an increase of 284 DUs, of which 151 units would be affordable, over the No-Action condition. At this time, the levels of affordability have not been defined, but it is expected that the 151 affordable housing units would be made available to a mix of low- to moderate-income residents. Therefore, the Proposed Action is expected to help maintain a more diverse demographic composition within the study area as compared to the No-Action condition.

The remaining 133 DUs would be market-rate and would be expected to be priced on the high end of the market in the study area. As described above, according to MNS Real Estate's Brooklyn Rental Market Report in September 2017, the average asking rent for a studio apartment in Crown Heights is approximately $1,850 and roughly $1,720 in Prospect-Lefferts Garden. Based on these average asking rents for studio apartments, prospective tenants would need to earn nearly $62,000 to afford a studio apartment.[8] As such, it is anticipated that prospective tenants of the market-rate units would have incomes above the study area's estimated 2012-2016 median household income of $48,868. Therefore, it is expected that the average household income of the incremental development facilitated by the Proposed Action would exceed the average incomes of the existing population. Based on this finding, this socioeconomic assessment proceeds to Step 2.

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

According to the 2014 *CEQR Technical Manual*, a population increase of less than five percent of the total study area population would generally not be expected to change real estate market conditions; however, a population increase of greater than ten percent of the study area would warrant a detailed analysis.

As shown in **Table D-2**, the population of the study area was 14,164 residents in 2010. The study area experienced an approximately six percent decrease in population between 2000 and 2010, compared to population increases of nearly two percent in both Brooklyn and New York City. According to 2012-2016 ACS data, the residential population of the study area is estimated to be approximately 14,628. As shown in **Table D-2**, the residential populations of both the borough and the greater City increased by approximately four and 3.5 percent, respectively, between 2010 and 2012-2016.

[8] Assuming households spend no more than a third of their income on rent, which is based on HUD's definition of affordable housing. According to HUD, families that pay more than 30 percent of income for housing are cost burdened.

Table D-2:
2000 and 2010 Residential Populations in the Study Area

	2000	2010	2012-2016	Percent Change between 2000 and 2010	Percent Change between 2010 and 2012-2016
Study Area	15,139	14,164	14,628	-6.4%	N.A.[1]
Brooklyn	2,465,326	2,504,700	2,606,852	+1.6%	4.1%
New York City	8,008,278	8,175,133	8,461,961	+2.1%	3.5%

Sources: U.S. Department of Commerce, Bureau of the Census: 2000 Census, Summary File 1; 2010 Census, Summary File 1; and 2012-2016 Five-Year ACS Estimates.
Notes: [1] The sample size of the data is too small to disclose the percent change.

As described above, the housing stock is anticipated to grow at a rapid rate as the study area has increasingly become a more desirable residential neighborhood. As detailed in **Attachment C, "Land Use, Zoning, and Public Policy,"** there are eight projects anticipated to be completed in the quarter-mile socioeconomic study area in the 2023 future without the Proposed Action. Six of these projects will result in the development of approximately 795 DUs, adding an estimated 2,083 new residents to the study area.[9] Additionally, under RWCDS No-Action conditions, portions of the Project Area could be redeveloped with a maximum of 277 DUs, resulting in an additional 726 residents. As such, the total estimated population of the socioeconomic study area in the future without the Proposed Action would be 17,437 people.

The Proposed Action and associated RWCDS would facilitate a net increase of 284 DUs in the Project Area as compared to the No-Action. Assuming an average household size of 2.62 persons and 100 percent occupancy, the Proposed Action would introduce a total of 744 new residents to the study area. As shown in **Table D-3**, when compared with the population expected to reside in the study area in the future No-Action condition, the Proposed Action would result in an approximately 4.3 percent population increase in the socioeconomic study area. According to 2014 *CEQR Technical Manual* guidelines, a population increase of less than five percent within a study area is not large enough (relative to the size of the population expected to reside in the study area without the Proposed Action) to affect real estate market conditions in a study area. As such, no further assessment of the Proposed Action is warranted per CEQR guidelines.

Table D-3:
No-Action and With-Action Estimated Residential Populations in the Study Area

	2012-2016 Existing Condition	2023 No-Action Condition	2023 With-Action Condition[1]	Percent Change (No-Action to With Action)
Study Area	14,928	17,437	18,181	+4. 27%

Notes:
[1] Population estimates for known developments in the future 2023 No-Action condition assumed 100 percent occupancy, and assume an average household size of 2.62 persons per 2010 Census average household size of Brooklyn Community District 9. Refer to **Attachment C, "Land Use, Zoning, and Public Policy"** for a description of future No-Action projects.
Sources: U.S. Department of Commerce, Bureau of the Census: 2012-2016 ACS Five-Year Estimates; and DCP.

IV. CONCLUSION

A preliminary assessment found that the Proposed Action and associated RWCDS would not result in significant adverse impacts due to indirect residential displacement. According to the *CEQR Technical Manual*, a population increase of less than five percent of the total study area population would generally

[9] Estimated residents based on an average of 2.62 persons per household in Brooklyn Community District 9 from 2010 Census.

not be expected to change real estate market conditions in a study area. The RWCDS associated with the Proposed Action would result in a net increase of 284 residential units, of which 151 housing units are expected to be permanently affordable units pursuant to the MIH program, compared to the No-Action condition. Assuming that the units would be fully occupied and would have the same average household size as Brooklyn Community District 9 in 2010 (2.62 persons per household), this is expected to increase the residential population by 744 people over the No-Action condition. This equates to an approximately 4.3 percent increase as compared to the study area population in the future without the Proposed Action. Therefore, the Proposed Action would not introduce a substantial new population that could substantially affect residential real estate market conditions in the study area, and no further analysis is required.

Attachment E

Community Facilities

I. INTRODUCTION

The 2014 *CEQR Technical Manual* defines community facilities as public or publicly-funded facilities, including schools, health care, child care, libraries, and fire and police protection services. This attachment examines the potential effects of the Proposed Action on the capacity and provision of services by those community facilities in the 2023 analysis year. CEQR methodology focuses on direct impacts on community facilities and services and on increased demand for community facilities and services generated by increases in population. If a project would physically alter a community facility, whether by displacement of the facility or other physical change, this "direct" effect triggers the need to assess the service delivery of the facility and the potential effect that the physical change may have on that service delivery. New population added to an area as a result of a project would use existing services, which may result in potential "indirect" effects on service delivery. The CEQR analysis examines potential impacts on existing facilities and generally focuses in detail on those services that the City is obligated to provide to any member of the community. The CEQR analysis is not a needs assessment for new or additional services. Service providers like schools or libraries conduct their own needs assessments on a continuing basis.

Under the reasonable worst case development scenario (RWCDS), the Proposed Action would not have a direct effect on existing community facilities in the study area. However, the Proposed Action would result in a net incremental increase in development of approximately 284 dwelling units (DUs), of which 152 would be affordable units; approximately 16,384 gross square feet (gsf) of local retail; and a reduction of four accessory parking spaces.

II. SCREENING LEVEL ASSESSMENT

As per the 2014 *CEQR Technical Manual,* a community facilities analysis is needed if there would be potential direct or indirect effects on a subject facility. The RWCDS would not result in the direct displacement of any existing community facilities or services, nor would it affect the physical operations or access to and from any police or fire stations. As there are no direct effects to existing community facilities resulting from the Proposed Action, this analysis concentrates on the potential for indirect effects. Analyses were conducted to identify the potential effect that the Proposed Action could have on community facilities and the provision of services to the surrounding community. In general, size, income characteristics, and the age distribution of a new population are factors that could affect the delivery of services. The *CEQR Technical Manual* provides guidelines or thresholds that can be used to make an initial determination of whether a detailed study is necessary to determine potential impacts. The RWCDS for the Proposed Action exceeds the 2014 *CEQR Technical Manual* thresholds for public elementary and intermediate schools, and publicly-funded child care centers. Therefore, detailed analyses of these services were conducted and are presented below. The Proposed Action would not trigger detailed analyses of potential impacts on high schools, police or fire protection services, libraries, or health care facilities.

III. PUBLIC ELEMENTARY AND INTERMEDIATE SCHOOLS

Methodology

According to the guidelines presented in the 2014 *CEQR Technical Manual*, a schools analysis focuses on

potential impacts on public schools operated or funded by the New York City Department of Education (DOE). Therefore, private and parochial education facilities are excluded from the analysis of schools. Charter schools are also excluded from the analysis presented in this attachment.

As stated above, the RWCDS for the Proposed Action would include a net increment of approximately 284 DUs, 152 of which would be affordable units. Based on the multipliers presented in Table 6-1a of the *CEQR Technical Manual*, the Proposed Action would result in a net increase of approximately 82 new elementary and approximately 34 new intermediate school students as compared to the No-Action condition, exceeding the combined 50-student CEQR screening threshold for detailed analysis of elementary and intermediate schools. The Proposed Action would also add an estimated 40 new high school students as compared to No-Action conditions, which would not exceed the 150-student CEQR screening threshold for detailed analysis of high schools. Moreover, as high school students travel throughout the City and high schools have a borough- or City-wide base, demand for high school seats does not have to be accommodated locally. Therefore, the following schools analysis focuses on the elementary and intermediate school levels only.

Following methodologies in the 2014 *CEQR Technical Manual*, the study area for the analysis of elementary and intermediate schools is the school district's "Sub-district" ("region" or "school planning zone") in which the Project Area is located. The Project Area is located within the boundaries of Sub-district 2 of New York City's Community School District (CSD) 17, which includes parts of the Brooklyn neighborhoods of Prospect Heights and Crown Heights and is generally bounded by Eastern Parkway to the north, Tapscott Street to the east, Linden Boulevard to the south, and Prospect Park to the west (refer to **Figure E-1**). Children residing in the Project Area attending public school would most likely attend the elementary and intermediate schools in CSD 17, Sub-district 2.

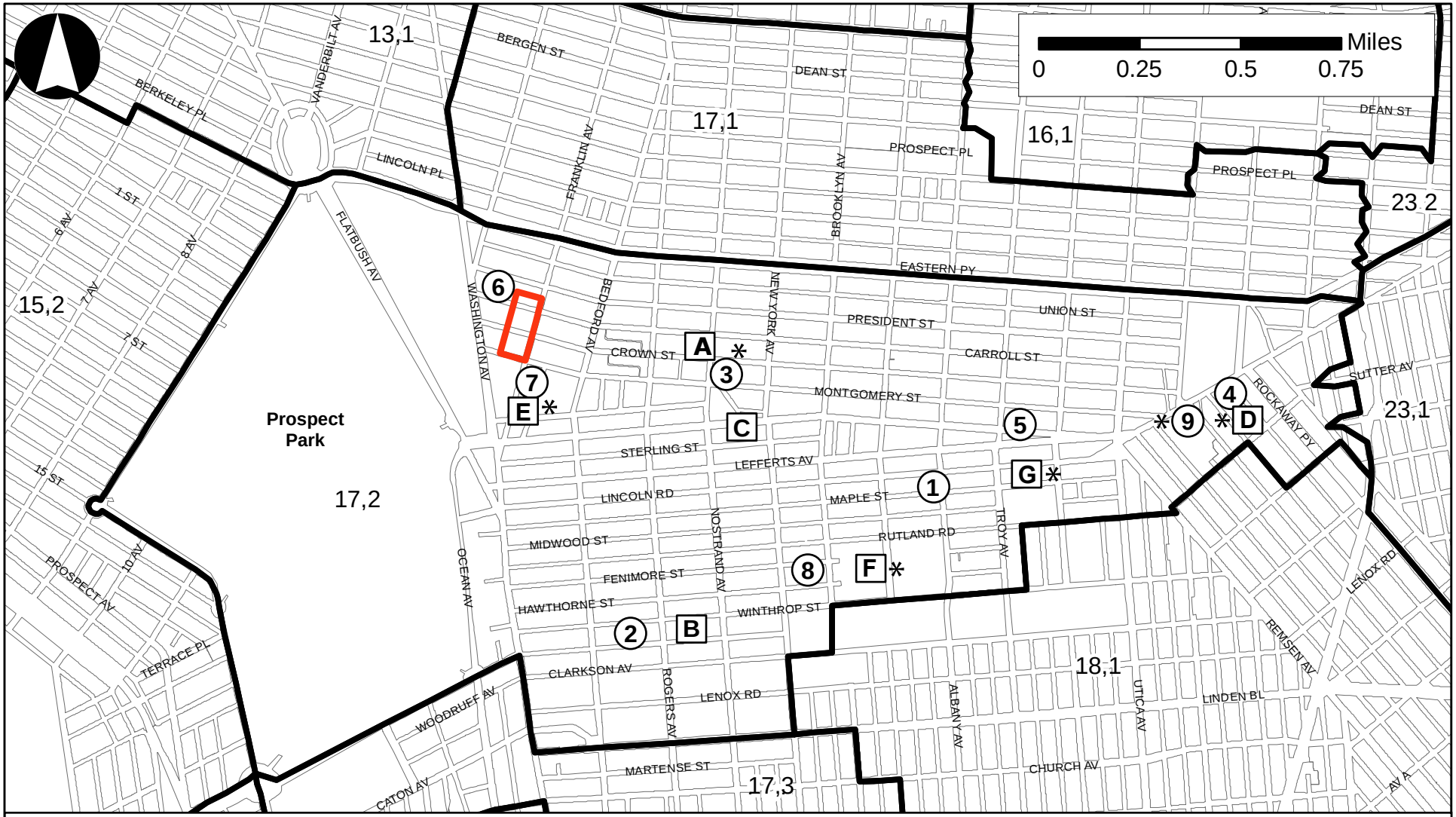
A schools analysis presents the most recent capacity, enrollment, and utilization rates for elementary and intermediate schools in the study area. Per DCP and SCA guidance, existing mini-school and transportable school capacity is excluded from the analysis. Future conditions are then predicted based on enrollment projections and proposed development projects—the future utilization rate for school facilities is calculated by adding the estimated enrollment from proposed residential developments in the schools study area to DOE's projected enrollment, and then comparing that number with projected school capacity. DOE's enrollment projections for years 2016 through 2025, the most recent data currently available, are posted on the School Construction Authority (SCA) website.[1] These DOE enrollment projections are based on broad demographic trends and do not explicitly account for discrete new residential developments planned for the study area. To ensure a more conservative prediction of future enrollment and utilization for the No-Action condition, the SCA's Projected New Housing Starts for this sub-district were obtained to account for children who may be generated by new residential development planned in the study area. In addition, any new school projects identified in the DOE Five-Year Capital Plan (and/or subsequent amendments) are included if construction has begun.

The effect of the new students introduced by the proposed project on the capacity of schools within the study area is then evaluated. According to the 2014 *CEQR Technical Manual*, a significant adverse impact may occur if the Proposed Action would result in a collective utilization rate of the elementary or intermediate schools that is equal to or greater than 100 percent in the With-Action Condition, and an increase of five percent or more in the collective utilization rate between the No-Action and With-Action conditions.

Existing Conditions

Elementary and intermediate schools in New York City are located in geographically defined community

[1] Enrollment projections 2016 to 2025 New York City Public Schools by Statistical Forecasting.



Legend

- Proposed Rezoning Area
- 17,2 — Community School District (CSD), Sub-district
- ✱ — Denotes location with two schools in one building
- 1 — CSD 17, Sub-district 2 Elementary School (refer to Table E-1)
- A — CSD 17, Sub-district 2 Intermediate School (refer to Table E-2)

Figure E-1
Existing Elementary and Intermediate Schools

school districts, which are divided into Sub-districts. As shown in **Figure E-1**, the Project Area is located within the boundaries of Sub-district 2 of CSD 17. Analyzed schools can generally be defined by one of four categories: elementary (kindergarten through 5th grades), intermediate (6th through 8th grades[2]), secondary (6th through 12th grades), and K-8 schools (kindergarten through 8th grades). It should be noted that several school buildings within the study area house more than one school organization: P.S. 398 Walter Weaver and P.S. 770 The New American Academy are both located at 60 East 94th Street; I.S. 531 The School for Human Rights and I.S. 533 School for Democracy and Leadership are both located at 600 Kingston Avenue; and P.S. 375 Jackie Robinson School and M.S. 352 Ebbets Field Middle School are both located at 46 McKeever Place. Additionally, as P.S. 189 – The Bilingual Center serves both elementary and intermediate school students, the school is listed under both elementary schools in **Table E-1** and intermediate schools in **Table E-2**, based on each respective school's P.S./I.S. breakdown as provided by the SCA via DCP. Capacity and enrollment information for public elementary and intermediate schools in Sub-district 2 of CSD 17 are provided in **Tables E-1** and **E-2** below.

Table E-1:
Existing Public Elementary School Enrollment, Capacity, and Utilization in CSD 17, Sub-district 2 (2016-2017)

Map No.[1]	Name	Address	Grades Served	Target Capacity	Enrollment	Available Seats	Utilization (%)
1	P.S. 91 – The Albany Avenue School[2]	532 Albany Avenue	PS	683	339	344	49.6
2	P.S. 92 – Adrian Hegeman	601 Parkside Avenue	PS	1,106	468	638	42.3
3	P.S. 161 – The Crown	330 Crown Street	PS	383	374	9	97.7
4	P.S. 189 – The Bilingual Center (P.S. Component)[2,3]	1100 East New York Avenue	PS/IS	595	656	-61	110.3
5	P.S. 221 Toussaint L'Ouverture[2]	791 Empire Boulevard	PS	316	352	-36	111,4
6	P.S. 241 – Emma L. Johnston[2]	976 President Street	PS	629	524	105	83.3
7	P.S. 375 – Jackie Robinson School	46 McKeever Place	PS	900	430	470	47.8
8	P.S. 397 – Foster Laurie	490 Fenimore Street	PS	243	203	40	83.5
9	P.S. 398 – Walter Weaver	60 East 94th Street	PS	445	344	101	77.3
	P.S. 770 – The New American Academy		PS	552	276	276	50.0
			Totals	***5,852***	***3,966***	***1,886***	***67.8***

Source: DOE's "Enrollment – Capacity – Utilization Report, 2016-2017 School Year."
Notes: [1] Refer to **Figure E-1**.
[2] Includes mini-school enrollment.
[3] P.S./I.S. breakdown provided by SCA, via DCP.

Elementary Schools
As shown in **Figure E-1**, there are 10 public schools located within CSD 17, Sub-district 2 that serve elementary students. The zoned elementary school for the Project Area is P.S. 241 – Emma L. Johnston, located at 976 President Street, located approximately 175 feet west of projected development site 1.

Table E-1 provides the existing capacity, enrollment, and utilization figures for elementary schools within Sub-district 2 of CDS 17 during the 2016-2017 academic year. As shown in **Table E-1**, the 10 elementary schools within CSD 17, Sub-district 2 had a target capacity of 5,852 seats (excluding existing mini-school

[2] Intermediate schools are also called middle schools and junior high schools.

capacity), and enrollment of 3,966 students, for a utilization of approximately 67.8 percent and 1,886 available seats.

Intermediate Schools

As shown in **Figure E-1**, there are 9 public schools located within CSD 17, Sub-district 2 that serve intermediate students. The zoned intermediate school for the Project Area is M.S. 352 – Ebbets Field Middle School, located at 46 McKeever Place, approximately 250 feet south of the rezoning area.

Table E-2 provides the existing capacity, enrollment, and utilization figures for intermediate schools within Sub-district 2 of CDS 17 during the 2015-2016 academic year. As shown in **Table E-2**, the 9 intermediate schools within CSD 17, Sub-district 2 had a target capacity of 3,691 seats (excluding existing mini-school capacity), and enrollment of 2,650 students, for a utilization of approximately 71.8 percent and an excess of 1,041 seats.

Table E-2:
Existing Public Intermediate School Enrollment, Capacity, and Utilization in CSD 17, Sub-district 2 (2015-2016)

Map No.[1]	Name	Address	Grades Served	Target Capacity	Enrollment	Available Seats	Utilization (%)
A	Medgar Evers College Preparatory School (I.S. Component)[2]	1186 Carroll Street	IS/HS	173	307	-134	177.5
B	I.S. 2 – Parkside Preparatory Academy	655 Parkside Avenue	IS	669	495	174	74.0
C	I.S. 61 – Dr. Gladstone H. Atwell	400 Empire Boulevard	IS	1,320	915	405	69.3
D	P.S. 189 – The Bilingual Center (I.S. Component)[2,3]	1100 East New York Avenue	PS/IS	366	403	-37	110.1
E	M.S. 352 – Ebbets Field Middle School	46 McKeever Place	IS	241	167	74	69.3
F	I.S. 531 – The School for Human Rights (I.S. Component)[2]	600 Kingston Avenue	IS/HS	122	79	43	64.8
	I.S. 533 – School for Democracy & Leadership (I.S. Component)[2]		IS/HS	89	34	55	38.2
G	I.S. 722 – New Heights Middle School	790 East New York Avenue	IS	711	250	461	35.2
			Totals	***3,691***	***2,650***	***1,041***	***71.8***

Source: DOE's "Enrollment – Capacity – Utilization Report, 2016-2017 School Year."
Notes: [1]Refer to **Figure E-1**.
[2] P.S./I.S. and I.S./H.S. breakdown provided by SCA, via DCP.
[3] Includes mini-school enrollment.

Charter Schools

Pursuant to 2014 *CEQR Technical Manual* guidelines, charter schools, including charter schools housed in DOE buildings, are not included in the impact analysis. Charter school enrollments are based on lotteries, with preferences made for students living within the school districts in which they are located and not to smaller geographic areas such as Sub-districts. In 2016-2017, seven charter schools serving elementary and intermediate school students were located in CSD 17, Sub-district 2: Achievement First Crown Heights Charter School, Brooklyn Ascend Charter School, Citizens of the World Charter School – New York 2

(Crown Heights), Explore Charter School, Explore Exceed Charter School, Lefferts Gardens Charter School, and Success Academy Charter School – Crown Heights.[3] These seven charter schools are discussed for informational purposes only, and their school capacities and enrollments are not included in the quantitative analysis.

The Future Without the Proposed Action (No-Action Condition)

In the absence of the Proposed Action, future utilization of public elementary and intermediate schools serving the study area would be affected by changes in enrollment mainly due to: (1) aging of the existing student body and new arrivals born in the area or moving to it; and (2) changes in capacity, or number of available seats, in the schools as a result of planned construction of new schools or building additions.

Projected Capacity Changes

As outlined in the *CEQR Technical Manual*, No-Action school capacity changes considered in a community facilities analysis include information on proposed and adopted "Significant Changes in School Utilization" and the DOE's Five Year Capital Plan.

According to the DOE's *Fiscal Year 2015-2019 Five-Year Capital Plan Proposed Amendment* released in November 2017, no elementary or intermediate school projects are anticipated to be developed within CSD 17 by 2023 in the future without the Proposed Action.

However, the Panel for Education Policy (PEP) approved several changes in school utilization that will affect the capacity of CSD 17, Sub-district 2 elementary and intermediate schools by the 2023 analysis year. Specifically, in 2013, the PEP approved the co-location of grades six through eight of the Explore Exceed Charter School with existing P.S. 375 – Jackie Robinson School and M.S. 352 – Ebbets Field Middle School at the DOE building located at 46 McKeever Place, beginning in the 2015-2016 school year. Upon full implementation (in the 2017-2018 academic year), the capacity of P.S. 375 is expected to increase to 731 seats, and the capacity of M.S. 352 is expected to decrease to 285 seats.[4] The PEP also approved the re-siting and co-location of Success Academy Charter School – Crown Heights with P.S. 161 – The Crown in the DOE building located at 330 Crown Street beginning in the 2014-2015 school year. Upon full implementation (in the 2017-2018 school year), the capacity of P.S. 161 – The Crown is expected to have a capacity of 390 elementary school seats.[5] Subsequently, in 2016, the PEP approved the re-siting and co-location of Achievement First Voyager Middle School with existing P.S. 92 – Adrian Hegeman at 601 Parkside Avenue, beginning in the 2017-2018 school year. Upon full implementation (in the 2019-2020 academic year), the capacity of P.S. 92 is expected to decrease to 464 seats.[6] In 2017, the PEP approved the consolidation of I.S. 533 – The School for Democracy and Leadership with I.S. 531 – The School for Human Rights, as well as the truncation of grades 6-8 at the consolidated I.S. 531, beginning in the 2017-2018 school year. As a result of this consolidation and truncation, I.S. 531 will no longer serve intermediate school students upon full implementation in the 2019-2020 academic year.[7] Lastly, in December 2017, the

[3] From the DOE's "2016-2017 Directory of the New York City Charter Schools – Brooklyn Charter Schools."

[4] DOE's *Educational Impact Statement: The Proposed Co-location of Grades Six through Eight of Explore Exceed Charter School (84K333) with Existing Schools P.S. 375 Jackie Robinson School (17K375) and M.S. 352 Ebbets Field Middle School (17K352) in Building K320 Beginning in 2015-2016* (September 13, 2013).

[5] DOE's *Educational Impact Statement: The Proposed Re-Siting and Co-location of Success Academy Charter School – Crown Heights (84K571) with Existing School P.S. 161 The Crown (17K161) in Building K161 Beginning in 2014-2015* (August 30, 2013).

[6] DOE's *Amended Educational Impact Statement: The Proposed Re-siting and Co-location of Achievement First Voyager Middle School (84K876) to Building K092 with P.S. 92 Adrian Hegeman (17K092) Beginning in the 2017-2018 School Year* (December 13, 2016).

[7] DOE's *Amended Educational Impact Statement: The Proposed Consolidation of The School for Democracy and Leadership (17K533) with The School for Human Rights (17K531) and Truncation of Grades 6-8 at the Consolidated School for Human Rights in Building K470 Beginning in the 2017-2018 School Year* (January 11, 2017).

PEP approved the opening and co-location of the elementary school grades of Achievement First Voyager Charter School with existing P.S. 91 – The Albany Avenue School, beginning in the 2018-2019 school year. Upon full implementation (in the 2021-2022 academic year), the capacity of P.S. 91 is expected to decrease to 306 seats.[8]

In total, these anticipated changes will decrease CSD 17, Sub-district 2 elementary and intermediate school capacities by 1,181 seats and 167 seats, respectively, for resultant elementary and intermediate school capacities of 4,671 and 3,524 seats, respectively.

Enrollment Projections

Estimates of future enrollments are derived from the latest available DOE enrollment projection data for CSD 17, Sub-district 2 for 2023 (SF Projections 2016-2025), including pre-K and special education enrollment. The enrollment projections focus on natural growth of the City's student population and other population increases and do not account for new residential developments planned for the area (i.e., No-Action projects).

In addition, some new residential development is planned in the study area by the analysis year of 2023. Using numbers derived from the SCA's Projected New Housing Starts for Sub-district 2 of CSD 17, approximately 714 new elementary school students and 274 new intermediate school students are expected to be added to the study area by the 2023 Build Year.

Elementary Schools

In the 2023 future without the Proposed Action, CSD 17, Sub-district 2 elementary school enrollment is expected to increase to 4,189 and capacity is expected to decrease to 4,671 seats. Based on these changes, elementary schools in Sub-district 2 of CSD 17 are expected to be operating below capacity (approximately 89.7 percent utilization), with a surplus of 482 seats (refer to **Table E-3**) in the future No-Action condition.

Table E-3:
2023 No-Action Estimated Public Elementary and Intermediate School Enrollment, Capacity, and Utilization in CSD 17, Sub-district 2

	2023 Projected Enrollment[1]	Students Generated from No-Action Development[2]	Total Projected No-Action Enrollment	Projected Capacity[3]	Seats Available	Utilization (%)
Elementary Schools	3,475	714	4,189	4,671	482	89.7
Intermediate Schools	1,952	274	2,226	3,524	1,298	63.2

Notes: [1] DOE Enrollment Projections (Actual 2015, Projected 2016-2025).
[2] The number of students added in the future without the Proposed Action for the study area were provided by SCA, via DCP.
[3] Reflects reduction of 1,181 PS seats and 167 IS seats as a result of approved significant changes in school utilization.

Intermediate Schools

With a reduction of enrollment and capacity of CSD 17, Sub-district 2 intermediate schools in the 2023 future without the Proposed Action, the utilization rate is expected to decrease to approximately 63.2 percent, with a surplus of 1,298 seats (refer to **Table E-3**) in the future No-Action condition.

[8] DOE's *Educational Impact Statement: The Proposed Opening and Co-location of the Elementary School Grades of Achievement First Voyager Charter School (84K876) with P.S. 91 The Albany Avenue School (17K091) in Buildings K091 and K891 Beginning in the 2018-2019 School Year* (December 7, 2017).

The Future With the Proposed Action (With-Action Condition)

As described in **Attachment A, "Project Description,"** in the RWCDS With-Action condition, the Proposed Action would facilitate a net increment of 284 DUs (152 of which would be affordable units). As shown in **Table E-4**, based on CEQR student generation rates, the estimated school age population generated by these 284 DUs would include approximately 82 elementary school students, 34 intermediate school students, and 40 high school students by 2023.

Table E-4:
Projected Net Increment of Public School Pupils Generated by the Proposed Action in the 2023 Future With the Proposed Action

	Pupil Generation Rate per Unit			Number of Students Generated by the Proposed Action		
DUs	Elementary	Intermediate	High	Elementary	Intermediate	High
284	0.29	0.12	0.14	83	34	40

Notes: [1] Pupil Generation Ratios are for the borough of Brooklyn, per Table 6-1a of the 2014 *CEQR Technical Manual*.

Elementary Schools
In the future with the Proposed Action, there would continue to be a surplus of elementary school seats in Sub-district 2 of CSD 17. As shown in **Table E-5**, the addition of 83 elementary school students generated by the Proposed Action would increase the utilization from approximately 89.7 percent to 91.4 percent from No-Action to With-Action conditions. CSD 17, Sub-district 2 elementary schools would experience a surplus of 400 elementary school seats in the 2023 With-Action condition.

Table E-5:
2023 With-Action Estimated Public Elementary and Intermediate School Enrollment, Capacity, and Utilization for CSD 17, Sub-district 2

	2023 No-Action Enrollment[1]	Students Generated from Proposed Action[2]	Total Projected With-Action Enrollment	Projected Capacity	Seats Available	Utilization (%)	Change in Utilization (%) from No-Action Condition
Elementary Schools	4,189	83	4,271	4,671	400	91.4	1.8
Intermediate Schools	2,226	34	2,260	3,524	1,264	64.1	1.0

Notes: [1] Refer to **Table E-3**.
[2] Refer to **Table E-4**.

The 2014 *CEQR Technical Manual* states that if the impact assessment finds a proposed action would cause an increase in utilization of less than five percent in a sub-district, no significant impact would occur. The Proposed Action would result in an increase of 1.8 percent over the No-Action condition. Additionally, elementary schools in CSD 17, Sub-district 2 would continue to have a surplus of seats with a utilization rate of under 100 percent in the future With-Action condition. As such, the Proposed Action would not cause a significant adverse impact for elementary schools per CEQR criteria.

Intermediate Schools
In the future with the Proposed Action, there would also continue to be a surplus of intermediate school seats in Sub-district 2 of CSD 17. As shown in **Table E-5**, the addition of 34 intermediate school students

generated by the Proposed Action would increase the utilization from approximately 63.2 percent to 64.1 percent from No-Action to With-Action conditions. CSD 17, Sub-district 2 intermediate schools would continue to operate under capacity, with a surplus of 1,264 intermediate school seats, in the 2023 With-Action condition.

The 2014 *CEQR Technical Manual* states that if the impact assessment finds a project would cause an increase in utilization of less than five percent in a sub-district, no significant impact would occur. The Proposed Action would result in an increase of 1.0 percent over the No-Action condition. Additionally, intermediate schools in CSD 17, Sub-district 2 would continue to have a surplus of seats with a utilization rate of under 100 percent in the future With-Action condition. As such, the Proposed Action would not cause a significant adverse impact for intermediate schools per CEQR criteria.

IV. PUBLICLY-FUNDED DAY CARE

Methodology

The 2014 *CEQR Technical Manual* requires a detailed analysis of publicly-funded day care centers when a project would produce substantial numbers of subsidized, low- to moderate-income affordable housing units that may generate a sufficient number of eligible children to affect the availability of slots at public child care centers. Typically, proposed actions that generate 20 or more eligible children under age 6 require further analysis. Table 6-1b of the *CEQR Technical Manual* calculates by borough the estimated number of affordable (low or low- to moderate-income) housing units that could yield at least 20 children under age 6 eligible for publicly-funded child care. The RWCDS would facilitate the construction of a net increment of 284 DUs, of which 152 would be affordable units. According to the table, 132 affordable housing units in Brooklyn would yield more than 20 children under age 6 eligible for public day care. Impacts are identified if the RWCDS would result in demand for slots in publicly-funded day care centers greater than remaining capacity, and the increase in demand would be five percent or more over the collective capacity of the day care centers in the future without the Proposed Action. As such, a detailed assessment is warranted and is provided below.

Publicly-funded group day care services are available for income-eligible children through the age of 12. The CEQR analysis focuses on services for children under age 6 because eligible children aged 6 through 12 are expected to be in school for most of the day.

Existing Conditions

Publicly-funded day care for the children of income-eligible households in New York City is sponsored and financially supported by the Division of Child Care and Head Start within the New York City Administration for Children's Services (ACS), as well as federally funded early childhood education and family support programs. ACS contracts with hundreds of private, non-profit organizations to provide Child Care and Head Start programs in communities across the City that are licensed by the New York City Department of Health (DOH). ACS also issues vouchers to eligible families to provide financial assistance in accessing care from formal and informal providers in the City.

To receive subsidized day care services, a family must meet specific financial and social eligibility criteria established by ACS. In general, children in families that have incomes at or below 200 percent of the Federal Poverty Level (FPL), depending on family size, are financially eligible, although in some cases eligibility can go up to 275 percent FPL. The family must also have an approved "reason for care," such as involvement in a child welfare case or participation in a "welfare-to-work" program. The City's affordable

housing market is pegged to the Area Median Income (AMI) rather than the FPL. Lower-income units must be affordable to households at or below 80 percent AMI. Since family incomes at or below 200 percent FPL fall under 80 percent AMI, for the purposes of CEQR analysis, the number of housing units expected to be subsidized and targeted for incomes of 80 percent AMI or below is used as a proxy for eligibility. This provides a conservative assessment of demand since eligibility for subsidized day care is not defined strictly by income (generally below 200 percent of poverty level), but also takes into account family size and other reasons for care (i.e. low-income parent(s) in school; low-income parent(s) training for work; or low-income parents who are ill or disabled).

ACS supports subsidized day care in several types of facilities including center-based group day care, Head Start, family and group family day care, and informal day care. As data on the exact location of Family Child Care Network and Voucher slots are not available, and they are therefore not suitable for a study area analysis, for CEQR analysis purposes, only publicly-funded group day care facilities (including Head Start programs) are included.

Since there are no location requirements for enrollment in day care centers, and some parents/guardians choose a day care center close to their employment rather than their residence, the service areas of these facilities can be quite large and not subject to strict delineation to identify a study area. According to 2014 *CEQR Technical Manual* guidelines, the locations of publicly-funded group day care centers within 1.5 miles or so of a project site should be shown since, as discussed in the *CEQR Technical Manual*, the center(s) closest to the site are more likely to be subject to increased demand. In transit-rich areas, such as midtown Manhattan, the study area may be expanded up to two miles or so, in consultation with the lead agency and ACS.

Figure E-2 shows publicly-funded day care centers within an approximate 1.5-mile radius of the Project Area and **Table E-6** indicates the capacity and enrollment for each facility. As shown in **Figure E-2** and **Table E-6**, there are presently 27 publicly-funded or partially publicly-funded group day care facilities within an approximate 1.5-mile radius of the Project Area. The 27 publicly-funded group day care centers within the study area have a combined total capacity of approximately 2,176 slots. Based on the most recent enrollment data provided by ACS, the 27 publicly-funded group day care centers have an existing enrollment of 1,971 children, for a 90.6 percent utilization rate and 205 available slots.

As noted above, in addition to attending group day care centers, eligible children may also be cared for in the homes of family day care providers, also registered with the DOH. A family day care provider is a professional who provides care for three to seven children in his or her residence. A group family day care provider is a professional who cares for 7 to 12 children with the help of an assistant, in his or her home. The majority of family and group family day care providers in New York City are registered with a day care network, which provides access to training and support services. According to ACS, these home-based facilities tend to absorb unmet demand at day care centers, and host households are added to the system as demand increases. However, pursuant to 2014 *CEQR Technical Manual* methodology, these facilities are not included in the quantitative analysis, as information on their exact location is not available.

The Future Without the Proposed Action (No-Action Condition)

In the 2023 future without the Proposed Action, it is anticipated that new residential development would occur within portions of the rezoning area, as well as in the surrounding area. As presented in **Attachment A, "Project Description,"** No-Action development on the projected development sites is expected to introduce 277 market-rate residential units; as none of the No-Action rezoning area units would be affordable, they would not result in increased demand for publicly-funded day care facilities, in accordance with *CEQR Technical Manual* methodology. In addition, 47 development projects are anticipated to be completed within the study area, introducing a total of 2,462 DU (refer to **Table C-4** and **Figure C-3** in

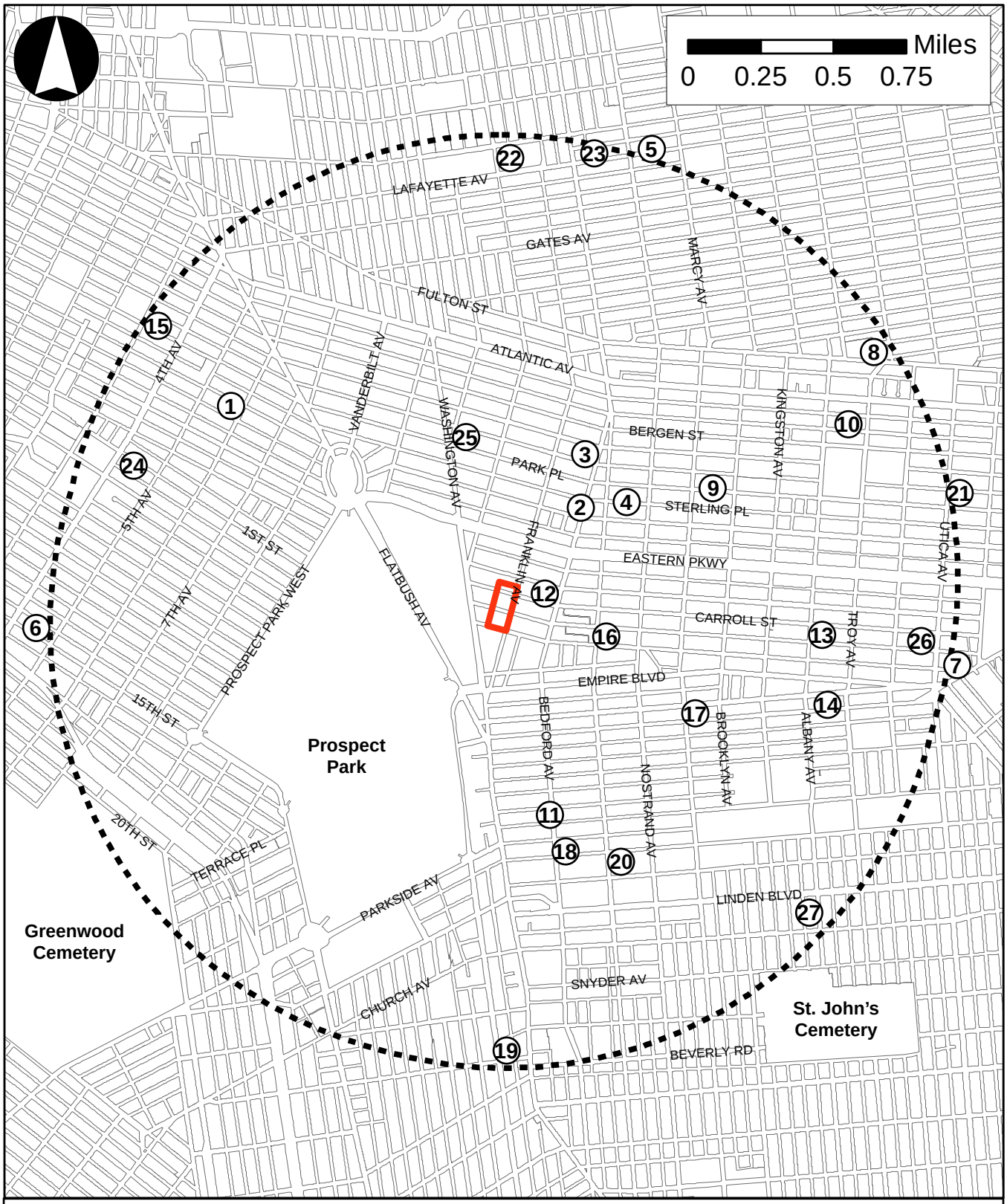
Attachment C, "Land Use, Zoning, and Public Policy"). Four of these study area developments (the Bedford-Union Armory, 31-33 Lincoln Road, 1036 Dean Street, and 626 Flatbush Avenue) are expected to include a combined 343 units affordable to households earning up to 80 percent AMI, introducing 61 children under age six eligible for publicly-funded child care services in the 2023 No-Action condition (refer to **Table E-7)**.

Table E-6:
Existing Publicly-Funded Group Day Care Facilities Within the 1.5 Mile Study Area

Map No.[1]	Contractor/Program Name	Site Address	Capacity	Enrollment	Available Slots	Utilization (%)
1	University Settlement Society of New York, Inc.	71 Lincoln Pl.	85	81	4	95.3
2	Friends of Crown Heights Educational Centers, Inc.	1491 Bedford Ave.	77	72	5	93.5
3	Friends of Crown Heights Educational Centers, Inc.	671 Prospect Pl.	137	132	5	96.4
4	Friends of Crown Heights Educational Centers, Inc.	813 Sterling Pl.	165	134	31	81.2
5	The Salvation Army	110 Kosciusko St.	32	23	9	71.9
6	Sunset Bay Community Services, Inc.	199 14th St.	55	54	1	98.2
7	Friends of Crown Heights Educational Centers, Inc.	36 Ford St.	126	109	17	86.5
8	Community Parents, Inc.	90 Chauncey St.	55	54	1	98.2
9	Friends of Crown Heights Educational Centers, Inc.	963 Park Pl.	80	72	8	90.0
10	Brooklyn Kindergarten Society, Inc.	1640 Pacific St.	75	54	21	72.0
11	Hawthorne Corners DCC, Inc.	1950 Bedford Ave.	49	48	1	98.0
12	Friends of Crown Heights Educational Centers, Inc.	995 Carroll Ave.	77	72	5	93.5
13	BAbove Worldwide Institute, Inc.	570 Crown St.	119	111	8	93.3
14	All My Children Daycare	739 East New York Ave.	17	14	3	82.4
15	Alonzo A. Daughtry Memorial DCC	565 Baltic Street	34	25	9	73.5
16	All My Children Daycare and Nursery School	317 Rogers Ave.	80	73	7	91.3
17	All My Children Daycare and Nursery School	420 Lefferts Ave.	153	131	22	85.6
18	Catholic Charities Neighborhood Services, Inc.	525 Parkside Ave.	24	20	4	83.3
19	St. Marks U.M.C. Family Services Council	2017 Beverly Rd.	144	144	0	100.0
20	Brightside Academy, Inc.	210 Clarkson Ave.	54	51	3	94.4
21	Friends of Crown Heights Educational Centers, Inc.	1435 Prospect Pl.	90	75	15	83.3
22	Billy Martin Child Development DCC	333 Classon Ave.	49	47	2	95.9
23	Friends of Crown Heights Educational Centers, Inc.	34 Kosciusko St.	175	156	19	89.1
24	Strong Place DCC, Inc.	333 Second St.	70	70	0	100.0
25	Sunny Skies Prospect Corp.	720 Washington Ave.	30	28	2	93.3
26	All My Children Daycare	771 Crown St.	43	40	3	93.0
27	Friends of Crown Heights Educational Centers, Inc.	141 East 40th St.	81	81	0	100.0
		Total	***2,176***	***1,971***	***205***	***90.6***

Source: ACS enrollment data as of June 2017.
Notes: [1]Refer to **Figure E-2**.
[2]DCC: Day Care Center

Figure E-2
Existing Day Care Facilities



Legend

Proposed Rezoning Area | 1.5-Mile Radius | (1) Day Care Center (refer to Table E-6)

Table E-7:
No-Action Number of Public Day Care Pupils Generated by New Study Area Development

Study Area No-Action Affordable DU	Generation Ratio per Unit[2]	Number of Child Care-Eligible Children
343	0.178	61

Notes:
[1] Pupil Generation Ratios are for the borough of Brooklyn, as per Table 6-1b of the 2014 *CEQR Technical Manual*.

As shown in **Table E-8**, demand for publicly-funded day care facilities in the study area would increase as a result of the 61 children eligible for publicly-funded day care services introduced by the new developments in the future without the Proposed Action. This would increase projected enrollment to 2,022, resulting in a collective utilization rate of 92.9 percent, with 154 available day care slots (refer to **Table E-8**) in the future without the Proposed Action.

Table E-8:
No-Action Public Day Care Enrollment and Capacity Changes

Capacity	Projected Enrollment	Available Slots	Utilization (%)
2,176	2,032	144	93.4

Notes: [1] No child care center capacity changes are anticipated in the No-Action Scenario.
[2] Projected Enrollment is calculated by adding the projected new public child care-eligible children (**Table E-7**) to the existing publicly-funded group day care enrollment in the study area (**Table E-6**).

The Future With the Proposed Action (With-Action Condition)

As described in **Attachment A, "Project Description,"** in the RWCDS With-Action condition, the Proposed Action would facilitate a net increment of 284 DUs (152 of which would be affordable units). As shown in **Table E-9**, based on CEQR student generation rates, the Proposed Action is expected to result in an additional 27 children eligible for publicly-funded day care by 2023.

Table E-9:
With-Action Number of Public Day Care Pupils Generated by the Proposed Action

Affordable DU	Generation Ratio per Unit[1]	Number of Child Care-Eligible Children
152	0.178	27

Notes: [1]Pupil Generation Ratios are for the borough of Brooklyn, as per Table 6-1b of the 2014 *CEQR Technical Manual*.

As described above, under No-Action conditions, the day care utilization rate for the study area is expected to be 93.4 percent. In the 2023 With-Action condition, the estimated 27 children eligible for publicly-funded day care that would be introduced in the Project Area would increase the projected enrollment to 2,059, resulting in a collective utilization rate of 94.6 percent and 117 available day care slots in the approximately 1.5-mile study area (refer to **Table E-10**).

Table E-10:
With-Action Public Day Care Enrollment and Capacity Changes

Capacity	Projected Enrollment	Available Slots	Utilization (%)	Change in Utilization (%) from No-Action Condition
2,176	2,059	117	94.6	1.2

Assessment

This analysis shows that publicly-funded group day care enrollment would continue to operate with available capacity in both the No-Action and With-Action conditions. According to the 2014 *CEQR Technical Manual*, a significant adverse impact to publicly-funded day care would occur if (1) study area facilities would operate over capacity; and (2) the Proposed Action results in an increase in day care utilization rates of five percent or more. The increase in utilization from the No-Action to the With-Action conditions is anticipated to be 1.2 percent in the future with the Proposed Action, and study area facilities would continue to operate below capacity. As such, the Proposed Action would not result in a significant adverse impact to publicly-funded group day care facilities.

Attachment F

Open Space Resources

I. INTRODUCTION

An open space assessment may be necessary if a project could potentially have a direct or indirect effect on open space resources in the area. According to the 2014 *CEQR Technical Manual*, a direct open space impact would result in the physical loss of public open space, change the use of an open space so that it no longer serves the same user population, limit public access to an open space, or cause increased noise or air pollutant emissions, odors, or shadows on public open space that would affect its usefulness, whether on a permanent or temporary basis. As the Proposed Action would not physically affect any existing open space or recreational resource, they would not have any direct impacts on open space resources in the area.

An indirect effect on open space may occur when a population generated by a proposed action would be sufficiently large to noticeably diminish the ability of an area's open spaces to serve the future population. According to the guidance established in the *CEQR Technical Manual*, a project that would add more than 200 residents or 500 employees, or a similar substantial number of other users to an area, is typically assessed for any potential indirect effects on open space. Under RWCDS With-Action conditions, the Proposed Action would facilitate an increment of approximately 284 dwelling units (DUs), introducing a net increase of 744 residents to the study area.[1] The Proposed Action would also result in a net increment of approximately 16,384 gsf of retail space, resulting in a net increase of approximately 49 employees.[2] The expected number of residents exceeds the CEQR threshold of 200 residents for a detailed open space analysis, while the expected number of workers is well below the CEQR threshold of 500 employees for a detailed open space analysis. Accordingly, this analysis of open space will focus exclusively on the open space needs of the study area residential population. A quantitative assessment was conducted to determine whether the Proposed Action would significantly reduce the amount of open space available for the area's residential population, and is presented below.

II. METHODOLOGY

The analysis of open space resources has been conducted in accordance with the guidance established in the 2014 *CEQR Technical Manual*. Using 2014 *CEQR Technical Manual* methodology, the adequacy of open space in the study area is assessed quantitatively using a ratio of usable open space acreage to the study area population, referred to as the open space ratio. This quantitative measure is then used to assess the changes in the adequacy of open space resources by the analysis year of 2023, both without and with the Proposed Action. In addition, qualitative factors are considered in making an assessment of the Proposed Action's effects on open space resources.

Open Space Study Area

In accordance with the guidance established in the 2014 *CEQR Technical Manual,* the open space study area is generally defined by a reasonable walking distance that users would travel to reach local open space and recreational resources. That distance is typically a half-mile radius for residential projects. Pursuant to CEQR guidance, the residential open space study area includes all census tracts that have at least 50 percent

[1] Residential increment is based on an average of 2.62 persons per household in Brooklyn Community District 9 from the 2010 Census.
[2] Worker increment is based on the standard assumption of 3 workers for every 1,000 gsf of retail space.

of their area located within a half-mile of the proposed rezoning area and all open spaces within those census tracts that are publicly accessible. The proposed rezoning area encompasses portions of three blocks in the Crown Heights neighborhood of Brooklyn Community District (CD) 9. As shown in **Figure F-1**, the open space study area is roughly bounded by Park Place to the north, New York Avenue to the east, Fenimore Street to the south, and Prospect Park/the Brooklyn Botanic Garden to the west. The study area includes the following census tracts: 215, 217, 219, and 317.02 (which are located in Brooklyn CD 8), as well as 213, 321, 323, 325, 327, and 798.01 (which are located in Brooklyn CD 9).

There are additional nearby public open spaces located immediately outside the study area boundary which are likely utilized by study area residents, such as the Brooklyn Botanic Garden, the Brooklyn Museum, Prospect Park, and Grand Army Plaza. However, for conservative analysis purposes, only open spaces located within the study area were included in the quantitative analysis per CEQR guidance. Nearby open spaces located beyond the study area are discussed qualitatively below.

Analysis Framework

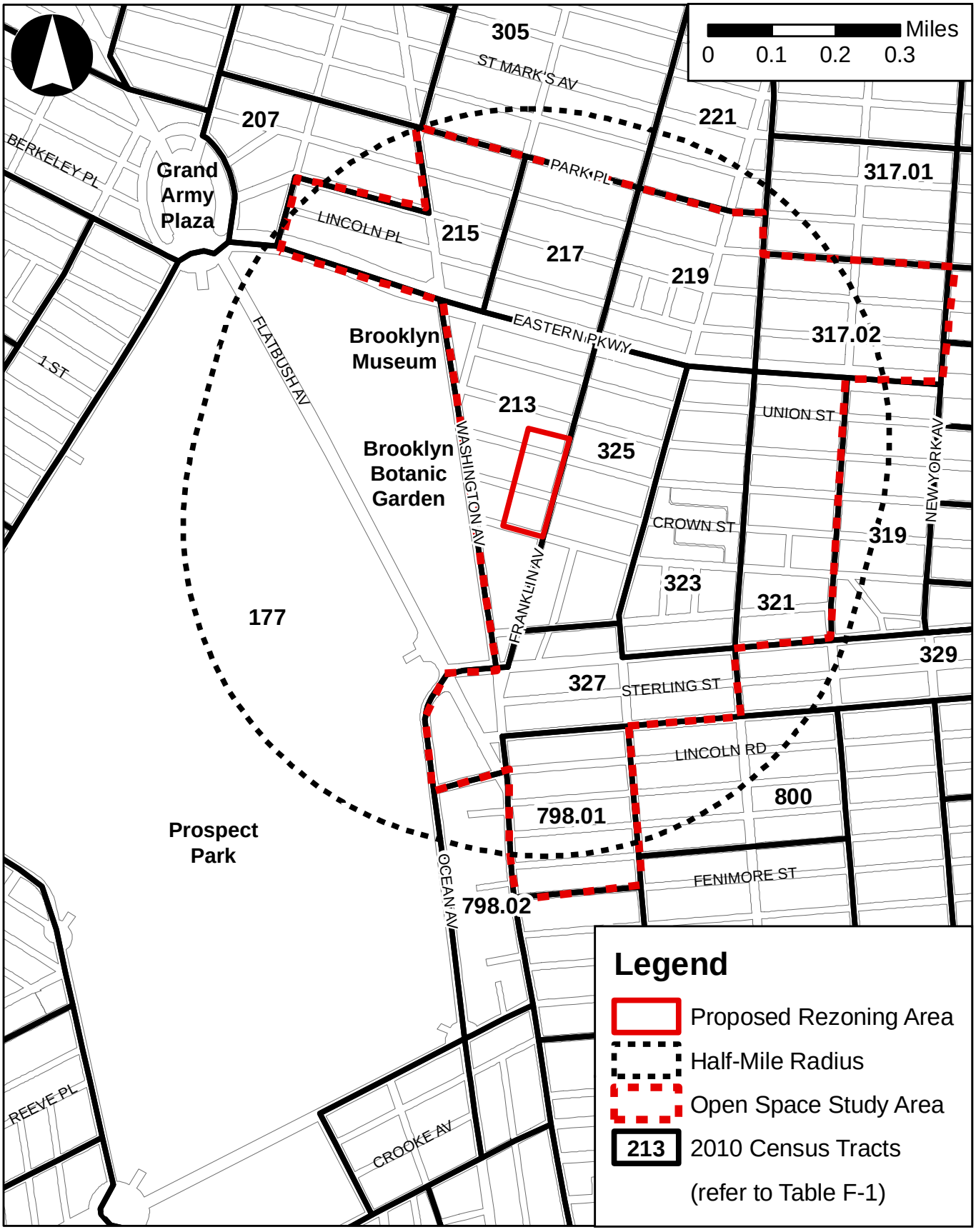
Direct Effects Analysis

According to the 2014 *CEQR Technical Manual*, a project would have a direct effect on an open space if it causes the physical loss of public open space because of encroachment onto the space or displacement of the space; changes the use of an open space so that it no longer serves the same user population; limits public access to an open space; or causes increased noise or air pollutant emissions, odors, or shadows that would affect its usefulness, whether on a permanent or temporary basis. As there are no publicly accessible open spaces in the proposed rezoning area, the Proposed Action would not have any direct effects and no further analysis is warranted. Additionally, as detailed in other sections of this EAS, the Proposed Action would not result in the imposition of noise, air pollutant emissions, odors, or shadows on public open spaces that may alter usability.

Indirect Effects Analysis

Indirect effects occur to an area's open spaces when a project would add enough population, either workers or residents, to noticeably diminish the ability of an area's open space to serve the existing or future population. The 2014 *CEQR Technical Manual* methodology suggests conducting an initial quantitative assessment to determine whether more detailed analyses are appropriate, but also recognizes that for projects that introduce a large population in an area that is underserved by open space, it may be clear that a full, detailed analysis should be conducted. The proposed rezoning area is not located within an underserved or well-served area as identified in the *CEQR Technical Manual*. However, it should be noted that in the larger study area, census tracts 217, 219, 317.02, 319, 321, 323, and a portion of tract 325 are within areas identified as underserved by open space in the *CEQR Technical Manual*, while census tracts 215, 798.01, and portions of tracts 213, 325, and 327, including the lots immediately south of the proposed rezoning area, are in an identified well-served area.

With an inventory of available open space resources and potential users, the adequacy of open space in the study area can be assessed both quantitatively and qualitatively. The quantitative approach computes the ratio of open space acreage to the population in the study area and compares this ratio with CEQR guidance. The qualitative assessment examines other factors that can affect conclusions about adequacy, including proximity to additional resources beyond the study area, the availability of private recreational facilities, and the demographic characteristics of the area's population. Specifically, the analysis in this attachment includes:


Miles
0 0.1 0.2 0.3
305
ST MARK'S AV
207
221
BERKELEY PL
Grand Army Plaza
PARK PL
317.01
LINCOLN PL
215
217
219
EASTERN PKWY
317.02
Brooklyn Museum
1 ST
FLATBUSH AV
213
UNION ST
Brooklyn Botanic Garden
325
WASHINGTON AV
NEW YORK AV
CROWN ST
319
FRANKLIN AV
323
321
177
329
327
STERLING ST
LINCOLN RD
800
798.01
Prospect Park
OCEAN AV
798.02
FENIMORE ST
REEVE PL
CROOKE AV
Legend
Proposed Rezoning Area
Half-Mile Radius
Open Space Study Area
213
2010 Census Tracts
(refer to Table F-1)

- Characteristics of the open space users: residents. To determine the number of residents in the study area, 2008-2012 American Community Survey (ACS) data have been compiled for census tracts comprising the open space study area.
- An inventory of all publicly accessible passive and active recreational facilities in the open space study area.
- An assessment of the quantitative ratio of open space in the study area by computing the ratio of open space acreage to the population in the study area and comparing this open space ratio with certain guidance. The New York Department of City Planning (DCP) generally recommends a comparison to the median open space ratio in New York City, which is 1.5 acres of open space per 1,000 residents, and a planning goal of 2.5 acres per 1,000 residents.
- An evaluation of qualitative factors affecting open space use.
- A final determination of the adequacy of open space in the open space study area.

III. DETAILED ANALYSIS

Pursuant to the guidance of the 2014 *CEQR Technical Manual*, a preliminary open space assessment was conducted which provided a comparison of the total existing open space ratios and in the future with and without the Proposed Action. As the study area exhibits a low open space ratio (i.e., below the citywide average of 1.5 acres per 1,000 residents and the planning goal of 2.5 acres per 1,000 residents) under existing conditions and in the future with and without the Proposed Action, a detailed open space assessment is warranted and is provided below.

Existing Conditions

Demographic Characteristics of the Study Area

To determine the residential population served by existing open space resources, 2008-2012 ACS data were compiled for the 10 census tracts comprising the study area. With an inventory of available open space resources and the number of potential users, open space ratios were calculated and compared with existing citywide averages and planning goals set forth by DCP. As mentioned above and shown in **Figure F-1**, the open space study area is comprised of 10 census tracts. **Table F-1** shows the 2008-2012 ACS total population figures for each census tract in the study area, as well as for the study area as a whole. As shown in the table, the ACS data indicate that the study area has a total residential population of approximately 42,629 people.

In 2008-2012, the median population age for individual census tracts within the residential study area ranged from a high of 39.2 years (tract 327) to a low of 32.1 years (tract 321). As shown in **Table F-1**, the study area's weighted average median age of 35.3 years is higher than the median age for Brooklyn as a whole, which is 34.1 years.

Within a given area, the age distribution of a population affects the way open spaces are used and the need for various types of recreational facilities. Typically, children 4 years old or younger use traditional playgrounds that have play equipment for toddlers and preschool children. Children ages 5 through 9 typically use traditional playgrounds, as well as grassy and hard-surfaced open spaces, which are important for activities such as ball playing, running, and skipping rope. Children ages 10 through 14 use playground equipment, court spaces, little league fields, and ball fields. Teenagers' and young adults' needs tend toward court game facilities such as basketball and field sports. Adults between the ages of 20 and 64 continue to

use court game facilities and fields for sports, as well as more individualized recreation such as rollerblading, biking, and jogging, requiring bike paths, promenades, and vehicle-free roadways. Adults also gather with families for picnicking, ad hoc active sports such as Frisbee, and recreational activities in which all ages can participate. Senior citizens typically engage in active recreation such as tennis, gardening, and swimming, as well as recreational activities that require passive facilities.

The residential population of the study area was broken down by age groups, as seen in **Table F-1**. As shown in the table, approximately 77.9 percent of the study area residents are adults, with approximately 67.6 percent between the ages of 20 and 64 and approximately 10.3 percent age 65 and older. Conversely, 22.1 percent of the study area population are children, with 5.7 percent under age 5 and 16.4 percent between ages 5 and 19. As such, the study area has a lower proportion of children compared to Brooklyn as a whole; in the borough 26.0 percent of residents are age 18 and younger and 74.0 percent of residents are age 19 and older. This data could reflect a proportionately lower demand for playgrounds and playing fields as compared to the borough.

Table F-1:
Existing Study Area Population Characteristics

Census Tract	Total Population	Under 5 Years		5 to 9 Years		10 to 14 Years		15 to 19 Years		20 to 64 Years		65+ Years		Median Age
		#	%	#	%	#	%	#	%	#	%	#	%	
213	4,448	301	6.8	274	6.2	294	6.6	254	5.7	2,947	66.3	378	8.5	36.1
215	5,160	390	7.6	200	3.9	85	1.6	131	2.5	3910	75.8	444	8.5	35.2
217	3,536	300	8.5	171	4.8	200	5.7	224	6.3	2,320	65.7	321	9.0	34.0
219	3,915	203	5.2	132	3.4	203	5.2	244	6.2	2,770	70.8	363	9.2	32.7
317.02	3,286	121	3.7	108	3.3	198	6.0	287	8.7	2,134	64.9	438	13.4	33.0
321	6,138	400	6.5	617	10.1	359	5.8	403	6.6	3,727	60.7	632	10.3	32.1
323	3,959	157	4.0	222	5.6	290	7.3	195	4.9	2,695	68.1	400	10.2	35.2
325	6,064	245	4.0	282	4.7	372	6.1	396	6.5	4,151	68.4	618	10.2	38.6
327	2,725	77	2.8	151	5.5	93	3.4	184	6.8	1,885	69.2	335	12.3	39.2
798.01	3,398	217	6.4	119	3.5	67	2.0	254	7.5	2,296	67.6	445	13.1	37.7
Total	**42,629**	**2,411**	**5.7%**	**2,276**	**5.3%**	**2,161**	**5.1%**	**2,572**	**6.0%**	**28,835**	**67.6%**	**4,374**	**10.3%**	**35.3**

Source: 2008-2012 ACS Five-Year "Demographic and Housing Estimates."
Notes: Refer to **Figure F-1**.

Inventory of Open Space Resources in the Study Area

According to the 2014 *CEQR Technical Manual*, open space may be public or private and may be used for active or passive recreational purposes. Pursuant to CEQR, public open spaces are defined as facilities open to the public at designated hours on a regular basis and are assessed for impacts under CEQR guidance, whereas private open spaces are not accessible to the general public on a regular basis, and are therefore only considered qualitatively. Field surveys and secondary sources were used to determine the number, availability, and condition of publicly accessible open space resources in the study area.

An open space is determined to be active or passive by the uses which the design of the space allows. Active open space is the part of a facility used for active play such as sports or exercise and may include playground equipment, playing fields and courts, swimming pools, skating rinks, golf courses, lawns and paved areas

for active recreation. Passive open space is used for sitting, strolling, and relaxation, and typically contains benches, walkways and picnicking areas. However, some passive spaces can be used for both passive and active recreation; such as a green lawn or riverfront walkway, which can also be used for ball playing, jogging or rollerblading.

Within the defined study area, all publicly accessible open spaces were inventoried and identified by their location, size, owner, type, utilization, equipment, hours, and condition of available open space. The information used for this analysis was gathered from the New York City Department of Parks and Recreation's (DPR) website; DCP's Primary Land Use Tax Lot Output (PLUTO) data; and through PHA field inventories conducted in May 2016.

The condition of each open space facility was categorized as "Excellent," "Good," or "Fair." A facility was considered in excellent condition if the area was clean, attractive, and all equipment was present and in good repair. A good facility had minor problems such as litter, or older but operative equipment. A fair facility was one that was poorly maintained, had broken or missing equipment, lack of security, or other factors that would diminish the facility's attractiveness. Determinations were made based on visual assessments of the facilities.

Likewise, judgments as to the intensity of use of the facilities were qualitative, based on an observed degree of activity or utilization on a weekday from 11:00 AM until 3:00 PM, which is considered the weekday peak utilization period according to the 2014 *CEQR Technical Manual*. If a facility seemed to be at or near capacity with the majority of equipment in use, then utilization was considered heavy. If equipment was in use but could accommodate additional users, utilization was considered moderate. If equipment was being used by few people, utilization was considered light. **Table F-2** identifies the address, ownership, hours, acreage of active and passive open spaces in the study area, and their condition and utilization. **Figure F-2** maps their location in the study area.

Quantitative Analysis of Open Space Adequacy

There are five publicly-accessible open space resources within the study area which are included in the quantitative analysis. These resources comprise a total of approximately 10.78 acres, of which approximately 53 percent (5.68 acres) is active open space and approximately 47 percent (5.10 acres) is passive open space.

In the study area, the closest public open space resource to the proposed rezoning area is the 1.0-acre Jackie Robinson Playground (#4), located at Franklin Avenue, Montgomery Street, and McKeever Place, immediately southeast of the proposed rezoning area. Jackie Robinson Playground is jointly operated by DPR and the New York City Department of Education (DOE), and contains basketball and handball courts, playgrounds, fitness equipment, and benches. It is in good condition and is lightly utilized.

To the north of the proposed rezoning area is Eastern Parkway (#3), which is a Designated Scenic Landmark that is jointly operated by DPR and the New York City Department of Transportation (DOT). Approximately 6.94 acres of the 63.64-acre park are located within the study area, bounded by Underhill Avenue and New York Avenue. This portion of Eastern Parkway includes walking paths, bicycle paths, and benches. It is heavily utilized and considered to be in excellent condition.

Another open space resource in close proximity to the proposed rezoning area is Dr. Ronald McNair Park (#1) bounded by Eastern Parkway, Classon Avenue, and Washington Avenue to the northwest of the proposed rezoning area. The 1.36-acre park is operated by DPR and includes walking paths, benches, and chess and checkers tables. It is in excellent condition and is lightly utilized.

Table F-2:
Inventory of Existing Study Area Public Open Spaces

Map No.[1]	Name	Address	Owner/ Agency	Amenities	User Groups	Hours of Access	Total Acres	Active		Passive		Condition & Utilization
								%	Acres	%	Acres	
1	Dr. Ronald McNair Park	Eastern Parkway, Classon Avenue, and Washington Avenue	DPR	Walking Paths, Benches, Chess/Checkers Tables	Teenagers, Adults, Senior Citizens	Dawn - 12AM	1.36	0	0.00	100	1.36	Excellent Condition / Light Utilization
2	Stroud Playground	Park Place and Sterling Place btwn Washington Avenue and Classon Avenue	DPR/DOE	Basketball and Handball Courts, Playgrounds, Fountains, Benches, Chess/Checkers Tables	Children, Teenagers, Adults	Dawn - Dusk	1.19	95	1.13	5	0.06	Good Condition / Moderate Utilization
3	Eastern Parkway	Eastern Parkway btwn Underhill Avenue and New York Avenue	DPR/DOT	Benches, Walking Paths, Bicycle Paths	Adults, Senior Citizens	24 Hours	6.94	50	3.47	50	3.47	Excellent Condition / High Utilization
4	Jackie Robinson Playground	Franklin Avenue, Montgomery Street, and McKeever Place	DPR/DOE	Basketball and Handball Courts, Playgrounds, Fitness Equipment, Benches	Children, Teenagers, Adults	Dawn - Dusk	1.00	80	0.80	20	0.2	Good Condition / Light Utilization
5	Dodger Playground	Sullivan Place btwn Rogers Avenue and Nostrand Avenue	DPR	Playgrounds, Fountains, Benches	Children	Dawn - Dusk	0.29	95	0.28	5	0.01	Excellent Condition / Light Utilization
Total Open Space in Quantitative Analysis:							**10.78**	**53%**	**5.68**	**47%**	**5.10**	

Sources: DPR's website; DCP's PLUTO data; PHA site visits (May 2016).
Notes: [1]Refer to **Figure F-2**


Miles
0 0.1 0.2 0.3
ST MARK'S AV
BERKELEY PL
Grand Army Plaza
LINCOLN PL
215
STERLING PL
217
219
ST JOHN'S PL
317.02
Mt. Prospect Park
Brooklyn Museum
EASTERN PKWY
1
A
3
213
FLATBUSH AV
WASHINGTON AV
FRANKLIN AV
325
UNION ST
321
CARROLL ST
CROWN ST
NEW YORK AV
4
Brooklyn Botanic Garden
177
323
5
SULLIVAN PL
Prospect Park
327
STERLING ST
LINCOLN RD
798.01
FENIMORE ST
1 ST
4 ST
16 ST
REEVE PL
CROOKE AV
Legend
Proposed Rezoning Area
Half-Mile Radius
Open Space Study Area
213 2010 Census Tracts
1 Open Space Resources
(refer to Table F-2)

Stround Playground (#2) is located in the northern section of the study area, fronting Park Place and Sterling Place between Washington Avenue and Classon Avenue. Stroud Playground is jointly operated by DPR and DOE, and contains 1.19 acres of recreational space, including basketball and handball courts, playgrounds, fountains, benches, and chess and checkers tables. It is moderately utilized and is in good condition.

Dodger Playground (#5) is located to the southeast of the proposed rezoning area on Sullivan Place between Rogers Avenue and Nostrand Avenue. Dodger is a 0.29-acre playground operated by DPR, and includes playground equipment, fountains, and benches. It is in excellent condition and is lightly utilized.

As shown in **Table F-3** below, with a residential population of 42,629, the total open space ratio for residents in the study area is 0.25 acres per 1,000 residents, which is less than the citywide average of 1.50 acres of parkland per 1,000 residents and DCP's planning guideline of 2.50 acres per 1,000 residents. The area's existing active open space ratio (0.13 acres) and passive open space ratio (0.12 acres) are also below the City's planning guidance of 2.00 acres of active open space and 0.50 acres of passive open space per 1,000 residents.

Table F-3:
Adequacy of Open Space Resources in the Study Area – Existing Conditions

	Total Population	Open Space Acreage			Open Space Ratios Per 1,000-People			DCP's Open Space Guidance		
		Total	Active	Passive	Total	Active	Passive	Total	Active	Passive
Residents	42,629	10.78	5.68	5.10	0.25	0.13	0.12	2.50	2.00	0.50

Qualitative Analysis of Open Space Adequacy

The Eastern Parkway Coalition Garden ("A" in **Figure F-2**) is a 0.44-acre community garden located on Union Street between Classon Avenue and Franklin Avenue. Owned by DPR and operated by the Eastern Parkway Coalition, this open space resource includes garden beds, benches, and tables for passive recreation. Per CEQR guidance, the community garden is not included in the quantitative analysis, as it has limited hours and is not fully accessible to the public. However, the Eastern Parkway Coalition constitutes an important recreational resource for neighborhood residents, and is included in the qualitative analysis.

Additionally, as mentioned above, there are several open space resources located immediately outside of the study area that, given their proximity to the study area, are likely utilized by study area residents. Less than 50 percent of census tract 177, to the southwest of the proposed rezoning area, is included in a quarter-mile radius of the proposed rezoning area, and is therefore not included in the quantitative analysis per CEQR guidance. However, census tract 177 comprises a significant portion of the quarter-mile radius around the proposed rezoning area (refer to **Figure F-1**), and includes several prominent open space resources: the 526.25-acre Prospect Park, a regional park (approximately 1,100 feet to the southwest of the proposed rezoning area), the 7.79-acre Mt. Prospect Park (approximately 1,700 feet to the west of the proposed rezoning area), and the 14.26-acre Grand Army Plaza (approximately 3,000 feet to the northwest of the proposed rezoning area) are publicly-accessible open space resources likely utilized by study area residents (refer to **Figure F-2**). Additionally, census tract 177 includes the Brooklyn Botanic Garden (less than 300 feet to the west of the proposed rezoning area), and the Brooklyn Museum (approximately 800 feet to the northwest of the proposed rezoning area), however, these open space resources offer limited accessibility to the public, as they charge admission fees.

Future Without the Proposed Action (No-Action Condition)

Open Space Resources

In the future without the Proposed Action, it is anticipated that portions of the proposed rezoning area could be redeveloped with residential and mixed-use buildings, as discussed below. While it is expected that these buildings would contain on-site, private accessory open space, it is not anticipated that any of these new open space resources would be publicly accessible.

As discussed in **Attachment C, "Land Use, Zoning, and Public Policy,"** the City University of New York (CUNY) Medgar Evers College's Crown Plaza project is expected be completed on Crown Street between Franklin Avenue and Bedford Avenue by the build year under No-Action conditions. This project includes the narrowing of Crown Street immediately to the east of the proposed rezoning area in order to create more open space for college students and local residents, including lawns, landscaping, benches, and walking paths. As it is currently unknown how much open space acreage will be added to the study area as a result of CUNY's Crown Plaza project, it is conservatively not included in the quantitative analysis of future conditions.

Study Area Population

Under RWCDS No-Action conditions, portions of the proposed rezoning area could be redeveloped with a maximum of 281 dwelling units, resulting in an additional 736 residents.[3] Additionally, as detailed in **Attachment C**, 21 projects are anticipated to be completed within the open space study area by 2023 (#1-9, 11, 12, 14, 15, 16, 27, 29, 32, 33, 37, 43, and 47 in **Figure C-3** and **Table C-4**). These new developments would increase the residential populations within the open space study area, and are therefore included in this analysis. The 21 No-Action projects are expected to introduce approximately 1,294 dwelling units to the study area, resulting in approximately 3,613 residents. Therefore, by 2023, it is expected that the residential population in the open space study area would increase to 46,242.

Quantitative Analysis of Open Space Adequacy

As shown in **Table F-4** below, in the absence of the Proposed Action, the available public open spaces in the study area would be identical to existing conditions, with approximately 10.78 acres of open space (5.68 active acres and 5.10 passive acres). As such, the total open space ratio for every 1,000 residents would decrease slightly to 0.235 acres per 1,000 residents. This would continue to be below the citywide average of 1.50 acres of parkland per 1,000 residents and DCP's recommended planning guideline of 2.50 acres per 1,000 residents. The active open space ratio would decrease slightly to 0.12 acres per 1,000 residents, and the passive open space ratio would decrease slightly by 0.005 acres to 0.115 acres per 1,000 residents, both below the City's recommended planning guidance.

Table F-4:
Adequacy of Open Space Resources in the Study Area – No-Action Conditions

Total Population	Open Space Acreage			Open Space Ratios Per 1,000-People			DCP's Open Space Guidance		
	Total	Active	Passive	Total	Active	Passive	Total	Active	Passive
46,242	10.78	5.68	5.10	0.233	0.123	0.110	2.50	2.00	0.50

[3] The anticipated number of new residents was determined by multiplying the number of units to be developed by the average household size of Brooklyn Community District 9 (2.62 persons per household) per the 2010 Census.

Qualitative Analysis of Open Space Adequacy

Although the study area's open space resources would continue to be below DCP's recommended open space guidance under No-Action conditions, this deficiency would be ameliorated by additional open space resources not included in the quantitative assessment. Although resources such as Prospect Park, Mt. Prospect Park, Grand Army Plaza, the Brooklyn Museum, and the Brooklyn Botanic Garden are not included in the quantitative analysis per CEQR guidance, they are in close proximity to the proposed rezoning area and add a considerable amount of publicly-accessible active and passive open space for utilization by study area residents. Additionally, as discussed above, under No-Action conditions it is anticipated that new development in the proposed rezoning area would incorporate private accessory open space on-site, and it is expected that the CUNY Crown Plaza would be complete, providing additional open space resources for residents in the future without the Proposed Action.

Future With the Proposed Action (With-Action Condition)

Open Space Resources

In the future with the Proposed Action, it is anticipated that portions of the proposed rezoning area would be redeveloped with residential and mixed-use buildings, as discussed below. It is expected that these buildings would contain on-site, shared open space in the building courtyards for building residents. However, it is not anticipated that these new open space resources would be publicly accessible, and therefore they are not included in the quantitative analysis below.

Study Area Population

Under RWCDS With-Action conditions, portions of the proposed rezoning area would be developed with approximately 565 dwelling units, an increment of 284 dwelling units over No-Action conditions. This increment would introduce an additional 744 residents to the proposed rezoning area in the future with the Proposed Action. Therefore, the residential population of the open space study area in With-Action conditions would total 46,986 people.

Quantitative Analysis of Open Space Adequacy

In the future with the Proposed Action, there would continue to be 10.78 acres of open space in the study area, of which 5.68 acres would be for active uses and 5.10 acres would be for passive uses (refer to **Table F-5**). With an estimated future residential population of 46,533, the total open space ratio per 1,000 residents would remain the same at 0.235 acres per 1,000 residents, continuing to be below the citywide average of 1.50 acres of parkland per 1,000 residents and DCP's recommended planning guideline of 2.50 acres per 1,000 residents. Under With-Action conditions, the active open space ratio would remain the same at 0.12 acres per 1,000 residents and the passive open space ratio would largely remain the same at 0.11 acres per 1,000 residents. Both of these ratios would continue to be below the City's recommended guidance of 2.00 acres of active and 0.50 acres of passive open space per 1,000 residents.

Table F-5:
Adequacy of Open Space Resources in the Study Area – With-Action Conditions

Total Population	Open Space Acreage			Open Space Ratios Per 1,000-People			DCP's Open Space Guidance		
	Total	Active	Passive	Total	Active	Passive	Total	Active	Passive
46,986	10.78	5.68	5.10	0.23	0.12	0.11	2.50	2.00	0.50

However, while the area would continue to have a shortfall of open space, the demand for open space generated by the Proposed Action would not exacerbate the No-Action deficiency. The Proposed Action would result in a decrease of 1.58 percent in the open space ratio for passive open space in the future. Decreases in open space ratios below the significant impact threshold of five percent would not result in significant adverse impacts to open space, as per the 2014 *CEQR Technical Manual*. The deficiency of open space resources within the study area would be ameliorated by several factors. Overall, a majority of the open space resources in the study area were found to be in excellent or good condition with varying degrees of utilization (as described in **Table F-2**, most study area open space resources were observed to have moderate or light utilization). Additionally, as on-site open spaces such as outdoor courtyards, patios and rooftops would help to lessen the use of off-site open space resources by the on-site residential population. Finally, there are several significant open space resources located just outside the study area boundary (e.g., Prospect Park), which add considerable accessible active and passive open spaces for the residential population, but are not included in the quantitative analysis per CEQR guidance.

Qualitative Analysis of Open Space Adequacy

As previously stated, the Proposed Action would not result in any direct displacement of existing public open space resources, nor would the Proposed Action significantly exacerbate the deficiency in open space in the study area. The study area contains five publicly accessible open spaces, all of which are in good to excellent condition. These open spaces provide a range of active and passive amenities, including playgrounds and fitness equipment, basketball and handball courts, fountains, checkers tables, benches, bicycle paths, and walking paths. The Eastern Parkway Coalition Garden is also located in the study area, providing an important recreational resource for neighborhood residents conservatively not included in the quantitative analysis. Additionally, vast amounts of open space resources are located immediately adjacent to the open space study area, including the regional open space resource of Prospect Park, as well as Mt. Prospect Park, Grand Army Plaza, and the outdoor spaces associated with the Brooklyn Museum. These are significant open space resources which would likely be utilized by study area residents, alleviating the low ratios of open space resources located within the study area (Accounting for the acreage of Prospect Park and Mt. Prospect Park within the 1/2-mile radius of the site, the total open space ratio would be 11.90-acres per 1,000 residents).

The population added as a result of the Proposed Action is not expected to noticeably affect utilization of the study area's open spaces. In the future with the Proposed Action, ratios of open spaces to residents would continue to be lower than citywide averages of open space and the optimal planning goals furnished by DCP. The residents generated by the Proposed Action are not expected to have any special characteristics, such as a disproportionately older or younger population, that would place heavy demands on facilities that cater to specific user groups. The residents in the future with the Proposed Action are expected to exhibit similar characteristics to the current residents of the study area and the breakdown of the population is expected to remain the same. Additionally, private, on-site, shared open spaces for building residents would help to offset the increased residential population's additional demand on the study area's open space resources.

V. CONCLUSION

Pursuant to CEQR guidance, a project may result in a significant adverse impact on open space resources if (a) there would be a direct displacement/alteration of existing open space within the study area that has a significant adverse effect on existing and anticipated users; or (b) it would reduce the open space ratio and consequently result in overburdening existing facilities or further exacerbates a deficiency in open space.

The Proposed Action would not result in the direct displacement or alteration of existing public open space resources in the study area. Although there would continue to be a shortage of public open space in the study area, the increase in demand from the Proposed Action would not result in decreases in open space ratios compared to No-Action conditions, consequently overburdening existing facilities or further exacerbating deficiencies in open space. Additionally, private, on-site, shared open space in the building courtyards for building residents would help to offset the increased residential population's additional demand on the study area's open space resources.

While there is a shortfall of active and passive open space within the study area under future No-Action and future With-Action conditions, the Proposed Action would not result in a reduction in open space ratios of five percent or more (the CEQR threshold for impact significance). Therefore, the Proposed Action is not anticipated to result in a significant adverse impact on open space resources. Open space ratios present under existing and No-Action conditions are below the citywide median of 1.50 acres of parkland per 1,000 residents and also below the DCP planning guidance of 2.50 acres of parkland per 1,000 residents, and would continue to be below those guidelines in the future with the Proposed Action. Most of the open space resources in the study area are in good to excellent condition and contain a mix of active and passive uses. Additionally, there are several significant open space resources located just outside the study area boundary, which add considerable accessible active and passive open spaces for the residential population, but are not included in the quantitative analysis per CEQR guidance.

Attachment G

Shadows

I. INTRODUCTION

According to the 2014 *CEQR Technical Manual*, an adverse shadow impact is considered to occur when the incremental shadow from a proposed development falls on a sunlight-sensitive resource and substantially reduces or completely eliminates direct sunlight exposure, thereby significantly altering the public's use of the resource or threatens the viability of vegetation or other resources. Pursuant to CEQR guidance, 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. Sunlight-sensitive resources can include publicly accessible open space, architectural resources, natural resources, and greenstreets. In general, shadows on city streets, sidewalks, buildings, or project-generated open spaces are not considered significant under CEQR. In addition, shadows occurring within an hour and a half of sunrise or sunset generally are not considered significant under CEQR.

According to the 2014 *CEQR Technical Manual*, a shadow assessment is required only if a project would result in structures (or additions to existing structures) of 50 feet or more and/or be located adjacent to, or across the street from, a sunlight-sensitive resource. As described in **Attachment A, "Project Description,"** the Proposed Action would facilitate the construction of two predominantly residential buildings with maximum building heights of approximately 175 feet, respectively, and a third projected development site that was also conservatively assumed to be built to a maximum height of 175 feet. As one of the proposed buildings is located across the street from an existing sunlight-sensitive resource, a shadows assessment is required in order to determine whether the Proposed Action would result in new shadows long enough to reach any sunlight sensitive resources at any time of year. As discussed below, the Proposed Action would not result in significant adverse shadow impacts, as compared to the No-Action condition.

II. METHODOLOGY

First, a preliminary screening assessment must be conducted to ascertain whether the shadows generated as a result of the Proposed Action could reach any sunlight-sensitive resources at any time of year. The preliminary screening assessment consists of three tiers of analysis. The first tier identifies the longest shadow study area based on the maximum height of the structure(s) resulting from the Proposed Action. If there are sunlight-sensitive resources within this radius, the analysis proceeds to the second tier, which reduces the area that could be affected by project generated shadows by accounting for a specific range of angles that can never receive shade in New York City due to the path of the sun in the northern hemisphere. If the second tier of analysis does not eliminate the possibility of new shadows on sunlight-sensitive resources, a third tier of screening analysis further refines the area that could be reached by looking at specific representative days of the year and determining the maximum extent of shadows over the course of each representative day.

If the third tier of analysis does not eliminate the possibility of new shadows on sunlight-sensitive resources, a detailed shadow analysis is required to determine the extent and duration of the incremental shadows resulting from the Proposed Action. The detailed analysis accounts for existing shadows cast by intervening and surrounding buildings and provides the data needed to assess the shadow impacts. The effects of the new incremental shadows created by the proposed development (including an allowance for a 15-foot tall bulkhead, which would be the maximum size of a bulkhead on the two Applicant-owned development sites) on the sunlight-sensitive resources are described, and their degree of significance is considered. The results

of the analysis and assessment are documented with graphics, a table of incremental shadow durations, and narrative text.

III. PRELIMINARY SCREENING

Tier 1 Screening Assessment

A base map was developed (see **Figure G-1**) showing the locations of the projected developments, the surrounding street layout, and all potentially sunlight-sensitive resources (publicly accessible open spaces, architectural resources, natural resources, and greenstreets). According to the 2014 *CEQR Technical Manual*, the longest shadow that a structure can cast in New York City, except for periods close to dawn or dusk, occurs on December 21, the winter solstice, at the start of the analysis day at 8:51 AM, and is equal to 4.3 times the height of the structure. The height of each building was used to determine the longest shadow study areas, which were combined to form the longest shadow study area (Tier 1 Assessment). Anything outside this study area could never be affected by project-generated shadow, while anything inside the perimeter requires additional assessment.

Within this longest shadow area, there are five potentially sunlight-sensitive resources, including four open space resources and one historic resource. Therefore, further screening is warranted in order to determine whether any resources would be affected by project-generated incremental shadows.

Tier 2 Screening Assessment

For the Tier 2 screening assessment, according to the 2014 *CEQR Technical Manual*, shadows cast by buildings fall to the north, east, and west. In New York City, the shadow area is between -108 degrees from true north and +108 degrees from true north. Conversely, any area lying to the south of a site in the triangular area beyond these angles cannot be shaded. The purpose of the Tier 2 screening is to determine whether the sunlight-sensitive resources identified in the Tier 1 screening lie within the portion of the longest shadow study area that could potentially be shaded as a result of the Proposed Action.

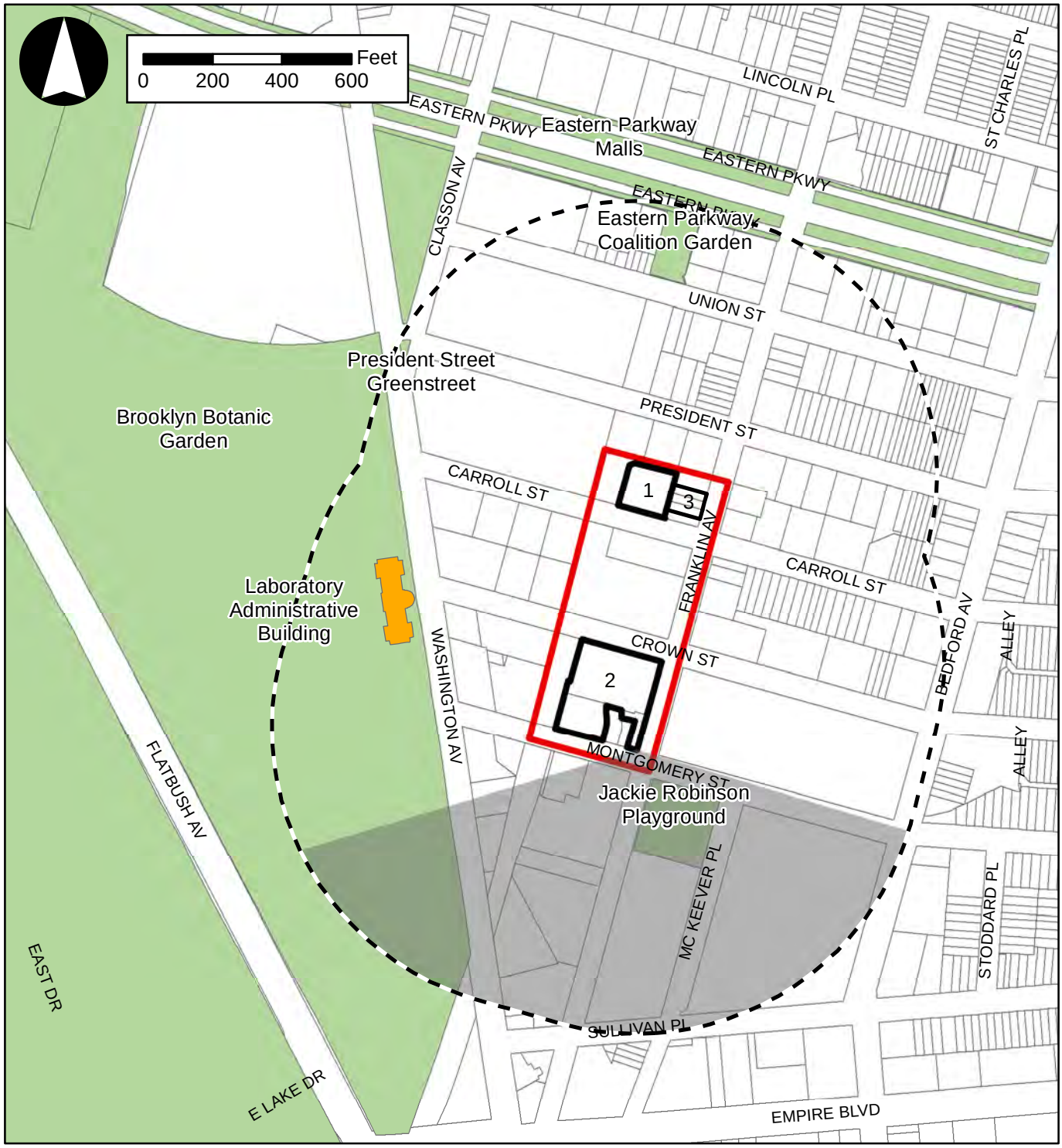
Figure G-1 provides a base map illustrating the results of the Tier 1 and 2 screening assessments (i.e., the portion of the longest shadow study area lying within -108 degrees from the true north and +108 degrees from true north as measured from southernmost portions of the project site). A total of four open space resources that could potentially be shaded as a result of the Proposed Action were identified as sunlight-sensitive. These resources include the Brooklyn Botanic Garden, the Eastern Parkway Coalition Garden, the Eastern Parkway Malls, and the President Street Greenstreet. The Laboratory Administrative Building, a State and National Register listed resource and New York City Landmark, does not possess any sunlight-sensitive features and does not warrant further analysis.

Tier 3 Screening Assessment

According to the 2014 *CEQR Technical Manual*, a Tier 3 screening assessment should be performed if any portion of a sunlight-sensitive resource is within the area that could be shaded as a result of the Proposed Action. The Tier 3 screening assessment is used to determine if project-generated shadows can reach a sunlight-sensitive resource at any time between 1.5 hours after sunrise and 1.5 hours before sunset on representative analysis dates.

As project-generated shadows could reach two sunlight-sensitive resources, a Tier 3 assessment was performed using three dimensional (3D) computer mapping software. The 3D model was used to calculate and display shadows on individual representative analysis dates. The model contained 3D representations of the elements in the base map used in the preceding assessments and a 3D model of the proposed

Longest Shadow Study Area - Tier 1 and 2 Screening



Legend

- Proposed Rezoning Area
- 1 Projected Development Sites
- Longest shadow study area boundary
- Area to the south that could never be shaded
- Open Space
- Designated Landmark

development (which includes a 15-foot tall bulkhead). At this stage of the assessment, surrounding buildings within the study area were not included in the model so that it may be determined whether project-generated shadows would reach any sunlight-sensitive resources.

Figures G-2 through **G-5** illustrate the range of project-generated shadows that could occur in the absence of existing buildings on the four representative analysis days. As the sun moves west across the sky, shadows move east and are shown occurring approximately every two to three hours.

The Tier 3 analysis showed that three sunlight-sensitive resources, the Eastern Parkway Coalition Garden, the Eastern Parkway Malls, and the President Street Greenstreet, would not receive project-generated shadows on any of the four analysis days, and therefore do not require any further analysis. As the Brooklyn Botanic Garden would receive project-generated shadows on all four analysis days in the absence of existing buildings, a detailed shadow analysis is required to determine the extent and duration of the incremental shadows on this resource occurring as a result of the Proposed Action.

IV. DETAILED ANALYSIS OF SHADOW IMPACTS

Resources of Concern

Brooklyn Botanic Garden

The Brooklyn Botanic Garden is an approximately 47-acre passive open space resource extending along the west side of Washington Avenue between Empire Boulevard, Flatbush Avenue, and Eastern Parkway. The open space includes a number of gardens, trees, ponds, grassy lawn areas, walking paths, benches, and conservatories.

Shadows Analysis

Per CEQR guidance, shadow analyses were performed for the one sunlight-sensitive resource identified above, the Brooklyn Botanic Garden, on four representative days of the year: March 21/September 21, the equinoxes; May 6, the midpoint between the summer solstice and the equinox (and equivalent to August 6); June 21, the summer solstice and the longest day of the year; and December 21, the winter solstice and shortest day of the year. These four representative days indicate the range of potential shadows over the course of the year. CEQR guidance defines the temporal limits of a shadow analysis period to fall from an hour and a half after sunrise to an hour and a half before sunset. As discussed above, the results of the shadow analysis show the incremental difference in shadows between the No-Action and With-Action scenarios (see **Table G-1**). **Table G-1** summarized the entry and exit times and total duration of incremental shadows on each affected sun-sensitive resource.

Table G-1:
Shadow Duration on Sunlight Sensitive Resources (Increment Compared to No-Action)

	Analysis Day	March 21/Sept. 21	May 6/August 6	June 21	December 21
		7:36 AM – 4:29 PM	6:27 AM – 5:18 PM	5:57 AM – 6:01 PM	8:51 AM – 2:53 PM
Brooklyn Botanic Garden	Shadow enter-exit time	7:36 – 7:56 AM	6:27 – 7:30 AM	5:57 – 7:14 AM	8:51 – 9:12 AM
	Incremental shadow duration	20 minutes	1 hour 3 minutes	1 hour 17 minutes	21 minutes

Note: All times are Eastern Standard Time; Daylight Savings Time was not accounted for per 2014 *CEQR Technical Manual* guidance.
Table indicates the entry and exit times and total duration of incremental shadow for each sunlight-sensitive resource.

Figure G-2

Tier 3 Screening - March 21/September 21



Figure G-3

Tier 3 Screening - May 6/August 6



Figure G-4
Tier 3 Screening - June 21



Figure G-5

Tier 3 Screening - December 21



As shown in **Table G-1**, the Proposed Action would result in increases to shadow coverage at the Brooklyn Botanic Garden on four analysis dates. **Figures G-6** through **G-9** show the representative project-generated incremental shadows on the Brooklyn Botanic Garden. As shadows are in constant motion, **Figures G-6** through **G-9** illustrate the extent of additional incremental shadow at particular moments in time, highlighted in red, and also show existing shadows and remaining areas of sunlight.

It should be noted that, per the 2014 *CEQR Technical Manual*, all times reported herein are Eastern Standard Time and do not reflect adjustments for daylight savings time that is in effect from mid-March to early November. As such, the times reported in this attachment for March 21/September 21, May 6/August 6, and June 21 need to have one hour added to reflect the Eastern Daylight Saving Time.

March 21/September 21

On March 21/September 21 the time period for shadows analysis begins at 7:36 AM and continues until 4:29 PM. March is considered the beginning of the growing season in New York City, and September 21, which has the same shadow patterns as March 21, is also within the growing season. On the March 21/September 21 analysis day, the Proposed Action would result in incremental shadow coverage on the Brooklyn Botanic Garden.

The Proposed Action would result in incremental shadows on the Brooklyn Botanic Garden from 7:36 AM to 7:56 AM for a duration of 20 minutes. As shown in **Figure G-6**, incremental shadows would be hardly discernible and would be limited to a small area to the west of the Palm House, including the Lily Pool Terrace, and a small portion of the Administrative Building. After 7:56 AM the garden would not experience any incremental shadow coverage as a result of the Proposed Action.

May 6/August 6

On May 6/August 6 the time period for shadows analysis begins at 6:27 AM and continues until 5:18 AM. On the midpoint between the equinoxes and the solstices, project-generated incremental shadows would reach the Brooklyn Botanic Garden.

The Proposed Action would result in incremental shadows on the Brooklyn Botanic Garden from 6:27 AM to 7:30 AM, for a duration of 1 hour and 3 minutes. As shown in **Figure G-7**, at 6:27 AM incremental shadows would generally be limited to rooftop areas of the Palm House/Atrium and the Bonsai Museum, which feature skylights for indoor plant growing. Small areas to the west of these buildings, including the Lily Pool Terrace, would also receive incremental shadows. By 7:15 AM, incremental shadows would shift eastward and would be limited to a small landscaped area with full-grown trees located between the buildings and Washington Avenue. After 7:30 AM the garden would not experience any incremental shadow coverage as a result of the Proposed Action.

June 21

On June 21 the time period for shadows analysis begins at 5:57 AM and continues until 6:01 PM. On the summer solstice, which is the day of the year with the longest period of daylight, the sun is most directly overhead and generally shadows are shortest and move across the widest angular range from west to east. On this date the Proposed Action would result in incremental shadow coverage on the Brooklyn Botanic Garden.

The proposed development would cast incremental shadows on the Brooklyn Botanic Garden from 5:57 AM to 7:14 AM, for a duration of 1 hour and 17 minutes. As shown in **Figure G-8**, at 5:57 AM incremental shadows would be limited to rooftop areas of the Palm House/Atrium and the Bonsai Museum, which feature skylights for indoor plant growing. Small areas to the west of these buildings, including the Lily Pool Terrace and Steinhardt Conservatory would also receive incremental shadows. By 6:30 AM, incremental shadows would shift eastward and would be limited to the rooftop areas of the Bonsai Museum. By 7:00 AM, incremental shadows would continue eastward and would be limited to a small landscaped

Incremental Shadows on March 21/September 21



7:36 AM



7:50 AM

Projected Developments Open Space Incremental Shadow

1. Administrative Building
2. Palm House/Atrium
3. Bonsai Museum
4. Steinhardt Conservatory
5. Lily Pool Terrace

Incremental Shadows on May 6/August 6



6:27 AM



6:45 AM

Projected Developments Open Space Incremental Shadow

1. Administrative Building
2. Palm House/Atrium
3. Bonsai Museum
4. Steinhardt Conservatory
5. Lily Pool Terrace

Incremental Shadows on May 6/August 6



7:15 AM

Projected Developments | Open Space | Incremental Shadow

1. Administrative Building
2. Palm House/Atrium
3. Bonsai Museum
4. Steinhardt Conservatory
5. Lily Pool Terrace

Incremental Shadows on June 21



5:57 AM



6:30 AM

Projected Developments | Open Space | Incremental Shadow

1. Administrative Building
2. Palm House/Atrium
3. Bonsai Museum
4. Steinhardt Conservatory
5. Lily Pool Terrace

Incremental Shadows on June 21



7:00 AM

Projected Developments | Open Space | Incremental Shadow

1. Administrative Building
2. Palm House/Atrium
3. Bonsai Museum
4. Steinhardt Conservatory
5. Lily Pool Terrace

Incremental Shadows on December 21



8:51 AM

Projected Developments | Open Space | Incremental Shadow

1. Administrative Building
2. Palm House/Atrium
3. Bonsai Museum
4. Steinhardt Conservatory
5. Lily Pool Terrace

area with full-grown trees located between the buildings and Washington Avenue. After 7:14 AM, the garden would not experience any incremental shadow coverage as a result of the Proposed Action.

December 21

On the winter solstice, December 21, the day of the year with the shortest period of daylight, the sun is low in the sky and shadows are at their longest but move rapidly. On this date the Proposed Action would result in incremental shadow coverage on the Brooklyn Botanic Garden.

The proposed development would cast incremental shadows on the Brooklyn Botanic Garden from 8:51 AM to 9:12 AM for a duration of 21 minutes. As shown in **Figure G-9**, incremental shadows would be hardly discernible and would be limited to a landscaped area with trees to the north of the Administrative Building. After 9:12 AM the garden would not experience any incremental shadow coverage as a result of the Proposed Action.

Assessment

A shadow impact occurs when project-generated incremental shadows fall on a sunlight sensitive resource or feature and reduces its direct sunlight exposure. Determining whether this impact is significant or not depends on the extent and duration of the incremental shadow and the specific context in which the impact occurs.

For open spaces, the uses and features of the space indicate its sensitivity to shadows. Shadows occurring during the cold-weather months of interest generally do not affect the growing season of outdoor vegetation; however, their effects on other uses and activities should be assessed. Therefore, this sensitivity is assessed for both (1) warm-weather-dependent features or vegetation that could be affected by a loss of sunlight during the growing season; and (2) features, such as benches, that could be affected by a loss of winter sunlight. Where lawns are actively used, the turf requires extensive sunlight. Vegetation requiring direct sunlight includes the tree canopy, flowering plants and plots in community gardens. Generally, 4 to 6 hours a day of sunlight, particularly in the growing season, is often a minimum requirement. Consequently, the assessment of an open space's sensitivity to increased shadow focuses on identifying the existing conditions of its facilities, plantings, and uses, and the sunlight requirements for each.

Brooklyn Botanic Garden

The shadows analysis determined that the duration and coverage of incremental shadows on the Brooklyn Botanic Garden would be limited. In the future with and without the Proposed Action, the shadow conditions on this open space resource would not significantly differ. The botanic garden would receive shadow coverage during the early morning hours in the future with and without the Proposed Action. Incremental shadow coverage would reach the botanic garden on the March 21/September 21, May 6/August 6, June 21, and December 21 analysis dates for a maximum duration of 1 hour and 17 minutes. Shadow coverage would be limited to areas that are predominantly rooftop. While other areas that feature landscaping, trees, lily pools, conservatories, and rooftop skylights for indoor plant growing would also receive incremental shadows, given the relatively small extent and duration of shadow coverage, these resources are not expected to be affected. Furthermore, as shadows are not static and move from west to east throughout the day, all vegetation requiring direct sunlight would continue to receive the CEQR recommended minimum of 4 to 6 hours of direct sunlight per day. Therefore, the Proposed Action would not result in significant adverse impacts on the Brooklyn Botanic Garden.

Attachment H

Urban Design and Visual Resources

I. INTRODUCTION

Together, the urban design components and visual resources of an area define the distinctive identity of a neighborhood. In an urban design assessment pursuant to the 2014 *CEQR Technical Manual*, one considers whether and how a project may change the experience of a pedestrian in the study area. The assessment focuses on the components of a project that may have the potential to alter the arrangement, appearance, and functionality of the built environment, as experienced by pedestrians in the study area. These components include building bulk, use, and type; building arrangement; block form and street pattern; streetscape elements; street hierarchy; and natural features. The concept of bulk is created by the size of a building and the way it is massed on a site. Height, length, and width define a building's size; volume, shape, setbacks, lot coverage, and density define its mass.

This attachment assesses the potential effects on urban design and visual resources that could result from the Proposed Action. While the two Applicant-owned sites would be developed by the end of 2021, an analysis year of 2023 is assumed for the project to account for the development of the projected development site that is not owned by the Applicant. The following analysis addresses each of the urban design characteristics for existing conditions and the future without and with the Proposed Action for the analysis year of 2023. As detailed in **Attachment A, "Project Description,"** the reasonable worst-case development scenario (RWCDS) for the Proposed Action includes an incremental increase of approximately 284 dwelling units (DUs), 152 of which would be affordable; 16,384 gross square feet (gsf) of retail space; and a reduction of four accessory parking spaces in the future with the Proposed Action.

II. METHODOLOGY

Determining Whether an Urban Design Analysis is Necessary

Urban design is the totality of components that may affect a pedestrian's experience of public space. These components include streets, buildings, visual resources, open space, natural features, and wind and sunlight conditions. These elements, as defined in the 2014 *CEQR Technical Manual*, are described below:

- *Streets.* The arrangement and orientation of streets define the location and flow of activity in an area, set street views, and create the blocks on which buildings and open spaces are organized. The apportionment of street space between cars, bicycles, transit, and sidewalk areas is critical to making a successful streetscape, as is the careful design of street furniture, grade, materials used, and permanent fixtures, including plantings, street lights, fire hydrants, curb cuts, or newsstands.

- *Buildings.* Buildings support streets. A building's street walls form the most common backdrop in the city for public space. A building's size, shape, setbacks, lot coverage, placement on the zoning lot and block, the orientation of active uses, and pedestrian and vehicular entrances all play major roles in the vitality of the streetscape. The public realm also extends to building façades and rooftops, offering more opportunity to enrich the visual character of an area.

- *Visual Resources.* A visual resource is the connection from the public realm to significant natural or built features, including views of the waterfront, public parks, landmark structures or districts, otherwise distinct buildings or groups of buildings, or natural resources.

- *Open Space.* For the purpose of urban design, open space includes public and private areas such as parks, yards, cemeteries, parking lots, and privately owned public spaces.

- *Natural Features.* Natural features include vegetation and geologic, topographic, and aquatic features. Rock outcroppings, steep slopes or varied ground elevation, beaches, or wetlands may help define the overall visual character of an area.

- *Wind.* Channelized wind pressure from between tall buildings and down washed wind pressure from parallel tall buildings may cause winds that jeopardize pedestrian safety.

In general, an assessment of urban design is needed when a project may have effects on one or more of the elements that contribute to the pedestrian experience, which are described above. Pursuant to the *CEQR Technical Manual*, projects that permit modification of yard, height, and setback requirements, and projects that result in an increase in built floor area beyond what would be allowed as-of-right, or in the future without the Proposed Action, require preliminary analysis. As the Proposed Action would result in the construction of new buildings with bulks and uses not permitted as-of-right under the existing zoning, a preliminary urban design and visual resources analysis is warranted.

Per criteria of Section 230 of the *CEQR Technical Manual*, a wind condition analysis is not required for the Proposed Action. The Project Area is located in the Crown Heights neighborhood of Brooklyn, and is not located in a high wind location such as along the waterfront, nor is it in a location where wind conditions from the waterfront are not attenuated by existing buildings or natural features. Therefore, a wind analysis is not warranted for the Proposed Action.

Study Area

As defined in the 2014 *CEQR Technical Manual*, the urban design and visual resources study area consists of the area where the project may influence land use patterns and the built environment. For the purpose of this assessment, the study area consists of the area within an approximate quarter-mile radius of the Proposed Rezoning Area. As shown in **Figure H-1**, the study area is roughly bounded by lots fronting Lincoln Place to the north, Rogers Avenue to the east, Sterling Street to the south, and Prospect Park/the Brooklyn Botanic Garden to the west.

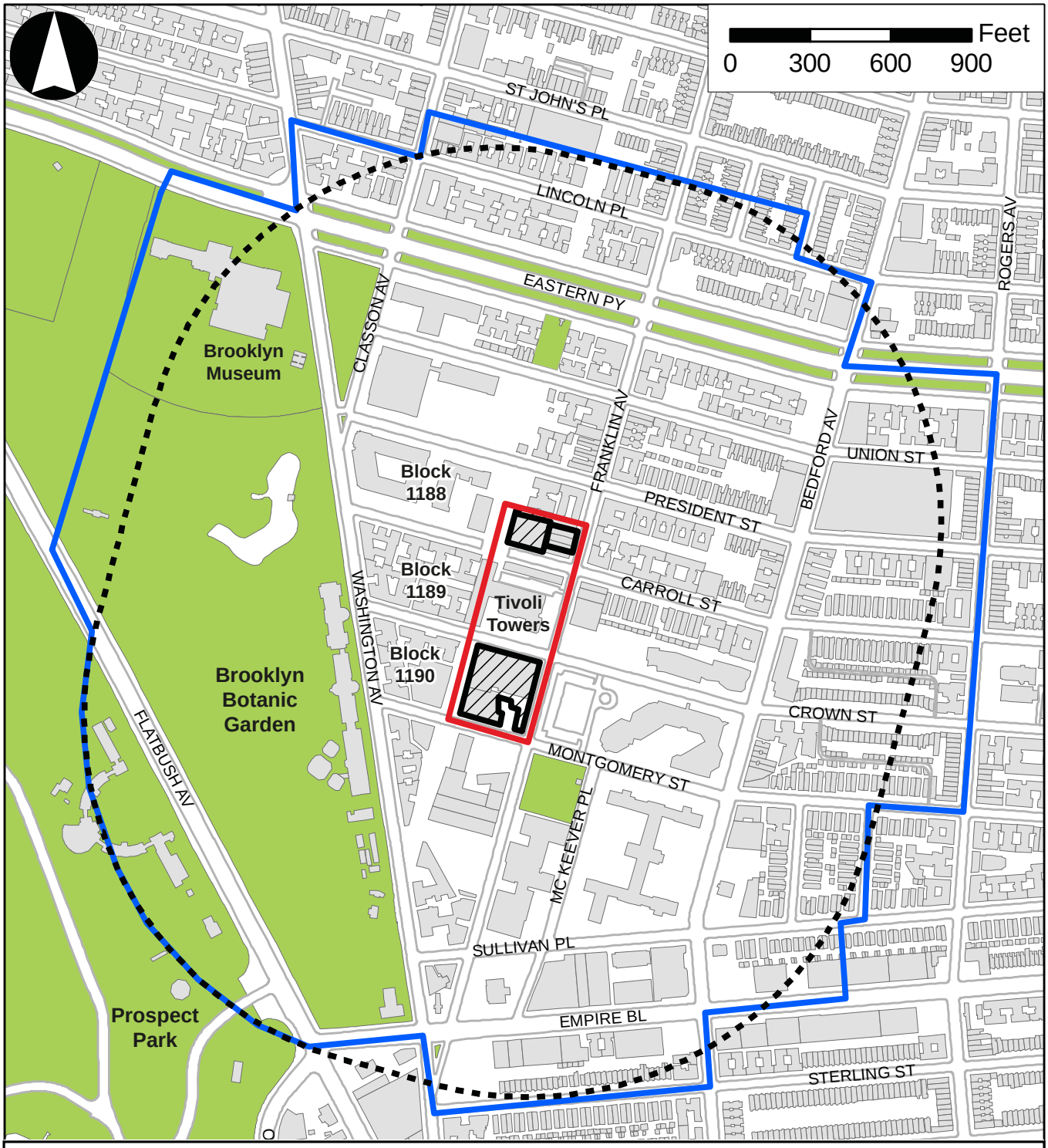
The following analysis is based on field visits, photographs, aerial views, and other graphic images of the Proposed Rezoning Area and surrounding study area. Zoning calculations, including floor area calculations, building heights, and lot coverage information are also provided for the Proposed Rezoning Area and, where applicable, the study area.

II. EXISTING CONDITIONS

Urban Design

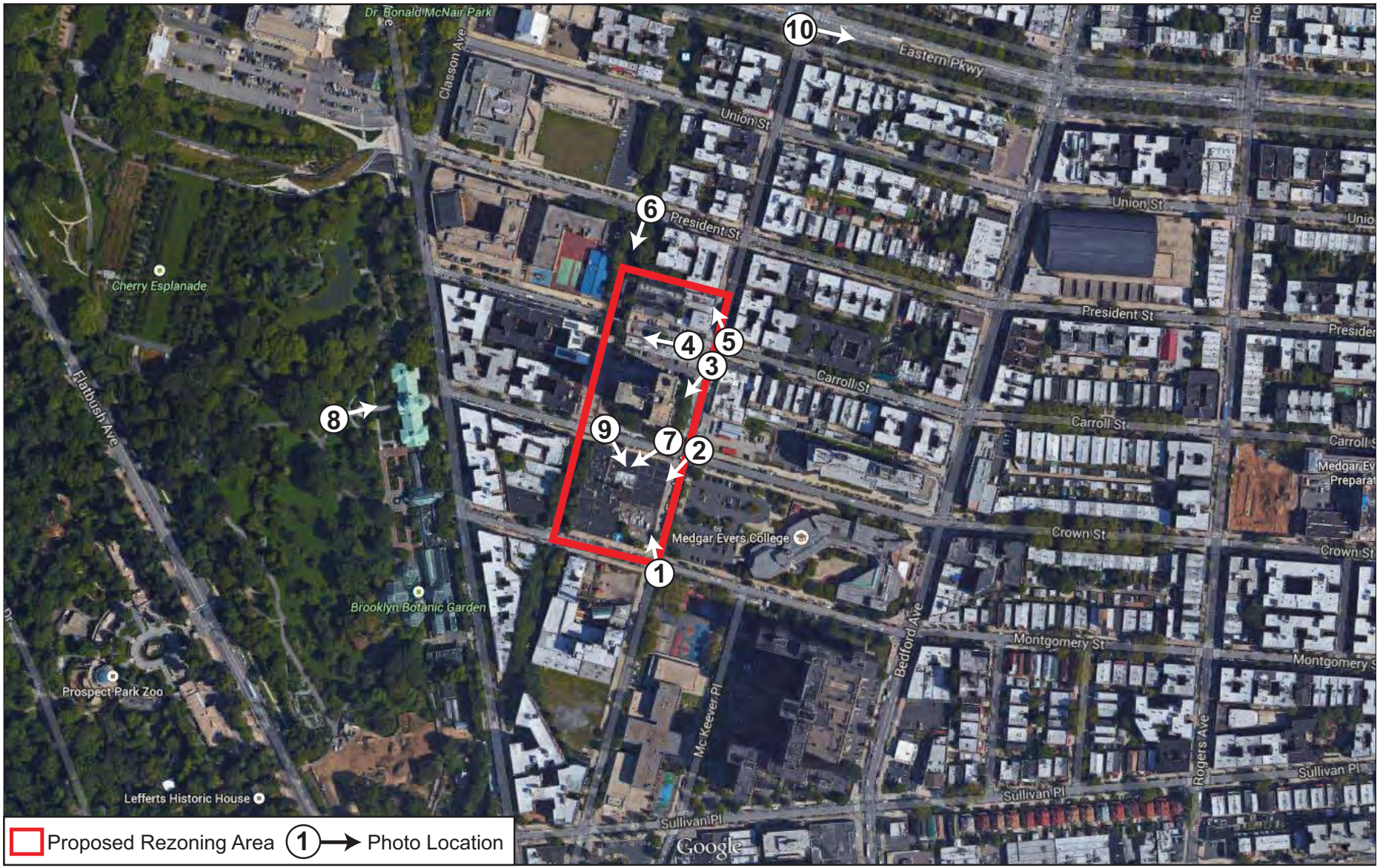
Proposed Rezoning Area

The Proposed Rezoning Area encompasses approximately 186,425 square feet (sf) of lot area in the Crown Heights neighborhood of Brooklyn (refer to **Figure H-1**). The area includes the eastern portions of three rectangular blocks (Brooklyn blocks 1188, 1189, and 1190), roughly bounded by Franklin Avenue to the east, Montgomery Street to the south, approximately 300 feet west of Franklin Avenue on the west, and



Legend

- Projected Development Sites
- Applicant-Owned Development Sites
- Proposed Rezoning Area
- Urban Design Study Area
- Quarter-Mile Radius
- Building Footprints
- Open Spaces



Franklin Avenue Rezoning EAS

Figure H-2a

Aerial Map & Photo Key



1. View looking north from Montgomery Street and Franklin Avenue.



2. View looking south from Crown Street and Franklin Avenue.



3. Southwest corner of Carroll Street and Franklin Avenue.



4. Looking west along Carroll Street from Franklin Avenue.



5. Northwest corner of Carroll Street and Franklin Avenue.



6. Franklin Avenue Shuttle tracks from President Street.



7. View west along Crown Street near Development Site 2.



8. Brooklyn Botanic Garden's Laboratory Adminsitration Building.



9. View southeast from Crown Street, towards Ebbets Field Houses.



10. View east along Eastern Parkway from Franklin Avenue.

131 feet south of President Street on the north. The Proposed Rezoning Area is located within R6A, R6A/C1-3, and R8A zoning districts.

Buildings

Block 1190
The eastern portion of block 1190 located within the Proposed Rezoning Area is comprised of an active construction site. The former vacant, low-rise industrial/manufacturing buildings and associated accessory parking lots (refer to **Figure H-1**) have been removed to accommodate the planned construction activities.

To the west are the below-grade Franklin Avenue Shuttle tracks (lot 26) which are surrounded by fencing and trees at the street level. The tracks are covered by vehicular and pedestrian bridges on Crown and Montgomery Streets, allowing through-traffic on each street. They would be bisected by the proposed zoning boundary. There is also a 610 sf vacant lot (lot 28) located immediately to the east of the shuttle right-of-way.

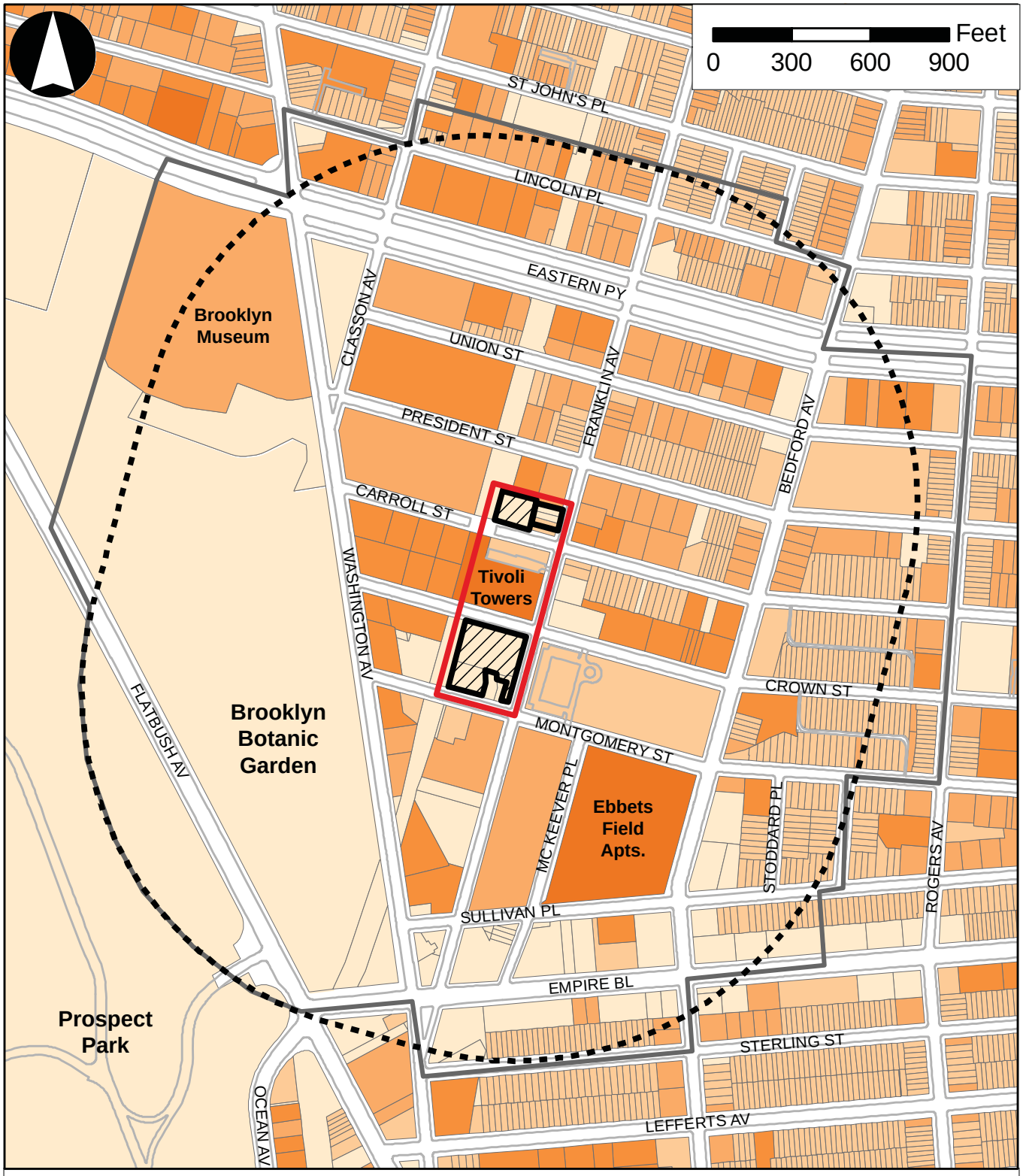
Block 1189
As shown in **Figure H-1**, the portion of block 1189 in the Proposed Rezoning Area accommodates the New York Police Department's (NYPD's) Transit District 32 facility at 960 Carroll Street (lot 31) and the eastern portion of Tivoli Towers at 49 Crown Street (lot 60). The two-story NYPD building occupies the northern half of the lot (see Photo 3 in **Figure H-2b**). It forms a continuous streetwall along Carroll Street from Franklin Avenue to the Franklin Avenue Shuttle right-of-way, with an entrance in the center of the block. The southern half of the lot is occupied by an accessory, at-grade parking lot, which has a vehicular entrance on Franklin Avenue. The NYPD facility has a built FAR of 0.79, well below the maximum FAR of 6.02 permitted in R8A zoning districts.

The 33-story Tivoli Towers, one of the tallest buildings in the surrounding area with a built FAR of 5.0 (an FAR of 7.08 if the parking area is not included), are located on lot 60, immediately to the south of the NYPD facility. Tivoli Towers has three wings which are setback from the street and surrounded by lawns, trees, shrubbery, fencing, and pavement. Each apartment in the building has a projecting balcony. There is an enclosed, one-story garage located on the western side of the building. A portion of the parking garage is located immediately above the below-grade Franklin Avenue Shuttle tracks. The garage has two driveway entrances on Franklin Avenue and one on Carroll Street. There are also pedestrian entrances to Tivoli Towers on Franklin Avenue and Crown Street; each pedestrian entrance is a gated access point.

Block 1188
The eastern portion of block 1188 located within the Proposed Rezoning Area is comprised of low- to mid-rise buildings of varying densities (refer to **Figures H-3** and **H-4**). Buildings in this section of the Proposed Rezoning Area are generally built out to the lot lines, forming continuous streetwalls on Franklin Avenue and Carroll Street, as well as President Street to the north. These buildings accommodate a variety of uses, including residential, commercial, mixed-use, and vacant industrial/manufacturing buildings. Block 1188 is in an R6A zoning district with a C1-3 commercial overlay extending 100 feet west from Franklin Avenue.

The four-story apartment building at 1000 President Street (lot 44) would be bisected by the proposed zoning boundary. The existing building on lot 44 has a built FAR of 3.7, which exceeds the maximum permitted FAR of 3.0 in R6A zoning districts. The residential entrance is located on President Street.

To the south of 1000 President Street (lot 44), there are two, one-story commercial buildings at 882 and 884 Franklin Avenue (Lots 53 and 54, respectively). Each of these buildings is built out to the lot line. Both buildings have built FARs of 1.0. 882 Franklin Avenue (lot 53) is currently vacant and 884 Franklin Avenue (lot 53) accommodates the Crown Star Laundromat. Immediately to the south are 886 and 888 Franklin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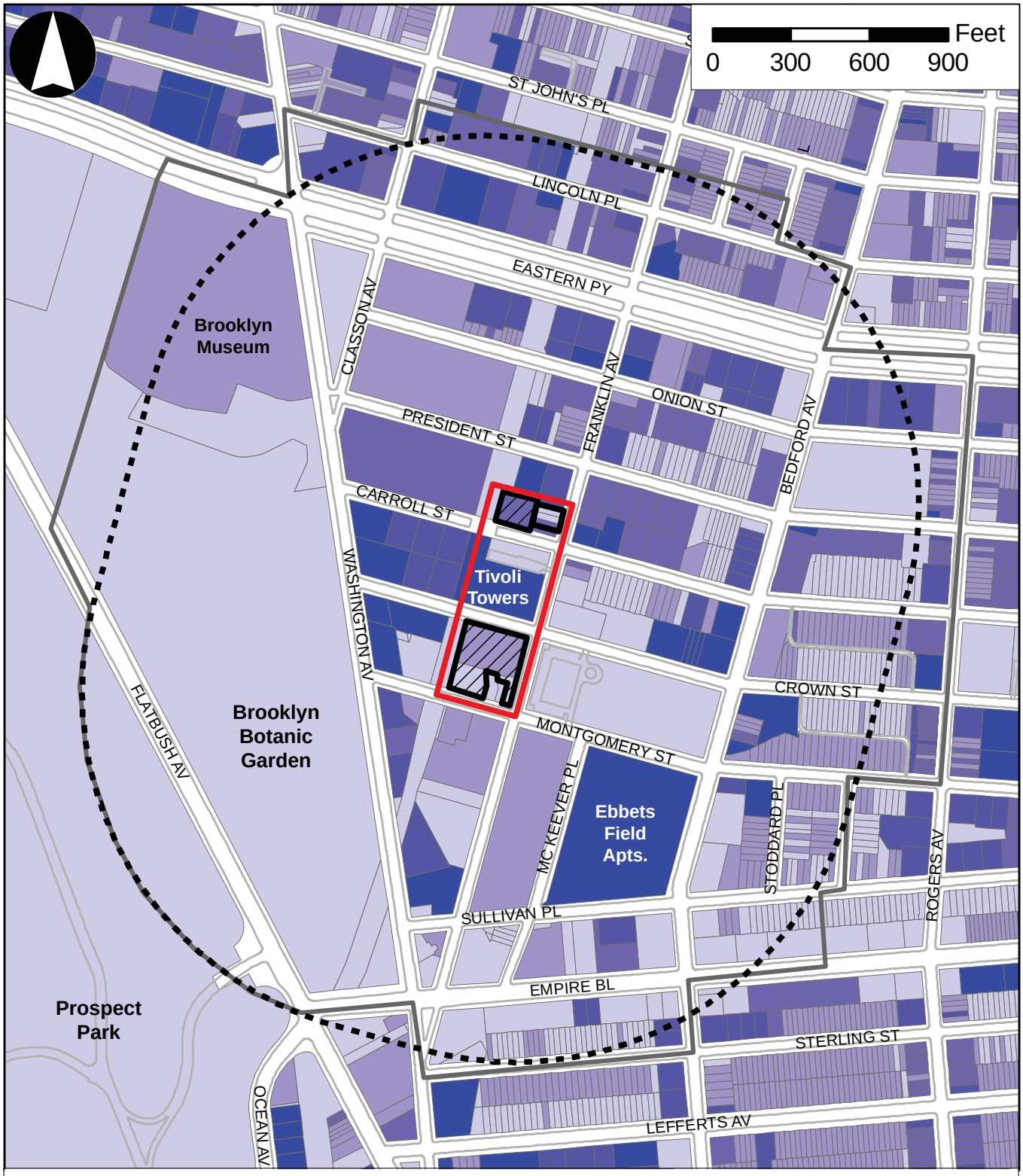
Brooklyn Museum
Tivoli Towers
Brooklyn Botanic Garden
FLATBUSH AV
CROWN ST
MONTGOMERY ST
MC KEEVER PL
Ebbets Field Apts.
STODDARD PL
ROGERS AV
SULLIVAN PL
EMPIRE BL
STERLING ST
Prospect Park
OCEAN AV
LEFFERTS AV
Legend
Projected Development Sites
Applicant-Owned Development Sites
Proposed Rezoning Area
Urban Design Study Area
Number of Floors
0 - 1 Floor
2 - 3 Floors
4 - 5 Floors
6 - 10 Floors
11+ Floors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Projected Development Sites
Applicant-Owned Development Sites
Proposed Rezoning Area
Urban Design Study Area
Built FAR
0.0 - 1.0 FAR
1.1 - 2.0 FAR
2.1 - 3.0 FAR
3.1 - 4.0 FAR
4.1+ FAR

Avenue (lots 55 and 56, respectively). These three-story buildings are both mixed-use buildings with commercial space on the first floor and residential space on the upper floors (see Photo 5 in **Figure H-2c**). 886 Franklin Avenue has an existing FAR of 2.0 and accommodates the Franklin and Carroll Pharmacy. 888 Franklin Avenue has an existing FAR of 2.3 and accommodates the Carroll Street Discount Corp. on the Franklin Avenue frontage and the Daisy Beauty Salon and Reclaimed Home store on the Carroll Street frontage. Most of the ground-floor commercial spaces on this portion of block 1188 have awnings projecting from the building façade above the storefronts.

The vacant, one-story industrial/manufacturing building at 931 Carroll Street (lot 58) has been demolished to accommodate the planned as-of-right development. Construction fencing is currently located at the perimeter of the site. To the west is an open subway cut for the Metropolitan Transportation Authority (MTA) Franklin Avenue Shuttle right-of-way (lot 35), which would be bisected by the Proposed Rezoning Area. The shuttle tracks on this block are located below the street level in an open cut. The subway right-of-way is enclosed in fencing and lined with trees. While there is no vehicular access across the subway tracks on Carroll Street, a pedestrian bridge provides connectivity along Carroll Street across the subway cut (see Photo 6 in **Figure H-2c**).

Table H-1:
Existing Descriptions of Lots within the Proposed Rezoning Area

Block	Lot	Lot Area (sf)	Projected Development Sites[1]	Primary Zoning[2]	Comm. Overlay	Existing Land Uses[3]	Owner
1188	35[4]	25,865	-	R6A	-	Transportation (Franklin Ave. Shuttle)	NYC Transit Authority
	44[4]	16,200	-		-	Multi-Family Residential Walkup	Franklin President Associates LP
	53	2,500	Projected Development Site 3		C1-3	Commercial/Office	Sonia Gallimore
	54	2,500				Commercial/Office	884 Realty Corp.
	55	2,500				Mixed Residential/Commercial	886 Frank Ave, LLC
	56	2,500	-			Mixed Residential/Commercial	Empire Holdings LP
	58	17,703	Projected Development Site 1		-	Construction (Vacant)	Cornell Realty Management LLC
1189	31	19,024	-	R8A	-	Public Facility/Institution (NYPD Transit District 32)	NYC Transit Authority
	60	63,506	-		-	Multi-Family Residential w/ Elevator	Tivoli BI, LLP
1190	26	18,340	-	R6A	-	Transportation (Franklin Ave. Shuttle)	NYC Transit Authority
	28	610	-		-	Vacant	DCAS
	46	2,289	-		-	Vacant	AAFE
	48	4,016	-		-	Vacant	AAFE
	29	38,701	Projected Development Site 2		-	Construction (Vacant)	Cornell Realty Management LLC
	45	3,765			-	Construction (Vacant)	
	50	13,496			-	Construction (Vacant)	

Notes: The Applicant-owned projected development sites are highlighted.
[1] The Proposed Rezoning Area would only include the area within 300 feet of Franklin Avenue, bisecting block 1188, lot 35; block 1189, lot 60; and block 1190, lot 26; and the area within 131 feet of Carroll Street, bisecting block 1188, lots 35 and 44.
[2] Refer to **Figures C-1** and **C-2** in **Attachment C, "Land Use, Zoning, and Public Policy."**

Streets & Streetscape
The Proposed Rezoning Area is characterized by a regular street grid, bounded by Franklin Avenue to the east, Montgomery Street to the south, and intersected by parallel Carroll and Crown Streets (refer to **Figure**

H-1). Franklin Avenue is a minor two-lane southbound arterial which forms the eastern boundary of the Proposed Rezoning Area. It measures approximately 75 feet in width, including two parallel parking lanes, two travel lanes, and 15-foot wide concrete sidewalks. Montgomery Street measures approximately 70 feet in width, including two parallel parking lanes, a single eastbound travel lane, and 15-foot wide concrete sidewalks. To the north, the parallel stretch of Crown Street that extends through the Proposed Rezoning Area is open to two-way traffic and measures approximately 70 feet in width, including two parallel parking lanes, two travel lanes, and 15-foot wide concrete sidewalks. The section of Carroll Street located in the Proposed Rezoning Area becomes a dead end at the Franklin Avenue Shuttle pedestrian overpass. The pedestrian overpass is marked by three-foot tall brown barriers connected by metal chains at the end of Carroll Street. Carroll Street measures approximately 75 feet in width, including two travel lanes and 20-foot wide concrete sidewalks, and unmarked perpendicular parking with cars partially parked on the sidewalks.

Sidewalks within the Proposed Rezoning Area are in fair to good condition. The sidewalks around the construction site on Franklin Avenue and Montgomery Street are showing signs of disrepair, while the sidewalks around Tivoli Towers and the NYPD facility appear to be newly laid. There are a few streetlights and some street trees scattered throughout the Proposed Rezoning Area, but there is almost no street furniture in the area.

Natural Features & Open Space
The topography of the Proposed Rezoning Area is generally flat, and contains no notable natural features or open space resources. The Proposed Rezoning Area includes street trees and landscaping that is typical of the urban environment. The exposed sections of the Franklin Avenue Shuttle tracks on these blocks are lined with trees. On block 1189, Tivoli Towers is surrounded by lawns, trees, and shrubbery; street trees line Carroll Street adjacent to the NYPD facility.

Study Area

Buildings
The study area contains a variety of building types, heights, and densities. The area immediately surrounding the Proposed Rezoning Area includes a mix of mid-rise residential, commercial, mixed-use, and industrial/manufacturing buildings built-out to the lot lines, juxtaposing high-rise, setback residential towers, such as the 25-story Ebbets Field Houses apartment buildings, and low-rise, setback institutional buildings, such as the City University of New York (CUNY)'s Medgar Evers College and several public elementary, middle, and high schools (refer to **Figure H-2d**). As shown in **Figure H-1**, the denser, mid-rise buildings generally create continuous streetwalls along Franklin Avenue and adjacent sidestreets, while the taller residential towers and institutional buildings are typically setback from the street line, surrounded by landscaping and parking.

The blocks in the northern, northeastern, and eastern sections of the study area contain a mix of low-rise, predominately residential buildings on narrow lots and mid-rise, mixed-use buildings, generally built-out to the lot lines, forming continuous streetwalls. As shown in **Figure H-4**, the blocks to the north of Eastern Parkway are very densely built, while blocks east of Bedford Avenue are less densely built.

The blocks in the southern and southeastern sections of the study area generally have low-rise residential buildings on narrow lots in the mid-block, and low-rise commercial buildings along Empire Boulevard and Bedford Avenue (refer to **Figure H-3**). The buildings in this area are mostly built-out to the lot lines, creating continuous streetwalls.

As shown in **Figure H-1**, the western section of the study area accommodates large open space resources which contain some scattered low- and mid-rise buildings. A portion of Prospect Park is located in the study

area, including the Prospect Park Zoo buildings and the Landmarks Preservation Commission (LPC)-designated Lefferts Homestead. The study area also encompasses the landmarked Brooklyn Museum, the Bureau of Fire Communications, Brooklyn Central Office building, and the Laboratory Administration Building, located in the Brooklyn Botanic Garden.

Streets & Streetscape
As shown in **Figure H-1**, the study area has an irregular street pattern as a result of the merging of different grid orientations as well as the superblocks of Prospect Park and the Brooklyn Botanic Garden/Brooklyn Museum. Main thoroughfares in the study area include north-southbound Flatbush Avenue to the west of the Proposed Rezoning Area, and east-westbound Eastern Parkway to the north of the Proposed Rezoning Area.

Most of the streets in the secondary study area have street trees and streetlights. Aside from Eastern Parkway, there is almost no street furniture in the study area. There are several small bike racks, parking meters, and bus stop shelters located along Flatbush Avenue, Franklin Avenue, and Bedford Avenue. Eastern Parkway, a designated Scenic Landmark, is a unique street in the area, with express and local travel lanes separated by walking and biking paths lined with benches and trees.

Natural Features & Open Space
Similar to the Proposed Rezoning Area, the topography of the study area is generally flat. The study area includes open space resources and natural features. A portion of Eastern Parkway, a designated Scenic Landmark, is located in the northern portion of the study area. As detailed above, the boulevard is lined with walking and biking paths, benches, and trees. The western portion of the study area also includes a section of Prospect Park, as well as the Brooklyn Botanic Garden and the Brooklyn Museum. To the east is the Dr. Ronald McNair Park. All of these open space resources contain a variety of natural features.

Visual Resources

Proposed Rezoning Area
There are no significant visual resources in the Proposed Rezoning Area. However, sections of surrounding landmarks and open space resources are visible from certain vantage points in the Proposed Rezoning Area. Portions of the landmarked Laboratory Administration Building in the Brooklyn Botanic Garden can be seen from the sidewalks of Crown and Montgomery Streets in the Proposed Rezoning Area. To the north, a section of Eastern Parkway, a designated Scenic Landmark, can be seen from the sidewalks of Franklin Avenue in the Proposed Rezoning Area.

Study Area
There are several significant visual resources located within an approximate quarter-mile radius around the Proposed Rezoning Area, including the LPC-designated Laboratory Administration Building in the Brooklyn Botanic Garden and the LPC-designated Scenic Landmark of Eastern Parkway, as discussed above. Other significant visual resources in the study area are not visible from the Proposed Rezoning Area, such as the LPC-designated Brooklyn Central Office, Bureau of Fire Communications building in the Brooklyn Botanic Garden, the LPC-designated Lefferts Homestead in Prospect Parks, and the LPC-designated Brooklyn Institute of Arts and Sciences (Brooklyn Museum).

III. FUTURE WITHOUT THE PROPOSED ACTION (NO-ACTION CONDITION)

Urban Design

Proposed Rezoning Area

Buildings
As detailed in **Attachment A, "Project Description,"** in the future without the Proposed Action, the RWCDS assumes that two sites in the Proposed Rezoning Area could be redeveloped pursuant to the existing zoning. As shown in **Table H-2**, Applicant-owned projected development Site 1 (block 1188, lot 58) would be redeveloped with the maximum allowable 3.0 FAR of market-rate residential space. It is assumed that projected development Site 1 would accommodate a seven-story, 70-foot tall, approximately 69,524 gsf building.

Lots 29, 45, and 50 of Applicant-owned projected development Site 2 (block 1190) would be redeveloped with the maximum 3.0 residential FAR under No-Action conditions. This portion of the site would accommodate three, seven-story, 70-foot tall buildings with approximately 225,821 total sf (refer to **Figure H-5**).

It is assumed that the AAFE Land (lots 46 and 48) would not be redeveloped under No-Action conditions.

Projected development Site 3, which is not owned by the Applicant, is not anticipated to be redeveloped in the No-Action condition as the sites are not in common ownership and the existing buildings exceed half of the available FAR under existing zoning.

Table H-2:
No-Action Scenario

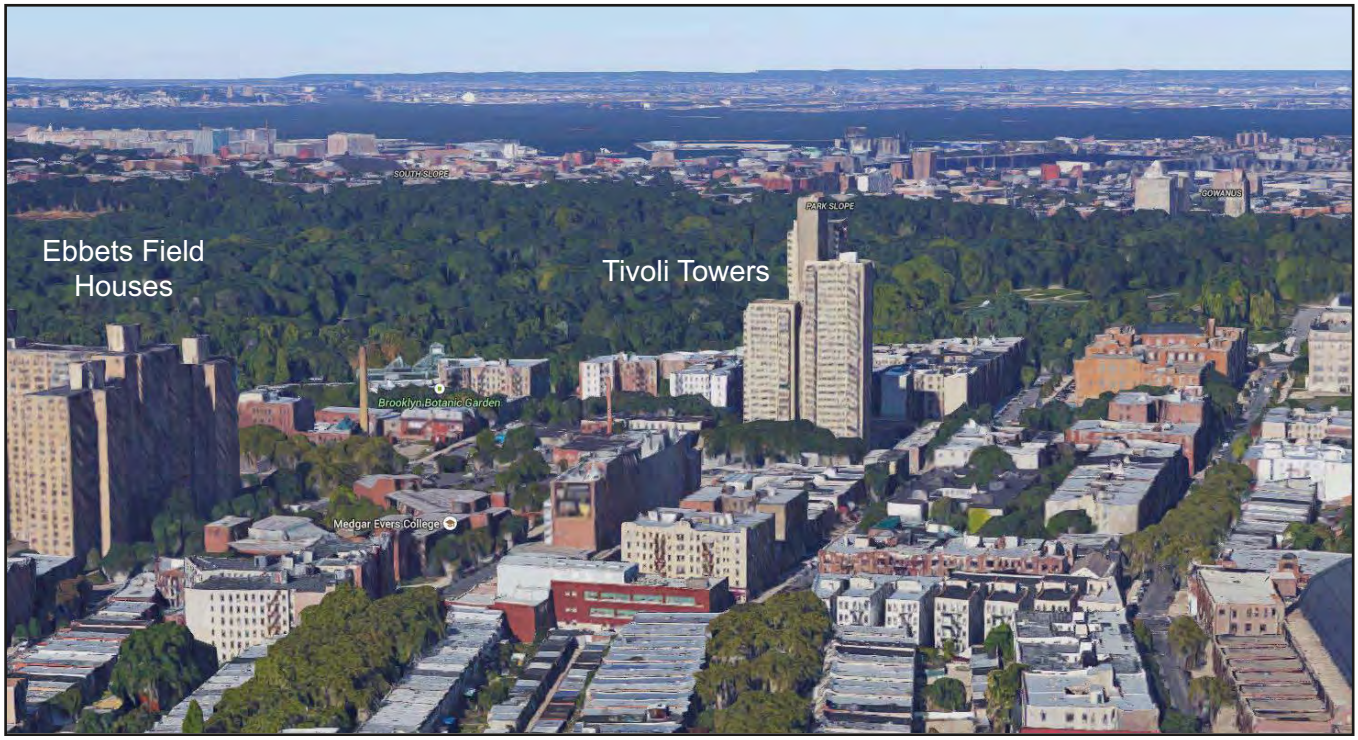
Block	Lot	Projected Dev. Sites	Existing Zoning	Existing Land Use	Existing Built FAR	Max. No-Action FAR	Max. No-Action Res. GSF	Max. No-Action Comm. GSF
1188	58	Projected Dev. Site 1	R6A	Industrial/Manufacturing (Vacant)	1.0	3.0	69,524 (69 DUs)	0
1190	29	Projected Dev. Site 2	R6A	Industrial/Manufacturing (Vacant)	1.1	3.0	225,821 (208 DUs)	0
	45		R6A	Vacant	0			
	50		R6A	Industrial/Manufacturing (Vacant)	1.0			

Notes: The Applicant-owned projected development sites are highlighted. No-Action buildings on the Applicant-owned sites are based on as-of-right plans filed with the New York City Department of Buildings (DOB) for block 1188, lot 58 and block 1190, lots 29, 45, and 50.

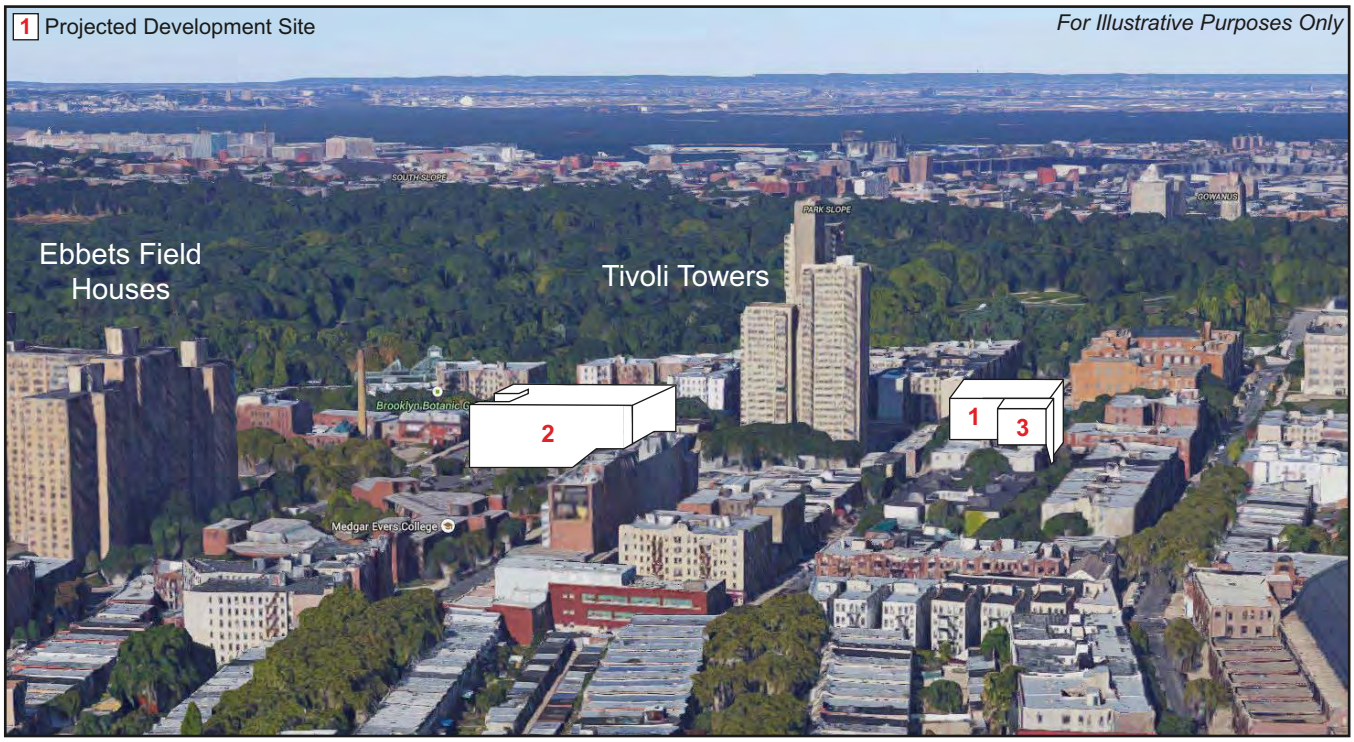
The anticipated No-Action buildings on the two projected development sites would replace vacant sites. All of the buildings on the two projected development sites have been demolished.

No other changes to buildings are anticipated in the Proposed Rezoning Area under No-Action conditions.

Streets & Streetscape
No changes to streets or streetscapes are anticipated in the future without the Proposed Action.



1. Existing Conditions: View west of proposed rezoning area.



2. No-Action Conditions: View west of proposed rezoning area.

Natural Features & Open Space
As discussed above, the Proposed Rezoning Area does not contain any open space resources. The street trees lining Carroll Street, Franklin Avenue, and the Franklin Avenue Shuttle tracks, and the lawns, trees, and shrubbery surrounding Tivoli Towers are expected to remain similar to existing conditions under future No-Action conditions.

Study Area

Buildings
As detailed in **Attachment C, "Land Use, Zoning, and Public Policy,"** there are sevenplanned projects anticipated to be constructed within the approximate quarter-mile study area in the future without the Proposed Action. These No-Action developments include a four-story, mixed-use building at 995 Washington Avenue; an eight-story, mixed-use building at 1 Sullivan Place; a six-story, mixed-use building at 90 Sullivan Place; an eight-story, residential building at 564 Saint John's Place, a 12-story residential building at 109-111 Montgomery Street, and a four-story self-storage facility at 155 Empire Boulevard. Additionally, it is expected that the 138,000 sf Bedford-Union Armory on Bedford Avenue will be converted and expanded in the future No-Action scenario to include a community center and 415 housing units (refer to **Figure C-3** in **Attachment C**). These projects are anticipated to enhance the existing character of the surrounding neighborhood within the quarter-mile study area and continue the trends of redevelopment through the introduction of new housing options, ground-floor retail spaces, and community facility spaces.

Streets & Streetscape
In the No-Action condition, the study area streetscape is expected to improve, as compared to existing conditions (also included in the list of planned No-Action developments) . As detailed in **Attachment C**, CUNY Medgar Evers College's Crown Plaza project is anticipated to convert the parking lanes along Crown Street, between Franklin Avenue and Bedford Avenue, into green space for the adjacent campus buildings. The new streetscape would include additional trees, landscaping, pedestrian paths, and classroom seating areas. This project is expected to enhance the existing streetscape in the vicinity of the Proposed Rezoning Area.

Natural Features & Open Space
The existing natural features in the study area are not expected to change significantly in the future without the Proposed Action. As discussed above and detailed in **Attachment C**, it is anticipated that CUNY's Crown Plaza project will introduce a publicly-accessible open space resource into the study area in the No-Action scenario, including trees, landscaping, pedestrian paths, and classroom seating areas.

Visual Resources

Proposed Rezoning Area
There are no visual resources in the Proposed Rezoning Area, and these conditions are not expected to change in the future without the Proposed Action. As the two projected development sites in the Proposed Rezoning Area are anticipated to be developed in the future without the Proposed Action, views from the area will therefore change in the future No-Action scenario. However, no view corridors of significant visual resources would be obstructed in future No-Action conditions. The views of the LPC-designated Laboratory Administration Building in the Brooklyn Botanic Garden down Crown and Montgomery Streets, and views of the LPC-designated Scenic Landmark of Eastern Parkway down Franklin Avenue would remain the same as in existing conditions as these views are only available along street corridors.

Study Area
As discussed above, the setting of study area visual resources may change in the future without the Proposed Action as the No-Action development sites are redeveloped with new buildings of approximately four- to eight-stories in height. Additionally, the two projected development sites in the Proposed Rezoning Area would similarly alter views in the study area from adjacent publicly accessible locations such as sidewalks. However, development on these sites would not obstruct any existing view corridors of significant visual resources in the study area, as all new development would occur on existing blocks. The new buildings are expected to further define view corridors in the study area by creating solid streetwalls.

IV. FUTURE WITH THE PROPOSED ACTION (WITH-ACTION CONDITION)

Urban Design

Proposed Rezoning Area
Development facilitated by the Proposed Action would be built on existing blocks, and would not entail any changes to topography, street pattern and hierarchy, block shapes, or natural features in the Proposed Rezoning Area. As detailed in **Attachment A, "Project Description,"** under With-Action conditions, the proposed zoning map amendment and zoning text amendment would be implemented in the Proposed Rezoning Area. As such, the maximum allowable FAR in the Proposed Rezoning Area would increase to 7.2 when fully utilizing the Inclusionary Housing Bonus. As discussed below, the Proposed Action would not have any significant adverse impacts on urban design in the Proposed Rezoning Area.

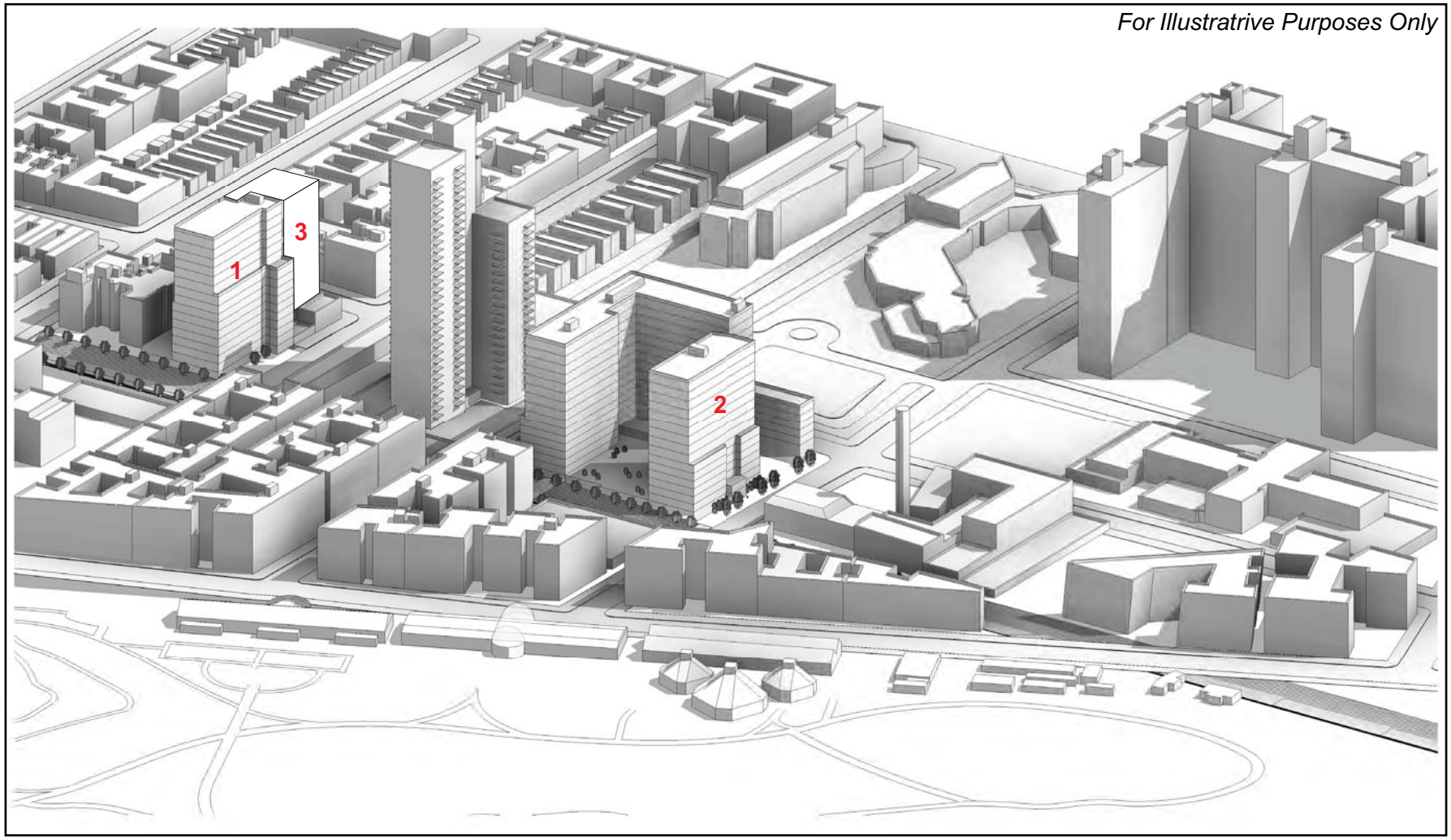
Buildings

Block 1190
Applicant-owned projected development Site 2 (block 1190, lots 29, 48, and 50) would be redeveloped with the maximum allowable 7.2 FAR in the future with the Proposed Action. The proposed building on Site 2 would be up to 175 feet tall, an increase of up to 105 feet over No-Action conditions. As such, the proposed building would be 427,634 sf, an increase of 201,813 sf over No-Action conditions (refer to **Figure H-6a & H-6b**).

As detailed in **Attachment A**, it is anticipated that lots 46 and 48 would not be developed by AAFE under future With-Action conditions. The AAFE land will be assessed in a conceptual analysis to evaluate a scenario where the restrictions are removed and the site is developed pursuant to the proposed zoning. Therefore, no other changes on block 1190 within the rezoning area are expected in the future with the Proposed Action.

Block 1189
Under With-Action conditions, no changes to block 1189 are anticipated to occur. As detailed in **Attachment A**, the existing NYPD facility and Tivoli Towers would remain unchanged as compared to No-Action conditions.

Block 1188
As shown in **Table H-3**, in the future with the Proposed Action, Applicant-owned projected development Site 1 (block 1188, lot 58) would be redeveloped with the maximum allowable 7.2 FAR. The proposed building would be up to 175 feet tall and 134,342 sf, an increase of up to 105 feet and 64,818 sf over No-Action conditions (refer to **Figure H-6a** and **H-6b**).

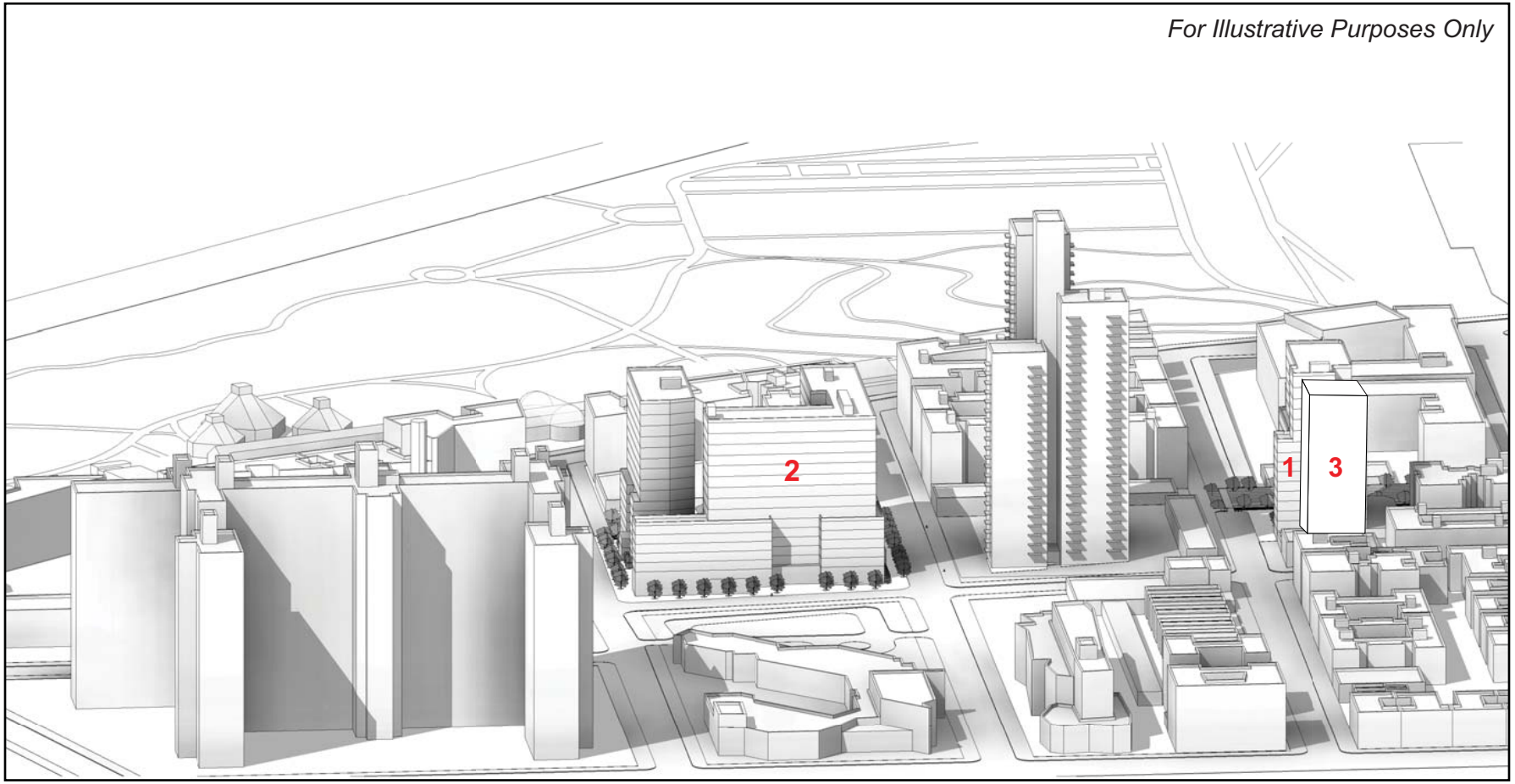


1 Projected Development Site

Franklin Avenue Rezoning EAS

Figure H-6a

Conceptual With-Action Renderings



1 Projected Development Site

Franklin Avenue Rezoning EAS

Figure H-6b
Conceptual With-Action Renderings

Table H-3:
With-Action Scenario

Block	Lot	Projected Dev. Sites	Existing Built FAR	Max. No-Action FAR	Max. No-Action Res. GSF	Max. No-Action Comm. GSF	Max. W/ Action FAR[1]	Max. W/Action Res. GSF	Max. W/Action Comm. GSF	Max. Res. GSF Increment[2]	Max. Comm. GSF Increment[2]
1188	53	Projected Dev. Site 3	1.0	3.0	2,575 (4 DUs)	7,400	7.2	46,500 (47 DUs)	7,500	+43,925 (43 DUs)	+100
	54		1.0								
	55		2.0								
	58	Projected Dev. Site 1	1.0	3.0	69,524 (69 DUs)	0	7.2	134,342 (128 DUs)	0	+64,818 (59 DUs)	0
1190	29	Projected Dev. Site 2	1.1	3.0	225,821 (208 DUs)	0	7.2	411,350 (390 DUs)	16,284	+185,529 (182 DUs)	+16,284
	45		0								
	50		1.0								
TOTAL WITH-ACTION INCREMENT:										**+294,272 (284 DUs)**	

Notes: The Applicant-owned projected development sites are highlighted.
[1]The maximum allowable With-Action FAR in the Proposed Rezoning Area increases to 7.2 FAR when utilizing the proposed Inclusionary Housing Bonus.
[2]The maximum building increment is the difference between the maximum allowable With-Action square footage and the maximum allowable No-Action square footage.

Projected development Site 3 on block 1188, which is not owned by the Applicant, is also anticipated to be redeveloped in the With-Action scenario (lots 53, 54, and 55). As shown in **Table H-3**, under With-Action conditions, projected development Site 3 would accommodate up to a 175-foot tall, approximately 54,000 sf building, an increase of up to 80 feet and 46,500 sf over No-Action conditions.

It is anticipated both projected development Site 1 and Site 2 would be partially visible from several locations in the Brooklyn Botanic Garden. **Figure H-7** provides an illustrative view of the projected development sites from a pathway near the LPC-designated Laboratory Administration Building. From this vantage point, the 33-story Tivoli Towers complex remains the tallest visible structure, while projected development Site 1 and Site 2 are visible just above the treeline. Additionally the 12-story No-Action development under construction at 109-111 Montgomery Street can be seen in **Figure H-7**, as it is located west of projected development Site 2, between the site and the Botanic Garden; therefore, views from the Botanic Garden towards Site 2 would be partially obstructed by the structure at 109-111 Montgomery Street.

As detailed in **Attachment A**, no other changes on block 1188 are expected in the future with the Proposed Action.

Streets & Streetscape
In the future with the Proposed Action, it is expected that new street trees would be provided on the sidewalks surrounding Applicant-owned projected development sites, as shown in **Figures H-6a** and **H-6b**. In addition to the new ground-floor retail space on projected development Site 2 and the creation of a continuous streetwall as a result of the Proposed Action, these street trees would help to enhance the pedestrian experience in the area. No streets or other streetscape elements in the Proposed Rezoning Area would be altered as a result of the Proposed Action.

Natural Features & Open Space
As discussed above, the Proposed Rezoning Area does not contain any open space resources. In the future with the Proposed Action, it is anticipated that private open spaces would be provided on Applicant-owned



Franklin Avenue EAS **Figure H-7**

With-Action View of Sites 1 & 2 From Botanic Garden

projected development Sites 1 and 2 for building residents.

The With-Action scenario would not include any changes to natural resources in the Proposed Rezoning Area. The trees lining Carroll Street, Franklin Avenue, and the Franklin Avenue Shuttle tracks, and the lawns, trees, and shrubbery surrounding Tivoli Towers are expected to remain similar to existing and No-Action conditions in the future with the Proposed Action.

Study Area

The Proposed Action is site-specific, and would not alter any street patterns, street hierarchies, block forms, building uses, bulk regulations, or arrangements in the study area surrounding the Proposed Rezoning Area. The proposed R8X zoning district is a contextual district governed by Quality Housing bulk regulations, which encourages development consistent with the character of established neighborhoods, resulting in high lot coverage buildings set at or near the street line with height limits. Therefore, the proposed rezoning would facilitate development that would be consistent with the scale and density of existing and anticipated developments in the surrounding study area. The Proposed Action would be generally consistent with the existing medium- and high-density R6, R6A, and R8A zoning districts immediately surrounding the Proposed Rezoning Area. Development facilitated by the Proposed Action would not be out of scale with the surrounding neighborhood, which currently encompasses the 33-story Tivoli Towers immediately adjacent to the projected development sites, and the 25-story Ebbets Field Houses to the southeast of the Proposed Rezoning Area (refer to **Figure H-3**). Other planned developments in the area, including the 12-story residential development being constructed at 109-111 Montgomery Street, would continue the trend of mid-rise developments in this area. Additionally, the Proposed Action would facilitate the construction of new buildings that would be in keeping with the increasingly residential character of the area, while introducing ground-floor retail spaces, and extending the commercial corridor and pedestrian activity of Franklin Avenue south into the Proposed Rezoning Area. As such, the Proposed Action is not anticipated to result in any significant adverse impacts to urban design in the study area surrounding the Proposed Rezoning Area, but rather is expected to complement the urban design of the area.

Visual Resources

Proposed Rezoning Area

As discussed above, the Proposed Rezoning Area does not contain any visual resources, and this is not expected to change in the future with the Proposed Action. The three projected development sites in the Proposed Rezoning Area would accommodate taller buildings under With-Action conditions than under No-Action conditions. However, no view corridors of significant visual resources would be obstructed as a result of these height increases. Views of the LPC-designated Laboratory Administration Building in the Brooklyn Botanic Garden from the sidewalks of Crown and Montgomery Streets in the Proposed Rezoning Area, and views of the LPC-designated Scenic Landmark of Eastern Parkway from the sidewalks of Franklin Avenue in the Proposed Rezoning Area would remain unchanged. As such, the Proposed Action would not have any significant adverse impacts on visual resources in the Proposed Rezoning Area.

Study Area

Under With-Action conditions, buildings on the three projected development sites in the Proposed Rezoning Area would be up to 105 feet higher than under No-Action conditions. Additionally, these buildings would have an FAR of 7.2, approximately 4.2 more FAR than permitted in the No-Action scenario. As such, these new buildings would alter views in the study area from adjacent publicly accessible locations such as sidewalks, in comparison to No-Action conditions. The anticipated 175-foot tall buildings on projected development Sites 1 through 3 would be visible from the Brooklyn Botanic Gardens and Prospect Park. However, the new buildings would not be taller than the adjacent 297-foot tall Tivoli Towers, and would therefore not create any significant adverse visual impacts. Additionally, as noted above, the 12-

story No-Action development under construction at 109-111 Montgomery Street is located west of projected development Site 2 on the west side of the MTA's Franklin Avenue shuttle right-of-way; therefore, views to the new development on Site 2 would be partially obstructed.

Additionally, anticipated development in the future with the Proposed Action would not obstruct any view corridors of significant visual resources in the study area. Publicly accessible views of resources and view corridors would not be blocked, as all new development would occur on existing blocks. The views of the Laboratory Administration Building in the Brooklyn Botanic Garden from Crown and Montgomery Street sidewalks in the Proposed Rezoning Area, and the views of Eastern Parkway from Franklin Avenue sidewalks in the Proposed Rezoning Area would not be obstructed. As under No-Action conditions, the With-Action developments are expected to further define view corridors in the study area by creating solid streetwalls. Therefore, the Proposed Action would not result in significant adverse impacts on visual resources in the study area.

V. CONCLUSION

The Proposed Action and subsequent development would not have significant adverse effects on the area's urban design or visual resources. The Proposed Action would facilitate new development, including market-rate and affordable residential units and ground-floor retail space in the Proposed Rezoning Area. The Proposed Action would introduce street trees to the area, improving the visual appearance of the Applicant-owned projected development sites. The anticipated new developments would not block significant views of any visual resources or obstruct important views or view corridors. Therefore, it is anticipated that the Proposed Action would have a beneficial impact on the urban design and visual resources of the Proposed Rezoning Area and surrounding study area.

Attachment I

Hazardous Materials

I. INTRODUCTION

As detailed in the 2014 *CEQR Technical Manual*, the goal of a hazardous materials assessment is to determine whether an action may increase the exposure of people or the environment to hazardous materials, and if so, whether this increased exposure would result in potential significant public health or environmental impacts. A hazardous material is any substance that poses a threat to human health or the environment. Substances that can be of concern include, but are not limited to, heavy metals, volatile and semi-volatile organic compounds, methane, polychlorinated biphenyls 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; (b) an action would increase pathways to their exposure; or (c) an action would introduce new activities or processes using hazardous materials.

II. PHASE I ENVIRONMENTAL SITE ASSESSMENT

An assessment was conducted to determine whether the Proposed Action could lead to increased exposure of people or the environment to hazardous materials and whether the increased exposure would result in significant adverse public health impacts or environmental damage. In October 2012, Environmental Business Consultants prepared a Phase I Environmental Site Assessment (ESA) for the Applicant-owned proposed development sites (refer to **Appendix 1**).

Based on the information gathered as a result of the Phase I ESA process, Environmental Business Consultants identified several Recognized Environmental Conditions (RECs) on the projected development sites. These RECs include:

Projected Development Site 1 (Applicant-Owned)

- The historic use of the building as a fleet maintenance garage.
- The presence of two historical gasoline tanks on the property.
- The absence of a closure report or other confirmation regarding the removal of a 4,000-gallon gasoline tank.

Projected Development Site 2 (Applicant-Owned)

- The historic use of the site for auto repair, used closing recycling, garages, and a commercial laundry.
- The presence of five historic gasoline underground storage tanks on the property.

III. PHASE II SUBSURFACE INVESTIGATION

The RECs identified above required a Phase II subsurface investigation for both sites. In 2013-2014, Environmental Business Consultants completed Phase II Subsurface Investigation Reports for each site, including property locations and descriptions, geophysical surveys, soil samplings, and soil gas samplings (refer to **Appendix 1**).

Based on the subsurface investigation, it was determined that projected development Site 1 had not been impacted by its historic use as a fleet maintenance garage and no further investigation was warranted. The Phase II report for this property noted that redevelopment of the site would require the proper removal and regulated closure of the underground tanks.

On projected development Site 2, the subsurface investigation found that the property had not been adversely impacted by the historic presence of underground fuel and gasoline storage tanks. Further, the site had not been impacted by its historic uses for auto repair or as a commercial laundry, and no further investigation was warranted.

Additionally, both Applicant-owned development sites are in the initial stages of construction pursuant to DOB-approved, as-of-right plans, with the demolition of all existing buildings completed in summer of 2016 and a single footing installed on each of the Applicant-owned sites to a depth of approximately 16 feet below the first floor elevation to vest the properties in the 421a program. The Applicant does not intend to proceed with construction on the sites before the conclusion of the uniform land use review process (ULURP) and the related public review of the Proposed Action. Additional testing is recommended through an (E)-designation to determine if remedial measures are required on the Applicant owned sites, projected development Sites 1 and 2.

For projected development Site 3, no Phase I or Phase II reports have been completed. As such, an (E)-designation would be required for the site.

For the AAFE property located at 141-145 Montgomery Street, which is surrounded by development site 2 on the west, north and east, it is anticipated that there would be no soil or ground water contamination based on the findings for Site 2. However, at present it is unknown if Phase I or Phase II reports have been completed for this site. As described in **Attachment M, "Conceptual Analysis,"** no (E)-designation is warranted for the AAFE property as a result of this action as development of this site would require that an applicant seek discretionary approvals in the future.

The (E)-designation (E-405) text related to hazardous materials is as follows:

> **Task 1**
> **The Applicant submits to OER, for review and approval, a Phase 1A of the site along with a soil and groundwater 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 sample sites should be selected to adequately characterize the site, the specific source 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
A written report with findings and a summary of the data must be submitted to OER after completion of the testing phase and laboratory analysis for review and approval. After receiving such results, a determination is made by OER if the results indicate that remediation is necessary. If OER determines that no remediation is necessary, written notice shall be given by OER.

If remediation is indicated from the 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.

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

All demolition or rehabilitation would be conducted in accordance with applicable requirements for disturbance, handling and disposal of suspect lead-paint and asbestos-containing materials. For all projected and potential development sites where no E-designation is recommended, in addition to the requirements for lead-based paint and asbestos, requirements (including those of NYSDEC) should petroleum tanks and/or spills be identified and for off-site disposal of soil/fill would need to be followed.

IV. FINDINGS

Based on the discussion above, no significant adverse hazardous materials impacts are anticipated as a result of the Proposed Action.

Attachment J

Transportation

I. INTRODUCTION

As presented in detail in **Attachment A, "Project Description,"** Cornell Realty Management LLC (the "Applicant"), is seeking two discretionary actions in order to facilitate the redevelopment of two sites in the Crown Heights neighborhood of Brooklyn Community District 9. The discretionary actions involve the rezoning of the eastern portions of blocks 1188, 1189, and 1190 (the proposed rezoning area) from medium to high density residential zoning districts (R6A and R8A) with a commercial overlay (C1-3) on the east side of block 1188 to a higher density residential zoning districts (R8X) with commercial overlays (C2-4) on the east side of blocks 1188 on the north end and 1190 on the south end. Block 1188 is bounded by Washington Avenue on the west, Carroll Street on the south, Franklin Avenue on the east, and President Street on the north. The proposed rezoning area is approximately 300 feet wide and two and a half blocks long, located on the western side of Franklin Avenue. Specifically, it consists of:

- Within block 1188, a portion of lot 35, a portion of lot 44, and lots 53, 54, 55, 56, and 58 (the "Northern Blockfront");
- Within block 1189, lots 31 and 60 (the "Middle Blockfront"); and,
- Within block 1190, a portion of lot 26, and lots 28, 29, 45, 46, 48, and 50 (the "Southern Blockfront").

Collectively, the Northern Blockfront, the Middle Blockfront, and the Southern Blockfront are referred to herein as the "proposed rezoning area." The proposed rezoning area is generally bounded by Franklin Avenue to the east, Montgomery Street to the south, a point approximately 300 feet west of Franklin Avenue to the west and on the north by a line 131 feet north of, and parallel to, Carroll Street.

As discussed in **Attachment A**, under the RWCDS for the Proposed Action, redevelopment is expected to consist of two Applicant-owned development sites on blocks 1188 and 1190 (Sites 1 and 2) and an additional site on Block 1188 (Site 3). Site 1 is located on lot 58 of block 1188 at 931 Carroll Street and is projected to be redeveloped with 128 dwelling units (DUs), of which approximately 34 would be designated as affordable housing, and 37 accessory parking spaces. Site 2 is located on lots 29, 45, and 50 on block 1190 and is projected to be redeveloped with 390 DUs, of which approximately 105 would be designated as affordable housing, 16,284 gross square feet (gsf) of local retail, and 114 accessory parking spaces. Site 3 is located on lots 53, 54, and 55 on block 1188 at 882-884 Franklin Avenue, and is projected to be redeveloped with 47 DUs, of which approximately 12 would be designated as affordable housing, 7,500 gsf of local retail, and 14 parking spaces. In total, the Proposed Action is expected to result in 565 DUs, of which approximately 152 would be designated as affordable housing, 23,784 gsf of local retail, and 151 parking spaces.

The project exceeds the applicable development density thresholds specified in Table 16-1 of the 2014 *City Environmental Quality Review (CEQR) Technical Manual* and therefore a screening assessment is necessary to determine if detailed analyses of traffic and parking, transit, and pedestrians are warranted. Per 2014 *CEQR Technical Manual* guidelines, the screening assessment consists of a two-level process including a Level 1 Project Trip Generation Screening Assessment and a Level 2 Project-generated Trip Assignment Screening Assessment.

II. PRINCIPAL CONCLUSIONS

Based on Level 1 and Level 2 screening analyses specified in the *CEQR Technical Manual*, detailed pedestrian analyses are required for typical traffic peak hours, which include one hour during the weekday AM, weekday midday, weekday PM, and Saturday midday peak periods. The results of these screening analyses are summarized as follows:

Traffic

The relatively low level of anticipated project-generated vehicle trips is not expected to result in an increase of 50 or more vehicles at any intersection in proximity to the proposed rezoning area. Therefore, as per 2014 *CEQR Technical Manual* criteria, detailed traffic analysis would not be warranted and significant adverse impacts to traffic are unlikely.

Parking

The 2014 *CEQR Technical Manual* states that if a detailed traffic analysis would not be warranted, a detailed parking analysis would not be warranted as significant adverse impacts to parking would be unlikely.

Transit

The Proposed Action is expected to facilitate new development that would generate new subway riders. It is anticipated that demand would be divided between three subway stations; the Franklin Avenue station on the IRT Eastern Parkway Line (2, 3, 4, and 5 trains), the Botanic Garden station on the BMT Franklin Avenue Shuttle, and the Prospect Park station on the BMT Brighton Line (B and Q trains) and BMT Franklin Avenue Shuttle. All three stations would process less than 200 project-generated trips in any peak hour and therefore the Proposed Action would not have the potential result in any significant adverse subway impacts at any station. Therefore, as per 2014 *CEQR Technical Manual* criteria, detailed subway station analysis would not be warranted.

A total of six bus routes operate in the vicinity of the proposed rezoning area (the B16, B41, B43, B44, B48, and B49). Total peak hour project generated bus demand is not expected to exceed the 50 bus trips per hour per direction threshold on any route as per 2014 *CEQR Technical Manual criteria*. Therefore, significant adverse impacts to bus routes would not be expected to result from the Proposed Action and a detailed bus route analysis would not be warranted.

Pedestrians

Detailed pedestrian analyses were conducted on the west sidewalk of Franklin Avenue between Montgomery and Crown Streets where action-generated pedestrian demand, including both walk-only and transit trips, is expected to exceed the 200 pedestrian trips per hour threshold during the weekday midday, PM, and Saturday midday peak hours. This sidewalk would operate at Level of Service (LOS) B under With-Action conditions, and therefore no significant adverse pedestrian impacts would result from the Proposed Action as per 2014 *CEQR Technical Manual* criteria.

III. LEVEL 1 AND LEVEL 2 SCREENING ANALYSIS

The 2014 *CEQR Technical Manual* identifies minimum development densities that potentially require a transportation analysis. Development at less than the development densities shown in Table 16-1 of the

2014 *CEQR Technical Manual* generally result in fewer than 50 peak-hour vehicle trips, 200 peak-hour subway/rail or bus transit riders, and 200 peak-hour pedestrian trips, where significant adverse impacts are considered unlikely. In Zone 2 (which includes the proposed rezoning area) the development threshold for residential is 200 DUs, which the anticipated RWCDS With-Action development exceeds.

According to the 2014 *CEQR Technical Manual*, if an action would result in development greater than one of the minimum development density thresholds in Table 16-1, further screening is necessary.

The 2014 *CEQR Technical Manual* describes a two level screening procedure for the preparation of a preliminary analysis of traffic, parking, transit, and pedestrians to determine if detailed analysis is warranted. As discussed below the preliminary analysis begins with a trip generation (Level 1) analysis to estimate the number of person and vehicle trips to and from the proposed rezoning area. According to the 2014 *CEQR Technical Manual*, detailed traffic analysis is typically not warranted if the Proposed Action generates less than 50 vehicle trips and detailed transit and/or pedestrian analysis is typically not warranted if the Proposed Action generates less than 200 transit and/or pedestrian trips. When these thresholds are exceeded, detailed trip assignments (Level 2) are to be performed to estimate the incremental trips at nearby intersections (for traffic), subway station elements and bus lines (for transit), and sidewalks, corners, and/or crosswalks (for pedestrians) to identify locations for detailed analysis.

If the trip assignments show that the project would generate an increase of 50 or more peak hour vehicle trips at an intersection, 200 or more peak hour subway trips at a station, 200 or more peak hour subway trips in one direction along a single subway line, 50 or more peak hour bus trips in one direction along a single bus line, and/or 200 or more pedestrian trips traversing a sidewalk, corner area, or crosswalk, then detailed analyses may be warranted to assess the potential for significant adverse impacts on traffic, transit, and pedestrians. Detailed on-street and public off-street parking analysis is typically warranted only if there is not a sufficient amount of accessory parking created to accommodate parking demand.

Level 1 Screening Analysis

A trip generation (Level 1 screening analysis) was conducted to estimate the person and vehicle trips expected to be generated by the Proposed Action during the weekday AM, midday, PM, and Saturday midday peak hours. The estimates were then compared to the thresholds provided in the 2014 *CEQR Technical Manual* to determine if a Level 2 screening analysis would be warranted.

It should be noted that under future conditions without the Proposed Action, it is expected that Sites 1 and 2 would be redeveloped on an as-of-right basis as residential buildings pursuant to existing zoning. In addition, Site 3 contains various uses under existing conditions. Therefore, a credit was taken in Level 1 screening for each of the sites. As shown in **Table J-1**, Sites 1, 2, and 3 were allowed credits of 69, 208, and four DUs respectively. In addition, Site 3 is allowed a credit of 7,400 gsf of local retail. As a result, only the incremental travel demand will be considered. The anticipated incremental demand is as follows: Site 1 is forecast to consist of 59 DUs, Site 2 is forecast to consist of 182 DUs and 16,284 gsf of local retail, and Site 3 is now forecast to consist of 43 DUs and 100 gsf of local retail.

Table J-1: Program for Travel Demand Forecast

Site	With-Action DUs	No-Action DUs	Net DU Increment	Other With-Action Uses
Site 1	128	69	59	None
Site 2	390	208	182	16,284 gsf local retail
Site 3	47	4	43	7,500 gsf local retail[1]
Total	**565**	**281**	**284**	**23,784 gsf local retail**

Notes: A credit of 7,400 gsf of local retail is permitted on Site 3, therefore only 100 gsf of local retail will be considered in the forecast for Site 3 and 16,384 gsf will be used as the basis of the overall forecast.

Transportation Planning Factors

Table J-2 shows the transportation planning factors used to forecast travel demand in the weekday AM, weekday midday, weekday PM, and Saturday midday peak hours. These include trip generation rates, temporal distributions, mode share percentages, directional (in and out) splits, and vehicle occupancy rates for the program shown in **Table J-1**.

Table J-2: Transportation Planning Factors

Land Use:	Residential		Local Retail	
Trip Generation:	(1)		(1)	
Weekday	8.075		205	
Saturday	9.6		240	
	per DU		per 1,000 sf	
Temporal Distribution:	(1)		(1)	
AM	10.0%		3.0%	
MD	5.0%		19.0%	
PM	11.0%		10.0%	
SAT	8.0%		10.0%	
	(2)		(4)	
Modal Splits*:	All		All	
Auto	15.0%		2.0%	
Taxi	0.0%		3.0%	
Subway	70.0%		20.0%	
Bus	7.0%		5.0%	
Walk/Bike/Other	8.0%		70.0%	
	100.0%		100.0%	
	(3)		(5)	
In/Out Splits:	In	Out	In	Out
AM	20.0%	80.0%	50.0%	50.0%
MD	51.0%	49.0%	50.0%	50.0%
PM	65.0%	35.0%	50.0%	50.0%
SAT	50.0%	50.0%	55.0%	45.0%
Vehicle Occupancy*:	(2)		(4)	
Auto	1.08		2.00	
Taxi	1.08		2.00	
Truck Trip Generation	(1)		(1)	
Weekday	0.06		0.35	
Saturday	0.02		0.04	
	per DU		per 1,000 sf	
Truck Temporal Distribution	(1)		(1)	
AM	12.0%		8.0%	
MD	9.0%		11.0%	
PM	2.0%		2.0%	
SAT	9.0%		11.0%	
	In	Out	In	Out
AM/MD/PM/Sat	50.0%	50.0%	50.0%	50.0%

Notes :

(1) *2014 City Environmental Quality Review (CEQR) Technical Manual.*

(2) Based on *American Community Survey 2009-2013* , Means of Transportation to Work Table for BrooklynTracts 213, 215, 217, 219, 323, 325, and 327.

(3) *Empire Boulevard Rezoning EAS,* December 2013.

(4) *Crown Heights West Rezoning EAS*.

(5) *Atlantic Yards FSEIS, 2014.*

The following provide the planning factors for each use for a weekday and Saturday as shown in **Table J-2**.

The forecast of travel demand for residential use used a weekday trip generation rate of 8.075 person trips per DU, a Saturday trip generation rate of 9.6 person trips per DU, and temporal distributions of 10.0 percent, 5.0 percent, 11.0 percent, and 8.0 percent for the weekday AM, midday, PM, and Saturday midday peak hours, respectively, as per the 2014 *CEQR Technical Manual*. The residential modal split assumed 15.0 percent, 0.0 percent, 70.0 percent, 7.0 percent, and 8.0 percent mode shares for private auto, taxi, subway, bus and walk-only modes, respectively, as per the 2010 to 2014 *American Community Survey (ACS)* Means of Transportation to Work Table for Brooklyn census tracts 213, 215, 217, 219, 323, 325, and 327. The vehicle occupancy of 1.08 persons per vehicle in the weekday AM and PM peak hours was also assumed based on the *ACS* data. Directional splits (in/out) shown in **Table J-2** were based on the *Empire Boulevard Rezoning EAS*, October 2013.

The forecast of travel demand for the local retail use used a weekday trip generation rate of 205 person trips per 1,000 sf, a Saturday trip generation rate of 240 person trips per 1,000 sf, and temporal distributions of 3.0 percent, 19.0 percent, 10.0 percent, and 10.0 percent for the weekday AM, midday, PM, and Saturday midday peak hours, respectively, as per the 2014 *CEQR Technical Manual*. The local retail modal split assumed 2.0 percent, 3.0 percent, 20.0 percent, 5.0 percent, and 70.0 percent mode shares for private auto, taxi, subway, bus, and walk-only modes, respectively, based on the *Crown Heights West Rezoning EAS*. The vehicle occupancy of 2.00 persons per vehicle was also assumed based on the *Crown West Heights Rezoning EAS*. Directional splits (in/out) were assumed based on the *Atlantic Yards FSEIS*, 2014.

Additionally, it was assumed that 25.0 percent of local retail trips were linked trips and not new to the study area.

Trip Generation

Table J-3 shows the resulting person-trip and vehicle-trip travel demand forecasts for the Proposed Action. As shown in **Table J-3**, the Proposed Action would generate 37, 38, 47, and 41 vehicle trips in the weekday AM, midday, PM, and Saturday midday peak hours respectively; 175, 176, 226, and 211 subway trips in the weekday AM, midday, PM, and Saturday midday peak hours respectively; 20, 32, 30, and 31 local bus trips in the weekday AM, midday, PM and Saturday midday peak hours respectively; and 266, 551, 452, and 467 pedestrian trips, including walk-only trips and trips to and from bus stops and subway stations, in the weekday AM, midday, PM and Saturday midday peak hours respectively. The traffic numbers do not exceed the trip thresholds in any one peak hour for Level 1 screening analysis, and therefore Level 2 screening analysis is not warranted. However, the transit and pedestrian numbers exceed the trip thresholds for their respective trip type in at least one peak hour for Level 1 screening analysis, and therefore Level 2 screening analysis is warranted and is provided below. Detailed parking demand and capacity calculations for the development facilitated by the Proposed Action is also provided below.

Traffic

As shown in **Table J-3**, the development facilitated by the Proposed Action would generate 37, 38, 47, and 41 vehicle trips in the weekday AM, midday, PM, and Saturday midday peak hours respectively. As there would be fewer than 50 vehicle trips generated by the Proposed Action in any peak hour, a Level 2 screening analysis for traffic is not warranted and significant adverse impacts are not expected.

Table J-3: Travel Demand Forecast

Land Use:		Net Residential		Net Local Retail		Total	
Area/Units:		284 DU		16,384 sf			
Peak Hour Trips:*							
	AM	229		75		304	
	MD	114		479		593	
	PM	252		252		504	
	Saturday	218		295		513	
Person Trips:							
		In	Out	In	Out	In	Out
AM	Auto	7	27	1	1	8	28
	Dropoff/Taxi	0	0	1	1	1	1
	Subway	31	129	8	7	39	136
	Public Bus	2	14	2	2	4	16
	Walk/Bike/Other	4	15	26	26	30	41
	Total	44	185	38	37	82	222
		In	Out	In	Out	In	Out
MD	Auto	9	9	5	5	14	14
	Dropoff/Taxi	0	0	7	7	7	7
	Subway	40	39	49	48	89	87
	Public Bus	5	3	12	12	17	15
	Walk/Bike/Other	4	5	167	167	171	172
	Total	58	56	240	239	298	295
		In	Out	In	Out	In	Out
PM	Auto	25	13	3	3	28	16
	Dropoff/Taxi	0	0	4	4	4	4
	Subway	114	62	25	25	139	87
	Public Bus	12	6	6	6	18	12
	Walk/Bike/Other	13	7	88	88	101	95
	Total	164	88	126	126	290	214
		In	Out	In	Out	In	Out
Saturday	Auto	16	15	3	3	19	18
	Dropoff/Taxi	0	0	5	4	5	4
	Subway	77	76	32	26	109	102
	Public Bus	8	8	8	7	16	15
	Walk/Bike/Other	9	9	114	93	123	102
	Total	110	108	162	133	272	241
Vehicle Trips :		In	Out	In	Out	In	Out
AM	Auto	6	25	1	1	7	26
	Dropoff/Taxi	0	0	1	1	1	1
	Dropoff/Taxi Balanced	0	0	2	2	2	2
	Truck	0	0	0	0	0	0
	Total	6	25	3	3	9	28
		In	Out	In	Out	In	Out
MD	Auto	8	8	3	3	11	11
	Dropoff/Taxi	0	0	4	4	4	4
	Dropoff/Taxi Balanced	0	0	8	8	8	8
	Truck	0	0	0	0	0	0
	Total	8	8	11	11	19	19
		In	Out	In	Out	In	Out
PM	Auto	22	13	2	2	24	15
	Dropoff/Taxi	0	0	2	2	2	2
	Dropoff/Taxi Balanced	0	0	4	4	4	4
	Truck	0	0	0	0	0	0
	Total	22	13	6	6	28	19
		In	Out	In	Out	In	Out
Saturday	Auto	14	13	2	2	16	15
	Dropoff/Taxi	0	0	3	2	3	2
	Dropoff/Taxi Balanced	0	0	5	5	5	5
	Truck	0	0	0	0	0	0
	Total	14	13	7	7	21	20

Note: It was assumed that 25% of local retail trips would be linked trips and not new to the study area.

Parking

Pursuant to zoning requirements for the projected land uses in the proposed R8X and C2-4 districts, 40 percent of market rate DUs require parking spaces. Based on the *2010-2014 ACS* Vehicles Available Data for Brooklyn Census Tracts 215, 217, 219, 323, 325, and 327, there are averages of 0.365 vehicles per household (all households) and 0.332 vehicles per household (renter-occupied households) which were used for market-rate and affordable DUs respectively. Using these rates, the 379 market rate and 140 affordable DUs in the With-Action condition on Sites 1 and 2, would generate a peak overnight parking demand of approximately 184 vehicles, as shown in **Tables J-4** and **J-5**.

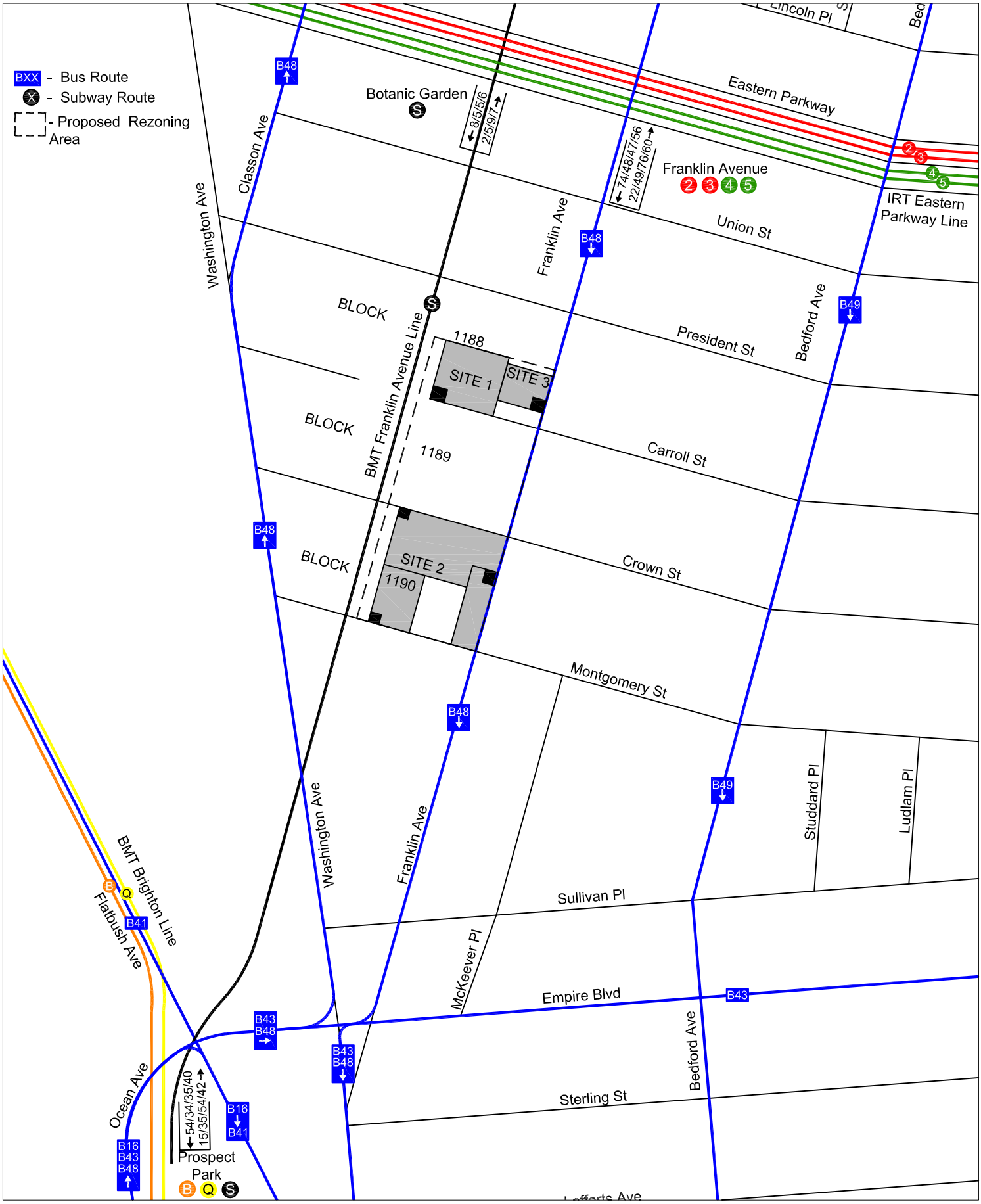
Since parking may be waived on Site 3 pursuant to the proposed zoning, it is not included in this calculation. As the residential parking demand would peak overnight and as there would be few, if any, retail visits overnight, there would be a parking shortfall of 33 accessory parking spaces. During the day, as residents depart, the overall parking demand would decrease, even as retail demand would increase. For example, as shown in **Table J-4** and **J-5**, the total parking demand at 1:00 PM would be 69 and 86 vehicles at the two proposed parking facilities, or approximately 46 and 57 percent utilization, on a typical weekday and Saturday, respectively. Therefore, the development facilitated by the Proposed Action would provide sufficient accessory parking to accommodate its weekday and Saturday midday projected demand, although it would not be sufficient to accommodate overnight demand. However, according to the 2014 *CEQR Technical Manual*, if a detailed traffic analysis would not be warranted, then a detailed parking analysis would not be warranted, even though the Proposed Action would not provide sufficient accessory parking to accommodate overnight demand, as parking impacts are not expected.

Transit

Rail

As shown in **Table J-3**, the development resulting from the Proposed Action would generate 175, 176, 226, and 211 subway trips in the weekday AM, midday, PM, and Saturday midday peak hours respectively. There are three subway stations within proximity to the proposed rezoning area: the Franklin Avenue station on the IRT Eastern Parkway Line (2, 3, 4, and 5 trains), the Botanic Garden station on the BMT Franklin Avenue Shuttle, and the Prospect Park station on the BMT Brighton Line (B and Q trains) and BMT Franklin Avenue Shuttle. The Franklin Avenue station has stairways at the northeast and southeast corners of Eastern Parkway and Franklin Avenue and in the Eastern Parkway medians east of Franklin Avenue; it is anticipated that all trips generated under With-Action conditions using this station would use the stairway at the southeast corner of Eastern Parkway and Franklin Avenue as it is closest to the Project Area. The Botanic Garden station has an entrance on the south side of Eastern Parkway between Classon and Franklin Avenues and a passageway connecting to the Franklin Avenue station. The Prospect Park station has a stairway on the west side of Flatbush Avenue between Ocean Avenue and Lincoln Road and a stairway on the north side of Lincoln Road between Ocean and Flatbush Avenues; it is anticipated that all trips generated under With-Action conditions using this station would use the stairway on Flatbush Avenue as it is closest to the Project Area. **Figure J-1** shows the locations of each subway stair that would potentially be used by trips generated by the Proposed Action.

For purposes of this analysis, it was assumed, based on the most recent subway ridership data provided by NYC Transit, approximately 61 percent of subway trips were assigned to the Franklin Avenue or Botanic Garden stations with the remaining approximately 39 percent of subway trips assigned to the Prospect Park station. **Table J-6** shows the number of trips assigned to and from each station. As shown in **Table J-6**, the maximum flow to/from any station is 123 trips per hour (in and out combined) in the weekday PM peak hour at the Franklin Avenue station. As the Proposed Action would not generate 200 or more trips at any one station in any peak hour, significant adverse subway impacts at any station would not be expected and detailed analysis is not warranted.



Franklin Avenue Rezoning EAS

Figure J-1

Transit Map

Table J-4: Projected Weekday Hourly Parking Accumulation

	Residential 518 DU 582 Auto Trips		Local Retail 16,284 sf 26 Auto Trips		Total		
	In	Out	In	Out	In	Out	Accumulation
12-1 AM	1	1	0	0	1	1	184
1-2	1	1	0	0	1	1	184
2-3	1	1	0	0	1	1	184
3-4	1	1	0	0	1	1	184
4-5	1	1	0	0	1	1	184
5-6	2	6	0	0	2	6	180
6-7	5	18	0	0	5	18	167
7-8	6	29	0	0	6	29	144
8-9	12	46	1	1	13	47	110
9-10	9	25	0	0	9	25	94
10-11	9	22	0	0	9	22	81
11-12	8	19	1	0	9	19	71
12-1 PM	13	15	3	3	16	18	69
1-2	15	15	2	2	17	17	69
2-3	15	12	1	1	16	13	72
3-4	24	9	1	1	25	10	87
4-5	30	16	1	1	31	17	101
5-6	41	23	2	2	43	25	119
6-7	33	14	1	1	34	15	138
7-8	31	7	0	1	31	8	161
8-9	21	6	0	0	21	6	176
9-10	9	3	0	0	9	3	182
10-11	5	3	0	0	5	3	184
11-12	3	3	0	0	3	3	184
Total	296	296	13	13	309	309	

Table J-5: Projected Saturday Hourly Parking Accumulation

	Residential 518 DU 692 Auto Trips		Local Retail 16,284 sf 30 Auto Trips		Total		
	In	Out	In	Out	In	Out	Accumulation
12-1 AM	0	0	0	0	0	0	184
1-2	0	0	0	0	0	0	184
2-3	0	0	0	0	0	0	184
3-4	4	0	0	0	4	0	188
4-5	4	0	0	0	4	0	192
5-6	4	7	0	0	4	7	189
6-7	4	23	0	0	4	23	170
7-8	4	31	0	0	4	31	143
8-9	12	50	0	0	12	50	105
9-10	8	23	1	1	9	24	90
10-11	15	19	1	1	16	20	86
11-12	15	15	1	1	16	16	86
12-1 PM	15	15	1	1	16	16	86
1-2	26	26	2	2	28	28	86
2-3	19	14	2	2	21	16	91
3-4	27	7	1	1	28	8	111
4-5	31	15	1	1	32	16	127
5-6	47	19	1	1	48	20	155
6-7	34	15	1	1	35	16	174
7-8	23	15	1	1	24	16	182
8-9	23	15	1	1	24	16	190
9-10	12	11	1	1	13	12	191
10-11	12	15	0	0	12	15	188
11-12	7	11	0	0	7	11	184
Total	346	346	15	15	361	361	

Table J-6:
Subway Increment

Station	Entering the Station				Exiting the Station			
	AM	Midday	PM	Saturday	AM	Midday	PM	Saturday
Franklin Avenue (2/3/4/5)	74	48	47	56	22	49	76	60
Botanic Garden (Shuttle)	8	5	5	6	2	5	9	7
Prospect Park (B/Q/Shuttle)	54	34	35	40	15	35	54	42
Total	**136**	**86**	**87**	**102**	**39**	**89**	**138**	**109**

Bus

As shown in **Figure J-1**, there are six bus routes which operate in the vicinity of the Project Area:

- The B16 provides service between Bay Ridge and the Prospect Park subway station. It operates along Ocean Avenue and Flatbush Avenue southwest of the Project Area. It operates 7 (4 northbound and 3 southbound), 6 (3 northbound and 3 southbound), 8 (4 northbound and 4 southbound), and 6 (3 northbound and 3 southbound) buses in the weekday AM, midday, PM, and Saturday midday peak hours respectively. Trips generated by the Proposed Action using this bus would board/alight at Empire Boulevard/Ocean Avenue and Flatbush Avenue.
- The B41 provides service between Marine Park/Kings Plaza and Downtown Brooklyn/Fulton Mall. It operates along Flatbush Avenue southwest of the Project Area. It operates 40 (21 northbound and 19 southbound), 26 (13 northbound and 13 southbound), 33 (15 northbound and 18 southbound), and 34 (17 northbound and 17 southbound) buses during the weekday AM, midday, PM, and Saturday midday peak hours respectively. Trips generated by the Proposed Action using this bus would board/alight at Empire Boulevard/Ocean Avenue and Flatbush Avenue.
- The B43 provides service between the Prospect Park subway station and Greenpoint. It operates along Empire Boulevard south of the Project Area. It operates 9 (4 northbound and 5 southbound), 8 (5 northbound and 3 southbound), 10 (5 northbound and 5 southbound), and 9 (5 northbound and 4 southbound) buses in the weekday AM, midday, PM and Saturday midday peak hours respectively. Trips generated by the Proposed Action using this bus would board/alight at Empire Boulevard and Washington Avenue.
- The B44 Select Bus Service provides service between Sheepshead Bay and the Williamsburg Bridge Plaza. It operates along Rogers (northbound) and Nostrand (southbound) Avenues, east of the Project Area. It operates 27 (12 northbound and 15 southbound), 16 (8 northbound and 8 southbound), 21 (12 northbound and 11 southbound), and 16 (8 northbound and 8 southbound) buses in the weekday AM, midday, PM, and Saturday midday peak hours respectively. Trips generated by the Proposed Action using this bus would board/alight at President, Carroll, Crown, or Montgomery Street and Rogers Avenue (northbound) or at President, Carroll, Crown, or Montgomery Street at Nostrand Avenue (southbound).
- The B48 provides service between the Prospect Park subway station and East Williamsburg. It operates along Washington/Classon Avenues (northbound) and Franklin Avenue (southbound) adjacent to the Project Area. It operates 9 (5 northbound and 4 southbound), 6 (3 northbound and 3 southbound), 6 (3 northbound and 3 southbound), and 6 (3 northbound and 3 southbound) buses during the weekday AM, midday, PM, and Saturday midday peak hours respectively. Trips generated by the Proposed Action using this bus would board on Washington Avenue between Montgomery and Crown Streets or on Classon Avenue at President Street (northbound) and would alight along Franklin Avenue at President, Carroll, Crown, or Montgomery Street (southbound).

- The B49 bus provides service between Manhattan Beach and Bedford-Stuyvesant. It operates along Rogers Avenue (northbound) and Bedford Avenue (southbound) east of the Project Area. It operates 12 (6 northbound and 6 southbound), 11 (6 northbound and 5 southbound), 14 (7 northbound and 7 southbound), and 8 (4 eastbound and 4 westbound) buses in the weekday AM, midday, PM, and Saturday midday peak hours respectively. Trips generated by the Proposed Action using this bus would board/alight at President, Carroll, Crown, or Montgomery Street and Rogers Avenue (northbound) or at President, Carroll, Crown, or Montgomery Street at Bedford Avenue (southbound).

In summary, approximately 100, 70, 90, and 80 buses operate in the vicinity of the Project Area during the weekday AM, midday, PM, and Saturday midday peak hours respectively.

As shown in **Table J-3**, the Proposed Action would generate 20, 32, 30, and 31 bus trips in the weekday AM, midday, PM, and Saturday midday peak hours respectively. Because the Proposed Action would not generate 50 or more bus trips within any peak hour, detailed line-haul bus analysis would not be warranted and no significant adverse impacts to the local bus network would be expected.

Pedestrians

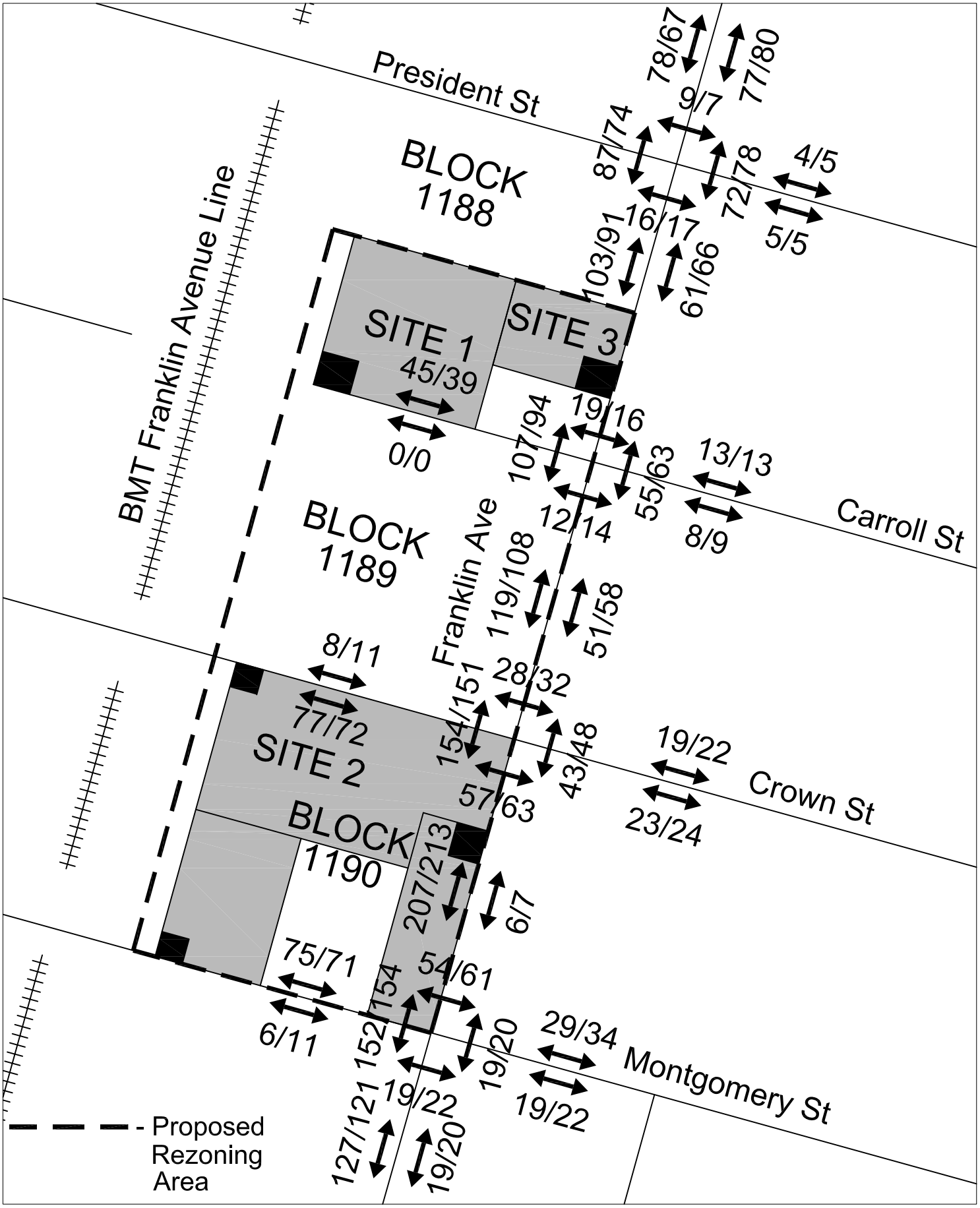
As shown in **Table J-3**, the Proposed Action would generate 266, 551, 452, and 467 pedestrian trips, including walk-only trips and trips to and from subway stations or bus stops, in the weekday AM, midday, PM, and Saturday midday peak hours respectively. Therefore, according to the 2014 *CEQR Technical Manual*, the Proposed Action would exceed the Level 1 threshold of 200 action-generated pedestrian trips. These trips would be concentrated along pedestrian elements (sidewalks, crosswalks, and corner areas) in the immediate proximity of the proposed rezoning area along the west side of Franklin Avenue. **Figures J-2** and **J-3** show the assignment of pedestrian trips generated by the Proposed Action to pedestrian elements, and **Figure J-4** shows that the west sidewalk on Franklin Avenue between Montgomery and Crown Streets would exceed the Level 2 200 pedestrian trips per hour threshold in the weekday midday, PM, and Saturday midday peak hours and would therefore require detailed analysis.

It should be noted that the northwest corner of Montgomery Street at Franklin Avenue and the southwest corner of Crown Street at Franklin Avenue would both exceed the Level 2 pedestrian trips per hour threshold in the weekday midday, PM, and Saturday midday peak hours. However, as the intersections of Montgomery Street at Franklin Avenue and Crown Street at Franklin Avenue are both unsignalized, the corner areas cannot be analyzed.

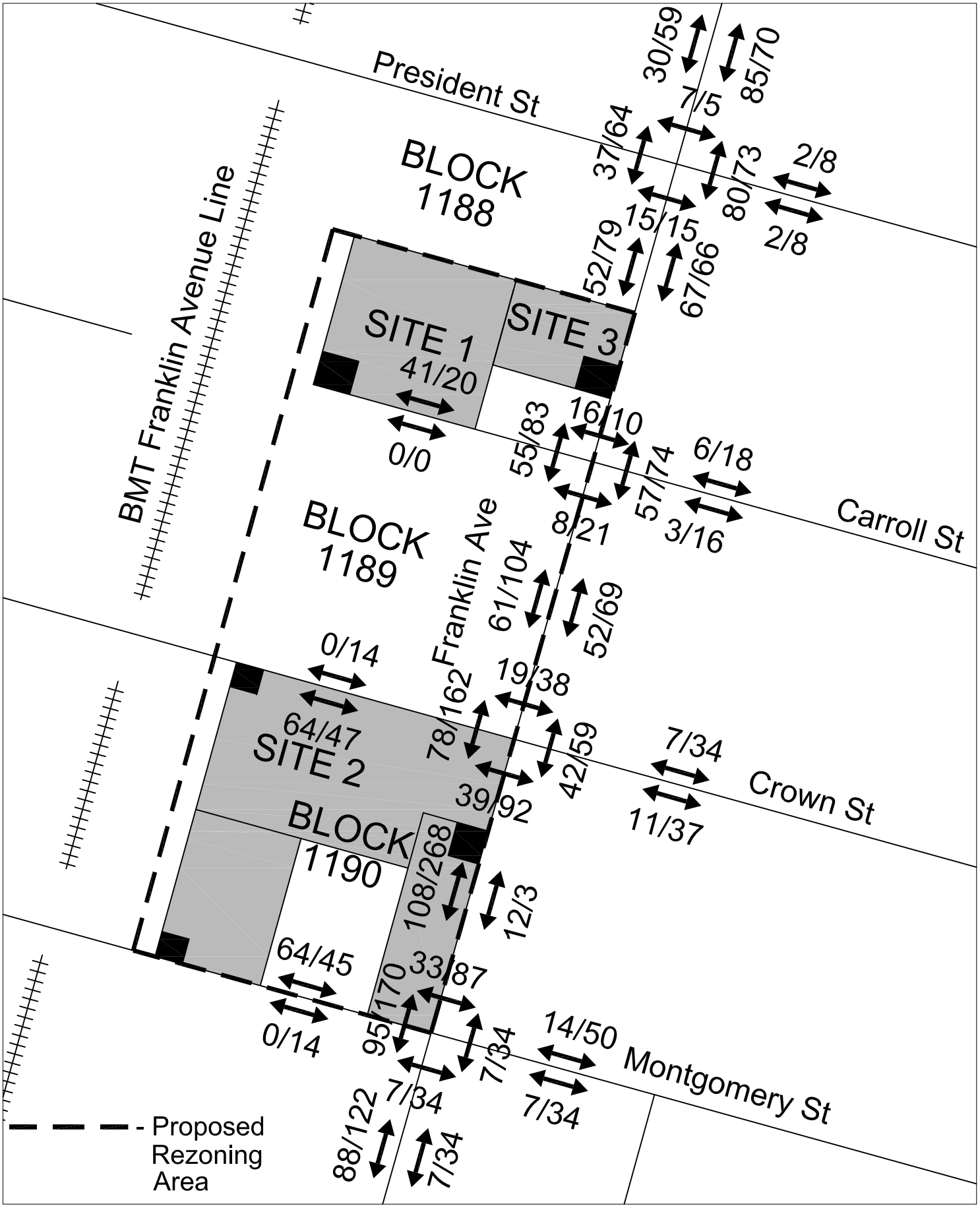
IV. PEDESTRIANS

As discussed previously, action-generated pedestrian trips include trips en route to or from subway stations and bus stops as well as "walk-only" trips. As shown in **Table J-3**, the Proposed Action would generate 266, 551, 452, and 467 pedestrian trips, including walk-only trips and trips to and from subway stations or bus stops, in the weekday AM, midday, PM, and Saturday midday peak hours respectively. These trips are expected to be concentrated on pedestrian elements (including sidewalks, crosswalks, and corner areas) immediately adjacent to the project area along the west side of Franklin Avenue. As shown in **Figure J-4** and as described above, the west sidewalk on Franklin Avenue between Montgomery and Crown Streets has been selected for analysis as it is expected to exceed the 200 pedestrians per hour threshold in one or more peak hours. The following provides the detailed analysis.

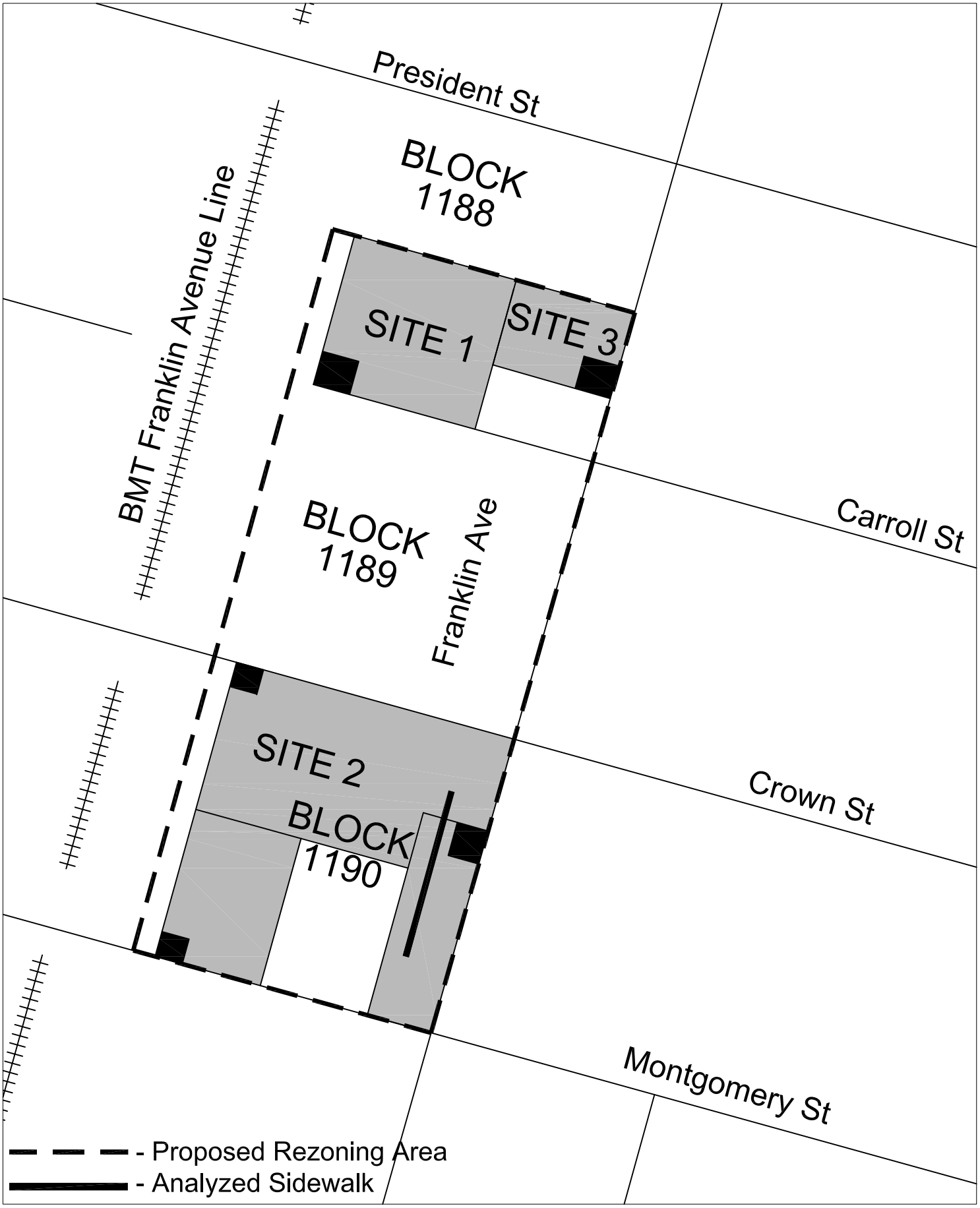
At present, most sidewalks tend to be 18 feet wide with minimal obstruction, mostly from signposts, fire hydrants, and lamp posts.



Franklin Avenue Rezoning EAS Figure J-3



Franklin Avenue Rezoning EAS Figure J-2



Franklin Avenue Rezoning EAS Figure J-4

Pedestrian Analysis Location

Analysis Methodology

Peak hour pedestrian flow conditions on analyzed pedestrian elements are assessed using the *2010 Highway Capacity Manual (HCM)* methodology and procedures outlined in the 2014 *CEQR Technical Manual*. Using the methodology described in these documents, the congestion level of pedestrian elements is determined using pedestrian volume, the width of a sidewalk or the area of a corner or crosswalk, and, for corner areas and crosswalks, conflicting turning vehicles and signal timing, due to time required to wait for a walk signal. From these inputs, a ratio of space available per pedestrian can be developed in terms of square feet per pedestrian (sf/p). The resulting ratio is then compared with LOS standards for pedestrian flow, which qualifies pedestrian conditions at a certain concentration level. It should be noted that there is currently no methodology available for analyzing corner areas and crosswalks at unsignalized intersections, and therefore analysis at these locations will only be performed in the 2023 With-Action condition if a signal is to be installed.

Pedestrian LOS standards are based on the average area available per pedestrian during the analysis period, which is typically expressed as a 15-minute peak period. Levels of Service range from LOS A to LOS F, with LOS A representing free flow conditions without pedestrian conflicts and LOS F representing significant capacity limitations and inconvenience, with activity such as shuffling observed frequently. **Table J-7** defines the LOS criteria for pedestrian elements as based on the *HCM* methodology.

Table J-7:
LOS Criteria for Pedestrian Elements

LOS	Description	Platoon-Adjusted Sidewalk LOS Criteria (sf/p)
A	Unrestricted	Greater than 530
B	Slightly Restricted	90.1 – 530
C	Restricted but Fluid	40.1 – 90
D	Restricted, Necessary to Continuously Alter Walking Stride and Direction	23.1 – 40
E	Severely Restricted	11.1 – 23
F	Forward Progress Only by Shuffling, no Reverse Movement Possible	11 or Less

Source: 2010 *HCM*

Existing Condition

Data on peak period pedestrian flow was collected along the sidewalks listed previously for the weekday AM, weekday midday, weekday PM, and Saturday midday periods on Wednesday, November 19th and Saturday, November 22nd, 2014, and the pedestrian peak hours were determined to be 11:30 AM to 12:30 PM (weekday midday) 5:00 to 6:00 PM (weekday PM) and 12:45 to 1:45 PM (Saturday midday). Pedestrian volumes on this sidewalk to be very low, with fewer than 100 pedestrians during the Saturday midday peak hour. This is primarily due to the fact that there are many industrial buildings near the analyzed sidewalk.

Table J-8 shows the Existing hourly volumes, available pedestrian space, and LOS for sidewalks. As shown in **Table J-8**, the sidewalk operates at LOS A or B in all peak hours. As noted above, these levels of service reflect the generally low existing pedestrian volumes in the primarily residential and manufacturing area near the proposed rezoning area.

Table J-8:
Sidewalk Levels of Service

No.	Location	Analysis Year	Effective Width (feet)	Peak Hour Vols			Ped Space (sf/ped)			Platoon Adjusted LOS		
				MD	PM	SAT	MD	PM	SAT	MD	PM	SAT
S1	Franklin Ave between Crown and Montgomery Sts - West	2014 Existing Conditions	9.5	198	386	51	607.9	311.7	2630.4	A	B	A
S1	Franklin Ave between Crown and Montgomery Sts - West	2023 No-Action Conditions	9.5	354	633	253	339.9	189.9	475.7	B	B	B
S1	Franklin Ave between Crown and Montgomery Sts - West	2023 With-Action Conditions	9.5	622	840	466	193.3	142.9	258.1	B	B	B

Notes:
MD - weekday 11:30 AM-12:30 PM peak hour
PM - weekday 5:00-6:00 PM peak hour
SAT - Saturday 12:45-1:45 PM peak hour
SF/Ped - average square feet per pedestrian.
LOS - level of service.

Future Without the Proposed Action (No-Action Condition)

Estimates of peak hour pedestrian trips on the analyzed sidewalk in the No-Action condition were developed by applying a background growth rate of 0.50 percent per year from 2014 to 2019 and 0.25 percent from 2019 to 2023 as well as pedestrian demand for large developments within a quarter-mile radius of the proposed rezoning area that are expected to be completed by 2023. These developments, along with the assignment methodology for each, are shown in **Table J-9**. It should be noted that, in addition to these sites, the as-of-right developments on Sites 1 and 2 were assigned. The as-of-right development for the potential site on lots 46 and 48 on block 1190 was included as part of the background growth.

Table J-9:
Projected No-Action Development Sites Within a Quarter-Mile Radius of the Project Area

Number	Project	Residential (DUs)	Commercial (sf)	Community Facility (sf)	Assignment
1	Medgar Evers College Crown Plaza	0	0	0	N/A
2	995 Washington Avenue	2	0	950	Background Growth
3	1 Sullivan Place	16	0	530	
4	90 Sullivan Place	28	6,000	6,000	Walk only trips assigned. Subway and bus trips not assigned.
5	564 Saint John's Place	172	0	0	Walk only trips assigned. Subway and bus trips not assigned.
6	Bedford-Union Armory	415	0	45,000	Walk only trips, subway trips to Prospect Park, and bus trips to the B16, B41, and B43 assigned.
7	109-111 Montgomery Street	162	0	0	Walk only trips and subway trips to Franklin Avenue and Botanic Garden assigned. Bus trips not assigned.

Table J-8 shows the 2023 No-Action hourly volumes, available pedestrian space, and LOS for sidewalks. As shown in **Table J-8**, the sidewalk continues to operate at LOS A or B in both peak hours. This reflects the continued low pedestrian volumes in the area near the proposed rezoning area.

Future With the Proposed Action (With-Action Condition)

The Proposed Action would generate new pedestrian demand on the analyzed sidewalk in 2023 (see **Figures J-3** and **J-4**). This new demand would consist of trips made only by walking as well as trips to and from subway stations and bus stops. In general, pedestrian trips to and from the proposed rezoning area are expected to primarily be concentrated along pedestrian elements (sidewalks, crosswalks, and corner areas) in the immediate proximity of the Project Area along the west side of Franklin Avenue.

Impact Criteria

For areas of the city within a central business district (CBD, as defined by the 2014 *CEQR Technical Manual* as including all areas within 0.25 miles of a subway station), criteria define that a significant adverse impact to a sidewalk has occurred under platoon flow if the pedestrian space available under the No-Action condition is greater than 39.2 sf/p (LOS D) and the pedestrian space available under the With-Action condition is less than 31.5 sf/p. If the pedestrian space available in the With-Action condition is greater than 35.4 sf/p, the impact should not be considered significantly adverse. If the pedestrian space available under the No-Action condition is between 6.4 sf/p and 39.2 sf/p, a reduction in space under the With-Action condition should be considered a significant adverse impact based on **Table J-10**, which shows a scale that identifies what reduction should be considered a significant adverse impact for a given amount of available pedestrian space. If the reduction of available pedestrian space is less than the value shown in **Table J-10**, the impact should not be considered significantly adverse. If the available pedestrian space under the No-Action condition is less than 6.4 sf/p, a reduction of at least 0.3 sf/p of available pedestrian space should be considered significantly adverse.

Table J-10: Significant Impact Criteria for Sidewalks in a CBD Location

No-Action Condition Pedestrian Space (sf/ped)			With-Action Condition Pedestrian Space Reduction to be Considered a Significant Impact (sf/ped)
> 39.2			With Action Condition < 31.5
38.7	to	39.2	Reduction ≥ 3.8
37.8	to	38.6	Reduction ≥ 3.7
36.8	to	37.7	Reduction ≥ 3.6
35.9	to	36.7	Reduction ≥ 3.5
34.9	to	35.8	Reduction ≥ 3.4
34.0	to	34.8	Reduction ≥ 3.3
33.0	to	33.9	Reduction ≥ 3.2
32.1	to	32.9	Reduction ≥ 3.1
31.1	to	32.0	Reduction ≥ 3.0
30.2	to	31.0	Reduction ≥ 2.9
29.2	to	30.1	Reduction ≥ 2.8
28.3	to	29.1	Reduction ≥ 2.7
27.3	to	28.2	Reduction ≥ 2.6
26.4	to	27.2	Reduction ≥ 2.5
25.4	to	26.3	Reduction ≥ 2.4
24.5	to	25.3	Reduction ≥ 2.3
23.5	to	24.4	Reduction ≥ 2.2
22.6	to	23.4	Reduction ≥ 2.1
21.6	to	22.5	Reduction ≥ 2.0
20.7	to	21.5	Reduction ≥ 1.9
19.7	to	20.6	Reduction ≥ 1.8
18.8	to	19.6	Reduction ≥ 1.7
17.8	to	18.7	Reduction ≥ 1.6
16.9	to	17.7	Reduction ≥ 1.5
15.9	to	16.8	Reduction ≥ 1.4
15.0	to	15.8	Reduction ≥ 1.3
14.0	to	14.9	Reduction ≥ 1.2
13.1	to	13.9	Reduction ≥ 1.1
12.1	to	13.0	Reduction ≥ 1.0
11.2	to	12.0	Reduction ≥ 0.9
10.2	to	11.1	Reduction ≥ 0.8
9.3	to	10.1	Reduction ≥ 0.7
8.3	to	9.2	Reduction ≥ 0.6
7.4	to	8.2	Reduction ≥ 0.5
6.4	to	7.3	Reduction ≥ 0.4
< 6.4			Reduction ≥ 0.3

Source: *2014 CEQR Technical Manual*

LOS Analysis

Table J-8 shows the 2023 With-Action hourly volumes, available pedestrian space, and LOS for sidewalks. As shown in **Table J-8**, under With-Action conditions, the sidewalk would operate at LOS B, and therefore there would be no significant adverse impacts to any pedestrian element as a result of the Proposed Action.

V. SUMMARY

The Applicants propose to redevelop (i) Site 1 located at 931 Carroll Street as a residential development and (ii) Site 2 located on Franklin Avenue between Crown and Montgomery Streets as a mixed use development as part of a proposed rezoning, which requires map and text amendments. The RWCDS for the Proposed Action consists of 565 DUs, 23,784 gsf of local retail, and 151 accessory parking spaces distributed over the Project Area. The Proposed Action would not generate enough traffic and transit trips to warrant detailed transportation analyses as significant adverse impacts would be unlikely. However, the Proposed Action would generate enough pedestrian trips to warrant detailed transportation analyses, however, there are not expected to be any significant adverse impacts to pedestrian elements within the Project Area. Lastly, as the Proposed Action would not generate enough traffic volumes that would warrant detailed traffic analysis, a detailed on-street and off-street parking analysis would not be warranted as per 2014 *CEQR Technical Manual* criteria.

Attachment K

Air Quality

I. INTRODUCTION

The Applicant proposes to rezone portions of three blocks in the Crown Heights neighborhood of Brooklyn to facilitate the redevelopment of four sites. Several lots of blocks 1188 and 1190, including two Projected Applicant-owned development sites (see **Figures K-1** and **K-2**), would be affected.

The reasonable worst-case development scenario (RWCDS) under the Proposed Action would facilitate development of three residential and mixed-use buildings, and include approximately 156 accessory parking spaces on two applicant-owned sites. The following is an overview of the anticipated development on each site:

- Projected development Site 1 (Site 1), which would occupy lot 58 on block 1188 and is owned by the Applicant, would be redeveloped as a 175-foot tall residential building with a total of 134,342 gross square feet of floor area (gsf) and 37 parking spaces.
- Projected development Site 2 (Site 2) at 40 Crown Street, which is also owned by the Applicant, is comprised of three lots (29, 45, and 50) on block 1190. This site would be redeveloped as a 175-foot tall mixed-use residential/commercial building with a total of 427,634 gsf that would include 411,350 gsf residential and 16,284 gsf retail space with 105 parking spaces.
- Projected Development Site 3 (Site 3), which not owned by the Applicant, is comprised of three lots (53, 54, and 55) on block 1188. This site would be redeveloped as a 175-foot tall mixed-use building with a total of 54,000 gsf of floor area, which includes 46,500 gsf of residential area and 7,500 gsf of retail space.

Air quality, which is a general term used to describe pollutant levels in the atmosphere, would be affected by these changes. This analysis estimates the potential impacts of the emissions from the heating, ventilation, and air conditioning (HVAC) systems of the proposed buildings. The HVAC emissions of each building could impact one of the other proposed buildings (project-on-project) and/or nearby existing buildings (project-on existing) that are taller than or as tall as the proposed buildings.

Additionally, analysis considered the potential impacts of an existing nearby combustion emission sources on proposed development sites and the potential impacts of emissions generated by the vehicles using the proposed garage. An analysis of the potential mobile source impacts of the Proposed Action, however, is not warranted because the number of trips generated by the action would be less than the number considered to be significant under CEQR.

Potential air quality impacts were estimated following the procedures and methodologies prescribed in the 2014 *New York City Environmental Quality Review Technical Manual (CEQR TM)*.

Figure K-1:
Project Location Map

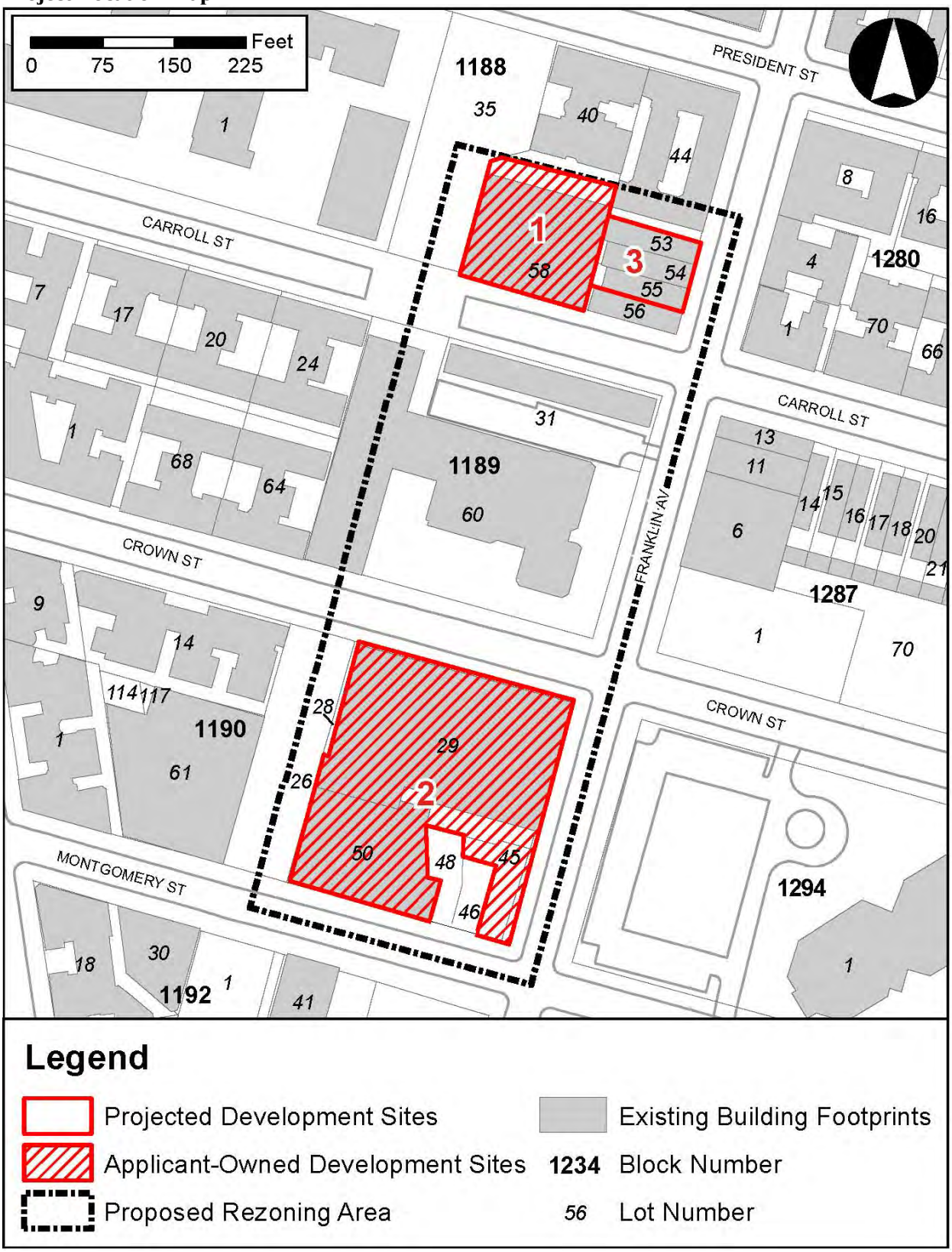


Figure K-2:
View of the Proposed Project Buildings on Blocks 1188 (Sites 1 and 3) and 1190 (Site 2)

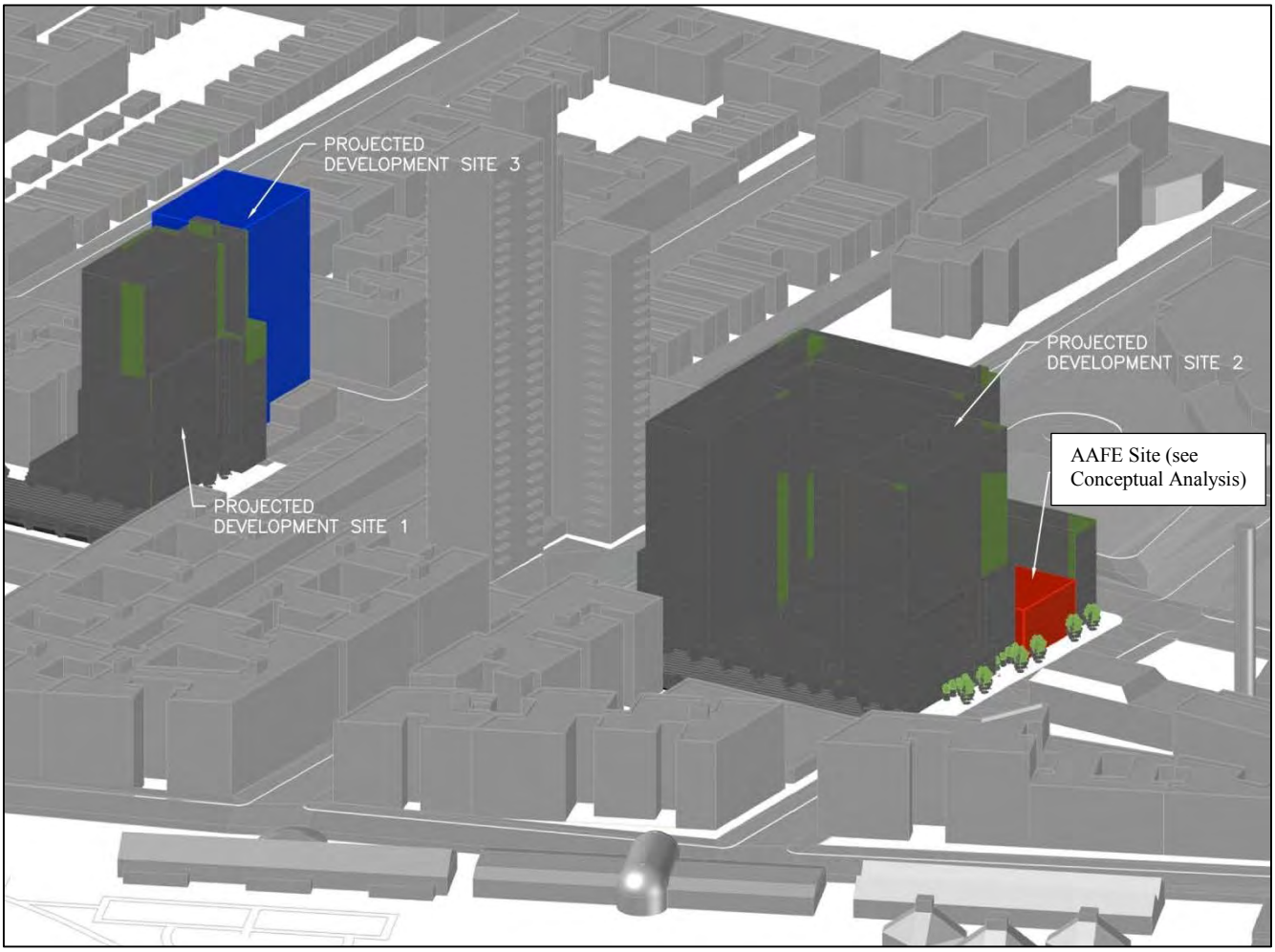


Table K-1:
Applicable National Ambient Air Quality Standards and CEQR Significant Impacts Criteria

Pollutant	Averaging Period	NAAQS	CEQR Significant Impact Criteria
NO_2	1 Hour	0.10 ppm (188 µg/m^3)	
	Annual	.053 ppm (100 µg/m^3)	
$PM_{2.5}$	24 Hour	35 µg/m^3	7.25 µg/m^3
	Annual	12 µg/m^3	0.3 µg/m^3

Source: US Environmental Protection Agency, "National Primary and Secondary Ambient Air Quality Standards." (49 CFR 50) (www.epa.gov/air/criteria.html) and New York State Department of Environmental Conservation (http://www.dec.ny.gov/chemical/8542.html.
Notes: ppm = parts per million
µg/m^3 = micrograms per cubic meter

NO_2 NAAQS

Nitrogen oxide (NOx) emissions from gas combustion consist predominantly of nitric oxide (NO) at the source. The NOx in these emissions are then gradually converted to NO_2, which is the pollutant of concern, in the atmosphere (in the presence of ozone and sunlight as these emissions travel downwind of a source).

The 1-hour NO_2 NAAQS standard of 0.100 ppm (188 ug/m^3) is the 3-year average of the 98th percentile of daily maximum 1-hour average concentrations in a year. For determining compliance with this standard, the EPA has developed a modeling approach for estimating 1-hour NO_2 concentrations that is comprised of 3 tiers: Tier 1, the most conservative approach, assumes a full (100%) conversion of NOx to NO_2; Tier 2 applies a conservative ambient NOx/NO_2 ratio of 80 percent to the NOx estimated concentrations; and Tier 3, which is the most precise approach, employs AERMOD's Plume Volume Molar Ratio Method (PVMRM) module. The PVMRM accounts for the chemical transformation of NO emitted from the stack to NO_2 within the source plume using hourly ozone background concentrations. When Tier 3 is utilized, AERMOD generates 8th highest daily maximum 1-hour NO_2 concentrations or total 1-hour NO_2 concentrations if hourly NO_2 background concentrations are added within the model, and averages these values over the numbers of the years modeled. Total estimated concentrations are generated in the statistical form of the 1-hour NO_2 NAAQS format and can be directly compared with the 1-hour NO_2 NAAQS standard.

Based on New York City Department of Planning (NYCDCP) guidance, Tier 1, as the most conservative approach, should initially be applied as a preliminary screening tool to determine whether violations of the NAAQS is likely to occur. If exceedances of the 1-hour NO_2 NAAQS were estimated, the less conservative Tier 3 approach should be applied.

The annual NO_2 standard is 0.053 parts per million (ppm or 100 ug/m^3). In order to conservatively estimate annual NO_2 impacts, a NO_2 to NOx ratio of 0.75 percent, which is recommended by the NYCDEP for an annual NO_2 analysis, was applied.

$PM_{2.5}$ CEQR Significant Impact Criteria

CEQR TM guidance includes the following criteria for evaluating significant adverse $PM_{2.5}$ incremental impacts:

> *Predicted 24-hour maximum $PM_{2.5}$ concentration increase of more than half the difference between the 24-hour $PM_{2.5}$ background concentration and the 24-hour standard.*

The 24-hour $PM_{2.5}$ background concentration of 20.5 ug/m^3 was obtained from data collected at the Brooklyn JHS-126 monitoring station. This value is the average of the 98th percentile of the latest 3 years of monitoring data collected by the New York State Department of Environmental Conservation (NYSDEC) for 2014 through 2016. As the applicable background value is 20.5 ug/m^3, half of the difference between the 24-hour $PM_{2.5}$ NAAQS of 35 ug/m^3 and this background value is 7.25 ug/m^3. As such, a significant impact criterion of 7.25 ug/m^3 was used for determining whether the potential 24-hour $PM_{2.5}$ impact of the proposed developments is significant.

An annual average adverse $PM_{2.5}$ incremental impact, according to *CEQR* guidance, would be:

> *Predicted annual average $PM_{2.5}$ concentration increment greater than 0.3 ug/m^3 at any receptor location for stationary sources.*

The above 24-hour and annual significant impact criteria were used to evaluate the significance of predicted $PM_{2.5}$ impacts.

Proposed Development Sites

The parameters of each building that would be developed under the Proposed Action (size and height) are as follows:

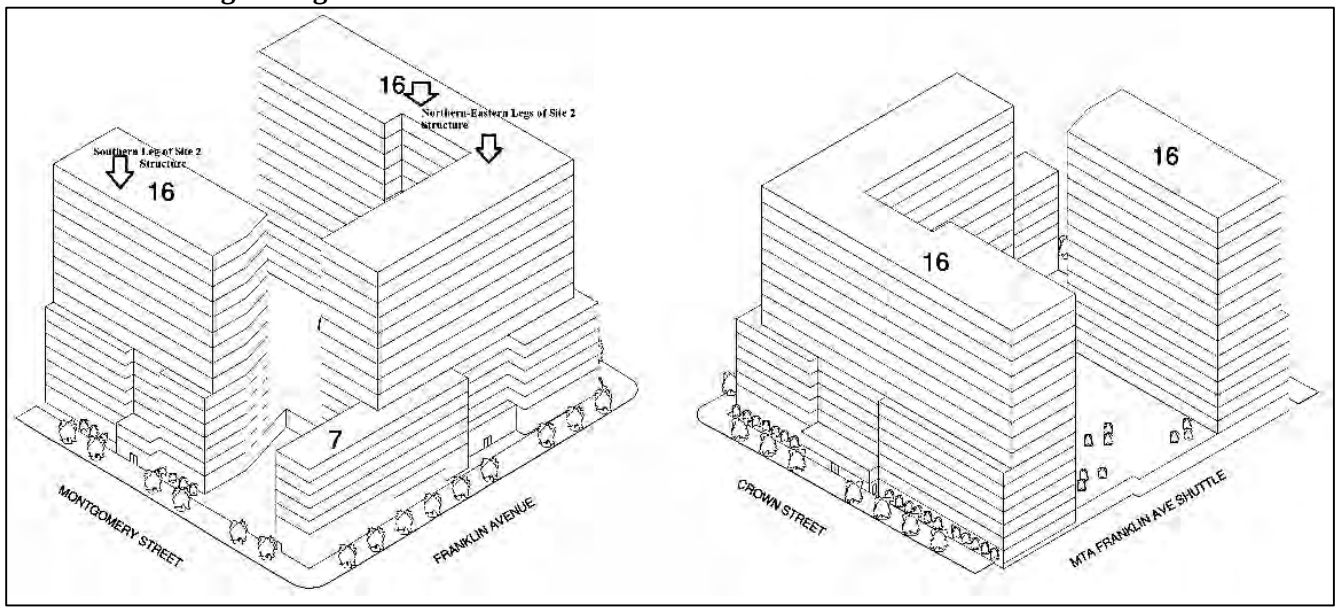
- Site 1 building – 175 feet tall with 134,342 gsf floor area
- Site 2 building – 175 feet tall with 427,634 gsf floor area (of which the L-shaped northern and eastern section would be approximately 299,344 gsf and the southern section of the building (the standalone tower section of the proposed building) would be 128,290 gsf)
- Site 3 building – 175 feet tall with 54,000 gsf floor area

Site 1 on block 1188, lot 58 and Site 3 on lots 53-55 of the same block are located on lots that are adjacent to each other. It was conservatively assumed that the buildings on these lots would also be adjacent to each other.

The HVAC emissions of each building could impact the other building on the same block. However, buildings on block 1188 are unlikely to have a significant impact on buildings on block 1190 because these blocks are far from each other (approximately 400 feet).

The proposed building on Site 2 is designed as one structure, with the northeastern section fronting Crown Street and Franklin Avenue, and the southern section fronting Montgomery Street and Franklin Avenue. The sections of the structure are separated from each other by an internal space (**see Figures K-2 and K-3**). It was assumed that each section would be served by independent HVAC systems. Based on the approximate size of each section, 70 percent of the heat and hot water usage was assumed for the larger northeastern section and 30 percent was assumed for the southern section. It was also assumed that each section of the structure would have one roof-top stack.

Figure K-3:
Site 2 Building Configuration



CEQR Screening Analysis

Based on *CEQR* guidelines, a preliminary screening analysis was conducted as a first step to predict whether the potential impacts of the HVAC emissions of each building would have the potential to be significant and therefore require a detailed analysis.

Project-on-Project

CEQR screening procedures are not applicable to buildings that are less than 30 feet apart from the nearest building of similar or greater height. As such, the screening procedures cannot be used for the project-on-project analysis because the buildings on Sites 1, 2, 3, and 4 are assumed to be adjacent to each other and therefore, should be subject to detailed dispersion analysis.

Screening procedures, however, are applicable for estimating the HVAC impacts of these buildings on existing buildings (project-on-existing).

Project-on-Existing

A review of existing land uses using NYC Oasis interactive mapping application and Google Earth images show that there are two nearby existing buildings taller than the projected and potential buildings. As such, an analysis of project-on-existing impacts need to be conducted.

The HVAC emissions of the projected and potential buildings have the potential to impact two nearby taller existing buildings – the 33-story (297-foot tall) Tivoli Towers residential complex at 49 Crown Street (block 1189, lot 60) and the 25-story Ebbets Field apartment buildings (which has seven buildings) at 1720 Bedford Avenue (block 1302, lot 1). The most significant potential impact from the proposed buildings are likely to occur on the 33-story Tivoli Towers residential complex, which is separated from block 1188 by the 70-foot wide Carroll Street and from block 1190 by the 70-foot wide Crown Street.

In addition, Tivoli Towers have a significant setback from both Carroll and Crown Streets. A setback from Carroll Street to closest tower is approximately 90 feet and to the next closest tower is approximately 150 feet (between Carroll Street and towers is an existing 2-story building). A setback from Crown Street to closest tower is approximately 80 feet and to the next closest tower is approximately 100 feet. This setback would reduce the potential impacts emissions of the proposed developments on Tivoli Towers 2.

The 25-story Ebbets Field apartment buildings are located approximately 345 feet from the closest development sites (Sites 2 and 4), and potential impact of the Sites 2 and 4 HVAC emissions on these buildings is likely to be less significant than the impacts on 33-story Tivoli Towers residential complex. As such, the screening analysis focused on the potential impacts on the Tivoli Towers.

A future planning development on 109-111 Montgomery Street (block 1190, lot 61) would be 12 stories tall, which is lower than the nearby Site 2.

Methodology

The total square footage of each building was used in the analysis, and Figure 17-7 of the *CEQR Air Quality Appendix NO_2 Boiler Screen* (Residential Development- Natural Gas*),* for a corresponding stack height, was applied. This curve depicts size of the development versus distance below which a potential impact could occur, and provides a threshold distance. As required by *CEQR* screening procedures, the 165-foot curve for buildings on Sites 1 and 3 and 2 and 4 was applied as the 165 feet curve height is closest to but

not higher than the proposed stack heights of 178 feet (which are based on building heights of 175 feet and an assumed stack height of 3 feet).

If the actual distance between a stack and an affected building is greater than the threshold distance for a building size, then that building passes the screening analysis (and no significant impact is predicted). However, if the actual distance is less than the threshold distance for a building, then there is a potential for a significant impact and a detailed analysis would be required.

Results

The results of the screening analysis for project-on-existing land uses are presented in **Table K-2**. As shown, for Sites 1 and 2, the actual distances between the buildings and the 33-story Tivoli Towers residential complex are less than the threshold distance determined by curve, indicating that these buildings fail the screening analysis on existing land uses, and a potential for significant impact exists. For Sites 3 and 4, the actual distances between buildings and the Tivoli Towers is greater than the threshold distance determined by curve, indicating that these buildings pass the screening analysis and no further detailed analysis is required.

For Site 2 on the existing 25-story Ebbets Field apartment buildings, the actual distances between Site 2 and these buildings are greater than the threshold distances determined by curve, indicating that both sites pass the screening analysis and no detailed analysis for this site on the Ebbets Field complex is required.

Table K-2:
Results of the Screening Analysis for Project-on-Existing Impacts

Site ID	Block	Floor Area	Stack Height	Nearest Building	Potential B on B Impact	Distance to Nearest Building	Threshold Distance by Nomograph	CEQR Nomograph Results	
		sq. ft.	feet	feet		feet	feet	Pass	Fail
Site 1	1188	132,342	178	33-story EB	S1 on EB	87	75	**Pass**	
Site 2									
Northeastern Section (Franklin Ave Building)	1190	299,344	178	33-story EB	S2 on EB	83	125		**Fail**
				25-story EB	S2 on EB	400		**Pass**	
Southern Section (Montgomery Street Building)		128,290	178	33-story EB	S2 on EB	242	72	**Pass**	
				25-story EB	S2 on EB	350			
Site 3	1188	54,000	178	33-story EB	S3 on EB	165	53	**Pass**	

*EB = Existing Tivoli Towers Building

Detailed Analysis

Based on results of screening analysis, detailed analyses were conducted for:

Project-on-Project

1. Site 1 on Site 3
2. Site 3 on Site 1
3. Northeastern Section (Franklin Avenue Building) on Southern Section (Montgomery Street Building)
4. Southern Section (Montgomery Street Building) on Northeastern Section (Franklin Avenue Building)

Project-on-Existing

1. Site 1 on existing Tivoli Towers
2. Site 3 on existing Tivoli Towers
3. Site 1 & Site 3 combined on Tivoli Towers
5. Site 2 on existing Tivoli Towers

A dispersion modeling analysis was conducted to estimate impacts from the HVAC emissions of proposed buildings using the latest version of EPA's AERMOD dispersion model 8.0 (EPA version 16216r). In accordance with *CEQR* guidance, this analysis was conducted assuming stack tip downwash, urban dispersion surface roughness length, elimination of calms, with and without downwash effect on plume dispersion. AERMOD's Plume Volume Molar Ratio Method (PVMRM) module was utilized for 1-hour NO_2 analysis -- to account for NOx to NO_2 conversion when applicable. Based on NYCDEP recommendations, an in-stack NOx/NO_2 ratio for PVMRM module of 0.5 and a value of a single missing ozone background value of 0.04 ppm were applied.

Analyses were conducted with and without the effects of wind flow around the proposed buildings (i.e., with and without downwash) and the highest results are reported.

Emissions

Emission rates were estimated as follows:

- As all the proposed buildings will be heated by natural gas, emission rates of NOx and $PM_{2.5}$ were calculated based on annual natural gas usage corresponding to the gross floor area of each building, EPA AP-42 emission factors for firing natural gas combustion in small boilers.
- $PM_{2.5}$ emissions from natural gas combustion accounted for both filterable and condensable particulate matter;
- Short-term NO_2 and $PM_{2.5}$ emission rates were estimated by accounting for seasonal variation in heat and hot water demand; and
- The natural gas fuel usage factor 59.1 cubic foot per square foot per year was obtained from CEQR Table US1, Total Energy Consumption, Expenditures and Intensities, 2005, Part I: Housing Unit Characteristics and Energy Use Indicators for New York using conservative factor for residential uses.

The diameter of the stacks and the exhaust's exit velocities were estimated based on values obtained from NYCDEP "CA Permit" database for the corresponding boiler sizes (i.e., rated heat input or million BTUs per hour). Boiler sizes were estimated based on assumption that all fuel would be consumed during the 100 days (or 2,400 hour) heating season. All stack exit temperatures were assumed to be 300°F (423°K), which is appropriate for building boilers. For the Site 2, where two stacks were assumed, emissions were split between stacks.

Table K-3 provides pollutant emission rates from natural gas combustion in the boilers that were used in the dispersion analysis.

Table K-3:
Estimated Pollutant Emission Rates

Site No.	Block/Lot	Building Height	Stack Height	Total Floor Area	$PM_{2.5}$ Emission Rate (1)		NO_2 Emission Rate (2)	
		feet	feet	ft^2	g/sec	g/sec	g/sec	g/sec
					24-hr	Annual	1-hr	Annual
Site 1	1188/58	175	178	132,342	3.12E-03	8.55E-04	4.11E-02	1.12E-02
Site 2	1190/29,45,50							
Northeastern Section (Franklin Avenue Building)		175	178	299,344	7.06E-03	1.93E-03	9.29E-02	2.54E-02
Southern Section (Montgomery Street Building)		175	178	128,290	3.03E-03	8.29E-04	3.98E-02	1.09E-02
Site 3	1188/53,54,55	175	178	54,000	1.27E-03	3.49E-04	1.68E-02	4.59E-03

Notes:
1. $PM_{2.5}$ emission factor for natural gas combustion of 7.6 lb/10^6 cubic feet included filterable and condensable particulate matter (Filterable $PM_{2.5}$ =1.9 lb/10^6 cubic feet and condensable $PM_{2.5}$=5.7 lb/10^6 cubic feet (AP-42, Table 1.4-2).
2. NOx emission factor for natural gas of 100 lb/10^6 cubic feet for uncontrolled boilers with <100MMBtu/hr (AP-42, Table 1.4-1).

Meteorological Data

All analyses were conducted using the five consecutive years of meteorological data from 2012-2016. Surface data was obtained from La Guardia Airport and upper air data was obtained from Brookhaven station, New York. The data were processed by Trinity Consultants, Inc. using the current EPA AERMET and EPA procedures. These meteorological data provide hour-by-hour wind speeds and directions, stability states, and temperature inversion elevations over the 5-year period.

Five years of meteorological data were combined into a single multiyear file to conduct 24-hour $PM_{2.5}$ and 1-hour NO_2 modeling. The $PM_{2.5}$ special procedure, which is incorporated into AERMOD, calculates concentrations at each receptor for each year modeled, averages those concentrations across the number of years of data, and then selects the highest values across all receptors of the 5-year averaged highest values.

Background Concentrations

Because the nearest monitoring station at Brooklyn JHS-126 does not collect hourly ozone and NO_2 background data, for the purpose of conducting the 1-hour NO_2 Tier 3 analysis, hourly NO_2 and hourly ozone background concentrations were developed from monitoring data collected by the NYSDEC at the Queens College monitoring station for 5 consecutive years (2012-2016), and compiled into AERMOD's required hourly emission (NO_2) and concentration (ozone) data format.

The maximum 1-hour NO_2 background concentration at Queens College monitoring station is 64.3 ppb or

121.3 ug/m^3, which is the 3-year average of the 98th percentile of daily maximum 1-hour concentrations for 2014-2016, and the annual NO_2 background concentration is 16.6 ppb or 31.3 ug/m^3 which is the maximum annual 3-year average.

Stack Locations

As previously discussed, buildings within the same block were assumed to be adjacent to each other. For the project-on-project analysis, the stack of each building was initially placed 10 feet from the lot line of the adjacent building, as required by the New York City Building Code as a minimum distance. If exceedances of the $PM_{2.5}$ significant impact criteria were predicted, set-backs from the lot line were increased, in 10-foot increments, until the threshold distance at which each building would pass the analysis was determined.

Therefore, for the project-on-project analysis, the stacks on Sites 1 and 3, which are adjacent to each other, were initially placed on each building approximately 10 feet from the lot line that separates these buildings. Stack heights were assumed to be 3 feet above the roof, as per *CEQR TM* guidance.

For the project-on-existing analysis, the stacks on the buildings on Sites 1, 2, and 3 were initially placed 10 feet from lot line facing Tivoli Towers. For Site 2, two stacks were assumed and emissions were split between these stacks -- with 70 percent emissions released from the stack on Northeastern section leg (Franklin Avenue Building) and 30 percent released from the stack on the Southern section leg (Montgomery Street Building).

*Receptor Locations (see **Figure K-4**)*

For the project-on-project analysis, receptors (windows) were placed around all faces of the impacted buildings in 10-foot increments on all floor levels, starting 10 feet above the ground and extending up to the level of the upper windows that was assumed to be approximately 5 feet below roof level. With buildings of the same height (175 feet each) and stacks 3 feet above the roof or on a bulkhead, the highest impact is likely to occur at the upper windows of the opposing building that are the closest receptors. In the case of a shorter building near a taller building, impacts are likely to occur at a level closest to the stack height.

For the project-on-existing analysis, where the proposed buildings would impact the 297-foot tall existing Tivoli Towers building, receptors were placed at all levels of this building -- at, below, and above the stack height of the proposed buildings using the actual building footprint (as opposed to lot configuration). In order to assure that maximum impacts are estimated, more than 2,800 receptors were placed on the 33-story Tivoli Towers residential complex.

Figure K-4:
Development Sites and Tivoli Towers Complex



$PM_{2.5}$ RESULTS

Project-on-Project

Site 1 on Site 3

Results show that the maximum 24-hour (0.75 ug/m^3) and annual (<0.1 ug/m^3) impacts at 10 feet from the lot line facing Site 3 are less than the 24-hour and annual $PM_{2.5}$ significant impact criteria of 7.25 ug/m^3 and 0.3 ug/m^3, respectively. Therefore, no additional stack setback is required for the stack on the Site 1 building.

Site 3 on Site 1

Results show that the maximum 24-hour (0.33 ug/m^3) and annual (<0.1ug/m^3) impacts at 10 feet from the lot line facing Site 1 are less than 24-hour and annual $PM_{2.5}$ significant impact criteria of 7.25 ug/m^3 and 0.3 ug/m^3, respectively. Therefore, no additional stack setback is required for the stack on the Site 3 building.

Site 2 North-Eastern Section (Franklin Avenue Building) on Site 2 Southern Section (Montgomery Street Building)

As results show, the critical factor in determining stack locations on Site 2 North-Eastern and Southern sections was potential impact on nearby 33-story Tivoli Tower Complex – not the potential impact on each section.

In order to avoid a significant impact (and possible significant cumulative impacts) on Tivoli Towers, the stack on the North-Eastern section (Franklin Avenue building) should be located on the eastern leg and the stack on Southern section (Montgomery Street building) should be located closer to Montgomery Street to

provide more separation from the stack on the Northeastern section of the building. This location would provide the necessary margin of safety to comply with CEQR significant impact thresholds (and the 1-hour NO_2 NAAQS).

Based on an iterative analysis, it was determined that the stack on the Site 2 North-Eastern section, eastern leg (Franklin Avenue building) should be set back at least 80 feet from Crown Street and 30 feet from Franklin Avenue, and the stack on the Southern section (Montgomery Street building) should be set back at least 220 feet from Crown Street and 180 feet from Franklin Avenue to comply with the $PM_{2.5}$ significant impact criteria. As such, the separation between each stack would be approximately 200 feet (**Figure K-5**).

The maximum estimated 24-hour/annual $PM_{2.5}$ impacts at these setback distances are 1.01 ug/m^3 and <0.1 ug/m^3, respectively, which are less than the CEQR significant impact criteria.

Site 2 Southern Section on Site 2 Northeastern Section

The maximum estimated 24-hour/annual $PM_{2.5}$ impacts at these setback distances are 0.44 ug/m^3 and 0<0.1 ug/m^3, respectively, which are less than the CEQR significant impact criteria.

Project-on-Existing Analysis

Site 1 on Existing 33-Story Tivoli Towers Residential Complex

Results for Site 1 with the stack located 10 feet from the lot line facing the existing Tivoli Towers residential complex show that both the maximum 24-hour and annual $PM_{2.5}$ impacts exceed the 24-hour/annual $PM_{2.5}$ significant impact criteria of 7.25 ug/m^3 and 0.3 ug/m^3, respectively. Therefore, an additional stack setback is required for the stack on the Site 1 building. Based on an iteration analysis, it was determined that, in order to comply with the $PM_{2.5}$ significant impact criteria, the stack on the Site 1 building should be at least 40 feet from Carroll Street. The maximum 24-hour and annual $PM_{2.5}$ impacts at this setback distance are 4.2 ug/m^3 and 0.08 ug/m^3, which are less than the CEQR significant impact criteria of 7.25 ug/m^3 and 0.3 ug/m^3, respectively.

Site 3 on Existing 33-Story Tivoli Towers Residential Complex

Results for Site 3 with a stack located 10 feet from the lot line show that the maximum 24-hour $PM_{2.5}$ impact (1.1 ug/m3) are less than the 24-hour $PM_{2.5}$ significant impact criteria of 7.25 ug/m^3.

Site 1 and 3 Combined Emissions on Existing 33-Story Tivoli Towers

Results of the analysis of the potential impacts of the combined emissions from Site 1 and 3 (assuming that these emissions would occur simultaneously) on Tivoli Towers are that both the maximum 24-hour (4.20 ug/m^3) and annual $PM_{2.5}$ impacts impact (0.1 ug/m^3) are less than the 24-hour and annual $PM_{2.5}$ significant impact criteria of 7.25 ug/m^3 and 0.3 ug/m^3, respectively. As such, combined emissions from Sites 1 and 3 would not significantly impact the Tivoli Towers residential complex.

Figure K-5:
Stacks on Franklin Avenue and Montgomery Street Buildings of Site 2

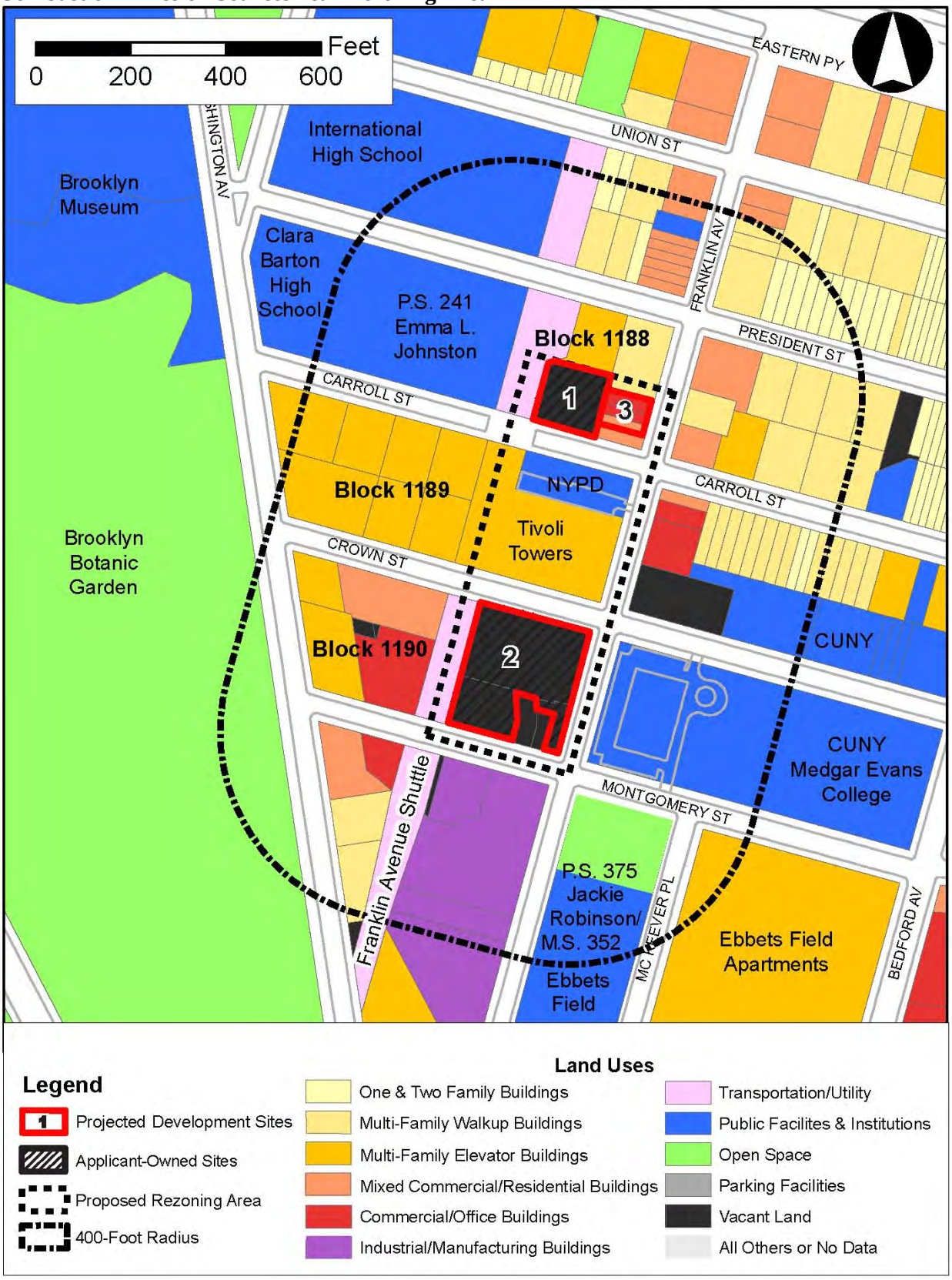


Site 2 on Existing 33-Story Tivoli Towers Residential Complex (see **Figure K-5**)

As described above, the stack on North-Eastern section (Franklin Avenue Building) should be located on the eastern leg and the stack on Southern section (Montgomery Street Building) should be located closer to Montgomery Street to provide more separation from the stack on the Northeastern section of the building. This location would provide the necessary margin of safety to comply with CEQR significant impact thresholds (and the 1-hour NO_2 NAAQS).

Based on an iterative analysis, it was determined that the stack on the Site 2 Northeastern section, eastern leg (Franklin Avenue building) should set back at least 80 feet from Crown Street and 30 feet from Franklin Avenue and the stack on the Southern section (Montgomery Street building) should be set back at least 220 feet from Crown Street and 180 feet from Franklin Avenue to comply with the $PM_{2.5}$ significant impact criteria. The maximum estimated 24-hour/annual $PM_{2.5}$ impacts at these setback distances are 2.85 ug/m^3 and 0. 14 ug/m^3, respectively, which are less than the CEQR significant impact criteria.

Figure K-6:
Combustion Emission Sources near Rezoning Area



All results of the $PM_{2.5}$ analyses are provided in **Table K-4**.

Table K-4:
Results of 24-Hour/Annual $PM_{2.5}$ Analysis for Project-on-Project and Project-on-Existing

Sites and Stack Locations	Building on Building	24-hr/Annual PM2.5 Impact ug/m³	CEQR Significant Threshold ug/m³	Exceed Yes/No
Site 1	S1 on S3	0.75/<0.1	7.25/0.3	No
Site 2 Franklin Avenue Building	Site 2 Montgomery Street Building	1.01/<0.1	7.25/0.3	No
Site 2 Montgomery Street Building	Site 2 Franklin Avenue Building	0.44/<0.1	7.25/0.3	No
Site 3	S3 on S1	0.33/<0.1	7.25/0.3	No
Project-on-Existing				
Site 1	S1 on EB (1)	4.2/0.1	7.25/0.3	No
Site 2 (Two Stacks)	S2 on EB (1)	2.85/0.14	7.25/0.3	No
Site 3	S3 on EB (1)	1.1	7.25/0.3	No
Combined Site 1/Site 3	S1/S3 on EB (1)	4.20/0.1	7.25/0.3	No

Notes:
1. EB = Existing 33-story Tivoli Towers residential complex

NO_2 Results

Project-on-Project

A Tier 1 NO_2 analysis was conducted as a first step in NO_2 evaluation of the project-on-project impacts. The same stack locations that were determined in the $PM_{2.5}$ were used. Results show that for Site 1 and 3, as well as for the Franklin Avenue and Montgomery Street buildings, as they impact each other, the 1-hour NO_2 impacts would not be significant (i.e., would not cause an exceedance of the 1-hour NO_2 NAAQS) for all sites. The 1-hour NO_2 8th highest daily 1-hour total concentrations and total annual average concentrations for Sites 1 and 3, and the Franklin Avenue and Montgomery Street buildings were less than the 1-hour and annual NO_2 NAAQS of 188 and 100 ug/m^3.

Project-on-Existing

For the project-on-existing analysis, a Tier 1 analysis, which was sufficient to demonstrate compliance for Site 3, resulted in potential exceedances of the 1-hour NO_2 NAAQS for Site 1 and Site 2. As such, a Tier 3 analysis, using the AERMOD PVMRM module, was conducted for these sites (see **Table K-5**). The result of the Tier 3 analysis is that the maximum 1-hour NO_2 concentrations for Site 1 and Site 2, with the required stack setback distances, were estimated to be 167.4 and 153.4 ug/m^3, respectively, which is less than the 1-hour NO_2 NAAQS of 188 ug/m^3. The maximum total annual NO_2 concentrations (including a background value of 31.3 ug/m^3) was also less than annual NO_2 NAAQS of 100 ug/m^3.

Table K-5:
Results of 1-Hour NO_2 Analysis for Project-on-Project and Project-on-Existing

Sites and Stack Locations	Building on Building	1-hr NO_2 Impact	1-hr NO_2 Bkgd. Conc.	Total 1-hr NO_2 Conc.	1-hr NAAQS	Tier Applied
		ug/m³	ug/m³	ug/m³	ug/m³	
Project-on-Project						
Site 1	S1 on S3	31.7	121.3	153	188	Tier 1
Site 2 Franklin Ave Building	Site 2 Montgomery Street Building	31.3		152.6		Tier 1
Site 2 Montgomery Street Building	Site 2 Franklin Avenue Building	17.7		139.0		Tier 1
Site 3	S3 on S1	13.4		134.7		Tier 1
Project-on-Existing						
Site 1	S1 on EB (1)	167.4(2)	-	167.4 (2)	188	Tier 3
Site 2 (Two stacks)	S2 on EB (1)	153.4(2)	-	153.4(2)	188	Tier 3
Site 3	S3 on EB (1)	30.3	121.3	151.6	188	Tier 1
Combined Site 1/Site 3	S1/S3 on EB (1)	167.4 (2)	-	167.4 (2)	188	Tier 3

Notes:
1. EB = Existing 33-story Tivoli Towers residential complex
2. The 1-hour NO2 background concentrations with the Tier 3 approach were added to estimated impacts internally within the dispersion model.

E-Designations

In order to ensure that there would be no significant $PM_{2.5}$ impacts from Site 1, Site 2, and Site 3 emissions, the following restrictions should be placed on each of these sites:

Site 1

A roof-top stack requirement would be placed on the Applicant-owned Site 1 building that would specify stack location with its height above the ground and the exclusive use of the natural gas. This would ensure that the HVAC emissions from the Applicant-owned Site 1 would not cause exceedances of the CEQR $PM_{2.5}$ significant impact criteria or violations of the 24-hour/annual $PM_{2.5}$ or the 1-hour/annual NO_2 NAAQS, and would therefore have no significant adverse air quality impacts.

Any future construction on Applicant-owned Site 1 on lot 58 would be required to comply with the following (E) designation:

> **Block 1188, Lot 58: Any new development or enlargement on the above-referenced property on Site 1 that has southern frontage on Carroll Street must use natural gas as the type of fuel for heating, ventilating, and air conditioning (HVAC) and ensure that the HVAC stack on Site 1 is located at least 40 feet from the Carroll Street property line, at the height at least 178 feet above the grade as measured from base elevation of the North American Vertical Datum**

of 1988 (NAVD 88). Adherence to these conditions would avoid any potential significant adverse air quality impacts.

Site 2

A roof-top stack requirement would be placed on the Applicant-owned Site 2 Franklin Avenue and Montgomery Street buildings that would specify stack locations on these buildings with their height above the ground and the exclusive use of the natural gas. This would ensure that the HVAC emissions from the Applicant-owned Site 2 would not cause exceedances of the CEQR $PM_{2.5}$ significant impact criteria or violations of the 24-hour/annual $PM_{2.5}$ or 1-hour/annual NO_2 NAAQS, and would therefore have no significant adverse air quality impacts.

Any future construction on Applicant-owned Site 2 (lots 29, 45, and 50) would be required to comply with the following (E) designation:

Block 1190, Lots 29, 45, and 50: Any new residential and/or commercial development or enlargement must use natural gas for HVAC systems and ensure the heating, ventilating, and air conditioning stacks are located at the highest building tier or at least 178 feet above the grade as measured from base elevation of the North American Vertical Datum of 1988 (NAVD 88), and the Franklin Avenue building stack is at least 80 feet from Crown Street and 30 feet from Franklin Avenue, and the Montgomery Street building stack is at least 220 feet from Crown Street and 180 feet from Franklin Avenue in order to avoid any potential significant air quality impacts.

Site 3

Any future construction on Site 3 on lots 53, 43, and 55 would be required to comply with the following (E) designation:

Block 1188, Lots 53, 43, 55: Any new development or enlargement on the above-referenced property on Site 3 that has eastern frontage on Franklin Avenue must use natural gas as the type of fuel for heating, ventilating, and air conditioning (HVAC) and ensure that HVAC stack on Site 3 building would be at least 178 feet above the grade as measured from base elevation of the North American Vertical Datum of 1988 (NAVD 88). Adherence to these conditions would avoid any potential significant adverse air quality impacts.

Analysis of Potential Impacts from Nearby Significant Emission Sources

CEQR guidance requires evaluation of impacts from potentially large combustion sources operating within 1,000 feet from the study area. The Department of City Planning (DCP) currently considers major or large combustion emission sources that can contribute to pollutant concentration at the identified receptors only those that have Title V or State Facility Permits.

Based on comprehensive review of available information (see **Figure K-6**), three combustion sources were identified near the proposed rezoning area - CUNY Medgar Evers College (CMEC) located at 1650 Bedford Avenue (block 1294, lot 1), industrial/manufacturing facility at 124 Montgomery Street (block 1192, lot 46) south of the Site 2, and the Brooklyn Botanic Garden and Museum of Art located within the Botanic Garden area at 990 Washington Avenue (block 1183, lot 26).

CUNY Medgar Evers College (CMEC) operates a heating and humidification plant that contains three 300 horse-power hot water boilers each used for heating and three smaller boilers used for steam humidification.

This facility, however, does not meet the definition of a large or major emission source because it is relatively small and has no Title V or State Facility permit.

The industrial/manufacturing facility at 124 Montgomery Street (block 1192, lot 46), south of the Site 2, is involved in food manufacturing and has one tall stack but, based on DEP boiler information, operates a relatively small boiler and has no Title V or State Facility permits.

The Brooklyn Museum of Art, located within the Brooklyn Botanic Garden, has two (2) Cleaver Brooks boilers with 20.9 MMBtu/hour heat input, two (2) Fulton Boilers with 56.6 MMBtu/hr. However, it also has no Title V or State Facility permits.

Therefore, none of these existing combustion sources warrant a major (or large) source analysis and no significant impacts from large or major emission sources on the projected developments are anticipated.

III. GARAGE ANALYSIS

Proposed Parking Facilities

The Proposed Action would facilitate the development of two buildings that would include two below-grade parking facilities. Up to 142 accessory parking spaces would be provided across two development sites to accommodate the parking demand for 40 percent of the market-rate dwelling units (37 parking spaces for Site 1 and 105 parking spaces for Site 2).

Projected parking facility capacity and peak hour arrivals and departures were used to identify the parking garage most likely to represent the worst-case scenario for the parking analysis. **Table K-6** provides the hourly incoming and outgoing vehicles at the two parking garages on projected development Site 1 and Site 2 for Saturday (worst-case). As shown, the parking garage for Site 2, located near the western edge of the Montgomery Street frontage, would result in higher hourly parking arrivals and departures (primarily due to number of vehicles generated by Site 2 retail uses).

For conservative purposes, the combined number of highest incoming (46) and outgoing (50) vehicles from the two facilities combined were used in this analysis. Vehicles utilizing the parking garage on Site 2 would enter and exit the garage from Montgomery Street (**Figure K-8**). One garage exhaust vent facing Montgomery Street entrance was conservatively assumed for the analysis.

Emissions from background traffic in the vicinity of the site must be accounted for in the analysis. Because a detailed transportation analysis was not conducted for this project, a traffic count for streets near the garage was conducted as follows:

- 30 vehicles/hour (Montgomery Street eastbound, one way);
- 118 vehicles /hour (Franklin Avenue southbound between Crown and Montgomery Streets, one way); and
- 101 vehicles /hour (Crown Street westbound, two ways).

These background traffic volumes were added to the garage-generated vehicular trips, and total volumes were modeled to estimate contributions from on-street vehicular traffic.

An analysis was conducted to estimate the potential impacts of the emissions from the vehicles using the proposed garage on pollutant level at nearby sensitive land uses (i.e., near and far sidewalk locations and

windows of nearby residential or commercial uses).

While the overall analysis year for the Proposed Action is 2023, the two Applicant-owned developments are expected to be completed by the end of 2021. As such, a 2021 analysis year was used for this analysis.

Methodology

The pollutants of concern for parking facilities are carbon monoxide (CO) and particulate matter smaller than 2.5 microns ($PM_{2.5}$). This analysis was conducted following guidelines provided in the *CEQR TM Appendices* for parking facilities.

The proposed garage would be a totally enclosed facility with mechanical ventilation. To estimate pollutant concentrations, the garage's exhaust vent was analyzed as a "virtual point source" using the computational procedure provided in EPA's Workbook of Atmospheric Dispersion Estimates (AP-26), as referenced in the *CEQR TM* on Page 17-30. This methodology estimates concentrations at various distances from the vent (using appropriate initial horizontal and vertical dispersion coefficients) assuming that the concentrations within the garage are equal to the concentrations in the vent exhaust.

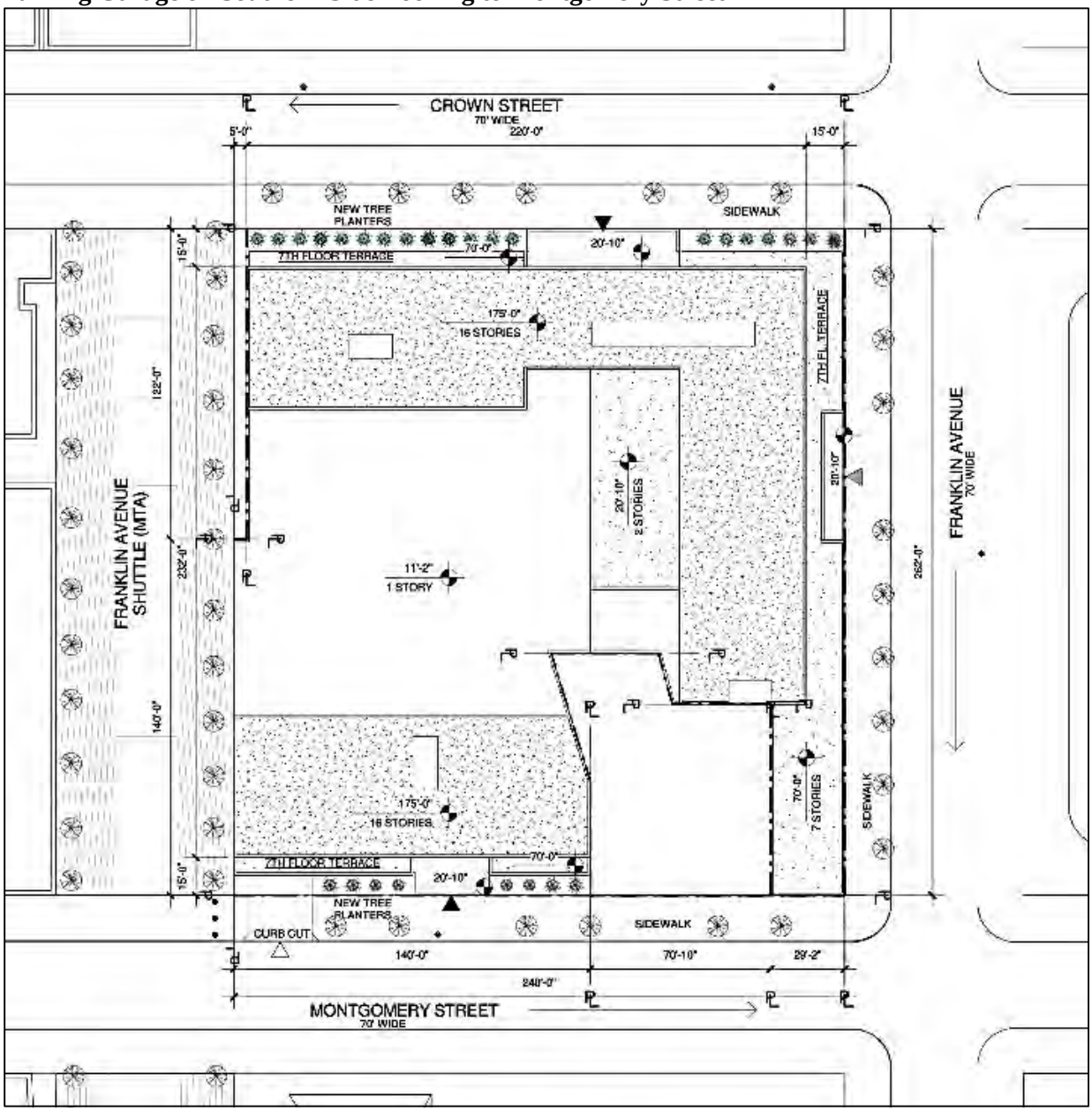
In accordance with CEQR guidance, pollutant concentrations were estimated at locations on the near and far pedestrian sidewalks to ensure that the maximum cumulative effects from on-street traffic and garage emissions are estimated. Concentrations were also estimated at a window (receptors) located directly above the vent.

Table K-6:
Projected With-Action Site 1 and Site 2 Saturday Hourly Parking Demand

Time Period	Site 1 170 Auto Trips			Site 2 550 Auto Trips		
	In	Out	Total	In	Out	Total
12-1 AM	0	0	0	0	0	4
1-2	0	0	0	0	0	2
2-3	0	0	0	0	0	2
3-4	1	0	0	3	0	3
4-5	1	0	0	3	0	3
5-6	1	2	3	3	6	9
6-7	1	5	5	3	17	20
7-8	1	7	8	3	23	26
8-9	3	**12**	15	9	**38**	47
9-10	2	5	7	13	15	28
10-11	4	5	9	13	15	28
11-12	4	4	8	13	13	26
12-1 PM	4	4	8	13	13	26
1-2	6	6	12	22	22	44
2-3	5	3	8	16	11	27
3-4	6	2	8	21	7	28
4-5	8	4	12	24	12	36
5-6	**10**	5	15	**36**	15	51
6-7	8	4	12	26	12	38
7-8	6	4	10	18	12	30
8-9	6	4	10	18	12	30
9-10	3	3	6	10	10	20
10-11	3	4	9	11	5	15
11-12	2	3	5	8	3	11

Note: Numbers in bold represent the highest volumes

Figure K-7:
Parking Garage on Southern Side Looking to Montgomery Street



Contributions from on-street CO and $PM_{2.5}$ vehicular emissions at these receptor locations were calculated through dispersion modeling analyses using EPA's AERMOD dispersion model, which is currently recommended by EPA for mobile source (intersection or highway) modeling, and these values were added to garage-generated impacts and appropriate background levels to estimate the total cumulative pollutant concentrations.

Pollutant concentrations within the garage were calculated assuming a minimum ventilation rate, as per New York City Building Code requirements, of 1 cubic foot per minute of fresh air per gross square foot of garage area.

To determine compliance with the 8-hour CO National Ambient Air Quality Standard (NAAQS) and the 24-hour $PM_{2.5}$ *CEQR* significant incremental impact criteria, maximum CO concentrations were predicted for an 8-hour averaging period and maximum $PM_{2.5}$ concentrations were predicted for a 24-hour/annual time period.

The 24-hour $PM_{2.5}$/annual *CEQR* significant incremental impact criteria of 7.25 and 0.3 ug/m^3, which were determined for HVAC analysis, was applied. These incremental values were used as the threshold level to determine whether the $PM_{2.5}$ garage emissions together with on-site mobile source emissions could cause exceedances of CEQR significant impact criteria.

Emission Factors

The EPA MOVES2014 emission factor algorithm was used to estimate CO and $PM_{2.5}$ emission factors for entering, exiting, and idling vehicles within the garage, and vehicles travelling on nearby streets. Vehicles exiting the garage were assumed to idle for one minute before departing, and the speed within the garage was assumed to be 5 miles per hour (mph). Speeds on the nearby streets were assumed to be 25 mph. All vehicles were assumed to be passenger vehicles. Per DEP guidance, a persistence factor of 0.7 was used to convert one-hour CO values to eight-hour CO values.

Emission factors estimated using the MOVES model (in both grams/vehicle-mile for moving vehicles and grams per hour for idling vehicles) were used to estimate garage exhaust impacts and model CO and $PM_{2.5}$ emissions from on-street traffic with the AERMOD dispersion model.

Modeling inputs for inspection/maintenance, fuel supply and formulation, age distribution, meteorology, etc., were all provided by the NYCDCP for the borough of Brooklyn. Running exhaust and crankcase running exhaust for $PM_{2.5}$, including brake and tire wear emissions, were all included in the emission factors estimates. Fugitive dust (i.e., from the re-entrainment of particles off the ground) emission factors for $PM_{2.5}$ were then added to the emission factors calculated by MOVES.

Fugitive dust was estimated using equations from Section 13.2.1-3 of EPA's AP-42 for roadways with more than 5,000 vehicles a day, which is applicable for roadways in the vicinity of the garage, which can be classified as principal or minor arterials. The formulas are based on an average fleet weight, which varies according to the vehicular mix for a given roadway, and a silt loading factor. A silt loading factor of 0.1 g/m^2, applicable for principal and minor urban arterials roads, was used, as recommended by the *CEQR TM*.

As discussed above, the MOVES model was run for a 2021 Build year. Post-processing, which was conducted to determine emission factors for use with the EPA AERMOD dispersion model, was conducted using the MOVES MySQL Workbench data management software application to extract CO and $PM_{2.5}$ emission factors from MOVES output for each link included in the analysis. These emission factors, together with traffic hourly volumes on each link, were used to model all roadway links in the AERMOD dispersion analysis.

Dispersion Analysis

The AERMOD dispersion model was used to estimate CO and $PM_{2.5}$ contributions from the vehicular traffic on the nearby roadway links as components of the total predicted pollutant concentrations. AERMOD is currently recommended by EPA as preferred model to estimate concentration from vehicular traffic at intersections, highways, by simulating them as a line or of volume sources. The advantage of using AERMOD over the previously used model (CAL3QHCR) for mobile source modeling is associated with

the ability to use five (5) consecutive years on meteorological data in one modeling run and obtain maximum concentrations over the 5-years period.

Traffic links were modeled as the EPA line sources. Inputs to the model included emission rates in grams per second per square meter, link coordinates, release height, and initial vertical dimension parameter. Emission rates were estimated based on MOVES emissions factors in grams per vehicle-mile, length of the roadway link, and total number of vehicles traveling on the link. Meteorological data from LaGuardia Airport for years 2012 through 2016 were used for this analysis.

The garage's exhaust duct was conservatively assumed to be 12 feet directly above ground level at the vehicle entry on Site 2 facing Montgomery Street. Receptors were placed at the near and far sidewalks of Montgomery Street. The pedestrian receptor sites on the near sidewalk were estimated to be approximately 5 feet from the garage vent while the receptor site in the middle of the far sidewalk was estimated to be approximately 60 feet from the vent. The window above the vent was assumed to be 5 feet higher than the vent (or 17 feet above ground level) and zero distance from the vent.

The analysis for estimating pollutant concentrations was conducted based on the computational procedures provided in the *CEQR TM*, which uses spreadsheets that include garage dimensions and total parking area, vent height(s), receptor distances from the vent, number of vehicles entering and exiting garage, emission factors for moving and idling vehicles, and pre-tabulated dispersion parameters to estimate concentration at the near and far sidewalks and windows above the vent. CO and $PM_{2.5}$ concentrations from the on-street sources were added to garage impacts on far sidewalk receptors and the total cumulative CO and $PM_{2.5}$ concentrations were estimated by adding together the contributions from the garage exhaust vent, on-street sources, and background levels. The maximum estimated total 8-hour CO concentration was compared to the 8-hour CO NAAQS of 9 ppm and the maximum estimated 24-hour/annual $PM_{2.5}$ impacts were compared to the CEQR $PM_{2.5}$ significant incremental impact thresholds.

All modeling inputs and emission factors determined by the MOVES model, as well as spreadsheets with estimated CO and $PM_{2.5}$ concentrations within the garage; at windows above the vent; near and far sidewalks, and on-street traffic as well as the cumulative pollutant concentrations at these locations are provided in the back-up documentation for this project.

Results of Garage Analysis

The results of the garage analyses are summarized in **Table K-7**. All input parameters, equations used, and estimated CO and $PM_{2.5}$ concentrations from within the garage, at garage vent, at the window receptors, contribution from on-street sources, and cumulative pollutant concentrations, as well as comparison to the NAAQS *de minimis* criteria for CO and the CEQR threshold significant criteria for $PM_{2.5}$, are provided in back-up spreadsheets for this project.

As shown in **Table K-7**, estimated total maximum 8-hour CO concentrations for the near and the far sidewalks, and the window above the vent are all below the NYC *de minimis* criteria for CO and NAAQS of 9 ppm. The maximum $PM_{2.5}$ 24-hour and annual impacts and the total concentrations are both less than the CEQR significant impact criteria for $PM_{2.5}$ and the respective NAAQS. As such, the garage and on-street mobile source emissions associated with the Proposed Action would not cause a significant adverse air quality impact.

Table K-7:
Estimated Cumulative Pollutant Concentrations from Garage and On-Street Mobile Sources Emissions

CO Cumulative Concentrations						
	Near Sidewalk		**Far Sidewalk**		**Window Above**	
Distance from Vent (feet)	5		65		17	
Averaging Period	**1-hour**	**8-hour**	**1-hour**	**8-hour**	**1-hour**	**8-hour**
Garage CO (ppm)	0.18	0.13	0.12	0.11	0.1	0.07
Line Source (ppm)	-	-	0.04	0.03	-	-
Cumulative Garage impact	0.18	0.13	0.16	0.14	0.1	0.07
NYC *de minimis* (ug/m^3)	3.7		3.7		3.7	
Significant Garage Impact?	**No**		**No**		**No**	
Background Value (ppm)	1.6	1.2	1.6	1.2	1.6	1.2
Total CO Concentration (ppm)	1.8	1.3	1.8	1.3	1.7	1.3
NAAQS, CO (ppm)	35	9	35	35	9	35
Significant Impact?	**No**		**No**		**No**	

$PM_{2.5}$ Impacts and Total Cumulative Concentrations			
	Near Sidewalk	**Far Sidewalk**	**Window Above**
Distance from Vent (feet)	5	65	17
Averaging Period	**24-hour**	**24-hour**	**24-hour**
Garage $PM_{2.5}$ (ug/m^3)	0.54	0.75	0.54
Line Source (ug/m^3)	-	0.34	-
Cumulative Garage impact	0.54	1.09	0.54
NYC *de minimis* (ug/m^3)	7.25	7.25	7.25
Significant Garage Impact?	**No**	**No**	**No**
Background Value (ug/m^3)	20.5	20.5	20.5
Total $PM_{2.5}$ Concentration (ug/m^3)	21.0	21.6	21.0
NAAQS, $PM_{2.5}$ (ug/m^3)	35.0	35.0	35.0
Exceeds NAAQS?	**No**	**No**	**No**

IV. RESULTS

The results of the analyses are as follows:

1. No significant adverse air quality impacts from the HVAC emissions of the Applicant-owned Sites 1 and 2 and non-Applicant Site 3 (Project-on-Project) will occur with the required stack setback distances for Sites 1 and 2 and the imposed E-designations;
2. No significant adverse air quality impacts from the HVAC emissions of the Applicant-owned Sites 1 and 2, or non-Applicant site 3 on existing land uses (Project-on-Existing) will occur with the required stack setback distances for Sites 1 and 2 and the imposed E-designations;
3. No significant adverse air quality impact from existing large or major emissions source on proposed developments is predicted; and
4. No significant adverse air quality impacts from the emissions of the vehicles using the proposed garages will occur.

V. CONCLUSION

With the required E-designations and fuel use restriction, the Proposed Action would not cause any potentially significant air quality impacts.

Attachment L

Noise

I. INTRODUCTION

The Applicant, Cornell Realty Management, LLC, is seeking several discretionary actions in order to facilitate the redevelopment of two sites in the Crown Heights neighborhood of Brooklyn Community District 9. The discretionary actions include: (i) a zoning map amendment to rezone portions of tax blocks 1188, 1189, and 1190 from R6A and R6A with a C1-3 overlay to an R8X zoning district and an R8X district with a C2-4 overlay, and (ii) a zoning text amendment to designate the northern and southern block ends of the Project Area as a Mandatory Inclusionary Housing (MIH) area. The portion of the block bound by Carroll Street, Franklin Avenue and Crown Street would not be designated as an MIH area.

Collectively, the zoning map amendment and zoning text amendment are the "Proposed Action" for the purposes of the environmental analysis, as this would represent the RWCDS.

The proposed rezoning area is approximately 300 feet wide and two and a half blocks long, located on the western side of Franklin Avenue. Specifically, it consists of:

- Within block 1188: a portion of lot 35, a portion of lot 44, and lots 53, 54, 55, 56, and 58 (the "Northern Blockfront");
- Within block 1189: lots 31 and 60 (the "Middle Blockfront"); and,
- Within block 1190: a portion of lot 26, and lots 28, 29, 45, 46, 48 and 50 (the "Southern Blockfront").

The two Applicant-owned projected development sites consist of lot 58 on block 1188 and lots 29, 45, and 50 on block 1190, which are currently occupied by vacant industrial/manufacturing buildings and vacant land (see **Figure 1, "Land Use"** in the EAS Form). The two developments on the Applicant-owned sites would be predominantly residential with approximately 518 total dwelling units (140 affordable), though the project proposed for block 1190 would also include approximately 16,284 gross square feet (gsf) of retail. Across the two Applicant-owned projected development sites, 151 accessory parking spaces are also proposed to accommodate on-site parking demand which correlates to a rate of 40 percent of the market rate dwelling units. The accessory parking garages are proposed on the two development sites to accommodate the parking demand. The development program described above represents the RWCDS for the Applicant-owned development sites.

One projected development site has been identified within the rezoning area that is expected to be developed under future conditions with the Proposed Action. Projected development Site 3 is comprised of block 1188, lots 53, 54, and 55 (882-886 Franklin Avenue). It is anticipated that the 7,500 sf site would be developed with the full 7.2 FAR, resulting in approximately 47 new dwelling units and approximately 7,500 sf of local retail with up to 14 accessory parking spaces. Pursuant to the proposed zoning, the required parking could be waived if a zoning lot is 10,000 sf or less, or if fewer than 15 spaces are required. As the parking requirement for the site would be for 14 spaces, it is anticipated that the developer would elect not to provide on-site parking. Therefore, it is assumed that no parking would be provided on-site.

As the Proposed Action would facilitate the development of residential uses that would be adjacent to an open, below-grade subway cut right-of-way, a noise analysis was conducted, pursuant to the standards set forth in the 2014 *CEQR Technical Manual*, to determine ambient noise levels and the level of building

attenuation necessary to ensure that interior noise levels of the proposed projects satisfy applicable interior noise criteria for the respective uses. Noise from the subway is expected to be dominant along the west-facing façades of the proposed projects closest to the subway tracks. Based on field observations, noise levels from a passing subway were moderate and hard to distinguish from other existing ambient noise levels in this area.

Existing vehicular traffic surrounding the site, where the proposed projects' frontages would be located, is also a contributing source of area noise in the Project Area. The developments that would result from the Proposed Action are expected to slightly increase traffic volumes in the general vicinity of the Project Area. Any change in future traffic volumes in the general vicinity of the Project Area could lead to changes in the existing noise levels. Increases of 3 dBA or greater between the future without the Proposed Action (No-Action condition) and the future with the Proposed Action (With-Action condition) would constitute significant impacts. An analysis was designed and conducted to identify and quantify any such impacts.

Based on a field survey of land uses in the area, it was determined that no stationary noise sources contribute significantly to noise levels in the area, and analysis of stationary noise source is not warranted.

II. NOISE FUNDAMENTALS

Quantitative information on the effects of airborne noise on people is well documented. If sufficiently loud, noise may adversely affect people in several ways. For example, noise may interfere with human activities such as sleep, speech communication, and tasks requiring concentration or coordination. It may also cause annoyance, hearing damage, and other physiological problems. Although it is possible to study these effects on people on an average or statistical basis, it must be remembered that all the stated effects of noise on people vary greatly with the individual. Several noise scales and rating methods are used to quantify the effects of noise on people. These scales and methods consider factors such as loudness, duration, time of occurrence, and changes in noise level with time.

"A"-Weighted Sound Level (dBA)

Table L-1:
Common Noise Levels

Sound Source	(dBA)
Air Raid Siren at 50 feet	120
Maximum Levels at Rock Concerts (Rear Seats)	110
On Platform by Passing Subway Train	100
On Sidewalk by Passing Heavy Truck or Bus	90
On Sidewalk by Typical Highway	80
On Sidewalk by Passing Automobiles with Mufflers	70
Typical Urban Area	60-70
Typical Suburban Area	50-60
Quiet Suburban Area at Night	40-50
Typical Rural Area at Night	30-40
Soft Whisper at 5 meters	30
Isolated Broadcast Studio	20
Audiometric (Hearing Testing) Booth	10
Threshold of Hearing	0

Source: 2014 *CEQR Technical Manual* / Cowan, James P. Handbook of Environmental Acoustics. Van Nostrand Reinhold, New York, 1994. Egan, M. David, Architectural Acoustics. McGraw-Hill Book Company, 1988.
Note: A 10 dBA increase appears to double the loudness, and a 10 dBA decrease appears to halve the apparent loudness.

Noise is typically measured in units called decibels (dB), which are ten times the logarithm of the ratio of the sound pressure squared to a standard reference pressure squared. Because loudness is important in the assessment of the effects of noise on people, the dependence of loudness on frequency must be taken into account in the noise scale used in environmental assessments. Frequency is the rate at which sound pressures fluctuate in a cycle over a given quantity of time, and is measured in Hertz (Hz), where 1 Hz equals 1 cycle per second. Frequency defines sound in terms of pitch components. In the measurement system, one of the simplified scales that accounts for the dependence of perceived loudness on frequency is the use of a weighting network - known as A-weighting - that simulates the response of the human ear. For most noise assessments, the A-weighted sound pressure level in units of dBA is used due to its widespread recognition and its close correlation to perception. In this analysis, all measured noise levels are reported in dBA or A-weighted decibels. Common noise levels in dBA are shown in **Table L-1.**

Community Response to Changes in Noise Levels

Table L-2 shows the average ability of an individual to perceive changes in noise. Generally, changes in noise levels less than 3 dBA are barely perceptible to most listeners. However, 5 dBA changes are readily noticeable and 10 dBA changes are normally perceived as doublings (or halvings) of noise levels. These guidelines permit direct estimation of an individual's probable perception of changes in noise levels.

Table L-2:
Average Ability to Perceive Changes in Noise Levels

Change (dBA)	Human Perception of Sound
2-3	Barely perceptible
5	Readily noticeable
10	A doubling or halving of the loudness of sound
20	A dramatic change
40	Difference between a faintly audible sound and a very loud sound

Source: Bolt Beranek and Neuman, Inc., Fundamentals and Abatement of Highway Traffic Noise, Report No. PB-222-703. Prepared for Federal Highway Administration, June 1973.

Noise Descriptors Used In Impact Assessment

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

The one-hour equivalent continuous noise level ($L_{eq\ (1h)}$ in dBA), the tenth percentile level L_{10} and the day-night average sound level L_{dn} were selected as the noise descriptors for the purposes of this analysis. Hourly statistical noise levels (particularly L_{10} and L_{eq} levels) were used to characterize the relevant noise sources and their relative importance at each receptor location.

Applicable Noise Codes and Impact Criteria

New York City Noise Code

The New York City Noise Control Code, amended in December 2005, contains prohibitions regarding unreasonable noise and specific noise standards, including plainly audible criteria for specific noise sources. In addition, the amended code specifies that no sound source operating in connection with any commercial or business enterprise may exceed the decibel levels in the designated octave bands at specified receiving properties. The New York City Department of Environmental Protection (DEP) has set external noise exposure standards. These standards are shown in **Table L-3**.

Table L-3:
Noise Exposure Guidelines for Use in City Environmental Impact Review

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

Source: New York City Department of Environmental Protection (adopted policy 1983).

Notes:

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

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

[2] Tracts of land where serenity and quiet are extraordinarily important and serve an important public need and where the preservation of these qualities is essential for the area to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of parks or open spaces dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet. Examples are grounds for ambulatory hospital patients and patients and residents of sanitariums and old-age homes.

[3] One may use the FAA-approved L_{dn} contours supplied by the Port Authority, or the noise contours may be computed from the federally approved INM Computer Model using flight data supplied by the Port Authority of New York and New Jersey.

[4] External Noise Exposure standards for industrial areas of sounds produced by industrial operations other than operating motor vehicles or other transportation facilities are spelled out in the New York City Zoning Resolution, Sections 42-20 and 42-21. The referenced standards apply to M1, M2, and M3 manufacturing districts and to adjoining residence districts (performance standards are octave band standards).

As shown in **Table L-4**, noise exposure is classified into four categories: "Acceptable," "Marginally Acceptable," "Marginally Unacceptable," and "Clearly Unacceptable." The standards and required attenuations shown are based on maintaining an interior noise level for the worst-case hour L_{10} of less than or equal to 45 dBA.

Table L-4:
Required Attenuation Values to Achieve Acceptable Interior Noise Levels

	Marginally Acceptable	**Marginally Unacceptable**				**Clearly Unacceptable**
Noise level with proposed project	$65<L_{10}\leq70$	$70<L_{10}\leq73$	$73<L_{10}\leq76$	$76<L_{10}\leq78$	$78<L_{10}\leq80$	$80<L_{10}$
Attenuation[A]	25 dB(A)	(I) 28 dB(A)	(II) 31 dB(A)	(III) 33 dB(A)	(IV) 35 dB(A)	$36 + (L_{10} - 80)$[B] dB(A)

Notes: [A] The above composite window-wall attenuation values are for residential dwellings. Commercial office spaces and meeting rooms would be 5 dB(A) less in each category. All the above categories require a closed window situation and hence an alternate means of ventilation.
[B] Required attenuation values increase by 1 dB(A) increments for L_{10} values greater than 80 dBA.
Source: New York City Department of Environmental Protection / 2014 *CEQR Technical Manual*

III. NOISE PREDICTION METHODOLOGY

Proportional Modeling

Proportional modeling was used to determine No-Action and With-Action noise levels at one receptor location adjacent to the development sites, as discussed in more detail below. Proportional modeling is one of the techniques recommended in the 2014 *CEQR Technical Manual* for mobile source analysis.

Using this technique, the prediction of future noise levels (where traffic is the dominant noise source) is based on a calculation using measured existing noise levels and predicted changes in traffic volumes to determine No-Action and With-Action noise levels. Vehicular traffic volumes (counted during the noise recording), are converted into PCE values, for which one medium-duty truck (having a gross weight between 9,900 and 26,400 pounds) is assumed to generate the noise equivalent of thirteen cars, one heavy-duty truck (having a gross weight of more than 26,400 pounds) is assumed to generate the noise equivalent of 47 cars, and one bus (vehicles designed to carry more than nine passengers) is assumed to generate the noise equivalent of eighteen cars. Future noise levels are calculated using the following equation:

FNA NL =10 log (NA PCE/E PCE) + E NL
where:
FNA NL = Future No-Action Noise Level
NA PCE = No-Action PCEs
E PCE = Existing PCEs
E NL = Existing Noise Level

Sound levels are measured in decibels and therefore increase logarithmically with sound source strength. In this case, the sound source is traffic volumes measured in PCEs. For example, assume that traffic is the dominant noise source at a particular location. If the existing traffic volume on a street is 100 PCEs and if the future traffic volumes were increased by 50 PCEs to a total of 150 PCEs, the noise level would increase by 1.8 dBA. Similarly, if the future traffic were increased by 100 PCEs, or doubled to a total of 200 PCEs, the noise level would increase by 3.0 dBA.

IV. EXISTING CONDITIONS – PROJECT AREA

As presented in **Attachment A, "Project Description,"** the Project Area measures approximately 186,425 sf and comprises the eastern portions of Brooklyn blocks 1188, 1189 and 1190 (the portions of the blocks that extend 300 feet from Franklin Avenue between a point 131 feet south of President Street on the north and Montgomery Street to the south), encompassing the two Applicant-owned projected development sites. As noted above, the Project Area is adjacent to an open subway cut for the MTA Franklin Avenue Shuttle right-of-way, spanning across tax lots 26 and 35. The portion of block 1188 in the Project Area is currently occupied by a mix of residential, commercial, and transportation uses. As described above, the northern portion of the block is comprised of two apartment buildings, 990 President Street (lot 40) and 1000 President Street (lot 44). These two buildings include 54 dwelling units (six stories) and 57 dwelling units (four stories), respectively.

While lot 40 is located immediately outside of the Project Area's northern limits, lot 44 would be bisected by the proposed zoning boundary. Within the Project Area, on the southern portion of the block, there are two one-story commercial buildings at 882 and 884 Franklin Avenue (lots 53 and 54). 882 Franklin Avenue is currently vacant, while 884 Franklin Avenue, also vacant, was most recently occupied by the Crown Star Laundromat. To the south, there are two three-story, mixed-use residential and commercial buildings at 886 and 888 Franklin Avenue (lots 55 and 56). 886 Franklin Avenue accommodates the Franklin and Carroll Pharmacy on the first floor, while 888 Franklin Avenue accommodates the Carroll Street Discount Corp. on the first floor. The vacant, one-story industrial/manufacturing building at 931 Carroll Street (lot 58) on projected development Site 1, is also located on block 1188.

The portion of block 1190 in the Project Area includes projected development Site 2 which encompasses five lots of vacant industrial/manufacturing buildings and former parking lots along Montgomery Street, Franklin Avenue, and Crown Street.

As shown in **Figure L-1**, Carroll Street is a one-way eastbound street with one travel lane, Crown Street has both west and east bound travel lanes, Franklin Avenue is a one-way southbound street with two travel lanes and Montgomery Street is a one-way eastbound street with one travel lane. All four streets permit parking on both sides of the street. Franklin Avenue is a minor one-way southbound arterial through Crown Heights which runs along the east side of the Project Area, and Washington Avenue is a minor two-way arterial west of the Project Area.

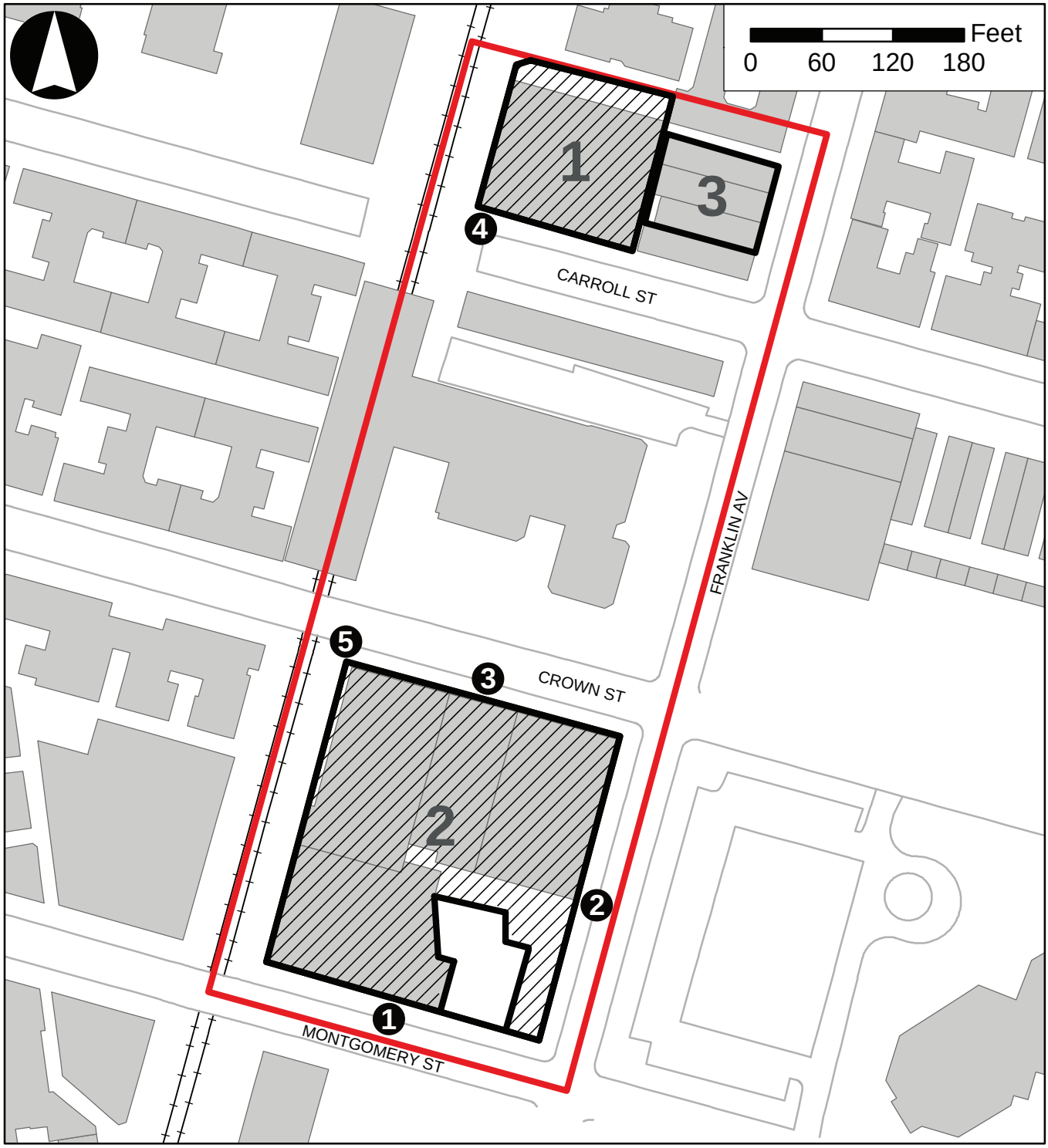
Selection of Noise Receptor Locations

As discussed above, local vehicular traffic and the adjacent subway line are the dominant noise sources in the vicinity of the Project Area. Four noise receptor locations were selected to be at the street frontages of the proposed projects (receptor locations 1 through 4). As the proposed projects would be located in proximity to a subway line, a receptor location near the tracks was also monitored (receptor location 5 in **Figure L-1**). The assumption was made that all windows on all frontages of the future buildings would be operable. These are all described below.

Receptor Location #1 – Future Building Façade at Montgomery Street
Halfway point of the street frontage dimension at Montgomery Street, between Washington and Franklin Avenues.

Receptor Location #2 – Future Building Façade at Franklin Avenue
Halfway point of the street frontage dimension at Franklin Avenue between Montgomery and Crown Streets.

Figure L-1
Receptor Locations



Legend

- 1 Projected Development Sites
- Proposed Rezoning Area
- Applicant-Owned Sites
- 1 Noise Receptor Locations
- Building Footprints
- BMT Franklin Avenue Line

Receptor Location #3 – Future Building Façade at Crown Street
Halfway point of the street frontage dimension at Crown Street between Washington and Franklin Avenues.

Receptor Location #4 – Future Building Façade at Carroll Street
At the southwestern corner of proposed development Site 1 on the northern side of Carroll Street, as close as possible to the subway tracks in order to capture any additional background train noise emanating from the tracks.

Receptor Location #5 – Future Western Façades at the Subway Tracks
To the southeast of the subway tracks at the northwestern corner of proposed development Site 2, directed at the subway tracks in order to thoroughly capture train noise.

Moreover, as local vehicular traffic is a source of noise where the future building façades would be located, No-Action and With-Action PCE values were calculated. Per Table 16-4 of the *CEQR Technical Manual,* to calculate the No-Action PCE values, an annual background growth rate of 0.50 percent for Brooklyn was applied for years 1-5, with an additional annual background growth rate of 0.25 percent for anything over 5 years, and were added to the PCE noise values based on counted vehicles.[1] In order to obtain the necessary future With-Action noise PCE values to calculate the With-Action noise levels, a preliminary traffic assignment was created to determine the future 2023 traffic increment.

Noise Monitoring

Measurements performed at receptor locations 1 through 5 were conducted as part of the impact identification and building attenuation analyses. These locations are representative of where maximum impact from either vehicular or subway traffic would be expected. The measurements in these locations were used to assess the potential impacts of existing noise generated by subway traffic and of traffic noise generated by the Proposed Action. At receptor locations 1 through 4, 20-minute spot measurements of existing noise levels were performed for each of the three noise analysis time periods - weekday AM peak hour (8:00 AM to 9:00 AM), weekday midday peak hour (12:00 PM to 1:00 PM), and weekday PM peak hour (5:00 PM to 6:00 PM). At receptor location 5, 1-hour spot measurements of existing noise levels were performed for each of the three noise analysis time periods - weekday AM peak hour (8:00 AM to 9:00 AM), weekday midday peak hour (12:00 PM to 1:00 PM), and weekday PM peak hour (5:00 PM to 6:00 PM). Noise monitoring at receptor locations 1 through 4 was performed on November 19 and November 20, 2014. The weather was clear and temperatures were in the low 30s ºF. Noise monitoring at receptor location 5 was performed on November 16, 2016. The weather was clear and temperatures were in the high 50s ºF.

Equipment Used During Noise Monitoring

The instrumentation used for the measurements was a Brüel & Kjaer Type 4189 ½-inch microphone connected to a Brüel & Kjaer Model 2250 Type 1 (as defined by the American National Standards Institute) sound level meter. This assembly was mounted at a height of 5 feet above the ground surface on a tripod and at least 6 feet away from any sound-reflecting surfaces to avoid major interference with source sound level that is being measured. The meter was calibrated before and after readings with a Brüel & Kjaer Type 4231 sound-level calibrator using the appropriate adaptor. Measurements at the receptor location were made on the A-scale (dBA). The data were digitally recorded by the sound level meter and displayed at the end of the measurement period in units of dBA. Measured quantities included L_{eq}, L_1, L_{10}, L_{50}, and L_{90}. A windscreen was used during all sound measurements except for calibration. Only subway and vehicular

[1] Calculations according to Table 16-4 of the *CEQR Technical Manual.*

traffic-related noise was measured; noise from other sources (e.g., emergency sirens, aircraft flyovers, etc.) was excluded from the measured noise levels. Weather conditions were noted to ensure a true reading as follows: wind speed under 12 mph; relative humidity under 90 percent; and temperature above 14°F and below 122°F (pursuant to ANSI Standard S1.13-2005).

Existing Noise Levels at the Noise Receptor Location

Measured Noise Levels

Noise monitoring results at the receptor locations are shown in **Table L-5** below. In general, the principal noise sources of rail systems are in the interaction between wheels and rails, the propulsion system of the railcars, brakes and auxiliary equipment (ventilation and horns). The dominate cause of railcar noise over most of the typical speed range is interaction between the wheels and rails. In general, noise increases with train speed and length. Additionally, noise levels are depending upon the railway configuration (i.e., whether the track is at-grade, welded rail, joined track, embedded track on grade or aerial structure with slab track), and whether there are any noise barriers or berms in place. When railcars travel on tight curves, the dominant noise emitted may be a high pitched squeal or screech.

Table L-5:
Existing Noise Levels (in dBA) at the Monitoring Locations

#[1]	Monitoring Location	Time	L_{eq}	L_{max}	L_{min}	L_1	L_{10}[2]	L_{50}	L_{90}	CEQR Noise Exposure Category
1	Midpoint of Montgomery Street	AM	66.7	83.7	49.2	78.8	**68.7**	60.7	54.6	**Marginally Acceptable**
		MD	57.5	79.8	45.5	67.9	60.6	54.0	49.5	
		PM	58.8	74.5	47.7	69.7	62.1	53.2	50.2	
2	Midpoint of Franklin Avenue	AM	64.7	85.7	49.2	75.9	**67.0**	59.6	53.7	**Marginally Acceptable**
		MD	63.1	94.6	44.1	72.4	65.9	54.2	48.0	
		PM	63.8	86.7	47.4	74.1	66.7	58.8	51.5	
3	Midpoint of Crown Street	AM	65.2	84.3	51.9	76.2	**68.1**	58.9	54.8	**Marginally Acceptable**
		MD	62.1	82.6	47.8	73.0	64.1	56.3	51.5	
		PM	61.4	84.6	47.7	72.7	62.7	55.5	51.5	
4	Western Edge of Carroll Street	AM	57.8	76.0	48.2	65.1	**59.9**	56.5	52.0	**Acceptable**
		MD	60.3	90.4	44.6	64.5	56.7	50.4	47.1	
		PM	57.4	81.6	47.8	68.4	58.2	52.4	49.8	
5[3]	Crown Street at Subway Tracks	AM	66.8	90.0	48.4	80.5	**64.4**	56.7	51.2	**Acceptable**
		MD	66.2	89.9	46.9	79.4	62.9	53.7	48.5	
		PM	65.8	89.6	47.9	79.3	62.9	55.2	49.2	

Notes:
Field measurements at receptor locations 1 through 4 were performed by Philip Habib & Associates on November 19 and 20, 2014; field measurements at receptor location 5 were performed by Philip Habib & Associates on November 16, 2016.
[1] Refer to **Figure L-1** for noise monitoring receptor location.
[2] Highest L_{10} values for each monitoring location are shown in **bold**.
[3] Field measurements at receptor location 5 were conducted for a duration of 1 hour, pursuant to CEQR standards for locations where train traffic is the main source of ambient noise; field measurements at receptor locations 1 through 4 were conducted for a duration of 20 minutes, pursuant to CEQR standards for locations where vehicular traffic is the main source of ambient noise.

As described previously, the existing subway tracks that run adjacent to the development sites are below grade, fenced off by chain link fencing and are bordered by trees. The approximately 30-foot-wide, open-cut tracks runs north to south, and do not have any curves in this area. The Franklin Avenue shuttle provides service between the Prospect Park Station and the Franklin Avenue Station approximately every 10 minutes

between 7 AM and 1 PM during the peak AM and Midday peak hours, as well as between 3 PM and 7:30 PM during the PM peak hour. During evening off-peak hours (after 7:30 PM until 12 AM), the shuttle runs approximately every 12 minutes, and then every 20 minutes between 12 AM and 7 AM. Area vehicular traffic volumes are generally low but were still the dominant noise source at receptor locations 1 through 4. The values shown for receptor locations 1 through 4 reflect the level of vehicular activity on the streets adjacent to the development sites, as well as background noise sources. The values shown for receptor location 5 reflect both the level of vehicular activity on Crown Street as well as train activity along the Franklin Avenue Shuttle subway tracks.

As shown in **Table L-5**, the highest L_{10} value was recorded at receptor location 1 during the AM peak hour at 68.7 dBA, placing this receptor location in the "Marginally Acceptable" noise exposure category pursuant to 2014 *CEQR Technical Manual* guidance. The highest L_{10} value recorded at receptor locations 2 and 3 (67.0 dBA and 68.1 dBA, respectively) also place the two locations in the "Marginally Acceptable" category. The highest L_{10} value recorded at receptor locations 4 and 5 (59.9 dBA and 64.4 dBA, respectively) place the two locations in the "Acceptable" noise exposure category, as L_{10} noise levels were lower the 65.0 dBA. **Table L-5** shows that the lowest L_{10} value was recorded at receptor 4, near the Franklin Avenue Shuttle as well as on a dead-end street.

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

Using the proportional modeling methodology previously described, future noise levels in the No-Action condition were calculated for the three analysis periods in the 2023 build year at receptor locations 1 through 4, where vehicular traffic was the main source of ambient noise levels. As there are no known significant planned changes in train frequency anticipated by the 2023 build year, noise levels at receptor location 5, where train traffic is the dominant source of noise, are expected to remain the same as under existing conditions. **Table L-6** shows the measured existing noise levels and the calculated No-Action noise levels, as well as the potential noise levels for the ground floors of the western façades of the proposed projects.

In the future without the Proposed Action, ambient noise levels would remain similar to those under existing conditions. Comparing No-Action noise levels with existing noise levels in **Table L-6**, anticipated changes would range between 0.0 and 0.2 dBA. Increases of less than 3.0 dBA would be barely perceptible, and based upon 2014 *CEQR Technical Manual* impact criteria, would not be significant. All five receptor locations would remain in their respective "Acceptable" and "Marginally Acceptable" CEQR noise exposure categories, as under existing conditions.

Table L-6:
Future No-Action Noise Levels and total PCE Values at Receptor Locations (in dBA)

Noise Receptor Location[1]	Time	No-Action PCEs	Existing $L_{eq(1)}$	2023 No-Action $L_{eq(1)}$	Change[2]	2023 No-Action $L_{10(1)}$ [3]	CEQR Noise Exposure Category
1	AM	74.6	66.7	66.8	0.1	**68.9**	**Marginally Acceptable**
	MD	37.3	57.5	57.7	0.2	60.8	
	PM	93.2	58.8	59.0	0.2	62.2	
2	AM	565.4	64.7	64.8	0.1	**67.2**	**Marginally Acceptable**
	MD	608.9	63.1	63.2	0.1	66.0	
	PM	584.0	63.8	64.0	0.2	66.9	
3	AM	217.5	65.2	65.3	0.1	**68.3**	**Marginally Acceptable**
	MD	323.1	62.1	62.2	0.1	64.3	
	PM	341.7	61.4	61.5	0.1	62.9	
4	AM	11.4	57.8	57.9	0.1	**60.1**	**Acceptable**
	MD	9.3	60.3	60.4	0.1	56.8	
	PM	19.7	57.4	57.6	0.2	58.3	
5	AM	N/A	66.8	66.8	0.0	**64.4**	**Acceptable**
	MD		66.2	66.2	0.0	62.9	
	PM		65.8	65.8	0.0	62.9	

Notes:
All PCE and noise value are shown for a weekday.
[1] Refer to **Figure L-1** for noise monitoring receptor locations.
[2] No-Action Leq - Existing Leq
[3] Highest No-Action L_{10} noise for each monitoring location are shown in **bold**.

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

Future noise levels at receptor locations 1 through 4 were calculated using the vehicle trip assignment and proportional modeling methodology described above in Section III. **Table L-7** presents the calculated noise levels under 2023 With-Action conditions. As in the No-Action condition, there are no known significant planned changes in train frequency anticipated by the 2023 build year in the With-Action condition, therefore, noise levels at receptor location 5 are expected to remain the same as under existing conditions.

Future Buildings' Street Frontage Locations (Receptor Locations 1 through 4)

As shown in **Table L-7**, after accounting for incremental traffic introduced by the proposed projects, the maximum projected L_{10} noise level in the future with the Proposed Action would be 69.5 dBA during the AM peak hour at receptor location 1, meaning that the highest noise level within the Project Area would fall in the "Marginally Acceptable" CEQR noise exposure category. Increases in noise levels at receptor locations 1 through 4 would range from 0.0 to 2.5 dBA. Increases of this magnitude would not be perceptible as they are less than 3.0 dBA, and, based upon CEQR impact criteria would not be significant. Moreover, all four receptor locations would also remain in their respective "Acceptable" and "Marginally Acceptable" CEQR noise exposure categories. Therefore, no adverse noise impacts are anticipated at receptor locations 1, 2, 3, and 4.

Table L-7:
Future With-Action Noise Levels and total PCE Values at Receptor Locations (in dBA)

Noise Receptor Location[1]	Time	With-Action PCEs	No-Action $L_{eq(1)}$	2023 With-Action $L_{eq(1)}$	Change[2]	2023 With-Action $L_{10(1)}$ [3]	CEQR Noise Exposure Category
1	AM	87.3	66.8	67.5	0.7	**69.5**	**Marginally Acceptable**
	MD	43.2	57.7	58.3	0.6	61.4	
	PM	105.2	59.0	59.5	0.5	62.8	
2	AM	562.9	64.8	64.8	0.0	**67.1**	**Marginally Acceptable**
	MD	605.1	63.2	63.2	0.0	66.0	
	PM	583.7	64.0	64.0	0.0	66.9	
3	AM	225.3	65.3	65.5	0.2	**68.4**	**Marginally Acceptable**
	MD	328.1	62.2	62.3	0.1	64.4	
	PM	350.7	61.5	61.6	0.1	63.0	
4	AM	20.3	57.9	60.5	2.5	**62.6**	**Acceptable**
	MD	15.1	60.4	62.5	2.1	58.9	
	PM	31.4	57.6	59.6	2.1	60.4	
5	AM	N/A	66.8	66.8	0.0	**64.4**	**Acceptable**
	MD		66.2	66.2	0.0	62.9	
	PM		65.8	65.8	0.0	62.9	

Notes:
All PCE and noise value are shown for a weekday.
[1] Refer to **Figure L-1** for noise monitoring receptor locations.
[2] With-Action Leq – No-Action Leq
[3] Highest With-Action L_{10} noise for each monitoring location are shown in **bold**.

Future Buildings' Facades Facing the Subway Tracks (Receptor Location 5)

As previously mentioned, there are no known significant planned changes in train frequency anticipated by the 2023 build year in the With-Action condition, therefore, noise levels at receptor location 5 are expected to remain the same as under existing conditions. **Table L-7** shows the potential noise levels for the ground floors of the western façades of the proposed projects. It should be noted that calculating L_{10} levels and required window attenuation for windows on the upper floors of the future buildings cannot be reliably determined from simple calculations of distance attenuation due to the independent components of subway noise, subway elevation, shielding from each of the proposed projects themselves and other buildings. This would require a more refined approach such as modeling with a CANDA or SoundPlan. However, the noise levels at the upper elevations facing the subway tracks are located at a larger distance to the tracks than the worst-case ground floor receptor location 5. Therefore, they are anticipated to be sufficiently covered by the attenuation levels required for the ground-floor windows at this location.

VII. ATTENUATION REQUIREMENTS

As shown above in **Table L-4**, the 2014 *CEQR Technical Manual* has set noise attenuation requirements for buildings based on exterior noise levels. Recommended noise attenuation values for buildings are designed to maintain a maximum interior noise level of 45 dBA or lower for residential and community facility uses and 50 dBA or lower for commercial uses, and are determined based on exterior L_{10} noise levels. As noted in **Table L-4**, no additional attenuation measures over the standard 25 dBA is required for façades where the maximum exterior L_{10} noise levels would be less than 70 dBA.

As maximum exterior L_{10} noise levels under With-Action conditions at all five receptor locations would be less than 70 dBA and within the "Acceptable" and "Marginally Acceptable" noise exposure categories, an attenuation level of 25 dBA would provide sufficient attenuation for residential interior noise levels at the

development sites. Additionally, as the proposed project on block 1190 would include retail, the required noise attenuation for the commercial uses would be 20 dBA (5 dBA less than the noise attenuation requirement for residential and community facility uses). Based on the projected noise levels, basic design and construction measures for the proposed projects would provide sufficient attenuation levels for both uses at the development sites.

VIII. OTHER NOISE CONCERNS

Mechanical Equipment

All of the future buildings' mechanical systems (i.e., heating, ventilation, and air conditioning systems) will be designed to meet all applicable noise regulations and requirements and would be designed to produce noise levels that would not result in any significant increase in ambient noise levels. In addition, the building mechanical systems would be designed with enclosures where necessary to meet all applicable noise regulations (i.e., Subchapter 5 §24-227 of the New York City Noise Control Code and the NYC DOB Building Code) and to avoid producing levels that would result in any significant increase in ambient noise levels.

Aircraft Noise

An initial aircraft noise impact screening analysis would be warranted if the new receptor would be located within one mile of an existing flight path, or cause aircraft to fly through existing or new flight paths over or within one mile of a receptor. Since the development sites are not within one mile of an existing flight path, no initial aircraft noise impact screening analysis is warranted.

IX. CONCLUSION

The peak period L_{10} values at the development sites range from a minimum of 58.9 dBA to a maximum of 69.5 dBA. As the relative increases in noise under With-Action conditions at all the receptor locations are below 3.0 dBA when compared to the No-Action conditions (refer to **Table L-7**), no significant adverse noise impacts due to project-generated traffic would occur.

Attenuation of Applicant-Owned Projected Development Site 1

With-Action L_{10} noise levels at receptor locations 4,along the southern street frontage of Applicant-owned projected development site 1, as well as With-Action L_{10} noise levels at receptor location 5, along the Franklin Avenue Shuttle subway tracks, would both fall under the "Acceptable" noise exposure category, and would not exceed any CEQR thresholds. Thus, no specific attenuation would be required above the standard 25 dBA/20 dBA in order to maintain interior noise levels of 45 dBA/50 dBA or lower for residential or commercial uses on all facades of projected development site 1. Standard construction measures would provide sufficient attenuation to satisfy CEQR and requirements and preclude the potential for any significant adverse noise impacts.

Attenuation of Applicant-Owned Projected Development Site 2

With-Action L_{10} noise levels at receptor locations 1, 2 and 3, along the street frontages of the Applicant-owned projected development site 2, as well as With-Action L_{10} noise levels at receptor location 5, along the Franklin Avenue Shuttle subway tracks, would fall under the "Marginally Acceptable" and

"Acceptable" noise exposure categories and would not exceed the 2014 *CEQR Technical Manual* threshold of 70 dBA as an absolute noise level. Therefore, the future building at projected development site 2 must provide a window-wall attenuation of 25 dBA in order to achieve a 45 dBA interior noise level for residential uses, and an attenuation of 20 dBA for commercial uses. These levels of attenuation can be achieved through standard design and construction measures.

Projected Development Site 3

In the event that projected development site 3 is developed in the future, its eastern frontage would be located on Franklin Avenue. Any future development at this site would also be required to provide a window-wall attenuation of 25 dBA/20 dBA in order to maintain interior noise levels of 45 dBA/50 dBA or lower should that development include any residential or commercial uses, respectively.

Attenuation of Future Building Frontages Facing the Subway Tracks

With-Action L_{10} noise levels at receptor location 5 would fall under the "Acceptable" noise exposure category, and would not exceed any CEQR thresholds. Thus, no specific attenuation would be required above the standard 25 dBA/20 dBA in order to maintain interior noise levels of 45 dBA/50 dBA or lower for residential or commercial uses, at these locations, respectively. Standard construction measures would provide sufficient attenuation to satisfy CEQR and requirements and preclude the potential for any significant adverse noise impacts.

Attachment M

Conceptual Analysis

I. INTRODUCTION

This attachment analyzes the potential future development of the Asian Americans for Equality (AAFE) property located on block 1190, lots 46 and 48 (141-145 Montgomery Street) as it is anticipated that AAFE would pursue development of this property. As detailed in **Attachment A, "Project Description,"** the AAFE site carries certain restrictions limiting development to buildings with one to four units of affordable housing, making the timeline for development of this property difficult to predict. In 1998, the City sold block 1190, lots 46 and 48 to the Neighborhood Partnership Housing Development Fund Company, Inc. ("NPHDFC"), and designated it as an urban development action area plan ("UDAAP") through an "accelerated" designation pursuant to Section 695(6)(d) of the General Municipal Law, as part of a residential rehabilitation project that was developed through the New York City Department of Housing and Development's ("HPD's") Neighborhood Entrepreneurs Program (NEP). Under the "accelerated" designation, the City Council and Mayor approved the UDAAP designation.

The approved 1998 project included the rehabilitation of two four-unit buildings on the AAFE Land (block 1190, lots 46 and 48). In connection with the sale, NPHDFC entered into Land Disposition Agreement with HPD, dated June 23, 1998 and recorded in the City Register under Reel 4342, Page 58 (the "LDA"). The LDA obligates NPHDFC and successors-in-interest to rehabilitate the buildings on the AAFE site for affordable housing. The buildings were subsequently deemed to be unsalvageable and were demolished in 2001, rendering rehabilitation moot. The accelerated UDAAP designation pursuant to Section 695(6)(d) of the General Municipal Law restricts development on the AAFE site to no more than four units of housing per building.

In 2014, NPHDFC sold the AAFE site to AAFE, and AAFE executed a Restrictive Covenant dated May 13, 2014 and recorded in the Office of the City Register of the City of New York ("City Register") under CRFN 2014000176712. The Restrictive Covenant obligates AAFE to develop Lots 46 and 48 as an affordable housing project, although the limitation of the accelerated UDAAP restricts development to no more than four units of housing per building. To eliminate or modify the restrictions, AAFE would have to complete its own ULURP application and any modifications to the site's development would be subject to review under CEQR.

Redevelopment of the property with a development in excess of the eight permitted units is considered unlikely because, even if a ULURP action to eliminate the development restrictions were pursued, the preparation of such application would take a reasonable amount of time to initiate and complete. The development team would have to generate plans and arrange for project financing. Additionally, the ability to build out the site to the maximum R8X floor area on this small irregular site is unknown because there is no project proposed to remove the current deed restriction. Finally, HPD may elect to apply new restrictions on the redevelopment of the property which could limit the site's development potential. Given the above, the AAFE site will be assessed qualitatively in a conceptual analysis to evaluate the unlikely possibility that AAFE seeks to eliminate the deed restriction and initiate development prior to the project's 2023 analysis year.

If the restrictions on the AAFE property were to be removed through its own discretionary action, the site could be developed pursuant to the proposed R8X/C2-4 mandatory inclusionary housing zoning. Under the proposed rezoning, it is possible that AAFE could build up to 7.2 FAR, resulting in up to 45,406 sf on the 6,306 sf property with up to approximately 45 DUs. However, given the irregular shape of the AAFE

property, the 30-foot rear yard that would be required under the multiple dwelling law, and the proposed bulk of Applicant-owned development Site 2 in relation to the AAFE site, it is unlikely that the AAFE property would be able to accommodate the full 7.2 FAR that would be available under the proposed zoning with mandatory inclusionary housing. Nonetheless, the conceptual analysis evaluates a building that maximizes the available FAR. This conceptual analysis describes the potential for the AAFE property to result in significant adverse environmental impacts to any technical area under future conditions with the Proposed Action.

As indicated above, the AAFE property is located within the boundaries of the Proposed Rezoning Area which extends approximately 300 feet wide and two and a half blocks long, located on the western side of Franklin Avenue. The portion of the site within 100 feet of Franklin Avenue would also be mapped with a C2-4 overlay. Overall, the AAFE property would be located within the boundaries of a cohesive R8X zoning district with rational district boundaries. Excluding the AAFE property from the Proposed Rezoning Area would result in abnormal district boundaries. As such, modification of the Proposed Rezoning Area boundaries would not be feasible.

II. EXISTING CONDITIONS

Table M-1 lists the site under conceptual analysis, and calculates the development potential using the current R6A zoning. As indicated in **Table M-1**, the AAFE property is currently vacant.

Table M-1:
Existing Site Conditions on the Site Under Conceptual Analysis

Site No.	Block/Lot(s)	Address	Lot Area (sf)	Max. Zoning Floor Area Permitted (sf)	Existing Built FAR	Residential Units
1	B 1190 L 46 and 48	141-145 Montgomery Street	6,306	18,918	0	0
				TOTAL	0	0

III. FUTURE WITHOUT THE PROPOSED ACTION (NO-ACTION CONDITION)

As indicated above, the AAFE property currently has restrictions that limit development to up to a total of eight units. AAFE would have to seek a discretionary action to remove the development restrictions that apply to the site. Therefore, for analytic purposes, in the future without the Proposed Action, it is assumed that the AAFE property would remain vacant under future No-Action conditions.

IV. FUTURE WITH THE PROPOSED ACTION (WITH-ACTION CONDITION)

As previously mentioned, the AAFE site carries development restrictions that limit the development to no more than eight dwelling units. If the restrictions on the AAFE property were to be removed through its own discretionary action, the site could be developed pursuant to the proposed R8X/C2-4 mandatory inclusionary housing zoning. Under the proposed rezoning, it is possible that AAFE could build up to 7.2 FAR, resulting in up to 45,406 sf on the 6,306 sf property with up to approximately 45 DUs. However, given the irregular shape of the AAFE property, the 30-foot rear yard that would be required under the multiple dwelling law, and the proposed bulk of Applicant-owned development Site 2 in relation to the

AAFE site, it is unlikely that the AAFE property would be able to accommodate the full 7.2 FAR that would be available under the proposed R8X/C2-4 zoning with mandatory inclusionary housing. Nonetheless, the conceptual analysis evaluates a building that maximizes the available FAR. **Table M-2** presents an estimate of the development potential of the site under conceptual analysis. While the table shows the zoning floor area, it should be noted that the total gross square footage would be higher, though an exact number cannot be determined at this time.

Table M-2:
Possible Future Site Conditions on the Sites Under Conceptual Analysis

Site No.	Lot Area (sf)	Zoning Floor Area (sf)	Maximum Number of Dwelling Units	Maximum Permitted Height (ft)
1	**6,306**	**45,406**	**45**	**175**

The following qualitative analysis describes the potential for the AAFE property to result in significant adverse environmental impacts to any technical area under future conditions with the Proposed Action.

As the AAFE property is currently vacant, the increment in the development potential associated with the proposed R8X/C2-4 zoning is the entire 45,406 sf building. This is assessed as the reasonable worst case scenario for this site.

V. CONCEPTUAL ANALYSIS

In the With-Action condition, the AAFE property would not necessarily be developed. However, given the limited area to which the proposed zoning would apply, it is possible for some technical areas of analysis to generally characterize effects under a hypothetical scenario in which the site under conceptual analysis were to be developed. Under existing conditions, the site under conceptual analysis utilizes none of the available floor area. While there is an existing restriction on the site that would limit future development of the two lots to a total of eight units, this conceptual analysis assumes that AAFE would pursue a discretionary action to remove the restrictions.

In general, analysis at a level consistent with the methodologies for the 2014 *CEQR Technical Manual* is only possible when site-specific applications for special permits are made. As with the Proposed Action studied in the previous sections of this document, a separate discretionary action would be required for the site under conceptual analysis that would require separate CEQR review.

Land Use, Zoning and Public Policy

The land uses of the projected development sites and surrounding area, as well as the zoning and public policies that apply to the rezoning area are described in detail in **Attachment C, "Land Use, Zoning, and Public Policy."** The descriptions of existing conditions provided below summarize the information provided in that chapter. The study area for the analysis of land use, zoning, and public policy encompasses the area within 400 feet of the rezoning area, as described in **Attachment C**.

Existing Condition

Land Use
As described above, the AAFE property is currently vacant and contains no structures.

The secondary study area for land use is generally bounded by lots fronting Lincoln Place to the north, Rogers Avenue to the east, Sterling Street to the south, and Prospect Park/the Brooklyn Botanic Garden to the west (refer to **Figure C-1**). The secondary study area is comprised of predominately residential buildings (58.2 percent of buildings in the secondary study area) with several institutions/public facilities (20.8 percent of buildings) and open space resources (26.6 percent of lot area in the secondary study area). Additionally, mixed-use residential and commercial buildings comprise approximately 14.2 percent of the buildings in the secondary study area, predominately along Franklin Avenue. The approximate quarter-mile radius around the Proposed Rezoning Area also accommodates smaller amounts of commercial/office space (2.7 percent of buildings), industrial/manufacturing space (2.2 percent of buildings), transportation/utility space (4.6 percent of lot area), parking facilities (0.7 percent of lot area), and vacant land (0.8 percent of lot area).

The secondary study area includes a significant amount of public facilities and institutions (approximately 23.5 percent of lot area and 20.8 percent of buildings in the secondary study area). Schools within an approximate quarter-mile radius of the Proposed Rezoning Area include Clara Barton High School (901 Classon Avenue), P.S. 241 Emma L. Johnston (976 President Street), the International High School at Prospect Heights (883 Classon Avenue), and St. Francis de Sales School for the Deaf (260 Eastern Parkway), all of which are located immediately to the north and west of the Proposed Rezoning Area (refer to **Figure C-1**). W.E.B. Dubois High School (402 Eastern Parkway) is located in the northeast section of the secondary study area, while P.S. 375 Jackie Robinson School/M.S. 352 Ebbets Field (46 McKeever Place) and the City University of New York's (CUNY's) Medgar Evers College campus (1637 Bedford Avenue) are located immediately to the south and east of the Proposed Rezoning Area.

There are several religious institutions located within an approximate quarter-mile radius of the Proposed Rezoning Area. The Solid Rock Pentecostal Church (817 Classon Avenue) is located in the northern section of the secondary study area, while the Full Gospel Assembly Pentecostal Church (836 Franklin Avenue) is immediately north of the Proposed Rezoning Area (refer to **Figure C-1**). The Ebenezer Haitian Baptist Church (1594 Bedford Avenue), the Miller Evangelical Church (1110 President Street), and the Kingdom Hall of Jehovah's Witnesses (1032 Carroll Street) are all located in the eastern section of the secondary study area. To the south of the Proposed Rezoning Area are the Full Gospel Assembly of God (131 Sullivan Place) and the Gospel Truth Church of God (1055 Washington Avenue).

Additional institutions in the secondary study area include the Brooklyn Museum (200 Eastern Parkway) to the northwest of the Proposed Rezoning Area, the Five Block Day Care Center (955 Carroll Street) to the east of the Proposed Rezoning Area, and the Bedford-Union Armory (1555 Bedford Avenue) to the northeast of the Proposed Rezoning Area.

There are also several large open space resources within the secondary study area. A portion of Prospect Park, including the Prospect Park Zoo (450 Flatbush Avenue), is located in the southwestern section of the secondary study area. A majority of the Brooklyn Botanic Garden, including the Science Center (109 Montgomery Street), is also located in the secondary study area, to the west and south of the Proposed Rezoning Area. To the northwest of the Proposed Rezoning Area is the 1.36-acre Dr. Ronald McNair Park, bounded by Eastern Parkway, Classon Avenue, and Washington Avenue.

Open subway cuts for the MTA Franklin Avenue Shuttle right-of-way extend north-south through the secondary study area and Proposed Rezoning Area. Additionally, Eastern Parkway is a major thoroughfare which traverses east-west through the northern portion of the secondary study area. Eastern Parkway is a tree-lined boulevard with walkways and benches, providing additional open space resources in the secondary study area.

Zoning

Existing zoning on the portion of block 1188 within the Proposed Rezoning Area consists of an R6A district and includes a 100-foot-deep C1-3 commercial overlay along Franklin Avenue. The segment of block 1189 that is located within the Proposed Rezoning Area is mapped with an R8A zoning district. Existing zoning on the portion of block 1190 within the Proposed Rezoning Area consists of an R6A district.

R6A zoning districts are medium-density contextual districts where Quality Housing bulk regulations are mandatory. R6A districts permit a maximum FAR of 3.0 with a minimum base height of 40 feet, a maximum base height of 60 feet, and a maximum building height of 70 feet. Parking is required for 50 percent of DUs in R6A zoning districts.

R8A zoning districts are high-density contextual districts where Quality Housing bulk regulations are mandatory. R8A districts permit a maximum FAR of 6.02 with a minimum base height of 60 feet, a maximum base height of 85 feet, and a maximum building height of 120 feet. Parking is required for 40 percent of DUs in R8A zoning districts.

A C1-3 commercial overlay is mapped along Franklin Avenue on block 1188. Commercial overlays are mapped within residential districts along streets that serve local retail needs. In the underlying R6A zoning district, a C1-3 commercial overlay permits a maximum commercial FAR of 2.0. Typical retail uses include neighborhood grocery stores, restaurants, and beauty parlors. In mixed-use buildings, commercial uses are limited to one or two floors, and must always be located below the residential uses. Overlay districts differ from other commercial districts in that residential bulk is governed by the residence district within which the overlay is mapped.

Public Policy

The Proposed Rezoning Area and the secondary study area are not controlled by or located in any urban renewal areas, 197-a Plans, designated in-place industrial parks, or within the coastal zone boundary. In addition, the Proposed Action does not involve the siting of any public facilities (Fair Share). The secondary study area is under the jurisdiction of the policies discussed below.

One New York: The Plan for a Strong and Just City ("OneNYC")

Released in 2007, PlaNYC was undertaken by Mayor Bloomberg and the Mayor's Office of Long Term Planning and Sustainability to prepare the City for one million more residents, strengthen its economy, combat climate change, and enhance the quality of life for all New Yorkers. An update to PlaNYC in April 2011 built upon the objectives set forth in 2007 and provided new goals and strategies. PlaNYC represents a comprehensive and integrated approach to planning for New York City's future. It includes policies to address three key challenges that the City faces over the next twenty years: population growth; aging infrastructure; and global climate change. In the 2011 update, elements of the plan were organized into 10 categories—housing and neighborhoods, parks and public space, brownfields, waterways, water supply, transportation, energy, air quality, solid waste, and climate change—with corresponding goals and initiatives for each category.

On April 22, 2015, the Mayor's Office of Sustainability released OneNYC, a comprehensive plan for a sustainable and resilient City for all New Yorkers, addressing social, economic, and environmental challenges ahead. OneNYC builds upon the goals and objectives set forth in PlaNYC, and expands on the critical targets established under the previous plan. Growth, sustainability, and resiliency remain at the core of OneNYC, with equity added as a guiding principle throughout the plan. Specific targets and initiatives included in OneNYC relevant to the Proposed Actions include making New York City home to 4.9 million jobs by 2040, enabling the average New Yorker to reach 25 percent more jobs (1.8 million jobs) within 45

minutes by public transit, lifting 800,000 New Yorkers out of poverty or near-poverty by 2025, and reducing annual economic losses from climate-related events.

Housing New York

On May 5, 2014, the City released Housing New York, a five-borough, ten-year strategy to build and preserve affordable housing throughout New York City in coordination with strategic infrastructure improvements to foster a more equitable and livable New York City through an extensive community engagement process. The plan outlines more than 50 initiatives to support the administration's goal of building or preserving 200,000 units of high-quality affordable housing to meet the needs of more than 500,000 people. The plan intends to do this through five guiding policies and principles: fostering diverse, livable neighborhoods; preserving the affordability and quality of the existing housing stock; building new affordable housing for all New Yorkers; promoting homeless, senior, supportive, and accessible housing; and refining City financing tools and expanding funding sources for affordable housing. Housing New York further calls for fifteen neighborhood studies to be undertaken in communities across the five boroughs that offer opportunities for affordable housing.

No-Action Condition

Two No-Action developments have been identified in the rezoning area under future No-Action conditions. As described above, there are no known plans for the development of the AAFE property at this time. Therefore, absent the proposed rezoning, it is likely to remain in its existing condition.

With-Action Condition

As the market for market rate and affordable housing continues to be strong, it is intended that the proposed rezoning would provide a mechanism for developers to provide new affordable and market rate units by creating incentives to provide that space. Within the rezoning area two Applicant-owned sites and one other projected development site have been identified. As the proposed rezoning would increase the allowable FAR within the rezoning area, the two Applicant-owned sites and one other projected development site would be expected to be constructed under future With-Action conditions as a result of the Proposed Actions. No other development sites have been identified within the Proposed Rezoning Area.

The land uses that could be developed on the AAFE site under future conditions with the Proposed Action already exist within the study area. As the proposed rezoning would facilitate the development of new residential uses at a higher density than is permitted under existing zoning, there would not be a notable shift in the types of land uses as a result of the Proposed Action.

Detailed and site-specific analysis of potential effects of proposed development on land use, zoning and public policy would be made at the time of special permit application.

Socioeconomic Conditions

The Proposed Action would not result in significant adverse impacts with respect to socioeconomic conditions. No direct residential displacement would occur, nor would the development of the site under conceptual analysis introduce a sizeable new residential population. Therefore, the Proposed Action would not introduce a trend that could potentially result in indirect residential displacement.

Should the site under conceptual analysis be developed pursuant to the proposed zoning, the vacant site would be would be reactivated. No businesses would be directly displaced. Further, the Applicant has already filed plans at NYC DOB for an as-of-right development on each of the two Applicant-owned development sites under No-Action conditions, so two sites within the area would be redeveloped regardless of the Proposed Action. Additionally, the vacant AAFE property on the site selected for analysis does not

have a critical social or economic role in the surrounding community. In addition, the possible development of the site for residential and other uses that are permitted in this zoning district on an as-of right basis is not anticipated to result in indirect displacement as it is intended to meet an existing demand for such uses in this area. As such, it is unlikely that there would be the potential for significant adverse socioeconomic impacts.

Detailed and site-specific analysis of potential effects of proposed development on socioeconomic conditions, if necessary, would be made at the time of AAFE's ULURP application.

Community Facilities and Services

As described above, this conceptual analysis of the site under conceptual analysis assumes that the site would be redeveloped with up to 45 new dwelling units. Therefore, the proposed zoning would require an analysis of community facilities and services. Based on the findings of the Community Facilities analysis provided in **Attachment E** of this EAS, a development of this size is unlikely to result in impacts to schools or local daycare facilities.

Detailed and site-specific analysis of potential effects of proposed development on community facilities, if necessary, would be made at the time of AAFE's ULURP application.

Shadows

The bulk of development and total building height on the site under conceptual analysis would be increased under the proposed zoning. A building could reach up to 175 feet in height in the proposed R8X zoning district with MIH designation. A building of this height at this location would be consistent with the heights of the surrounding buildings, including the Applicant-proposed development on Site 2. While no detailed plans have been developed for the AAFE property at this time, it is anticipated that a building of up to 175 feet would not change the findings that are presented in **Attachment G** of this EAS. However, the potential for such development to have shadow effects would be analyzed at the time that actual plans are available. Detailed and site-specific analysis of potential effects of proposed developments on shadows would be made at the time of AAFE's request to remove the site restrictions that currently limit development on the site to up to eight dwelling units. As development on the site under conceptual analysis could exceed 50 feet in height, it is possible that shadows impacts could occur as there are sunlight-sensitive open spaces within the zone that would be cast in shadows.

Historic and Cultural Resources

Archaeological Resources
As both sites under conceptual analysis were previously occupied with buildings that had near 100 percent lot coverage, it is unlikely that there would be any potential archaeological resource concerns on either site. However, LPC consultation would be required prior to development of either site if a discretionary action is pursued. If such an application were made for either site, LPC would be asked to review the site, and any subsequent archaeological research or testing would be conducted at that time.

Architectural Resources
No architectural resources were noted within the proposed rezoning area. As the AAFE property is currently vacant and all on-site buildings have been demolished, no architectural resources would be present on the two sites under conceptual analysis as both sites have previously been disturbed.

Urban Design and Visual Resources

The *CEQR Technical Manual* requires an assessment of urban design when a project may have effects on one or more of the elements that contribute to a pedestrian's experience of public space. These elements include streets, buildings, visual resources, open spaces, natural resources, wind, and sunlight. A preliminary assessment of urban design and visual resources is considered to be appropriate when there is the potential for a pedestrian to observe, from the street level, a physical alteration beyond that allowed by existing zoning, such as projects that permit the modification of yard, height, and setback requirements, and projects that result in an increase in built floor area beyond what would be allowed "as-of-right" or in the future without the proposed project. As described above, for the purposes of this conceptual analysis it was assumed that the AAFE site would remain vacant under No-Action conditions. As indicated above, two Applicant-owned sites would be developed within the rezoning area boundaries under future No-Action conditions.

Under With-Action conditions it is assumed that the AAFE property would be developed to the maximum FAR permitted under the proposed zoning (7.2 FAR). Therefore, the proposed zoning would result in a physical alteration beyond that allowed by existing zoning that could be observed by pedestrians. As indicated above, the Applicant would develop two sites within the rezoning area with buildings that would extend up to 175 feet in height. As such, development within the rezoning area would be considered contextual and likely would not result in adverse impacts. Nonetheless, it has been determined that the proposed project meets the threshold for a preliminary analysis of urban design and visual resources.

Existing Conditions

Urban Design
The site under conceptual analysis is a small site at 6,306 sf which has frontage on one street (Montgomery Street). As described above, the site is currently vacant.

As described above, there is an assortment of residential, mixed-use, institutional, and open space uses within the Proposed Rezoning Area. The current land uses reflect a significant amount of new residential development and conversions that have taken place. New buildings and significant additions have generally occurred in the northern and western sections of the secondary study area, and recently constructed buildings are all taller and denser than existing buildings (see **Attachment C**).

The area has a mix of buildings that are built out to the lot lines and that are set back from the street, such as Tivoli Towers. Older, industrial buildings tend to be brick structures, while newer developments are typically clad in glass with some transparency at the ground-floor.

Visual Resources
The site under conceptual analysis does not contain or substantially contribute to any visual resources. As described in **Attachment H, "Urban Design and Visual Resources,"** there are no significant visual resources in the Proposed Rezoning Area. However, sections of surrounding landmarks and open space resources are visible from certain vantage points in the Proposed Rezoning Area. Portions of the landmarked Laboratory Administration Building in the Brooklyn Botanic Garden can be seen from the sidewalks of Crown and Montgomery Streets in the Proposed Rezoning Area. To the north, a section of Eastern Parkway, a designated Scenic Landmark, can be seen from the sidewalks of Franklin Avenue in the Proposed Rezoning Area.

No-Action Condition

As described above, there are no known plans for the development of the AAFE property at this time.

Therefore, it is assumed that the site is likely to remain vacant under future No-Action conditions. As described above, the Applicant has plans to develop both of the sites under their control under future No-Action conditions.

With-Action Condition

The *CEQR Technical Manual* guidelines state that if the preliminary assessment shows that changes to the pedestrian environment are sufficiently significant to require greater explanation and further study, then a detailed analysis is appropriate. Examples include projects that would potentially obstruct view corridors, compete with icons in the skyline, or make substantial alterations to the streetscape of a neighborhood by noticeably changing the scale of buildings. Detailed analyses also are generally appropriate for area-wide rezonings 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 a historic building that contribute to the resource's historic significance.

The Proposed Action could potentially spur development of the site under conceptual analysis in a manner that would noticeably change the scale of buildings as compared to existing and No-Action conditions. The Proposed Action would not involve an area-wide rezoning that includes an increase in permitted floor area or significant changes in height or setback requirements; would not involve a general large-scale development; and would not result in substantial changes to the built environment of a historic district or components of a historic building that contribute to the resource's historic significance. The lots that could be affected by the Proposed Action are vacant, though there are three projected developments within the rezoning area, including two Applicant-owned sites.

As such, the Proposed Action would be anticipated to affect urban design features of the site under conceptual analysis when compared to development that could occur as-of-right pursuant to existing zoning and as compared to the development that could be built under the existing restrictions (a total of eight dwelling units). Detailed and site-specific analysis of potential effects of proposed development on urban design, if necessary, would be made at the time of AAFE's ULURP application.

According to the guidance of the *CEQR Technical Manual*, additional visual resources analysis is required if: a project would partially or totally block a view corridor or a natural or built resource or a natural or built visual resource, and that resource is rare in the area or considered a defining feature of the neighborhood; or, a project would change urban design features so that the context of a natural or built visual resource is altered (for example, if a project alters the street grid so that the approach to the resource changes; if a project changes the scale of surrounding buildings so that the context changes; or if a project removes lawns or other open areas that serve as a setting for the resource). While the Proposed Actions would allow for a development of up to 175 feet, it does not appear to meet this threshold, and would not be anticipated to significantly affect visual corridors or visual resources. The site is currently vacant. Therefore, the Proposed Actions do not merit further analysis of urban design and visual resources, and would not be anticipated to result in significant adverse effects to urban design and visual resources. Detailed and site-specific analysis of potential effects of proposed developments on visual resources would be made at the time of AAFE's ULURP application.

Natural Resources

There are no natural resources located on or near the site under conceptual analysis. Therefore, no further analysis is necessary. Detailed and site-specific analysis of potential effects of proposed developments on natural resources, if necessary, would be made at the time of AAFE's ULURP application.

Hazardous Materials

The overall sensitivity (i.e., potential for hazardous materials issues based on typical uses) of the AAFE site is nearly identical to that of Applicant-owned Site 2 due to the configuration and location of the AAFE property in relation to Site 2. As indicated in the hazardous materials section of **Attachment I**, an assessment was conducted to determine whether the Proposed Action could lead to increased exposure of people or the environment to hazardous materials and whether the increased exposure would result in significant adverse public health impacts or environmental damage. In October 2012, Environmental Business Consultants prepared a Phase I Environmental Site Assessment (ESA) for the Applicant-owned proposed development sites (refer to **Appendix 1**).

Based on the information gathered as a result of the Phase I ESA process, Environmental Business Consultants identified several Recognized Environmental Conditions (RECs) on Site 2. These RECs include:

- The historic use of the site for auto repair, used closing recycling, garages, and a commercial laundry.
- The presence of five historic gasoline underground storage tanks on the property.

The RECs identified above required a Phase II subsurface investigation for Site 2. In 2013-2014, Environmental Business Consultants completed Phase II Subsurface Investigation Reports for each site, including property locations and descriptions, geophysical surveys, soil samplings, and soil gas samplings (refer to **Appendix 1**).

Based on the subsurface investigation, it was determined that projected development Site 2 had not been adversely impacted by the historic presence of underground fuel and gasoline storage tanks. Further, the site had not been impacted by its historic uses for auto repair or as a commercial laundry, and no further investigation was warranted. Additionally, Site 2 is in the initial stages of construction pursuant to DOB-approved, as-of-right plans. Therefore, no additional remedial efforts would be required under future With-Action conditions.

For the AAFE property located at 141-145 Montgomery Street, which is surrounded by development site 2 on the west, north and east, it is anticipated that there would be no soil or ground water contamination based on the findings for Site 2. However, at present it is unknown if Phase I or Phase II reports have been completed for this site. As such, it is anticipated that an (E)-designation would be required for the site to ensure that development of the site does not result in significant adverse impacts related to hazardous materials.

Based on the discussion above, no significant adverse hazardous materials impacts are anticipated as a result of the Proposed Action.

Water and Sewer Infrastructure

A CEQR water and sewer infrastructure assessment analyzes whether a project may adversely affect the City's water distribution or sewer system and, if so, assess the effects of such projects to determine whether their impact is significant, and present potential mitigation strategies and alternatives. According to the *CEQR Technical Manual*, only projects that increase density or change drainage conditions on a large site require a water and sewer infrastructure analysis. A water supply assessment would be required for projects with an exceptionally large demand for water (over 1 million gallons per day) or for projects located in an

area that experiences low water pressure (such as Coney Island and the Rockaway Peninsula). In addition, a wastewater and storm water conveyance and treatment analysis would be necessary if the project:

- Is located in a combined sewer area and would result in over 1,000 residential units or 250,000 sf of commercial use in Manhattan, or 400 residential units or 150,000 sf of commercial use in all other boroughs;
- Is located in a separately sewered area and would exceed: 25 residential units or 50,000 sf of commercial use in R1, R2, or R3 districts; 50 residential units or 100,000 sf of commercial use in R4 or R5 districts; 100 residential units or 100,000 sf of commercial use in all other zoning districts;
- Is located in an area that is partially sewered or currently unsewered;
- Involves development on a site 5 acres or larger where the amount of impervious surface would increase;
- Would involve development on a site 1 acre or larger where the amount of impervious surface would increase and is located in the Jamaica Bay watershed or specific drainage areas (Bronx River, Coney Island Creek, Flushing Bay and Creek, Gowanus Canal, Hutchison River, Newtown Creek, Westchester Creek); or
- Would involve construction of a new storm water outfall that requires federal and/or state permits.

The incremental size of a development on the AAFE property would not warrant a detailed analysis of water and sewer infrastructure as such development would not meet any of the conditions listed above, Therefore, the proposed rezoning and related actions would not result in any significant impacts on water and sewer infrastructure, and no further analysis is necessary. Detailed and site-specific analysis of potential effects of proposed development on water and sewer infrastructure, if necessary, would be made at the time of AAFE's ULURP application.

Solid Waste and Sanitation Services

The incremental development of the site under conceptual analysis could be expected to generate approximately 1,845 pounds of solid waste per week, based on standard waste generation rates for households provided in the *CEQR Technical Manual*. The solid waste generated by the AAFE development would not significantly increase the demand for solid waste and sanitation services and would not overburden the City's solid waste management capacity. As such, no significant adverse impacts on solid waste and sanitation services are anticipated. Detailed and site specific analysis of potential effects of proposed developments on solid waste and sanitation services, if necessary, would be made at the time of AAFE's ULURP application.

Energy

As described in the *CEQR Technical Manual*, all new structures requiring heating and cooling are subject to the New York City Energy Conservation Code. The need for a detailed assessment of energy impacts is limited to projects that may significantly affect the transmission or generation of energy. The increase in energy consumption related to the potential future development of up to 45 DUs on the AAFE site would be a negligible change that would not overburden the electrical generation and transmission system; therefore, the development anticipated to occur as a result of the Proposed Action would not result in

significant adverse impacts on energy. The Proposed Action would not significantly affect the transmission or generation of energy, and therefore, no further analysis is needed.

Transportation

The *CEQR Technical Manual* specifies minimum development densities potentially requiring transportation analysis (Table 16-1, page 16-3). A residential development of this size would generally result in trips below the CEQR analysis thresholds of 50 peak hour vehicle trips, 200 peak hour subway/rail or bus transit riders, and 200 peak hour pedestrian trips.

As described above, it is anticipated that the possible future development of the AAFE property would consist of up to 45 DUs. Therefore, since the AAFE property would not meet the *CEQR Technical Manual* analysis threshold, a transportation analysis would not be warranted. Detailed and site-specific analysis of potential effects of proposed developments on transportation, if necessary, would be made at the time of AAFE's ULURP application.

Air Quality

Mobile Source Analysis

As described above, development of the site under conceptual analysis pursuant to the proposed rezoning and related actions is unlikely to generate a substantial amount of vehicle traffic. Per the *CEQR Technical Manual*, a mobile source air quality analysis would be required if the site under conceptual analysis would result in 170 or more peak hour auto trips. If the site under conceptual analysis exceeds this threshold, a quantified air quality analysis of mobile source (vehicle) emissions would be required. Detailed and site-specific analysis of potential effects of proposed developments on mobile source air quality, if necessary, would be made at the time of AAFE's ULURP application.

Heat and Hot Water System Screening Analysis

Development of the site under conceptual analysis pursuant to the Proposed Action would require heat and hot water systems, which would likely use natural gas or heating oil as fuel. It is not possible to fully conduct a heat and hot water systems analysis at this time, as the information regarding the height of the site under conceptual analysis as well as the location and type of heat and hot water system is unavailable. However, it is expected that if any potential concerns with respect to the effects of heat and hot water systems on air quality are identified at the time that the site-specific applications for special permits are submitted, such concerns could be addressed through potential restrictions on type of fuel to be used, stack placement away from taller sensitive uses, and by implementing any other protective measures required to avoid the potential for significant adverse impact on air quality. Detailed and site-specific analysis of potential effects of proposed developments on stationary source air quality, if necessary, would be made at the time of AAFE's ULURP application.

Industrial Sources

The site under conceptual analysis would, pursuant to the Proposed Action, introduce a new residential use in an area that is near existing large or major emissions sources. Therefore, as specified in the *CEQR Technical Manual*, an assessment of the potential for air quality impacts from any existing manufacturing or industrial uses would be required at the time when site-specific applications for special permits are made. The site under conceptual analysis is adjacent to existing commercial and institutional uses that may require permits for air emissions. While an assessment of existing uses would be required in the future, as described in **Attachment K,** it is unlikely that a new development within the Proposed Rezoning Area would

experience significant adverse impacts related to industrial sources. Detailed and site-specific analysis of potential effects of proposed developments on industrial source air quality, if necessary, would be made at the time of AAFE's ULURP application.

Greenhouse Gas Emissions

According to the *CEQR Technical Manual*, projects that do not require an EIS do not warrant a GHG emissions assessment unless they are City capital projects, include significant power generation, or would fundamentally change the City's solid waste management system. Since none of those exceptions apply in this case, no analysis is required. Detailed and site-specific analysis of potential effects of proposed development on greenhouse gas emissions, if necessary, would be made at the time of AAFE's ULURP application.

Noise

A noise analysis examines an action for its potential effects on sensitive noise receptors (which can be both indoors and outdoors), including the effects on the interior noise levels of residential, commercial, and certain community facility uses, such as hospitals, schools, and libraries. The principal types of noise sources affecting the City are mobile sources (primarily motor vehicles), stationary sources (typically machinery or mechanical equipment associated with manufacturing operations or building HVAC systems) and construction noise (e.g., trucks, bulldozers, power tools, etc.). An initial impact screening would consider whether a proposed action would generate any mobile or stationary source noise, or would be located in an area with high ambient noise levels.

Mobile Source Screening

According to the *CEQR Technical Manual*, a detailed mobile source analysis is generally performed if a proposed action would increase noise passenger car equivalent (noise PCE) values by 100 percent or more. While the site under conceptual analysis would have to complete detailed traffic forecasts, it is unlikely that it would result in a doubling of vehicle trips. Therefore, it is unlikely that a detailed mobile source analysis would be warranted for the AAFE site, and no significant adverse mobile source impacts are anticipated. Detailed and site-specific analysis of potential effects of proposed developments on mobile source noise, if necessary, would be made at the time of AAFE's ULURP application.

Stationary Source Screening

According to the *CEQR Technical Manual*, a detailed stationary source analysis is generally performed if a proposed action would cause a substantial stationary source (i.e., unenclosed equipment for building ventilation purposes) to be operating within 1,500 feet of a receptors 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.

It is unlikely that the site under conceptual analysis would meet any of these criteria. It is expected that the rooftop mechanical equipment for the AAFE site would be located within enclosed mechanical bulkheads or would be designed to meet all applicable noise regulations and to avoid producing levels that would result in any significant adverse noise impacts. Further, the site is not located in an area with high ambient noise levels resulting from stationary sources. Therefore, the site under conceptual analysis would not be expected to result in any stationary source noise impacts and no further analysis is warranted. However, detailed and site-specific analysis of potential effects of proposed developments on stationary source noise, if necessary, would be made at the time of AAFE's ULURP application.

Sensitive Receptor Analysis

According to the *CEQR Technical Manual*, a detailed noise analysis may be warranted if a sensitive receptor screening determines that a proposed development would introduce a new noise-sensitive location (a "receptor") in an area with high ambient noise levels, which typically include those sites near heavily-trafficked thoroughfares, airports, rail, or other loud activities. Receptors are usually defined as an area where human activity may be adversely affected when noise levels exceed predefined thresholds of acceptability or when noise levels increase by an amount exceeding a predefined threshold of change. As stated in the *CEQR Technical Manual*¸ indoor receptors include residences, hotels, motels, health care facilities, nursing homes, schools, houses of worship, court houses, public meeting facilities, museums, libraries, and theaters; outdoor receptors include parks, outdoor theaters, golf courses, zoos, campgrounds, and beaches. As the surrounding area contains residential and commercial uses, there are existing sensitive receptors in the vicinity of the project site. In addition, the site under conceptual analysis would include indoor receptors (as defined in the *CEQR Technical Manual*) and the site under conceptual analysis is located near an open subway cut, but is not located near heavily trafficked thoroughfares, airports, or other loud activities. As such, it is anticipated that detailed analysis would be warranted.

Based on the findings of the noise analysis presented in **Attachment L** of the EAS, no significant adverse noise impacts to sensitive receptors are anticipated. As described in the EAS, in the event that the AAFE property is developed in the future, its southern frontage would be located on Montgomery Street. Any future development at this site would also be required to provide a window-wall attenuation of 25 dBA/20 dBA in order to maintain interior noise levels of 45 dBA/50 dBA or lower should that development include any residential or commercial uses, respectively. However, detailed and site-specific analysis of potential effects of proposed developments on sensitive receptors, if necessary, would be made at the time of AAFE's ULURP application.

Public Health

This conceptual analysis of the site under conceptual analysis has not identified the potential for significant unmitigated adverse impacts in any CEQR analysis areas, including air quality, water quality, hazardous materials, and noise. Therefore, based on the methodology set forth by the *CEQR Technical Manual*, an analysis of public health is not warranted. More detailed analysis of public health, if necessary, would be performed at such time as a site-specific application for development of the AAFE property is made. It is anticipated that development on the site under conceptual analysis would not result in significant adverse impacts as development on this site would have to mitigate any air quality, water quality, hazardous materials and noise impacts to achieve project approval from the City.

Neighborhood Character

As described in the *CEQR Technical Manual*, an assessment of neighborhood character is generally warranted when a proposed project has the potential to result in significant adverse impacts in one or more of the following technical areas: land use, zoning and public policy; socioeconomic conditions; open space; historic and cultural resources; urban design and visual resources; shadows; transportation; and noise. An assessment of neighborhood character is also needed if a project may have moderate effects on several of the elements that define a neighborhood's character. This conceptual analysis of the site under conceptual analysis has not identified any potential for the Proposed Action to result in moderate or significant adverse impacts in the technical areas listed above. Therefore, a detailed analysis of neighborhood character is not warranted. More detailed analysis of neighborhood character, if necessary, would be performed at such time as a site-specific application for redevelopment of the AAFE property is made. It is anticipated that development on the site under conceptual analysis would not result in significant adverse impacts as

development on this site would have to mitigate any potential impacts to the technical areas listed above to achieve project approval from the City.

Construction

The future development of the AAFE property pursuant to the proposed zoning would be expected to result in short-term conditions typical of construction sites in Brooklyn. More detailed analysis of construction impacts, if necessary, would be performed at such time as site-specific applications for redevelopment of the AAFE property is made. No construction impacts are expected to result from the development of site under conceptual analysis.

Appendix 1

Phase I Environmental Site Assessment (ESA)

October 23, 2012

Mr. Yoel Barminka
The Mazel Group
162 Manhattan Avenue
Brooklyn, NY 11211

Re: Former Best-Metropolitan Towel & Linen Supply Co., Inc.
46 Crown Street, Brooklyn, NY - Block 1190, Lots 29, 46, 48 and 50
931 Carroll Street, Brooklyn, NY - Block 1183, Lot 58

Dear Mr. Barminka:

Environmental Business Consultants (EBC) performed a Phase I Environmental site assessment at the above referenced locations, as part of your due diligence inquiry to complete the purchase. This letter is to give you a preliminary summary of our findings which will be further detailed in the Phase I Report.

According to the NYSDEC PBS Database there are two 4,000 gallon underground storage tanks registered to the Carroll Street property and one 5,000 gallon underground tank at the Crown street location. The tanks at the Carroll Street property include a gasoline tank listed as "closed –removed" in 2006, and a diesel tank listed as "in-service". The 5,000 gallon tank at the Crown Street address is listed as "in-service".

According to historic Sanborn maps the 46 Crown Street property was occupied by a commercial laundry since at least 1932. The properties at 52 Crown, 56-64 Crown and 127-137 Montgomery Streets were used as parking garages since at least 1932. Two underground gasoline tanks are shown on the maps for 56-64 Crown and 127-137 Montgomery and one gasoline tank at 52 Crown through 1963. The tanks at 52 Crown and Montgomery streets are gone by 1965 but continue to be shown on the 56-64 Crown st lot through the latest map dated 2007.

In addition to past use as garages, the 127-137 Montgomery street properties were used by a clothing recycling and auto repair. The Carroll Street property has a long history of use as a garage with 2 underground gasoline tanks shown from 1932 to the most recent map. These tanks appear to be additional to the two 4,000 gallon tanks registered to the property since they pre-date the installation date (1984) of these tanks by more than 50 years.

The historic use of the Crown Street properties as auto repair, used clothing recycling, garages and a commercial laundry are considered a recognized environmental condition (REC).

The historic use of the Carroll Street building as a fleet maintenance garage is also considered an REC.

The presence of two historical gasoline tanks on the Carroll street property and the absence of a closure report or other confirmation regarding the removal of the 4,000 gallon gasoline tank are both an REC.

The presence of 5 historic gasoline USTs on the Crown street properties is also an REC.

1808 Middle Country Road
Ridge, NY 11961
Phone 631.924.0870
Fax 631.924.2870

The RECs identified above require a Phase II subsurface investigation on both properties. No conventional lender will provide financial assistance for acquisition or construction without these subsurface investigations.

Our recommendation is to perform an investigation at both properties. These investigations would include the following elements:

- Geophysical surveys on both the Carroll Street and Crown Street properties to determine the location of existing tanks and to determine if historic tanks are present.
- Installation of 5 to 6 borings at the Carroll Street location to a depth of 20 feet.
- Installation of 8 to 12 borings at the Crown Street property to a depth of 20 feet.
- Analysis of selected soil samples for Volatile Organic Compounds (VOCs) and Semi-volatile Organic Compounds (SVOCs) by methods 8260 (full) and 8270 (CP51 list) respectively.
- With the depth to groundwater in this area at approximately 85 to 95 feet below the surface, the collection of groundwater samples will not be possible practical. We therefore recommend the collection of subslab vapor samples at 6 locations throughout the Crown Street Property as a viable alternative.

It is estimated that this work could be completed in 3 days with laboratory results received in 5 to 7 business days from the time the samples are received by the laboratory. We would therefore recommend 3 weeks to complete the investigation.

Please call if you have any questions or if anything requires further explanation.

Very truly yours,
Environmental Business Consultants

Charles B. Sosik, P.G., P.H.G.
Principal

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46 CROWN STREET

BROOKLYN NEW YORK

Phase II Subsurface Investigation

Prepared for:

The Mazel Group
162 Manhattan Avenue
Brooklyn, NY 11211

Prepared by:

EBC
Environmental Business Consultants

1808 Middle Country Road
Ridge, NY 11961

July 2013

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46 Crown Street, Brooklyn, NY 11225

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Figure 1 Site Location Map
Figure 2 Site Plan

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Appendix A Boring Logs
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Appendix C Laboratory Reports - Sub-slab Soil Vapor

1.0 INTRODUCTION

Environmental Business Consultants (EBC) prepared the following Subsurface Investigation Report for the property located at 46 Crown Street in Brooklyn, New York 11225. The work was conducted on behalf of The Mazel Group, to evaluate the current environmental quality of the subject property and to further assess environmental conditions identified during a Phase I investigation. The scope of work for this Phase II investigation was based on recommendations made in a Phase I Environmental Site Assessment Report prepared by EBC (10/12).

1.3 Site Location and Description

The address for the subject property is 40-64 Crown Street, 902-918 Franklin Avenue, and 135-149 Montgomery Street, Brooklyn, New York 11225 (see **Figure 1**). The subject property is designated as Block 1190, Lots 29, 45, 46, 48, and 50 by the New York City Department of Assessment. The subject property is located in the City of New York and Borough of Brooklyn (Kings County)**.** The subject site is a consists of approximately 262 feet of frontage on Franklin Avenue, 235 feet of frontage on Crown Street, and 240 feet of frontage on Montgomery Street (**Figure 2**). The subject site is located on the western side of Franklin Avenue between Crown Street and Montgomery Street. According to the deed and the Automated City Registration Information System (ACRIS) website, the current owner of Lots 29, 45, and 50 is Central Laundry Service Corp. The current owner of Lots 46 and 48 are the Neighborhood Partnership Housing Development Fund.

The subject site lot is approximately 61,540 square feet (1.41 acres), and is developed with multiple 1-story buildings.The buildings are currently used as a commercial laundry. Loading bays are located along Franklin Street at the corner of Franklin Street and Crown Street. The rear and southern portion of the loading bay area is used for storage and sorting. The center building has a room for utilities, boiler, and hot water heaters.

In the rear of the Site along Crown Street is the laundry room with numerous washers mounted along the west wall. South of the laundry room (toward Montgomery Street) large commercial machines are stored. To the east along Montgomery Street resides the press room with large automatic feed press machines. A parking lot for employees and equipment is located at the corner of Montgomery Street and Franklin Avenue.

Surrounding Adjacent Property Usage

Direction	Property Description
North –	Block 1189, Lot 60 (Across Crown Street) – Developed with a 33-story apartment building. The building was completed in 1973 and has 321 units.
South –	Block 1192, Lots 41 & 46 (Across Montgomery Street) – Undeveloped lot on the corner of SW corner of Montgomery Street and Frankling Avenue. Adjacent to the west (Lot 41) is developed with an old 3-story brick manufacturing building. It is unclear if the building is still in use.
West –	Block 1190, Lot 26 - Train tracks for the NYC MTA "S" line.
East –	Block 1294 (Across Franklin Avenue) – Developed with 2-story Medgar Evers College on the eastern portion of the lot. The remaining areas are parking lots and landscaped areas.

1.2 Previous Reports

1.2.1 Phase I Environmental Site Assessment Desktop Review, (EBC, October 2012)

EBC performed a desktop review of the above referenced property to determine the existence of any recognized environmental conditions. The review included a full environmental database search, historic Sanborn maps, City Directory search, Aerial Photo review and a site inspection.

The following is a summary of EBC's findings:

According to historic Sanborn maps the 46 Crown Street property was occupied by a commercial laundry since at least 1932. The properties at 52 Crown, 56-64 Crown and 127-137 Montgomery Streets were used as parking garages since at least 1932. In addition to past use as garages, the 127-137 Montgomery street properties were used by a clothing recycling and auto repair. Two underground gasoline tanks are shown on the maps for 56-64 Crown and 127-137 Montgomery and one gasoline tank at 52 Crown through 1963. The tanks at 52 Crown and Montgomery streets are gone by 1965 but continue to be shown on the 56-64 Crown Street lot through the latest map dated 2007.

According to the NYSDEC PBS Database there is one 5,000 gallon underground tank at the site. The 5,000 gallon tank is listed as “in-service”.

The historic use of the Crown Street properties as auto repair, used clothing recycling, garages and a commercial laundry are considered a recognized environmental condition (REC).

The presence of 5 historic gasoline USTs on the Crown Street properties is also an REC.

EBC recommended performing a Phase II Subsurface Investigation at the subject site to include the collection and laboratory analysis of subsurface samples including:

- A Geophysical survey of the site to determine the location of existing tanks and to determine if historic tanks are present.
- Installation of 8 to 12 borings at the site to a depth of 20 feet.
- Analysis of selected soil samples for Volatile Organic Compounds (VOCs) and Semi-volatile Organic Compounds (SVOCs) by methods 8260 (full) and 8270 (CP51 list) respectively.
- The collection of sub-slab vapor samples at 6 locations throughout the site as a viable alternative to collecting groundwater samples (depth to water is approximately 85 ft).

2.0 SUBSURFACE INVESTIGATION

The field work portion of the Phase II of was performed on October 26th, November 5th, November 7th, November 10th, and November 19th, 2012. The work included a geophysical survey to confirm the presence of underground storage tanks and the collection and analysis of soil and soil gas samples.

Laboratory services were provided by Phoenix Environmental Laboratories, Inc. of Manchester, CT, a New York State ELAP certified environmental laboratory (ELAP Certification No. 11301).

2.1 Geophysical Survey

The geophysical survey was performed on October 26, 2012 by Nova Geophysical Services of Douglaston, NY. Nova utilized Ground Penetrating Radar (GPR), Electromagnetic (EM) surveys and comprehensive subsurface utility (CSUL) surveys to confirm the presence of suspect underground storage tanks (USTs) as identified on historic Sanborn maps, and to mark-out the perimeter of the known 5,000 gallon fuel oil tank to allow borings to safely proceed.

Nova was able to identify the two USTs 56-64 Crown Street as indicated on the Sanborn Map and also outlined the 5,000 gallon fuel oil tank in the southeast parking lot. The two USTs at 137 Montgomery Street, which was formerly the site of a private garage, are in a location which now has a full basement level. Any tanks that were present at this location would have been removed during excavation for the basement. The remaining tank shown at 52 Crown Street could not be confirmed. This area of the building now contains office space and a large bathroom and was inaccessible to Nova.

The geophysical survey report is provided in **Appendix A**.

2.2 Soil Sampling

On November 5th, 7th, and 10th, 2012 a total of 16 soil borings were advanced to evaluate identified areas of concern including underground storage tanks and the main laundry area of the building. The approximate location of each the borings is shown on **Figure 2.**

At each soil boring location, soil samples were collected continuously in 4 or 5 foot intervals using a track-mounted Geoprobe™ model 66DT sampling system. The Geoprobe™ uses a direct push hydraulic percussion system to drive and retrieve core samplers. Soil samples were retrieved using a 2-inch diameter, 4 or 5-foot long macro-core sampler with disposable acetate liners.

Each soil sample recovered from the soil borings was characterized by an experienced geologist and field screened for the presence of VOCs using a photo-ionization detector (PID). The geologist's field observations and PID readings were recorded for each boring in a soil boring log (see **Appendix B**).

The first sampling event (November 5th) was to investigate two suspect gasoline tanks at 56-64 Crown Street, as shown on the 1963 Sanborn Map and confirmed to be present by the GPR survey. The suspect tanks were located inside the loading bay doors along Franklin Street. Two soil borings (GT-B1, GT-B2) were performed on either side of the tank and advanced to 15-17 foot below slab grade. One sample was retained from each of the 2 soil boring locations for a total of 2 soil samples. Retained soil samples were submitted for laboratory analysis of VOCs by EPA Method 8260 and SVOCs by EPA Method 8270 (CP51 list).

On November 7th, three borings (FO-B1 through FO-B3) were performed to 20 feet below grade around the 5,000 gallon noted as "in service". The tank was located in the parking area on the corner of Franklin Street and Montgomery Avenue. An additional soil boring (GT-B3) was also advanced near the suspect gasoline UST inside 56-64 Crown Street during this mobilization. One sample was retained from each of the soil boring locations for a total of 4 soil samples. Retained soil samples were submitted for laboratory analysis of VOCs by EPA Method 8260 and SVOCs by EPA Method 8270 (CP51 list).

On November 10th, ten soil borings (ML-B1 through ML-B10) were advanced across the main laundry operations area of the Site. These borings were advanced to 8 feet below the building slab with the exception of soil boring B9 (12 feet below grade). One sample was retained from each of the soil boring locations for a total of 12 soil samples. Soil samples were collected from the depth exhibiting the greatest degree of contamination, in the absence of contamination soil samples were collected from the boring terminus. Retained soil samples were submitted for laboratory analysis of VOCs by EPA Method 8260, SVOCs by EPA Method 8270 (CP51 list). In addition four of the samples (ML-B2, ML-B4, ML-B7, and ML-B9) were analyzed for Priority Pollutant Metals.

2.2.1 Soil Results

Soil sample results were compared to the Soil sample results were compared to the NYSDEC Part 375-6 Unrestricted Use Cleanup Objectives (UUSCOs) and Restricted Residential Soil Cleanup Objectives (RRSCOs). Analytical data for the soil samples are summarized in **Tables 1** through **5**, and a copy of the laboratory analytical reports are included in **Appendix C**.

VOCs
No VOCs were detected above NYSDEC Part 375.6 Unrestricted Soil Cleanup Objectives in any of the soil samples submitted for laboratory analysis.

SVOCs
Three shallow soil borings showed elevated concentrations of SVOC compounds. Soil borings B2(0-2') and B3(0-4') showed 5 SVOC compounds above UUSCOs and RRSCOs (Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, and Indeno(1,2,3-cd)pyrene). The SVOC compound chrysene was also detected in both soil borings (B2 and B3) at levels above its corresponding UUSCO but not its RRSCO. Soil boring B12(0-2') showed the same SVOCs and one additional (Dibenzo(a,h)anthracene) at concentrations an order of magnitude greater than those reported in the B2 and B3 sample.

Metals
Only four metals, Lead (B2 and B7), Mercury (B2, B4, and B7), Nickel (B4 and B7), and Zinc (B2 and B7) were reported at concentrations above there respective UUSCOs and RRSCOs as shown blow:

B2(0-2') – lead (75 ppm), mercury (5.55 ppm), zinc (147 ppm)
B4(0-2') – mercury (0.2 ppm), nickel (32.5 ppm)
B7(0-2') – lead (271 ppm), mercury (0.38 ppm), nickel (30.8 ppm), zinc (133 ppm)

2.3 Soil Gas Sampling

To evaluate the potential for VOC contamination site-wide, nine sub-slab sampling points (SG1-SG9) were installed on November 17th, 2012 in the approximate locations shown in **Figure 2**. The soil gas sampling locations were selected to be representative of conditions across the subject property.

2.3.1 Installation of Soil Gas Sampling Points

The points were installed by drilling a 0.5 inch diameter hole through the twelve-inch thick concrete slab using a hammer drill and drill bit. At each drilled location, a length of disposable polyethylene tubing was installed to a depth of approximately 2 to 3 inches below the concrete slab surface. The surface of the drilled hole was sealed with hydrated granular bentonite and a 1 foot square sheet of 2 mil HDPE plastic sheeting.

2.3.2 Surface Seal Test Procedure

Sub-slab soil gas sampling was performed after each sampling location was tested to ensure a proper surface seal that been obtained. In accordance with NYSDOH guidance (NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, February 2005), a tracer gas (helium) was used as a quality assurance/quality control device to verify the integrity of the sampling point seal prior to collecting the samples. Prior to testing and collecting samples, the surface immediately surrounding the polyethylene tubing of the vapor implant was sealed using a 1 foot square sheet of 2 mil HDPE plastic firmly adhered to a wetted layer of granular bentonite. The seal was then tested by enriching the air space above the seal with a tracer gas (helium) while continuously monitoring air drawn from the implant with a helium detector (ionscience) for a minimum of 15 minutes. The tracer gas test procedure was employed at all four sub-slab soil gas sampling locations. No surface seal leaks were observed at any of the locations.

2.3.3 Sample Collection

Following verification that the surface seal was tight, one to three volumes (i.e., the volume of the sample probe and tube) of air was purged from the implant using a calibrated vacuum pump. After purging, a 6-liter Summa® canister, fitted with a 2-hour flow regulator, was attached to the surface tube of each of the six vapor implants. Prior to initiating sample collection, sample identification, canister number, date and start time were recorded on tags attached to each canister and in a bound field note book and sample log sheet (**Appendix D**). Sampling then proceeded by fully opening the flow control valve on each canister in turn. Immediately after opening the flow control valve on a canister, the initial vacuum (inches of mercury) was recorded in the field book and on the sample tag. When the vacuum level in the canister was between 5 and 8 inches of mercury (approx 2 hours), the flow controller valve was closed, and the final vacuum recorded in the field notebook and on the sample tag.

Samples were submitted to Phoenix Environmental Laboratories, Inc. for laboratory analysis of VOCs EPA Method TO-15.

2.3.4 Soil Gas Results

The results of the sub-slab soil gas sampling reported typical background levels of petroleum VOCs in all samples with slightly elevated levels of trichloroethylene (TCE) reported in two of the nine samples.

A summary of the results is provided in **Table 6**. The laboratory reports are provided in **Appendix D**.

3.0 CONCLUSIONS

The investigation characterized the soil beneath the Site as a firm red-brown silty sand in the southern portion of the site. Beneath the existing building along Crown Street and Franklin Avenue the subsurface soil is described as fill material to a depth of at least 8 feet in certain areas, underlain by a brown silty sand.

There were no VOCs or other compounds of concern reported in the soil samples. Elevated levels of several SVOC compounds and metals in some areas of the site are consistent with that typically encountered in historic fill materials which are present through out the area and most of Brooklyn.

No evidence of a spill or leak was found for the suspect USTs beneath 56-64 Crown Street or the 5,000 gallon UST located beneath the parking lot on the corner of Franklin Avenue and Montgomery Street. The soil borings and soil samples around each tank area showed no physical evidence (odor, staining, etc.) of petroleum contamination which was confirmed by the laboratory results. The USTs shown on the Sanborn maps in the central area of the building along Montgomery Street were likely removed when the basement was installed in the central building. The presence of a single UST at 52 Crown Street side could not be confirmed or investigated due to accessibility issues. However, the historic Sanborn Fire Insurance Maps show the USTs at 52 Crown and 137 Montgomery Street from 1932 to 1963 only. The tanks are not shown in the 1965 Sanborn, nor in any of the subsequent maps through 2007. This confirms that the tank was taken out of use sometime between 1963 and 1965. Based on the time span of 48 to 50 years since the tanks were removed from service they are unlikely to represent a significant environmental concern.

With the depth to groundwater estimated at 85 feet below grade, the collection of groundwater samples was impractical and unnecessary. Instead a series of soil gas samples were used to provide full coverage of the Site and to assess whether a release of chlorinated solvents had occurred during the historic use of the property as a commercial laundry.

The results of the soil gas samples did not identify chlorinated solvents at levels indicative of a release. Both PCE and TCE detections were generally low and consistent with background levels observed in former commercial areas throughout Brooklyn. The highest PCE concentration reported was 9.83 ug/m^3 while the highest TCE 22.9 ug/m^3. In contrast, if a spill was indicated chlorinated solvent concentrations would be in the 10,000 to 100,000 ug/m^3 range.

Based on the results of this investigation the property has not been adversely impacted by the historic presence of underground fuel and gasoline storage tanks and the historic use of the property for auto repair and as a commercial laundry.

TABLES

TABLE 1
46 Crown Street
Brooklyn, New York
Soil Analytical Results
Gasoline Tank Area
Volatile Organic Compounds

COMPOUND	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	GT-B1 (17') 11/5/2012 µg/Kg		GT-B2 (9-10') 11/5/2012 µg/Kg		GT-B4 (8-10') 11/7/2012 µg/Kg	
			Result	RL	Result	RL	Result	RL
1,1,1,2-Tetrachlorothane			ND	5.7	ND	5.6	ND	5.6
1,1,1-Trichloroethane	680	100,000	ND	5.7	ND	5.6	ND	5.6
1,1,2,2-Tetrachloroethane			ND	5.7	ND	5.6	ND	5.6
1,1,2-Trichloroethane			ND	5.7	ND	5.6	ND	5.6
1,1-Dichloroethane	270	26,000	ND	5.7	ND	5.6	ND	5.6
1,1-Dichloroethene	330	100,000	ND	5.7	ND	5.6	ND	5.6
1,1-Dichloropropene			ND	5.7	ND	5.6	ND	5.6
1,2,3-Trichlorobenzene			ND	5.7	ND	5.6	ND	5.6
1,2,3-Trichloropropane			ND	5.7	ND	5.6	ND	5.6
1,2,4-Trichlorobenzene			ND	5.7	ND	5.6	ND	5.6
1,2,4-Trimethylbenzene	3,600	52,000	ND	5.7	ND	5.6	ND	5.6
1,2-Dibromo-3-chloropropane			ND	5.7	ND	5.6	ND	5.6
1,2-Dichlorobenzene	1,100	100,000	ND	5.7	ND	5.6	ND	5.6
1,2-Dichloroethane	20	3,100	ND	5.7	ND	5.6	ND	5.6
1,2-Dichloropropane			ND	5.7	ND	5.6	ND	5.6
1,3,5-Trimethylbenzene	8,400	52,000	ND	5.7	ND	5.6	ND	5.6
1,3-Dichlorobenzene	2,400	4,900	ND	5.7	ND	5.6	ND	5.6
1,3-Dichloropropane			ND	5.7	ND	5.6	ND	5.6
1,4-Dichlorobenzene	1,800	13,000	ND	5.7	ND	5.6	ND	5.6
2,2-Dichloropropane			ND	5.7	ND	5.6	ND	5.6
2-Chlorotoluene			ND	5.7	ND	5.6	ND	5.6
2-Hexanone (Methyl Butyl Ketone)			ND	5.7	ND	5.6	ND	5.6
2-Isopropyltoluene			ND	28	ND	28	ND	28
4-Chlorotoluene			ND	5.7	ND	5.6	ND	5.6
4-Methyl-2-Pentanone			ND	5.7	ND	5.6	ND	5.6
Acetone	50	100,000	ND	28	ND	28	ND	28
Acrylonitrile			ND	28	ND	28	ND	28
Benzene	60	4,800	ND	11	ND	11	ND	11
Bromobenzene			ND	5.7	ND	5.6	ND	5.6
Bromochloromethane			ND	5.7	ND	5.6	ND	5.6
Bromodichloromethane			ND	5.7	ND	5.6	ND	5.6
Bromoform			ND	5.7	ND	5.6	ND	5.6
Bromomethane			ND	5.7	ND	5.6	ND	5.6
Carbon Disulfide			ND	5.7	ND	5.6	ND	5.6
Carbon tetrachloride	760	2,400	ND	5.7	ND	5.6	ND	5.6
Chlorobenzene	1,100	100,000	ND	5.7	ND	5.6	ND	5.6
Chloroethane			ND	5.7	ND	5.6	ND	5.6
Chloroform	370	49,000	ND	5.7	ND	5.6	ND	5.6
Chloromethane			ND	5.7	ND	5.6	ND	5.6
cis-1,2-Dichloroethene	250	100,000	ND	5.7	ND	5.6	ND	5.6
cis-1,3-Dichloropropene			ND	5.7	ND	5.6	ND	5.6
Dibromochloromethane			ND	5.7	ND	5.6	ND	5.6
Dibromoethane			ND	5.7	ND	5.6	ND	5.6
Dibromomethane			ND	5.7	ND	5.6	ND	5.6
Dichlorodifluoromethane		100,000	ND	5.7	ND	5.6	ND	5.6
Ethylbenzene	1,000	41,000	ND	5.7	ND	5.6	ND	5.6
Hexachlorobutadiene			ND	5.7	ND	5.6	ND	5.6
Isopropylbenzene			ND	5.7	ND	5.6	ND	5.6
m&p-Xylenes	260		ND	5.7	ND	5.6	ND	5.6
Methyl Ethyl Ketone (2-Butanone)	120	100,000	ND	28	ND	28	ND	28
Methyl t-butyl ether (MTBE)	930	100,000	ND	11	ND	11	ND	11
Methylene chloride	50	100,000	ND	5.7	ND	5.6	ND	5.6
Naphthalene	12,000		ND	5.7	ND	5.6	ND	5.6
n-Butylbenzene	12,000	100,000	ND	5.7	ND	5.6	ND	5.6
n-Propylbenzene	3,900	100,000	ND	5.7	ND	5.6	ND	5.6
o-Xylene	260	100,000	ND	5.7	ND	5.6	ND	5.6
p-Isopropyltoluene			ND	5.7	ND	5.6	ND	5.6
sec-Butylbenzene	11,000	100,000	ND	5.7	ND	5.6	ND	5.6
Styrene			ND	5.7	ND	5.6	ND	5.6
tert-Butylbenzene	5,900	100,000	ND	5.7	ND	5.6	ND	5.6
Tetrachloroethene	1,300	19,000	ND	5.7	ND	5.6	ND	5.6
Tetrahydrofuran (THF)			ND	11	ND	11	ND	11
Toluene	700	100,000	ND	5.7	ND	5.6	ND	5.6
Total Xylenes			ND	5.7	ND	5.6	ND	5.6
trans-1,2-Dichloroethene	190	100,000	ND	5.7	ND	5.6	ND	5.6
trans-1,3-Dichloropropene			ND	5.7	ND	5.6	ND	5.6
trabs-1,4-dichloro-2-butene			ND	11	ND	11	ND	11
Trichloroethene	470	21,000	ND	5.7	ND	5.6	ND	5.6
Trichlorofluoromethane			ND	5.7	ND	5.6	ND	5.6
Trichlorotrifluoroethane			ND	5.7	ND	5.6	ND	5.6
Vinyl Chloride	20	900	ND	5.7	ND	5.6	ND	5.6
Total BTEX Concentration			**0.0**		**0.0**		**0.0**	
Total VOCs Concentration			**0.0**		**0.0**		**0.0**	

Notes:

** - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives
ND - Not-detected
RL - Reporting Limit
Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value
Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 2
46 Crown Street
Brooklyn, New York
Soil Analytical Results
Fuel Oil Tank Area
Volatile Organic Compounds

COMPOUND	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	FO-B1 (16-18') 11/7/2012 µg/Kg		FO-B2 (16-18') 11/7/2012 µg/Kg		FO-B3 (16-18') 11/7/2012 µg/Kg	
			Result	RL	Result	RL	Result	RL
1,1,1,2-Tetrachlorothane			ND	5.7	ND	5.6	ND	5.7
1,1,1-Trichloroethane	680	100,000	ND	5.7	ND	5.6	ND	5.7
1,1,2,2-Tetrachloroethane			ND	5.7	ND	5.6	ND	5.7
1,1,2-Trichloroethane			ND	5.7	ND	5.6	ND	5.7
1,1-Dichloroethane	270	26,000	ND	5.7	ND	5.6	ND	5.7
1,1-Dichloroethene	330	100,000	ND	5.7	ND	5.6	ND	5.7
1,1-Dichloropropene			ND	5.7	ND	5.6	ND	5.7
1,2,3-Trichlorobenzene			ND	5.7	ND	5.6	ND	5.7
1,2,3-Trichloropropane			ND	5.7	ND	5.6	ND	5.7
1,2,4-Trichlorobenzene			ND	5.7	ND	5.6	ND	5.7
1,2,4-Trimethylbenzene	3,600	52,000	ND	5.7	ND	5.6	ND	5.7
1,2-Dibromo-3-chloropropane			ND	5.7	ND	5.6	ND	5.7
1,2-Dichlorobenzene	1,100	100,000	ND	5.7	ND	5.6	ND	5.7
1,2-Dichloroethane	20	3,100	ND	5.7	ND	5.6	ND	5.7
1,2-Dichloropropane			ND	5.7	ND	5.6	ND	5.7
1,3,5-Trimethylbenzene	8,400	52,000	ND	5.7	ND	5.6	ND	5.7
1,3-Dichlorobenzene	2,400	4,900	ND	5.7	ND	5.6	ND	5.7
1,3-Dichloropropane			ND	5.7	ND	5.6	ND	5.7
1,4-Dichlorobenzene	1,800	13,000	ND	5.7	ND	5.6	ND	5.7
2,2-Dichloropropane			ND	5.7	ND	5.6	ND	5.7
2-Chlorotoluene			ND	5.7	ND	5.6	ND	5.7
2-Hexanone (Methyl Butyl Ketone)			ND	5.7	ND	5.6	ND	5.7
2-Isopropyltoluene			ND	28	ND	28	ND	28
4-Chlorotoluene			ND	5.7	ND	5.6	ND	5.7
4-Methyl-2-Pentanone			ND	5.7	ND	5.6	ND	5.7
Acetone	50	100,000	ND	28	ND	28	ND	28
Acrylonitrile			ND	28	ND	28	ND	28
Benzene	60	4,800	ND	11	ND	11	ND	11
Bromobenzene			ND	5.7	ND	5.6	ND	5.7
Bromochloromethane			ND	5.7	ND	5.6	ND	5.7
Bromodichloromethane			ND	5.7	ND	5.6	ND	5.7
Bromoform			ND	5.7	ND	5.6	ND	5.7
Bromomethane			ND	5.7	ND	5.6	ND	5.7
Carbon Disulfide			ND	5.7	ND	5.6	ND	5.7
Carbon tetrachloride	760	2,400	ND	5.7	ND	5.6	ND	5.7
Chlorobenzene	1,100	100,000	ND	5.7	ND	5.6	ND	5.7
Chloroethane			ND	5.7	ND	5.6	ND	5.7
Chloroform	370	49,000	ND	5.7	ND	5.6	ND	5.7
Chloromethane			ND	5.7	ND	5.6	ND	5.7
cis-1,2-Dichloroethene	250	100,000	ND	5.7	ND	5.6	ND	5.7
cis-1,3-Dichloropropene			ND	5.7	ND	5.6	ND	5.7
Dibromochloromethane			ND	5.7	ND	5.6	ND	5.7
Dibromoethane			ND	5.7	ND	5.6	ND	5.7
Dibromomethane			ND	5.7	ND	5.6	ND	5.7
Dichlorodifluoromethane		100,000	ND	5.7	ND	5.6	ND	5.7
Ethylbenzene	1,000	41,000	ND	5.7	ND	5.6	ND	5.7
Hexachlorobutadiene			ND	5.7	ND	5.6	ND	5.7
Isopropylbenzene			ND	5.7	ND	5.6	ND	5.7
m&p-Xylenes	260		ND	5.7	ND	5.6	ND	5.7
Methyl Ethyl Ketone (2-Butanone)	120	100,000	ND	28	ND	28	ND	28
Methyl t-butyl ether (MTBE)	930	100,000	ND	11	ND	11	ND	11
Methylene chloride	50	100,000	ND	5.7	ND	5.6	ND	5.7
Naphthalene	12,000		ND	5.7	ND	5.6	ND	5.7
n-Butylbenzene	12,000	100,000	ND	5.7	ND	5.6	ND	5.7
n-Propylbenzene	3,900	100,000	ND	5.7	ND	5.6	ND	5.7
o-Xylene	260	100,000	ND	5.7	ND	5.6	ND	5.7
p-Isopropyltoluene			ND	5.7	ND	5.6	ND	5.7
sec-Butylbenzene	11,000	100,000	ND	5.7	ND	5.6	ND	5.7
Styrene			ND	5.7	ND	5.6	ND	5.7
tert-Butylbenzene	5,900	100,000	ND	5.7	ND	5.6	ND	5.7
Tetrachloroethene	1,300	19,000	ND	5.7	ND	5.6	ND	5.7
Tetrahydrofuran (THF)			ND	11	ND	11	ND	11
Toluene	700	100,000	ND	5.7	ND	5.6	ND	5.7
Total Xylenes			ND	5.7	ND	5.6	ND	5.7
trans-1,2-Dichloroethene	190	100,000	ND	5.7	ND	5.6	ND	5.7
trans-1,3-Dichloropropene			ND	5.7	ND	5.6	ND	5.7
trabs-1,4-dichloro-2-butene			ND	11	ND	11	ND	11
Trichloroethene	470	21,000	ND	5.7	ND	5.6	ND	5.7
Trichlorofluoromethane			ND	5.7	ND	5.6	ND	5.7
Trichlorotrifluoroethane			ND	5.7	ND	5.6	ND	5.7
Vinyl Chloride	20	900	ND	5.7	ND	5.6	ND	5.7
Total BTEX Concentration			**0.0**		**0.0**		**0.0**	
Total VOCs Concentration			**0.0**		**0.0**		**0.0**	

Notes:

** - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives
ND - Not-detected
RL - Reporting Limit
Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value
Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 3
46 Crown Street
Brooklyn, New York
Soil Analytical Results
Main Laundry Area
Volatile Organic Compounds

COMPOUND	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	ML-B1 (0-2') 11/10/2012 µg/Kg		ML-B2 (0-2') 11/10/2012 µg/Kg		ML-B3 (0-4') 11/10/2012 µg/Kg		ML-B4 (0-2') 11/10/2012 µg/Kg		ML-B5 (0-2') 11/10/2012 µg/Kg		ML-B7 (0-2') 11/10/2012 µg/Kg		ML-B8 (0-2') 11/10/2012 µg/Kg		ML-B9 (0-2') 11/10/2012 µg/Kg		ML-B9 (10-12') 11/10/2012 µg/Kg		ML-B10 (0-2') 11/10/2012 µg/Kg		ML-B11 (2-4') 11/10/2012 µg/Kg		ML-B12 (0-2') 11/10/2012 µg/Kg	
			Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL
1,1,1,2-Tetrachlorothane			ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
1,1,1-Trichloroethane	680	100,000	ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
1,1,2,2-Tetrachloroethane			ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
1,1,2-Trichloroethane			ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
1,1-Dichloroethane	270	26,000	ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
1,1-Dichloroethene	330	100,000	ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
1,1-Dichloropropene			ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
1,2,3-Trichlorobenzene			ND	5.7	ND	5.6	ND	5.7	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
1,2,3-Trichloropropane			ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
1,2,4-Trichlorobenzene			ND	5.7	ND	5.6	ND	5.7	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
1,2,4-Trimethylbenzene	3,600	52,000	ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	**8.2**	5.6
1,2-Dibromo-3-chloropropane			ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
1,2-Dichlorobenzene	1,100	100,000	ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
1,2-Dichloroethane	20	3,100	ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
1,2-Dichloropropane			ND	5.7	ND	5.6	ND	5.7	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
1,3,5-Trimethylbenzene	8,400	52,000	ND	5.7	ND	5.6	ND	5.7	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
1,3-Dichlorobenzene	2,400	4,900	ND	5.7	ND	5.6	ND	5.7	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	**8.5**	5.6
1,3-Dichloropropane			ND	5.7	ND	5.6	ND	5.7	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
1,4-Dichlorobenzene	1,800	13,000	ND	5.7	ND	5.6	ND	5.7	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
2,2-Dichloropropane			ND	5.7	ND	5.6	ND	5.7	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
2-Chlorotoluene			ND	5.7	ND	5.6	ND	5.7	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
2-Hexanone (Methyl Butyl Ketone)			ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
2-Isopropyltoluene			ND	28	ND	28	ND	29	ND	28	ND	27	ND	29	ND	29	ND	27	ND	27	ND	28	ND	27	ND	28
4-Chlorotoluene			ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
4-Methyl-2-Pentanone			ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
Acetone	50	100,000	ND	28	ND	28	ND	29	ND	28	ND	27	ND	29	ND	29	ND	27	ND	27	ND	28	ND	27	ND	28
Acrylonitrile			ND	28	ND	28	ND	29	ND	28	ND	27	ND	29	ND	29	ND	27	ND	27	ND	28	ND	27	ND	28
Benzene	60	4,800	ND	11	ND	11	ND	1	ND	11	ND	11	ND	11	ND	11	ND	11	ND	11	ND	11	ND	11	ND	11
Bromobenzene			ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
Bromochloromethane			ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
Bromodichloromethane			ND	5.7	ND	5.6	ND	5.7	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
Bromoform			ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
Bromomethane			ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
Carbon Disulfide			ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
Carbon tetrachloride	760	2,400	ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
Chlorobenzene	1,100	100,000	ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
Chloroethane			ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
Chloroform	370	49,000	ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
Chloromethane			ND	5.7	ND	5.6	ND	5.7	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
cis-1,2-Dichloroethene	250	100,000	ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
cis-1,3-Dichloropropene			ND	5.7	ND	5.6	ND	5.7	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
Dibromochloromethane			ND	5.7	ND	5.6	ND	5.7	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
Dibromoethane			ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
Dibromomethane			ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
Dichlorodifluoromethane		100,000	ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
Ethylbenzene	1,000	41,000	ND	5.7	ND	5.6	ND	5.7	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
Hexachlorobutadiene			ND	5.7	ND	5.6	ND	5.7	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
Isopropylbenzene			ND	5.7	ND	5.6	ND	5.7	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
m&p-Xylenes	260		ND	5.7	ND	5.6	ND	5.7	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
Methyl Ethyl Ketone (2-Butanone)	120	100,000	ND	28	ND	28	ND	29	ND	28	ND	27	ND	29	ND	29	ND	27	ND	27	ND	28	ND	27	ND	28
Methyl t-butyl ether (MTBE)	930	100,000	ND	11	ND	11	ND	1	ND	11	ND	11	ND	11	ND	11	ND	11	ND	11	ND	11	ND	11	ND	11
Methylene chloride	50	100,000	ND	5.7	ND	5.6	ND	5.7	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
Naphthalene	12,000		ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	**5.8**	5.6
n-Butylbenzene	12,000	100,000	ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
n-Propylbenzene	3,900	100,000	ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
o-Xylene	260	100,000	ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
p-Isopropyltoluene			ND	5.7	ND	5.6	ND	5.7	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
sec-Butylbenzene	11,000	100,000	ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
Styrene			ND	5.7	ND	5.6	ND	5.7	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
tert-Butylbenzene	5,900	100,000	ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
Tetrachloroethene	1,300	19,000	ND	5.7	ND	5.6	ND	5.7	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
Tetrahydrofuran (THF)			ND	11	ND	11	ND	1	ND	11	ND	11	ND	11	ND	11	ND	11	ND	11	ND	11	ND	11	ND	11
Toluene	700	100,000	ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
Total Xylenes			ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
trans-1,2-Dichloroethene	190	100,000	ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
trans-1,3-Dichloropropene			ND	5.7	ND	5.6	ND	5.7	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
trabs-1,4-dichloro-2-butene			ND	11	ND	11	ND	1	ND	11	ND	11	ND	11	ND	11	ND	11	ND	11	ND	11	ND	11	ND	11
Trichloroethene	470	21,000	ND	5.7	ND	5.6	ND	5.7	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
Trichlorofluoromethane			ND	5.7	ND	5.6	ND	5.7	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
Trichlorotrifluoroethane			ND	5.7	ND	5.6	ND	5.7	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
Vinyl Chloride	20	900	ND	5.7	ND	5.6	ND	5	ND	5.6	ND	5.3	ND	5.4	ND	5.7	ND	5.4	ND	5.4	ND	5.6	ND	5.5	ND	5.6
Total BTEX Concentration			**0.0**		**0.0**		**0.0**		**0.0**		**0.0**		**0.0**		**0.0**		**0.0**		**0.0**		**0.0**		**0.0**		**0.0**	
Total VOCs Concentration			**0.0**		**0.0**		**0.0**		**0.0**		**0.0**		**0.0**		**0.0**		**0.0**		**0.0**		**0.0**		**0.0**		**22.5**	

Notes:

** - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives
ND - Not-detected
RL - Reporting Limit
Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value
Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 4
46 Crown Street
Brooklyn, New York
Soil Analytical Results
Gasoline Tank Area
Volatile Organic Compounds

COMPOUND	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	GT-B1 (17') 11/5/2012 µg/Kg		GT-B2 (9-10') 11/5/2012 µg/Kg	
			Result	RL	Result	RL
Acenaphthene	20,000	100,000	ND	260	ND	260
Acenaphthylene	100,000	100,000	ND	260	ND	260
Anthracene	100,000	100,000	ND	260	ND	260
Benzo(a)anthracene	1,000	1,000	ND	260	ND	260
Benzo(a)pyrene	1,000	1,000	ND	260	ND	260
Benzo(b)fluoranthene	1,000	1,000	ND	260	ND	260
Benzo(g,h,i)perylene	100,000	100,000	ND	260	ND	260
Benzo(k)fluoranthene	800	3,900	ND	260	ND	260
Chrysene	1,000	3,900	ND	260	ND	260
Dibenzo(a,h)anthracene	330	330	ND	260	ND	260
Fluoranthene	100,000	100,000	ND	260	ND	260
Fluorene	30,000	100,000	ND	260	ND	260
Indeno(1,2,3-cd)pyrene	500	500	ND	260	ND	260
Naphthalene	12,000	100,000	ND	260	ND	260
Phenanthrene	100,000	100,000	ND	260	ND	260
Pyrene	100,000	100,000	ND	260	ND	260

Notes:

* - NYSDEC Technical and Administative Guidance Memorandum 4046, 1994

** - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives

ND - Not-detected

RL - Reporting Limit

Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value

Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 5
46 Crown Street
Brooklyn, New York
Soil Analytical Results
Fuel Oil Tank Area
Volatile Organic Compounds

COMPOUND	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	FO-B1 (16-18') 11/7/2012 µg/Kg		FO-B2 (16-18') 11/7/2012 µg/Kg		FO-B3 (16-18') 11/7/2012 µg/Kg	
			Result	RL	Result	RL	Result	RL
Acenaphthene	20,000	100,000	ND	260	ND	260	ND	260
Acenaphthylene	100,000	100,000	ND	260	ND	260	ND	260
Anthracene	100,000	100,000	ND	260	ND	260	ND	260
Benzo(a)anthracene	1,000	1,000	ND	260	ND	260	ND	260
Benzo(a)pyrene	1,000	1,000	ND	260	ND	260	ND	260
Benzo(b)fluoranthene	1,000	1,000	ND	260	ND	260	ND	260
Benzo(g,h,i)perylene	100,000	100,000	ND	260	ND	260	ND	260
Benzo(k)fluoranthene	800	3,900	ND	260	ND	260	ND	260
Chrysene	1,000	3,900	ND	260	ND	260	ND	260
Dibenzo(a,h)anthracene	330	330	ND	260	ND	260	ND	260
Fluoranthene	100,000	100,000	ND	260	ND	260	ND	260
Fluorene	30,000	100,000	ND	260	ND	260	ND	260
Indeno(1,2,3-cd)pyrene	500	500	ND	260	ND	260	ND	260
Naphthalene	12,000	100,000	ND	260	ND	260	ND	260
Phenanthrene	100,000	100,000	ND	260	ND	260	ND	260
Pyrene	100,000	100,000	ND	260	ND	260	ND	260

Notes:

* - NYSDEC Technical and Administative Guidance Memorandum 4046, 1994

** - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives

ND - Not-detected

RL - Reporting Limit

Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value

Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 6
46 Crown Street
Brooklyn, New York
Soil Analytical Results
Main Laundry Area
Volatile Organic Compounds

COMPOUND	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	ML-B1 (0-2') 11/10/2012 µg/Kg		ML-B2 (0-2') 11/10/2012 µg/Kg		ML-B3 (0-4') 11/10/2012 µg/Kg		ML-B4 (0-2') 11/10/2012 µg/Kg		ML-B5 (0-2') 11/10/2012 µg/Kg		ML-B7 (0-2') 11/10/2012 µg/Kg		ML-B8 (0-2') 11/10/2012 µg/Kg		ML-B9 (0-2') 11/10/2012 µg/Kg		ML-B9 (10-12') 11/10/2012 µg/Kg		ML-B10 (0-2') 11/10/2012 µg/Kg		ML-B11 (2-4') 11/10/2012 µg/Kg		ML-B12 (0-2') 11/10/2012 µg/Kg	
			Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL
Acenaphthene	20,000	100,000	ND	260	ND	260	350	260	ND	260	ND	260	ND	250	ND	530	ND	260	ND	260	ND	260	ND	260	2,000	500
Acenaphthylene	100,000	100,000	ND	260	ND	260	ND	260	ND	260	ND	260	ND	250	ND	530	ND	260	ND	260	ND	260	ND	260	ND	500
Anthracene	100,000	100,000	ND	260	ND	260	560	260	ND	260	ND	260	ND	250	ND	530	ND	260	ND	260	ND	260	ND	260	7,400	500
Benzo(a)anthracene	1,000	1,000	ND	260	1,100	260	2,200	260	ND	260	ND	260	260	250	830	530	ND	260	ND	260	ND	260	ND	260	28,000	500
Benzo(a)pyrene	1,000	1,000	ND	260	1,300	260	1,800	260	ND	260	ND	260	270	250	550	530	ND	260	ND	260	ND	260	ND	260	27,000	500
Benzo(b)fluoranthene	1,000	1,000	ND	260	1,900	260	2,100	260	ND	260	ND	260	370	250	730	530	ND	260	ND	260	ND	260	ND	260	36,000	500
Benzo(g,h,i)perylene	100,000	100,000	ND	260	960	260	1,200	260	ND	260	ND	260	ND	250	ND	530	ND	260	ND	260	ND	260	ND	260	10,000	500
Benzo(k)fluoranthene	800	3,900	ND	260	540	260	530	260	ND	260	ND	260	ND	250	ND	530	ND	260	ND	260	ND	260	ND	260	8,100	500
Chrysene	1,000	3,900	ND	260	1,200	260	2,400	260	ND	260	ND	260	300	250	700	530	ND	260	ND	260	ND	260	ND	260	24,000	500
Dibenzo(a,h)anthracene	330	330	ND	260	ND	260	280	260	ND	260	ND	260	ND	250	ND	530	ND	260	ND	260	ND	260	ND	260	3,700	500
Fluoranthene	100,000	100,000	ND	260	1,300	260	4,200	260	360	260	ND	250	380	250	2,200	530	ND	260	ND	260	ND	260	ND	260	41,000	500
Fluorene	30,000	100,000	ND	260	ND	260	ND	260	ND	260	ND	250	ND	250	ND	530	ND	260	ND	260	ND	260	ND	260	1,500	500
Indeno(1,2,3-cd)pyrene	500	500	ND	260	860	260	1,000	260	ND	260	ND	250	ND	250	ND	530	ND	260	ND	260	ND	260	ND	260	12,000	500
Naphthalene	12,000	100,000	ND	260	ND	260	ND	260	ND	260	ND	250	ND	250	ND	530	ND	260	ND	260	ND	260	ND	260	900	500
Phenanthrene	100,000	100,000	ND	260	560	260	4,500	260	ND	260	ND	250	ND	250	1,500	530	ND	260	ND	260	ND	260	ND	260	24,000	500
Pyrene	100,000	100,000	ND	260	1,300	260	4,500	260	370	260	ND	250	360	250	1,900	530	ND	260	ND	260	ND	260	ND	260	33,000	500

Notes:

* - NYSDEC Technical and Administative Guidance Memorandum 4046, 1994

** - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives

ND - Not-detected

RL - Reporting Limit

Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value

Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 7
46 Crown Street
Brooklyn, New York
Soil Analytical Results
Main Laundry Area
Priority Pollutant Metals

COMPOUND	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	B2 (0-2') 11/10/2012 mg/Kg		B4 (0-2') 11/10/2012 mg/Kg		B7 (0-2') 11/10/2012 mg/Kg		B9 (0-2') 11/10/2012 mg/Kg	
			Result	RL	Result	RL	Result	RL	Result	RL
Antimony	2	180	BRL	3.6	BRL	3.7	BRL	3.6	BRL	3.3
Arsenic	13	16	**6.1**	0.7	**3.4**	0.7	**4.4**	0.7	**3.2**	0.7
Beryllium	7.2	72	**0.48**	0.28	**0.36**	0.3	**0.51**	0.28	**0.42**	0.26
Cadmium	2.5 c	4.3	BRL	0.36	BRL	0.37	BRL	0.36	BRL	0.33
Chromium	30 c	180 - trivalent	**21.9**	0.36	**16.2**	0.37	**22.5**	0.36	**18.2**	0.33
Copper	50	270	**42.6**	0.36	**24.2**	0.37	**33.9**	0.36	**20**	0.33
Lead	63 c	400	**281**	3.6	**40**	0.37	**271**	3.6	**10.8**	0.33
Mercury	0.18 c	0.81	**5.55**	0.71	**0.2**	0.07	**0.38**	0.06	BRL	0.08
Nickel	30	310	**29.6**	0.36	**32.5**	0.37	**30.8**	0.36	**26.9**	0.33
Selenium	3.9c	180	BRL	1.4	BRL	1.5	BRL	1.4	BRL	1.3
Silver	2	180	BRL	0.36	BRL	0.37	BRL	0.36	BRL	0.33
Thallium			BRL	0.6	BRL	0.6	BRL	0.6	BRL	0.5
Zinc	109 c	10,000	**147**	3.6	**41.8**	0.37	**133**	0.36	**32.1**	0.33

Notes:

* - NYSDEC Technical and Administative Guidance Memorandum 4046, 1994

** - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives

ND - Not-detected

NA - Not analyzed

RL - Reporting Limit

BRL - Below Reporting Limit

Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value

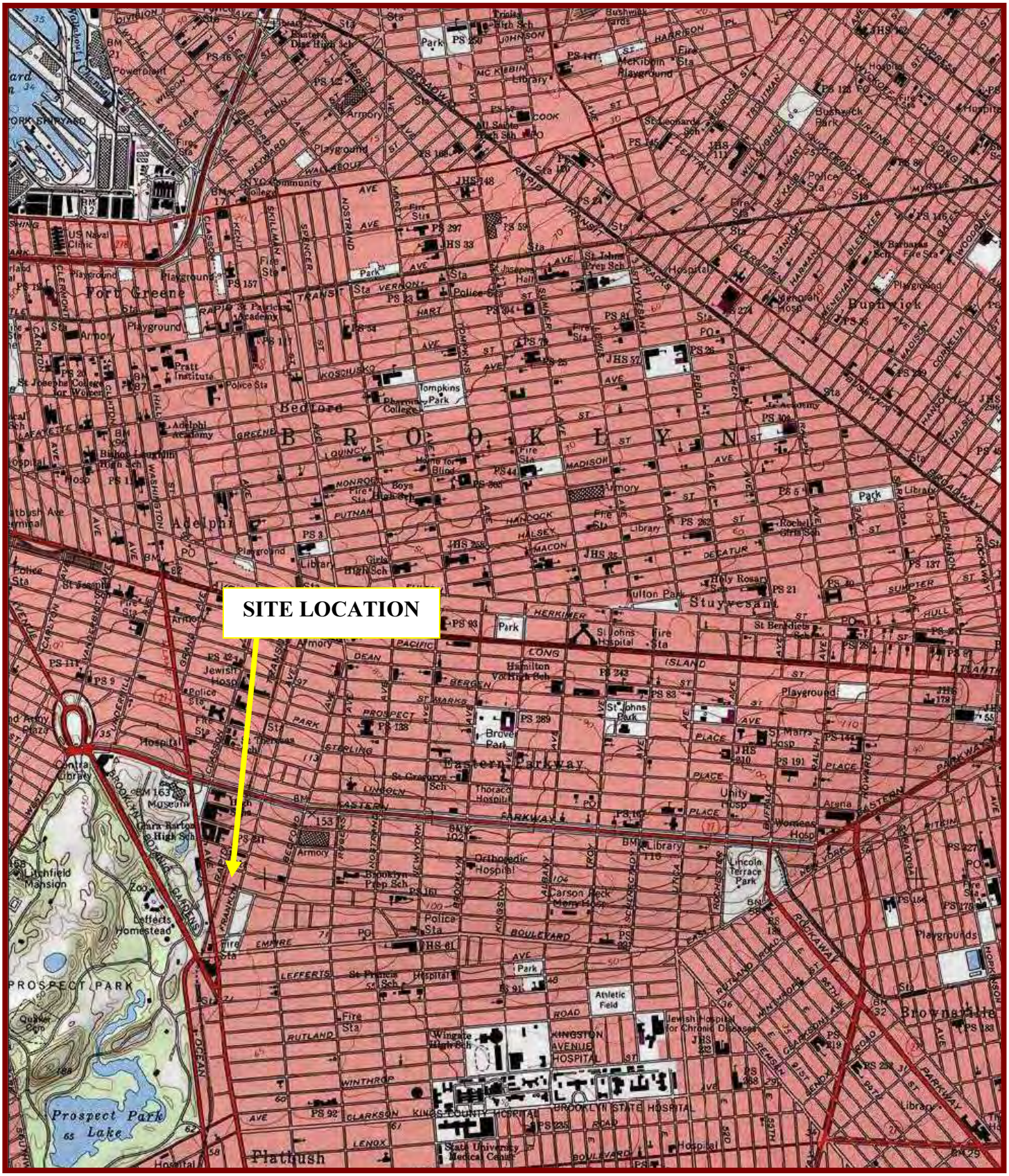
Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 8
46 Crown Street
Brooklyn, New York
Soil Gas Analytical Results
11/17/2012
Volatile Organic Compounds

COMPOUNDS	NYSDOH Maximum Sub-Slab Value ($\mu g/m^3$) [a]	NYSDOH Soil Outdoor Background Levels ($\mu g/m^3$) [b]	SG-1 (µg/m3)		SG-2 (µg/m3)		SG-3 (µg/m3)		SG-4 (µg/m3)		SG-5 (µg/m3)		SG-6 (µg/m3)		SG-7 (µg/m3)		SG-8 (µg/m3)		SG-9 (µg/m3)	
			Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL
1,1,1,2-Tetrachloroethane			ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
1,1,1-Trichloroethane	100	<2.0 - 2.8	ND	1	ND	1	ND	1	ND	1	5.23	1	ND	1	ND	1	ND	1	5.23	1
1,1,2,2-Tetrachloroethane		<1.5	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
1,1,2-Trichloroethane		<1.0	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
1,1-Dichloroethane		<1.0	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
1,1-Dichloroethene		<1.0	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
1,2,4-Trichlorobenzene		NA	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
1,2,4-Trimethylbenzene		<1.0	4.96	1	6.44	1	4.62	1	6.24	1	2.95	1	ND	1	4.62	1	ND	1	3.83	1
1,2-Dibromoethane		<1.5	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
1,2-Dichlorobenzene		<2.0	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
1,2-Dichloroethane		<1.0	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
1,2-Dichloropropane			ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
1,2-Dichlorotetrafluoroethane			ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
1,3,5-Trimethylbenzene		<1.0	1.13	1	1.28	1	ND	1	1.23	1	ND	1	ND	1	ND	1	ND	1	ND	1
1,3-Butadiene		NA	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
1,3-Dichlorobenzene		<2.0	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
1,4-Dichlorobenzene		NA	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
1,4-Dioxane			ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
2-Hexanone			ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
4-Ethyltoluene		NA	1.08	1	1.33	1	ND	1	1.13	1	ND	1	ND	1	ND	1	ND	1	ND	1
4-Isopropyltoluene			ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
4-Methyl-2-pentanone			ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
Acetone		NA	46.8	1	175	1	65.8	1	52.2	1	177	1	119	1	15.9	1	23.3	1	20.7	1
Acrylonitrile			ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
Benzene		<1.6 - 4.7	1.85	1	3.38	1	2.01	1	2.87	1	1.98	1	1.76	1	1.56	1	1.28	1	1.31	1
Benzyl Chloride		NA	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
Bromodichloromethane		<5.0	ND	1	2.68	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
Bromoform		<1.0	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
Bromomethane		<1.0	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
Carbon Disulfide		NA	ND	1	31	1	ND	1	6	1	ND	1	ND	1	ND	1	ND	1	2.15	1
Carbon Tetrachloride	5	<3.1	0.692	0.25	1.63	0.25	0.943	0.25	0.566	0.25	0.629	0.25	0.566	0.25	1.45	0.25	0.629	0.25	0.629	0.25
Chlorobenzene		<2.0	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
Chloroethane		NA	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
Chloroform		<2.4	5.56	1	542	1	79	1	10.9	1	8.83	1	14.3	1	254	1	37.9	1	654	1
Chloromethane		<1.0 - 1.4	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
cis-1,2-Dichloroethene		<1.0	ND	1	1.15	1	ND	1	ND	1	5.82	1	ND	1	ND	1	ND	1	1.07	1
cis-1,3-Dichloropropene		NA	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
Cyclohexane		NA	ND	1	1.58	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
Dibromochloromethane		<5.0	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
Dichlorodifluromethane		NA	2.72	1	2.62	1	4.15	1	2.57	1	2.37	1	2.42	1	2.52	1	2.17	1	2.52	1
Ethanol			360	1	392	1	245	1	286	1	280	1	192	1	216	1	116	1	176	1
Ethyl Acetate		NA	1.08	1	ND	1	1.69	1	1.55	1	1.48	1	1.19	1	1.22	1	ND	1	ND	1
Ethylbenzene		<4.3	2.04	1	2.52	1	2.3	1	2.08	1	1.65	1	1.95	1	2.08	1	ND	1	1.22	1
Heptane		NA	1.1	1	1.76	1	1.15	1	0.983	1	ND	1	1.1	1	1.19	1	1.88	1	1.23	1
Hexachlorobutadiene		NA	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
Hexane		<1.5	1.97	1	4.23	1	2.08	1	1.73	1	1.41	1	1.97	1	2.04	1	1.97	1	2.82	1
Isopropylalcohol		NA	8.35	1	ND	1	6.19	1	3.32	1	7.76	1	3.96	1	2.48	1	3.32	1	2.06	1
Isopropylbenzene			ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
Xylene (m&p)		<4.3	8.03	1	9.46	1	8.55	1	8.07	1	5.81	1	7.42	1	7.68	1	2.08	1	4.08	1
Methyl Ethyl Ketone			6.84	1	14	1	10	1	9.61	1	8.4	1	15.6	1	5.36	1	4.13	1	5.28	1
MTBE		NA	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
Methylene Chloride		<3.4	1.18	1	2.5	1	1.25	1	ND	1	ND	1	ND	1	3.09	1	3.92	1	2.71	1
n-Butylbenzene			ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	0.987	1
Xylene (o)		<4.3	3.25	1	3.47	1	3.3	1	3.17	1	2.17	1	2.86	1	3.08	1	ND	1	1.48	1
Propylene		NA	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	8.67	1
sec-Butylbenzene			ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
Styrene		<1.0	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
Tetrachloroethene	100		0.407	0.25	2.98	0.25	2.3	0.25	1.29	0.25	0.746	0.25	0.678	0.25	0.407	0.25	1.49	0.25	9.83	0.25
Tetrahydrofuran		NA	35.1	1	45.1	1	43.3	1	41	1	22.4	1	37.4	1	31.2	1	6.54	1	26.3	1
Toluene		1.0 - 6.1	15.7	1	19.1	1	17.3	1	16	1	14.5	1	16.6	1	17.6	1	5.31	1	11.9	1
trans-1,2-Dichloroethene		NA	ND	1	ND	1	ND	1	ND	1	1.78	1	ND	1	ND	1	ND	1	ND	1
trans-1,3-Dichloropropene		NA	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
Trichloroethene	5	<1.7	ND	0.25	0.806	0.25	0.268	0.25	0.483	0.25	14.8	0.25	0.268	0.25	ND	0.25	0.483	0.25	22.9	0.25
Trichlorofluoromethane		NA	1.52	1	1.4	1	1.68	1	1.35	1	1.35	1	1.35	1	1.35	1	1.29	1	1.4	1
Trichlorotrifluoroethane			ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
Vinyl Chloride		<1.0	ND	0.25	ND	0.25	ND	0.25	ND	0.25	ND	0.25	ND	0.25	ND	0.25	ND	0.25	ND	0.25

Notes:
NA No guidance value or standard available
(a) Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York. October 2006. New York State Department of Health.
(b) NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, February 2005, Summary of Background Levels for Selected Compounds (NYSDOH Database, Outdoor values)
Value detected above NYSDOH Air Guidance Value of 5 µg/m3, which according to Soil Vapor/Indoor Air Matrix 1 would require at a minimum, monitoring.

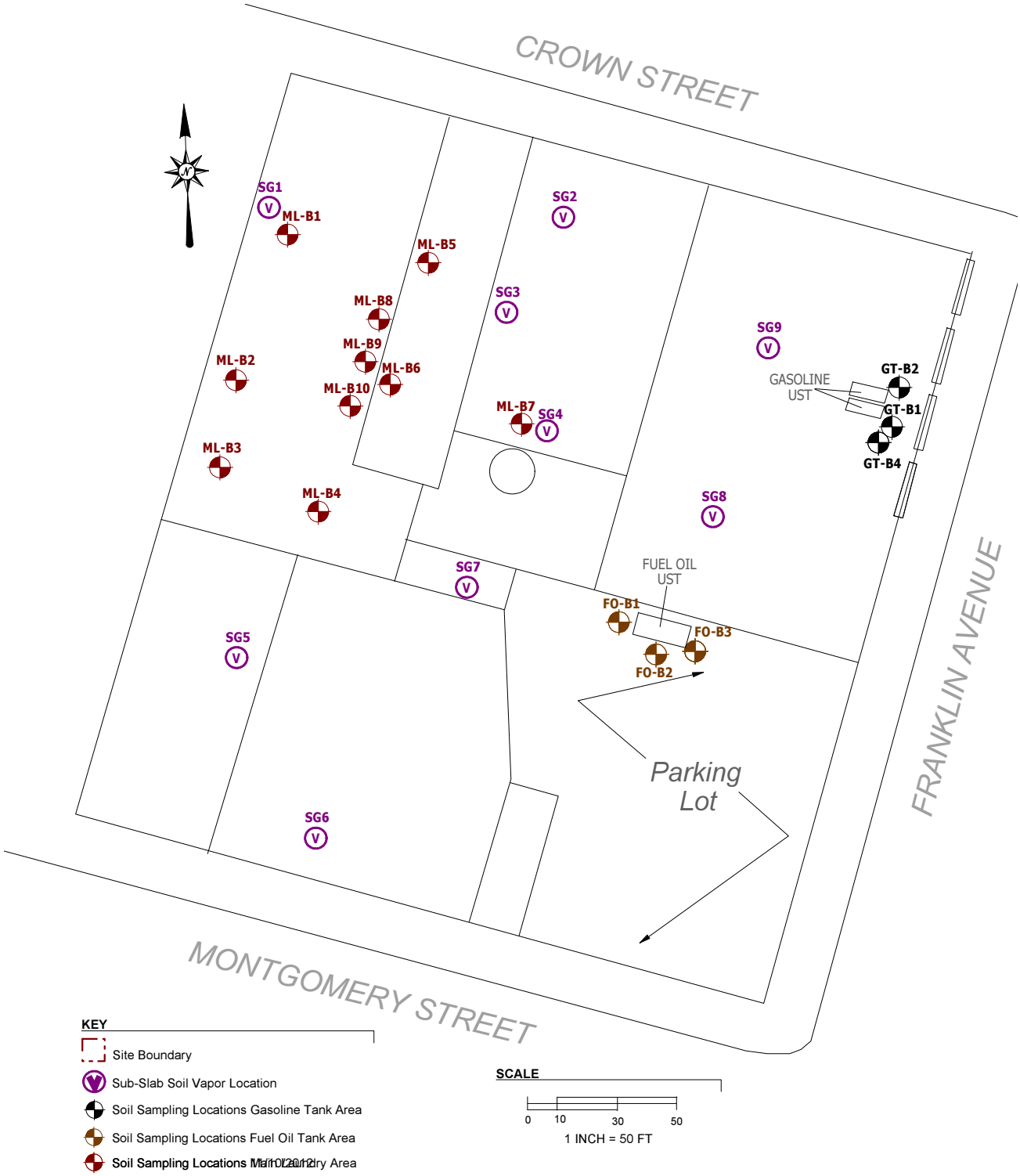
FIGURES



EBC
Environmental Business Consultants
Phone 631.504.6000
Fax 631.924.2870

46 CROWN STREET
BROOKLYN, NEW YORK 11225

FIGURE 1 – SITE LOCATION MAP



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46 CROWN STREET BROOKLYN, NY

FIGURE 2 SITE PLAN

APPENDIX A
Geophysical Survey

NOVA GEOPHYSICAL SERVICES

SUBSURFACE MAPPING SOLUTIONS
56-01 Marathon Parkway, PO Box 765, Douglaston, New York 11362
Ph. 347-556-7787 Fax. 718-261-1527
www.nova-gsi.com

November 5, 2012

Kevin Brussee
Project Manager
Environmental Business Consultants
Ph: 631.504.6000 ext. 114
Fax: 631.924.2870
Cell: 631.338-1749
Kbrussee@ebcincny.com

Re: Geophysical Survey Report
Commercial Properties
931 Carroll Street & 46 Crown Street
Brooklyn, New York

Dear Mr. Brussee:

Nova Geophysical Services (NOVA) is pleased to provide findings of our geophysical surveys at the above referenced project sites located at 931 Carroll Street and 46 Crown Street, Brooklyn, NY (the "Site"). Please see attached Geophysical Survey map for more details.

INTRODUCTION TO GEOPHYSICAL SURVEY

NOVA performed Geophysical surveys consisting of Ground Penetrating Radar (GPR), Electromagnetic (EM) surveys and comprehensive subsurface utility (CSUL) surveys at the project Site. The purpose of this survey is to verify anomalies; underground storage tanks (USTs) that maybe located at the project site on October 26th, 2012.

The equipment selected for this investigation will be included a CSUL Pipe and Cable Locator (an magnetic detector), Electromagnetic detector (Geonics EM61), Noggin's 250 MHz ground-penetrating radar (GPR) units.

A GPR system consists of a radar control unit, control cable and a transducer (antenna). The control unit transmits a trigger pulse at a normal repetition rate of 250 MHz. The trigger pulse is sent to the transmitter electronics in the transducer via the control cable. The transmitter electronics amplify the trigger pulses into bipolar pulses that are radiated to the surface. The

transformed pulses vary in shape and frequency according to the transducer used. In the subsurface, variations of the signal occur at boundaries where there is a dielectric contrast (void, steel, soil type, etc.). Signal reflections travel back to the control unit and are represented as color graphic images for interpolation.

GEOPHYSICAL METHODS

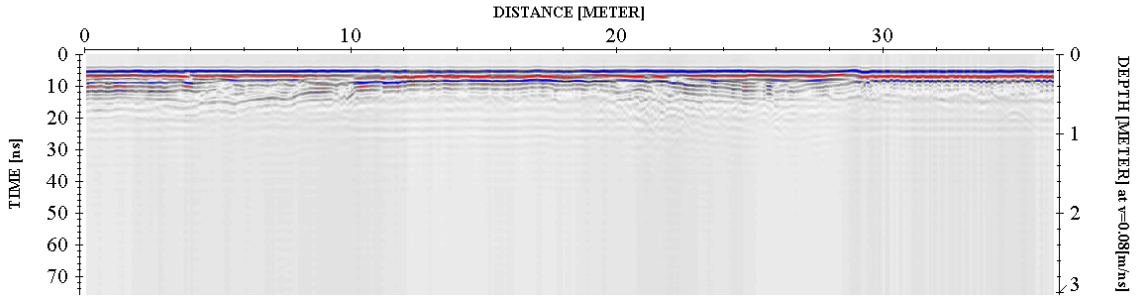
The project site was first screened using the Geonics(tm) electromagnetic detector by carrying the instrument over the boring locations at the site in 5' x 5' traverses. When evidence of anomalies were observed, the Ditch-witch(tm) utility locator was then used to determine if the anomalies were utilities or other large sub-surface metal objects. Finally, GPR profiles were collected over each metal-detector anomaly and inspected for reflections, which could be indicative of major anomalies.

GPR data profiles were collected for the areas of the Site specified by the client. The surveyed area consisted of paved areas.

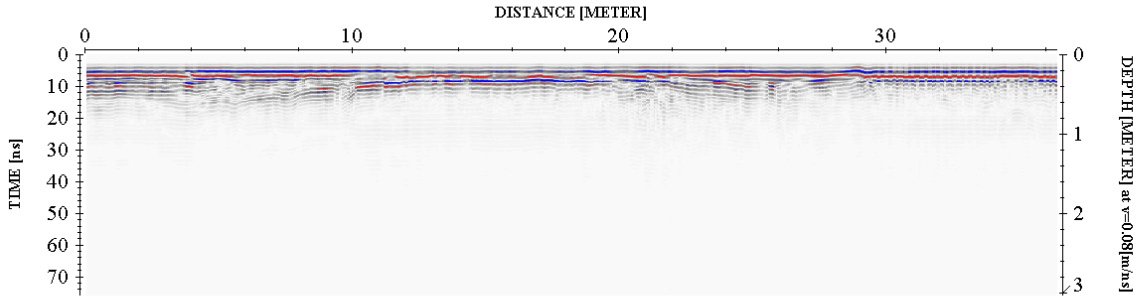
DATA PROCESSING

In order to improve the quality of the results and to better identify subsurface anomalies NOVA processed the collected data. The processes flow is briefly described at this section.

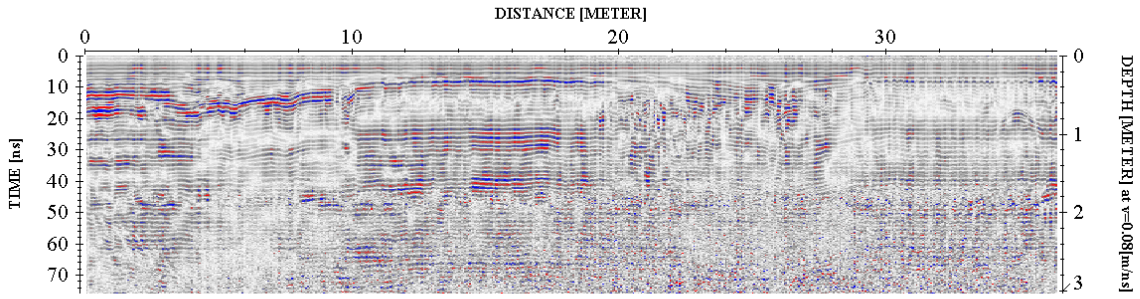
Step 1. Import raw RAMAC data to standard processing format



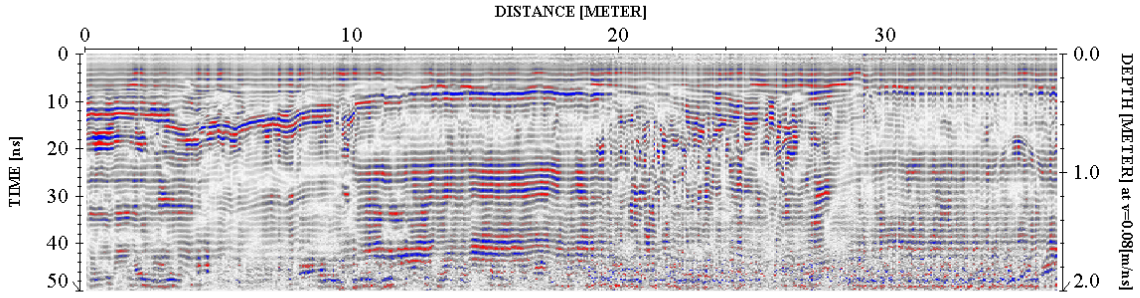
Step 2. Remove instrument noise *(dewow)*



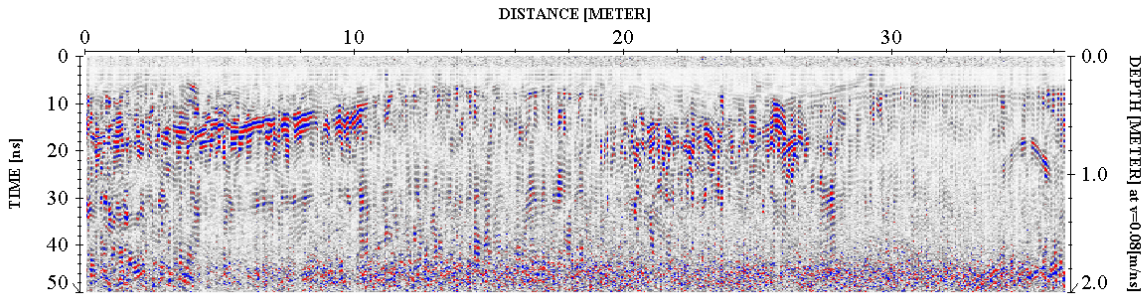
Step 3. Correct for attenuation losses *(energy decay function)*



Step 4. Remove static from bottom of profile *(time cut)*



Step 5. Mute horizontal ringing/noise *(subtracting average)*



The above example shows the significance of data processing. The last image (step 5) has higher resolution than the starting image (raw data – step 1) and describes the subsurface anomalies more accurately.

PHYSICAL SETTINGS

Nova observed following physical conditions at the time of the survey:

The weather: Cloudy.

Temp: 70 degrees.

Surface: Sidewalk, paved areas.

Geophysical Noise Level (GNL): Geophysical Noise Level (GNL) was medium to high at the time of the survey due to the nature of on-going business activities at the project areas.

RESULTS

The results of the geophysical survey identified following anomalies located at the project Site:

- Geophysical survey identified two major anomalies inside the building western portion of the project area at 931 Carroll Street. Based on their reflection rate and proximity, those anomalies were consistent with underground storage tanks (USTs). Further vent pipes (one was cut!) identified during the survey along the Carroll Street was also associated with these anomalies (USTs).

- Geophysical survey identified anomalies located inside the building at 931 Carroll Street next to the tank areas. Based on their reflection rate and their proximity, they were consistant with subsurface structures such as: (oil/water separator, USTs, etc.).

- Geophysical survey identified scattered anomalies located throughout of the inside the building at 931 Carroll Street. Based on their reflection rates and physical evidences, they were consistent with former and current utilities such as sewer, water and etc.

- Geophysical survey identified a major anomaly in the parking lot at 46 Crown Street. Based on its reflection rate and proximity that anomaly was consistent with an underground storage tank (UST). The identified vent pipe observed during the survey was also associated with this anomaly (UST).

- Geophysical survey identified two major anomalies associated with the observed vent pipes located along the Crown Street. Based on their reflection rates and proximity, those anomalies may be indicative of underground storage tanks (USTs).

- Geophysical survey identified anomalies within the project area at 46 Crown Street. Based on their reflection rates and physical evidences, they were consistent with former and current utilities such as sewer, water.

- Geophysical Survey Plan portrays the areas investigated during the geophysical survey.

If you have any questions please do not hesitate to contact the undersigned.
Sincerely,

NOVA Geophysical Services



Levent Eskicakit, P.G., E.P.
Project Engineer

Attachments:
Figure 1 Site Location Map
Geophysical Survey Plan
Geophysical Images



FIGURE 1
SITE LOCATION MAP

SITE: **Commercial Property**
46 Crown Street & 931 Carroll Street, Brooklyn, NY

SCALE: See Map

NOVA
Geophysical Services
Subsurface Mapping Solutions
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(718) 261-1527 Fax (718) 261-1528
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NOVA

Geophysical Engineering Services

Subsurface Mapping Solutions

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Douglaston, New York11362
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www.nova-gsi.com

GEOPHYSICAL SURVEY SITE PLAN

SITE: 46 Crown Street, Brooklyn, NY
CLIENT: Environmental Business Consultants
SCALE: Not To Scale
DATE : 10/26/12

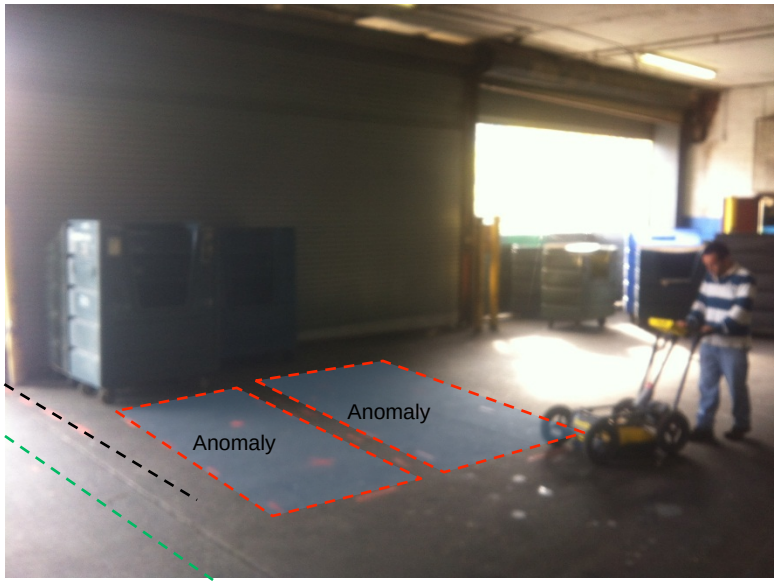
INFORMATION

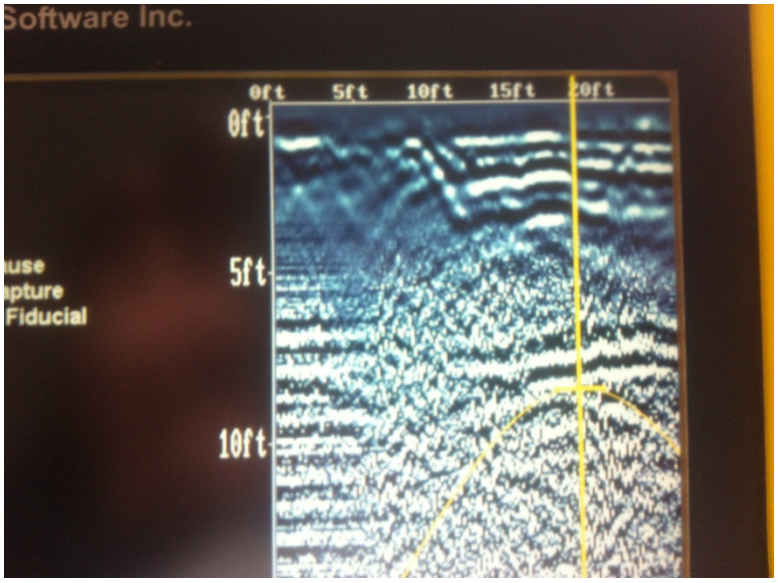
- GPR / EM Surveyed Area
- Scattered/ Anomaly
- Major Anomaly
- Manhole Cover (Water Well/Sewer Cleanouts)
- Underground Piping (Sewer, Electric, and gas)
- Underground Storage Tank

GEOPHYSICAL IMAGES
Commercial Property
46 Crown Street, Brooklyn, NY
October 26, 2012



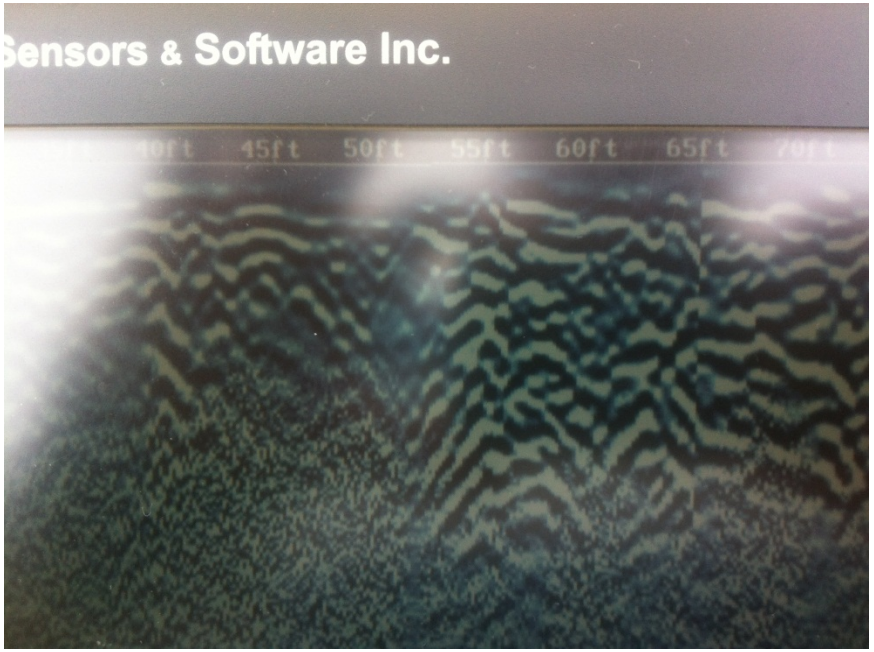






GEOPHYSICAL IMAGES
Commercial Property
46 Crown Street, Brooklyn, NY
October 26, 2012





January 20, 2014

Mr. Yoel Barminka
The Mazel Group
162 Manhattan Avenue
Brooklyn, NY 11225

Re: **931 Carroll Street, Brooklyn, NY 11211**
Subsurface Investigation Report

Dear Mr. Barminka:

Environmental Business Consultants (EBC) has prepared this report to summarize the findings of the Phase II subsurface investigation performed at 931 Carroll Street, Brooklyn, New York 11225, on November 1st and 19th of 2012.

Site Location and Description

The Site is identified as Block 1188, Lot 58 on the New York City Tax Map. The location of the Site is shown in **Figure 1**. Lot 1 is an irregular shaped lot with approximately 135 feet of frontage on Carroll Street and is a maximum of 131 feet deep, resulting in a total area of approximately 7,685 ft^2.

The entire footprint of the lot is currently developed with a one-story garage and consists of the addresses 929-939 Carroll Street. After a search of the NYS DEC Bulk Storage Database, two 4,000-gallon underground storage tanks (USTs) and two 275-gallon aboveground storage tanks (ASTs) were found associated with the property under the site name "Sea Crest Linen Supply Co". Both ASTs and one of the two USTs (gasoline) were listed as "Closed – Removed" in 2006. The second UST (diesel) was listed as "in-service".

Sanborn maps for the property show that it was used historically as a garage with two underground gas tanks from 1932 through 2007. Interviews with the property owner revelaed that the property was associated with the Patton Laundry operation located one block to the south on Crown Street, and that the subject property was used as a maintenance garage for the laundry services delivery fleet.

A copy of the Sanborn Maps id provided in **Appendix A**. The Bulk Storage Database search details are provided in **Appendix B**.

Geophysical Survey

The geophysical survey was performed on October 26th, 2012 by Nova Geophysical Services of Douglaston, NY. Nova utilized Ground Penetrating Radar (GPR), Electromagnetic (EM) surveys and comprehensive subsurface utility (CSUL) surveys to confirm the presence of suspect

underground storage tanks (USTs) as identified on historic Sanborn maps and NYS DEC PBS database, and to mark-out any utilities to allow borings to safely proceed.

Nova was able to identify the two major anomalies consistent with USTs and two vent pipes (one cut) on the building wall along Carroll Street. These USTs were consistent with the size of the two 4,000 gallon USTs associated with the Site. The one cut vent pipe signifies that one of the tanks may have been closed.

In addition, Nova identified an anomaly adjacent to the tank area and concluded it to be an oil/water separator. The geophysical survey report is provided in **Appendix C**.

Soil Sampling

A total of five soil borings (B1, B3-B6) were installed as part of the investigation at the Site. The approximate location of each soil boring is shown on **Figure 2**. The soil borings were concentrated around areas of concern including the USTs, oil/water separator, pump dispenser, and fill/vent lines identified by the geophysical survey.

All five soil borings were advanced with Geoprobe™ direct push equipment and sampled with a 5 foot macro core sampler using disposable acetate liners. At each of the five soil boring locations, soil samples were collected continuously from grade to a depth of approximately 20 feet (or refusal). Retrieved sample cores were field screened for the presence of volatile organic compounds (VOCs) with a photo-ionization detector (PID) and visually inspected for evidence of contamination. Subsurface soil recovered from each soil boring consisted of a red to brown fine sand with some gravel followed by a brown silty sand. In some areas the brown silty sand layer was stained grey/black with petroleum odors and elevated PID readings.

Several elevated PID values above background concentrations and olfactory evidence of contamination was observed within the four (B1, B3-B5) of the five soil borings. Two soil samples representing a 2 foot interval were retained from each soil boring (with the exception of B5 and B6) for laboratory analysis. These samples were collected from the interval representing the greatest degree of contamination and the soil boring terminus. Only one soil sample was collected from soil boring locations B5 and B6 due to repeated refusal at 9.5 feet below grade. Groundwater was not encountered during this investigation and is estimated at over 100 feet below grade. Soil boring logs are attached in **Appendix D**.

The soil samples were collected in pre-cleaned, laboratory supplied glassware, stored in a cooler with ice and delivered by laboratory dispatched courier to Phoenix Environmental Laboratories (Phoenix) of 587 East Middle Turnpike, Manchester, CT 06040, a New York State ELAP certified environmental laboratory (ELAP Certification No. 11301). All four soil samples were analyzed for VOCs by USEPA Method 8260, and semi-volatile organic compounds (SVOCs) - CP51 list by USEPA Method 8270.

Soil Gas Sampling

Due to the estimated depth to groundwater and the absence of groundwater samples, three subslab soil vapor samples were collected to evaluate potential releases at the Site. Soil vapor implants were installed by drilling a 0.5 inch diameter hole through the twelve-inch thick concrete slab using a hammer drill and drill bit. At each drilled location, a length of disposable polyethylene tubing was installed to a depth of approximately 2 to 3 inches below the concrete

slab surface. The surface of the drilled hole was sealed with hydrated granular bentonite and a 1 foot square sheet of 2 mil HDPE plastic sheeting.

Prior to collecting the sample, one to three volumes (i.e., the volume of the sample probe and tube) of air was purged from the implant using a calibrated vacuum pump. After purging, a 6-liter Summa® canister, fitted with a 2-hour flow regulator, was attached to the surface tube of each of the six vapor implants. Sample identification, date, start time, start vacuum, end time and end vacuum were recorded on tags attached to each canister and on a sample log sheet. Samples were submitted to Analytical Laboratory Services, Inc. for laboratory analysis of VOCs EPA Method TO-15.

Results

The laboratory results of the five soil samples were compared to the Unrestricted Use and Restricted Residential Use Soil Cleanup Objectives (SCOs) as presented in NYSDEC CP51 Soil Cleanup Guidance (10/21/10). A copy of the laboratory analytical report is included in **Appendix E**. Several PID readings above background concentrations and a slight petroleum odor was observed in some of the borings. Low level detections of petroleum related VOCs were also reported within soil samples B3 (13-15'), B3 (18-20'), and B4 (2-4'). However no VOCs or SVOCs were detected above Unrestricted Use SCOs within the eight soil samples collected at the Site.

With the depth to groundwater estimated to be greater than 100 feet below grade, the collection of groundwater samples was impractical and unnecessary. Instead a series of soil gas samples were used to provide further evaluation of whether a fuel or solvent release had occurred. The results of the soil gas samples indicated low levels of several petroleum and chlorinated solvent compounds consistent with that frequently reported and are considered to be representative of background conditions.

Based on laboratory results of this investigation, the property has not been impacted by its historic use as a fleet maintenance garage and no further investigation is warranted. Note that redevelopment of the Site will require the proper removal and regulatory closure of the underground tanks. Please call if you have any questions or would like to discuss the project further.

Very truly yours,
Environmental Business Consultants



Dominick Mosca
Environmental Scientist

TABLES

TABLE 1
931 Carroll Street,
Brooklyn, New York
Soil Analytical Results
Volatile Organic Compounds

COMPOUND	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	B1				B3				B4				B5		B6	
			(13-15') µg/Kg		(18-20') µg/Kg		(13-15') µg/Kg		(18-20') µg/Kg		(2-4') µg/Kg		(13-15') µg/Kg		(7-9') µg/Kg		(7-9') µg/Kg	
			Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL
1,1,1,2-Tetrachlorothane			ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
1,1,1-Trichloroethane	680	100,000	ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
1,1,2,2-Tetrachloroethane			ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
1,1,2-Trichloroethane			ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
1,1-Dichloroethane	270	26,000	ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
1,1-Dichloroethene	330	100,000	ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
1,1-Dichloropropene			ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
1,2,3-Trichlorobenzene			ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
1,2,3-Trichloropropane			ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
1,2,4-Trichlorobenzene			ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
1,2,4-Trimethylbenzene	3,600	52,000	ND	5.6	ND	5.6	**7.8**	5.5	**1,900**	280	**570**	5.6	ND	5.4	ND	5.5	ND	5.5
1,2-Dibromo-3-chloropropane			ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
1,2-Dichlorobenzene	1,100	100,000	ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
1,2-Dichloroethane	20	3,100	ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
1,2-Dichloropropane			ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
1,3,5-Trimethylbenzene	8,400	52,000	ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
1,3-Dichlorobenzene	2,400	4,900	ND	5.6	ND	5.6	ND	5.5	ND	280	**760**	5.6	ND	5.4	ND	5.5	ND	5.5
1,3-Dichloropropane			ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
1,4-Dichlorobenzene	1,800	13,000	ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
2,2-Dichloropropane			ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
2-Chlorotoluene			ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
2-Hexanone (Methyl Butyl Ketone)			ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
2-Isopropyltoluene			ND	28	ND	28	ND	27	ND	1,400	ND	28	ND	27	ND	27	ND	27
4-Chlorotoluene			ND	5.6	ND	5.6	**11**	5.5	ND	280	**5.8**	5.6	ND	5.4	ND	5.5	ND	5.5
4-Methyl-2-Pentanone			ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
Acetone	50	100,000	ND	28	ND	28	ND	27	ND	1,400	ND	28	ND	27	ND	27	ND	27
Acrylonitrile			ND	28	ND	28	ND	50	ND	1,400	ND	50	ND	50	ND	27	ND	27
Benzene	60	4,800	ND	11	ND	11	ND	11	ND	560	ND	11	ND	11	ND	11	ND	11
Bromobenzene			ND	5.6	ND	5.6	ND	5.5	ND	280	**5.8**	5.6	ND	5.4	ND	5.5	ND	5.5
Bromochloromethane			ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
Bromodichloromethane			ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
Bromoform			ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
Bromomethane			ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
Carbon Disulfide			ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
Carbon tetrachloride	760	2,400	ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
Chlorobenzene	1,100	100,000	ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
Chloroethane			ND	5.6	ND	5.6	**5.9**	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
Chloroform	370	49,000	ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
Chloromethane			ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
cis-1,2-Dichloroethene	250	100,000	ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
cis-1,3-Dichloropropene			ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
Dibromochloromethane			ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
Dibromoethane			ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
Dibromomethane			ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
Dichlorodifluoromethane		100,000	ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
Ethylbenzene	1,000	41,000	ND	5.6	ND	5.6	ND	5.5	**520**	280	**30**	5.6	ND	5.4	ND	5.5	ND	5.5
Hexachlorobutadiene			ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
Isopropylbenzene			ND	5.6	ND	5.6	**60**	5.5	**790**	280	**20**	5.6	ND	5.4	ND	5.5	ND	5.5
m&p-Xylenes	260		ND	5.6	ND	5.6	ND	5.5	ND	280	**540**	5.6	ND	5.4	ND	5.5	ND	5.5
Methyl Ethyl Ketone (2-Butanone)	120	100,000	ND	28	ND	28	ND	27	ND	1,400	ND	28	ND	27	ND	27	ND	27
Methyl t-butyl ether (MTBE)	930	100,000	ND	11	**27**	11	ND	11	ND	560	**46**	11	ND	11	ND	11	ND	11
Methylene chloride	50	100,000	ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	27	ND	5.5	ND	5.5
Naphthalene	12,000		ND	5.6	ND	5.6	**27**	5.5	**1,800**	280	**620**	5.6	ND	5.4	ND	5.5	ND	5.5
n-Butylbenzene	12,000	100,000	ND	5.6	ND	5.6	**92**	5.5	**1,100**	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
n-Propylbenzene	3,900	100,000	ND	5.6	ND	5.6	**220**	11	**3,700**	280	**75**	5.6	ND	5.4	ND	5.5	ND	5.5
o-Xylene	260	100,000	ND	5.6	ND	5.6	ND	5.5	ND	280	**220**	5.6	ND	5.4	ND	5.5	ND	5.5
p-Isopropyltoluene			ND	5.6	ND	5.6	ND	5.5	ND	280	**16**	5.6	ND	5.4	ND	5.5	ND	5.5
sec-Butylbenzene	11,000	100,000	ND	5.6	ND	5.6	**57**	5.5	**390**	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
Styrene			ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
tert-Butylbenzene	5,900	100,000	ND	5.6	ND	5.6	ND	5.5	ND	280	**380**	5.6	ND	5.4	ND	5.5	ND	5.5
Tetrachloroethene	1,300	19,000	ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
Tetrahydrofuran (THF)			ND	11	ND	11	ND	11	ND	560	ND	11	ND	11	ND	11	ND	11
Toluene	700	100,000	ND	5.6	ND	5.6	ND	5.5	ND	280	**27**	5.6	ND	5.4	ND	5.5	ND	5.5
Total Xylenes			ND	5.6	ND	5.6	ND	5.5	ND	280	**760**	5.6	ND	5.4	ND	5.5	ND	5.5
trans-1,2-Dichloroethene	190	100,000	ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
trans-1,3-Dichloropropene			ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
trabs-1,4-dichloro-2-butene			ND	11	ND	11	ND	11	ND	560	ND	11	ND	11	ND	11	ND	11
Trichloroethene	470	21,000	ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
Trichlorofluoromethane			ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
Trichlorotrifluoroethane			ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
Vinyl Chloride	20	900	ND	5.6	ND	5.6	ND	5.5	ND	280	ND	5.6	ND	5.4	ND	5.5	ND	5.5
Total BTEX Concentration			**0.0**		**0.0**		**0.0**		**520.0**		**293.0**		**0.0**		**0.0**		**0.0**	
Total VOCs Concentration			**0.0**		**27.0**		**480.7**		**10200.0**		**4075.6**		**0.0**		**0.0**		**0.0**	

Notes:

** - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives
ND - Not-detected
RL - Reporting Limit
Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value
Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 2
931 Carroll Street,
Brooklyn, New York
Soil Analytical Results
Semi-Volatile Organic Compounds

COMPOUND	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	B1				B3				B4				B5		B6	
			(13-15')		(18-20')		(13-15')		(18-20')		(2-4')		(13-15')		(7-9')		(7-9')	
			µg/Kg		µg/Kg		µg/Kg		µg/Kg		µg/Kg		µg/Kg		µg/Kg		µg/Kg	
			Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL
Acenaphthene	20,000	100,000	ND	260	ND	250	ND	250	ND	250	ND	260	ND	250	ND	260	ND	250
Acenaphthylene	100,000	100,000	ND	260	ND	250	ND	250	ND	250	ND	260	ND	250	ND	260	ND	250
Anthracene	100,000	100,000	ND	260	ND	250	ND	250	ND	250	ND	260	ND	250	ND	260	ND	250
Benzo(a)anthracene	1,000	1,000	ND	260	ND	250	ND	250	ND	250	ND	260	ND	250	ND	260	ND	250
Benzo(a)pyrene	1,000	1,000	ND	260	ND	250	ND	250	ND	250	ND	260	ND	250	ND	260	ND	250
Benzo(b)fluoranthene	1,000	1,000	ND	260	ND	250	ND	250	ND	250	ND	260	ND	250	ND	260	ND	250
Benzo(g,h,i)perylene	100,000	100,000	ND	260	ND	250	ND	250	ND	250	ND	260	ND	250	ND	260	ND	250
Benzo(k)fluoranthene	800	3,900	ND	260	ND	250	ND	250	ND	250	ND	260	ND	250	ND	260	ND	250
Chrysene	1,000	3,900	ND	260	ND	250	ND	250	ND	250	ND	260	ND	250	ND	260	ND	250
Dibenzo(a,h)anthracene	330	330	ND	260	ND	250	ND	250	ND	250	ND	260	ND	250	ND	260	ND	250
Fluoranthene	100,000	100,000	ND	260	ND	250	ND	250	ND	250	ND	260	ND	250	ND	260	ND	250
Fluorene	30,000	100,000	ND	260	ND	250	ND	250	ND	250	ND	260	ND	250	ND	260	ND	250
Indeno(1,2,3-cd)pyrene	500	500	ND	260	ND	250	ND	250	ND	250	ND	260	ND	250	ND	260	ND	250
Naphthalene	12,000	100,000	ND	260	ND	250	ND	250	**3,100**	250	**470**	260	ND	250	ND	260	ND	250
Phenanthrene	100,000	100,000	ND	260	ND	250	ND	250	ND	250	ND	260	ND	250	ND	260	ND	250
Pyrene	100,000	100,000	ND	260	ND	250	ND	250	ND	250	**270**	260	ND	250	ND	260	ND	250

Notes:

* - NYSDEC Technical and Administative Guidance Memorandum 4046, 1994

** - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives

ND - Not-detected

RL - Reporting Limit

Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value

Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 3
931 Carroll Street,
Brooklyn, New York
Soil Gas - Volatile Organic Compounds

COMPOUNDS	NYSDOH Maximum Sub-Slab Value ($\mu g/m^3$) [a]	NYSDOH Soil Outdoor Background Levels ($\mu g/m^3$) [b]	SG1 (µg/m3)		SG2 (µg/m3)		SG3 (µg/m3)	
			Result	RL	Result	RL	Result	RL
1,1,1,2-Tetrachloroethane			ND	1	ND	1	ND	1
1,1,1-Trichloroethane	100	<2.0 - 2.8	ND	1	ND	1	ND	1
1,1,2,2-Tetrachloroethane		<1.5	ND	1	ND	1	ND	1
1,1,2-Trichloroethane		<1.0	ND	1	ND	1	ND	1
1,1-Dichloroethane		<1.0	ND	1	ND	1	ND	1
1,1-Dichloroethene		<1.0	ND	1	ND	1	ND	1
1,2,4-Trichlorobenzene		NA	ND	1	ND	1	ND	1
1,2,4-Trimethylbenzene		<1.0	**7.81**	1	**4.67**	1	**4.72**	1
1,2-Dibromoethane		<1.5	ND	1	ND	1	ND	1
1,2-Dichlorobenzene		<2.0	ND	1	ND	1	ND	1
1,2-Dichloroethane		<1.0	ND	1	ND	1	ND	1
1,2-Dichloropropane			ND	1	ND	1	ND	1
1,2-Dichlorotetrafluoroethane			ND	1	ND	1	ND	1
1,3,5-Trimethylbenzene		<1.0	**1.82**	1	**1.03**	1	ND	1
1,3-Butadiene		NA	ND	1	ND	1	ND	1
1,3-Dichlorobenzene		<2.0	ND	1	ND	1	ND	1
1,4-Dichlorobenzene		NA	ND	1	ND	1	ND	1
1,4-Dioxane			ND	1	ND	1	ND	1
2-Hexanone			ND	1	ND	1	ND	1
4-Ethyltoluene		NA	**1.57**	1	ND	1	ND	1
4-Isopropyltoluene			ND	1	ND	1	ND	1
4-Methyl-2-pentanone			**1.15**	1	ND	1	ND	1
Acetone		NA	**25.6**	1	**1,460**	1	**297**	1
Acrylonitrile			ND	1	ND	1	ND	1
Benzene		<1.6 - 4.7	**2.11**	1	**16.5**	1	**2.87**	1
Benzyl Chloride		NA	ND	1	ND	1	ND	1
Bromodichloromethane		<5.0	ND	1	ND	1	ND	1
Bromoform		<1.0	ND	1	ND	1	ND	1
Bromomethane		<1.0	ND	1	ND	1	ND	1
Carbon Disulfide		NA	**1.49**	1	**9.93**	1	ND	1
Carbon Tetrachloride	5	<3.1	**0.692**	0.25	**0.503**	0.25	**0.377**	0.25
Chlorobenzene		<2.0	ND	1	ND	1	ND	1
Chloroethane		NA	ND	1	ND	1	ND	1
Chloroform		<2.4	**6**	1	**14.1**	1	**2.68**	1
Chloromethane		<1.0 - 1.4	ND	1	**1.16**	1	ND	1
cis-1,2-Dichloroethene		<1.0	ND	1	ND	1	ND	1
cis-1,3-Dichloropropene		NA	ND	1	ND	1	ND	1
Cyclohexane		NA	**1.03**	1	**585**	1	**1.51**	1
Dibromochloromethane		<5.0	ND	1	ND	1	ND	1
Dichlorodifluromethane		NA	**2.37**	1	**2.32**	1	**2.52**	1
Ethanol			**243**	1	**655**	1	**456**	1
Ethyl Acetate		NA	ND	1	ND	1	**1.8**	1
Ethylbenzene		<4.3	**2.6**	1	**2.73**	1	**2.56**	1
Heptane		NA	**1.68**	1	**10.5**	1	**8.27**	1
Hexachlorobutadiene		NA	ND	1	ND	1	ND	1
Hexane		<1.5	**3.38**	1	**440**	1	**3.87**	1
Isopropylalcohol		NA	**7.34**	1	ND	1	**10.4**	1
Isopropylbenzene			ND	1	ND	1	ND	1
Xylene (m&p)		<4.3	**10**	1	**9.76**	1	**9.33**	1
Methyl Ethyl Ketone			**2.89**	1	ND	1	**6.25**	1
MTBE		NA	ND	1	ND	1	**9.37**	1
Methylene Chloride		<3.4	**8.78**	1	**13.1**	1	**8.61**	1
n-Butylbenzene			**0.987**	1	ND	1	ND	1
Xylene (o)		<4.3	**4.04**	1	**3.34**	1	**3.17**	1
Propylene		NA	**2.54**	1	**12.3**	1	**14.6**	1
sec-Butylbenzene			ND	1	ND	1	**1.04**	1
Styrene		<1.0	ND	1	ND	1	ND	1
Tetrachloroethene	100		**1.29**	0.25	**0.813**	0.25	**0.542**	0.25
Tetrahydrofuran		NA	**10.5**	1	**20.1**	1	**19.3**	1
Toluene		1.0 - 6.1	**12.7**	1	**20.3**	1	**16.9**	1
trans-1,2-Dichloroethene		NA	ND	1	ND	1	ND	1
trans-1,3-Dichloropropene		NA	ND	1	ND	1	ND	1
Trichloroethene	5	<1.7	ND	0.25	ND	0.25	ND	0.25
Trichlorofluoromethane		NA	**1.24**	1	**1.24**	1	**1.18**	1
Trichlorotrifluoroethane			ND	1	ND	1	ND	1
Vinyl Chloride		<1.0	ND	0.25	**0.664**	0.25	ND	0.25
BTEX			**31.45**		**52.63**		**34.83**	
Total VOCs			**364.609**		**3285.06**		**884.869**	

Notes:
NA No guidance value or standard available

(a) Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York. October 2006. New York State Department of Health.
(b) NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, February 2005, Summary of Background Levels for Selected Compounds (NYSDOH Database, Outdoor values)

FIGURES

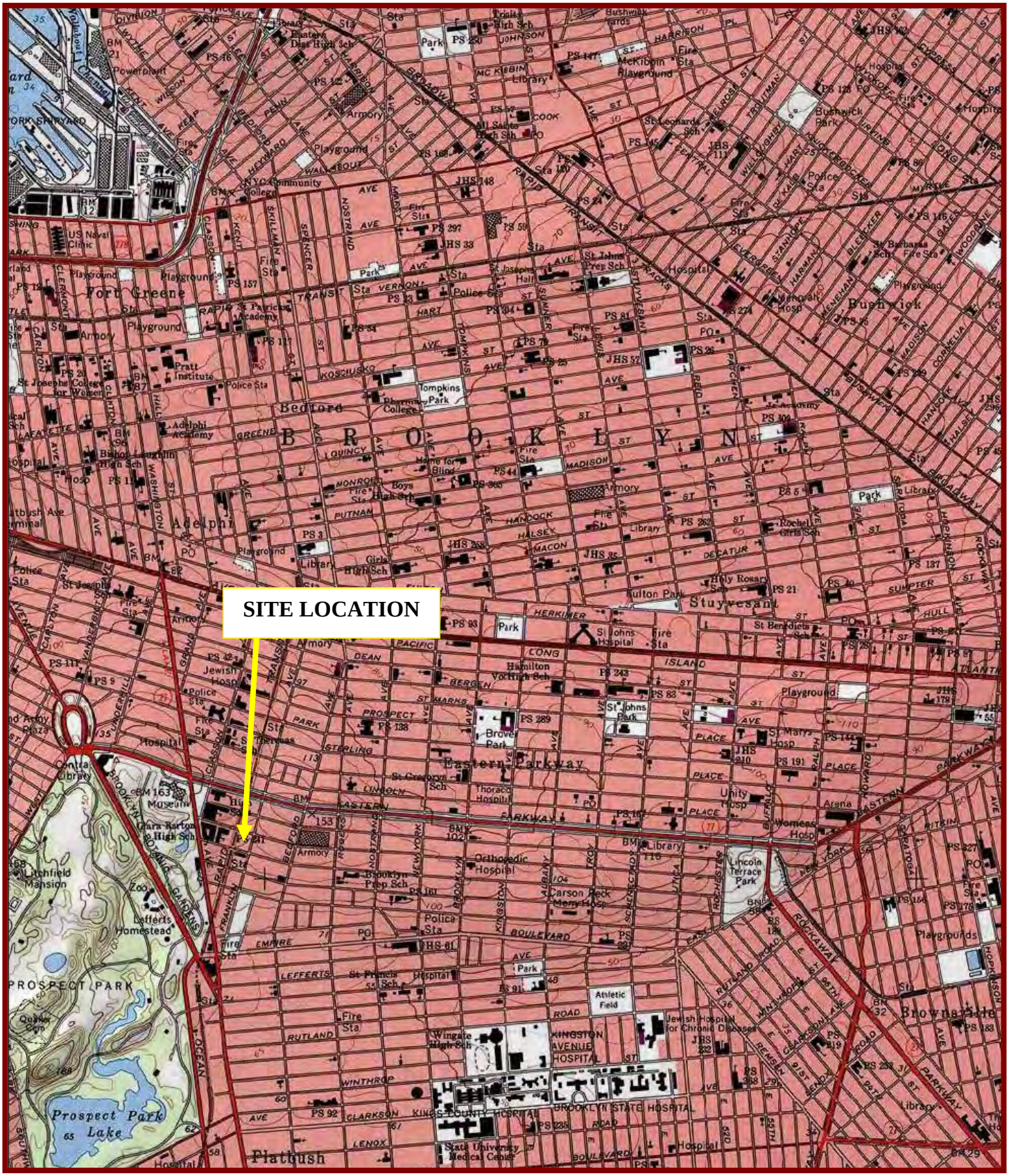


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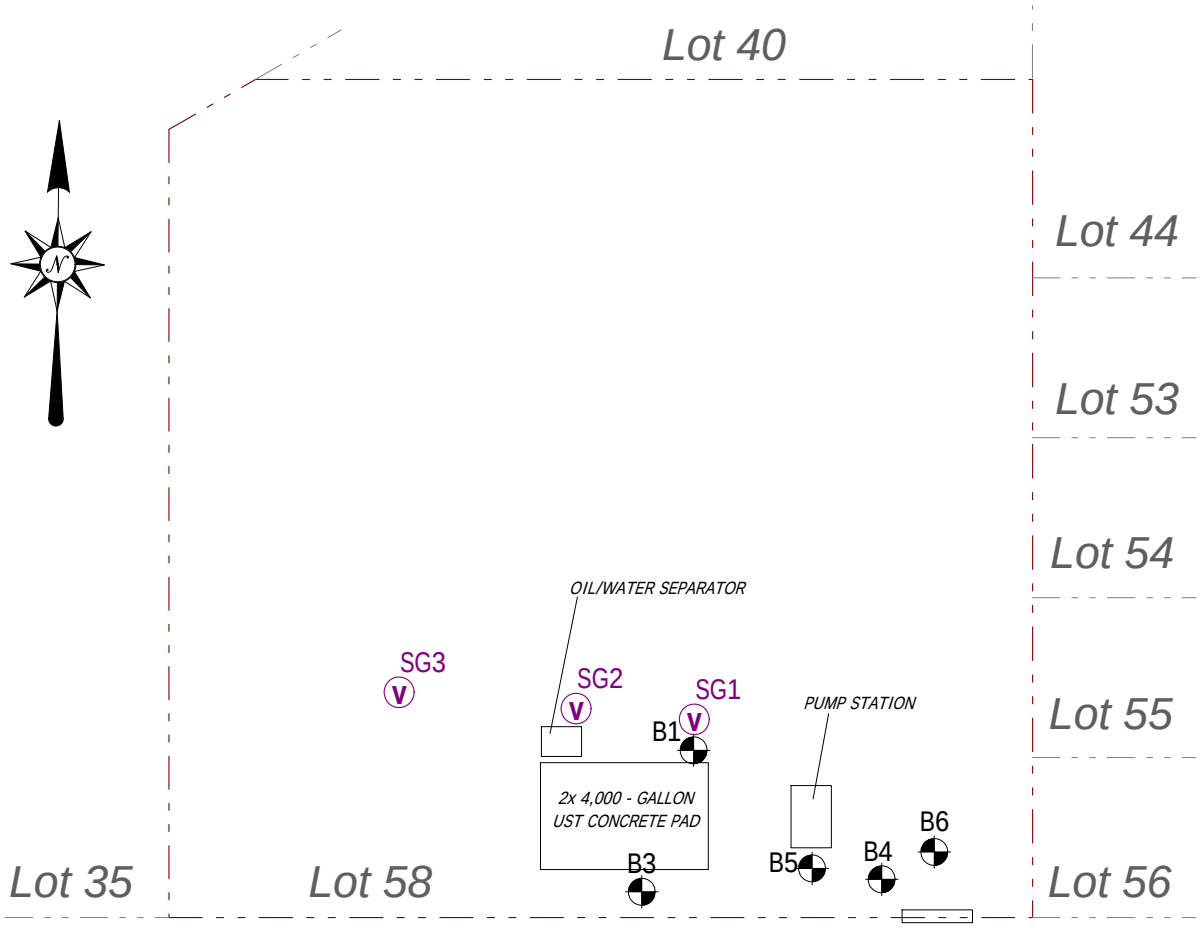
FIGURE 1 – SITE LOCATION MAP



KEY

- Site Boundary
- Sub-Slab Soil Vapor Location
- Soil Sampling Locations

SCALE

0 10 30

1 INCH = 30 FT

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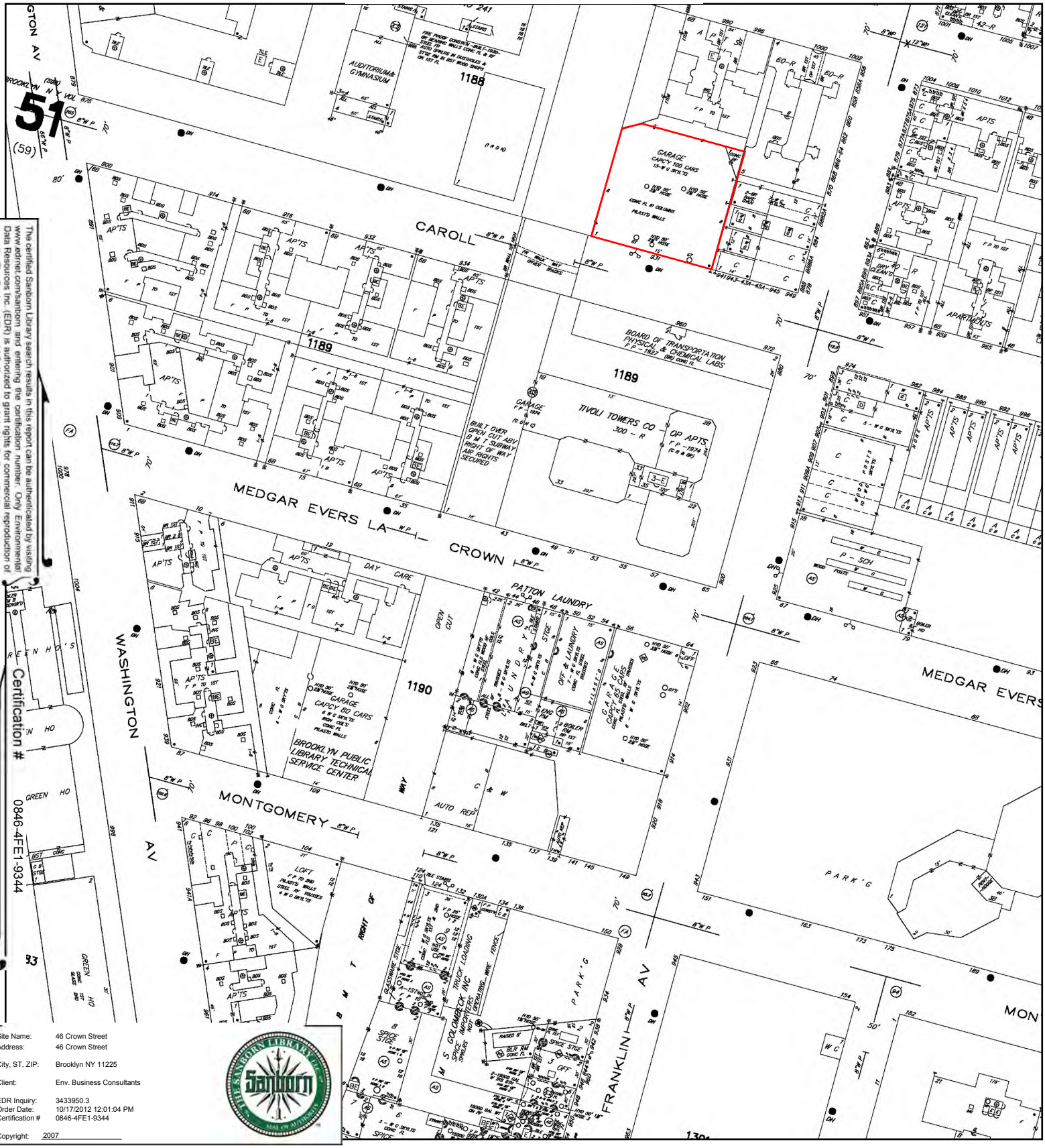
FIGURE 2 SITE PLAN

APPENDIX A
Sanborn Maps

2007 Certified Sanborn Map



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Client:	Env. Business Consultants
EDR Inquiry:	3433950.3
Order Date:	10/17/2012 12:01:04 PM
Certification #	0846-4FE1-9344
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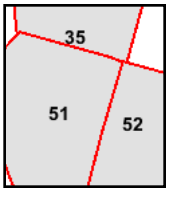

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Volume 7, Sheet 51
Volume 7, Sheet 52

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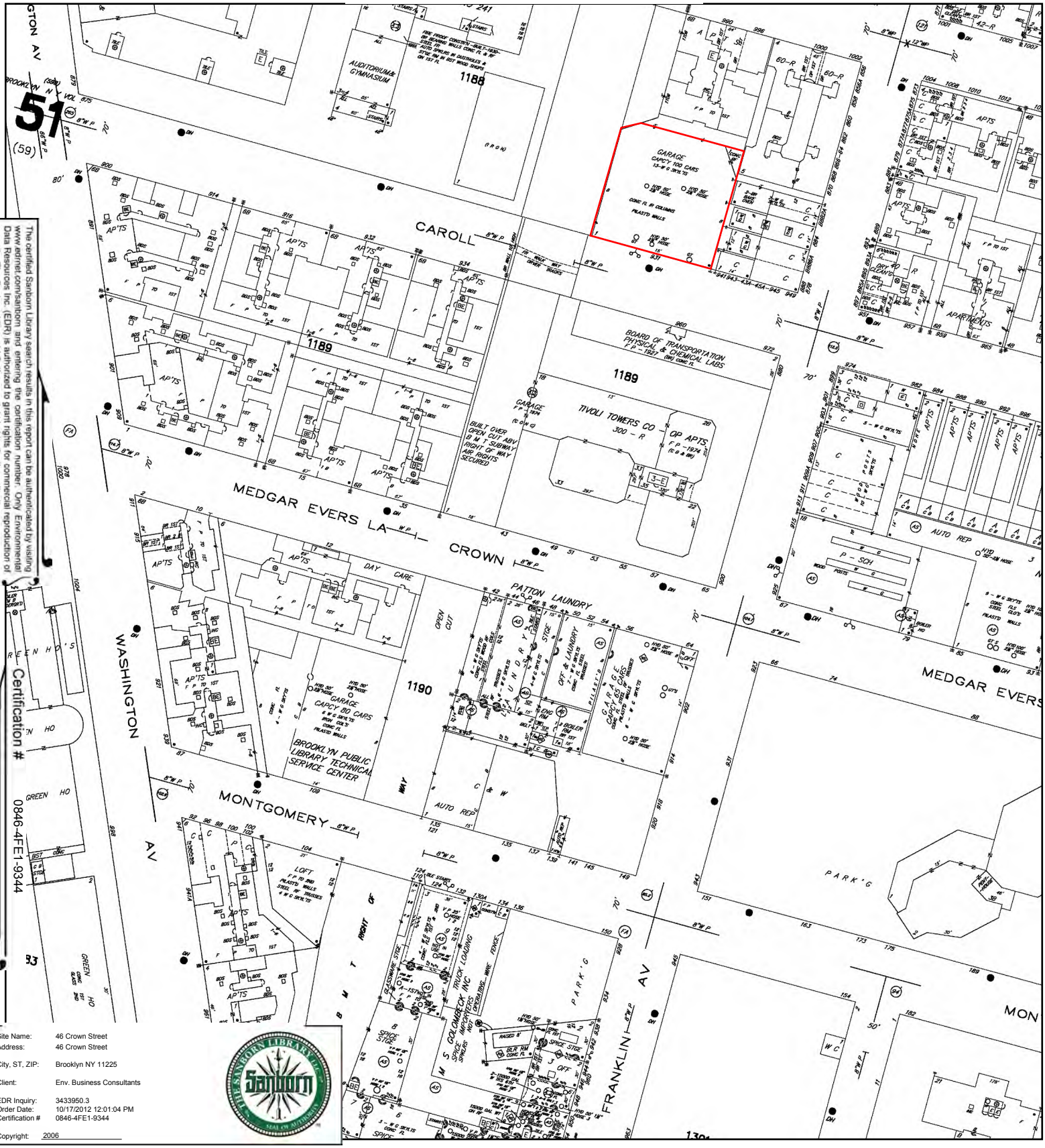
2006 Certified Sanborn Map



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Site Name:	46 Crown Street
Address:	46 Crown Street
City, ST, ZIP:	Brooklyn NY 11225
Client:	Env. Business Consultants
EDR Inquiry:	3433950.3
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Certification #	0846-4FE1-9344
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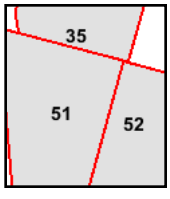

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2005 Certified Sanborn Map



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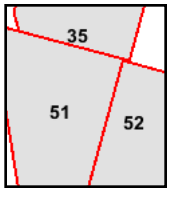

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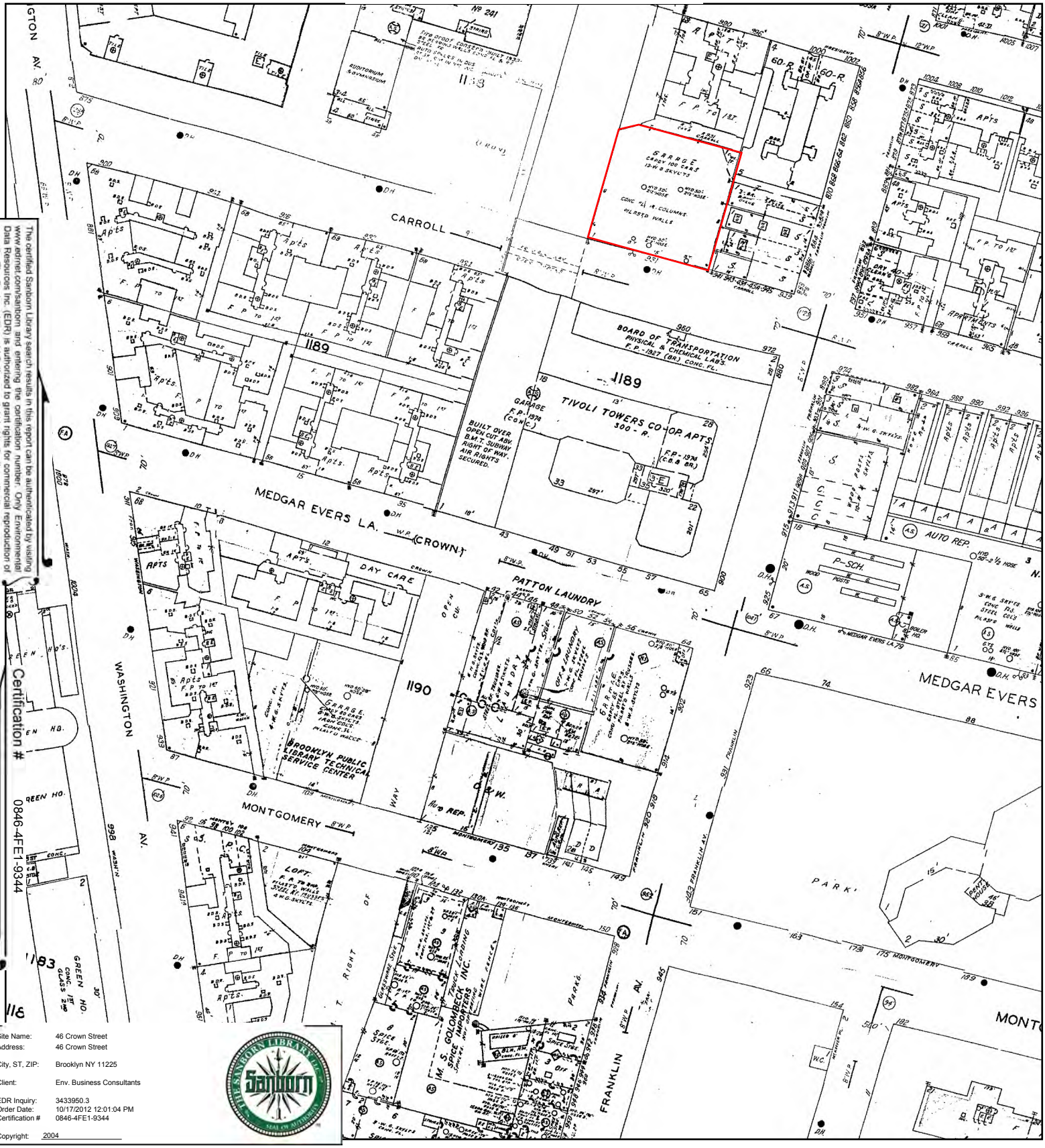

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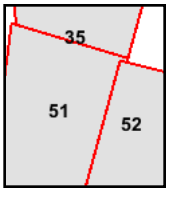

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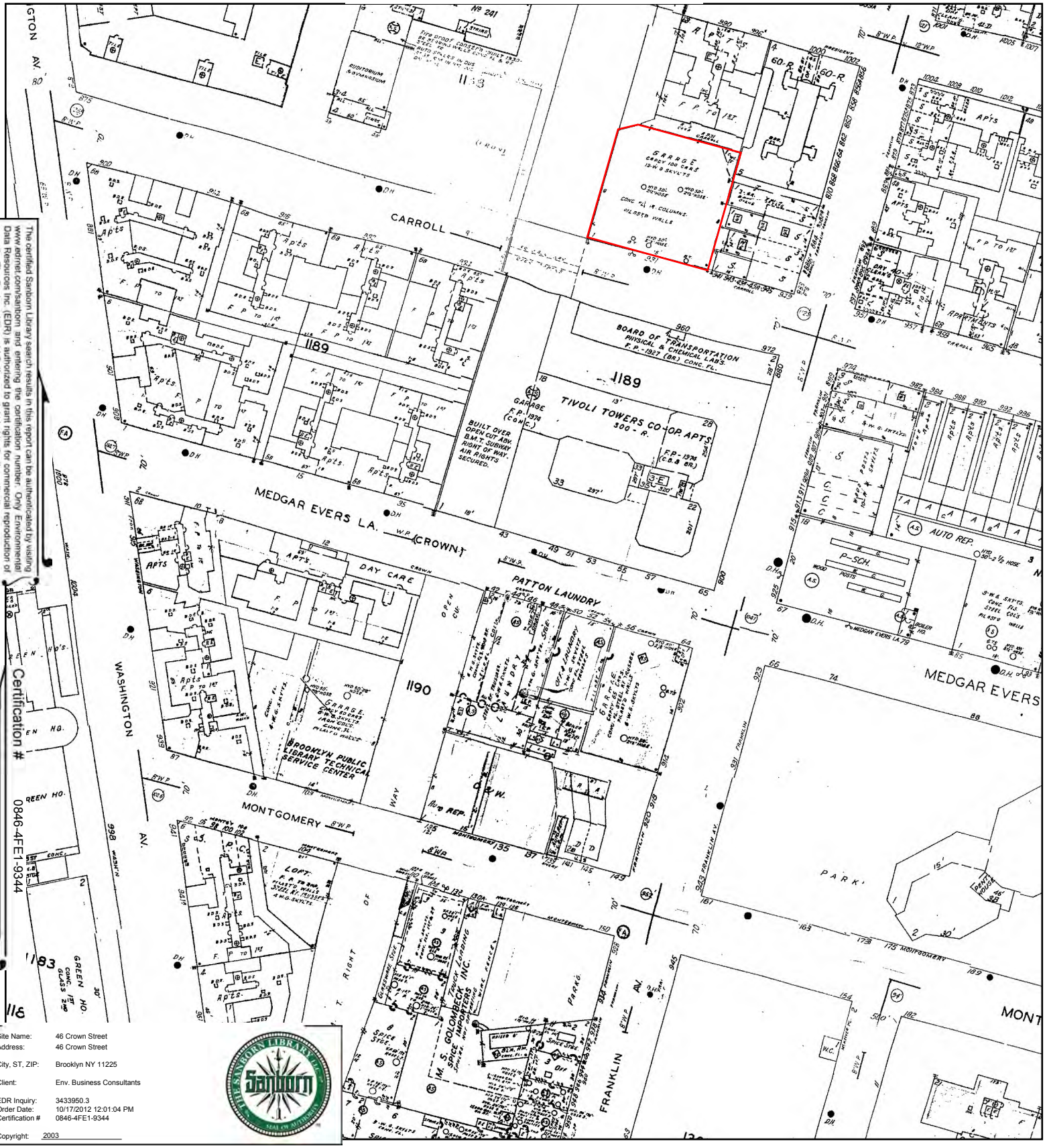

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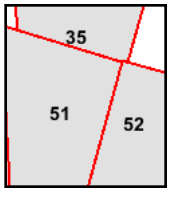

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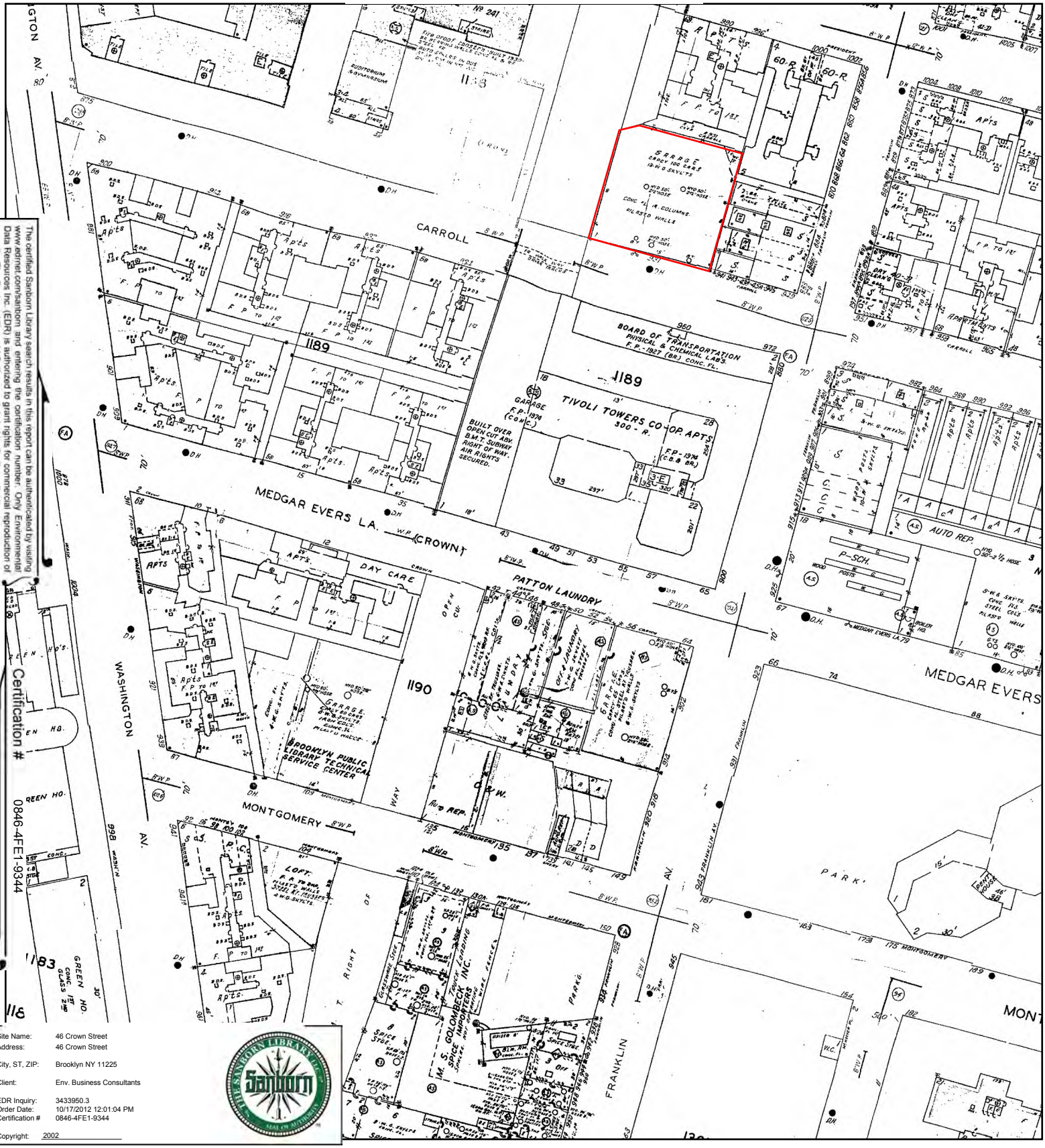

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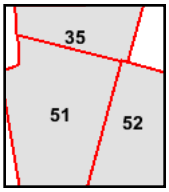

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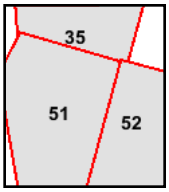

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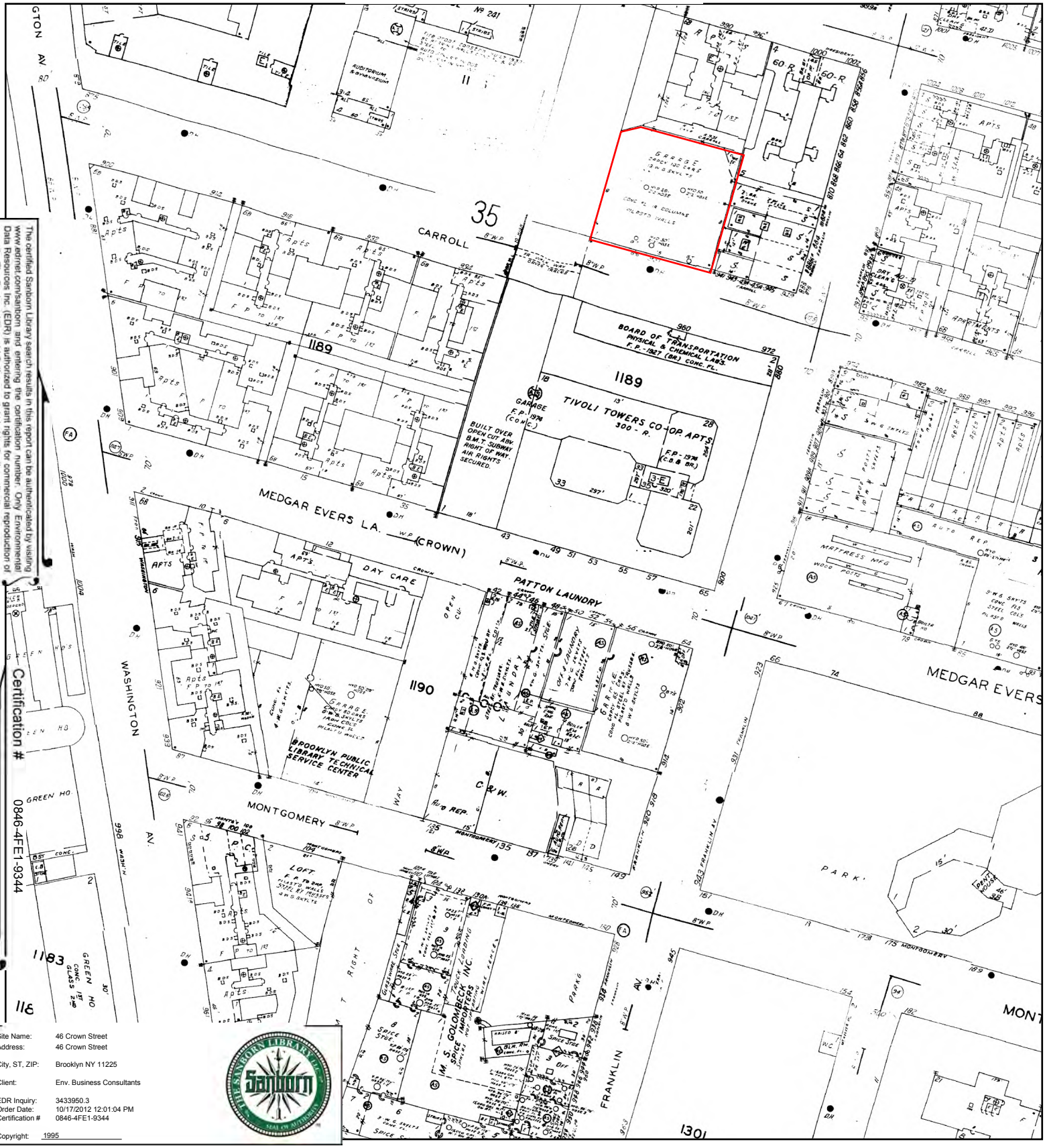
1995 Certified Sanborn Map



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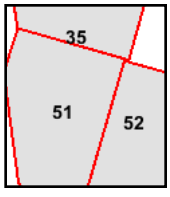

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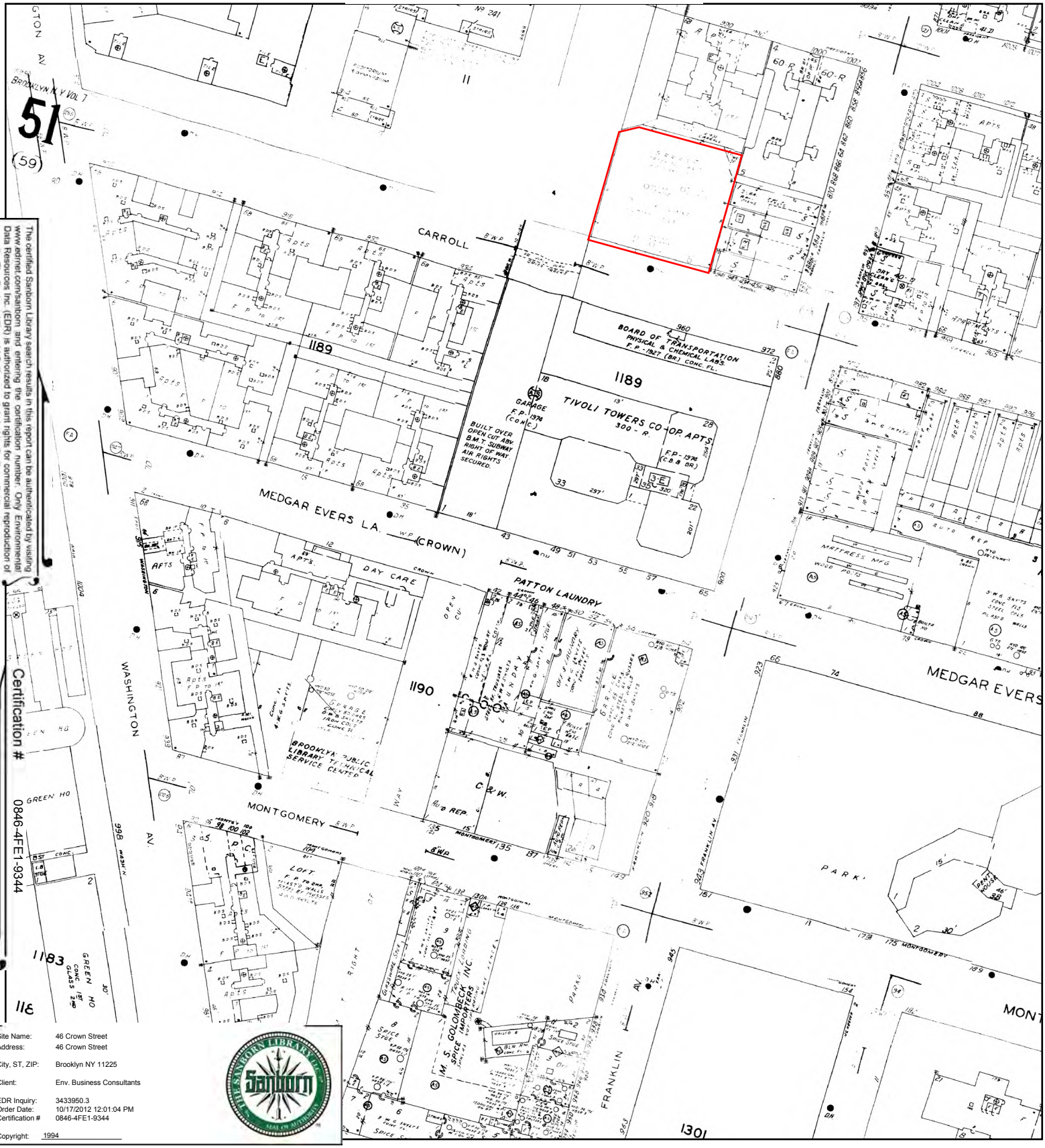
1994 Certified Sanborn Map



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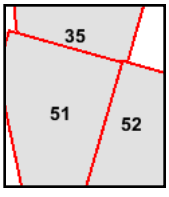

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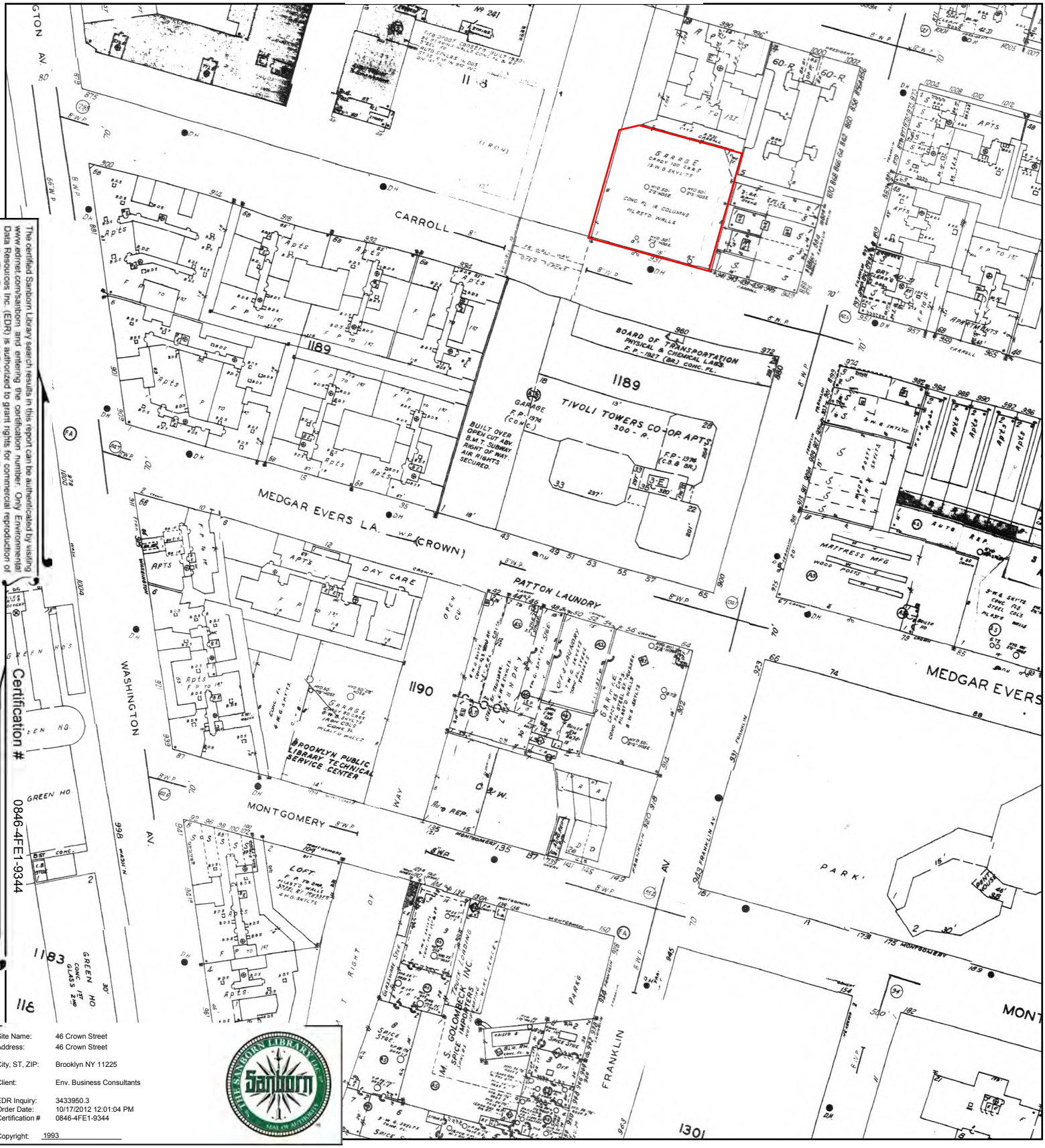

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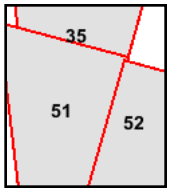

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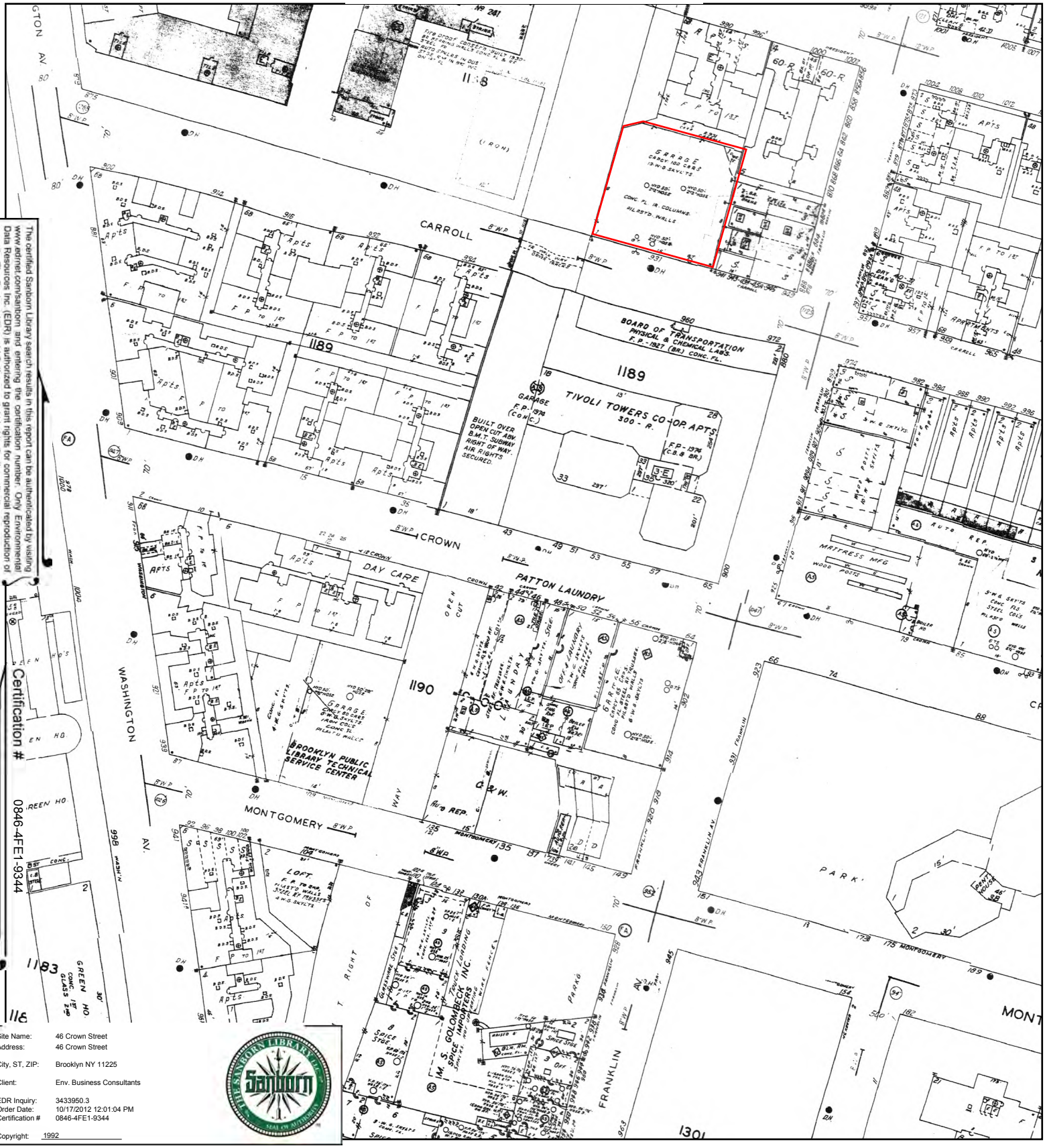
1992 Certified Sanborn Map



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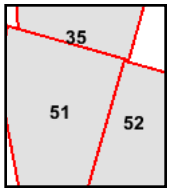

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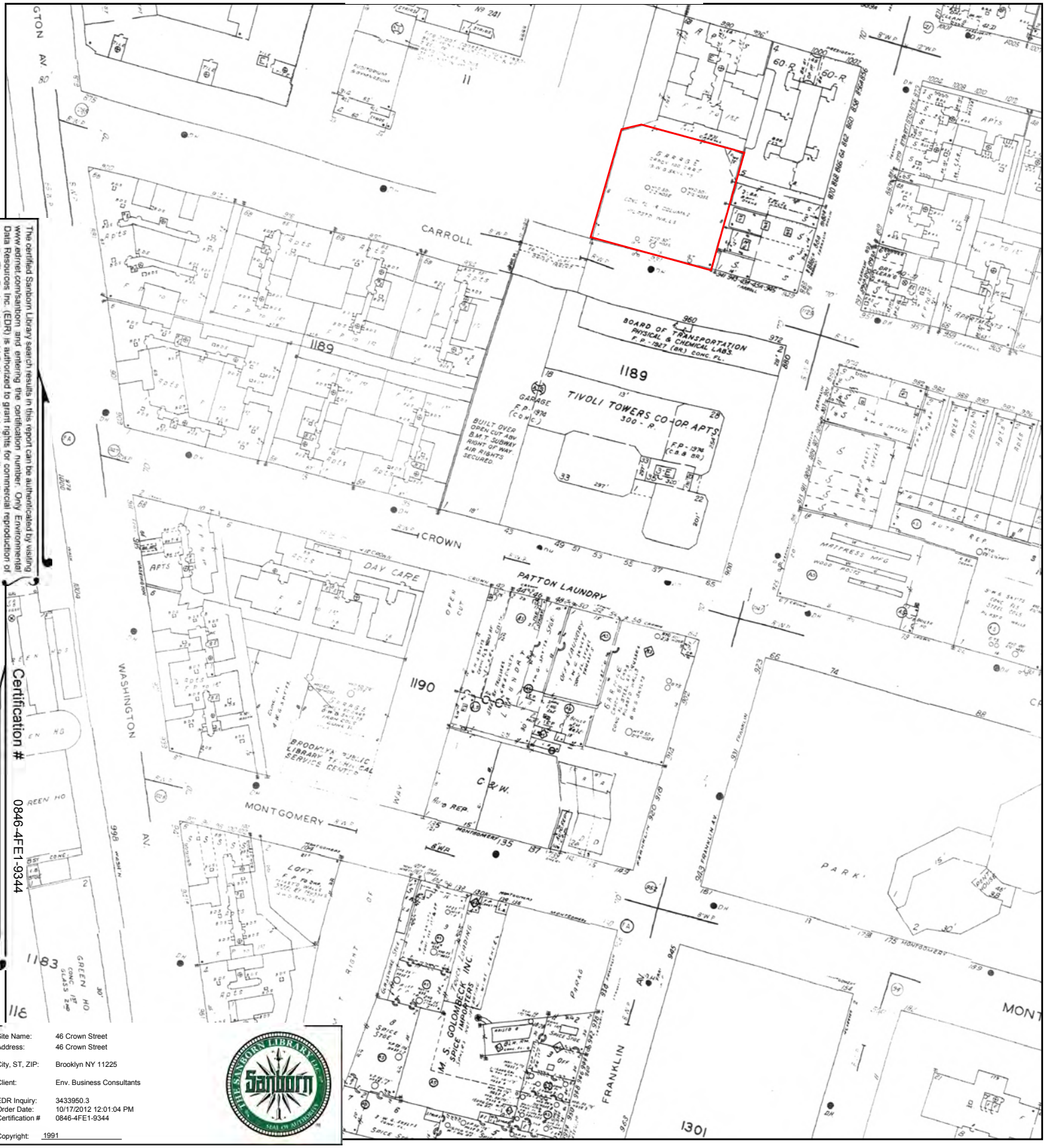
1991 Certified Sanborn Map



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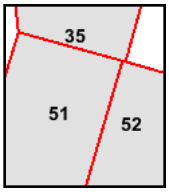

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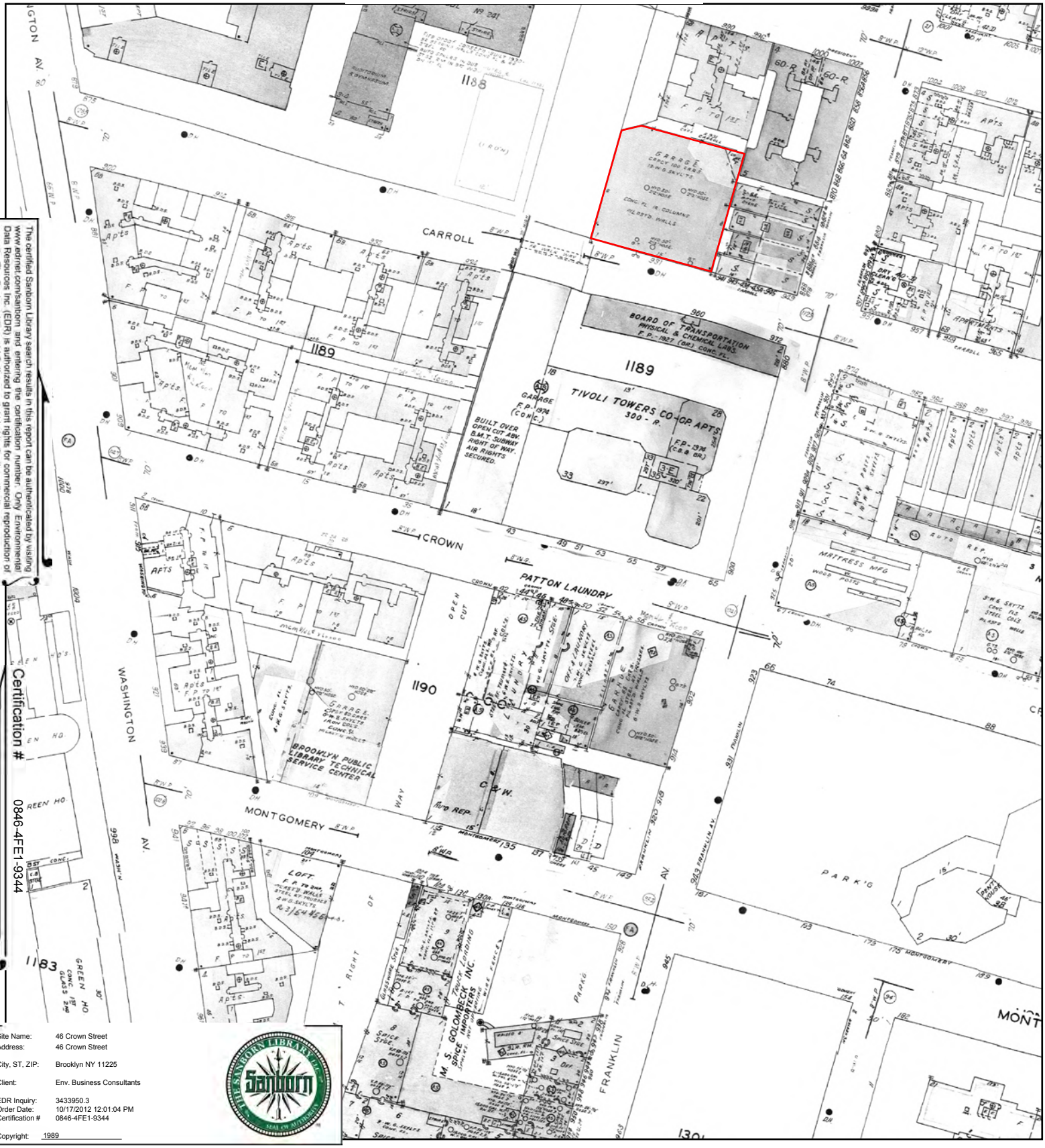
1989 Certified Sanborn Map



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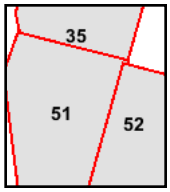

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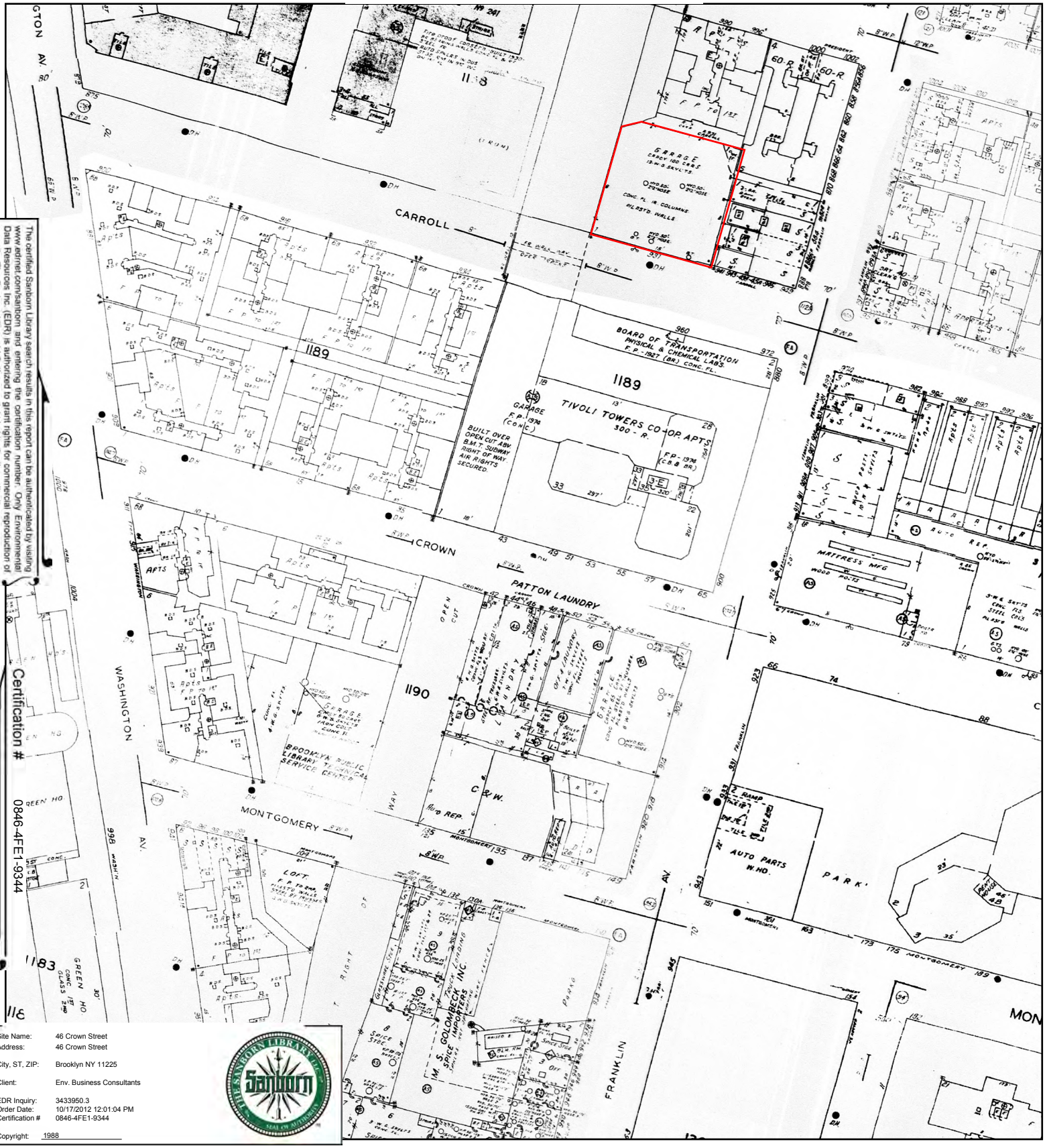

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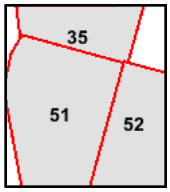

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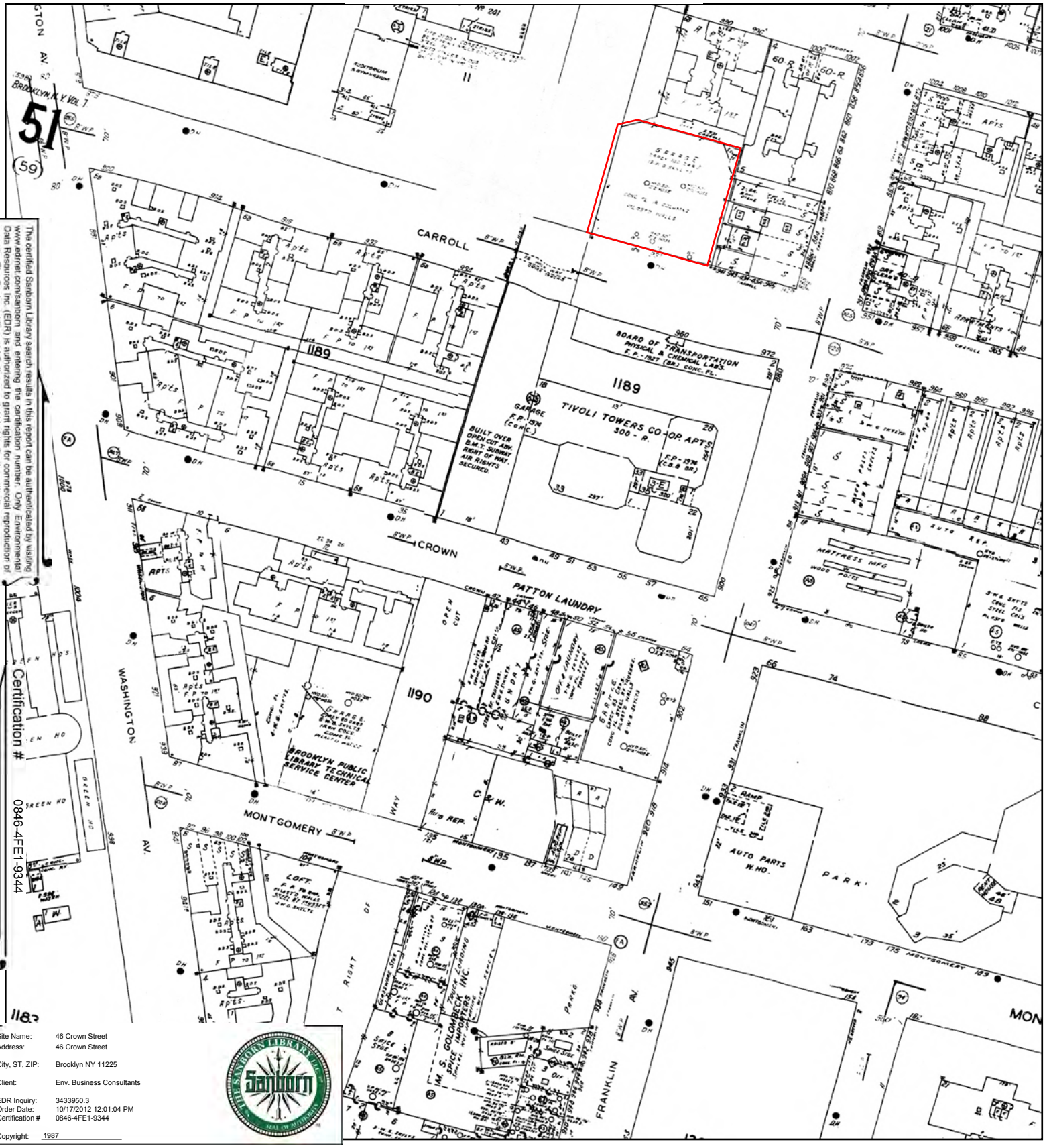
1987 Certified Sanborn Map



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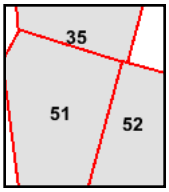

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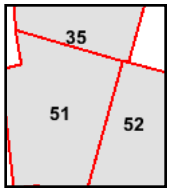

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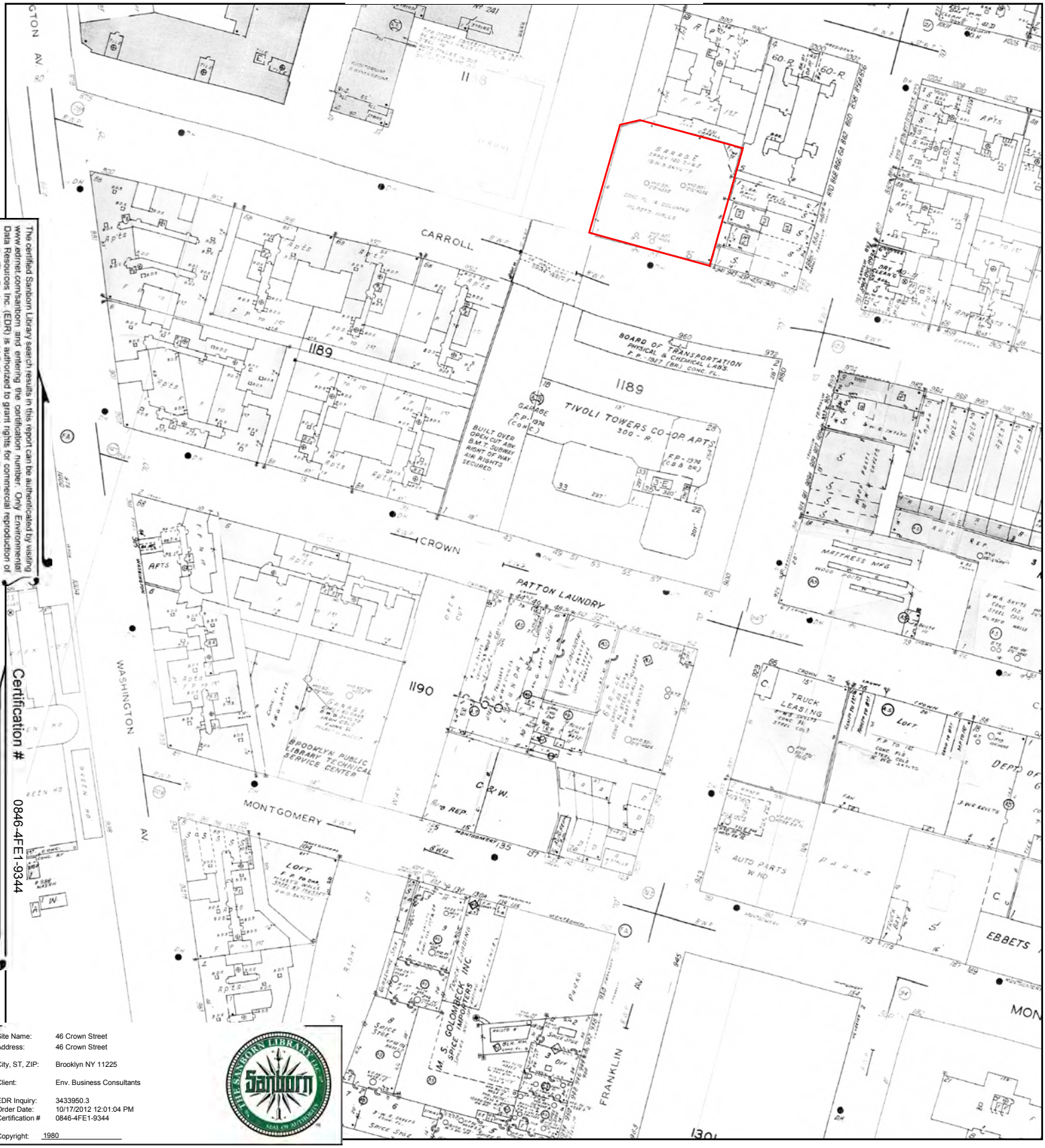
1980 Certified Sanborn Map



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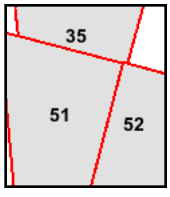

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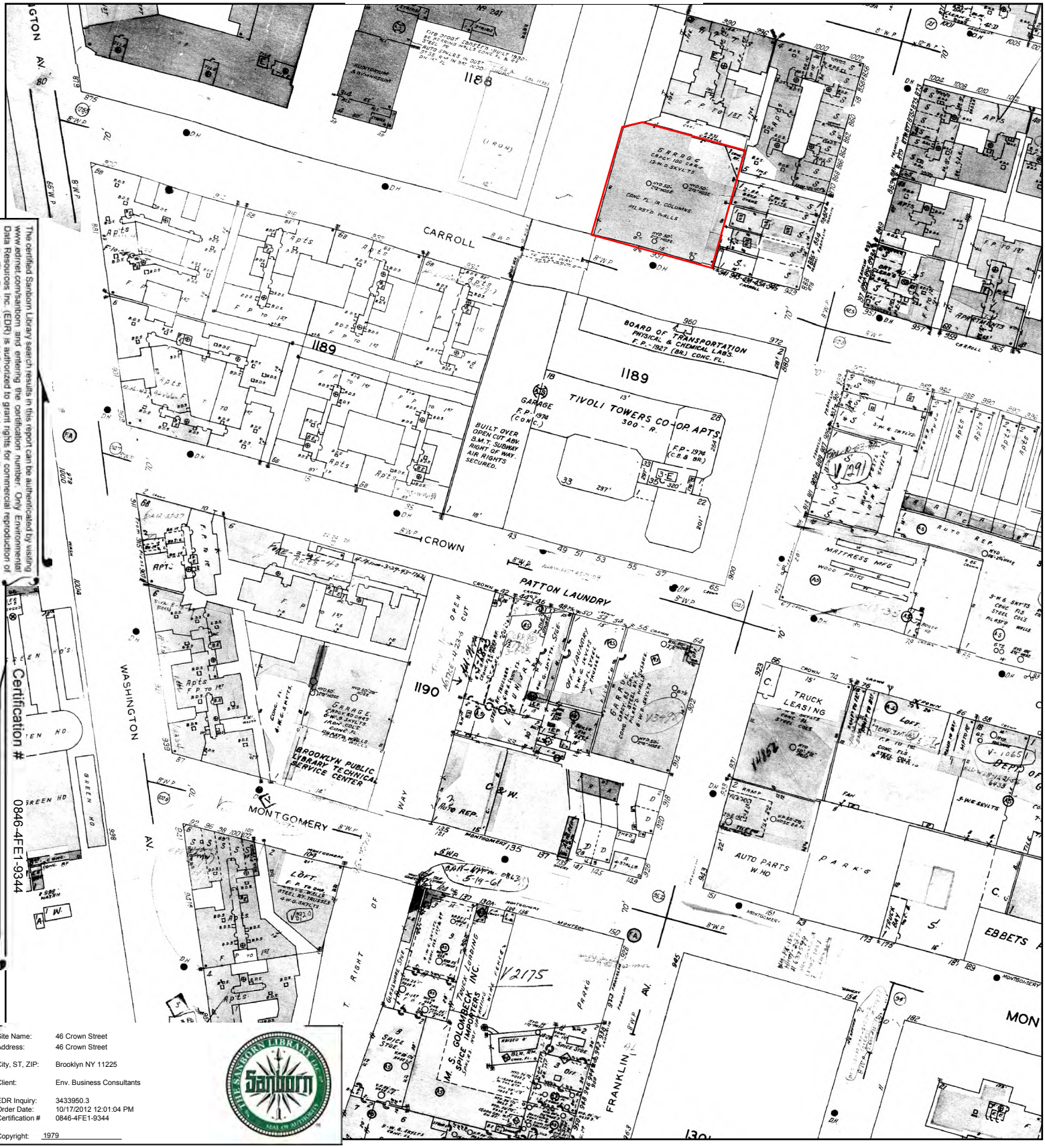
1979 Certified Sanborn Map



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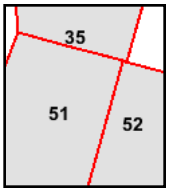

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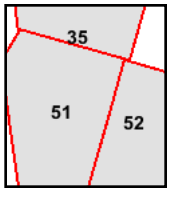

Volume 7, Sheet 35
Volume 7, Sheet 51
Volume 7, Sheet 52

N

1965 Certified Sanborn Map



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Certification # 0846-4FE1-9344

Site Name: 46 Crown Street
Address: 46 Crown Street
City, ST, ZIP: Brooklyn NY 11225
Client: Env. Business Consultants
EDR Inquiry: 3433950.3
Order Date: 10/17/2012 12:01:04 PM
Certification # 0846-4FE1-9344
Copyright: 1965

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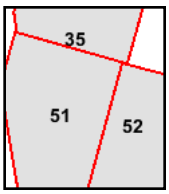

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Volume 7, Sheet 51
Volume 7, Sheet 52

0 Feet 150 300 600

N

1963 Certified Sanborn Map



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Site Name:	46 Crown Street
Address:	46 Crown Street
City, ST, ZIP:	Brooklyn NY 11225
Client:	Env. Business Consultants
EDR Inquiry:	3433950.3
Order Date:	10/17/2012 12:01:04 PM
Certification #	0846-4FE1-9344
Copyright:	1963

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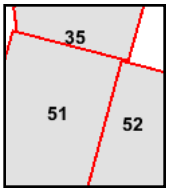

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Volume 7, Sheet 51
Volume 7, Sheet 52

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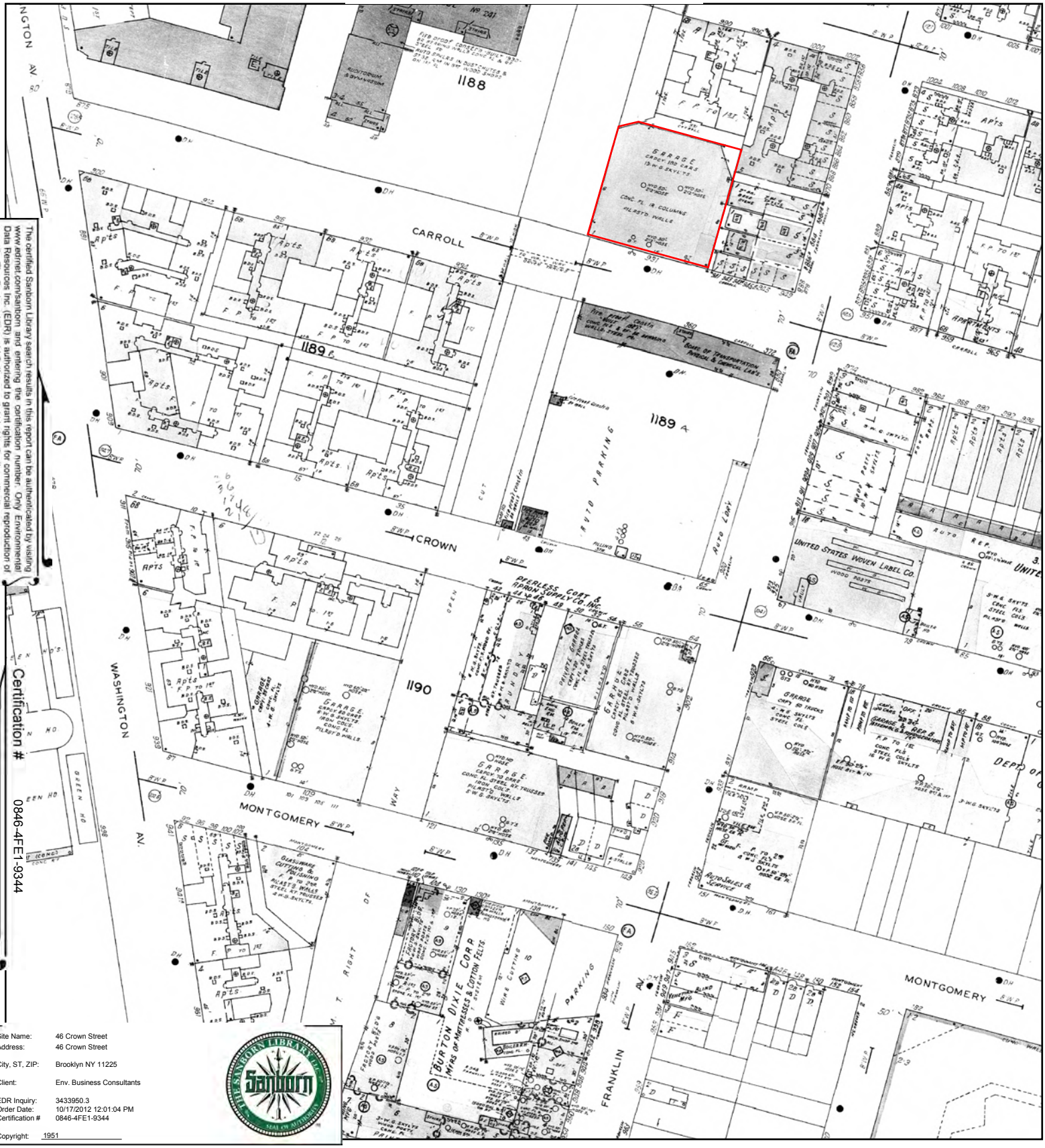
1951 Certified Sanborn Map



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Certification # 0846-4FE1-9344

Site Name:	46 Crown Street
Address:	46 Crown Street
City, ST, ZIP:	Brooklyn NY 11225
Client:	Env. Business Consultants
EDR Inquiry:	3433950.3
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Copyright:	1951

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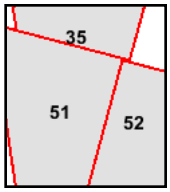

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Volume 7, Sheet 52

0 Feet 150 300 600

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1932 Certified Sanborn Map



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Certification # 0846-4FE1-9344

Site Name:	46 Crown Street
Address:	46 Crown Street
City, ST, ZIP:	Brooklyn NY 11225
Client:	Env. Business Consultants
EDR Inquiry:	3433950.3
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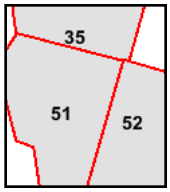

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Volume 7, Sheet 52

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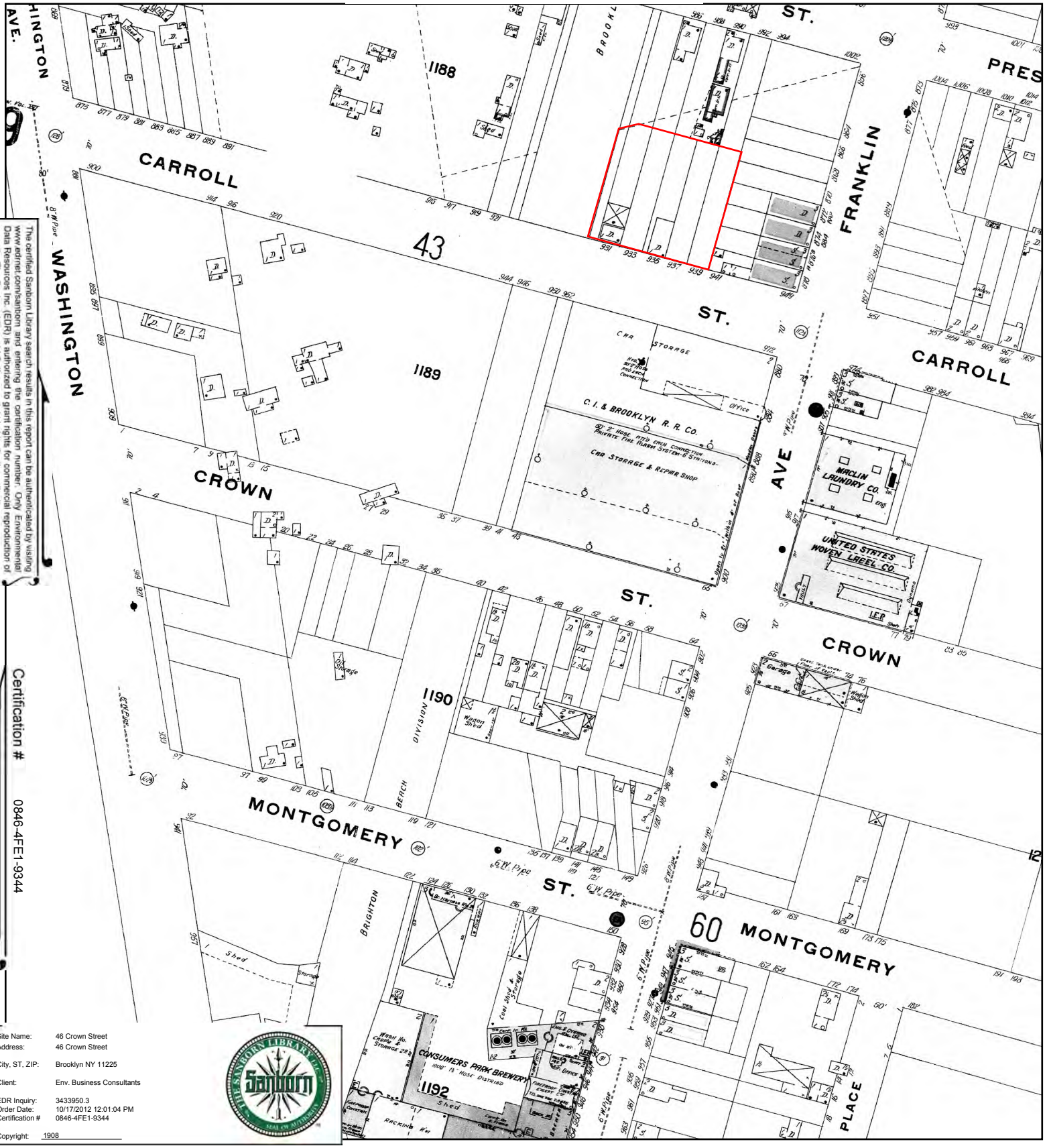
1908 Certified Sanborn Map



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Certification # 0846-4FE1-9344

Site Name:	46 Crown Street
Address:	46 Crown Street
City, ST, ZIP:	Brooklyn NY 11225
Client:	Env. Business Consultants
EDR Inquiry:	3433950.3
Order Date:	10/17/2012 12:01:04 PM
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Copyright:	1908

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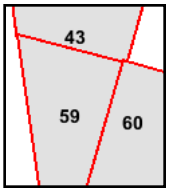

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0 Feet 150 300 600

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1888 Certified Sanborn Map



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Certification # 0846-4FE1-9344

Site Name: 46 Crown Street
Address: 46 Crown Street
City, ST, ZIP: Brooklyn NY 11225
Client: Env. Business Consultants
EDR Inquiry: 3433950.3
Order Date: 10/17/2012 12:01:04 PM
Certification # 0846-4FE1-9344
Copyright: 1888

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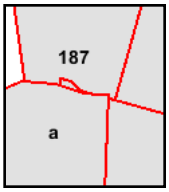

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Volume 7, Sheet 187
Volume 7, Sheet a
Volume 7, Sheet a

N

APPENDIX B
PBS Database Listing

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Bulk Storage Database Search Details

First Site | Previous Site | Next Site | Last Site

Facility Information

Site No.: 2-215929
Status: Active
Expiration Date: 10/15/2017
Site Type: PBS
Site Name: SEA CREST LINEN SUPPLY CO
Address: 931 CARROLL STREET
Locality: BROOKLYN
State: NY
Zipcode: 11225
County: KINGS

Owner(s) Information

Facility Owner: CENTRAL LAUNDRY SERVICES CORP
46 CROWN ST . BROOKLYN, NY. 11225
Mail Contact: SEA CREST LINEN SUPPLY CO.
46 CROWN STREET . BROOKLYN, NY. 11225

Tank Information

4 Tanks Found

Tank No	Tank Location	Status	Capacity (Gal.)
001	Underground	In Service	4000
002	Underground	Closed - Removed	4000
3	Aboveground - No Contact (on saddles, legs, rack, cradle, etc.)	Closed - Removed	275
4	Aboveground - No Contact (on saddles, legs, rack, cradle, etc.)	Closed - Removed	275

Back to Search Results

Refine Current Search

APPENDIX C
Geophysical Survey

NOVA GEOPHYSICAL SERVICES

SUBSURFACE MAPPING SOLUTIONS
56-01 Marathon Parkway, PO Box 765, Douglaston, New York 11362
Ph. 347-556-7787 Fax. 718-261-1527
www.nova-gsi.com

November 5, 2012

Kevin Brussee
Project Manager
Environmental Business Consultants
Ph: 631.504.6000 ext. 114
Fax: 631.924.2870
Cell: 631.338-1749
Kbrussee@ebcincny.com

Re: Geophysical Survey Report
Commercial Properties
931 Carroll Street & 46 Crown Street
Brooklyn, New York

Dear Mr. Brussee:

Nova Geophysical Services (NOVA) is pleased to provide findings of our geophysical surveys at the above referenced project sites located at 931 Carroll Street and 46 Crown Street, Brooklyn, NY (the "Site"). Please see attached Geophysical Survey map for more details.

INTRODUCTION TO GEOPHYSICAL SURVEY

NOVA performed Geophysical surveys consisting of Ground Penetrating Radar (GPR), Electromagnetic (EM) surveys and comprehensive subsurface utility (CSUL) surveys at the project Site. The purpose of this survey is to verify anomalies; underground storage tanks (USTs) that maybe located at the project site on October 26th, 2012.

The equipment selected for this investigation will be included a CSUL Pipe and Cable Locator (an magnetic detector), Electromagnetic detector (Geonics EM61), Noggin's 250 MHz ground-penetrating radar (GPR) units.

A GPR system consists of a radar control unit, control cable and a transducer (antenna). The control unit transmits a trigger pulse at a normal repetition rate of 250 MHz. The trigger pulse is sent to the transmitter electronics in the transducer via the control cable. The transmitter electronics amplify the trigger pulses into bipolar pulses that are radiated to the surface. The

transformed pulses vary in shape and frequency according to the transducer used. In the subsurface, variations of the signal occur at boundaries where there is a dielectric contrast (void, steel, soil type, etc.). Signal reflections travel back to the control unit and are represented as color graphic images for interpolation.

GEOPHYSICAL METHODS

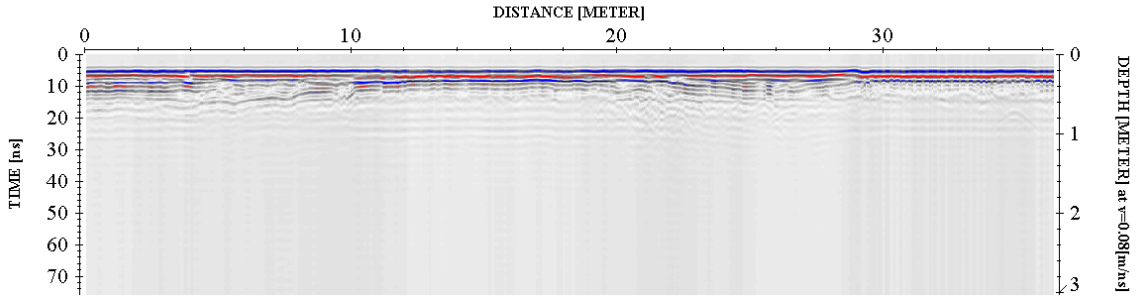
The project site was first screened using the Geonics(tm) electromagnetic detector by carrying the instrument over the boring locations at the site in 5' x 5' traverses. When evidence of anomalies were observed, the Ditch-witch(tm) utility locator was then used to determine if the anomalies were utilities or other large sub-surface metal objects. Finally, GPR profiles were collected over each metal-detector anomaly and inspected for reflections, which could be indicative of major anomalies.

GPR data profiles were collected for the areas of the Site specified by the client. The surveyed area consisted of paved areas.

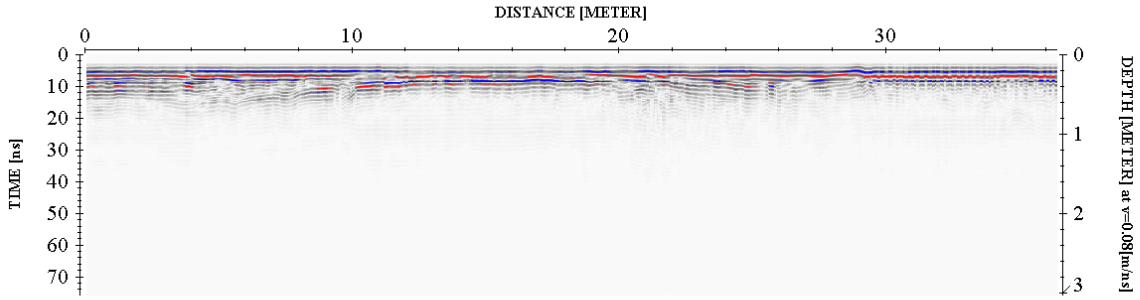
DATA PROCESSING

In order to improve the quality of the results and to better identify subsurface anomalies NOVA processed the collected data. The processes flow is briefly described at this section.

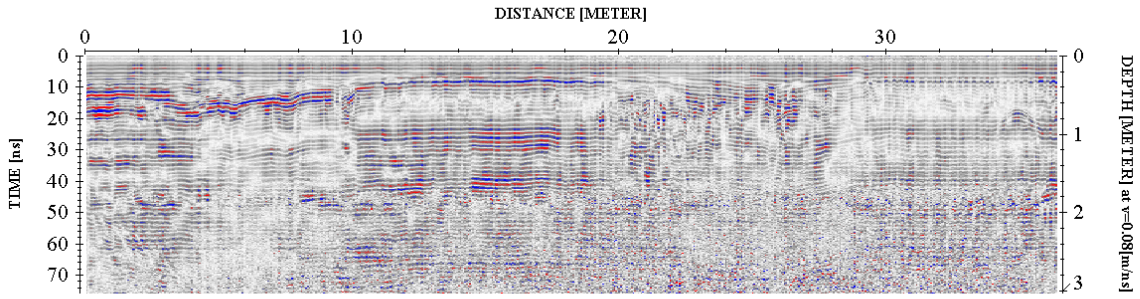
Step 1. Import raw RAMAC data to standard processing format



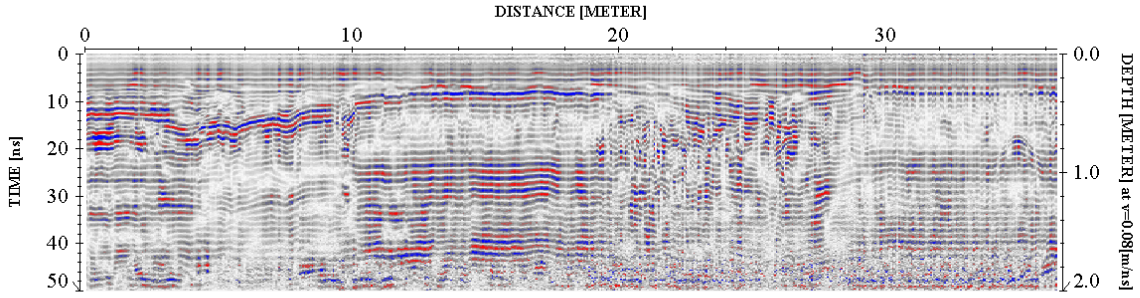
Step 2. Remove instrument noise *(dewow)*



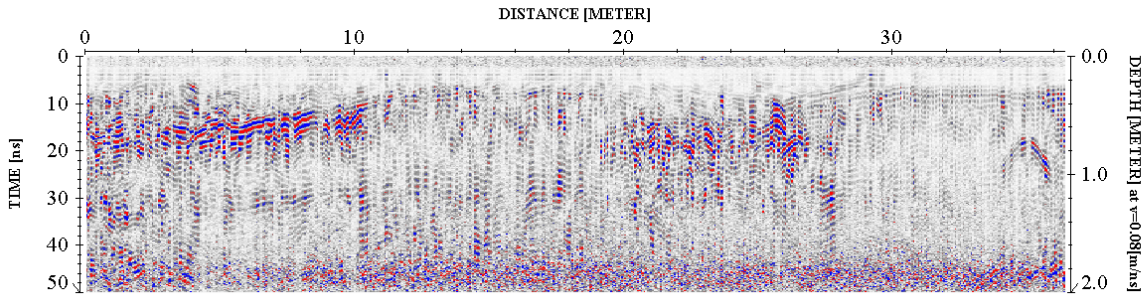
Step 3. Correct for attenuation losses *(energy decay function)*



Step 4. Remove static from bottom of profile *(time cut)*



Step 5. Mute horizontal ringing/noise *(subtracting average)*



The above example shows the significance of data processing. The last image (step 5) has higher resolution than the starting image (raw data – step 1) and describes the subsurface anomalies more accurately.

PHYSICAL SETTINGS

Nova observed following physical conditions at the time of the survey:

The weather: Cloudy.

Temp: 70 degrees.

Surface: Sidewalk, paved areas.

Geophysical Noise Level (GNL): Geophysical Noise Level (GNL) was medium to high at the time of the survey due to the nature of on-going business activities at the project areas.

RESULTS

The results of the geophysical survey identified following anomalies located at the project Site:

- Geophysical survey identified two major anomalies inside the building western portion of the project area at 931 Carroll Street. Based on their reflection rate and proximity, those anomalies were consistent with underground storage tanks (USTs). Further vent pipes (one was cut!) identified during the survey along the Carroll Street was also associated with these anomalies (USTs).

- Geophysical survey identified anomalies located inside the building at 931 Carroll Street next to the tank areas. Based on their reflection rate and their proximity, they were consistant with subsurface structures such as: (oil/water separator, USTs, etc.).

- Geophysical survey identified scattered anomalies located throughout of the inside the building at 931 Carroll Street. Based on their reflection rates and physical evidences, they were consistent with former and current utilities such as sewer, water and etc.

- Geophysical survey identified a major anomaly in the parking lot at 46 Crown Street. Based on its reflection rate and proximity that anomaly was consistent with an underground storage tank (UST). The identified vent pipe observed during the survey was also associated with this anomaly (UST).

- Geophysical survey identified two major anomalies associated with the observed vent pipes located along the Crown Street. Based on their reflection rates and proximity, those anomalies may be indicative of underground storage tanks (USTs).

- Geophysical survey identified anomalies within the project area at 46 Crown Street. Based on their reflection rates and physical evidences, they were consistent with former and current utilities such as sewer, water.

- Geophysical Survey Plan portrays the areas investigated during the geophysical survey.

If you have any questions please do not hesitate to contact the undersigned.
Sincerely,

NOVA Geophysical Services



Levent Eskicakit, P.G., E.P.
Project Engineer

Attachments:
Figure 1 Site Location Map
Geophysical Survey Plan
Geophysical Images



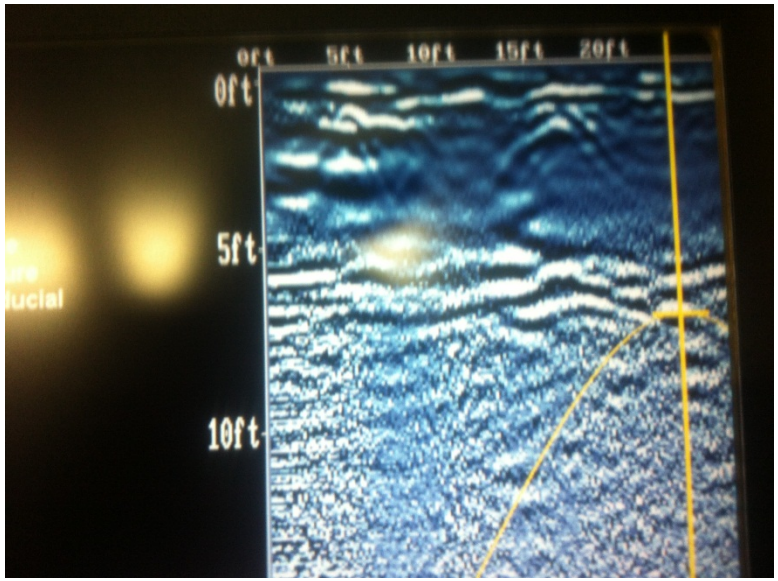
FIGURE 1
SITE LOCATION MAP

SITE: **Commercial Property**
46 Crown Street & 931 Carroll Street, Brooklyn, NY

SCALE: See Map

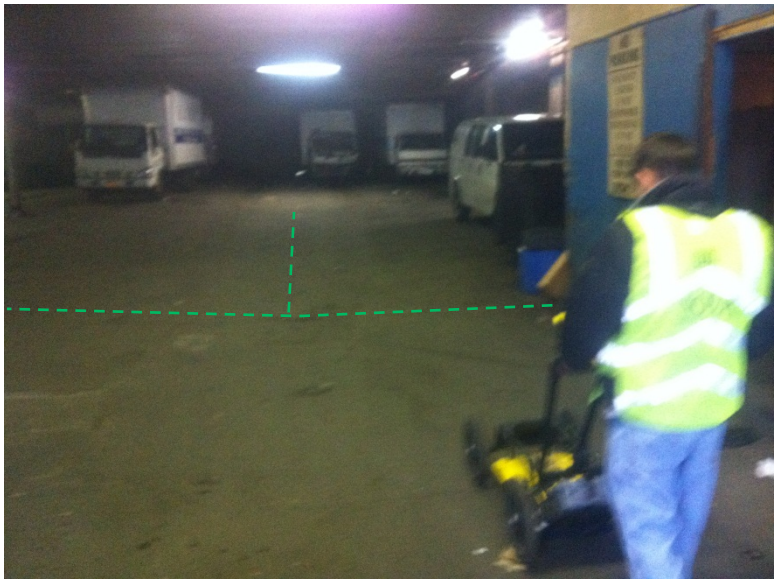
NOVA
Geophysical Services
Subsurface Mapping Solutions
56-01 Marathon Pkwy, PO Box 765, Douglaston, NY11362
(718) 261-1527 Fax (718) 261-1528
www.nova-gsi.com

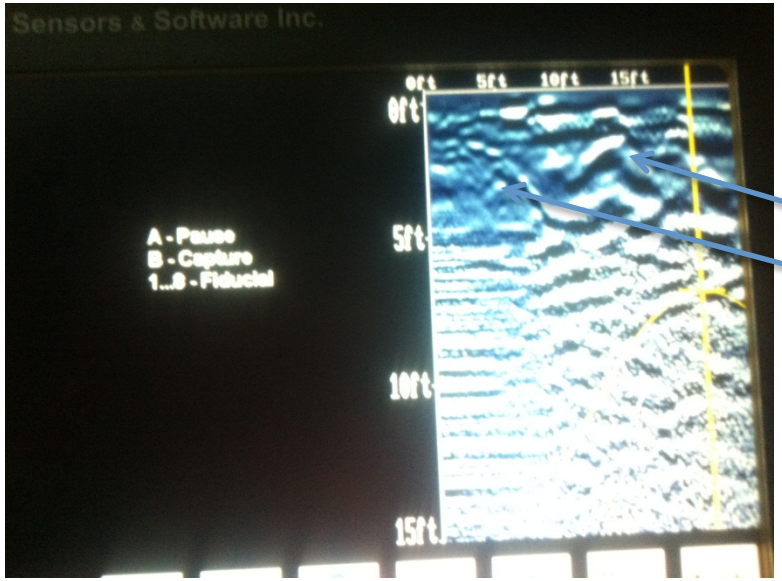
GEOPHYSICAL IMAGES
Commercial Property
931 Carroll Street, Brooklyn, NY
October 26, 2012







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10ft
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B - Capture
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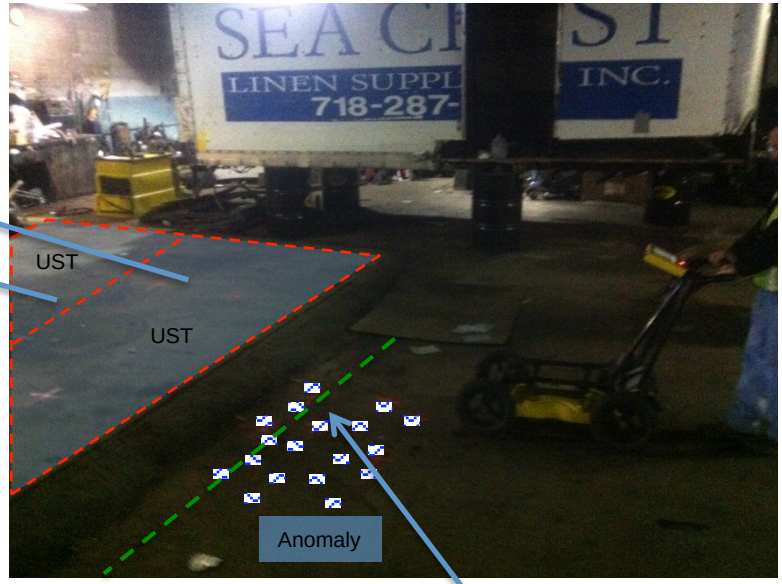
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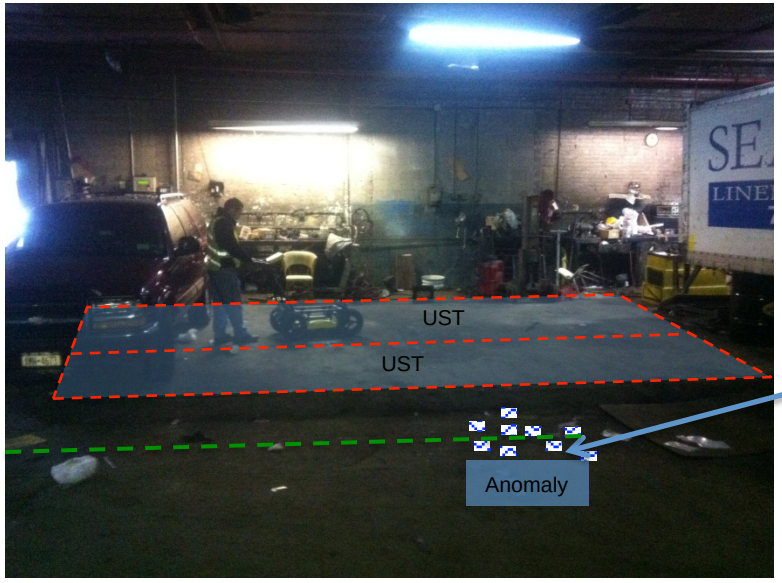
UST
Anomaly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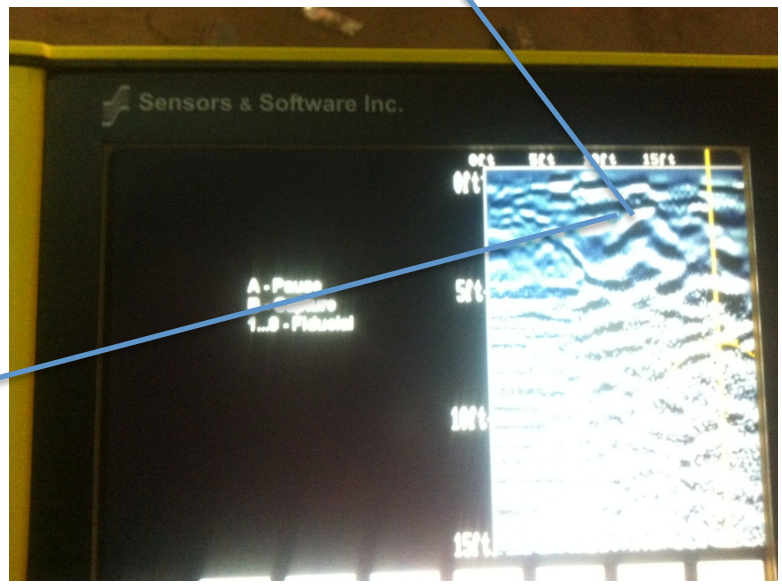
Sensors & Software Inc.
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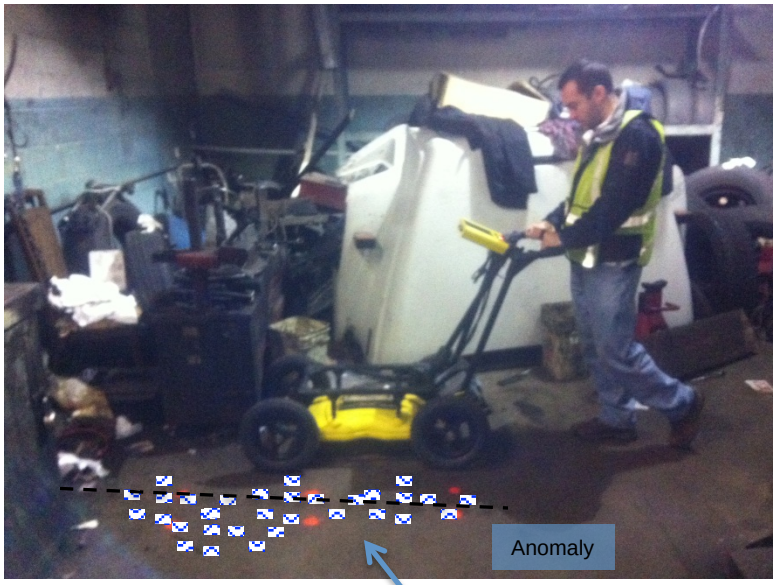
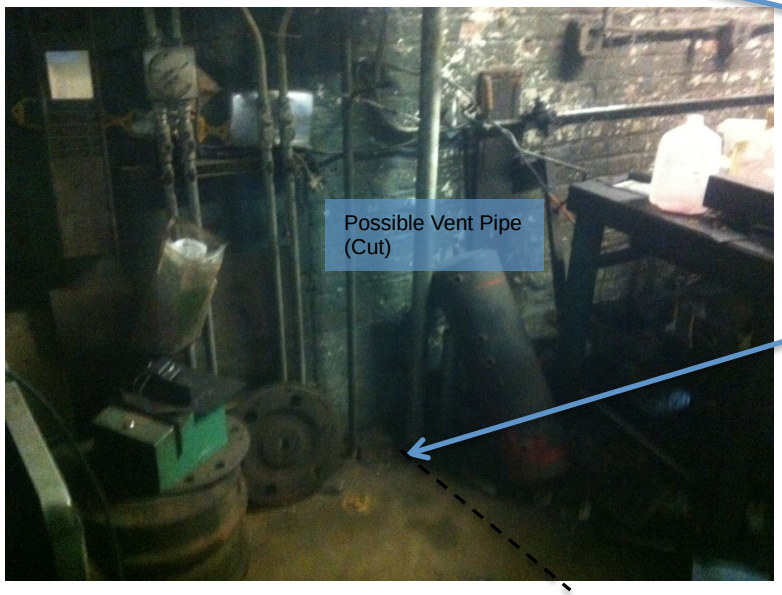
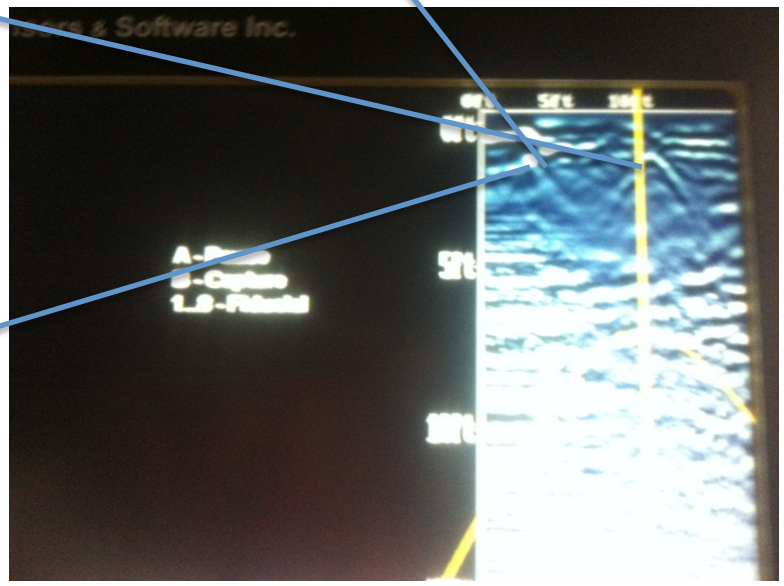
5ft
10ft
15ft

GEOPHYSICAL IMAGES
Commercial Property
931 Carroll Street, Brooklyn, NY
October 26, 2012

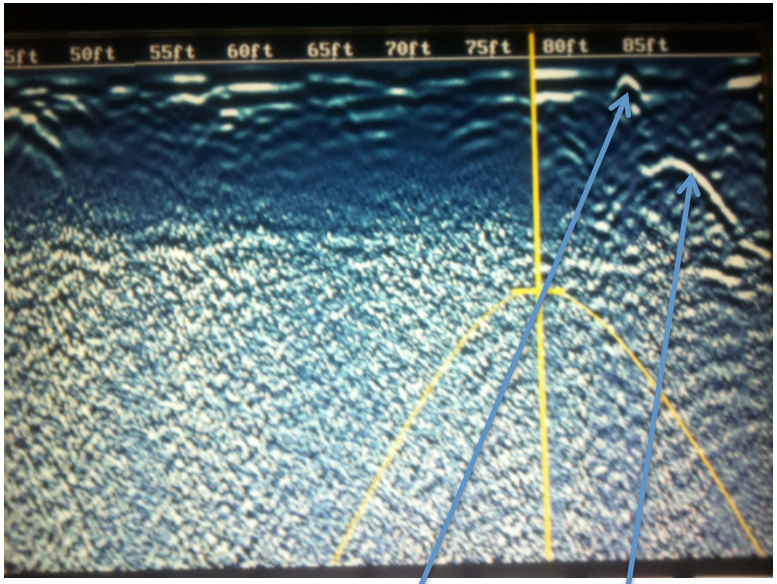


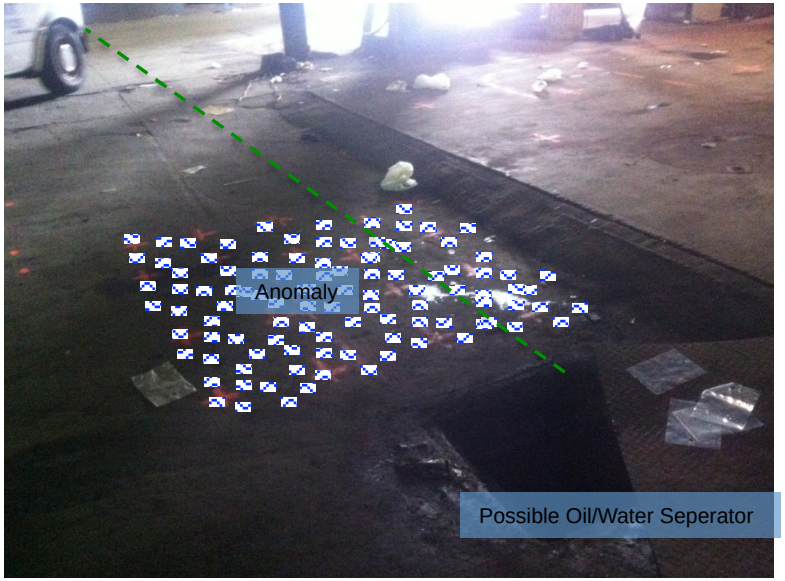


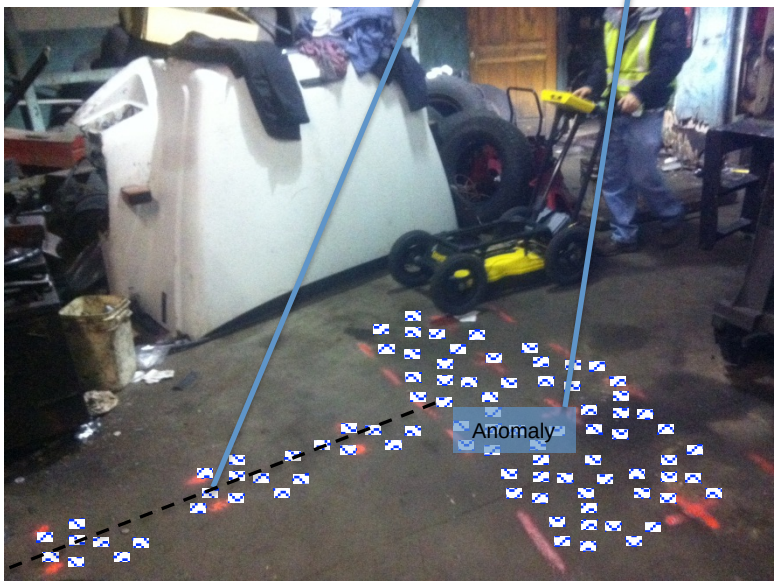


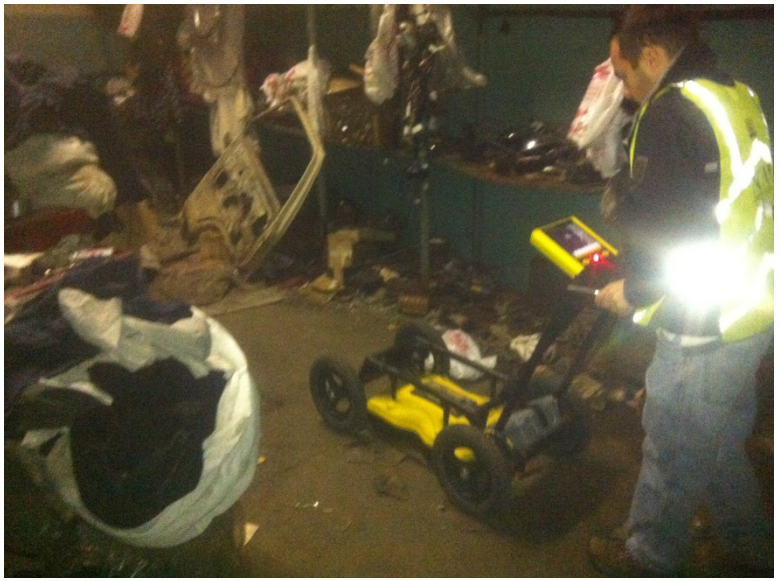


GEOPHYSICAL IMAGES
Commercial Property
931 Carroll Street, Brooklyn, NY
October 26, 2012





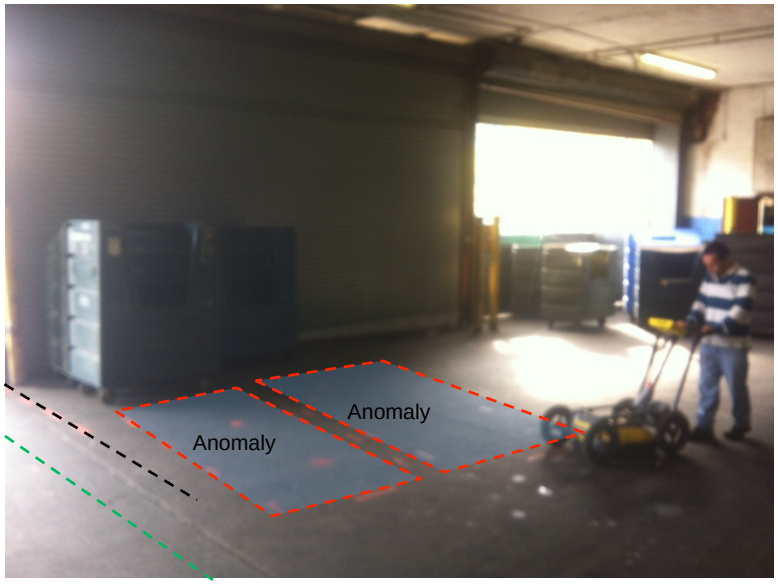


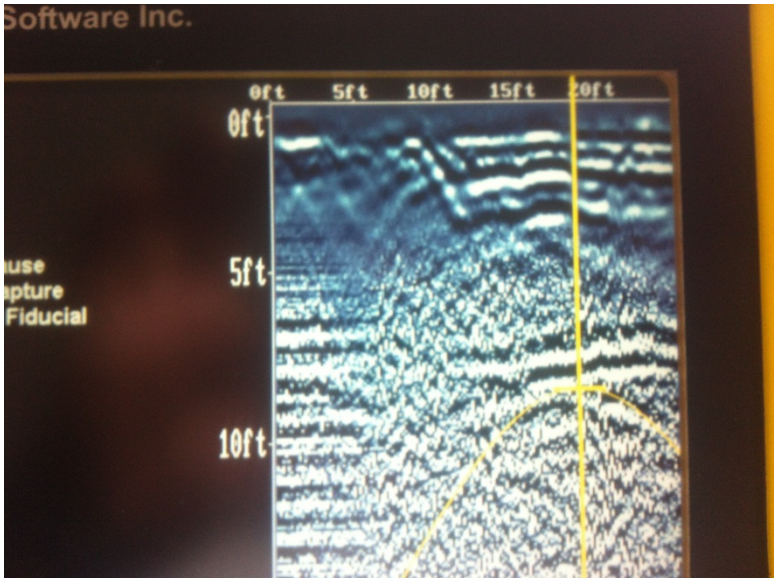


GEOPHYSICAL IMAGES
Commercial Property
46 Crown Street, Brooklyn, NY
October 26, 2012









GEOPHYSICAL IMAGES
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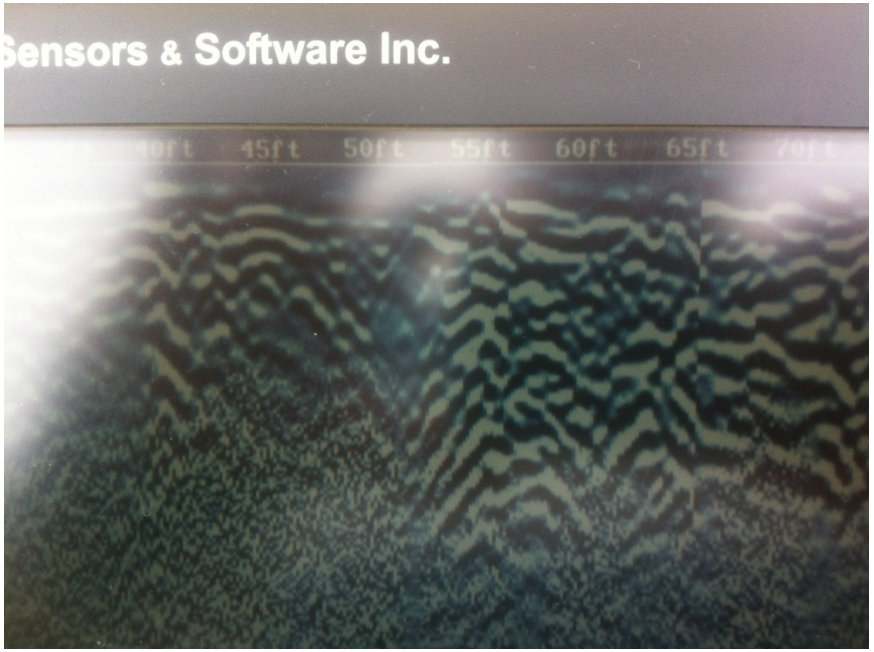
46 Crown Street, Brooklyn, NY
October 26, 2012







NOVA

Geophysical Engineering Services

Subsurface Mapping Solutions

56-01 Marathon Parkway, # 765
Douglaston, New York11362
Phone (347) 556-7787 * Fax (718) 261-1527
www.nova-gsi.com

GEOPHYSICAL SURVEY SITE PLAN

SITE: 931 Carroll Street, Brooklyn, NY
CLIENT: Environmental Business Consultants
SCALE: Not To Scale
DATE : 10/26/12

INFORMATION

- GPR / EM Surveyed Area
- Scattered/ Anomaly
- Major Anomaly
- Geophysical Noise Areas
- Underground Piping (Sewer, Electric, and gas)
- Underground Storage Tank
- Pump Island



NOVA

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Subsurface Mapping Solutions

56-01 Marathon Parkway, # 765
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Phone (347) 556-7787 * Fax (718) 261-1527
www.nova-gsi.com

GEOPHYSICAL SURVEY SITE PLAN

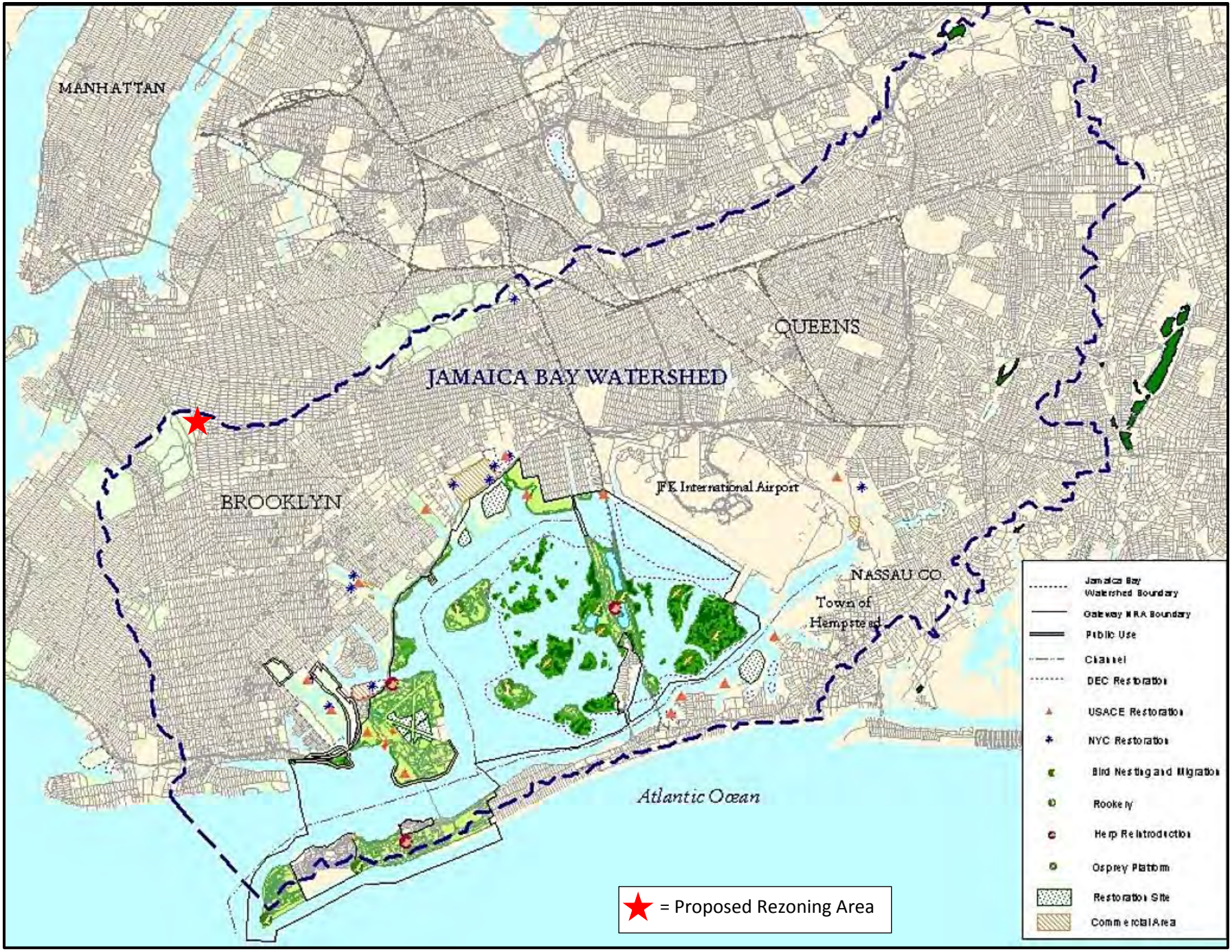
SITE: 46 Crown Street, Brooklyn, NY
CLIENT: Environmental Business Consultants
SCALE: Not To Scale
DATE : 10/26/12

INFORMATION

- GPR / EM Surveyed Area
- Scattered/ Anomaly
- Major Anomaly
- Manhole Cover (Water Well/Sewer Cleanouts)
- Underground Piping (Sewer, Electric, and gas)
- Underground Storage Tank

Appendix 2

Jamaica Bay Watershed Form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= Proposed Rezoning Area
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Gateway NRA Boundary
Public Use
Channel
DEC Restoration
USACE Restoration
NYC Restoration
Bird Nesting and Migration
Rookery
Herp Reintroduction
Osprey Platform
Restoration Site
Commercial Area

Print Form

Jamaica Bay Watershed Protection Plan
Project Tracking Form

The Jamaica Bay Watershed Protection Plan, developed pursuant to Local Law 71 of 2005, mandates that the New York City Department of Environmental Protection (DEP) work with the Mayor's Office of Environmental Coordination (MOEC) to review and track proposed development projects in the Jamaica Bay Watershed (http://www.nyc.gov/html/oec/downloads/pdf/ceqr/Jamaica_Bay_Watershed_Map.jpg) that are subject to CEQR in order to monitor growth and trends. If a project is located in the Jamaica Bay Watershed, (the applicant should complete this form and submit it to DEP and MOEC. This form must be updated with any project modifications and resubmitted to DEP and MOEC.

The information below will be used for tracking purposes only. It is not intended to indicate whether further CEQR analysis is needed to substitute for the guidance offered in the relevant chapters of the CEQR Technical Manual.

A. GENERAL PROJECT INFORMATION

1. CEQR Number: 17DCP067K 1a. Modification ☐
2. Project Name: Franklin Avenue Rezoning Revised EAS
3. Project Description:

   Cornell Realty Management LLC (the Applicant) is seeking two discretionary actions in Crown Heights, Brooklyn: a zoning map amendment to rezone portions of Blocks 1188, 1189, and 1190, including two applicant-owned projected development sites, and a zoning text amendment (see EAS).

4. Project Sponsor: Cornell Realty Management LLC
5. Required approvals: Zoning map amendment, zoning text amendment
6. Project schedule (build year and construction schedule): 2021 (Applicant's sites); 2023 (Proj Dev)

B. PROJECT LOCATION:

1. Street address: N/A - rezoning a portion of three blocks
2. Tax block(s): BK Block 1188, 1189, 1190 Tax Lot(s): Multiple - see EAS
3. Identify existing land use and zoning on the project site: residential, commercial and vacant
4. Identify proposed land use and zoning on the project site: residential and commercial
5. Identify land use of adjacent sites (include any open space): residential, commercial, institution
6. Describe existing density on the project site and the proposed density:

Existing Condition	Proposed Condition
Applicant's sites are vacant.	7.2 FAR of residential or mixed-use development

7. Is project within 100 or 500 year floodplain (specify)? ☐ 100 Year ☐ 500 Year ☒ No

C. GROUND AND GROUNDWATER

1. Total area of in-ground disturbance, if any (in square feet): TBD
2. Will soil be removed (if so, what is the volume in cubic yards)? Yes-TBD
3. Subsurface soil classification:
   (per the New York City Soil and Water Conservation Board): Urban soil/fill (Phase II ESA results)
4. If project would change site grade, provide land contours (**attach** map showing existing in 1' contours and proposed in 1' contours).
5. Will groundwater be used (list volumes/rates)? ☐ **Yes** ☒ **No**

   Volumes: _____ Rates: _____
6. Will project involve dewatering (list volumes/rates)? ☐ **Yes** ☒ **No**

   Volumes: _____ Rates: _____
7. Describe site elevation above seasonal high groundwater:

   Depth to groundwater estimated at 85 feet below grade.

D. HABITAT

1. Will vegetation be removed, particularly native vegetation? ☐ **Yes** ☒ **No**

   If YES,
   - **Attach** a detailed list (species, size and location on site) of vegetation to be removed (including trees >2" caliper, shrubs, understory planting and groundcover).
   - **List** species to remain on site.
   - **Provide** a detailed list (species and sizes) of proposed landscape restoration plan (including any wetland restoration plans).
2. Is the site used or inhabited by any rare, threatened or endangered species? ☐ **Yes** ☒ **No**
3. Will the project affect habitat characteristics? ☐ **Yes** ☒ **No**

   If YES, describe existing wildlife use and habitat classification using "Ecological Communities of New York State." at http://www.dec.ny.gov/animals/29392.html.

   N/A
4. Will pesticides, rodenticides or herbicides be used during construction? ☐ **Yes** ☒ **No**

   If YES, estimate quantity, area and duration of application.

   N/A
5. Will additional lighting be installed? ☒ **Yes** ☐ **No**

   If YES and near existing open space or natural areas, what measures would be taken to reduce light penetration into these areas?

   N/A

E. SURFACE COVERAGE AND CHARACTERISTICS

(describe the following for both the existing and proposed condition):

	Existing Condition	Proposed Condition
1. ***Surface area:***		
Roof:	N/A - buildings have been demolished	80% roof coverage
Pavement/walkway:	N/A - sites are currently vacant	20% pavement/walkway
Grass/softscape:	N/A - sites are currently vacant	Street trees will be provided
Other (describe):	N/A	N/A
2. ***Wetland*** (regulated or non-regulated) area and classification:	0 sf	0 sf
3. ***Water surface area:***	0 sf	0 sf

4. ***Stormwater management*** (describe):

Existing – how is the site drained?

N/A - sites are currently vacant as buildings have been demolished in anticipation of future construction.

Proposed – describe, including any infrastructure improvements necessary off-site:

Sites will connect to the City's storm water system.

Appendix 3

LPC Determination

Landmarks Preservation Commission

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

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

ENVIRONMENTAL REVIEW

Project number: DEPARTMENT OF CITY PLANNING / LA-CEQR-K
Project: FRANKLIN AVE REZONING
Date received: 6/20/2014

Properties with no Architectural or Archaeological significance:

1) ADDRESS: 882 FRANKLIN AVENUE, BBL: 3011880053
2) ADDRESS: 884 FRANKLIN AVENUE, BBL: 3011880054
3) ADDRESS: 886 FRANKLIN AVENUE, BBL: 3011880055
4) ADDRESS: 888 FRANKLIN AVENUE, BBL: 3011880056
5) ADDRESS: 931 CARROLL STREET, BBL: 3011880058
6) ADDRESS: 40 CROWN STREET, BBL: 3011900029
7) ADDRESS: MONTGOMERY STREET, BBL: 3011900045
8) ADDRESS: 135 MONTGOMERY STREET, BBL: 3011900050

Gina Santucci 6/26/2014

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 29662_FSO_DNP_06262014.doc